Groundwater Monitoring Report, March 2022
Butler Green Industrial Landfill, Parcel 175(5)
(Permit No. 08-02)
McClellan, Anniston, Alabama

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LIST OF ABBREVIATIONS AND ACRONYMS

ADEM	Alabama Department of Environmental Management
ADEM Division 7 Regulations	*Alabama Department of Environmental Management Water Division Water Supply Program Division 335-7*
ADEM Division 13 Regulations	*Alabama Department of Environmental Management (ADEM) Land Division Solid Waste Program Division 13 Regulations*
AGMRG	*Alabama Groundwater Monitoring Reporting Guidance for Solid Waste Facilities*
ARBCA	*Alabama Risk-Based Corrective Action Guidance Manual*
Army	United States Department of the Army
BTOC	Below top of casing
CA	Cleanup agreement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CUSUM	Shewhart Cumulative Sum
DO	Dissolved oxygen
DVS	Data Validation Summary
EPA	United States Environmental Protection Agency
ESCA	Environmental Services Cooperative Agreement
Fill Area Definition Report	*Draft Final Site Investigation and Fill Area Definition Report, Parcels 78(6), 79(6), 80(6), 81(5), 175(5), 230(7), 227(7), 126(7), 229(7), 231(7), 233(7), and 82(7), Fort McClellan, Calhoun County, Alabama, Revision 1*
Final EE/CA	*Final Revision 1 Engineering Evaluation/Cost Analysis Landfills and Fill Areas, Landfills 1, 2, 4, and Industrial Landfill, Parcels 78(6), 79(6), 81(5), 175(5), McClellan, Anniston, Alabama*
ft	feet
ft/ft	feet per foot
GWMR	Groundwater monitoring report
h	decision internal value
ICP	Inductively-coupled plasma
Industrial Landfill	Butler Green Industrial Landfill, Parcel 175(5)
IT	IT Corporation
k	reference value
Landfill 4	Landfill 4, Parcel 81(5)
McClellan	McClellan, Anniston, Alabama
MCL	Maximum contaminant level
MDA	McClellan Development Authority
MDL	Method detection limit
MES	Matrix Environmental Services, LLC
µg/L	micrograms per liter
ORP	Oxidation-reduction potential
Permit	Solid Waste Disposal Facility Permit No. 08-02
QAP	*Quality Assurance Plan*
RBTL	Risk-based target level
RL	Reporting limit
SCL	Shewhart control limit

Shaw	Shaw Environmental, Inc.
Site	Landfill 4, Parcel 81(5) and the Butler Green Industrial Landfill, 175(5)
SSI	Statistically Significant Increase
TCE	trichloroethene
TDS	Total dissolved solids
U.S.	United States
VOC	Volatile Organic Compound
Zi	standardized means

EXECUTIVE SUMMARY

Matrix Environmental Services, L.L.C. (MES) has prepared this groundwater monitoring report (GWMR) on behalf of the McClellan Development Authority (MDA) to meet the requirements of the Solid Waste Disposal Facility Permit No. 08-02 (permit) for the Butler Green Industrial Landfill, formerly the McClellan Industrial Landfill, Parcel 175(5) located within McClellan, Anniston, Alabama (McClellan), formerly known as Fort McClellan. Figure 1-1 shows a map of McClellan and Figure 1-2 shows the parcel location. As shown in Figure 1-2, the Butler Green Industrial Landfill, Parcel 175(5) (Industrial Landfill) is located in the northeast corner of Landfill 4, Parcel 81(5) (Landfill 4). The area was permitted as the McClellan Industrial Landfill (Permit No. 08-02). In July 2017, the MDA requested the Alabama Department of Environmental Management (ADEM) to change the name of the Industrial Landfill from the McClellan Industrial Landfill to the Butler Green Industrial Landfill. This request was granted in a letter from the Department dated August 23, 2017. In this GWMR Landfill 4 and the Industrial Landfill will collectively be referred to as "the Site".

This GWMR presents results related to the implementation of groundwater monitoring under the requirements of the permit and the *Alabama Department of Environmental Management Land Division Solid Waste Program Division 13 Regulations* (*ADEM Division 13 Regulations*) for solid waste facilities.

The March 2022 monitoring event was performed under the Assessment Monitoring program, described in Section 2.4.3. Groundwater samples were collected from five residuum monitoring wells at the Site on March 2, 2022. The groundwater samples were analyzed for the constituents listed in *Appendix I* of ADEM Admin. Code 335-13-4-27 of the *ADEM Division 13 Regulations* (Table 2-2).

Groundwater elevations showed groundwater at the Site flowed in a north and northwesterly direction. The horizontal hydraulic gradients were low over the Site, ranging from 0.004 feet per foot (ft/ft) to 0.014 ft/ft, averaging 0.011 ft/ft Site-wide.

During the March 2022 monitoring event, volatile organic compounds cis-1,2-dichloroethene, trans-1,2-dichloroethene, and trichloroethene were detected in well LF4-MW4. All VOC detections are considered statistically significant increase (SSI) occurrences. VOC concentrations detected in LF4-MW4 were consistent with historical results and below maximum contaminant levels (MCLs) with the exception of trichloroethene which was above MCL but consistent with historical results.

To evaluate whether there were any SSI occurrences for metal constituents in groundwater at the Site, a statistical analysis was performed on the metals data using Shewhart Cumulative Sum (CUSUM) control charts in accordance with Code Rule 335-13-4-27, subparagraph (2) of the *ADEM Division 13 Regulations* and applicable United States Environmental Protection Agency (EPA) guidance. The statistical analysis showed SSI occurrences for cobalt and nickel in well LF4-MW1 and cobalt, nickel, and zinc in well LF4-MW2. All results were consistent with historical data.

The concentrations of the SSI constituents were compared to the groundwater protection standards for the Site. MCLs, as listed in the *Alabama Department of Environmental Management Water Division Water Supply Program Division 335-7 Regulations* (*ADEM Division 7 Regulations*), were used as the groundwater protection standards for the SSIs. Nickel, zinc, cis-1,2-dichloroethene and trans-1,2-dichloroethene concentrations were below MCLs. Trichloroethene was above the MCL but consistent with historical results. Because there is no promulgated MCL for cobalt, the concentration for the cobalt SSI in wells LF4-MW1 and LF4-MW2 were compared to the cobalt concentration for background well LF4-MW5. The concentration for metal SSI constituent cobalt in LF4-MW1 (34 µg/L) and LF4-MW2 (71 µg/L) were greater than the background concentration (10.5 µg/L).

MDA recommends that natural attenuation and land use controls be allowed to continue, and the site continue to be monitored on a semi-annual basis under the assessment monitoring program.

1.0 INTRODUCTION

Matrix Environmental Services, L.L.C. (MES) has prepared this groundwater monitoring report (GWMR) on behalf of the McClellan Development Authority (MDA) to meet the requirements of the Solid Waste Disposal Facility Permit No. 08-02 (permit) for the Butler Green Industrial Landfill, formerly the McClellan Industrial Landfill, Parcel 175(5) located within McClellan, Anniston, Alabama (McClellan), formerly known as Fort McClellan. Figure 1-1 shows a map of McClellan and Figure 1-2 shows the parcel location. As shown in Figure 1-2, the Butler Green Industrial Landfill, Parcel 175(5) (Industrial Landfill) is located in the northeast corner of Landfill 4, Parcel 81(5) (Landfill 4). The area was permitted as the McClellan Industrial Landfill (Permit No. 08-02). In July 2017, the MDA requested the Alabama Department of Environmental Management (ADEM) to change the name of the Industrial Landfill from the McClellan Industrial Landfill to the Butler Green Industrial Landfill. This request was granted in a letter from the Department dated August 23, 2017(ADEM, 2017). In this GWMR Landfill 4 and the Industrial Landfill will collectively be referred to as "the Site".

This GWMR presents results related to the implementation of groundwater monitoring under the requirements of the permit and the *Alabama Department of Environmental Management (ADEM) Land Division Solid Waste Program Division 13 Regulations* (*ADEM Division 13 Regulations*) for solid waste facilities.

1.1 Purpose and Objectives

The purpose of this GWMR is to describe the activities performed and present the results of the March 2022 groundwater monitoring event. The objectives of the March 2022 groundwater monitoring event and this GWMR include the following:

- Summarize data from previous monitoring events and present analytical results for the March 2022 monitoring event.
- Evaluate the groundwater analytical data and demonstrate compliance with the permit and the *ADEM Division 13 Regulations*.

1.2 Report Organization

Section 2.0 of this report presents a summary of the background information including the parcel location, description, and physical characteristics. Section 3.0 presents a summary of the March 2022 sampling activities. Section 4.0 describes the results of the March 2022 sampling activities. Section 5.0 presents the evaluation of the groundwater data. Section 6.0 presents the conclusions and recommendations. Section 7.0 provides the references cited in this report. Tables and figures follow the text and the appendices are organized as follow:

Appendix A Groundwater Sample Collection Logs, March 2022
Appendix B Chains-of-Custody, March 2022
Appendix C Data Validation Summary and Laboratory Report
Appendix D Statistical Evaluation of Metals Data, March 2022

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2.0 BACKGROUND

This section provides background information about the Site. Parts of this section are adapted from the *Final Revision 1 Engineering Evaluation/Cost Analysis Landfills and Fill Areas, Landfills 1, 2, 4, and Industrial Landfill, Parcels 78(6), 79(6), 81(5), 175(5), McClellan, Anniston, Alabama* (*Final EE/CA*) (MES, 2006) and the *Draft Final Site Investigation and Fill Area Definition Report, Parcels 78(6), 79(6), 80(6), 81(5), 175(5), 230(7), 227(7), 126(7), 229(7), 231(7), 233(7), and 82(7), Fort McClellan, Calhoun County, Alabama, Revision 1* (*Fill Area Definition Report*) (IT Corporation [IT], 2002a).

2.1 Site Location and Description

Landfill 4 operated as the main sanitary landfill for McClellan from 1967 to 1994. The unlined landfill used trench and fill as the method of disposal and was not equipped with a leachate collection system. The landfill reportedly received the McClellan household garbage, construction and demolition debris, oil-contaminated soil, and dead animals. One pound of waste Diazinon dust (pesticide) was also reportedly disposed at Landfill 4 and the Industrial Landfill (IT, 2002).

The landfill was closed in April 1994 because of changes in the permit requirements governing sanitary landfills, including that sanitary landfills be lined. A temporary permit was issued to the Army in 1993 to dispose of industrial and construction debris at the landfill. A permanent industrial landfill permit (Permit Number 08-02) allowing the disposal of waste with a 30-ton per day limit in a previously unused section of the landfill property was issued in October 1995. This permit was transferred from the Army to the MDA (MES, 2006). The permit was renewed by the MDA on January 5, 2016, effective January 9, 2016, and expired on January 8, 2021. The total permitted disposal area for Permit 08-02 was approximately 53 acres. The permit for the Industrial Landfill allowed 3,204 cubic yards per day of disposal. The active disposal area for industrial and construction debris at the Industrial Landfill was approximately 12-13 acres. The MDA completed capping and closing of the landfill in March 2022 and no longer accepts waste for disposal.

2.2 Site Characterization

This subsection summarizes the physical setting, geology and hydrogeology at the Site.

2.2.1 Physical Setting

All of Landfill 4, including the Industrial Landfill, is covered with an engineered, low permeability clay cover that meets the landfill closure requirements. Landfill 4 is devoid of natural vegetation, but is currently covered with seeded grasses and vegetation. A concrete-lined drainage swale runs from west to east across most of the Site. The Site is bound on the north by mixed coniferous/deciduous forest and the Fill Area Northwest of Reilly Airfield, Parcel 229(7) (FANWR), on the east by mixed coniferous/deciduous forest, on the south by a soil borrow area, on the west by a road, and on the northwest by Landfill 3, Parcel 80(6) (Landfill 3). Much of the

perimeter of the Site is enclosed by chain-link fence that restricts access to the Site (MES, 2006).

Surface water generally follows the sloping surface topography collecting in drainage ditches on the south, east and north sides of the landfill before converging into an unnamed creek that flows toward the northwest. Surface water is also diverted through a concrete ditch that runs through the center of the landfill toward the east and converging into the unnamed creek.

2.2.2 Site Geology and Hydrogeology

The bedrock mapped beneath the Site is the Cambrian Conasauga Formation. The Cambrian Conasauga Formation is comprised of dark gray, finely to coarsely crystalline medium- to thick-bedded dolomite with minor shale and chert (IT, 2002). A geologic map of the Site is presented in Figure 2-1.

Underlying soils at the Site include the Cumberland loam, Purdy silt loam, Tyler silt loam, and the Anniston Gravelly loam. These soils were derived mainly from limestone, shale, and sandstone and are classified generally as silts to silty and clayey sands. The color of these soils are generally brown to dark brown with lesser amount of reddish-brown, grayish-brown, and yellowish-brown (IT, 2002).

The topography of the combined Landfill 4 and Industrial Landfill area is relatively flat of which a portion is within the floodplain of Cave Creek (Figure 2-2). Groundwater flow has generally been to the northwest and north (MES, 2006). Static groundwater levels measured during the historical monitoring events at the Site are presented in Table 4-1. See Section 4.1 for further details concerning groundwater elevations, groundwater flow, and gradients at the Site.

2.3 Groundwater Monitoring System

Five monitoring wells (LF4-MW1, LF4-MW2, LF4-MW3, LF4-MW4, and LF4-MW5) were installed at the Site in 1994 and completed in the residuum zone, i.e., first zone of saturation. None of the borings for these wells penetrated fill material (IT, 2002). A monitoring well construction summary is included in Table 2-1. Figure 1-2 shows the well locations.

Well LF4-MW5 is the upgradient background monitoring well used for the detection of representative background groundwater quality at the Site. Wells LF4-MW1, LF4-MW2, LF4-MW3, and LF4-MW4 are the downgradient monitoring wells used for the detection of representative groundwater quality at the Site.

2.4 Groundwater Monitoring History

The groundwater monitoring history of the Site including detection monitoring and assessment monitoring sampling events are summarized in this section.

2.4.1 Previous Monitoring Events

Semi-annual groundwater monitoring was conducted at the Site by the Army, pursuant to the

permit, from March 2000 through September 2003. The MDA assumed the semi-annual groundwater monitoring at the Site in March 2004 and has continued the long-term groundwater monitoring to the present. The MDA conducted a detection monitoring program at the Site from March 2004 through September 2009 and an assessment monitoring program from March 2010 to the present. A summary of the historical detected volatile organic compound (VOC) and metals data are presented in Tables 4-4 and 4-5 (see Section 4.4 for details concerning Tables 4-4 and 4-5). A summary of the Detection Monitoring and Assessment Monitoring programs performed at the Site is described below.

2.4.2 Detection Monitoring Program

During the detection monitoring events from March 2004 through September 2009, groundwater samples were collected at wells LF4-MW1, LF4-MW2, LF4-MW3, LF4-MW4, and LF4-MW5 and analyzed for the constituents listed in *Appendix I* of ADEM Admin. Code r 335-13-4-27 of the *ADEM Division 13 Regulations* (ADEM, 2016). The *Appendix I* constituents are shown in Table 2-2 of this report.

The detection monitoring data at the Site demonstrated compliance with the permit and *ADEM Division 13 Regulations* until the March 2009 sampling event when a SSI occurred for zinc in downgradient well LF4-MW2. Please see Section 5.1 for details concerning the statistical analysis performed on the semi-annual groundwater monitoring results collected. Pursuant to subparagraph (2)(n) of Rule 335-13-4-27, a letter was sent by the MDA informing ADEM of the SSI. Because this was the first SSI occurrence, and because the groundwater sample with the SSI showed a high level of turbidity (145 NTU), the detection monitoring program continued with the September 2009 monitoring event to confirm whether the SSI from the March 2009 monitoring event was an isolated occurrence, a result of an error in sampling or analysis, or due to natural variation in groundwater quality. The September 2009 sampling round confirmed the SSI occurrence of zinc in downgradient well LF4-MW2. In accordance with Rule 335-13-4-27 subparagraph (3)(c) of the *ADEM Division 13 Regulations*, an assessment monitoring program was initiated pursuant to subparagraphs (4)(a) through (4)(j).

2.4.3 Assessment Monitoring Program

An Assessment Monitoring program was initiated during the March 2010 groundwater monitoring event and conducted in accordance with the permit and *ADEM Division 13 Regulations*, which continues to the present.

Pursuant to subparagraph (4)(b)1 of the *ADEM Division 13 Regulations*, during an Assessment Monitoring program groundwater must be sampled and analyzed for the constituents listed in *Appendix II* of the *ADEM Division 13 Regulations*. No additional constituents from the *Appendix II* list that were not already on the *Appendix I* list were detected during previous groundwater sampling events performed by the Army and the MDA, as indicated in the *Final EE/CA* (MES, 2006). Therefore, during the assessment monitoring March 2010 and September 2010 events at the Industrial Landfill, the *Appendix I* list of constituents were sampled and analyzed in lieu of the *Appendix II* list, as allowed by subparagraph (4)(b)2 of the *ADEM Division 13 Regulations*.

For the March 2010 and September 2010 groundwater monitoring events, metal constituents cobalt, nickel, and zinc were determined to be SSIs in well LF4-MW2. Although there were some VOC detections, no organic constituents were considered to be SSIs during any of the previous monitoring events at the Site. Because historical statistical analyses showed SSIs for only metal constituents, only metals were sampled and analyzed during the March 2011 monitoring event. The concentrations of constituents detected in groundwater samples collected during past and current monitoring events are presented in Tables 4-4 (VOCs) and 4-5 (metals).

In March 2011 ADEM issued the *Alabama Groundwater Monitoring Reporting Guidance for Solid Waste Facilities* (*AGMRG*) (ADEM, 2011) to be used in conjunction with the *ADEM Division 13 Regulations*. Subparagraph 2.2.10.3.7 of the *AGMRG* stated "the detection of any organic constituents is considered an SSI". Because historical sampling events showed metal and VOC detections in groundwater at the Site, in a letter dated August 5, 2011 the MDA proposed to analyze groundwater samples collected at the Site under the Assessment Monitoring program for the *Appendix I* list of constituents (Table 2-2), which include metals and VOCs, starting with the September 2011 monitoring event. The MDA received concurrence from ADEM in a letter dated August 16, 2011 to use the *Appendix I* list of constituents (Table 2-2) for the Assessment Monitoring program at the Site.

In a letter dated September 13, 2016, ADEM issued comments on the March 2016 GWMR requesting MDA conduct an assessment of corrective measures (ACM) in accordance with ADEM Admin. Code r. 335-13-4-.27(4)(g) related to the detection of cobalt in LF4-MW2 and trichloroethene in LF4-MW4 and include surface water samples from the stream downgradient of LF4-MW4. In December 2016, MDA responded to ADEM comments and explained the stream is an ephemeral feature that channels storm water around the site and does not influence groundwater flow to which ADEM concurred on April 20, 2017. MDA also collected three surface water samples in January 2017 for *Appendix I* constituents and all were non-detect for chlorinated VOCs. Cobalt was detected at 11.6 µg/L which is well below the site-wide surface water risk-based target level (RBTL) of 30 µg/L. These findings were provided to ADEM in a letter dated February 8, 2017.

In the December 2016 response to ADEM comments, MDA proposed an alternate groundwater protection standard (GWPS) for cobalt of 5400 µg/L based on a site-specific risk-based evaluation of exposure pathways. ADEM responded in a letter dated April 20, 2017 that the proposed 5400 ug/L GWPS was not applicable and cobalt concentration should be compared to the highest detected concentration in background well LF4-MW5. The highest detected cobalt concentration in LF4-MW5 is 10.5 µg/L sampled on September 21, 2010. ADEM also requested that MDA comply with ADEM Admin. Code r. 335-13-4-.27(4)(g) and conduct an ACM. In June 2017, MDA responded to ADEM and summarized the ACM conducted to date and existing land use controls and proposed that natural attenuation be allowed to continue and the site continue to be monitored on a semi-annual basis under the assessment monitoring program. ADEM concurred with MDA's proposal in June 2017.

3.0 SUMMARY OF MARCH 2022 ACTIVITIES

During the March 2022 monitoring event, groundwater samples were collected and analyzed for the parameters on the *Appendix I* of ADEM Admin. Code r 335-13-4-27 of the *ADEM Division 13 Regulations* (Table 2-2). The March 2022 monitoring event was performed under the Assessment Monitoring program, discussed in Section 2.4.3.

To meet the recommended actions outlined in the permit, *ADEM Division 13 Regulations*, and applicable United States Environmental Protection Agency (EPA) guidance, the following activities were performed during the March 2022 monitoring event:

- Measured groundwater levels in the monitoring wells.
- Collected groundwater samples from five monitoring wells.
- Analyzed the groundwater samples for the constituents listed in *Appendix I* of Code Rule 335-13-4-27 of the *ADEM Division 13 Regulations* (Table 2-2) by Methods SW8260B (VOCs), SW6020B (Inductively Coupled Plasma-Atomic Emission Spectrometry [ICP-MS metals], and SW7470A (mercury).
- Performed statistical analysis on the metals results (described in Section 5.0).

3.1 Groundwater Sampling

To address the issues with high turbidity concentrations in the groundwater at the Site, the groundwater samples are collected from each well using the sampling technique described below.

- The day before groundwater samples are to be collected, water levels are measured to the nearest hundredth of a foot using a Solinst™ water level indicator and recorded. Total well depths are also measured and recorded.
- After the water levels are taken, the wells are purged and allowed to recharge overnight, approximately 24 hours before sampling.
- The following day, groundwater levels, chemical and physical field screening parameters including pH, conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), total dissolved solids (TDS), turbidity, and temperature are measured using a YSI 556 MPS Water Quality Meter. The field parameters are measured 24 hours after the wells are purged and before sampling.
- Using disposable bailers, groundwater samples are collected directly into laboratory-supplied sample bottles with the appropriate preservatives.

Groundwater samples were collected on March 2, 2022 from five residuum monitoring wells, LF4-MW1 through LF4-MW5. The sample containers were labeled, placed in a chilled cooler and shipped under chain-of-custody procedures to TestAmerica in Savannah, Georgia. The groundwater samples for monitoring wells LF4-MW1 through LF4-MW5 were analyzed for VOCs and metals. Figure 1-2 shows the groundwater sampling locations. The groundwater sample collection logs are provided in Appendix A and the chain-of-custody forms for the groundwater samples collected during the March 2022 monitoring event are provided in Appendix B.

3.2 Data Quality Review

MES reviewed the analytical data for the groundwater samples collected during the March 2022 monitoring event. The data quality review was performed in accordance with the *Quality Assurance Plan (QAP)* in *Appendix A* of the *Final Installation-Wide Sampling and Analysis Plan* (MES, 2013) to assess compliance with quality assurance objectives, and to assess hard copy and electronic deliverable consistency and integrity. Appendix C presents the analytical data collected during the March 2022 monitoring event. The Data Validation Summary (DVS) for the March 2022 groundwater samples is included in Appendix C. The laboratory data forms showing the validated results are also included in Appendix C.

4.0 RESULTS OF MARCH 2022 GROUNDWATER SAMPLING

This section discusses the results of the March 2022 groundwater monitoring event at the Site.

4.1 Groundwater Levels

Groundwater elevations measured during the March 2022 groundwater monitoring event are presented in Table 4-1. Groundwater elevations from previous monitoring events are also shown in Table 4-1. Figure 4-1 shows groundwater elevations and potentiometric surface contours for the residuum monitoring wells based on the March 2022 water level measurements. As indicated in Figure 4-1, groundwater flowed in a north and northwesterly direction.

To further aid in assessing groundwater flow at the Site, horizontal hydraulic gradients were calculated using the groundwater data collected during the March 2022 monitoring event, presented in Table 4-2. The horizontal hydraulic gradients were low over the Site, ranging from 0.004 feet per foot (ft/ft) to 0.014 ft/ft. Site-wide horizontal hydraulic gradients averaged 0.011 ft/ft.

Based on the groundwater flow direction (Figure 4-1) and horizontal hydraulic gradients (Table 4-2), the groundwater monitoring well network at the Site is functioning as intended and is sufficient for determining the facility's impact on the quality of groundwater in the first zone of saturation at the Site.

4.2 Analytical Data and Data Quality Review

The analytical data for the March 2022 samples is provided in Appendix C. Groundwater samples were analyzed for VOCs and metals. MES reviewed the analytical data in accordance with the *QAP* (MES, 2013). 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. A more detailed discussion of the analytical results can be found in the DVS provided in Appendix C.

4.3 Groundwater Field Parameter Results

Field screening parameters, including pH, conductivity, DO, ORP, TDS, turbidity, and temperature, and other sampling data (e.g., groundwater depths, well depths, sampling conditions, etc.) were recorded on the Groundwater Sampling Logs included in Appendix A. The field parameters for the groundwater samples are summarized in Table 4-3.

4.4 Summary of Groundwater Analytical Results

Groundwater samples were collected from five monitoring wells during the March 2022 monitoring event and analyzed for VOCs and metals. This section describes the analytical results for the groundwater samples.

4.4.1 Volatile Organic Compounds Analytical Results

Cis-1,2-dichloroethene, trans-1,2-dichloroethene, and trichloroethene were detected in well LF4-MW4 during the March 2022 sampling event. The analytical results for VOCs including historical data are presented in Table 4-4. Review of the current and historical analytical results indicate concentrations detected were all within the range of previous detections for LF4-MW4.

4.4.2 Metals Analytical Results

The analytical results for metals in the groundwater samples during the March 2022 monitoring event are presented in Table 4-5. Ten of the 16 target metals, arsenic, barium, beryllium, cadmium, cobalt, copper, lead, nickel, vanadium, and zinc were detected in groundwater samples from at least one of the monitoring wells during March 2022 monitoring event. Antimony, chromium, mercury, selenium, silver, and thallium were not detected during the March 2022 monitoring event. All reporting limits (RLs) and method detection limits (MDLs) were below the MCL.

To simplify the presentation of historical analytical results and facilitate identification of downward or upward trends in metal concentrations, analytical results from previous sampling events are also presented in Table 4-5. Further details concerning trends in metal concentrations over time are described in Section 5.0.

5.0 EVALUATION OF GROUNDWATER ANALYTICAL DATA

The analytical results for groundwater collected during the March 2022 groundwater monitoring event were evaluated to determine whether there was an SSI over background groundwater quality at the Site.

5.1 Evaluation of Groundwater VOCs Quality Data

Detections of organic constituents are considered SSIs, as per the *Alabama Groundwater Monitoring Report Guidance for Solid Waste Facilities* (2011). During the March 2022 groundwater sampling event, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and trichloroethene were detected. All VOCs detected are considered SSIs. Concentrations of cis-1,2-dichloroethene and trans-1,2-dichloroethene were below MCLs. Trichloroethene was above the MCL but consistent with historical results.

5.2 Evaluation of Groundwater Metals Quality Data

To evaluate whether there were any SSI occurrences for metal constituents in groundwater at the Site a statistical analysis was performed on the metals data using control charts in accordance with ADEM Admin. Code r 335-13-4-27, subparagraph (2) of the *ADEM Division 13 Regulations* and applicable United States Environmental Protection Agency (EPA) guidance.

Control charts are used to monitor the inherent statistical variation of the data collected within a single well. Because intrawell comparisons involve a single well, significant changes in the level of contamination in a well cannot be attributed to spatial and/or hydrogeological differences between wells. Intrawell control charts employ historical measurements from a compliance point well as background. Control charts are mostly appropriate for analytes with a reasonably high detection frequency in monitoring wells. Control charts allow data from a well to be viewed graphically over time (EPA, 2009).

The combined Shewhart Cumulative Sums (CUSUMs) control charts assesses two statistical quantities at every sampling event, both the new individual measurement and the CUSUM of past and current measurements. The Shewhart portion compares compliance measurements against a background limit. The CUSUM portion sequentially analyzes each new measurement with prior compliance data. Both portions are used to assess the similarity of compliance data to background. The baseline parameters for the chart, estimates of the mean and standard deviation, are obtained from historical background data collected from the specific compliance well. These baseline measurements characterize the expected background concentrations at compliance wells. As future compliance observations are collected, the baseline parameters are used to standardize the newly gathered data (EPA, 2009).

The combined CUSUM control chart is declared out-of-control in one of two ways. First, the standardized means (Z_i) computed at each sampling period may cross the Shewhart control limit (SCL). Such a change signifies a rapid increase in well concentration levels among the most recent sample data. Second, the CUSUM of the standardized means (Z_i) may become too large, crossing the "decision internal value" (h). Crossing the h threshold can mean either a sudden rise

in concentration levels or a gradual increase over a longer span of time. A gradual increase or trend is particularly indicated if the CUSUM crosses its threshold but the standardized mean Z_i does not. The reason for this is that several consecutive small increases in Z_i will not trigger the SCL threshold but may trigger the CUSUM threshold. As such, the control chart can indicate the onset of either sudden or gradual contamination at the compliance point. Three parameters are necessary to construct a CUSUM control chart, a reference value (k), h, and SCL. The combination of k = 1, h = 5 and SCL = 4.5 was determined to be the most appropriate for the application of CUSUM control charts for groundwater monitoring (EPA, 2009).

The CUSUM control charts are constructed with respect to a log scale. The lognormal distribution is a frequently used model in groundwater statistics and is generally more appropriate as a default statistical model than the normal distribution (EPA, 2009). The log-mean and the log-standard deviation represent the sample mean and standard deviation computed using log-transformed values instead of the raw measurements.

5.2.1 Metals Background Groundwater Quality Data

For the statistical analyses performed on the March 2004 to March 2007 semi-annual groundwater sampling events, the results from the March 2000 to the September 2003 sampling events were used for the background data. However, several metals had only one or no background results out of the eight sampling events from March 2000 to September 2003. As of the September 2007 groundwater sampling event, four additional metals (cobalt, copper, nickel, and zinc) had 9 sampling events and at least one groundwater sample with nondetects less than 50%. However, these metals only had one background result out of the eight sampling events from March 2000 to September 2003. ADEM Admin. Code r 335-13-4-27, subparagraphs (3)(b) and (4)(b) of the *ADEM Division 13 Regulations* and the permit requires that a minimum of four independent samples from each well be used to establish background. In addition, the *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities: Unified Guidance* (EPA, 2009) recommends that if control charts remain "in control" for a long period of time the baseline parameters should be updated to include more recent background data.

A two-sample t-test was performed comparing the March 2004 through September 2005 data with the previous background data set from March 2000 through September 2003 data to ensure there were no significant differences at the 95 percent confidence level between the two data sets. Details of the t-test are presented in the *Statistical Analysis of Semi-Annual Groundwater Sampling Results September 2008 Groundwater Sampling Event, Fort McClellan Industrial Landfill (Permit No. 08-02), Ft. McClellan, Anniston, Calhoun County, Alabama* (MDA, 2008). The t-tests showed there were no significant differences at the 95 percent confidence level between the March 2004 to September 2005 data set and the March 2000 to September 2003 data set. Therefore, the data from the twelve sampling events from March 2000 to September 2005 were used for the background during the statistical analysis of metal constituents in wells that had 9 or more sampling events and percentages of nondetects less than 50%, starting with the September 2007 sampling event and continuing to the present.

5.2.2 March 2022 Metals Groundwater Quality Data

Statistical analysis was performed for the March 2022 groundwater metals data using CUSUM control charts in accordance with ADEM Admin. Code r 335-13-4-27, subparagraph (2) of the *ADEM Division 13 Regulations* and applicable EPA guidance. Because control charts must be constructed from a data set large enough to characterize the behavior of a specific well and because control charts do not efficiently handle data sets with a significant fraction of nondetects (EPA, 2009), control charts were developed for those metal constituents in wells that had nine (9) or more sampling events and the percentage of nondetects was less than 50%. The results of the statistical analysis performed for the March 2022 groundwater metals data are provided in Appendix D. Attachment D1 summarizes the number of analyses and percentage of nondetects. Attachment D2 provides the calculations for the CUSUMs and Attachment D3 provides the CUSUM control charts for the statistical analyses.

The CUSUMs for cobalt (14.78) and nickel (31.18) in well LF4-MW1; and cobalt (42.12), nickel (31.89), and zinc (116.8) in well LF4-MW2 were above the threshold value of 5 and are therefore considered SSI occurrences.

5.3 SSI Occurrences in Groundwater for the March Sampling Event

Table 5-1 presents a summary of the SSI occurrences for the March 2022 groundwater sampling event. The concentrations of the SSI constituents were compared to the groundwater protection standards (Table 5-1). In accordance with Code Rule 335-13-4-27, subparagraph (4)(h), the maximum contaminant levels (MCLs) were used as the groundwater protection standards for the SSIs. For constituents for which MCLs have not been promulgated (cobalt), the background well concentrations were used as the groundwater protection standards, as per ADEM Admin. Code r 335-13-4-27, subparagraph (4)(h)2.

SSI occurrences of nickel, zinc, cis-1,2-dichloroethene and trans-1,2-dichloroethene were all below the groundwater protection standards or MCLs. Trichloroethene was above the MCL but consistent with historical results. The concentrations for metal SSI constituent cobalt (34 µg/L) in LF4-MW1 and (71 µg/L) in well LF4-MW2, were greater than the background concentration in LF4-MW5 (10.5 µg/L).

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6.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This section summarizes the activities performed and the results of the March 2022 monitoring event, and provides conclusions and recommendations based on the results of the groundwater monitoring activities.

6.1 Summary of Activities and Results

The March 2022 monitoring event was performed under the Assessment Monitoring program. Groundwater samples were collected from five residuum monitoring wells at the Site on March 2, 2022. The groundwater samples were analyzed for the constituents listed in *Appendix I* of ADEM Admin. Code r 335-13-4-27 of the *ADEM Division 13 Regulations* (Table 2-2).

Groundwater elevations showed groundwater at the Site flowed in a north and northwesterly direction. The horizontal hydraulic gradients were low over the Site, ranging from 0.004 ft/ft to 0.014 ft/ft.

During the March 2022 monitoring event, three VOCs in well LF4-MW4 were detected and considered SSIs. To evaluate whether there were any SSI occurrences for metal constituents in groundwater at the Site a statistical analysis was performed on the metals data using CUSUM control charts in accordance with ADEM Admin. Code r 335-13-4-27, subparagraph (2) of the *ADEM Division 13 Regulations* and applicable EPA guidance. The statistical analysis showed SSI occurrences for cobalt and nickel in well LF4-MW1; and cobalt, nickel and zinc in well LF4-MW2 during March 2022 groundwater monitoring event. Concentrations were consistent with historical data.

The concentrations of the SSI constituents were compared to the groundwater protection standards for the Site (Table 5-1). MCLs, as listed in the *ADEM Division 7 Regulations*, were used as the groundwater protection standards for the SSIs. Because there is no promulgated MCL for cobalt, the concentration for the cobalt SSI in wells were compared to the cobalt concentration for background well LF4-MW5.

6.2 Conclusions and Recommendations

The concentrations for metal SSI constituent cobalt (34 µg/L) in LF4-MW1 and (71 µg/L) in well LF4-MW2, were greater than the groundwater protection standard or background concentration (10.5 µg/L) and trichloroethene (20 µg/L) in well LF4-MW4 was greater than the MCL (5 µg/L). All other SSI constituents were below groundwater protection standards. MDA recommends that natural attenuation and land use controls be allowed to continue, and the site continue to be monitored on a semi-annual basis under the assessment monitoring program.

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7.0 REFERENCES

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8.0 Professional Groundwater Scientist Certification

I certify that I currently hold an active license in the State of Alabama and the groundwater monitoring report activities undertaken by Matrix Environmental Services, LLC. as described in this report were performed in general accordance with the requirements of the Solid Waste Disposal Facility Permit No. 08-02 and Alabama Department of Environmental Management Land Division Solid Waste Program Division 13 Regulations (ADEM Division 13 Regulations).

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Alabama P.G. # 965

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Tables

Table 4-1: Groundwater Elevations
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Measurement Date	Well Depth (ft BTOC)	Depth to Water (ft BTOC)	Groundwater Elevation (ft msl)
LF4-MW1	3/2/22	42.5	15.65	724.14
LF4-MW2	3/2/22	40.3	17.63	720.87
LF4-MW3	3/2/22	34.2	11.33	728.45
LF4-MW4	3/2/22	26.8	4.90	738.45
LF4-MW5	3/2/22	34.6	9.97	743.35

ft BTOC = feet below top of casing
ft msl = feet above mean sea level.

Table 4-2: Horizontal Hydraulic Gradients, March 2022
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Upgradient Well	Groundwater Elevation	Downgradient Well	Groundwater Elevation	Estimated Groundwater Flow Direction	Horizontal Distance	Groundwater Elevation Difference (feet)	Horizontal Gradient (ft/ft)
LF4-MW5	743.35	LF4-MW1	724.14	north	1601	19.21	0.012
LF4-MW4	738.45	LF4-MW3	728.45	northwest	724	10.00	0.014
LF4-MW3	728.45	LF4-MW2	720.87	west	524	7.58	0.014
LF4-MW1	724.14	LF4-MW2	720.87	northeast	890	3.27	0.004
					Average Horizontal Gradient:		**0.011**

Notes:
Elevations in feet above mean sea level.
ft/ft = feet per foot

Table 4-3: Groundwater Field Parameters, March 2022
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Sample Location	Sample Date	Temperature (^{o}C)	Conductivity (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH
LF4-MW1	3/2/22	17.2	138	2.2	117	0.09	38	4.8
LF4-MW2	3/2/22	17.8	354	1.3	22	0.23	41	6.0
LF4-MW3	3/2/22	17.6	80	2.8	168	0.05	40	4.9
LF4-MW4	3/2/22	15.5	765	3.4	-14	0.50	71	7.0
LF4-MW5	3/2/22	16.0	50	3.1	140	0.03	51	5.3

Notes:

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

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW1	3/29/00	< 0.5	< 0.5	< 5	< 0.5	< 5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
LF4-MW1	9/26/00	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW1	4/24/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW1	9/28/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	0.7	1.9	< 0.5	< 0.5	--
LF4-MW1	4/2/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW1	9/18/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW1	3/5/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW1	9/26/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW1	3/31/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	9/29/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	3/16/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	9/28/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	3/13/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	9/13/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	3/6/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	9/24/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	3/26/08	<1	<1	< 10 (UJC)	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	9/16/08	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/17/09	<1	<1	8.4 J	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/17/09	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/17/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/21/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/8/11	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/14/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/6/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/5/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/11/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/5/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/4/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/13/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/16/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/16/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/21/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/15/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/8/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW1	3/8/18	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/11/18	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	1.1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	3/7/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	9/5/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	3/12/20	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	9/15/20	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	3/4/21	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	3/2/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	3/29/00	< 0.5	< 0.5	< 5	< 0.5	< 5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
LF4-MW2	9/26/00	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW2	4/24/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW2	9/28/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	0.6	2	< 0.5	< 0.5	--
LF4-MW2	4/2/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW2	9/18/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW2	3/5/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW2	9/26/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW2	3/31/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	9/29/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	3/16/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	9/28/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	3/13/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	9/13/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	3/6/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	9/24/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	3/26/08	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	9/16/08	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/17/09	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/17/09	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/17/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/21/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/8/11	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/14/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/6/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/5/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/11/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW2	3/5/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/4/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/13/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/16/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/16/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/21/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/15/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/8/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/8/18	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/11/18	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	3/7/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	9/5/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	3/12/20	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	9/15/20	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	3/4/21	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	3/2/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW3	3/29/00	< 0.5	< 0.5	< 5	< 0.5	< 5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
LF4-MW3	9/26/00	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	4/24/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	9/28/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	4/2/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	9/18/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	3/5/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	9/26/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	3/31/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	9/29/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	3/16/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	9/29/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	3/13/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	9/14/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	3/6/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	9/25/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	3/26/08	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	9/16/08	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/17/09	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW3	9/17/09	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/17/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/21/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/8/11	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/14/12	<1	<1	< 10	<1	<1	<1	<2	0.46 J	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/6/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/5/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/11/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/5/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/4/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/13/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/16/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/16/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/21/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/15/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/8/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/8/18	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/11/18	< 1	< 1	< 10 (UJL)	< 1	< 2	< 1	< 5 (UJL)	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW3	3/7/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW3	9/5/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1 (UJM)	< 1	< 1	< 1	< 1	< 1
LF4-MW3	3/12/20	< 1 H (UJH)	< 1 (JH)	< 10 (JH)	< 1 (JH)	< 2 (JH)	< 1 (JH)	< 5 (JH)	< 1 (JH)	< 1 (JH)	< 1 (JH)	< 1 (JH)	< 1 (JH)	< 1 (JH)	< 1
LF4-MW3	9/15/20	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW3	3/4/21	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW3	3/2/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW4	3/29/00	< 0.5	< 0.5	< 5	< 0.5	< 5	3.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
LF4-MW4	9/26/00	< 0.5	--	--	< 0.5	--	4.1	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW4	4/24/01	< 0.5	--	--	< 0.5	--	2.6	--	--	--	< 0.5	< 0.5	< 0.5	10.4	--
LF4-MW4	9/28/01	< 0.5	--	--	< 0.5	--	7.8	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW4	4/2/02	< 0.5	--	--	< 0.5	--	5.6	--	--	--	< 0.5	< 0.5	< 0.5	6	--
LF4-MW4	9/18/02	< 0.5	--	--	< 0.5	--	6.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW4	3/5/03	< 0.5	--	--	< 0.5	--	1.9	--	--	--	< 0.5	< 0.5	< 0.5	7.2	--
LF4-MW4	9/26/03	< 0.5	--	--	< 0.5	--	7.4	--	--	--	< 0.5	< 0.5	< 0.5	0.6	--
LF4-MW4	3/31/04	<1	<1	< 10	<1	<1	3.7	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	9/29/04	<1	0.99 J	< 10	0.5 J	<1	8.5	0.35 J	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	3/15/05	<1	<1	2.9 J	<1	<1	1.4	<2	<1	<1	<1	<1	<1	<1	<1

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW4	9/29/05	<1	0.36 J	< 10	<1	<1	4.1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	3/14/06	<1	<1	< 10	<1	<1	0.82 J	<2	<1	1.3	<1	<1	<1	7	<1
LF4-MW4	9/14/06	<1	<1	< 10	<1	<1	1.7	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	3/7/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	9/25/07	<1	0.7 J	< 10	0.37 J	2.8	13	0.25 J	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	3/26/08	<1	<1	< 10 (UJC)	<1	<1	1.9	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	9/17/08	<1	0.93 J	< 10	0.42 J	< 1 (UJCL)	15	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	3/17/09	<1	0.39 J	< 10	<1	<1	4.9	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	9/21/09	<1	0.24 J	< 10	<1	<1	3.6	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	3/17/10	0.22 J	<1	< 10	<1	<1	2.1	<2	<1	16	<1	<1	2.4	61	0.21 J
LF4-MW4	9/21/10	<1	0.53 J	< 10	<1	<1	7.6	<2	<1	<1	<1	<1	<1	0.22 J	< 0.8
LF4-MW4	9/8/11	<1	0.54 J	< 10	<1	<1	7.5	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	3/14/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	9/6/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	3/5/13	<1	0.23 J	< 10	<1	<1	2.8	<2	<1	16	<1	<1	1.6	40	< 0.8
LF4-MW4	9/11/13	<1	0.5 J	< 10	<1	<1	7.7	<2	<1	2.9	<1	<1	<1	1.7	< 0.8
LF4-MW4	3/5/14	<1	0.28 J	< 10	<1	<1	3.7	<2	<1	19	<1	<1	1.3	17	0.25 J
LF4-MW4	9/4/14	<1	0.21 J	< 10	<1	<1	4.6	<2	<1	7.7	<1	<1	0.45 J	6.1	< 0.8
LF4-MW4	3/13/15	<1	<1	< 10	<1	<1	1.3	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	9/16/15	<1	0.33 J	< 10	<1	<1	5.6	<2	<1	0.38 J	<1	<1	<1	0.33 J	< 0.8
LF4-MW4	3/16/16	<1	<1	< 10	<1	<1	1	<2	<1	30	<1	<1	2.3	32	< 0.8
LF4-MW4	9/21/16	<1	0.31 J	< 10	<1	<1	5	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	3/15/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	9/8/17	<1	<1	< 10	<1	<1	2.6	<2	<1	2.1	<1	<1	<1	1	< 0.8
LF4-MW4	3/8/18	<1	<1	< 10	<1	<1	1.6	<2	<1	20	<1	<1	1.6	27	< 0.8
LF4-MW4	9/11/18	< 1	< 1	< 10	< 1	< 2	3.2	< 5	< 1	0.6 J	< 1	< 1	< 1	< 1	< 1
LF4-MW4	3/7/19	< 1	< 1	< 10	< 1	< 2	1.2	< 5	< 1	35	< 1	< 1	2.8	34	< 1
LF4-MW4	9/5/19	< 1	< 1	< 10	< 1	< 2	3.5	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW4	3/12/20	< 1	< 1	< 10	< 1	< 2	1.3	< 5	< 1	25	< 1	< 1	2.2	30	< 1
LF4-MW4	9/15/20	< 1	< 1	< 10	< 1	< 2	2.4	< 5	< 1	1.5	< 1	< 1	< 1	1.2	< 1.0
LF4-MW4	3/4/21	< 1	< 1	< 10	< 1	< 2	0.71 J	< 5	< 1	2.1	< 1	< 1	< 1	1.9	< 1.0
LF4-MW4	3/2/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	21	< 1	< 1	1.8	20	< 1
LF4-MW5	3/29/00	< 0.5	< 0.5	< 5	< 0.5	< 5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
LF4-MW5	9/26/00	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW5	4/24/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW5	9/28/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW5	4/2/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW5	9/18/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW5	3/5/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW5	9/26/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW5	3/31/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	9/29/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	3/16/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	9/29/05	<1	<1	< 10 (UJI)	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	3/14/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	9/14/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	3/7/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	9/24/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	3/26/08	<1	<1	< 10 (UJC)	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	9/16/08	<1	<1	< 10	<1	< 1 (UJC)	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/18/09	<1	<1	5.5 J	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/17/09	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/17/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/21/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/8/11	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/14/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/6/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	0.67 J	<1	<1	< 0.8
LF4-MW5	3/5/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/11/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/5/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/4/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/13/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/16/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/16/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/21/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/15/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/8/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/8/18	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/11/18	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	3/7/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW5	9/5/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	3/12/20	< 1	< 1	7.0 J	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	9/15/20	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	3/4/21	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	3/2/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Notes:

-- = Not analyzed
< = Indicates the analyte was not detected at the reported quantitation limit shown.
1,1-DCE = 1,1-Dichloroethene
1,4-DCB = 1,4-Dichlorobenzene
c-1,2-DCE = Cis-1,2-Dichloroethene
t-1,2-DCE = Trans-1,2-Dichloroethene
TCE = Trichloroethene
VC = Vinyl Chloride
VOC = Volatile organic compound

Data reported in micrograms per liter (µg/L)
Samples collected 2000 through 2003 by IT Corporation/Shaw Environmental.
Samples collected in 2004 to the present by Matrix Environmental Services, LLC (MES).

Lab Flag:

J = Estimated detection. Concentration is between the method detection limit and the practical quantitation limit.

Validation Flags:

(JH) = Data is estimated. Analytical method holding time exceeded.
(UJC) = Reported quantitation limit is estimated; continuing calibration was outside method-specific control limits.
(UJI) = Reported quantitation limit is estimated; initial calibration was outside method-specific control limits.
(UJL) = Reported quantitation limit is estimated; the LCS and LCSD recoveries were outside laboratory historical control limits.
(UJM) = Reported quantitation limit is estimated; the MS and MSD recoveries were outside laboratory historical control limits.

Table 4-5: Analytical Data for Metals in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
LF4-MW1	3/29/00	< 5.0	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 500	< 5.0	< 3.0	< 1	18	< 5.0	--	< 2.0	< 100	71
LF4-MW1	9/26/00	--	< 5.0	60	--	< 1.0	12.4	--	--	28.4	< 1	--	< 5.0	--	--	--	--
LF4-MW1	4/24/01	--	< 5.0	< 50	--	< 1.0	17.8	--	--	21.1	< 1	--	< 5.0	--	--	--	--
LF4-MW1	9/28/01	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1	--	< 5.0	--	--	--	--
LF4-MW1	4/2/02	--	< 5.0	60	--	< 1.0	< 5.0	--	--	< 3.0	< 1	--	< 5.0	--	--	--	--
LF4-MW1	9/18/02	--	< 5.0	60	--	< 1.0	< 5.0	--	--	3.0	< 1	--	< 5.0	--	--	--	--
LF4-MW1	3/5/03	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1	--	< 5.0	--	--	--	--
LF4-MW1	9/26/03	--	< 5.0	< 50	--	1.0	< 5.0	--	--	13	< 1	--	< 5.0	--	--	--	--
LF4-MW1	3/31/04	< 100	< 10	40.8	< 10	< 10	< 20 (UJ-)	8.81 J (J-)	< 20	2.1 J (J-)	< 0.4	< 20	< 10	< 20 (UJ-)	< 10	< 10	21.6 J
LF4-MW1	9/29/04	< 100	< 10	41.2	< 10	2.31 J	< 20	30.5	< 20	2.25 J (J-)	< 0.4	13.1 J	< 10	5.11 J	< 10	< 10	51.9 J
LF4-MW1	3/16/05	< 100	< 10	29.1	< 10	< 10	< 20	8.6 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	14.4 J
LF4-MW1	9/28/05	< 100	< 10	43.2	< 10	< 10	< 20	14.6 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW1	3/13/06	< 100	< 10	71.5	1.62 J	< 10	7.94 J	17.8 J	15.1 J	< 10	< 0.4	20 U^ (UB)	< 10	20 U^ (UB)	< 10	14.3	83.1 J
LF4-MW1	9/13/06	< 100	5.07 J	41.6	1.13 J	< 10	< 20	8.79 J	10.1 J	2.86 J	< 0.4	12.9 J	< 10	38	< 10	< 10	30.4 J
LF4-MW1	3/6/07	< 100	< 10	40	< 10	< 10	< 20	8.36 J	9.69 J	4.77 J	< 0.4	< 20	< 10	< 20	< 10	< 10	39.5 J
LF4-MW1	9/24/07	< 100	< 10	32.1	< 10	< 10	< 20	9.65 J	6.72 J	3.48 J	< 0.4	10.2 J	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW1	3/26/08	< 100	< 10	50.3	< 10	< 10	< 20	28.6	9.1 J	7.19 J	< 0.4	16.3 J	< 10	< 20	< 10	< 10	41.7 J
LF4-MW1	9/16/08	< 100	< 10	31.3	< 10	< 10	< 20	10.6 J	6.42 J	< 10	< 0.4	10.1 J	< 10	< 20	< 10	< 10	23.9 J
LF4-MW1	3/17/09	< 100	< 10	28.7	< 10	< 10	< 20	19.9 J	4.64 J	< 10	< 0.8	12.3 J	< 10	< 20	6.41 J	< 10	34.9 J
LF4-MW1	9/17/09	< 100	< 10	33.1	< 10	< 10	< 20	14.7 J	4.63 J	3.4 J	< 0.4	11 J	< 10	< 20	< 10	< 10	31.3 J
LF4-MW1	3/17/10	< 100	< 10	32.5	< 10	< 10	< 20	12.6 J	4.74 J	5.31 J	< 0.4	6.78 J	< 10	< 20	< 10	< 10	13.1 J
LF4-MW1	9/21/10	100 U^ (UB)	< 10	29.9	< 10	< 10	< 20	21.7	2.12 J	< 10	< 0.4	13.8 J	< 10	< 20	< 10	< 10	41.2 J
LF4-MW1	3/15/11	< 100	< 10	40.9	< 10	< 10	< 20	26.7	17.8 J	< 10	< 0.4	19.1 J	< 10	< 20	< 10	< 10	65.9 J
LF4-MW1	9/8/11	< 100	< 10	39.1	< 10	< 10	< 20	31.9	< 20	3.17 J	< 2	19.1 J	< 10	< 20	< 10	< 10	52.1 J
LF4-MW1	3/14/12	< 100	< 10	47.2	< 10	< 10	< 20	32.8	< 20	3.18 J	< 0.4	20.5	< 10	< 20	< 10	< 10	52.8 J
LF4-MW1	9/6/12	< 100	< 10	46.6	< 10	< 10	< 20	36.8	< 20	< 10	< 0.4	25.4	< 10	< 20	< 10	< 10	55.9 J
LF4-MW1	3/5/13	< 100	< 10	47.7	< 10	< 10	< 20	33.0	< 20	3.26 J	< 0.4	23.1	< 10	< 20	< 10	< 10	62.9 J
LF4-MW1	9/11/13	< 100	< 10	36.1	< 10	< 10	< 20	22.1	3.11 J	7.36 J	< 0.4	15.4 J	< 10	< 20	< 10	< 10	39.1 J
LF4-MW1	3/5/14	< 1.0	0.258 J	37.1	0.284 J	< 1.0	< 1.0	26.4	2.74	0.223 J	< 0.4	17.7	< 1.0	< 1.0	< 1.0	< 1.0	43.3
LF4-MW1	9/4/14	< 1.0	0.263 J	36.0	0.391 J	< 1.0	0.296 J	24.3	2.71	0.378 J	< 0.4	14.7	< 1.0	< 1.0	< 1.0	< 1.0	39.3
LF4-MW1	3/13/15	< 1.0	0.227 J	43.5	0.289 J	< 1.0	< 1.0	33.6	1.45	0.282 J	< 0.4	19.4	< 1.0	< 1.0	< 1.0	< 1.0	59.5
LF4-MW1	9/16/15	< 1.0	0.513 J	42.3	0.497 J	< 1.0	1.89	25	4.87	3.77	< 0.4	16.4	< 1.0	< 1.0	< 1.0	1.77	40.5
LF4-MW1	3/16/16	< 1.0	< 1.0	42.7	0.275 J	0.201 J	< 1.0	39.5	1.78	0.374 J	< 0.4	22.1	< 1.0	< 1.0	< 1.0	< 1.0	60.5
LF4-MW1	9/21/16	< 1.0	0.314 J	40.7	0.429 J	< 1.0	0.408 J	30.4	2.16	0.722 J	< 0.4	18.3	<1.0	<1.0	<1.0	<1.0	47
LF4-MW1	3/15/17	< 1.0	0.309 J	45.5	0.276 J	0.249 J	0.481 J	33.7	1.31	0.472 J	< 0.4	21.8	<1.0	<1.0	<1.0	<1.0	55.8
LF4-MW1	9/8/17	< 1	0.346 J	44	0.224 J	< 1	0.377 J	37.7	1.33	0.368 J	< 0.4	22.9	< 1	< 1	< 1	< 1	60.9
LF4-MW1	3/8/18	< 1	1.48	44.6	0.207 J	< 1	1.45	27.9	2.23	1.67	< 0.4	18.3	< 1	< 1	< 1	1.58	50.3
LF4-MW1	9/11/18	< 20	< 20	47	0.19 J	< 5	< 10	33	< 20	< 10	< 0.2	23 J	< 20	< 10	6.5 J	1.1 J	73
LF4-MW1	3/7/19	< 5	< 3	47	0.17 J	< 0.5	1.7 J	38	1.7 J	1.7 J	< 0.2	23	< 2.5	< 1	< 1	< 10	58
LF4-MW1	9/5/19	< 5	< 3	44	0.34 J	< 0.5	< 5	34	2.3 J	1.5 J	0.09 J B (UB)	21	< 2.5	< 1	< 1	< 10	150
LF4-MW1	3/12/20	< 5	< 3	46	0.27 J	< 0.5	< 5	35 ^	2.6 J	1.6 J	< 0.20	22	< 2.5	< 1	< 1	< 10	57
LF4-MW1	9/15/20	< 5	< 3	46 B	0.3 J	0.2 J	< 5	38	< 5	< 2.5	< 0.2	23	< 2.5	< 1	< 1	< 10	82
LF4-MW1	3/4/21	< 5	< 3	49	0.35 J	< 0.5	1.9 J	36	3.7 J	2.6	< 0.2	23	< 2.5	< 1	< 1	< 10	86
LF4-MW1	9/9/21	< 5	2.2	55	0.17 J	0.16 J	< 5	37	1.9 J	1 J	< 0.2	21	< 2.5	< 1	< 1	< 10	99

Table 4-5: Analytical Data for Metals in Groundwater
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Well ID	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
LF4-MW1	3/2/22	< 5	2.2 J	52	0.37 J	0.13 J	< 5	34	3.3 J	3	< 0.2	23	< 2.5	< 1	< 1	2.9 J	140
LF4-MW2	3/29/00	< 5.0	< 5.0	96.5	< 1.0	< 1.0	< 5.0	< 500	< 5.0	< 3.0	< 1.0	15	< 5.0	--	< 2.0	< 100	39.5
LF4-MW2	9/26/00	--	< 5.0	120	--	< 1.0	7.4	--	--	23.9	< 1.0	--	< 5.0	--	--	--	--
LF4-MW2	4/24/01	--	< 5.0	100	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW2	9/28/01	--	< 5.0	70	--	< 1.0	5.77	--	--	8.14	< 1.0	--	< 5.0	--	--	--	--
LF4-MW2	4/2/02	--	< 5.0	120	--	< 1.0	< 5.0	--	--	5.69	< 1.0	--	< 5.0	--	--	--	--
LF4-MW2	9/18/02	--	< 5.0	110	--	< 1.0	< 5.0	--	--	3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW2	3/5/03	--	< 5.0	60	--	< 1.0	9.0	--	--	10	< 1.0	--	< 5.0	--	--	--	--
LF4-MW2	9/26/03	--	< 5.0	90	--	1.0	< 5.0	--	--	15	< 1.0	--	< 5.0	--	--	--	--
LF4-MW2	3/31/04	< 100	< 10	87.2	< 10	< 10	< 20 (UJ-)	7.27 J (J-)	< 20	4.27 J (J-)	< 0.4	< 20	< 10	< 20 (UJ-)	< 10	< 10	50.4 J
LF4-MW2	9/29/04	< 100	15.2	227	4.41 J	< 10	30.1	27.2	55.6	78.8	0.188 J	33.2	< 10	< 20	< 10	101	92.9 J
LF4-MW2	3/16/05	< 100	< 10	60.3	< 10	< 10	< 20	8.53 J	< 20	2.71 J	< 0.4	< 20	< 10	< 20	< 10	< 10	65.6 J
LF4-MW2	9/28/05	< 100	< 10	87.7	1.32 J	< 10	< 20	22.0	< 20	< 10	< 0.4	14.8 J	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW2	3/13/06	< 100	< 10	25.4	< 10	< 10	< 20	6.39 J	10.7 J	10.1	< 0.4	< 20	< 10	20 U^ (UB)	< 10	< 10	54.2 J
LF4-MW2	9/13/06	46.2 J	6.34 J	111	2.38 J	< 10	5.68 J	15 J	16.1 J	12.1	< 0.4	18.7 J	< 10	20 U^ (UB)	10 U^ (UB)	18.7	96 J
LF4-MW2	3/6/07	< 100	< 10	94.7	< 10	< 10	< 20	14.6 J	9.44 J	7.79 J	< 0.4	10.8 J	< 10	< 20	< 10	6.95 J	35.5 J
LF4-MW2	9/24/07	< 100	< 10	82	< 10	< 10	< 20	12.7 J	2.59 J	4.45 J	< 0.4	10.8 J	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW2	3/26/08	< 100	< 10	133	< 10	< 10	< 20	9.79 J	4.98 J	7.24 J	< 0.4	9.77 J	< 10	< 20	< 10	< 10	17.1 J
LF4-MW2	9/16/08	< 100	< 10	97.6	< 10	< 10	< 20	19.4 J	4.2 J	5.01 J	< 0.4	14.8 J	< 10	< 20	< 10	< 10	30.6 J
LF4-MW2	3/17/09	< 100	< 10	125	1.06 J	< 10	< 20	96.4	3.4 J	< 10	< 0.8	68.3	< 10	< 20	5.84 J	< 10	501
LF4-MW2	9/17/09	< 100	< 10	93.4	< 10	< 10	< 20	113	3.54 J	< 10	< 0.4	70.1	< 10	< 20	6.54 J	< 10	608
LF4-MW2	3/17/10	< 100	< 10	89.8	2.02 J	1.01 J	3.36 J	87	24.3	9.3 J	< 0.4	64.8	< 10	< 20	< 10	< 10	887
LF4-MW2	9/21/10	< 100	8.3 J	99.7	< 10	< 10	< 20	31.3	< 20	< 10	< 0.4	20.5	< 10	< 20	< 10	< 10	105
LF4-MW2	3/15/11	< 100	< 10	102	< 10	< 10	< 20	23.5	< 20	< 10	< 0.4	14.6 J	< 10	< 20	< 10	< 10	703 J
LF4-MW2	9/8/11	< 100	5.4 J	107	< 10	< 10	< 20	24.6	< 20	< 10	< 2.0	15 J	< 10	< 20	< 10	< 10	73.7 J
LF4-MW2	3/14/12	< 100	< 10	107	< 10	< 10	< 20	19.9 J	< 20	< 10	< 0.4	11.6 J	< 10	< 20	< 10	< 10	54.9 J
LF4-MW2	9/6/12	< 100	< 10	109	< 10	< 10	< 20	18.7 J	4.79 J	< 10	< 0.4	15.4 J	< 10	< 20	< 10	< 10	62.4 J
LF4-MW2	3/5/13	< 100	< 10	128	< 10	< 10	< 20	142	11.8 J	3.74 J	< 0.4	83.4	< 10	< 20	< 10	< 10	733
LF4-MW2	9/11/13	< 100	< 10	75.4	< 10	< 10	< 20	109	< 20	4.31 J	< 0.4	61.6	< 10	< 20	< 10	< 10	410
LF4-MW2	3/5/14	< 1.0	1.38	63	0.8 J	1.08	2.4	175	23.5	2.2	< 0.4	99	0.771 J	< 1.0	< 1.0	< 1.0	1020
LF4-MW2	9/4/14	< 1.0	1.96	57.6	0.11 J	0.303 J	0.667 J	90.6	1.86	0.987 J	< 0.4	44.2	< 1.0	< 1.0	< 1.0	0.639 J	311
LF4-MW2	3/13/15	< 1.0	2.36	73.6	0.709 J	0.715 J	2.04	139	15.1	2.08	< 0.4	75.4	1.04	< 1.0	< 1.0	< 1.0	826
LF4-MW2	9/16/15	< 1.0	4.05	79.1	0.148 J	0.232 J	0.972 J	75.5	2.42	1.9	< 0.4	41.1	< 1.0	< 1.0	< 1.0	0.8 J	281
LF4-MW2	3/16/16	< 1.0	2.46	58.8	0.345 J	0.5 J	1.83	92.8	10.4	4.16	< 0.4	53.8	< 1.0	< 1.0	< 1.0	1.4	434
LF4-MW2	9/21/16	<1.0	3.33	69.7	0.14 J	0.282 J	1	91.7	2.54	1.8	< 0.4	49.1	<1.0	<1.0	<1.0	0.895 J	389
LF4-MW2	3/15/17	<1.0	2.85	66.5	0.119 J	<1.0	0.854 J	55.7	2.31	2.24	< 0.4	27.5	<1.0	<1.0	<1.0	1.4	175
LF4-MW2	9/8/17	< 1	5.43	87.3	0.115 J	< 1	1.22	51.3	2.11	1.93	< 0.4	25.3	< 1	< 1	< 1	1.96	180
LF4-MW2	3/8/18	< 1	2.74	77	0.542 J	0.915 J	2.97	125	10.9	3.91	< 0.4	64.8	0.608 J	< 1	< 1	2.52	732
LF4-MW2	9/11/18	< 20	9.9 J	74	0.15 J	< 5	< 10	100	2.3 J	< 10	< 0.2	53	< 20	< 10	< 25	< 10	390
LF4-MW2	3/7/19	< 5	< 3	59	1.3	1.3	4.7 J	160	27	4.7	< 0.2	96	1.3 J	< 1	< 1	< 10	1200
LF4-MW2	9/5/19	0.65 J	2.4 J	68	0.24 J	0.37 J	3.2 J	120	4.4 J	2.2 J	0.093 J B (UB)	63	< 2.5	< 1	< 1	< 10	520
LF4-MW2	3/12/20	< 5	3.1	63	0.8	0.74	3.9 J	100 ^	19	16	< 0.20	59	< 2.5	< 1	< 1	< 10	540
LF4-MW2	9/15/20	< 5	3.3	69 B	0.42 J	0.21 J	4.5 J	130	5.1	6.2	< 0.2	65	< 2.5	< 1	< 1	< 10	460

Table 4-5: Analytical Data for Metals in Groundwater
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Well ID	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
LF4-MW2	3/4/21	< 5	3.3	62	0.25 J	0.18 J	1.9 J	65	6.9	7.4	< 0.2	33	< 2.5	< 1	< 1	< 10	210
LF4-MW2	9/9/21	< 5	4.1	100	0.31 J	0.34 J	2.1 J (J)	99	9.4	5.4	< 0.2	50	< 2.5	< 1	< 1	< 10	360
LF4-MW2	3/2/22	< 5	3.2	60	0.5	0.39 J	< 5	71	10	6.8	< 0.2	39	< 2.5	< 1	< 1	2 J	310
LF4-MW3	3/29/00	< 5.0	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 500	< 5.0	4.0	< 1.0	< 5.0	< 5.0	--	< 2.0	< 100	< 30
LF4-MW3	9/26/00	--	< 5.0	60	--	< 1.0	6.23	--	--	11.4	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	4/24/01	--	< 5.0	60	--	< 1.0	< 5.0	--	--	5.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	9/28/01	--	6.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	4/2/02	--	< 5.0	60	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	9/18/02	--	< 5.0	70	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	3/5/03	--	< 5.0	50	--	< 1.0	7.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	9/26/03	--	< 5.0	70	--	< 1.0	< 5.0	--	--	17	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	3/31/04	< 100	< 10	53.7	< 10	< 10	< 20 (UJ-)	< 20 (UJ-)	27.4	5.34 J (J-)	< 0.4	< 20	< 10	< 20 (UJ-)	< 10 (UJ-)	< 10	69.4 J
LF4-MW3	9/29/04	< 100	< 10	66.8	< 10	< 10	< 20	12.3 J	< 20	< 10 (UJ-)	< 0.4	< 20	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW3	3/16/05	< 100	< 10	36.3	< 10	< 10	< 20	< 20	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	5.05 J
LF4-MW3	9/29/05	< 100	< 10	54.1	< 10	< 10	< 20	< 20	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW3	3/13/06	< 100	< 10	57	< 10	< 10	< 20	< 20	6.48 J	5.43 J	< 0.4	< 20	< 10	20 U^ (UB)	< 10	7.06 J	21.1 J
LF4-MW3	9/14/06	< 100	5.12 J	65.4	< 10	< 10	20 U^ (UB)	14 J	7.02 J	3.01 J	< 0.4	15.4 J	< 10	< 20 (UJ-)	5.41 J	5.79 J	25.1 J
LF4-MW3	3/6/07	< 100	< 10	48.3	< 10	< 10	< 20	< 20	< 20	2.38 J	< 0.4	< 20	< 10	< 20 (UJM)	< 10	< 10	26.2 J
LF4-MW3	9/25/07	< 100	< 10	59.7	< 10	< 10	< 20	7.41 J	< 20	< 10	< 0.4	6.81 J	< 10	< 20	< 10	< 10	15.6 J
LF4-MW3	3/26/08	< 100	< 10	69.8	< 10	< 10	< 20	< 20	2.46 J	4.79 J	< 0.4	6.14 J	< 10	< 20	< 10	< 10	15.9 J
LF4-MW3	9/16/08	< 100	< 10	51.9	< 10	< 10	< 20	< 20	3.72 J	< 10	< 0.4	3.94 J	< 10	< 20	< 10	< 10	8.07 J
LF4-MW3	3/17/09	< 100	< 10	53.5	< 10	< 10	< 20	< 20	2.2 J	< 10	< 0.8	3.49 J	< 10	< 20	< 10	< 10	15 J
LF4-MW3	9/17/09	< 100	22.4	76.3	< 10	< 10	< 20	< 20	< 20	29.1	< 0.4	6.87 J	< 10	< 20	< 10	< 10	26.6 J
LF4-MW3	3/17/10	< 100	< 10	58.5	< 10	< 10	< 20	< 20	2.03 J	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	7.51 J
LF4-MW3	9/21/10	< 100	< 10	39.2	< 10	< 10	< 20	3.39 J	< 20	< 10	< 0.4	2.66 J	< 10	< 20	< 10	< 10	5.95 J
LF4-MW3	3/15/11	< 100	< 10	69.2	< 10	< 10	< 20	2.92 J	6.07 J	5.0 J	< 0.4	3.87 J	< 10	< 20	< 10	< 10	20.6 J
LF4-MW3	9/8/11	< 100	< 10	57.1	< 10	< 10	< 20	2.74 J	< 20	< 10	< 2.0	3.49 J	< 10	< 20	< 10	< 10	10.1 J
LF4-MW3	3/14/12	< 100	< 10	60.8	< 10	< 10	< 20	< 20	3.23 J	< 10	< 0.4	3.43 J	< 10	< 20	< 10	< 10	14.7 J
LF4-MW3	9/6/12	< 100	< 10	59	< 10	< 10	< 20	< 20	3.05 J	< 10	< 0.4	3.62 J	< 10	< 20	< 10	< 10	17.1 J
LF4-MW3	3/5/13	< 100	< 10	75.7	< 10	< 10	< 20	< 20	3.46 J	4.5 J	< 0.4	4.38 J	< 10	< 20	< 10	< 10	16.6 J
LF4-MW3	9/11/13	< 100	< 10	52.2	< 10	< 10	< 20	9.77 J	< 20	3.13 J	< 0.4	< 20	< 10	< 20	< 10	< 10	< 100
LF4-MW3	3/5/14	< 1.0	0.272 J	54.7	0.27 J	< 1.0	0.256 J	1.76	1.74	2.01	< 0.4	2.85	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW3	9/4/14	< 1.0	679 J	67200	0.35 J	0.243 J	0.654 J	4.03	1.67	2.01	< 0.4	3.4	< 1.0	< 1.0	< 1.0	1.28	< 20
LF4-MW3	3/13/15	< 1.0	0.648 J	84.5	0.597 J	< 1.0	0.356 J	1.61	1.93	4.32	< 0.4	3.37	< 1.0	< 1.0	< 1.0	< 1.0	14.9 J
LF4-MW3	9/16/15	< 1.0	0.432 J	97.8	0.308 J	0.248 J	0.406 J	17.7	1.1	1.53	< 0.4	6.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW3	3/16/16	< 1.0	0.352 J	56.7	0.31 J	< 1.0	0.34 J	1.49	1.91	2.41	< 0.4	2.9	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW3	9/21/16	<1.0	0.992 J	86.8	0.508 J	0.262 J	1.19	1.02	2.26	3.16	< 0.4	3.93	<1.0	<1.0	<1.0	1.83	11.2 J
LF4-MW3	3/15/17	<1.0	0.782 J	60.3	0.373 J	< 1.0	0.786 J	1.5	1.3	3.05	< 0.4	3.0	<1.0	<1.0	<1.0	0.949 J	10.4 J
LF4-MW3	9/8/17	< 1	0.207 J	59.3	0.224 J	< 1	0.591 J	1.86	3.36	0.935 J	< 0.4	3.4	< 1	< 1	< 1	< 1	18 J
LF4-MW3	3/8/18	< 1 (UJM)	0.715 J	58.1	0.329 J	< 1	0.841	1.38	1.58	2.91	< 0.4	2.8	< 1	< 1	< 1	0.898 J	14.2 J
LF4-MW3	9/11/18	< 20	< 20	57	0.28 J	< 5	< 10	6.4 J	< 20	< 10	< 0.2	4.7 J	< 20	< 10	< 25	1.2 J	15J F1 F2
LF4-MW3	3/7/19	< 5	< 3	68	0.44 J	< 0.5	2.4 J	1.3	2.5 J	4.1	< 0.2	3.3 J	< 2.5	< 1	< 1	< 10	16 J
LF4-MW3	9/5/19	< 5	< 3	73	0.32 J	< 0.5	1.6 J	0.59	< 5	1.5 J	0.094 J B (UB)	3.5 J	< 2.5	< 1	< 1	< 10	41

Table 4-5: Analytical Data for Metals in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
LF4-MW3	3/12/20	< 5	3.5	85	0.69	< 0.5	4.2 J	1.5 ^	4.1 J	8.9	< 0.20	4.5 J	2.2 J	< 1	< 1	< 10	19 J
LF4-MW3	9/15/20	< 5	< 3	42 (JM)	0.41 J	0.17 J	2.4 J	1.1 (B)	1.7 J	2 J	< 0.2	2.7 J	< 2.5	< 1	< 1	< 10	53 F2
LF4-MW3	3/4/21	< 5	< 3	83	0.81	< 0.5	< 5	2.4	5.8	5.8	< 0.2 F1	5.6	< 2.5	< 1	< 1	0.44 F1	44
LF4-MW3	9/9/21	< 5	< 3	60	0.39 J	< 0.5	< 5	6.3	< 5	3.5	< 0.2	2.8 J	< 2.5	< 1	< 1	< 10	< 20
LF4-MW3	3/2/22	< 5	1.1 J	60	0.48 J	0.1 J	< 5	3.4	2 J	5	< 0.2	3.7 J	< 2.5	< 1	< 1	2.6 J	11 J
LF4-MW4	3/29/00	< 5.0	< 5.0	245	< 1	< 1.0	< 5.0	< 500	< 5.0	6.0	< 1.0	< 5.0	< 5.0	--	< 2.0	< 100	< 30
LF4-MW4	9/26/00	--	< 5.0	200	--	< 1.0	5.55	--	--	22.3	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	4/24/01	--	< 5.0	140	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	9/28/01	--	6.0	250	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	4/2/02	--	< 5.0	250	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	9/18/02	--	< 5.0	240	--	< 1.0	< 5.0	--	--	5.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	3/5/03	--	< 5.0	170	--	< 1.0	< 5.0	--	--	5.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	9/26/03	--	< 5.0	230	--	2.0	< 5.0	--	--	15	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	3/31/04	< 100	< 10	197	< 10	< 10	< 20 (UJ-)	6.45 J (J-)	< 20	< 10 (UJ-)	< 0.4	< 20	< 10	< 20 (UJ-)	< 10 (UJ-)	< 10	17.5 J
LF4-MW4	9/29/04	< 100	< 10	181	< 10	< 10	< 20	< 20	< 20	6.94 J (J-)	< 2.0	< 20	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW4	3/15/05	< 100	< 10	152	< 10	< 10	< 20	< 20 (UJ-)	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	10.4 J
LF4-MW4	9/29/05	< 100	< 10	186	< 10	< 10	< 20	< 20	< 20	2.7 J	< 0.4	< 20	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW4	3/14/06	< 100	< 10	145	< 10	< 10	< 20	< 20	< 20	11.6	< 0.4	< 20	< 10	< 20	< 10	6.87 J	25.5 J
LF4-MW4	9/14/06	< 100	5.18 J	180	< 10	< 10	20 U^ (UB)	< 20	8.16 J	28.5	< 0.4	< 20	< 10	< 20 (UJ-)	< 10	12.5	45 J
LF4-MW4	3/7/07	< 100	5.59 J	119	< 10	< 10	< 20	< 20	< 20	5.62 J	< 0.4	< 20	< 10	< 20	< 10	< 10	9.82 J
LF4-MW4	9/25/07	< 100	< 10	209	< 10	< 10	< 20	4.34 J	< 20	5 J	< 0.4	5.16 J	< 10	< 20	< 10	< 10	14 J
LF4-MW4	3/26/08	< 100	< 10	143	< 10	< 10	< 20	6.95 J	< 20	< 10	< 0.4	4.22 J	< 10	< 20	8.84 J	< 10	7.11 J
LF4-MW4	9/17/08	68.6 J	< 10	193	< 10	< 10	< 20	4.32 J	2.4 J	5.62 J	< 0.4	4.99 J	< 10	3.37 J (JM)	10.7	< 10	17.8 J
LF4-MW4	3/17/09	< 100	< 10	139	< 10	< 10	< 20	5.29 J	< 20	4.94 J	< 0.8	4.39 J	< 10	< 20	11.8	< 10	19.3 J
LF4-MW4	9/21/09	< 100	< 10	115	< 10	< 10	< 20	< 20	2.06 J	5.62 J	< 0.4	2.83 J	< 10	< 20	< 10	< 10	7.15 J
LF4-MW4	3/17/10	36.7 J	< 10	129	< 10	< 10	< 20	2.63 J	2 U^ (UB)	3.32 J	< 0.4 (UJM)	4.59 J	< 10	< 20	< 10	< 10	6.8 J
LF4-MW4	9/21/10	< 100	< 10	177	< 10	1.62 J	< 20	4.49 J	< 20	3.58 J	< 0.4	3.93 J	< 10	< 20	< 10	< 10	12.9 J
LF4-MW4	3/15/11	< 100	< 10	89.8	< 10	< 10	< 20	3.02 J	3.05 J	3.56 J	< 0.4	< 20	< 10	< 20	< 10	< 10	12.7 J
LF4-MW4	9/8/11	< 100	< 10	169	< 10	< 10	< 20	4.25 J	< 20	3.69 J	< 2.0	3.72 J	< 10	< 20	< 10	2.75 J	10.2 J
LF4-MW4	3/14/12	< 100	< 10	136	< 10	< 10	< 20	3.92 J	3.03 J	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	< 100
LF4-MW4	9/6/12	< 100	< 10	115	< 10	< 10	< 20	< 20	4.83 J	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	< 100
LF4-MW4	3/5/13	< 100	< 10	162	< 10	< 10	< 20	2.86 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	12.7 J
LF4-MW4	9/11/13	< 100	< 10	201	< 10	< 10	< 20	6.32 J	< 20	4.8 J	< 0.4	8.64 J	< 10	< 20	< 10	< 10	11.8 J
LF4-MW4	3/5/14	< 1.0	2.03	174	< 1.0	< 1.0	< 1.0	3.05	1.37	1.01	< 0.4 (UJM)	2.57	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW4	9/4/14	< 1.0	2720	188000	0.114 J	0.926 J	< 1.0	3.31	0.889 J	4.09	< 0.4	3.73	< 1.0	< 1.0	< 1.0	2.33	< 20
LF4-MW4	3/13/15	< 1.0	2.29	112	< 1.0	< 1.0	0.22 J	5.34	< 1.0	0.601 J	< 0.4	2.11	< 1.0	< 1.0	< 1.0	1.28	< 20
LF4-MW4	9/16/15	< 1.0	1.3	174	0.196 J	1.5	1.95	4.47	2.53	10.9	< 0.4	4.35	0.308 J	< 1.0	< 1.0	7.32	17.3 J
LF4-MW4	3/16/16	< 1.0	5.22	186	< 1.0	< 1.0	< 1.0	2.11	< 1.0	0.407 J	< 0.4	2.2	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW4	9/21/16	<1.0	1.02	160	<1.0	0.508 J	<1.0	4.22	1.17	3.2	< 0.4	3.16	<1.0	<1.0	<1.0	2.91	17.1 J
LF4-MW4	3/15/17	<1.0	3.28	127	<1.0	< 1.0	0.289 J	7.09	0.501 J	0.711 J	< 0.4	2.29	<1.0	<1.0	<1.0	2.09	< 20
LF4-MW4	9/8/17	< 1	6.17	225	0.103 J	0.892 J	0.709 J	8.34	1.28	8.82	< 0.4	3.63	0.463 J	< 1	< 1	3.91	23.5
LF4-MW4	3/8/18	< 1	2.47	197	< 1	< 1	0.253 J	2.71	< 1	0.547 J	< 0.4	1.47	< 1	< 1	< 1	0.799 J	< 20
LF4-MW4	9/11/18	< 20	7.0 J	160	< 4	< 5	< 10	4.3 J	< 20	7.2 J	< 0.2	4.8 J	< 20	< 10	< 25	< 10	46

Table 4-5: Analytical Data for Metals in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
LF4-MW4	3/7/19	< 5	5	180	< 0.5	< 0.5	< 5	1.9	< 5	1.2 J	< 0.2	< 5	< 2.5	< 1	< 1	< 10	56
LF4-MW4	9/5/19	1.2 J	1.6 J	160	< 0.5	1	< 5	4	< 5	5.2	< 0.2	3.4 J	< 2.5	< 1	< 1	< 10	92
LF4-MW4	3/12/20	< 5	5.9	170	< 0.5	0.21 J	< 5	2.2 ^	< 5	3.3	< 0.20	2.2 J	< 2.5	< 1	< 1	< 10	12 J
LF4-MW4	9/15/20	< 5	< 3	160 B	< 0.5	0.7	< 5	3.4	< 5	5.2	< 0.2	2.6 J	< 2.5	< 1	< 1	< 10	27
LF4-MW4	3/4/21	< 5	2.9 J	190	< 0.5	< 0.5	< 5	3.3	< 5	1.1 J	< 0.2	2.4 J	< 2.5	< 1	< 1	< 10	< 20
LF4-MW4	9/9/21	< 5	6.4	330	0.42 J	0.63	< 5	4.1	2.1 J	24	0.15 J	3 J	1.1 J	< 1	< 1	< 10	31
LF4-MW4	3/2/22	< 5	4.3	220	0.34 J	0.54	< 5	2	1.6 J	7.7	< 0.2	1.8 J	< 2.5	< 1	< 1	4.2 J	11 J
LF4-MW5	3/29/00	< 5.0	< 5.0	< 50	< 1	< 1.0	< 5.0	< 500	< 5.0	3.0	< 1.0	< 5.0	< 5.0	--	< 2.0	< 100	< 30
LF4-MW5	9/26/00	--	< 5.0	< 20	--	< 1.0	< 5.0	--	--	11.2	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	4/24/01	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	9/28/01	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	4/2/02	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	9/18/02	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	3/5/03	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	9/26/03	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	17	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	3/31/04	< 100	< 10	14.4	< 10	< 10	< 20 (UJ-)	< 20 (UJ-)	29.2	4.98 J (J-)	< 0.4	< 20	< 10	< 20 (UJ-)	< 10 (UJ-)	< 10	67.5 J
LF4-MW5	9/29/04	< 100	< 10	12.7	< 10	< 10	< 20	7.63 J	< 20	< 10 (UJ-)	< 0.4	< 20	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW5	3/16/05	< 100	< 10	15.8	< 10	< 10	< 20	< 20	< 20	3.87 J	< 0.4	< 20	< 10	< 20	< 10	< 10	7.98 J
LF4-MW5	9/29/05	< 100	< 10	11.6	< 10	< 10	< 20	< 20	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	< 100
LF4-MW5	3/14/06	< 100	< 10	20.4	< 10	< 10	< 20	7.09 J	< 20	4.51 J	< 0.4	< 20	< 10	20 U^ (UB)	6.92 J	9.47 J	12.8 J
LF4-MW5	9/14/06	< 100	< 10	20.8	< 10	< 10	< 20	6.42 J	< 20	10.7	< 0.4	< 20	< 10	< 20 (UJ-)	8.76 J	7.5 J	20.9 J
LF4-MW5	3/7/07	< 100	< 10	14.5	< 10	< 10	< 20	< 20	< 20	3.2 J	< 0.4	< 20	< 10	< 20	< 10	< 10	18.8 J
LF4-MW5	9/24/07	< 100	< 10	20.5	< 10	< 10	< 20	4.25 J	2.14 J	5 J	< 0.4	3.21 J	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW5	3/26/08	< 100	< 10	12.2	< 10	< 10	< 20	2.59 J	< 20	< 10	< 0.4	2.75 J	< 10	< 20	< 10	< 10	6.55 J
LF4-MW5	9/16/08	< 100	< 10	10.7	< 10	< 10	< 20	3.33 J	< 20	< 10	< 0.4	2.58 J	< 10	< 20	< 10	< 10	6.3 J
LF4-MW5	3/18/09	< 100	< 10	13.1	< 10	< 10	< 20	2.91 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	8.63 J
LF4-MW5	9/17/09	< 100	< 10	9.23 J	< 10	< 10	< 20	4.33 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	5.65 J
LF4-MW5	3/17/10	< 100	< 10	13.6	< 10	< 10	< 20	6.24 J	< 20	< 10	< 0.4	3.17 J	< 10	< 20	< 10	< 10	< 100
LF4-MW5	9/21/10	100 U^ (UB)	< 10	12.5	< 10	< 10	< 20	10.5 J	< 20	< 10	< 0.4	3.69 J	< 10	< 20	< 10	< 10	8.21 J
LF4-MW5	3/15/11	< 100	< 10	28.9	< 10	< 10	4.91 J	2.95 J	4.69 J	9.14 J	< 0.4	5.17 J	< 10	< 20	< 10	12.5	15 J
LF4-MW5	9/8/11	< 100	< 10	17.2	< 10	< 10	< 20	7.26 J	< 20	< 10	< 2.0	3.14 J	< 10	< 20	< 10	< 10	< 100
LF4-MW5	3/14/12	< 100	< 10	12.5	< 10	< 10	< 20	3.17 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	11.5 J
LF4-MW5	9/6/12	< 100	< 10	11.1	< 10	< 10	< 20	2.34 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	< 100
LF4-MW5	3/5/13	< 100	< 10	12	< 10	< 10	< 20	2.76 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	11 J
LF4-MW5	9/11/13	< 100	< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	< 100
LF4-MW5	3/5/14	< 1.0	0.21 J	11.6	< 1.0	< 1.0	< 1.0	4.02	1.1	0.943 J	< 0.4	2.36	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW5	9/4/14	< 1.0	226 J	10100	0.101 J	< 1.0	< 1.0	3.24	0.788 J	0.638 J	< 0.4	1.61	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW5	3/13/15	< 1.0	< 1.0	13.5	0.102 J	< 1.0	< 1.0	3.15	0.624 J	0.923 J	< 0.4	1.89	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW5	9/16/15	< 1.0	< 1.0	10.8	< 1.0	< 1.0	0.206 J	2.31	< 1.0	0.6 J	< 0.4	1.46	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW5	3/16/16	< 1.0	0.284 J	16.2	0.101 J	< 1.0	0.402 J	4.38	1.13	2.28	< 0.4	2.63	< 1.0	< 1.0	< 1.0	1.0 J	11.6 J
LF4-MW5	9/21/16	<1.0	<1.0	14.7	0.163 J	<1.0	<1.0	6.56	0.616 J	0.647 J	< 0.4	3.3	<1.0	<1.0	<1.0	<1.0	< 20
LF4-MW5	3/15/17	<1.0	<1.0	14.8	0.125 J	<1.0	0.477 J	2.67	1.22	1.24	< 0.4	2.07	<1.0	<1.0	<1.0	0.903 J	< 20
LF4-MW5	9/8/17	< 1	0.232 J	11.8	0.124 J	< 1	0.388 J	3.05	1.15	0.715 J	< 0.4	1.46	< 1	< 1	< 1	< 1	< 20
LF4-MW5	3/8/18	< 1	0.658 J	17.4	0.123 J	< 1	0.796	4.09	1.7	3.18	< 0.4	2.77	< 1	< 1	< 1	2.46	59.7

Table 4-5: Analytical Data for Metals in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
LF4-MW5	9/11/18	<20	< 20	11	< 4	< 5	< 10	2.7 J	< 20	< 10	< 0.2	3.9 J	< 20	< 10	< 25	<10	120
LF4-MW5	3/7/19	< 5	< 3	23	< 0.5	< 0.5	2.6 J	4.3	2 J	2.3 J	< 0.2	3.9 J	< 2.5	< 1	< 1	5.4 J	21
LF4-MW5	9/5/19	< 5	< 3	13	< 0.5	< 0.5	< 5	6.7	< 5	< 2.5	0.096 J B (UB)	3.1 J	< 2.5	< 1	< 1	< 10	11 J
LF4-MW5	3/12/20	< 5	< 3	18	< 0.5	< 0.5	< 5	3.6 ^	< 5	1.5 J	< 0.20	2.4 J	< 2.5	< 1	< 1	< 10	13 J
LF4-MW5	9/15/20	< 5	< 3	16 B	0.21 J	< 0.5	2.3 J	3.5	2.1 J	3	< 0.2	2.6 J	< 2.5	< 1	< 1	< 10	1000
LF4-MW5	3/4/21	< 5	< 3	21	0.38 J	< 0.5	3.2 J	4.4	3.7 J	3.5	< 0.2	5.3	< 2.5	< 1	< 1	6.7 J	28
LF4-MW5	9/9/21	< 5	< 3	14	< 0.5	< 0.5	< 5	4.1	< 5	< 2.5	< 0.2	< 5	< 2.5	< 1	< 1	< 10	27
LF4-MW5	3/2/22	< 5	0.87 J	20	0.52	< 0.5	< 5	5.4	2.1 J	2.6	< 0.2	4 J	< 2.5	< 1	< 1	4.1 J	< 20

Notes:
-- = Not analyzed
< = Indicates the analyte was not detected at the reported quantitation limit shown.
µg/L = micrograms per liter
mg/L = milligrams per liter

Samples collected 2000 through 2003 by IT Corporation/Shaw Environmental.
Samples collected in 2004 to the present by Matrix Environmental Services, LLC.

Lab Flags:
J = Estimated detection. Concentration is between the method detection limit and the practical quantitation limit.
U^ = Analyte is not detected above the reporting limit. Lab flag updated by MES data reviewer.
^ = ICV, CCV, ICB, CCB, ISA, CRL, CRA, DLCK or MRL standard, instrument related QC is outside acceptance limits.
Validation Flags:
(B) = Analyte was detected in an associated blank.
(UB) = Value is considered a non-detection due to a detection of the analyte in an associated blank.
(JM) = Estimated detection; the MS and MSD recoveries were outside laboratory historical control limits.
(UJM) = Reported quantitation limit is estimated; the MS and MSD recoveries were outside laboratory historical control limits.
(J-) = Analyte was reported as a negative concentration in the method or continuing calibration blank; affected sample detects may be biased low.
(UJ-) = Analyte was reported as a negative concentration in the method or continuing calibration blank; affected sample non-detects may be potential false negatives.

Table 5-1 - Summary of Statistically Significant Increases, March 2022
Sampling Event
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Well Location	SSI Analyte	CUSUM	Sample Concentration	MCL	BKG Concentration	Units
LF4-MW1	cobalt	14.78	34	NA	10.5	µg/L
	nickel	31.18	23	100	--	µg/L
LF4-MW2	cobalt	42.12	71	NA	10.5	µg/L
	nickel	31.89	39	100	--	µg/L
	zinc	116.8	310	5000*	--	µg/L
LF4-MW4	cis-1,2-dichloroethene	NA	21	70	--	µg/L
	trans-1,2-dichloroethene	NA	1.8	100	--	µg/L
	trichloroethene	NA	20	5	--	µg/L

Notes:

-- = Not applicable or not established

µg/L = micrograms per liter

BKG = Background well LF4-MW5

CUSUM = Shewhart Cumulative Sum

MCL = Maximum contaminant level (Codes 335-7-2-.03, 335-7-2-.05, and 335-7-3-.02 of the *ADEM Division 7 Regulations* [ADEM, 2014])

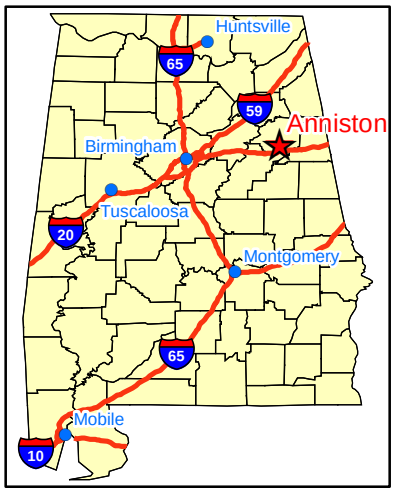
NA = Promulgated MCL not available

SSI = Statistically Significant Increase

* Secondary MCL (Code 335-7-3-.02 of the *ADEM Division 7 Regulations* [ADEM, 2014])

Sample concentration > MCL or BKG Concentration

Figures



PELHAM RANGE

CHOCCOLOCCO CORRIDOR

McCLELLAN

21

431

78

20

20

431

CALHOUN COUNTY

CLEBURNE COUNTY

CALHOUN COUNTY

CLEBURNE COUNTY

TALLADEGA COUNTY

0 1 2 4

Miles

Figure 1-1
Location Map
McClellan, Anniston, Alabama

Matrix ENVIRONMENTAL

FILE: G:\gis_projects\Fort McClellan\03_094.007\active\mxd\EA-81(5)\Figure1-1_Location_Map.mxd, 11/19/2019, Rachel Perstorff

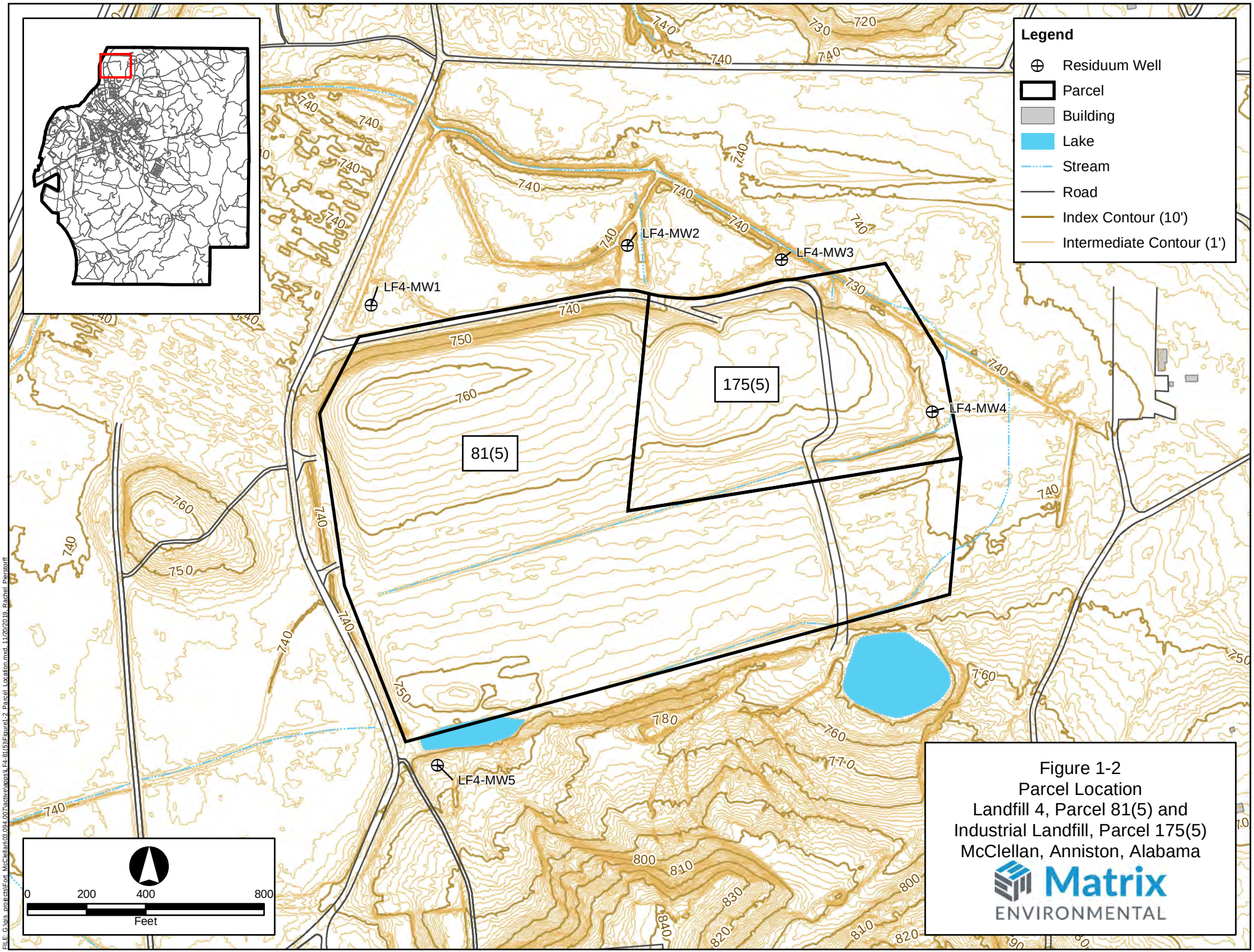
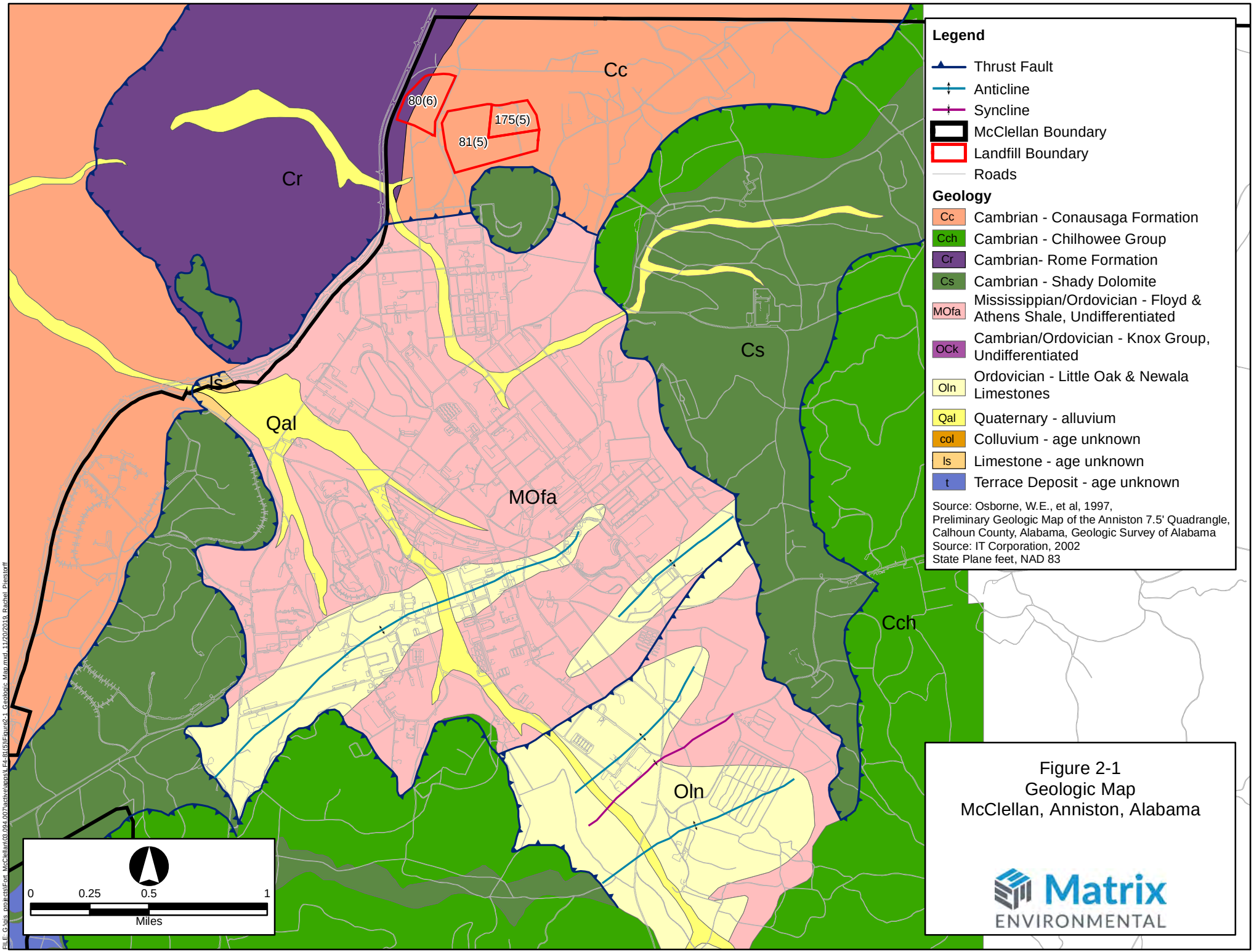
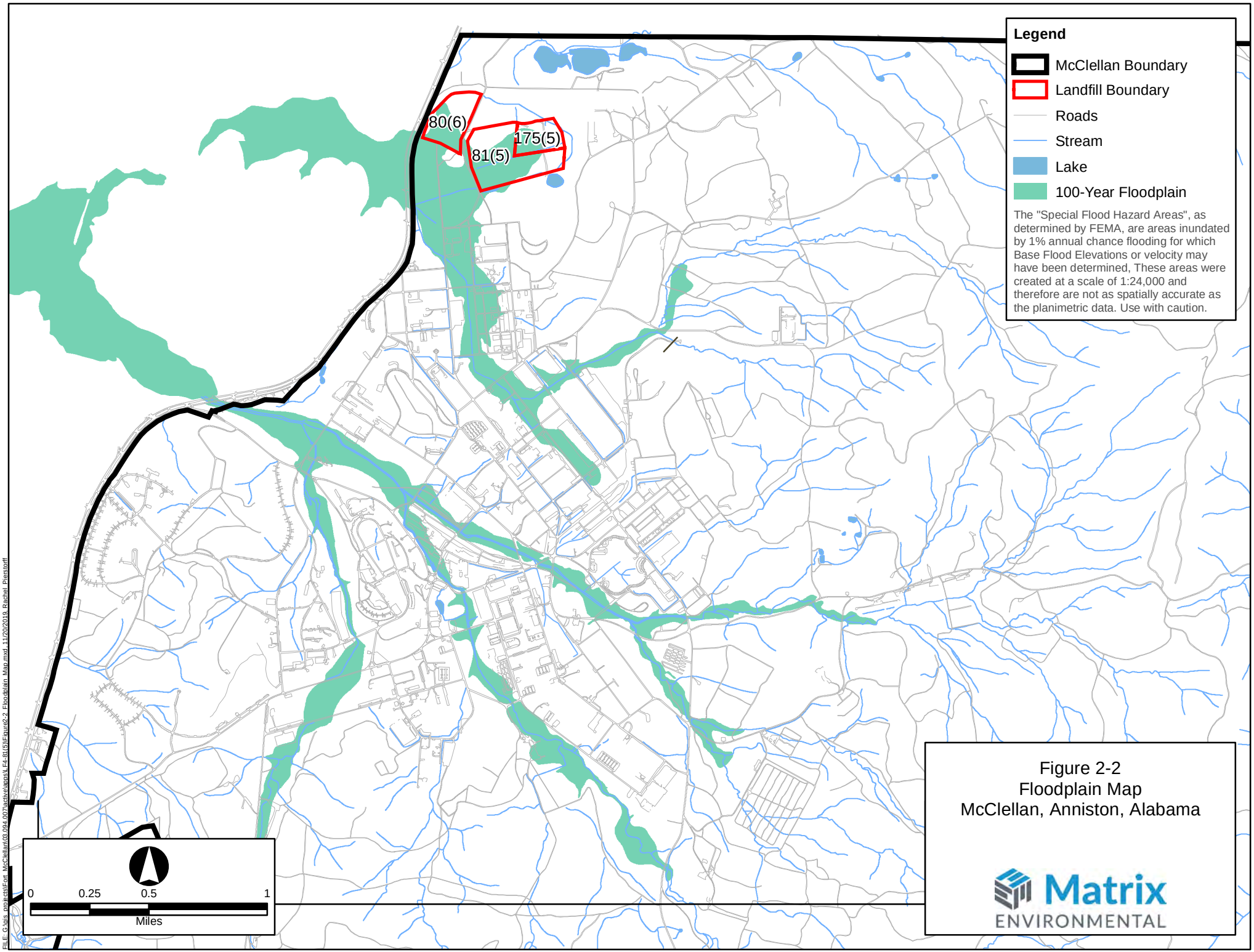


Figure 1-2
Parcel Location
Landfill 4, Parcel 81(5) and
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Matrix ENVIRONMENTAL

FILE: G:\gis projects\Fort_McClellan\03.004.007\active\apps\LF4-81(5)\Figure1-2 Parcel Location.mxd 11/20/2019, Rachel Perstorff


Cc
80(6)
175(5)
81(5)
Cr
Cs
ls
Qal
MOfa
Cch
Oln
Legend
Thrust Fault
Anticline
Syncline
McClellan Boundary
Landfill Boundary
Roads
Geology
Cc Cambrian - Conausaga Formation
Cch Cambrian - Chilhowee Group
Cr Cambrian- Rome Formation
Cs Cambrian - Shady Dolomite
MOfa Mississippian/Ordovician - Floyd & Athens Shale, Undifferentiated
OCk Cambrian/Ordovician - Knox Group, Undifferentiated
Oln Ordovician - Little Oak & Newala Limestones
Qal Quaternary - alluvium
col Colluvium - age unknown
ls Limestone - age unknown
t Terrace Deposit - age unknown
Source: Osborne, W.E., et al, 1997, Preliminary Geologic Map of the Anniston 7.5' Quadrangle, Calhoun County, Alabama, Geologic Survey of Alabama
Source: IT Corporation, 2002
State Plane feet, NAD 83
0 0.25 0.5 1
Miles
Figure 2-1
Geologic Map
McClellan, Anniston, Alabama
Matrix ENVIRONMENTAL
FILE: G:\gis_proj\EastsFort_McClellan\03.094.007\activeloppe\LF4-81(5)\Figure2-1_Geologic_Map.mxd, 11/20/2019, Rachel_Pierstorff


80(6)
81(5)
175(5)
Legend
McClellan Boundary
Landfill Boundary
Roads
Stream
Lake
100-Year Floodplain
The "Special Flood Hazard Areas", as determined by FEMA, are areas inundated by 1% annual chance flooding for which Base Flood Elevations or velocity may have been determined, These areas were created at a scale of 1:24,000 and therefore are not as spatially accurate as the planimetric data. Use with caution.
0
0.25
0.5
1
Miles
Figure 2-2
Floodplain Map
McClellan, Anniston, Alabama
Matrix
ENVIRONMENTAL
FILE: G:\gis_projects\Fort_McClellan\03.004.007\active\mxd\F4-81(5)\Figure2-2_Floodplain_Map.mxd 11/20/2019, Rachel Pierstorff

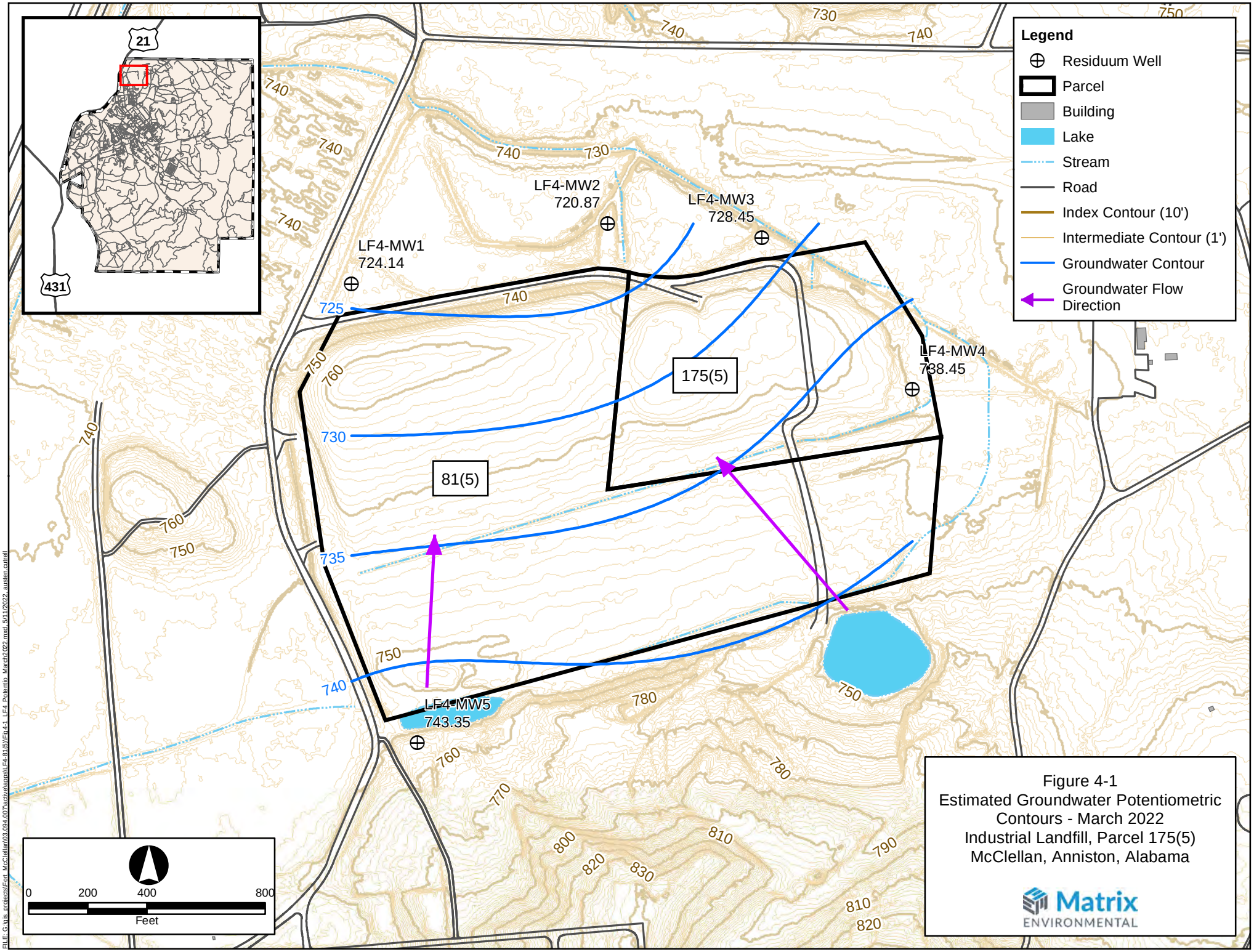


Figure 4-1
Estimated Groundwater Potentiometric Contours - March 2022
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Matrix ENVIRONMENTAL

FILE: G:\gis projects\Fort McClellan\03.094.007\active\apps\LF4-81(5)\LF4-1_LF4_Potento_March2022.mxd, 5/11/2022, austen.cutrell

APPENDICES

Groundwater Monitoring Report, March 2022
Butler Green Industrial Landfill, Parcel 175(5)
(Permit No. 08-02)
McClellan, Anniston, Alabama

APPENDIX A

Groundwater Sample Logs

Matrix ENVIRONMENTAL

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

Station Name/Sample ID	
LF4-MW01	
Project	**Project Number**
McClellan	21.094.22-07.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 15.65 feet	**Equipment**	**Sampler** J. Tulley	**Date** 3/2/2022
Well Depth (TOC) 42.5 feet	__X__ Bailer	**Location (Site)** Landfill 4	**Begin Time** 11:40
Water Column Thickness 26.85 feet	____ Check Valve	**Laboratory** TestAmerica	**Sample Depth** Bailer
Casing Diameter 4 inches	____ Grundfos	**Sample Suite** See COCs	
Casing Volume 17.45 gallons	____ Peristaltic	**Meters** YSI Pro Plus Geotech Water Level Micro TPW Turbidity	**Serial numbers**
1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	____ Bladder Pump		
Well Elevation (TOC) 739.79 feet	____ PID/FID	**Calibration** 3/2/2022	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Groundwater Elevation 724.14 feet	____ Other (describe)	**Product Observed (yes/no)** No	**Depth to product** Not Applicable
	Conditions (temp, weather, precip) Sunny, High 76°		
	Parameter Stabilization temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit		

Time	Volume removed (gallon)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description (e.g. odor, clarity, color)
11:40	0.25	17.2	138	2.2	117	0.09	38	4.8	cloudy, colorless, no odor

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
Not Applicable	0.25 gallons	No	N/A

QA/QC Samples	Signature

Matrix ENVIRONMENTAL

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

Station Name/Sample ID	
LF4-MW02	
Project	**Project Number**
McClellan	21.094.22-07.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 17.63 feet	**Equipment**	**Sampler** J. Tulley	**Date** 3/2/2022
Well Depth (TOC) 40.25 feet	_X_ Bailer	**Location (Site)** Landfill 4	**Begin Time** 12:05
Water Column Thickness 22.62 feet	____ Check Valve	**Laboratory** Test America	**Sample Depth** Bailer
Casing Diameter 4 inches	____ Grundfos	**Sample Suite** See COCs	
Casing Volume 14.70 gallons	____ Peristaltic	**Meters** YSI Pro Plus; Geotech Water Level; Micro TPW Turbidity	**Serial numbers**
1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	____ Bladder Pump		
Well Elevation (TOC) 738.5 feet	____ PID/FID	**Calibration** 3/2/2022	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Groundwater Elevation 720.87 feet	____ Other (describe)	**Product Observed (yes/no)** No	**Depth to product** Not Applicable
	Conditions (temp, weather, precip) Sunny, High 76°		
	Parameter Stabilization temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit		

Time	Volume removed (gallon)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description (e.g. odor, clarity, color)
12:05	0.25	17.8	354	1.3	22	0.23	41	6.0	cloudy, colotless, no odor

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
Not Applicable	0.25 gallons	No	N/A

QA/QC Samples DUP390

Signature

Matrix ENVIRONMENTAL

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

Station Name/Sample ID	
LF4-MW03	
Project	**Project Number**
McClellan	21.094.22-07.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 11.33 feet	**Equipment**	**Sampler** J. Tulley	**Date** 3/2/2022
Well Depth (TOC) 34.2 feet	_X_ Bailer	**Location (Site)** Landfill 4	**Begin Time** 12:50
Water Column Thickness 22.87 feet	____ Check Valve	**Laboratory** Test America	**Sample Depth** Bailer
Casing Diameter 4 inches	____ Grundfos	**Sample Suite** See COCs	
Casing Volume 14.87 gallons	____ Peristaltic	**Meters** YSI Pro Plus Geotech Water Level Micro TPW Turbidity	**Serial numbers**
1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	____ Bladder Pump		
Well Elevation (TOC) 739.78 feet	____ PID/FID	**Calibration** 3/2/2022	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Groundwater Elevation 728.45 feet	____ Other (describe)	**Product Observed (yes/no)** No	**Depth to product** Not Applicable
	Conditions (temp, weather, precip) Sunny, High 76°		
	Parameter Stabilization temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit		

Time	Volume removed (gallon)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description (e.g. odor, clarity, color)
12:50	0.25	17.6	80	2.8	168	0.05	40	4.9	cloudy, colorless, no odor

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
Not Applicable	0.25 gallons	No	

QA/QC Samples MS/MSD

Signature

Matrix ENVIRONMENTAL

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

Station Name/Sample ID	
LF4-MW04	
Project	**Project Number**
McClellan	21.094.22-07.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.9 feet	**Equipment**	**Sampler** J. Tulley	**Date** 3/2/2022
Well Depth (TOC) 26.8 feet	__X__ Bailer	**Location (Site)** Landfill 4	**Begin Time** 13:20
Water Column Thickness 21.9 feet	____ Check Valve	**Laboratory** TestAmerica	**Sample Depth** Bailer
Casing Diameter 4 inches	____ Grundfos	**Sample Suite** See COCs	
Casing Volume 14.24 gallons	____ Peristaltic	**Meters** YSI Pro Plus Geotech Water Level Micro TPW Turbidity	**Serial numbers**
1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	____ Bladder Pump		
Well Elevation (TOC) 743.35 feet	____ PID/FID	**Calibration** 3/2/2022	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Groundwater Elevation 738.45 feet	____ Other (describe)	**Product Observed (yes/no)** No	**Depth to product** Not Applicable
	Conditions (temp, weather, precip) Sunny, High 76°		
	Parameter Stabilization temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit		

Time	Volume removed (gallon)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description (e.g. odor, clarity, color)
13:20	0.25	15.5	765	3.4	-14	0.50	71	7.0	cloudy, light brown color, no odor

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
Not Applicable	0.25 gallons	No	N/A

QA/QC Samples N/A

Signature

Matrix ENVIRONMENTAL

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

Station Name/Sample ID	
LF4-MW05	
Project	**Project Number**
McClellan	21.094.22-07.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 9.97 feet	**Equipment**	**Sampler** J. Tulley	**Date** 3/2/2022
Well Depth (TOC) 34.6 feet	_X_ Bailer	**Location (Site)** Landfill 4	**Begin Time** 14:00
Water Column Thickness 24.63 feet	____ Check Valve	**Laboratory** TestAmerica	**Sample Depth** Bailer
Casing Diameter 4 inches	____ Grundfos	**Sample Suite** See COCs	
Casing Volume 16.01 gallons	____ Peristaltic	**Meters** YSI Pro Plus; Geotech Water Level; Micro TPW Turbidity	**Serial numbers**
1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	____ Bladder Pump		
Well Elevation (TOC) 753.32 feet	____ PID/FID	**Calibration** 3/2/2022	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Groundwater Elevation 743.35 feet	____ Other (describe)	**Product Observed (yes/no)** No	**Depth to product** Not Applicable
	Conditions (temp, weather, precip) Sunny, High 76°		
	Parameter Stabilization temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit		

Time	Volume removed (gallon)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description (e.g. odor, clarity, color)
14:00	0.25	16.0	50	3.1	140	0.03	51	5.3	clear, colorless, no odor

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
Not Applicable	0.25 gallons	No	N/A

QA/QC Samples

Signature

APPENDIX B

Chains-of-Custody, March 2022

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 6560
Cooler ID 1 of 1
Page 1 of 1

Laboratory Eurofins
Lab Contact Noel Savoie and Beth Daughtry
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 81(5), Landfill 4
Task # 21.094.22-07.1
Lab contract: 21.094.22-07.1.500

Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: SW8260D - VOC 3 - 40 ml vials, HCl	Analysis: 6020A/7470A Metals (Total) 1 - 250 ml poly HNO3	Analysis: SW8260D - VOC 2 - 40 ml vials, HCl	
Parcel 81(5), Landfill 4	LF4-MW1	NS	MW	WQ	Grab	3-2-22	1140	X	X		
Parcel 81(5), Landfill 4	LF4-MW2	NS	MW	WQ	Grab	3-2-22	1205	X	X		
Parcel 81(5), Landfill 4	LF4-MW3	NS	MW	WQ	Grab	3-2-22	1250	X	X		
Parcel 81(5), Landfill 4	LF4-MW3	MS/MSD	MW	WQ	Grab	3-2-22	1250	X	X		
Parcel 81(5), Landfill 4	LF4-MW4	NS	MW	WQ	Grab	3-2-22	1320	X	X		
Parcel 81(5), Landfill 4	LF4-MW5	NS	MW	WQ	Grab	3-2-22	1400	X	X		
Parcel 81(5), Landfill 4	DUP390	FD	MW	WQ	Grab	3-2-22	N/A	X	X		
Parcel 81(5), Landfill 4	TB594	TB	WQ	W	Grab	3-2-22	1345			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

Double the number of bottles for MS/MSD

COMMENTS: See Task Order 17.094.18-07.1 500 for required list of VOCs and metals **Collect FEII in the field

Relinquished by (Signature): Date/Time: 3-2-22 1600 Received by (Signature): FedEx

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

FedEx

DUP390 on LF4-MW2

APPENDIX C

Data Valdation Summary, March 2022

Data Validation Summary

Laboratory Name:	TALSAV	Report Package Date:	3/14/2022
Project Name:	LF4	Review Date:	5/10/2022
SDG:	680-212047-1		
Reviewer Name:	B Van Pelt	No. of Environ. Sples?	5
Parameters:	MET, ORG, STD, VOC		
Method IDs:	SW6020B, SW7470A, SW8260D	Rejected Results?	0
Matrix:	Ground water		

		Yes	No	N/A	Comment
	Laboratory Method Blanks and Field Blanks				
1	Were appropriate types of laboratory method blanks analyzed?	X			
2	Were the laboratory method blanks analyzed at the appropriate frequency?	X			
3	Was the method blank free of contamination (i.e., less than the MDL or RL)?	X			
4	Did the method blank contamination affect the final results? If so, note on page 2.			X	
5	Was a trip blank required and submitted with the samples?	X			
6	Was the trip blank free of contamination (i.e., less than the MDL or RL)?		X		1
7	Did the trip blank contamination affect the final results? If so, note on page 2.		X		
8	Was an equipment blank required and submitted with the samples?			X	
9	Was the equipment blank free of contamination (i.e., less than the MDL or RL)?			X	
10	Did the equipment blank contamination affect the final results? If so, note on page 2.			X	
11	Were Continuous Calibration Blanks (CCBs) analyzed?	X			
12	Were CCBs within the control window?	X			
13	Did the CCB contamination affect the final results? If so, note on page 2.			X	
	Surrogates				
1	Were surrogates added prior to extraction for all appropriate methods?	X			
2	Were surrogate percent recoveries within laboratory control limits?	X			
3	Did the surrogate percent recoveries affect the final results? If so, note on page 2.		X		
	Laboratory Control Samples				
1	Were Laboratory Control Sample (LCS) analyzed at a frequency of one per batch?	X			
2	Were LCSs spiked with appropriate list of target compounds?	X			
3	Were LCS percent recoveries within laboratory control limits?		X		2
4	Did the LCS percent recoveries affect the final results? If so, note on page 2.		X		
5	If performed, was LCS Duplicate data provided?	X			
6	Were the LCS/LCSD RPD values within laboratory control limits?		X		2
	Matrix Spikes				
1	Were MS/MSDs analyzed at a frequency of one per batch?	X			
	Sample used/methods: LF4-MW3				
2	Were MS/MSDs performed on a project sample selected by the laboratory?		X		
	Sample used/methods: LF4-MW3				
3	Were MS/MSDs spiked with appropriate list of target compounds?	X			
4	Were MS/MSD percent recoveries within laboratory control limits?		X		3
5	Did the MS/MSD percent recoveries affect the final results? If yes, narrate.		X		
6	Were the MS/MSD RPD values within laboratory control limits?		X		3
7	Did the MS/MSD RPDs affect the final results? If so, note on page 2.		X		
	Field and Laboratory Duplicates				
1	Was a field duplicate submitted with this SDG?	X			
	Field Duplicate ID: LF4-MW2				
2	Were the field sample RPD values less than review criteria?		X		4
3	Did the field duplicate RPD results affect the final results? If so, narrate.				
4	Was a laboratory method duplicate (MD) performed?		X		
	MD ID:				
5	Did the field duplicate RPD results affect the final results?		X		
7	Did the MD results affect the final results? If so, note on page 2.			X	
	Other Laboratory QC Data				
1	Calibrations within control limits?		X		5
2	Were internal standard data reported? (organics and inorganics by 6020)	X			
3	Were IS area counts and retention times within method required limits?	X			
4	Were data associated with manual integration flagged on the test reports?			X	
5	Did dual-column confirmation results (PCBs) meet method-required QC limits of <25% difference?		X		
6	Was an interference check sample analyzed and were percent recoveries within QC limits?	X			
7	If serial dilutions were analyzed using a project sample, were the percent differences within QC limits?	X			
8	Was a CRDL check sample analyzed and were the percent recoveries within QC limits?	X			
9	If post-digestion spikes (PDS) were performed for metals, were percent recoveries with QC limits?	X			
10	If ICV/CCV was stated in the case narrative, did the ICV/CCV affect the project samples?	X			
10	Were the total metal results greater than the dissolved metal results?			X	
	Electronic Data Deliverable				
1	Was an EDD provided with the deliverable? *(Attach printout of final results and qualifiers to this report as Att 2**.)*	X			
2	Was the electronic data the same as the hardcopy data?	X			

Comment No.	*Description (data usability; note any estimated and/or rejected data):*
1	The trip blank contains methylene chloride. Analyte not detected in other samples.
2	LCS and LCSD recoveries above criteria and above the calibration range in batch 680-709936 vinyl acetate 209%/192%, not detected assoc sampled (LF4-MW3 thru LF4-MW7, dup, LF4-MW3 MS/MSD, and TB) - no qual RPD batch 680-710177 outside criteria (LF4-MW1 and LF4-MW2) - 32%(30) recoveries in - no Qual Result in lab report in appendix C
3	MS/MSD on LF4-MW3 - MS/MSD chloromethane MS 152% (59-127) and RPD 40% (30); MSD met criteria and not detected in samples - no qual MS/MSD - recovery above calibration limit for vinyl acetate high recovery 168%/173% (67-135) not detected in samples - no qual No MS/MSD analyzed for batch 680-710177 due to insufficient sample volume - run for SDG and LCS/LCSD analyzed - no qual Result in lab report in appendix C
4	FD results presented in Table 1 attached. RPD for vanadium on FD LF4-MW2 - the results are both trace values - no qual
5	CCV batch 680-709936 (LF4-MW3 thru LF4-MW7, dup, LF4-MW3 MS/MSD, and TB) high recovery for vinyl acetate 114.9% (20) and trans-1,4-dichloro-2-butene 27.4%(20) - not detected in samples - no qual CCV batch 680-710177 (LF4-MW1 and LF4-MW2) high recovery for vinyl acetate 28.9%(20) - not detected in samples - no qual Commented on in the case narrative of the lab report in appendix C

Table 1 - Sample Index

Table 2 - Field Duplicate Summary

Tables

Table C1: Sample Index
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

SiteName	Station	QCCode	Matrix	Sample Date	Lab	Delivery Group	LabSampleID	Method
PARCEL 81(5), LANDFILL 4	LF4-MW1	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-1	SW6020B
PARCEL 81(5), LANDFILL 4	LF4-MW1	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-1	SW7470A
PARCEL 81(5), LANDFILL 4	LF4-MW1	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-1	SW8260D
PARCEL 81(5), LANDFILL 4	LF4-MW2	FD	WG	3/2/22	TALSAV	680-212047-1	680-212047-6	SW6020B
PARCEL 81(5), LANDFILL 4	LF4-MW2	FD	WG	3/2/22	TALSAV	680-212047-1	680-212047-6	SW7470A
PARCEL 81(5), LANDFILL 4	LF4-MW2	FD	WG	3/2/22	TALSAV	680-212047-1	680-212047-6	SW8260D
PARCEL 81(5), LANDFILL 4	LF4-MW2	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-2	SW6020B
PARCEL 81(5), LANDFILL 4	LF4-MW2	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-2	SW7470A
PARCEL 81(5), LANDFILL 4	LF4-MW2	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-2	SW8260D
PARCEL 81(5), LANDFILL 4	LF4-MW3	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-3	SW6020B
PARCEL 81(5), LANDFILL 4	LF4-MW3	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-3	SW7470A
PARCEL 81(5), LANDFILL 4	LF4-MW3	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-3	SW8260D
PARCEL 81(5), LANDFILL 4	LF4-MW3	MSD	WG	3/2/22	TALSAV	680-212047-1	680-212047-3 MSD	SW6020B
PARCEL 81(5), LANDFILL 4	LF4-MW3	MSD	WG	3/2/22	TALSAV	680-212047-1	680-212047-3 MSD	SW7470A
PARCEL 81(5), LANDFILL 4	LF4-MW3	MSD	WG	3/2/22	TALSAV	680-212047-1	680-212047-3 MSD	SW8260D
PARCEL 81(5), LANDFILL 4	LF4-MW3	MS	WG	3/2/22	TALSAV	680-212047-1	680-212047-3 MS	SW6020B
PARCEL 81(5), LANDFILL 4	LF4-MW3	MS	WG	3/2/22	TALSAV	680-212047-1	680-212047-3 MS	SW7470A
PARCEL 81(5), LANDFILL 4	LF4-MW3	MS	WG	3/2/22	TALSAV	680-212047-1	680-212047-3 MS	SW8260D
PARCEL 81(5), LANDFILL 4	LF4-MW4	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-4	SW6020B
PARCEL 81(5), LANDFILL 4	LF4-MW4	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-4	SW7470A
PARCEL 81(5), LANDFILL 4	LF4-MW4	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-4	SW8260D
PARCEL 81(5), LANDFILL 4	LF4-MW5	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-5	SW6020B

Table C1: Sample Index
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

SiteName	Station	QCCode	Matrix	Sample Date	Lab	Delivery Group	LabSampleID	Method
PARCEL 81(5), LANDFILL 4	LF4-MW5	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-5	SW7470A
PARCEL 81(5), LANDFILL 4	LF4-MW5	NS	WG	3/2/22	TALSAV	680-212047-1	680-212047-5	SW8260D
MCCLELLAN FIELD QC	TRIP BLANK (TB594)	TB	W	3/2/22	TALSAV	680-212047-1	680-212047-7	SW8260D

Notes:
ID - Identification
QC - Quality Control
FD - Field duplicate
MS - Matrix spike
MSD - Matrix spike duplicate
NS - normal sample
TB - Trip blank
W - Water
WG - Ground water

Table C2 - Summary of Field Duplicate Relative Percent Recoveries.
Industrial Landfill, Parcel 175(5)

Parameter	LongName	NS Result	NS Flag	FD Result	FD Flag	RPD
LF4-MW2	Arsenic	3.2		3		6
LF4-MW2	Barium	60		64		6
LF4-MW2	Beryllium	0.5		0.54		8
LF4-MW2	Cadmium	0.39	J	0.36	J	8
LF4-MW2	Cobalt	71		70		1
LF4-MW2	Copper	10		8.3		19
LF4-MW2	Lead	6.8		5.5		21
LF4-MW2	Nickel	39		39		0
LF4-MW2	Vanadium	2	J	3.4	J	52
LF4-MW2	Zinc	310		310		0

Notes:
NS - Normal sample
FD - Field duplicate
RPD - Relative percent duplicate
J - Result is estimated. Detection is between the reporting limit and the method detection limit.
Yellow highlight indicates RPD above criteria.

ATTACHMENT C1

Laboratory Data, March 2022

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 680-212047-1
Client Project/Site: Parcel 81(5), Landfill 4

For:
Matrix Environmental Services, LLC
707 17th Street
Suite 3150
Denver, Colorado 80202

Attn: Ms. Betty Van Pelt

Authorized for release by:
3/14/2022 2:59:22 PM
Sheila Hoffman, Project Manager II
(912)250-0279
Sheila.Hoffman@Eurofinset.com

Designee for

Noel Savoie, Project Manager I
(850)254-0107
Noel.Savoie@Eurofinset.com

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
E	Result exceeded calibration range.
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.

Metals

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.

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: 680-212047-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-212047-1	LF4-MW1	Water	03/02/22 11:40	03/03/22 09:45
680-212047-2	LF4-MW2	Water	03/02/22 12:05	03/03/22 09:45
680-212047-3	LF4-MW3	Water	03/02/22 12:50	03/03/22 09:45
680-212047-4	LF4-MW4	Water	03/02/22 13:20	03/03/22 09:45
680-212047-5	LF4-MW5	Water	03/02/22 14:00	03/03/22 09:45
680-212047-6	DUP390	Water	03/02/22 00:00	03/03/22 09:45
680-212047-7	TB594	Water	03/02/22 13:45	03/03/22 09:45

Job ID: 680-212047-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-212047-1

Comments
No additional comments.

Receipt
The samples were received on 3/3/2022 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.5º C.

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) associated with batch 680-709936 recovered above the upper control limit for Vinyl acetate and trans-1,4-Dichloro-2-butene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-709936 recovered outside control limits for the following analytes: Vinyl acetate. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The matrix spike and/or matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-709936 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 8260D: The continuing calibration verification (CCV) associated with batch 680-710177 recovered above the upper control limit for Vinyl acetate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-710177 recovered outside control limits for the following analytes: Trichlorofluoromethane.

Method 8260D: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-710177.

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

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

Detection Summary

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-212047-1

Client Sample ID: LF4-MW1 — Lab Sample ID: 680-212047-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.2	J	3.0	0.86	ug/L	1		6020B	Total Recoverable
Barium	52		5.0	0.89	ug/L	1		6020B	Total Recoverable
Beryllium	0.37	J	0.50	0.20	ug/L	1		6020B	Total Recoverable
Cadmium	0.13	J	0.50	0.078	ug/L	1		6020B	Total Recoverable
Cobalt	34		0.50	0.22	ug/L	1		6020B	Total Recoverable
Copper	3.3	J	5.0	0.90	ug/L	1		6020B	Total Recoverable
Lead	3.0		2.5	0.34	ug/L	1		6020B	Total Recoverable
Nickel	23		5.0	1.8	ug/L	1		6020B	Total Recoverable
Vanadium	2.9	J	10	1.8	ug/L	1		6020B	Total Recoverable
Zinc	140		20	10	ug/L	1		6020B	Total Recoverable

Client Sample ID: LF4-MW2 — Lab Sample ID: 680-212047-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.2		3.0	0.86	ug/L	1		6020B	Total Recoverable
Barium	60		5.0	0.89	ug/L	1		6020B	Total Recoverable
Beryllium	0.50		0.50	0.20	ug/L	1		6020B	Total Recoverable
Cadmium	0.39	J	0.50	0.078	ug/L	1		6020B	Total Recoverable
Cobalt	71		0.50	0.22	ug/L	1		6020B	Total Recoverable
Copper	10		5.0	0.90	ug/L	1		6020B	Total Recoverable
Lead	6.8		2.5	0.34	ug/L	1		6020B	Total Recoverable
Nickel	39		5.0	1.8	ug/L	1		6020B	Total Recoverable
Vanadium	2.0	J	10	1.8	ug/L	1		6020B	Total Recoverable
Zinc	310		20	10	ug/L	1		6020B	Total Recoverable

Client Sample ID: LF4-MW3 — Lab Sample ID: 680-212047-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.1	J	3.0	0.86	ug/L	1		6020B	Total Recoverable
Barium	60		5.0	0.89	ug/L	1		6020B	Total Recoverable
Beryllium	0.48	J	0.50	0.20	ug/L	1		6020B	Total Recoverable
Cadmium	0.10	J	0.50	0.078	ug/L	1		6020B	Total Recoverable
Cobalt	3.4		0.50	0.22	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Savannah

Client Sample ID: LF4-MW3 (Continued) — Lab Sample ID: 680-212047-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	2.0	J	5.0	0.90	ug/L	1		6020B	Total Recoverable
Lead	5.0		2.5	0.34	ug/L	1		6020B	Total Recoverable
Nickel	3.7	J	5.0	1.8	ug/L	1		6020B	Total Recoverable
Vanadium	2.6	J	10	1.8	ug/L	1		6020B	Total Recoverable
Zinc	11	J	20	10	ug/L	1		6020B	Total Recoverable

Client Sample ID: LF4-MW4 — Lab Sample ID: 680-212047-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	21		1.0	0.25	ug/L	1		8260D	Total/NA
trans-1,2-Dichloroethene	1.8		1.0	0.34	ug/L	1		8260D	Total/NA
Trichloroethene	20		1.0	0.20	ug/L	1		8260D	Total/NA
Arsenic	4.3		3.0	0.86	ug/L	1		6020B	Total Recoverable
Barium	220		5.0	0.89	ug/L	1		6020B	Total Recoverable
Beryllium	0.34	J	0.50	0.20	ug/L	1		6020B	Total Recoverable
Cadmium	0.54		0.50	0.078	ug/L	1		6020B	Total Recoverable
Cobalt	2.0		0.50	0.22	ug/L	1		6020B	Total Recoverable
Copper	1.6	J	5.0	0.90	ug/L	1		6020B	Total Recoverable
Lead	7.7		2.5	0.34	ug/L	1		6020B	Total Recoverable
Nickel	1.8	J	5.0	1.8	ug/L	1		6020B	Total Recoverable
Vanadium	4.2	J	10	1.8	ug/L	1		6020B	Total Recoverable
Zinc	11	J	20	10	ug/L	1		6020B	Total Recoverable

Client Sample ID: LF4-MW5 — Lab Sample ID: 680-212047-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.87	J	3.0	0.86	ug/L	1		6020B	Total Recoverable
Barium	20		5.0	0.89	ug/L	1		6020B	Total Recoverable
Beryllium	0.52		0.50	0.20	ug/L	1		6020B	Total Recoverable
Cobalt	5.4		0.50	0.22	ug/L	1		6020B	Total Recoverable
Copper	2.1	J	5.0	0.90	ug/L	1		6020B	Total Recoverable
Lead	2.6		2.5	0.34	ug/L	1		6020B	Total Recoverable
Nickel	4.0	J	5.0	1.8	ug/L	1		6020B	Total Recoverable
Vanadium	4.1	J	10	1.8	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-212047-1

Client Sample ID: DUP390

Lab Sample ID: 680-212047-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.0		3.0	0.86	ug/L	1		6020B	Total Recoverable
Barium	64		5.0	0.89	ug/L	1		6020B	Total Recoverable
Beryllium	0.54		0.50	0.20	ug/L	1		6020B	Total Recoverable
Cadmium	0.36	J	0.50	0.078	ug/L	1		6020B	Total Recoverable
Chromium	2.6	J	5.0	2.6	ug/L	1		6020B	Total Recoverable
Cobalt	70		0.50	0.22	ug/L	1		6020B	Total Recoverable
Copper	8.3		5.0	0.90	ug/L	1		6020B	Total Recoverable
Lead	5.5		2.5	0.34	ug/L	1		6020B	Total Recoverable
Nickel	39		5.0	1.8	ug/L	1		6020B	Total Recoverable
Vanadium	3.4	J	10	1.8	ug/L	1		6020B	Total Recoverable
Zinc	310		20	10	ug/L	1		6020B	Total Recoverable

Client Sample ID: TB594

Lab Sample ID: 680-212047-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	3.3	J	5.0	3.2	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-212047-1

Client Sample ID: LF4-MW1
Date Collected: 03/02/22 11:40
Date Received: 03/03/22 09:45

Lab Sample ID: 680-212047-1
Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			03/10/22 15:41	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/10/22 15:41	1
Benzene	0.27	U	1.0	0.27	ug/L			03/10/22 15:41	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/10/22 15:41	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/10/22 15:41	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/10/22 15:41	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/10/22 15:41	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/10/22 15:41	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/10/22 15:41	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/10/22 15:41	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/10/22 15:41	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/10/22 15:41	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/10/22 15:41	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/10/22 15:41	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/10/22 15:41	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/10/22 15:41	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/10/22 15:41	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/10/22 15:41	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/10/22 15:41	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/10/22 15:41	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/10/22 15:41	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/10/22 15:41	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/10/22 15:41	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/10/22 15:41	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/10/22 15:41	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/10/22 15:41	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/10/22 15:41	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/10/22 15:41	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/10/22 15:41	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/10/22 15:41	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/10/22 15:41	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/10/22 15:41	1
Iodomethane	3.9	U	10	3.9	ug/L			03/10/22 15:41	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/10/22 15:41	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/10/22 15:41	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/10/22 15:41	1
Styrene	0.27	U	1.0	0.27	ug/L			03/10/22 15:41	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/10/22 15:41	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/10/22 15:41	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/10/22 15:41	1
Toluene	0.25	U	1.0	0.25	ug/L			03/10/22 15:41	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/10/22 15:41	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/10/22 15:41	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/10/22 15:41	1
Trichlorofluoromethane	0.33	U *1	1.0	0.33	ug/L			03/10/22 15:41	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/10/22 15:41	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			03/10/22 15:41	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/10/22 15:41	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/10/22 15:41	1

Client Sample ID: LF4-MW1

Lab Sample ID: 680-212047-1

Date Collected: 03/02/22 11:40

Matrix: Water

Date Received: 03/03/22 09:45

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*70 - 130*		*03/10/22 15:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*60 - 124*		*03/10/22 15:41*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*03/10/22 15:41*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*03/10/22 15:41*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.52	U	5.0	0.52	ug/L		03/04/22 14:46	03/07/22 18:34	1
Arsenic	**2.2**	**J**	3.0	0.86	ug/L		03/04/22 14:46	03/07/22 18:34	1
Barium	**52**		5.0	0.89	ug/L		03/04/22 14:46	03/07/22 18:34	1
Beryllium	**0.37**	**J**	0.50	0.20	ug/L		03/04/22 14:46	03/07/22 18:34	1
Cadmium	**0.13**	**J**	0.50	0.078	ug/L		03/04/22 14:46	03/07/22 18:34	1
Chromium	2.6	U	5.0	2.6	ug/L		03/04/22 14:46	03/07/22 18:34	1
Cobalt	**34**		0.50	0.22	ug/L		03/04/22 14:46	03/07/22 18:34	1
Copper	**3.3**	**J**	5.0	0.90	ug/L		03/04/22 14:46	03/07/22 18:34	1
Lead	**3.0**		2.5	0.34	ug/L		03/04/22 14:46	03/07/22 18:34	1
Nickel	**23**		5.0	1.8	ug/L		03/04/22 14:46	03/07/22 18:34	1
Selenium	1.2	U	2.5	1.2	ug/L		03/04/22 14:46	03/07/22 18:34	1
Silver	0.39	U	1.0	0.39	ug/L		03/04/22 14:46	03/07/22 18:34	1
Thallium	0.26	U	1.0	0.26	ug/L		03/04/22 14:46	03/07/22 18:34	1
Vanadium	**2.9**	**J**	10	1.8	ug/L		03/04/22 14:46	03/07/22 18:34	1
Zinc	**140**		20	10	ug/L		03/04/22 14:46	03/07/22 18:34	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		03/08/22 15:12	03/09/22 12:22	1

Client Sample ID: LF4-MW2

Lab Sample ID: 680-212047-2

Date Collected: 03/02/22 12:05

Matrix: Water

Date Received: 03/03/22 09:45

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			03/10/22 16:01	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/10/22 16:01	1
Benzene	0.27	U	1.0	0.27	ug/L			03/10/22 16:01	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/10/22 16:01	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/10/22 16:01	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/10/22 16:01	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/10/22 16:01	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/10/22 16:01	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/10/22 16:01	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/10/22 16:01	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/10/22 16:01	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/10/22 16:01	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/10/22 16:01	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/10/22 16:01	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/10/22 16:01	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/10/22 16:01	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/10/22 16:01	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/10/22 16:01	1

Client Sample ID: LF4-MW2
Lab Sample ID: 680-212047-2
Date Collected: 03/02/22 12:05
Matrix: Water
Date Received: 03/03/22 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/10/22 16:01	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/10/22 16:01	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/10/22 16:01	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/10/22 16:01	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/10/22 16:01	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/10/22 16:01	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/10/22 16:01	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/10/22 16:01	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/10/22 16:01	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/10/22 16:01	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/10/22 16:01	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/10/22 16:01	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/10/22 16:01	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/10/22 16:01	1
Iodomethane	3.9	U	10	3.9	ug/L			03/10/22 16:01	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/10/22 16:01	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/10/22 16:01	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/10/22 16:01	1
Styrene	0.27	U	1.0	0.27	ug/L			03/10/22 16:01	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/10/22 16:01	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/10/22 16:01	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/10/22 16:01	1
Toluene	0.25	U	1.0	0.25	ug/L			03/10/22 16:01	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/10/22 16:01	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/10/22 16:01	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/10/22 16:01	1
Trichlorofluoromethane	0.33	U *1	1.0	0.33	ug/L			03/10/22 16:01	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/10/22 16:01	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			03/10/22 16:01	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/10/22 16:01	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/10/22 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*70 - 130*		*03/10/22 16:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*60 - 124*		*03/10/22 16:01*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*		*03/10/22 16:01*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/10/22 16:01*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.52	U	5.0	0.52	ug/L		03/04/22 14:46	03/07/22 18:45	1
Arsenic	**3.2**		3.0	0.86	ug/L		03/04/22 14:46	03/07/22 18:45	1
Barium	**60**		5.0	0.89	ug/L		03/04/22 14:46	03/07/22 18:45	1
Beryllium	**0.50**		0.50	0.20	ug/L		03/04/22 14:46	03/07/22 18:45	1
Cadmium	**0.39**	**J**	0.50	0.078	ug/L		03/04/22 14:46	03/07/22 18:45	1
Chromium	2.6	U	5.0	2.6	ug/L		03/04/22 14:46	03/07/22 18:45	1
Cobalt	**71**		0.50	0.22	ug/L		03/04/22 14:46	03/07/22 18:45	1
Copper	**10**		5.0	0.90	ug/L		03/04/22 14:46	03/07/22 18:45	1
Lead	**6.8**		2.5	0.34	ug/L		03/04/22 14:46	03/07/22 18:45	1
Nickel	**39**		5.0	1.8	ug/L		03/04/22 14:46	03/07/22 18:45	1

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-212047-1

Client Sample ID: LF4-MW2

Lab Sample ID: 680-212047-2

Date Collected: 03/02/22 12:05

Matrix: Water

Date Received: 03/03/22 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	1.2	U	2.5	1.2	ug/L		03/04/22 14:46	03/07/22 18:45	1
Silver	0.39	U	1.0	0.39	ug/L		03/04/22 14:46	03/07/22 18:45	1
Thallium	0.26	U	1.0	0.26	ug/L		03/04/22 14:46	03/07/22 18:45	1
Vanadium	**2.0**	**J**	10	1.8	ug/L		03/04/22 14:46	03/07/22 18:45	1
Zinc	**310**		20	10	ug/L		03/04/22 14:46	03/07/22 18:45	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		03/08/22 15:12	03/09/22 12:25	1

Client Sample ID: LF4-MW3

Lab Sample ID: 680-212047-3

Date Collected: 03/02/22 12:50

Matrix: Water

Date Received: 03/03/22 09:45

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			03/09/22 15:48	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/09/22 15:48	1
Benzene	0.27	U	1.0	0.27	ug/L			03/09/22 15:48	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/09/22 15:48	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/09/22 15:48	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/09/22 15:48	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/09/22 15:48	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/09/22 15:48	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/09/22 15:48	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/09/22 15:48	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/09/22 15:48	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/09/22 15:48	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/09/22 15:48	1
Chloromethane	0.54	U F1 F2	1.0	0.54	ug/L			03/09/22 15:48	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/09/22 15:48	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/09/22 15:48	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/09/22 15:48	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/09/22 15:48	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/22 15:48	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/22 15:48	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/09/22 15:48	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/09/22 15:48	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/09/22 15:48	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/09/22 15:48	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/09/22 15:48	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/09/22 15:48	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/09/22 15:48	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/09/22 15:48	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/09/22 15:48	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/09/22 15:48	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/09/22 15:48	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/09/22 15:48	1
Iodomethane	3.9	U	10	3.9	ug/L			03/09/22 15:48	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/09/22 15:48	1

Client Sample ID: LF4-MW3

Lab Sample ID: 680-212047-3

Date Collected: 03/02/22 12:50

Matrix: Water

Date Received: 03/03/22 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/09/22 15:48	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/09/22 15:48	1
Styrene	0.27	U	1.0	0.27	ug/L			03/09/22 15:48	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/09/22 15:48	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/09/22 15:48	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/09/22 15:48	1
Toluene	0.25	U	1.0	0.25	ug/L			03/09/22 15:48	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/09/22 15:48	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/09/22 15:48	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/09/22 15:48	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/09/22 15:48	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/09/22 15:48	1
Vinyl acetate	0.69	U *+ F1	2.0	0.69	ug/L			03/09/22 15:48	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/09/22 15:48	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/09/22 15:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*03/09/22 15:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*60 - 124*		*03/09/22 15:48*	*1*
Dibromofluoromethane (Surr)	*106*		*70 - 130*		*03/09/22 15:48*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/09/22 15:48*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.52	U	5.0	0.52	ug/L		03/04/22 16:06	03/07/22 19:03	1
Arsenic	**1.1**	**J**	3.0	0.86	ug/L		03/04/22 16:06	03/07/22 19:03	1
Barium	**60**		5.0	0.89	ug/L		03/04/22 16:06	03/07/22 19:03	1
Beryllium	**0.48**	**J**	0.50	0.20	ug/L		03/04/22 16:06	03/07/22 19:03	1
Cadmium	**0.10**	**J**	0.50	0.078	ug/L		03/04/22 16:06	03/07/22 19:03	1
Chromium	2.6	U	5.0	2.6	ug/L		03/04/22 16:06	03/07/22 19:03	1
Cobalt	**3.4**		0.50	0.22	ug/L		03/04/22 16:06	03/07/22 19:03	1
Copper	**2.0**	**J**	5.0	0.90	ug/L		03/04/22 16:06	03/07/22 19:03	1
Lead	**5.0**		2.5	0.34	ug/L		03/04/22 16:06	03/07/22 19:03	1
Nickel	**3.7**	**J**	5.0	1.8	ug/L		03/04/22 16:06	03/07/22 19:03	1
Selenium	1.2	U	2.5	1.2	ug/L		03/04/22 16:06	03/07/22 19:03	1
Silver	0.39	U	1.0	0.39	ug/L		03/04/22 16:06	03/07/22 19:03	1
Thallium	0.26	U	1.0	0.26	ug/L		03/04/22 16:06	03/07/22 19:03	1
Vanadium	**2.6**	**J**	10	1.8	ug/L		03/04/22 16:06	03/07/22 19:03	1
Zinc	**11**	**J**	20	10	ug/L		03/04/22 16:06	03/07/22 19:03	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		03/08/22 15:12	03/09/22 12:27	1

Client Sample ID: LF4-MW4

Lab Sample ID: 680-212047-4

Date Collected: 03/02/22 13:20

Matrix: Water

Date Received: 03/03/22 09:45

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			03/09/22 16:14	1

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-212047-1

Client Sample ID: LF4-MW4
Date Collected: 03/02/22 13:20
Date Received: 03/03/22 09:45

Lab Sample ID: 680-212047-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrylonitrile	5.5	U	20	5.5	ug/L			03/09/22 16:14	1
Benzene	0.27	U	1.0	0.27	ug/L			03/09/22 16:14	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/09/22 16:14	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/09/22 16:14	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/09/22 16:14	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/09/22 16:14	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/09/22 16:14	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/09/22 16:14	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/09/22 16:14	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/09/22 16:14	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/09/22 16:14	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/09/22 16:14	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/09/22 16:14	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/09/22 16:14	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/09/22 16:14	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/09/22 16:14	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/09/22 16:14	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/22 16:14	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/22 16:14	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/09/22 16:14	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/09/22 16:14	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/09/22 16:14	1
cis-1,2-Dichloroethene	**21**		1.0	0.25	ug/L			03/09/22 16:14	1
trans-1,2-Dichloroethene	**1.8**		1.0	0.34	ug/L			03/09/22 16:14	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/09/22 16:14	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/09/22 16:14	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/09/22 16:14	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/09/22 16:14	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/09/22 16:14	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/09/22 16:14	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/09/22 16:14	1
Iodomethane	3.9	U	10	3.9	ug/L			03/09/22 16:14	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/09/22 16:14	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/09/22 16:14	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/09/22 16:14	1
Styrene	0.27	U	1.0	0.27	ug/L			03/09/22 16:14	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/09/22 16:14	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/09/22 16:14	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/09/22 16:14	1
Toluene	0.25	U	1.0	0.25	ug/L			03/09/22 16:14	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/09/22 16:14	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/09/22 16:14	1
Trichloroethene	**20**		1.0	0.20	ug/L			03/09/22 16:14	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/09/22 16:14	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/09/22 16:14	1
Vinyl acetate	0.69	U *+	2.0	0.69	ug/L			03/09/22 16:14	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/09/22 16:14	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/09/22 16:14	1

Client Sample ID: LF4-MW4

Lab Sample ID: 680-212047-4

Date Collected: 03/02/22 13:20

Matrix: Water

Date Received: 03/03/22 09:45

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*03/09/22 16:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*60 - 124*		*03/09/22 16:14*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*03/09/22 16:14*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*03/09/22 16:14*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.52	U	5.0	0.52	ug/L		03/04/22 16:06	03/07/22 19:20	1
Arsenic	**4.3**		3.0	0.86	ug/L		03/04/22 16:06	03/07/22 19:20	1
Barium	**220**		5.0	0.89	ug/L		03/04/22 16:06	03/07/22 19:20	1
Beryllium	**0.34**	**J**	0.50	0.20	ug/L		03/04/22 16:06	03/07/22 19:20	1
Cadmium	**0.54**		0.50	0.078	ug/L		03/04/22 16:06	03/07/22 19:20	1
Chromium	2.6	U	5.0	2.6	ug/L		03/04/22 16:06	03/07/22 19:20	1
Cobalt	**2.0**		0.50	0.22	ug/L		03/04/22 16:06	03/07/22 19:20	1
Copper	**1.6**	**J**	5.0	0.90	ug/L		03/04/22 16:06	03/07/22 19:20	1
Lead	**7.7**		2.5	0.34	ug/L		03/04/22 16:06	03/07/22 19:20	1
Nickel	**1.8**	**J**	5.0	1.8	ug/L		03/04/22 16:06	03/07/22 19:20	1
Selenium	1.2	U	2.5	1.2	ug/L		03/04/22 16:06	03/07/22 19:20	1
Silver	0.39	U	1.0	0.39	ug/L		03/04/22 16:06	03/07/22 19:20	1
Thallium	0.26	U	1.0	0.26	ug/L		03/04/22 16:06	03/07/22 19:20	1
Vanadium	**4.2**	**J**	10	1.8	ug/L		03/04/22 16:06	03/07/22 19:20	1
Zinc	**11**	**J**	20	10	ug/L		03/04/22 16:06	03/07/22 19:20	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		03/08/22 15:12	03/09/22 12:40	1

Client Sample ID: LF4-MW5

Lab Sample ID: 680-212047-5

Date Collected: 03/02/22 14:00

Matrix: Water

Date Received: 03/03/22 09:45

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			03/09/22 16:40	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/09/22 16:40	1
Benzene	0.27	U	1.0	0.27	ug/L			03/09/22 16:40	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/09/22 16:40	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/09/22 16:40	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/09/22 16:40	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/09/22 16:40	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/09/22 16:40	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/09/22 16:40	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/09/22 16:40	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/09/22 16:40	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/09/22 16:40	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/09/22 16:40	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/09/22 16:40	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/09/22 16:40	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/09/22 16:40	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/09/22 16:40	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/09/22 16:40	1

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-212047-1

Client Sample ID: LF4-MW5
Date Collected: 03/02/22 14:00
Date Received: 03/03/22 09:45

Lab Sample ID: 680-212047-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/22 16:40	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/22 16:40	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/09/22 16:40	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/09/22 16:40	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/09/22 16:40	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/09/22 16:40	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/09/22 16:40	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/09/22 16:40	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/09/22 16:40	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/09/22 16:40	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/09/22 16:40	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/09/22 16:40	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/09/22 16:40	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/09/22 16:40	1
Iodomethane	3.9	U	10	3.9	ug/L			03/09/22 16:40	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/09/22 16:40	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/09/22 16:40	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/09/22 16:40	1
Styrene	0.27	U	1.0	0.27	ug/L			03/09/22 16:40	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/09/22 16:40	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/09/22 16:40	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/09/22 16:40	1
Toluene	0.25	U	1.0	0.25	ug/L			03/09/22 16:40	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/09/22 16:40	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/09/22 16:40	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/09/22 16:40	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/09/22 16:40	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/09/22 16:40	1
Vinyl acetate	0.69	U *+	2.0	0.69	ug/L			03/09/22 16:40	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/09/22 16:40	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/09/22 16:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*03/09/22 16:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 124*		*03/09/22 16:40*	*1*
Dibromofluoromethane (Surr)	*107*		*70 - 130*		*03/09/22 16:40*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*03/09/22 16:40*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.52	U	5.0	0.52	ug/L		03/04/22 16:06	03/07/22 19:24	1
Arsenic	**0.87**	**J**	3.0	0.86	ug/L		03/04/22 16:06	03/07/22 19:24	1
Barium	**20**		5.0	0.89	ug/L		03/04/22 16:06	03/07/22 19:24	1
Beryllium	**0.52**		0.50	0.20	ug/L		03/04/22 16:06	03/07/22 19:24	1
Cadmium	0.078	U	0.50	0.078	ug/L		03/04/22 16:06	03/07/22 19:24	1
Chromium	2.6	U	5.0	2.6	ug/L		03/04/22 16:06	03/07/22 19:24	1
Cobalt	**5.4**		0.50	0.22	ug/L		03/04/22 16:06	03/07/22 19:24	1
Copper	**2.1**	**J**	5.0	0.90	ug/L		03/04/22 16:06	03/07/22 19:24	1
Lead	**2.6**		2.5	0.34	ug/L		03/04/22 16:06	03/07/22 19:24	1
Nickel	**4.0**	**J**	5.0	1.8	ug/L		03/04/22 16:06	03/07/22 19:24	1

Client Sample ID: LF4-MW5

Lab Sample ID: 680-212047-5

Date Collected: 03/02/22 14:00

Matrix: Water

Date Received: 03/03/22 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	1.2	U	2.5	1.2	ug/L		03/04/22 16:06	03/07/22 19:24	1
Silver	0.39	U	1.0	0.39	ug/L		03/04/22 16:06	03/07/22 19:24	1
Thallium	0.26	U	1.0	0.26	ug/L		03/04/22 16:06	03/07/22 19:24	1
Vanadium	**4.1**	**J**	10	1.8	ug/L		03/04/22 16:06	03/07/22 19:24	1
Zinc	10	U	20	10	ug/L		03/04/22 16:06	03/07/22 19:24	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		03/08/22 15:12	03/09/22 12:42	1

Client Sample ID: DUP390

Lab Sample ID: 680-212047-6

Date Collected: 03/02/22 00:00

Matrix: Water

Date Received: 03/03/22 09:45

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			03/09/22 17:05	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/09/22 17:05	1
Benzene	0.27	U	1.0	0.27	ug/L			03/09/22 17:05	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/09/22 17:05	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/09/22 17:05	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/09/22 17:05	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/09/22 17:05	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/09/22 17:05	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/09/22 17:05	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/09/22 17:05	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/09/22 17:05	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/09/22 17:05	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/09/22 17:05	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/09/22 17:05	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/09/22 17:05	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/09/22 17:05	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/09/22 17:05	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/09/22 17:05	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/22 17:05	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/22 17:05	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/09/22 17:05	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/09/22 17:05	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/09/22 17:05	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/09/22 17:05	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/09/22 17:05	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/09/22 17:05	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/09/22 17:05	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/09/22 17:05	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/09/22 17:05	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/09/22 17:05	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/09/22 17:05	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/09/22 17:05	1
Iodomethane	3.9	U	10	3.9	ug/L			03/09/22 17:05	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/09/22 17:05	1

Client Sample ID: DUP390

Lab Sample ID: 680-212047-6

Date Collected: 03/02/22 00:00

Matrix: Water

Date Received: 03/03/22 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/09/22 17:05	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/09/22 17:05	1
Styrene	0.27	U	1.0	0.27	ug/L			03/09/22 17:05	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/09/22 17:05	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/09/22 17:05	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/09/22 17:05	1
Toluene	0.25	U	1.0	0.25	ug/L			03/09/22 17:05	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/09/22 17:05	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/09/22 17:05	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/09/22 17:05	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/09/22 17:05	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/09/22 17:05	1
Vinyl acetate	0.69	U *+	2.0	0.69	ug/L			03/09/22 17:05	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/09/22 17:05	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/09/22 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*03/09/22 17:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*60 - 124*		*03/09/22 17:05*	*1*
Dibromofluoromethane (Surr)	*106*		*70 - 130*		*03/09/22 17:05*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*03/09/22 17:05*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.52	U	5.0	0.52	ug/L		03/04/22 16:06	03/07/22 19:28	1
Arsenic	**3.0**		3.0	0.86	ug/L		03/04/22 16:06	03/07/22 19:28	1
Barium	**64**		5.0	0.89	ug/L		03/04/22 16:06	03/07/22 19:28	1
Beryllium	**0.54**		0.50	0.20	ug/L		03/04/22 16:06	03/07/22 19:28	1
Cadmium	**0.36**	**J**	0.50	0.078	ug/L		03/04/22 16:06	03/07/22 19:28	1
Chromium	**2.6**	**J**	5.0	2.6	ug/L		03/04/22 16:06	03/07/22 19:28	1
Cobalt	**70**		0.50	0.22	ug/L		03/04/22 16:06	03/07/22 19:28	1
Copper	**8.3**		5.0	0.90	ug/L		03/04/22 16:06	03/07/22 19:28	1
Lead	**5.5**		2.5	0.34	ug/L		03/04/22 16:06	03/07/22 19:28	1
Nickel	**39**		5.0	1.8	ug/L		03/04/22 16:06	03/07/22 19:28	1
Selenium	1.2	U	2.5	1.2	ug/L		03/04/22 16:06	03/07/22 19:28	1
Silver	0.39	U	1.0	0.39	ug/L		03/04/22 16:06	03/07/22 19:28	1
Thallium	0.26	U	1.0	0.26	ug/L		03/04/22 16:06	03/07/22 19:28	1
Vanadium	**3.4**	**J**	10	1.8	ug/L		03/04/22 16:06	03/07/22 19:28	1
Zinc	**310**		20	10	ug/L		03/04/22 16:06	03/07/22 19:28	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		03/08/22 15:12	03/09/22 12:45	1

Client Sample ID: TB594

Lab Sample ID: 680-212047-7

Date Collected: 03/02/22 13:45

Matrix: Water

Date Received: 03/03/22 09:45

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			03/09/22 15:22	1

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-212047-1

Client Sample ID: TB594
Date Collected: 03/02/22 13:45
Date Received: 03/03/22 09:45

Lab Sample ID: 680-212047-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrylonitrile	5.5	U	20	5.5	ug/L			03/09/22 15:22	1
Benzene	0.27	U	1.0	0.27	ug/L			03/09/22 15:22	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/09/22 15:22	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/09/22 15:22	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/09/22 15:22	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/09/22 15:22	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/09/22 15:22	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/09/22 15:22	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/09/22 15:22	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/09/22 15:22	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/09/22 15:22	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/09/22 15:22	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/09/22 15:22	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/09/22 15:22	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/09/22 15:22	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/09/22 15:22	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/09/22 15:22	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/22 15:22	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/22 15:22	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/09/22 15:22	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/09/22 15:22	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/09/22 15:22	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/09/22 15:22	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/09/22 15:22	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/09/22 15:22	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/09/22 15:22	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/09/22 15:22	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/09/22 15:22	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/09/22 15:22	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/09/22 15:22	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/09/22 15:22	1
Iodomethane	3.9	U	10	3.9	ug/L			03/09/22 15:22	1
Methylene Chloride	**3.3**	**J**	5.0	3.2	ug/L			03/09/22 15:22	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/09/22 15:22	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/09/22 15:22	1
Styrene	0.27	U	1.0	0.27	ug/L			03/09/22 15:22	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/09/22 15:22	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/09/22 15:22	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/09/22 15:22	1
Toluene	0.25	U	1.0	0.25	ug/L			03/09/22 15:22	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/09/22 15:22	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/09/22 15:22	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/09/22 15:22	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/09/22 15:22	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/09/22 15:22	1
Vinyl acetate	0.69	U *+	2.0	0.69	ug/L			03/09/22 15:22	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/09/22 15:22	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/09/22 15:22	1

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-212047-1

Client Sample ID: TB594
Date Collected: 03/02/22 13:45
Date Received: 03/03/22 09:45

Lab Sample ID: 680-212047-7
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		03/09/22 15:22	1
1,2-Dichloroethane-d4 (Surr)	99		60 - 124		03/09/22 15:22	1
Dibromofluoromethane (Surr)	103		70 - 130		03/09/22 15:22	1
4-Bromofluorobenzene (Surr)	102		70 - 130		03/09/22 15:22	1

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-212047-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 680-709936/9
Matrix: Water
Analysis Batch: 709936

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			03/09/22 14:05	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/09/22 14:05	1
Benzene	0.27	U	1.0	0.27	ug/L			03/09/22 14:05	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/09/22 14:05	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/09/22 14:05	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/09/22 14:05	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/09/22 14:05	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/09/22 14:05	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/09/22 14:05	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/09/22 14:05	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/09/22 14:05	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/09/22 14:05	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/09/22 14:05	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/09/22 14:05	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/09/22 14:05	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/09/22 14:05	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/09/22 14:05	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/09/22 14:05	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/22 14:05	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/22 14:05	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/09/22 14:05	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/09/22 14:05	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/09/22 14:05	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/09/22 14:05	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/09/22 14:05	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/09/22 14:05	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/09/22 14:05	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/09/22 14:05	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/09/22 14:05	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/09/22 14:05	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/09/22 14:05	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/09/22 14:05	1
Iodomethane	3.9	U	10	3.9	ug/L			03/09/22 14:05	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/09/22 14:05	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/09/22 14:05	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/09/22 14:05	1
Styrene	0.27	U	1.0	0.27	ug/L			03/09/22 14:05	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/09/22 14:05	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/09/22 14:05	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/09/22 14:05	1
Toluene	0.25	U	1.0	0.25	ug/L			03/09/22 14:05	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/09/22 14:05	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/09/22 14:05	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/09/22 14:05	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/09/22 14:05	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/09/22 14:05	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			03/09/22 14:05	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/09/22 14:05	1

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

Lab Sample ID: MB 680-709936/9
Matrix: Water
Analysis Batch: 709936

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/09/22 14:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*03/09/22 14:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*60 - 124*		*03/09/22 14:05*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*03/09/22 14:05*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*		*03/09/22 14:05*	*1*

Lab Sample ID: LCS 680-709936/4
Matrix: Water
Analysis Batch: 709936

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	250	270		ug/L		108	67 - 120
Acrylonitrile	500	537		ug/L		107	70 - 130
Benzene	50.0	52.8		ug/L		106	70 - 130
Bromochloromethane	50.0	50.0		ug/L		100	70 - 130
Bromodichloromethane	50.0	53.7		ug/L		107	70 - 130
Bromoform	50.0	50.4		ug/L		101	69 - 129
Bromomethane	50.0	46.1		ug/L		92	28 - 192
2-Butanone (MEK)	250	259		ug/L		104	69 - 120
Carbon disulfide	50.0	54.9		ug/L		110	70 - 130
Carbon tetrachloride	50.0	54.2		ug/L		108	70 - 130
Chlorobenzene	50.0	49.3		ug/L		99	70 - 130
Chloroethane	50.0	45.2		ug/L		90	31 - 213
Chloroform	50.0	53.2		ug/L		106	70 - 130
Chloromethane	50.0	51.0		ug/L		102	59 - 127
Dibromochloromethane	50.0	52.2		ug/L		104	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	55.2		ug/L		110	70 - 130
1,2-Dibromoethane	50.0	49.9		ug/L		100	70 - 130
Dibromomethane	50.0	50.7		ug/L		101	70 - 130
1,2-Dichlorobenzene	50.0	51.2		ug/L		102	70 - 130
1,4-Dichlorobenzene	50.0	51.7		ug/L		103	70 - 130
trans-1,4-Dichloro-2-butene	50.0	58.9		ug/L		118	67 - 120
1,1-Dichloroethane	50.0	53.5		ug/L		107	70 - 130
1,2-Dichloroethane	50.0	52.7		ug/L		105	70 - 130
cis-1,2-Dichloroethene	50.0	56.6		ug/L		113	70 - 130
trans-1,2-Dichloroethene	50.0	54.4		ug/L		109	70 - 130
1,1-Dichloroethene	50.0	53.4		ug/L		107	70 - 130
1,2-Dichloropropane	50.0	53.7		ug/L		107	70 - 130
1,3-Dichloropropane	50.0	51.7		ug/L		103	70 - 130
cis-1,3-Dichloropropene	50.0	55.8		ug/L		112	70 - 130
trans-1,3-Dichloropropene	50.0	53.2		ug/L		106	70 - 130
Ethylbenzene	50.0	52.9		ug/L		106	70 - 130
2-Hexanone	250	265		ug/L		106	70 - 130
Iodomethane	50.0	51.2		ug/L		102	52 - 129
Methylene Chloride	50.0	51.9		ug/L		104	70 - 130
4-Methyl-2-pentanone (MIBK)	250	267		ug/L		107	68 - 120

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

Lab Sample ID: LCS 680-709936/4
Matrix: Water
Analysis Batch: 709936

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	50.0	54.7		ug/L		109	70 - 130
Styrene	50.0	54.1		ug/L		108	70 - 130
1,1,1,2-Tetrachloroethane	50.0	50.9		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	50.0	52.6		ug/L		105	70 - 130
Tetrachloroethylene	50.0	50.3		ug/L		101	70 - 130
Toluene	50.0	52.9		ug/L		106	70 - 130
1,1,1-Trichloroethane	50.0	53.3		ug/L		107	70 - 130
1,1,2-Trichloroethane	50.0	51.2		ug/L		102	70 - 130
Trichloroethene	50.0	48.7		ug/L		97	70 - 130
Trichlorofluoromethane	50.0	49.5		ug/L		99	63 - 142
1,2,3-Trichloropropane	50.0	48.8		ug/L		98	70 - 130
Vinyl acetate	100	209	E *+	ug/L		209	67 - 135
Vinyl chloride	50.0	44.1		ug/L		88	66 - 129
Xylenes, Total	100	107		ug/L		107	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*107*		*60 - 124*
Dibromofluoromethane (Surr)	*104*		*70 - 130*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 680-709936/5
Matrix: Water
Analysis Batch: 709936

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
Acetone	250	271		ug/L		109	67 - 120	1	30
Acrylonitrile	500	544		ug/L		109	70 - 130	1	30
Benzene	50.0	52.1		ug/L		104	70 - 130	1	30
Bromochloromethane	50.0	51.5		ug/L		103	70 - 130	3	30
Bromodichloromethane	50.0	54.4		ug/L		109	70 - 130	1	30
Bromoform	50.0	50.5		ug/L		101	69 - 129	0	30
Bromomethane	50.0	46.3		ug/L		93	28 - 192	0	30
2-Butanone (MEK)	250	257		ug/L		103	69 - 120	1	30
Carbon disulfide	50.0	55.8		ug/L		112	70 - 130	1	30
Carbon tetrachloride	50.0	53.8		ug/L		108	70 - 130	1	30
Chlorobenzene	50.0	49.6		ug/L		99	70 - 130	1	30
Chloroethane	50.0	51.8		ug/L		104	31 - 213	14	30
Chloroform	50.0	52.5		ug/L		105	70 - 130	1	30
Chloromethane	50.0	48.0		ug/L		96	59 - 127	6	30
Dibromochloromethane	50.0	53.8		ug/L		108	70 - 130	3	30
1,2-Dibromo-3-Chloropropane	50.0	53.3		ug/L		107	70 - 130	3	30
1,2-Dibromoethane	50.0	51.9		ug/L		104	70 - 130	4	30
Dibromomethane	50.0	52.9		ug/L		106	70 - 130	4	30
1,2-Dichlorobenzene	50.0	50.6		ug/L		101	70 - 130	1	30
1,4-Dichlorobenzene	50.0	51.5		ug/L		103	70 - 130	0	30
trans-1,4-Dichloro-2-butene	50.0	58.7		ug/L		117	67 - 120	0	30
1,1-Dichloroethane	50.0	53.5		ug/L		107	70 - 130	0	30

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

Lab Sample ID: LCSD 680-709936/5
Matrix: Water
Analysis Batch: 709936

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
1,2-Dichloroethane	50.0	52.9		ug/L		106	70 - 130	0	50
cis-1,2-Dichloroethene	50.0	55.7		ug/L		111	70 - 130	2	30
trans-1,2-Dichloroethene	50.0	54.8		ug/L		110	70 - 130	1	30
1,1-Dichloroethene	50.0	54.9		ug/L		110	70 - 130	3	20
1,2-Dichloropropane	50.0	53.8		ug/L		108	70 - 130	0	20
1,3-Dichloropropane	50.0	52.7		ug/L		105	70 - 130	2	20
cis-1,3-Dichloropropene	50.0	56.4		ug/L		113	70 - 130	1	20
trans-1,3-Dichloropropene	50.0	53.6		ug/L		107	70 - 130	1	30
Ethylbenzene	50.0	52.9		ug/L		106	70 - 130	0	20
2-Hexanone	250	272		ug/L		109	70 - 130	2	20
Iodomethane	50.0	52.2		ug/L		104	52 - 129	2	30
Methylene Chloride	50.0	53.8		ug/L		108	70 - 130	4	30
4-Methyl-2-pentanone (MIBK)	250	273		ug/L		109	68 - 120	2	30
Methyl tert-butyl ether	50.0	56.0		ug/L		112	70 - 130	2	30
Styrene	50.0	53.1		ug/L		106	70 - 130	2	30
1,1,1,2-Tetrachloroethane	50.0	51.1		ug/L		102	70 - 130	0	30
1,1,2,2-Tetrachloroethane	50.0	52.8		ug/L		106	70 - 130	0	30
Tetrachloroethylene	50.0	51.5		ug/L		103	70 - 130	2	30
Toluene	50.0	53.5		ug/L		107	70 - 130	1	30
1,1,1-Trichloroethane	50.0	53.2		ug/L		106	70 - 130	0	30
1,1,2-Trichloroethane	50.0	52.5		ug/L		105	70 - 130	3	30
Trichloroethene	50.0	49.4		ug/L		99	70 - 130	1	30
Trichlorofluoromethane	50.0	52.7		ug/L		105	63 - 142	6	30
1,2,3-Trichloropropane	50.0	49.0		ug/L		98	70 - 130	1	30
Vinyl acetate	100	193	E *+	ug/L		193	67 - 135	8	30
Vinyl chloride	50.0	44.2		ug/L		88	66 - 129	0	30
Xylenes, Total	100	106		ug/L		106	70 - 130	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*106*		*60 - 124*
Dibromofluoromethane (Surr)	*104*		*70 - 130*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 680-212047-3 MS
Matrix: Water
Analysis Batch: 709936

Client Sample ID: LF4-MW3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	3.7	U	250	221		ug/L		89	67 - 120
Acrylonitrile	5.5	U	500	481		ug/L		96	70 - 130
Benzene	0.27	U	50.0	52.7		ug/L		105	70 - 130
Bromochloromethane	0.34	U	50.0	49.6		ug/L		99	70 - 130
Bromodichloromethane	0.25	U	50.0	53.4		ug/L		107	70 - 130
Bromoform	0.59	U	50.0	52.9		ug/L		106	69 - 129
Bromomethane	3.7	U	50.0	36.8		ug/L		74	28 - 192
2-Butanone (MEK)	6.4	U	250	220		ug/L		88	69 - 120
Carbon disulfide	0.43	U	50.0	56.0		ug/L		112	70 - 130

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

Lab Sample ID: 680-212047-3 MS
Matrix: Water
Analysis Batch: 709936

Client Sample ID: LF4-MW3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	0.30	U	50.0	56.5		ug/L		113	70 - 130
Chlorobenzene	0.15	U	50.0	50.0		ug/L		100	70 - 130
Chloroethane	4.6	U	50.0	56.1		ug/L		112	31 - 213
Chloroform	0.27	U	50.0	53.3		ug/L		107	70 - 130
Chloromethane	0.54	U F1 F2	50.0	75.9	F1	ug/L		152	59 - 127
Dibromochloromethane	0.39	U	50.0	53.4		ug/L		107	70 - 130
1,2-Dibromo-3-Chloropropane	1.8	U	50.0	48.5		ug/L		97	70 - 130
1,2-Dibromoethane	0.33	U	50.0	49.3		ug/L		99	70 - 130
Dibromomethane	0.34	U	50.0	50.5		ug/L		101	70 - 130
1,2-Dichlorobenzene	0.31	U	50.0	51.7		ug/L		103	70 - 130
1,4-Dichlorobenzene	0.31	U	50.0	50.8		ug/L		102	70 - 130
trans-1,4-Dichloro-2-butene	1.3	U	50.0	50.9		ug/L		102	67 - 120
1,1-Dichloroethane	0.33	U	50.0	47.5		ug/L		95	70 - 130
1,2-Dichloroethane	0.25	U	50.0	50.2		ug/L		100	70 - 130
cis-1,2-Dichloroethene	0.25	U	50.0	52.0		ug/L		104	70 - 130
trans-1,2-Dichloroethene	0.34	U	50.0	54.3		ug/L		109	70 - 130
1,1-Dichloroethene	0.33	U	50.0	55.5		ug/L		111	70 - 130
1,2-Dichloropropane	0.22	U	50.0	51.9		ug/L		104	70 - 130
1,3-Dichloropropane	0.36	U	50.0	50.1		ug/L		100	70 - 130
cis-1,3-Dichloropropene	0.26	U	50.0	51.1		ug/L		102	70 - 130
trans-1,3-Dichloropropene	0.23	U	50.0	48.9		ug/L		98	70 - 130
Ethylbenzene	0.20	U	50.0	53.5		ug/L		107	70 - 130
2-Hexanone	3.2	U	250	245		ug/L		98	70 - 130
Iodomethane	3.9	U	50.0	48.8		ug/L		98	52 - 129
Methylene Chloride	3.2	U	50.0	51.5		ug/L		103	70 - 130
4-Methyl-2-pentanone (MIBK)	2.7	U	250	245		ug/L		98	68 - 120
Methyl tert-butyl ether	0.81	U	50.0	51.1		ug/L		102	70 - 130
Styrene	0.27	U	50.0	54.0		ug/L		108	70 - 130
1,1,1,2-Tetrachloroethane	0.36	U	50.0	51.2		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	0.40	U	50.0	53.6		ug/L		107	70 - 130
Tetrachloroethylene	0.35	U	50.0	53.4		ug/L		107	70 - 130
Toluene	0.25	U	50.0	53.9		ug/L		108	70 - 130
1,1,1-Trichloroethane	0.21	U	50.0	54.5		ug/L		109	70 - 130
1,1,2-Trichloroethane	0.32	U	50.0	50.4		ug/L		101	70 - 130
Trichloroethene	0.20	U	50.0	49.5		ug/L		99	70 - 130
Trichlorofluoromethane	0.33	U	50.0	56.0		ug/L		112	63 - 142
1,2,3-Trichloropropane	0.48	U	50.0	50.3		ug/L		101	70 - 130
Vinyl acetate	0.69	U *+ F1	100	168	E F1	ug/L		168	67 - 135
Vinyl chloride	0.40	U	50.0	46.6		ug/L		93	66 - 129
Xylenes, Total	0.23	U	100	107		ug/L		107	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 124*
Dibromofluoromethane (Surr)	*104*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*

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

Lab Sample ID: 680-212047-3 MSD
Matrix: Water
Analysis Batch: 709936

Client Sample ID: LF4-MW3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	3.7	U	250	240		ug/L		96	67 - 120	8	30
Acrylonitrile	5.5	U	500	506		ug/L		101	70 - 130	5	30
Benzene	0.27	U	50.0	52.9		ug/L		106	70 - 130	0	30
Bromochloromethane	0.34	U	50.0	49.5		ug/L		99	70 - 130	0	30
Bromodichloromethane	0.25	U	50.0	53.9		ug/L		108	70 - 130	1	30
Bromoform	0.59	U	50.0	52.2		ug/L		104	69 - 129	1	30
Bromomethane	3.7	U	50.0	40.5		ug/L		81	28 - 192	10	30
2-Butanone (MEK)	6.4	U	250	234		ug/L		93	69 - 120	6	30
Carbon disulfide	0.43	U	50.0	55.9		ug/L		112	70 - 130	0	30
Carbon tetrachloride	0.30	U	50.0	57.7		ug/L		115	70 - 130	2	30
Chlorobenzene	0.15	U	50.0	50.3		ug/L		101	70 - 130	1	30
Chloroethane	4.6	U	50.0	56.1		ug/L		112	31 - 213	0	30
Chloroform	0.27	U	50.0	53.1		ug/L		106	70 - 130	0	30
Chloromethane	0.54	U F1 F2	50.0	50.4	F2	ug/L		101	59 - 127	40	30
Dibromochloromethane	0.39	U	50.0	53.9		ug/L		108	70 - 130	1	30
1,2-Dibromo-3-Chloropropane	1.8	U	50.0	53.5		ug/L		107	70 - 130	10	30
1,2-Dibromoethane	0.33	U	50.0	50.4		ug/L		101	70 - 130	2	30
Dibromomethane	0.34	U	50.0	51.0		ug/L		102	70 - 130	1	30
1,2-Dichlorobenzene	0.31	U	50.0	52.4		ug/L		105	70 - 130	1	30
1,4-Dichlorobenzene	0.31	U	50.0	51.1		ug/L		102	70 - 130	1	30
trans-1,4-Dichloro-2-butene	1.3	U	50.0	52.1		ug/L		104	67 - 120	2	30
1,1-Dichloroethane	0.33	U	50.0	51.1		ug/L		102	70 - 130	7	30
1,2-Dichloroethane	0.25	U	50.0	50.8		ug/L		102	70 - 130	1	50
cis-1,2-Dichloroethene	0.25	U	50.0	53.4		ug/L		107	70 - 130	3	30
trans-1,2-Dichloroethene	0.34	U	50.0	55.2		ug/L		110	70 - 130	2	30
1,1-Dichloroethene	0.33	U	50.0	55.6		ug/L		111	70 - 130	0	20
1,2-Dichloropropane	0.22	U	50.0	53.0		ug/L		106	70 - 130	2	20
1,3-Dichloropropane	0.36	U	50.0	51.0		ug/L		102	70 - 130	2	20
cis-1,3-Dichloropropene	0.26	U	50.0	51.5		ug/L		103	70 - 130	1	20
trans-1,3-Dichloropropene	0.23	U	50.0	49.3		ug/L		99	70 - 130	1	30
Ethylbenzene	0.20	U	50.0	53.4		ug/L		107	70 - 130	0	20
2-Hexanone	3.2	U	250	251		ug/L		100	70 - 130	2	20
Iodomethane	3.9	U	50.0	51.0		ug/L		102	52 - 129	4	30
Methylene Chloride	3.2	U	50.0	52.2		ug/L		104	70 - 130	1	30
4-Methyl-2-pentanone (MIBK)	2.7	U	250	255		ug/L		102	68 - 120	4	30
Methyl tert-butyl ether	0.81	U	50.0	52.1		ug/L		104	70 - 130	2	30
Styrene	0.27	U	50.0	54.6		ug/L		109	70 - 130	1	30
1,1,1,2-Tetrachloroethane	0.36	U	50.0	51.7		ug/L		103	70 - 130	1	30
1,1,2,2-Tetrachloroethane	0.40	U	50.0	53.9		ug/L		108	70 - 130	1	30
Tetrachloroethylene	0.35	U	50.0	53.4		ug/L		107	70 - 130	0	30
Toluene	0.25	U	50.0	53.7		ug/L		107	70 - 130	0	30
1,1,1-Trichloroethane	0.21	U	50.0	54.6		ug/L		109	70 - 130	0	30
1,1,2-Trichloroethane	0.32	U	50.0	51.1		ug/L		102	70 - 130	1	30
Trichloroethene	0.20	U	50.0	50.4		ug/L		101	70 - 130	2	30
Trichlorofluoromethane	0.33	U	50.0	56.0		ug/L		112	63 - 142	0	30
1,2,3-Trichloropropane	0.48	U	50.0	49.1		ug/L		98	70 - 130	2	30
Vinyl acetate	0.69	U *+ F1	100	173	E F1	ug/L		173	67 - 135	3	30
Vinyl chloride	0.40	U	50.0	51.5		ug/L		103	66 - 129	10	30

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

Lab Sample ID: 680-212047-3 MSD
Matrix: Water
Analysis Batch: 709936

Client Sample ID: LF4-MW3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Xylenes, Total	0.23	U	100	107		ug/L		107	70 - 130	1	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*105*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 124*
Dibromofluoromethane (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 680-710177/9
Matrix: Water
Analysis Batch: 710177

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			03/10/22 13:23	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/10/22 13:23	1
Benzene	0.27	U	1.0	0.27	ug/L			03/10/22 13:23	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/10/22 13:23	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/10/22 13:23	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/10/22 13:23	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/10/22 13:23	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/10/22 13:23	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/10/22 13:23	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/10/22 13:23	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/10/22 13:23	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/10/22 13:23	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/10/22 13:23	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/10/22 13:23	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/10/22 13:23	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/10/22 13:23	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/10/22 13:23	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/10/22 13:23	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/10/22 13:23	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/10/22 13:23	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/10/22 13:23	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/10/22 13:23	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/10/22 13:23	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/10/22 13:23	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/10/22 13:23	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/10/22 13:23	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/10/22 13:23	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/10/22 13:23	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/10/22 13:23	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/10/22 13:23	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/10/22 13:23	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/10/22 13:23	1
Iodomethane	3.9	U	10	3.9	ug/L			03/10/22 13:23	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/10/22 13:23	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/10/22 13:23	1

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

Lab Sample ID: MB 680-710177/9
Matrix: Water
Analysis Batch: 710177

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/10/22 13:23	1
Styrene	0.27	U	1.0	0.27	ug/L			03/10/22 13:23	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/10/22 13:23	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/10/22 13:23	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/10/22 13:23	1
Toluene	0.25	U	1.0	0.25	ug/L			03/10/22 13:23	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/10/22 13:23	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/10/22 13:23	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/10/22 13:23	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/10/22 13:23	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/10/22 13:23	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			03/10/22 13:23	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/10/22 13:23	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/10/22 13:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/10/22 13:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*60 - 124*		*03/10/22 13:23*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*		*03/10/22 13:23*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*03/10/22 13:23*	*1*

Lab Sample ID: LCS 680-710177/4
Matrix: Water
Analysis Batch: 710177

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	250	230		ug/L		92	67 - 120
Acrylonitrile	500	507		ug/L		101	70 - 130
Benzene	50.0	50.0		ug/L		100	70 - 130
Bromochloromethane	50.0	52.5		ug/L		105	70 - 130
Bromodichloromethane	50.0	49.0		ug/L		98	70 - 130
Bromoform	50.0	45.4		ug/L		91	69 - 129
Bromomethane	50.0	58.0		ug/L		116	28 - 192
2-Butanone (MEK)	250	248		ug/L		99	69 - 120
Carbon disulfide	50.0	50.5		ug/L		101	70 - 130
Carbon tetrachloride	50.0	52.0		ug/L		104	70 - 130
Chlorobenzene	50.0	48.7		ug/L		97	70 - 130
Chloroethane	50.0	53.7		ug/L		107	31 - 213
Chloroform	50.0	52.1		ug/L		104	70 - 130
Chloromethane	50.0	58.2		ug/L		116	59 - 127
Dibromochloromethane	50.0	49.2		ug/L		98	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	47.5		ug/L		95	70 - 130
1,2-Dibromoethane	50.0	52.2		ug/L		104	70 - 130
Dibromomethane	50.0	47.6		ug/L		95	70 - 130
1,2-Dichlorobenzene	50.0	49.8		ug/L		100	70 - 130
1,4-Dichlorobenzene	50.0	49.2		ug/L		98	70 - 130
trans-1,4-Dichloro-2-butene	50.0	51.4		ug/L		103	67 - 120
1,1-Dichloroethane	50.0	50.2		ug/L		100	70 - 130

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

Lab Sample ID: LCS 680-710177/4
Matrix: Water
Analysis Batch: 710177

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	50.0	51.1		ug/L		102	70 - 130
cis-1,2-Dichloroethene	50.0	51.7		ug/L		103	70 - 130
trans-1,2-Dichloroethene	50.0	48.1		ug/L		96	70 - 130
1,1-Dichloroethene	50.0	46.6		ug/L		93	70 - 130
1,2-Dichloropropane	50.0	48.9		ug/L		98	70 - 130
1,3-Dichloropropane	50.0	50.7		ug/L		101	70 - 130
cis-1,3-Dichloropropene	50.0	51.0		ug/L		102	70 - 130
trans-1,3-Dichloropropene	50.0	52.9		ug/L		106	70 - 130
Ethylbenzene	50.0	48.6		ug/L		97	70 - 130
2-Hexanone	250	216		ug/L		87	70 - 130
Iodomethane	50.0	50.6		ug/L		101	52 - 129
Methylene Chloride	50.0	49.1		ug/L		98	70 - 130
4-Methyl-2-pentanone (MIBK)	250	219		ug/L		88	68 - 120
Methyl tert-butyl ether	50.0	49.5		ug/L		99	70 - 130
Styrene	50.0	50.8		ug/L		102	70 - 130
1,1,1,2-Tetrachloroethane	50.0	50.8		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	50.0	48.5		ug/L		97	70 - 130
Tetrachloroethylene	50.0	47.6		ug/L		95	70 - 130
Toluene	50.0	51.0		ug/L		102	70 - 130
1,1,1-Trichloroethane	50.0	48.4		ug/L		97	70 - 130
1,1,2-Trichloroethane	50.0	46.8		ug/L		94	70 - 130
Trichloroethene	50.0	49.6		ug/L		99	70 - 130
Trichlorofluoromethane	50.0	33.3		ug/L		67	63 - 142
1,2,3-Trichloropropane	50.0	49.6		ug/L		99	70 - 130
Vinyl acetate	100	116		ug/L		116	67 - 135
Vinyl chloride	50.0	55.1		ug/L		110	66 - 129
Xylenes, Total	100	96.0		ug/L		96	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 124*
Dibromofluoromethane (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 680-710177/5
Matrix: Water
Analysis Batch: 710177

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
Acetone	250	248		ug/L		99	67 - 120	8	30
Acrylonitrile	500	533		ug/L		107	70 - 130	5	30
Benzene	50.0	49.8		ug/L		100	70 - 130	0	30
Bromochloromethane	50.0	52.6		ug/L		105	70 - 130	0	30
Bromodichloromethane	50.0	49.5		ug/L		99	70 - 130	1	30
Bromoform	50.0	46.7		ug/L		93	69 - 129	3	30
Bromomethane	50.0	59.1		ug/L		118	28 - 192	2	30
2-Butanone (MEK)	250	256		ug/L		102	69 - 120	3	30
Carbon disulfide	50.0	48.9		ug/L		98	70 - 130	3	30

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

Lab Sample ID: LCSD 680-710177/5
Matrix: Water
Analysis Batch: 710177

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
Carbon tetrachloride			50.0	50.1		ug/L		100	70 - 130	4	30
Chlorobenzene			50.0	49.1		ug/L		98	70 - 130	1	30
Chloroethane			50.0	53.7		ug/L		107	31 - 213	0	30
Chloroform			50.0	51.7		ug/L		103	70 - 130	1	30
Chloromethane			50.0	57.7		ug/L		115	59 - 127	1	30
Dibromochloromethane			50.0	50.1		ug/L		100	70 - 130	2	30
1,2-Dibromo-3-Chloropropane			50.0	48.5		ug/L		97	70 - 130	2	30
1,2-Dibromoethane			50.0	52.4		ug/L		105	70 - 130	0	30
Dibromomethane			50.0	48.0		ug/L		96	70 - 130	1	30
1,2-Dichlorobenzene			50.0	48.7		ug/L		97	70 - 130	2	30
1,4-Dichlorobenzene			50.0	48.6		ug/L		97	70 - 130	1	30
trans-1,4-Dichloro-2-butene			50.0	52.6		ug/L		105	67 - 120	2	30
1,1-Dichloroethane			50.0	49.4		ug/L		99	70 - 130	2	30
1,2-Dichloroethane			50.0	52.3		ug/L		105	70 - 130	2	50
cis-1,2-Dichloroethene			50.0	50.8		ug/L		102	70 - 130	2	30
trans-1,2-Dichloroethene			50.0	47.0		ug/L		94	70 - 130	2	30
1,1-Dichloroethene			50.0	47.9		ug/L		96	70 - 130	3	20
1,2-Dichloropropane			50.0	47.6		ug/L		95	70 - 130	3	20
1,3-Dichloropropane			50.0	51.8		ug/L		104	70 - 130	2	20
cis-1,3-Dichloropropene			50.0	50.8		ug/L		102	70 - 130	0	20
trans-1,3-Dichloropropene			50.0	54.5		ug/L		109	70 - 130	3	30
Ethylbenzene			50.0	48.7		ug/L		97	70 - 130	0	20
2-Hexanone			250	233		ug/L		93	70 - 130	8	20
Iodomethane			50.0	49.9		ug/L		100	52 - 129	2	30
Methylene Chloride			50.0	48.1		ug/L		96	70 - 130	2	30
4-Methyl-2-pentanone (MIBK)			250	235		ug/L		94	68 - 120	7	30
Methyl tert-butyl ether			50.0	50.1		ug/L		100	70 - 130	1	30
Styrene			50.0	52.1		ug/L		104	70 - 130	3	30
1,1,1,2-Tetrachloroethane			50.0	52.2		ug/L		104	70 - 130	3	30
1,1,2,2-Tetrachloroethane			50.0	54.6		ug/L		109	70 - 130	12	30
Tetrachloroethylene			50.0	47.1		ug/L		94	70 - 130	1	30
Toluene			50.0	51.1		ug/L		102	70 - 130	0	30
1,1,1-Trichloroethane			50.0	47.2		ug/L		94	70 - 130	2	30
1,1,2-Trichloroethane			50.0	48.0		ug/L		96	70 - 130	3	30
Trichloroethene			50.0	47.2		ug/L		94	70 - 130	5	30
Trichlorofluoromethane			50.0	45.9	*1	ug/L		92	63 - 142	32	30
1,2,3-Trichloropropane			50.0	52.6		ug/L		105	70 - 130	6	30
Vinyl acetate			100	133		ug/L		133	67 - 135	13	30
Vinyl chloride			50.0	53.9		ug/L		108	66 - 129	2	30
Xylenes, Total			100	96.6		ug/L		97	70 - 130	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*96*		*60 - 124*
Dibromofluoromethane (Surr)	*105*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 680-709341/1-A
Matrix: Water
Analysis Batch: 709703

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 709341

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.52	U	5.0	0.52	ug/L		03/04/22 14:46	03/07/22 17:19	1
Arsenic	0.86	U	3.0	0.86	ug/L		03/04/22 14:46	03/07/22 17:19	1
Barium	0.89	U	5.0	0.89	ug/L		03/04/22 14:46	03/07/22 17:19	1
Beryllium	0.20	U	0.50	0.20	ug/L		03/04/22 14:46	03/07/22 17:19	1
Cadmium	0.078	U	0.50	0.078	ug/L		03/04/22 14:46	03/07/22 17:19	1
Chromium	2.6	U	5.0	2.6	ug/L		03/04/22 14:46	03/07/22 17:19	1
Cobalt	0.22	U	0.50	0.22	ug/L		03/04/22 14:46	03/07/22 17:19	1
Copper	0.90	U	5.0	0.90	ug/L		03/04/22 14:46	03/07/22 17:19	1
Lead	0.34	U	2.5	0.34	ug/L		03/04/22 14:46	03/07/22 17:19	1
Nickel	1.8	U	5.0	1.8	ug/L		03/04/22 14:46	03/07/22 17:19	1
Selenium	1.2	U	2.5	1.2	ug/L		03/04/22 14:46	03/07/22 17:19	1
Silver	0.39	U	1.0	0.39	ug/L		03/04/22 14:46	03/07/22 17:19	1
Thallium	0.26	U	1.0	0.26	ug/L		03/04/22 14:46	03/07/22 17:19	1
Vanadium	1.8	U	10	1.8	ug/L		03/04/22 14:46	03/07/22 17:19	1
Zinc	10	U	20	10	ug/L		03/04/22 14:46	03/07/22 17:19	1

Lab Sample ID: LCS 680-709341/2-A
Matrix: Water
Analysis Batch: 709703

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 709341

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	56.2		ug/L		112	80 - 120
Arsenic	100	112		ug/L		112	80 - 120
Barium	100	108		ug/L		108	80 - 120
Beryllium	50.0	53.5		ug/L		107	80 - 120
Cadmium	50.0	56.5		ug/L		113	80 - 120
Chromium	100	114		ug/L		114	80 - 120
Cobalt	50.0	57.7		ug/L		115	80 - 120
Copper	99.1	118		ug/L		119	80 - 120
Lead	505	569		ug/L		113	80 - 120
Nickel	99.0	118		ug/L		120	80 - 120
Selenium	100	106		ug/L		106	80 - 120
Silver	50.0	55.8		ug/L		112	80 - 120
Thallium	40.0	43.8		ug/L		109	80 - 120
Vanadium	99.8	111		ug/L		111	80 - 120
Zinc	100	112		ug/L		112	80 - 120

Lab Sample ID: MB 680-709358/1-A
Matrix: Water
Analysis Batch: 709703

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 709358

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.52	U	5.0	0.52	ug/L		03/04/22 16:06	03/07/22 18:55	1
Arsenic	0.86	U	3.0	0.86	ug/L		03/04/22 16:06	03/07/22 18:55	1
Barium	0.89	U	5.0	0.89	ug/L		03/04/22 16:06	03/07/22 18:55	1
Beryllium	0.20	U	0.50	0.20	ug/L		03/04/22 16:06	03/07/22 18:55	1
Cadmium	0.078	U	0.50	0.078	ug/L		03/04/22 16:06	03/07/22 18:55	1
Chromium	2.6	U	5.0	2.6	ug/L		03/04/22 16:06	03/07/22 18:55	1
Cobalt	0.22	U	0.50	0.22	ug/L		03/04/22 16:06	03/07/22 18:55	1

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

Lab Sample ID: MB 680-709358/1-A
Matrix: Water
Analysis Batch: 709703

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 709358

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	0.90	U	5.0	0.90	ug/L		03/04/22 16:06	03/07/22 18:55	1
Lead	0.34	U	2.5	0.34	ug/L		03/04/22 16:06	03/07/22 18:55	1
Nickel	1.8	U	5.0	1.8	ug/L		03/04/22 16:06	03/07/22 18:55	1
Selenium	1.2	U	2.5	1.2	ug/L		03/04/22 16:06	03/07/22 18:55	1
Silver	0.39	U	1.0	0.39	ug/L		03/04/22 16:06	03/07/22 18:55	1
Thallium	0.26	U	1.0	0.26	ug/L		03/04/22 16:06	03/07/22 18:55	1
Vanadium	1.8	U	10	1.8	ug/L		03/04/22 16:06	03/07/22 18:55	1
Zinc	10	U	20	10	ug/L		03/04/22 16:06	03/07/22 18:55	1

Lab Sample ID: LCS 680-709358/2-A
Matrix: Water
Analysis Batch: 709703

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 709358

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	50.0		ug/L		100	80 - 120
Arsenic	100	98.7		ug/L		99	80 - 120
Barium	100	97.6		ug/L		98	80 - 120
Beryllium	50.0	49.3		ug/L		99	80 - 120
Cadmium	50.0	49.5		ug/L		99	80 - 120
Chromium	100	98.4		ug/L		98	80 - 120
Cobalt	50.0	51.1		ug/L		102	80 - 120
Copper	99.1	99.8		ug/L		101	80 - 120
Lead	505	503		ug/L		100	80 - 120
Nickel	99.0	102		ug/L		103	80 - 120
Selenium	100	97.4		ug/L		97	80 - 120
Silver	50.0	48.7		ug/L		97	80 - 120
Thallium	40.0	38.3		ug/L		96	80 - 120
Vanadium	99.8	97.3		ug/L		98	80 - 120
Zinc	100	97.5		ug/L		98	80 - 120

Lab Sample ID: 680-212047-3 MS
Matrix: Water
Analysis Batch: 709703

Client Sample ID: LF4-MW3
Prep Type: Total Recoverable
Prep Batch: 709358

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.52	U	50.0	38.5		ug/L		77	75 - 125
Arsenic	1.1	J	100	98.4		ug/L		97	75 - 125
Barium	60		100	153		ug/L		93	75 - 125
Beryllium	0.48	J	50.0	47.9		ug/L		95	75 - 125
Cadmium	0.10	J	50.0	49.0		ug/L		98	75 - 125
Chromium	2.6	U	100	98.4		ug/L		98	75 - 125
Cobalt	3.4		50.0	53.7		ug/L		101	75 - 125
Copper	2.0	J	99.1	101		ug/L		100	75 - 125
Lead	5.0		505	501		ug/L		98	75 - 125
Nickel	3.7	J	99.0	104		ug/L		102	75 - 125
Selenium	1.2	U	100	95.3		ug/L		95	75 - 125
Silver	0.39	U	50.0	47.6		ug/L		95	75 - 125
Thallium	0.26	U	40.0	38.0		ug/L		95	75 - 125
Vanadium	2.6	J	99.8	98.9		ug/L		97	75 - 125

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

Lab Sample ID: 680-212047-3 MS
Matrix: Water
Analysis Batch: 709703

Client Sample ID: LF4-MW3
Prep Type: Total Recoverable
Prep Batch: 709358

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	11	J	100	106		ug/L		96	75 - 125

Lab Sample ID: 680-212047-3 MSD
Matrix: Water
Analysis Batch: 709703

Client Sample ID: LF4-MW3
Prep Type: Total Recoverable
Prep Batch: 709358

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.52	U	50.0	41.2		ug/L		82	75 - 125	7	20
Arsenic	1.1	J	100	101		ug/L		100	75 - 125	2	20
Barium	60		100	159		ug/L		99	75 - 125	4	20
Beryllium	0.48	J	50.0	49.8		ug/L		99	75 - 125	4	20
Cadmium	0.10	J	50.0	51.2		ug/L		102	75 - 125	4	20
Chromium	2.6	U	100	104		ug/L		104	75 - 125	6	20
Cobalt	3.4		50.0	55.0		ug/L		103	75 - 125	2	20
Copper	2.0	J	99.1	105		ug/L		104	75 - 125	5	20
Lead	5.0		505	515		ug/L		101	75 - 125	3	20
Nickel	3.7	J	99.0	107		ug/L		105	75 - 125	3	20
Selenium	1.2	U	100	97.0		ug/L		97	75 - 125	2	20
Silver	0.39	U	50.0	49.2		ug/L		98	75 - 125	3	20
Thallium	0.26	U	40.0	39.4		ug/L		99	75 - 125	4	20
Vanadium	2.6	J	99.8	103		ug/L		101	75 - 125	4	20
Zinc	11	J	100	110		ug/L		100	75 - 125	4	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LB 680-709472/1-E
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709788

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	8.0	U	20	8.0	ug/L		03/08/22 13:52	03/09/22 10:13	1

Lab Sample ID: LB2 680-709472/10-D
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709788

Analyte	LB2 Result	LB2 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	8.0	U	20	8.0	ug/L		03/08/22 13:52	03/09/22 10:46	1

Lab Sample ID: MB 680-709788/12-A
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709788

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		03/08/22 13:52	03/09/22 10:08	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 680-709788/13-A
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709788

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	250	258		ug/L		103	80 - 120

Lab Sample ID: MB 680-709796/1-A
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709796

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		03/08/22 14:31	03/09/22 10:58	1

Lab Sample ID: LCS 680-709796/3-A
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709796

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.50	2.50		ug/L		100	80 - 120

Lab Sample ID: MB 680-709800/1-A
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709800

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		03/08/22 14:58	03/09/22 12:48	1

Lab Sample ID: LCS 680-709800/2-A
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709800

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.50	2.51		ug/L		100	80 - 120

Lab Sample ID: MB 680-709803/1-A
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709803

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		03/08/22 15:12	03/09/22 12:17	1

Lab Sample ID: LCS 680-709803/2-A
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709803

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.50	2.52		ug/L		101	80 - 120

Lab Sample ID: 680-212047-3 MS
Matrix: Water
Analysis Batch: 710033

Client Sample ID: LF4-MW3
Prep Type: Total/NA
Prep Batch: 709803

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.080	U	1.00	0.987		ug/L		99	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: 680-212047-3 MSD
Matrix: Water
Analysis Batch: 710033

Client Sample ID: LF4-MW3
Prep Type: Total/NA
Prep Batch: 709803

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.080	U	1.00	0.975		ug/L		98	80 - 120	1	20

Lab Sample ID: LCS 680-709814/3-B
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709815

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.50	2.47		ug/L		99	80 - 120

Lab Sample ID: MB 680-709817/1-B
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709818

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		03/08/22 16:20	03/09/22 14:22	1

Lab Sample ID: LCS 680-709817/2-B
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709818

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.50	2.51		ug/L		100	80 - 120

Lab Sample ID: LCSD 680-709817/3-B
Matrix: Water
Analysis Batch: 710033

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 709818

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	2.50	2.54		ug/L		102	80 - 120	1	20

Lab Sample ID: MB 680-709814/1-A
Matrix: Water
Analysis Batch: 710033

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L			03/09/22 13:59	1

GC/MS VOA

Analysis Batch: 709936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-212047-3	LF4-MW3	Total/NA	Water	8260D	
680-212047-4	LF4-MW4	Total/NA	Water	8260D	
680-212047-5	LF4-MW5	Total/NA	Water	8260D	
680-212047-6	DUP390	Total/NA	Water	8260D	
680-212047-7	TB594	Total/NA	Water	8260D	
MB 680-709936/9	Method Blank	Total/NA	Water	8260D	
LCS 680-709936/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-709936/5	Lab Control Sample Dup	Total/NA	Water	8260D	
680-212047-3 MS	LF4-MW3	Total/NA	Water	8260D	
680-212047-3 MSD	LF4-MW3	Total/NA	Water	8260D	

Analysis Batch: 710177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-212047-1	LF4-MW1	Total/NA	Water	8260D	
680-212047-2	LF4-MW2	Total/NA	Water	8260D	
MB 680-710177/9	Method Blank	Total/NA	Water	8260D	
LCS 680-710177/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-710177/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Metals

Prep Batch: 709341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-212047-1	LF4-MW1	Total Recoverable	Water	3005A	
680-212047-2	LF4-MW2	Total Recoverable	Water	3005A	
MB 680-709341/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-709341/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 709358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-212047-3	LF4-MW3	Total Recoverable	Water	3005A	
680-212047-4	LF4-MW4	Total Recoverable	Water	3005A	
680-212047-5	LF4-MW5	Total Recoverable	Water	3005A	
680-212047-6	DUP390	Total Recoverable	Water	3005A	
MB 680-709358/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-709358/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-212047-3 MS	LF4-MW3	Total Recoverable	Water	3005A	
680-212047-3 MSD	LF4-MW3	Total Recoverable	Water	3005A	

Leach Batch: 709472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 680-709472/1-E	Method Blank	Total/NA	Water	1311	
LB2 680-709472/10-D	Method Blank	Total/NA	Water	1311	

Analysis Batch: 709703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-212047-1	LF4-MW1	Total Recoverable	Water	6020B	709341
680-212047-2	LF4-MW2	Total Recoverable	Water	6020B	709341
680-212047-3	LF4-MW3	Total Recoverable	Water	6020B	709358
680-212047-4	LF4-MW4	Total Recoverable	Water	6020B	709358
680-212047-5	LF4-MW5	Total Recoverable	Water	6020B	709358

Metals (Continued)

Analysis Batch: 709703 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-212047-6	DUP390	Total Recoverable	Water	6020B	709358
MB 680-709341/1-A	Method Blank	Total Recoverable	Water	6020B	709341
MB 680-709358/1-A	Method Blank	Total Recoverable	Water	6020B	709358
LCS 680-709341/2-A	Lab Control Sample	Total Recoverable	Water	6020B	709341
LCS 680-709358/2-A	Lab Control Sample	Total Recoverable	Water	6020B	709358
680-212047-3 MS	LF4-MW3	Total Recoverable	Water	6020B	709358
680-212047-3 MSD	LF4-MW3	Total Recoverable	Water	6020B	709358

Prep Batch: 709788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 680-709472/1-E	Method Blank	Total/NA	Water	7470A	709472
LB2 680-709472/10-D	Method Blank	Total/NA	Water	7470A	709472
MB 680-709788/12-A	Method Blank	Total/NA	Water	7470A	
LCS 680-709788/13-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 709796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-709796/1-A	Method Blank	Total/NA	Water	245.1	
LCS 680-709796/3-A	Lab Control Sample	Total/NA	Water	245.1	

Prep Batch: 709800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-709800/1-A	Method Blank	Total/NA	Water	7470A	
LCS 680-709800/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 709803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-212047-1	LF4-MW1	Total/NA	Water	7470A	
680-212047-2	LF4-MW2	Total/NA	Water	7470A	
680-212047-3	LF4-MW3	Total/NA	Water	7470A	
680-212047-4	LF4-MW4	Total/NA	Water	7470A	
680-212047-5	LF4-MW5	Total/NA	Water	7470A	
680-212047-6	DUP390	Total/NA	Water	7470A	
MB 680-709803/1-A	Method Blank	Total/NA	Water	7470A	
LCS 680-709803/2-A	Lab Control Sample	Total/NA	Water	7470A	
680-212047-3 MS	LF4-MW3	Total/NA	Water	7470A	
680-212047-3 MSD	LF4-MW3	Total/NA	Water	7470A	

Filtration Batch: 709814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-709814/1-A	Method Blank	Total/NA	Water	FILTRATION	
LCS 680-709814/3-B	Lab Control Sample	Total/NA	Water	FILTRATION	

Prep Batch: 709815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-709814/3-B	Lab Control Sample	Total/NA	Water	245.1	709814

Filtration Batch: 709817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-709817/1-B	Method Blank	Total/NA	Water	FILTRATION	
LCS 680-709817/2-B	Lab Control Sample	Total/NA	Water	FILTRATION	

Metals (Continued)

Filtration Batch: 709817 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 680-709817/3-B	Lab Control Sample Dup	Total/NA	Water	FILTRATION	

Prep Batch: 709818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-709817/1-B	Method Blank	Total/NA	Water	7470A	709817
LCS 680-709817/2-B	Lab Control Sample	Total/NA	Water	7470A	709817
LCSD 680-709817/3-B	Lab Control Sample Dup	Total/NA	Water	7470A	709817

Analysis Batch: 710033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-212047-1	LF4-MW1	Total/NA	Water	7470A	709803
680-212047-2	LF4-MW2	Total/NA	Water	7470A	709803
680-212047-3	LF4-MW3	Total/NA	Water	7470A	709803
680-212047-4	LF4-MW4	Total/NA	Water	7470A	709803
680-212047-5	LF4-MW5	Total/NA	Water	7470A	709803
680-212047-6	DUP390	Total/NA	Water	7470A	709803
LB 680-709472/1-E	Method Blank	Total/NA	Water	7470A	709788
LB2 680-709472/10-D	Method Blank	Total/NA	Water	7470A	709788
MB 680-709788/12-A	Method Blank	Total/NA	Water	7470A	709788
MB 680-709796/1-A	Method Blank	Total/NA	Water	7470A	709796
MB 680-709800/1-A	Method Blank	Total/NA	Water	7470A	709800
MB 680-709803/1-A	Method Blank	Total/NA	Water	7470A	709803
MB 680-709814/1-A	Method Blank	Total/NA	Water	7470A	709814
MB 680-709817/1-B	Method Blank	Total/NA	Water	7470A	709818
LCS 680-709788/13-A	Lab Control Sample	Total/NA	Water	7470A	709788
LCS 680-709796/3-A	Lab Control Sample	Total/NA	Water	7470A	709796
LCS 680-709800/2-A	Lab Control Sample	Total/NA	Water	7470A	709800
LCS 680-709803/2-A	Lab Control Sample	Total/NA	Water	7470A	709803
LCS 680-709814/3-B	Lab Control Sample	Total/NA	Water	7470A	709815
LCS 680-709817/2-B	Lab Control Sample	Total/NA	Water	7470A	709818
LCSD 680-709817/3-B	Lab Control Sample Dup	Total/NA	Water	7470A	709818
680-212047-3 MS	LF4-MW3	Total/NA	Water	7470A	709803
680-212047-3 MSD	LF4-MW3	Total/NA	Water	7470A	709803

Lab Chronicle

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-212047-1

Client Sample ID: LF4-MW1

Lab Sample ID: 680-212047-1

Date Collected: 03/02/22 11:40

Matrix: Water

Date Received: 03/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	710177	03/10/22 15:41	Y1S	TAL SAV
	Instrument ID: CMSB									
Total Recoverable	Prep	3005A			50 mL	250 mL	709341	03/04/22 14:46	JE	TAL SAV
Total Recoverable	Analysis	6020B		1			709703	03/07/22 18:34	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	709803	03/08/22 15:12	JKL	TAL SAV
Total/NA	Analysis	7470A		1			710033	03/09/22 12:22	JKL	TAL SAV
	Instrument ID: QuickTrace2									

Client Sample ID: LF4-MW2

Lab Sample ID: 680-212047-2

Date Collected: 03/02/22 12:05

Matrix: Water

Date Received: 03/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	710177	03/10/22 16:01	Y1S	TAL SAV
	Instrument ID: CMSB									
Total Recoverable	Prep	3005A			50 mL	250 mL	709341	03/04/22 14:46	JE	TAL SAV
Total Recoverable	Analysis	6020B		1			709703	03/07/22 18:45	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	709803	03/08/22 15:12	JKL	TAL SAV
Total/NA	Analysis	7470A		1			710033	03/09/22 12:25	JKL	TAL SAV
	Instrument ID: QuickTrace2									

Client Sample ID: LF4-MW3

Lab Sample ID: 680-212047-3

Date Collected: 03/02/22 12:50

Matrix: Water

Date Received: 03/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	709936	03/09/22 15:48	P1C	TAL SAV
	Instrument ID: CMSO2									
Total Recoverable	Prep	3005A			50 mL	250 mL	709358	03/04/22 16:06	JE	TAL SAV
Total Recoverable	Analysis	6020B		1			709703	03/07/22 19:03	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	709803	03/08/22 15:12	JKL	TAL SAV
Total/NA	Analysis	7470A		1			710033	03/09/22 12:27	JKL	TAL SAV
	Instrument ID: QuickTrace2									

Client Sample ID: LF4-MW4

Lab Sample ID: 680-212047-4

Date Collected: 03/02/22 13:20

Matrix: Water

Date Received: 03/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	709936	03/09/22 16:14	P1C	TAL SAV
	Instrument ID: CMSO2									

Client Sample ID: LF4-MW4

Lab Sample ID: 680-212047-4

Date Collected: 03/02/22 13:20

Matrix: Water

Date Received: 03/03/22 09:45

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	709358	03/04/22 16:06	JE	TAL SAV
Total Recoverable	Analysis	6020B		1			709703	03/07/22 19:20	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	709803	03/08/22 15:12	JKL	TAL SAV
Total/NA	Analysis	7470A		1			710033	03/09/22 12:40	JKL	TAL SAV
	Instrument ID: QuickTrace2									

Client Sample ID: LF4-MW5

Lab Sample ID: 680-212047-5

Date Collected: 03/02/22 14:00

Matrix: Water

Date Received: 03/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	709936	03/09/22 16:40	P1C	TAL SAV
	Instrument ID: CMSO2									
Total Recoverable	Prep	3005A			50 mL	250 mL	709358	03/04/22 16:06	JE	TAL SAV
Total Recoverable	Analysis	6020B		1			709703	03/07/22 19:24	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	709803	03/08/22 15:12	JKL	TAL SAV
Total/NA	Analysis	7470A		1			710033	03/09/22 12:42	JKL	TAL SAV
	Instrument ID: QuickTrace2									

Client Sample ID: DUP390

Lab Sample ID: 680-212047-6

Date Collected: 03/02/22 00:00

Matrix: Water

Date Received: 03/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	709936	03/09/22 17:05	P1C	TAL SAV
	Instrument ID: CMSO2									
Total Recoverable	Prep	3005A			50 mL	250 mL	709358	03/04/22 16:06	JE	TAL SAV
Total Recoverable	Analysis	6020B		1			709703	03/07/22 19:28	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	709803	03/08/22 15:12	JKL	TAL SAV
Total/NA	Analysis	7470A		1			710033	03/09/22 12:45	JKL	TAL SAV
	Instrument ID: QuickTrace2									

Client Sample ID: TB594

Lab Sample ID: 680-212047-7

Date Collected: 03/02/22 13:45

Matrix: Water

Date Received: 03/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	709936	03/09/22 15:22	P1C	TAL SAV
	Instrument ID: CMSO2									

Laboratory References:

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

Accreditation/Certification Summary

Client: Matrix Environmental Services, LLC
Job ID: 680-212047-1
Project/Site: Parcel 81(5), Landfill 4

Laboratory: Eurofins Savannah

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

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87052	06-30-22

Method Summary

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-212047-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	TAL SAV
6020B	Metals (ICP/MS)	SW846	TAL SAV
7470A	Mercury (CVAA)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV
5030C	Purge and Trap	SW846	TAL SAV
7470A	Preparation, Mercury	SW846	TAL SAV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 6560
Cooler ID 1 of 1
Page 1 of 1

Laboratory Eurofins
Lab Contact Noel Savoie and Beth Daughtry
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 81(5), Landfill 4
Task # 21.094.22-07.1
Lab contract: 21.094.22-07.1.500

Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: SW8260D - VOC 3 - 40 ml vials, HCl	Analysis: 6020A/7470A Metals (Total) 1 - 250 ml poly HNO3	Analysis: SW8260D - VOC 2 - 40 ml vials, HCl	
Parcel 81(5), Landfill 4	LF4-MW1	NS	MW	WQ	Grab	3-2-22	1140	X	X		
Parcel 81(5), Landfill 4	LF4-MW2	NS	MW	WQ	Grab	3-2-22	1205	X	X		
Parcel 81(5), Landfill 4	LF4-MW3	NS	MW	WQ	Grab	3-2-22	1250	X	X		
Parcel 81(5), Landfill 4	LF4-MW3	MS/MSD	MW	WQ	Grab	3-2-22	1250	X	X		
Parcel 81(5), Landfill 4	LF4-MW4	NS	MW	WQ	Grab	3-2-22	1320	X	X		
Parcel 81(5), Landfill 4	LF4-MW5	NS	MW	WQ	Grab	3-2-22	1400	X	X		
Parcel 81(5), Landfill 4	DUP390	FD	MW	WQ	Grab	3-2-22	N/A	X	X		
Parcel 81(5), Landfill 4	TB594	TB	WQ	W	Grab	3-2-22	1345			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

Double the number of bottles for MS/MSD

COMMENTS: See Task Order 17 094.18-07.1 500 for required list of VOCs and metals **Collect FEII in the field

Relinquished by (Signature) — Date/Time 3-2-22 1600 — Received by (Signature) — FedEx

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

FedEx

TA 3322 9455

1.9/25

680-212047 Chain of Custody

Login Sample Receipt Checklist

Client: Matrix Environmental Services, LLC

Job Number: 680-212047-1

Login Number: 212047

List Source: Eurofins Savannah

List Number: 1

Creator: Sims, Robert D

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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX D

Statistical Evaluation of Metals Date March 2022

Attachment D1. Analyses and Percent Non-Detects
McClellan Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

	Antimony			Arsenic			Barium		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	38	38	100%	45	35	78%	46	5	11%
LF4-MW2	38	36	95%	45	25	56%	45	0	0%
LF4-MW3	38	38	100%	45	31	69%	45	2	4%
LF4-MW4	38	34	89%	45	26	58%	45	0	0%
LF4-MW5	38	38	100%	45	39	87%	45	9	20%

	Beryllium			Cadmium			Chromium		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	37	19	51%	44	36	82%	44	44	100%
LF4-MW2	37	16	43%	44	30	68%	44	24	55%
LF4-MW3	37	21	57%	44	36	82%	44	30	68%
LF4-MW4	37	32	86%	44	33	75%	44	29	66%
LF4-MW5	37	28	76%	44	42	95%	44	36	82%

	Cobalt			Copper			Lead		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	37	0	0%	38	12	32%	45	14	31%
LF4-MW2	37	0	0%	38	10	26%	45	11	24%
LF4-MW3	37	13	35%	38	14	37%	45	16	36%
LF4-MW4	37	8	22%	38	22	58%	45	10	22%
LF4-MW5	37	5	14%	38	24	63%	45	20	44%

	Mercury			Nickel			Selenium		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	45	45	100%	38	5	13%	45	45	100%
LF4-MW2	45	44	98%	38	3	8%	45	41	91%
LF4-MW3	45	45	100%	38	9	24%	45	44	98%
LF4-MW4	45	44	98%	38	13	34%	45	42	93%
LF4-MW5	45	45	100%	38	15	39%	45	45	100%

	Silver			Thallium			Vanadium		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	37	37	100%	38	36	95%	38	33	87%
LF4-MW2	37	37	100%	38	36	95%	38	28	74%
LF4-MW3	37	37	100%	38	37	97%	38	30	79%
LF4-MW4	37	36	97%	38	35	92%	38	28	74%
LF4-MW5	37	37	100%	38	36	95%	38	30	79%

	Zinc		
Well ID	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	38	2	5%
LF4-MW2	38	2	5%
LF4-MW3	38	9	24%
LF4-MW4	38	12	32%
LF4-MW5	38	16	42%

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Barium

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-2.638	1.86	0.86	0.86
LF4-MW1	9/13/06	-3.180	0.37	-0.63	0.23
LF4-MW1	3/6/07	-3.219	0.26	-0.74	0.00
LF4-MW1	9/24/07	-3.439	-0.34	-1.34	0.00
LF4-MW1	3/26/08	-2.990	0.89	-0.11	0.00
LF4-MW1	9/16/08	-3.464	-0.41	-1.41	0.00
LF4-MW1	3/17/09	-3.551	-0.65	-1.65	0.00
LF4-MW1	9/17/09	-3.408	-0.26	-1.26	0.00
LF4-MW1	3/17/10	-3.427	-0.31	-1.31	0.00
LF4-MW1	9/21/10	-3.510	-0.54	-1.54	0.00
LF4-MW1	3/15/11	-3.197	0.32	-0.68	0.00
LF4-MW1	9/8/11	-3.242	0.20	-0.80	0.00
LF4-MW1	3/14/12	-3.053	0.72	-0.28	0.00
LF4-MW1	9/6/12	-3.066	0.68	-0.32	0.00
LF4-MW1	3/5/13	-3.043	0.75	-0.25	0.00
LF4-MW1	9/11/13	-3.321	-0.02	-1.02	0.00
LF4-MW1	3/5/14	-3.294	0.06	-0.94	0.00
LF4-MW1	9/4/14	-3.324	-0.03	-1.03	0.00
LF4-MW1	3/13/15	-3.135	0.49	-0.51	0.00
LF4-MW1	9/16/15	-3.163	0.42	-0.58	0.00
LF4-MW1	3/16/16	-3.154	0.44	-0.56	0.00
LF4-MW1	9/21/16	-3.202	0.31	-0.69	0.00
LF4-MW1	3/15/17	-3.090	0.62	-0.38	0.00
LF4-MW1	9/8/17	-3.124	0.52	-0.48	0.00
LF4-MW1	3/8/18	-3.110	0.56	-0.44	0.00
LF4-MW1	9/11/18	-3.058	0.71	-0.29	0.00
LF4-MW1	3/7/19	-3.058	0.71	-0.29	0.00
LF4-MW1	9/5/19	-3.124	0.53	-0.47	0.00
LF4-MW1	3/12/20	-3.079	0.65	-0.35	0.00
LF4-MW1	9/15/20	-3.079	0.65	-0.35	0.00
LF4-MW1	3/4/21	-3.016	0.82	-0.18	0.00
LF4-MW1	9/9/21	-2.900	1.14	0.14	0.14
LF4-MW1	3/2/22	-2.957	0.98	-0.02	0.12
Background					
LF4-MW1	MEAN	-3.315			
LF4-MW1	STDEV	0.364			

Barium

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-3.673	-3.70	-4.70	0.00
LF4-MW2	9/13/06	-2.198	0.41	-0.59	0.00
LF4-MW2	3/6/07	-2.357	-0.03	-1.03	0.00
LF4-MW2	9/24/07	-2.501	-0.44	-1.44	0.00
LF4-MW2	3/26/08	-2.017	0.91	-0.09	0.00
LF4-MW2	9/16/08	-2.327	0.05	-0.95	0.00
LF4-MW2	3/17/09	-2.079	0.74	-0.26	0.00
LF4-MW2	9/17/09	-2.371	-0.07	-1.07	0.00
LF4-MW2	3/17/10	-2.410	-0.18	-1.18	0.00
LF4-MW2	9/21/10	-2.306	0.11	-0.89	0.00
LF4-MW2	3/15/11	-2.283	0.17	-0.83	0.00
LF4-MW2	9/8/11	-2.235	0.31	-0.69	0.00
LF4-MW2	3/14/12	-2.235	0.31	-0.69	0.00
LF4-MW2	9/6/12	-2.216	0.36	-0.64	0.00
LF4-MW2	3/5/13	-2.056	0.80	-0.20	0.00
LF4-MW2	9/11/13	-2.585	-0.67	-1.67	0.00
LF4-MW2	3/5/14	-2.765	-1.17	-2.17	0.00
LF4-MW2	9/4/14	-2.854	-1.42	-2.42	0.00
LF4-MW2	3/13/15	-2.609	-0.74	-1.74	0.00
LF4-MW2	9/16/15	-2.537	-0.54	-1.54	0.00
LF4-MW2	3/16/16	-2.834	-1.36	-2.36	0.00
LF4-MW2	9/21/16	-2.664	-0.89	-1.89	0.00
LF4-MW2	3/15/17	-2.711	-1.02	-2.02	0.00
LF4-MW2	9/8/17	-2.438	-0.26	-1.26	0.00
LF4-MW2	3/8/18	-2.564	-0.61	-1.61	0.00
LF4-MW2	9/11/18	-2.604	-0.72	-1.72	0.00
LF4-MW2	3/7/19	-2.830	-1.35	-2.35	0.00
LF4-MW2	9/5/19	-2.688	-0.96	-1.96	0.00
LF4-MW2	3/12/20	-2.765	-1.17	-2.17	0.00
LF4-MW2	9/15/20	-2.674	-0.92	-1.92	0.00
LF4-MW2	3/4/21	-2.781	-1.22	-2.22	0.00
LF4-MW2	9/9/21	-2.303	0.12	-0.88	0.00
LF4-MW2	3/2/22	-2.813	-1.30	-2.30	0.00
Background					
LF4-MW2	MEAN	-2.344			
LF4-MW2	STDEV	0.359			

Barium

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW3	3/13/06	-2.865	0.37	-0.63	0.00
LF4-MW3	9/14/06	-2.727	0.74	-0.26	0.00
LF4-MW3	3/6/07	-3.030	-0.08	-1.08	0.00
LF4-MW3	9/25/07	-2.818	0.49	-0.51	0.00
LF4-MW3	3/26/08	-2.662	0.92	-0.08	0.00
LF4-MW3	9/16/08	-2.958	0.11	-0.89	0.00
LF4-MW3	3/17/09	-2.928	0.19	-0.81	0.00
LF4-MW3	9/17/09	-2.573	1.16	0.16	0.16
LF4-MW3	3/17/10	-2.839	0.44	-0.56	0.00
LF4-MW3	9/21/10	-3.239	-0.65	-1.65	0.00
LF4-MW3	3/15/11	-2.671	0.90	-0.10	0.00
LF4-MW3	9/8/11	-2.863	0.37	-0.63	0.00
LF4-MW3	3/14/12	-2.800	0.54	-0.46	0.00
LF4-MW3	9/6/12	-2.830	0.46	-0.54	0.00
LF4-MW3	3/5/13	-2.581	1.14	0.14	0.14
LF4-MW3	9/11/13	-2.953	0.13	-0.87	0.00
LF4-MW3	3/5/14	-2.906	0.26	-0.74	0.00
LF4-MW3	9/4/14	-2.700	0.82	-0.18	0.00
LF4-MW3	3/13/15	-2.471	1.44	0.44	0.44
LF4-MW3	9/16/15	-2.325	1.84	0.84	1.28
LF4-MW3	3/16/16	-2.870	0.35	-0.65	0.63
LF4-MW3	9/21/16	-2.444	1.51	0.51	1.14
LF4-MW3	3/15/17	-2.808	0.52	-0.48	0.66
LF4-MW3	9/8/17	-2.825	0.47	-0.53	0.14
LF4-MW3	3/8/18	-2.846	0.42	-0.58	0.00
LF4-MW3	9/11/18	-2.865	0.37	-0.63	0.00
LF4-MW3	3/7/19	-2.688	0.85	-0.15	0.00
LF4-MW3	9/5/19	-2.617	1.04	0.04	0.04
LF4-MW3	3/12/20	-2.465	1.46	0.46	0.50
LF4-MW3	9/15/20	-3.170	-0.46	-1.46	0.00
LF4-MW3	3/4/21	-2.489	1.39	0.39	0.39
LF4-MW3	9/9/21	-2.813	0.51	-0.49	0.00
LF4-MW3	3/2/22	-2.813	0.51	-0.49	0.00
Background					
LF4-MW3	MEAN	-3.000			
LF4-MW3	STDEV	0.367			

Barium

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW4	3/14/06	-1.931	-1.61	-2.61	0.00
LF4-MW4	9/14/06	-1.715	-0.52	-1.52	0.00
LF4-MW4	3/7/07	-2.129	-2.60	-3.60	0.00
LF4-MW4	9/25/07	-1.565	0.22	-0.78	0.00
LF4-MW4	3/26/08	-1.945	-1.68	-2.68	0.00
LF4-MW4	9/17/08	-1.645	-0.17	-1.17	0.00
LF4-MW4	3/17/09	-1.973	-1.82	-2.82	0.00
LF4-MW4	9/21/09	-2.163	-2.77	-3.77	0.00
LF4-MW4	3/17/10	-2.048	-2.19	-3.19	0.00
LF4-MW4	9/21/10	-1.732	-0.61	-1.61	0.00
LF4-MW4	3/15/11	-2.410	-4.01	-5.01	0.00
LF4-MW4	9/8/11	-1.778	-0.84	-1.84	0.00
LF4-MW4	3/14/12	-1.995	-1.93	-2.93	0.00
LF4-MW4	9/6/12	-2.163	-2.77	-3.77	0.00
LF4-MW4	3/5/13	-1.820	-1.05	-2.05	0.00
LF4-MW4	9/11/13	-1.604	0.03	-0.97	0.00
LF4-MW4	3/5/14	-1.749	-0.69	-1.69	0.00
LF4-MW4	9/4/14	-1.671	-0.31	-1.31	0.00
LF4-MW4	3/13/15	-2.189	-2.90	-3.90	0.00
LF4-MW4	9/16/15	-1.749	-0.69	-1.69	0.00
LF4-MW4	3/16/16	-1.682	-0.36	-1.36	0.00
LF4-MW4	9/21/16	-1.833	-1.12	-2.12	0.00
LF4-MW4	3/15/17	-2.064	-2.27	-3.27	0.00
LF4-MW4	9/8/17	-1.492	0.59	-0.41	0.00
LF4-MW4	3/8/18	-1.625	-0.07	-1.07	0.00
LF4-MW4	9/11/18	-1.833	-1.11	-2.11	0.00
LF4-MW4	3/7/19	-1.715	-0.52	-1.52	0.00
LF4-MW4	9/5/19	-1.833	-1.11	-2.11	0.00
LF4-MW4	3/12/20	-1.772	-0.81	-1.81	0.00
LF4-MW4	9/15/20	-2.303	-3.47	-4.47	0.00
LF4-MW4	3/4/21	-1.661	-0.25	-1.25	0.00
LF4-MW4	9/9/21	-1.109	2.51	1.51	1.51
LF4-MW4	3/2/22	-1.514	0.48	-0.52	0.99
Background					
LF4-MW4	MEAN	-1.610			
LF4-MW4	STDEV	0.200			

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Barium

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW5	3/14/06	-3.892	0.21	-0.79	0.00
LF4-MW5	9/14/06	-3.873	0.27	-0.73	0.00
LF4-MW5	3/7/07	-4.234	-0.73	-1.73	0.00
LF4-MW5	9/24/07	-3.887	0.23	-0.77	0.00
LF4-MW5	3/26/08	-4.406	-1.20	-2.20	0.00
LF4-MW5	9/16/08	-4.538	-1.56	-2.56	0.00
LF4-MW5	3/18/09	-4.335	-1.00	-2.00	0.00
LF4-MW5	9/17/09	-4.685	-1.97	-2.97	0.00
LF4-MW5	3/17/10	-4.298	-0.90	-1.90	0.00
LF4-MW5	9/21/10	-4.382	-1.13	-2.13	0.00
LF4-MW5	3/15/11	-3.544	1.17	0.17	0.17
LF4-MW5	9/8/11	-4.063	-0.26	-1.26	0.00
LF4-MW5	3/14/12	-4.382	-1.13	-2.13	0.00
LF4-MW5	9/6/12	-4.501	-1.46	-2.46	0.00
LF4-MW5	3/5/13	-4.423	-1.25	-2.25	0.00
LF4-MW5	9/11/13	-5.298	-3.65	-4.65	0.00
LF4-MW5	3/5/14	-4.457	-1.34	-2.34	0.00
LF4-MW5	9/4/14	-4.595	-1.72	-2.72	0.00
LF4-MW5	3/13/15	-4.305	-0.92	-1.92	0.00
LF4-MW5	9/16/15	-4.528	-1.54	-2.54	0.00
LF4-MW5	3/16/16	-4.123	-0.42	-1.42	0.00
LF4-MW5	9/21/16	-4.220	-0.69	-1.69	0.00
LF4-MW5	3/15/17	-4.213	-0.67	-1.67	0.00
LF4-MW5	9/8/17	-4.440	-1.29	-2.29	0.00
LF4-MW5	3/8/18	-4.051	-0.22	-1.22	0.00
LF4-MW5	9/11/18	-4.510	-1.48	-2.48	0.00
LF4-MW5	3/7/19	-3.772	0.54	-0.46	0.00
LF4-MW5	9/5/19	-4.343	-1.03	-2.03	0.00
LF4-MW5	3/12/20	-4.017	-0.13	-1.13	0.00
LF4-MW5	9/15/20	-4.135	-0.45	-1.45	0.00
LF4-MW5	3/4/21	-3.863	0.29	-0.71	0.00
LF4-MW5	9/9/21	-4.269	-0.82	-1.82	0.00
LF4-MW5	3/2/22	-3.912	0.16	-0.84	0.00
Background					
LF4-MW5	MEAN	-3.970			
LF4-MW5	STDEV	0.364			

Beryllium

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-6.041	-0.58	-1.58	0.00
LF4-MW2	9/13/06	-5.298	0.56	-0.44	0.00
LF4-MW2	3/6/07	-5.298	0.56	-0.44	0.00
LF4-MW2	9/24/07	-5.298	0.56	-0.44	0.00
LF4-MW2	3/26/08	-5.298	0.56	-0.44	0.00
LF4-MW2	9/16/08	-5.298	0.56	-0.44	0.00
LF4-MW2	3/17/09	-6.849	-1.83	-2.83	0.00
LF4-MW2	9/17/09	-5.298	0.56	-0.44	0.00
LF4-MW2	3/17/10	-6.205	-0.84	-1.84	0.00
LF4-MW2	9/21/10	-5.298	0.56	-0.44	0.00
LF4-MW2	3/15/11	-5.298	0.56	-0.44	0.00
LF4-MW2	9/8/11	-5.298	0.56	-0.44	0.00
LF4-MW2	3/14/12	-5.298	0.56	-0.44	0.00
LF4-MW2	9/6/12	-5.298	0.56	-0.44	0.00
LF4-MW2	3/5/13	-5.298	0.56	-0.44	0.00
LF4-MW2	9/11/13	-5.298	0.56	-0.44	0.00
LF4-MW2	3/5/14	-7.131	-2.27	-3.27	0.00
LF4-MW2	9/4/14	-9.115	-5.33	-6.33	0.00
LF4-MW2	3/13/15	-7.252	-2.45	-3.45	0.00
LF4-MW2	9/16/15	-8.818	-4.87	-5.87	0.00
LF4-MW2	3/16/16	-7.972	-3.57	-4.57	0.00
LF4-MW2	9/21/16	-8.874	-4.96	-5.96	0.00
LF4-MW2	3/15/17	-9.036	-5.21	-6.21	0.00
LF4-MW2	9/8/17	-9.071	-5.26	-6.26	0.00
LF4-MW2	3/8/18	-7.520	-2.87	-3.87	0.00
LF4-MW2	9/11/18	-8.805	-4.85	-5.85	0.00
LF4-MW2	3/7/19	-6.645	-1.52	-2.52	0.00
LF4-MW2	9/5/19	-8.335	-4.13	-5.13	0.00
LF4-MW2	3/12/20	-7.131	-2.27	-3.27	0.00
LF4-MW2	9/15/20	-7.775	-3.26	-4.26	0.00
LF4-MW2	3/4/21	-8.294	-4.06	-5.06	0.00
LF4-MW2	9/9/21	-8.079	-3.73	-4.73	0.00
LF4-MW2	3/2/22	-7.601	-2.99	-3.99	0.00
Background					
LF4-MW1	MEAN	-5.663			
LF4-MW1	STDEV	0.648			

Cobalt

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-4.029	0.50	-0.50	0.00
LF4-MW1	9/13/06	-4.734	-0.87	-1.87	0.00
LF4-MW1	3/6/07	-4.784	-0.97	-1.97	0.00
LF4-MW1	9/24/07	-4.641	-0.69	-1.69	0.00
LF4-MW1	3/26/08	-3.554	1.42	0.42	0.42
LF4-MW1	9/16/08	-4.547	-0.51	-1.51	0.00
LF4-MW1	3/17/09	-3.917	0.72	-0.28	0.00
LF4-MW1	9/17/09	-4.220	0.13	-0.87	0.00
LF4-MW1	3/17/10	-4.374	-0.17	-1.17	0.00
LF4-MW1	9/21/10	-3.830	0.89	-0.11	0.00
LF4-MW1	3/15/11	-3.623	1.29	0.29	0.29
LF4-MW1	9/8/11	-3.445	1.63	0.63	0.92
LF4-MW1	3/14/12	-3.417	1.69	0.69	1.61
LF4-MW1	9/6/12	-3.302	1.91	0.91	2.52
LF4-MW1	3/5/13	-3.411	1.70	0.70	3.22
LF4-MW1	9/11/13	-3.812	0.92	-0.08	3.14
LF4-MW1	3/5/14	-3.634	1.27	0.27	3.41
LF4-MW1	9/4/14	-3.717	1.11	0.11	3.51
LF4-MW1	3/13/15	-3.393	1.73	0.73	4.25
LF4-MW1	9/16/15	-3.689	1.16	0.16	4.41
LF4-MW1	3/16/16	-3.231	2.05	1.05	5.46
LF4-MW1	9/21/16	-3.493	1.54	0.54	6.00
LF4-MW1	3/15/17	-3.390	1.74	0.74	6.74
LF4-MW1	9/8/17	-3.278	1.96	0.96	7.70
LF4-MW1	3/8/18	-3.579	1.37	0.37	8.07
LF4-MW1	9/11/18	-3.411	1.70	0.70	8.77
LF4-MW1	3/7/19	-3.270	1.97	0.97	9.74
LF4-MW1	9/5/19	-3.381	1.76	0.76	10.50
LF4-MW1	3/12/20	-3.352	1.81	0.81	11.31
LF4-MW1	9/15/20	-3.270	1.97	0.97	12.29
LF4-MW1	3/4/21	-3.352	1.81	0.81	13.10
LF4-MW1	9/9/21	-3.297	1.92	0.92	14.02
LF4-MW1	3/2/22	-3.381	1.76	0.76	14.78
Background					
LF4-MW1	MEAN	-4.286			
LF4-MW1	STDEV	0.515			

Cobalt

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-5.053	-1.17	-2.17	0.00
LF4-MW2	9/13/06	-4.200	0.12	-0.88	0.00
LF4-MW2	3/6/07	-4.227	0.08	-0.92	0.00
LF4-MW2	9/24/07	-4.366	-0.13	-1.13	0.00
LF4-MW2	3/26/08	-4.626	-0.53	-1.53	0.00
LF4-MW2	9/16/08	-3.942	0.50	-0.50	0.00
LF4-MW2	3/17/09	-2.339	2.92	1.92	1.92
LF4-MW2	9/17/09	-2.180	3.16	2.16	4.08
LF4-MW2	3/17/10	-2.442	2.77	1.77	5.85
LF4-MW2	9/21/10	-3.464	1.23	0.23	6.08
LF4-MW2	3/15/11	-3.751	0.79	-0.21	5.87
LF4-MW2	9/8/11	-3.705	0.86	-0.14	5.73
LF4-MW2	3/14/12	-3.917	0.54	-0.46	5.28
LF4-MW2	9/6/12	-3.979	0.45	-0.55	4.73
LF4-MW2	3/5/13	-1.952	3.51	2.51	7.23
LF4-MW2	9/11/13	-2.216	3.11	2.11	9.34
LF4-MW2	3/5/14	-1.743	3.82	2.82	12.16
LF4-MW2	9/4/14	-2.401	2.83	1.83	13.99
LF4-MW2	3/13/15	-1.973	3.47	2.47	16.46
LF4-MW2	9/16/15	-2.584	2.55	1.55	18.01
LF4-MW2	3/16/16	-2.377	2.86	1.86	19.88
LF4-MW2	9/21/16	-2.389	2.85	1.85	21.73
LF4-MW2	3/15/17	-2.888	2.09	1.09	22.82
LF4-MW2	9/8/17	-2.970	1.97	0.97	23.79
LF4-MW2	3/8/18	-2.079	3.31	2.31	26.10
LF4-MW2	9/11/18	-2.303	2.98	1.98	28.08
LF4-MW2	3/7/19	-1.833	3.68	2.68	30.77
LF4-MW2	9/5/19	-2.120	3.25	2.25	33.02
LF4-MW2	3/12/20	-2.303	2.98	1.98	34.99
LF4-MW2	9/15/20	-2.040	3.37	2.37	37.37
LF4-MW2	3/4/21	-2.733	2.33	1.33	38.70
LF4-MW2	9/9/21	-2.313	2.96	1.96	40.66
LF4-MW2	3/2/22	-2.645	2.46	1.46	42.12
Background					
LF4-MW2	MEAN	-4.277			
LF4-MW2	STDEV	0.663			

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Cobalt

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW3	3/13/06	-4.605	-0.50	-1.50	0.00
LF4-MW3	9/14/06	-4.269	2.75	1.75	1.75
LF4-MW3	3/6/07	-4.605	-0.50	-1.50	0.25
LF4-MW3	9/25/07	-4.905	-3.40	-4.40	0.00
LF4-MW3	3/26/08	-4.605	-0.50	-1.50	0.00
LF4-MW3	9/16/08	-4.605	-0.50	-1.50	0.00
LF4-MW3	3/17/09	-4.605	-0.50	-1.50	0.00
LF4-MW3	9/17/09	-4.605	-0.50	-1.50	0.00
LF4-MW3	3/17/10	-4.605	-0.50	-1.50	0.00
LF4-MW3	9/21/10	-5.687	-10.95	-11.95	0.00
LF4-MW3	3/15/11	-5.836	-12.39	-13.39	0.00
LF4-MW3	9/8/11	-5.900	-13.01	-14.01	0.00
LF4-MW3	3/14/12	-4.605	-0.50	-1.50	0.00
LF4-MW3	9/6/12	-4.605	-0.50	-1.50	0.00
LF4-MW3	3/5/13	-4.605	-0.50	-1.50	0.00
LF4-MW3	9/11/13	-4.628	-0.72	-1.72	0.00
LF4-MW3	3/5/14	-6.342	-17.28	-18.28	0.00
LF4-MW3	9/4/14	-5.514	-9.28	-10.28	0.00
LF4-MW3	3/13/15	-6.432	-18.14	-19.14	0.00
LF4-MW3	9/16/15	-4.034	5.02	4.02	4.02
LF4-MW3	3/16/16	-6.509	-18.89	-19.89	0.00
LF4-MW3	9/21/16	-6.888	-22.55	-23.55	0.00
LF4-MW3	3/15/17	-6.502	-18.83	-19.83	0.00
LF4-MW3	9/8/17	-6.287	-16.75	-17.75	0.00
LF4-MW3	3/8/18	-6.586	-19.63	-20.63	0.00
LF4-MW3	9/11/18	-5.051	-4.81	-5.81	0.00
LF4-MW3	3/7/19	-6.645	-20.21	-21.21	0.00
LF4-MW3	9/5/19	-7.435	-27.84	-28.84	0.00
LF4-MW3	3/12/20	-6.502	-18.83	-19.83	0.00
LF4-MW3	9/15/20	-6.812	-21.82	-22.82	0.00
LF4-MW3	3/4/21	-6.032	-14.28	-15.28	0.00
LF4-MW3	9/9/21	-5.067	-4.96	-5.96	0.00
LF4-MW3	3/2/22	-5.684	-10.92	-11.92	0.00
Background					
LF4-MW3	MEAN	-4.553			
LF4-MW3	STDEV	0.104			

Cobalt

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW4	3/14/06	-4.605	0.50	-0.50	0.00
LF4-MW4	9/14/06	-4.605	0.50	-0.50	0.00
LF4-MW4	3/7/07	-4.605	0.50	-0.50	0.00
LF4-MW4	9/25/07	-5.440	-3.31	-4.31	0.00
LF4-MW4	3/26/08	-4.969	-1.16	-2.16	0.00
LF4-MW4	9/17/08	-5.444	-3.33	-4.33	0.00
LF4-MW4	3/17/09	-5.242	-2.40	-3.40	0.00
LF4-MW4	9/21/09	-4.605	0.50	-0.50	0.00
LF4-MW4	3/17/10	-5.941	-5.59	-6.59	0.00
LF4-MW4	9/21/10	-5.406	-3.15	-4.15	0.00
LF4-MW4	3/15/11	-5.802	-4.96	-5.96	0.00
LF4-MW4	9/8/11	-5.461	-3.40	-4.40	0.00
LF4-MW4	3/14/12	-5.542	-3.77	-4.77	0.00
LF4-MW4	9/6/12	-4.605	0.50	-0.50	0.00
LF4-MW4	3/5/13	-5.857	-5.21	-6.21	0.00
LF4-MW4	9/11/13	-5.064	-1.59	-2.59	0.00
LF4-MW4	3/5/14	-5.793	-4.92	-5.92	0.00
LF4-MW4	9/4/14	-5.711	-4.54	-5.54	0.00
LF4-MW4	3/13/15	-5.233	-2.36	-3.36	0.00
LF4-MW4	9/16/15	-5.410	-3.17	-4.17	0.00
LF4-MW4	3/16/16	-6.161	-6.60	-7.60	0.00
LF4-MW4	9/21/16	-5.468	-3.44	-4.44	0.00
LF4-MW4	3/15/17	-4.949	-1.07	-2.07	0.00
LF4-MW4	9/8/17	-4.787	-0.33	-1.33	0.00
LF4-MW4	3/8/18	-5.911	-5.45	-6.45	0.00
LF4-MW4	9/11/18	-5.449	-3.35	-4.35	0.00
LF4-MW4	3/7/19	-6.266	-7.07	-8.07	0.00
LF4-MW4	9/5/19	-5.521	-3.68	-4.68	0.00
LF4-MW4	3/12/20	-6.119	-6.40	-7.40	0.00
LF4-MW4	9/15/20	-5.684	-4.42	-5.42	0.00
LF4-MW4	3/4/21	-5.714	-4.56	-5.56	0.00
LF4-MW4	9/9/21	-5.497	-3.57	-4.57	0.00
LF4-MW4	3/2/22	-6.215	-6.84	-7.84	0.00
Background					
LF4-MW4	MEAN	-4.715			
LF4-MW4	STDEV	0.219			

Cobalt

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW5	3/14/06	-4.949	-2.04	-3.04	0.00
LF4-MW5	9/14/06	-5.048	-2.78	-3.78	0.00
LF4-MW5	3/7/07	-4.605	0.50	-0.50	0.00
LF4-MW5	9/24/07	-5.461	-5.83	-6.83	0.00
LF4-MW5	3/26/08	-5.956	-9.49	-10.49	0.00
LF4-MW5	9/16/08	-5.705	-7.63	-8.63	0.00
LF4-MW5	3/18/09	-5.840	-8.63	-9.63	0.00
LF4-MW5	9/17/09	-5.442	-5.69	-6.69	0.00
LF4-MW5	3/17/10	-5.077	-2.99	-3.99	0.00
LF4-MW5	9/21/10	-4.556	0.86	-0.14	0.00
LF4-MW5	3/15/11	-5.826	-8.53	-9.53	0.00
LF4-MW5	9/8/11	-4.925	-1.87	-2.87	0.00
LF4-MW5	3/14/12	-5.754	-7.99	-8.99	0.00
LF4-MW5	9/6/12	-6.058	-10.24	-11.24	0.00
LF4-MW5	3/5/13	-5.893	-9.02	-10.02	0.00
LF4-MW5	9/11/13	-4.605	0.50	-0.50	0.00
LF4-MW5	3/5/14	-5.516	-6.24	-7.24	0.00
LF4-MW5	9/4/14	-5.732	-7.83	-8.83	0.00
LF4-MW5	3/13/15	-5.760	-8.04	-9.04	0.00
LF4-MW5	9/16/15	-6.071	-10.33	-11.33	0.00
LF4-MW5	3/16/16	-5.431	-5.60	-6.60	0.00
LF4-MW5	9/21/16	-5.027	-2.62	-3.62	0.00
LF4-MW5	3/15/17	-5.926	-9.26	-10.26	0.00
LF4-MW5	9/8/17	-5.793	-8.28	-9.28	0.00
LF4-MW5	3/8/18	-5.499	-6.11	-7.11	0.00
LF4-MW5	9/11/18	-5.915	-9.18	-10.18	0.00
LF4-MW5	3/7/19	-5.499	-6.11	-7.11	0.00
LF4-MW5	9/5/19	-5.006	-2.46	-3.46	0.00
LF4-MW5	3/12/20	-5.627	-7.06	-8.06	0.00
LF4-MW5	9/15/20	-5.655	-7.26	-8.26	0.00
LF4-MW5	3/4/21	-5.426	-5.57	-6.57	0.00
LF4-MW5	9/9/21	-5.497	-6.09	-7.09	0.00
LF4-MW5	3/2/22	-5.221	-4.05	-5.05	0.00
Background					
LF4-MW5	MEAN	-4.673			
LF4-MW5	STDEV	0.135			

Copper

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-4.193	1.14	0.14	0.14
LF4-MW1	9/13/06	-4.595	0.43	-0.57	0.00
LF4-MW1	3/6/07	-4.637	0.35	-0.65	0.00
LF4-MW1	9/24/07	-5.003	-0.29	-1.29	0.00
LF4-MW1	3/26/08	-4.699	0.24	-0.76	0.00
LF4-MW1	9/16/08	-5.048	-0.37	-1.37	0.00
LF4-MW1	3/17/09	-5.373	-0.95	-1.95	0.00
LF4-MW1	9/17/09	-5.375	-0.95	-1.95	0.00
LF4-MW1	3/17/10	-5.352	-0.91	-1.91	0.00
LF4-MW1	9/21/10	-6.156	-2.33	-3.33	0.00
LF4-MW1	3/15/11	-4.029	1.43	0.43	0.43
LF4-MW1	9/8/11	-4.605	0.41	-0.59	0.00
LF4-MW1	3/14/12	-4.605	0.41	-0.59	0.00
LF4-MW1	9/6/12	-4.605	0.41	-0.59	0.00
LF4-MW1	3/5/13	-4.605	0.41	-0.59	0.00
LF4-MW1	9/11/13	-5.773	-1.66	-2.66	0.00
LF4-MW1	3/5/14	-5.900	-1.88	-2.88	0.00
LF4-MW1	9/4/14	-5.911	-1.90	-2.90	0.00
LF4-MW1	3/13/15	-6.536	-3.00	-4.00	0.00
LF4-MW1	9/16/15	-5.325	-0.86	-1.86	0.00
LF4-MW1	3/16/16	-6.331	-2.64	-3.64	0.00
LF4-MW1	9/21/16	-6.138	-2.30	-3.30	0.00
LF4-MW1	3/15/17	-6.638	-3.18	-4.18	0.00
LF4-MW1	9/8/17	-6.623	-3.16	-4.16	0.00
LF4-MW1	3/8/18	-6.106	-2.24	-3.24	0.00
LF4-MW1	9/11/18	-4.605	0.41	-0.59	0.00
LF4-MW1	3/7/19	-6.377	-2.72	-3.72	0.00
LF4-MW1	9/5/19	-6.075	-2.19	-3.19	0.00
LF4-MW1	3/12/20	-5.952	-1.97	-2.97	0.00
LF4-MW1	9/15/20	-5.991	-2.04	-3.04	0.00
LF4-MW1	3/4/21	-5.599	-1.35	-2.35	0.00
LF4-MW1	9/9/21	-6.266	-2.53	-3.53	0.00
LF4-MW1	3/2/22	-6.166	-2.35	-3.35	0.00
Background					
LF4-MW1	MEAN	-4.836			
LF4-MW1	STDEV	0.566			

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Copper

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-4.538	0.00	-1.00	0.00
LF4-MW2	9/13/06	-4.129	0.37	-0.63	0.00
LF4-MW2	3/6/07	-4.663	-0.11	-1.11	0.00
LF4-MW2	9/24/07	-5.956	-1.29	-2.29	0.00
LF4-MW2	3/26/08	-5.302	-0.69	-1.69	0.00
LF4-MW2	9/16/08	-5.473	-0.85	-1.85	0.00
LF4-MW2	3/17/09	-5.684	-1.04	-2.04	0.00
LF4-MW2	9/17/09	-5.644	-1.00	-2.00	0.00
LF4-MW2	3/17/10	-3.717	0.75	-0.25	0.00
LF4-MW2	9/21/10	-6.215	-1.52	-2.52	0.00
LF4-MW2	3/15/11	-4.605	-0.06	-1.06	0.00
LF4-MW2	9/8/11	-4.605	-0.06	-1.06	0.00
LF4-MW2	3/14/12	-4.605	-0.06	-1.06	0.00
LF4-MW2	9/6/12	-5.341	-0.73	-1.73	0.00
LF4-MW2	3/5/13	-4.440	0.09	-0.91	0.00
LF4-MW2	9/11/13	-4.605	-0.06	-1.06	0.00
LF4-MW2	3/5/14	-3.751	0.72	-0.28	0.00
LF4-MW2	9/4/14	-6.287	-1.59	-2.59	0.00
LF4-MW2	3/13/15	-4.193	0.31	-0.69	0.00
LF4-MW2	9/16/15	-6.024	-1.35	-2.35	0.00
LF4-MW2	3/16/16	-4.566	-0.02	-1.02	0.00
LF4-MW2	9/21/16	-5.976	-1.31	-2.31	0.00
LF4-MW2	3/15/17	-6.071	-1.39	-2.39	0.00
LF4-MW2	9/8/17	-6.161	-1.47	-2.47	0.00
LF4-MW2	3/8/18	-4.519	0.02	-0.98	0.00
LF4-MW2	9/11/18	-6.075	-1.40	-2.40	0.00
LF4-MW2	3/7/19	-3.612	0.84	-0.16	0.00
LF4-MW2	9/5/19	-5.426	-0.81	-1.81	0.00
LF4-MW2	3/12/20	-3.963	0.52	-0.48	0.00
LF4-MW2	9/15/20	-5.279	-0.67	-1.67	0.00
LF4-MW2	3/4/21	-4.976	-0.40	-1.40	0.00
LF4-MW2	9/9/21	-4.667	-0.12	-1.12	0.00
LF4-MW2	3/2/22	-4.605	-0.06	-1.06	0.00
Background					
LF4-MW2	MEAN	-4.539			
LF4-MW2	STDEV	1.100			

Copper

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW3	3/13/06	-5.039	0.53	-0.47	0.00
LF4-MW3	9/14/06	-4.959	0.60	-0.40	0.00
LF4-MW3	3/6/07	-6.215	-0.49	-1.49	0.00
LF4-MW3	9/25/07	-6.215	-0.49	-1.49	0.00
LF4-MW3	3/26/08	-6.008	-0.31	-1.31	0.00
LF4-MW3	9/16/08	-5.594	0.05	-0.95	0.00
LF4-MW3	3/17/09	-6.119	-0.41	-1.41	0.00
LF4-MW3	9/17/09	-6.215	-0.49	-1.49	0.00
LF4-MW3	3/17/10	-6.200	-0.48	-1.48	0.00
LF4-MW3	9/21/10	-6.215	-0.49	-1.49	0.00
LF4-MW3	3/15/11	-5.104	0.47	-0.53	0.00
LF4-MW3	9/8/11	-4.605	0.91	-0.09	0.00
LF4-MW3	3/14/12	-5.735	-0.08	-1.08	0.00
LF4-MW3	9/6/12	-5.793	-0.13	-1.13	0.00
LF4-MW3	3/5/13	-5.666	-0.02	-1.02	0.00
LF4-MW3	9/11/13	-4.605	0.91	-0.09	0.00
LF4-MW3	3/5/14	-6.354	-0.62	-1.62	0.00
LF4-MW3	9/4/14	-6.395	-0.65	-1.65	0.00
LF4-MW3	3/13/15	-6.250	-0.53	-1.53	0.00
LF4-MW3	9/16/15	-6.812	-1.01	-2.01	0.00
LF4-MW3	3/16/16	-6.261	-0.53	-1.53	0.00
LF4-MW3	9/21/16	-6.092	-0.39	-1.39	0.00
LF4-MW3	3/15/17	-6.645	-0.87	-1.87	0.00
LF4-MW3	9/8/17	-5.696	-0.04	-1.04	0.00
LF4-MW3	3/8/18	-6.450	-0.70	-1.70	0.00
LF4-MW3	9/11/18	-4.605	0.91	-0.09	0.00
LF4-MW3	3/7/19	-5.991	-0.30	-1.30	0.00
LF4-MW3	9/5/19	-5.991	-0.30	-1.30	0.00
LF4-MW3	3/12/20	-5.497	0.13	-0.87	0.00
LF4-MW3	9/15/20	-6.377	-0.64	-1.64	0.00
LF4-MW3	3/4/21	-6.032	-0.34	-1.34	0.00
LF4-MW3	9/9/21	-5.991	-0.30	-1.30	0.00
LF4-MW3	3/2/22	-6.215	-0.49	-1.49	0.00
Background					
LF4-MW3	MEAN	-5.647			
LF4-MW3	STDEV	1.150			

Lead

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-5.298	0.21	-0.79	0.00
LF4-MW1	9/13/06	-5.857	-0.33	-1.33	0.00
LF4-MW1	3/6/07	-5.345	0.17	-0.83	0.00
LF4-MW1	9/24/07	-5.661	-0.14	-1.14	0.00
LF4-MW1	3/26/08	-4.935	0.56	-0.44	0.00
LF4-MW1	9/16/08	-5.298	0.21	-0.79	0.00
LF4-MW1	3/17/09	-5.298	0.21	-0.79	0.00
LF4-MW1	9/17/09	-5.684	-0.16	-1.16	0.00
LF4-MW1	3/17/10	-5.238	0.27	-0.73	0.00
LF4-MW1	9/21/10	-5.809	-0.28	-1.28	0.00
LF4-MW1	3/15/11	-5.298	0.21	-0.79	0.00
LF4-MW1	9/8/11	-5.754	-0.23	-1.23	0.00
LF4-MW1	3/14/12	-5.751	-0.22	-1.22	0.00
LF4-MW1	9/6/12	-5.298	0.21	-0.79	0.00
LF4-MW1	3/5/13	-5.726	-0.20	-1.20	0.00
LF4-MW1	9/11/13	-4.912	0.59	-0.41	0.00
LF4-MW1	3/5/14	-8.408	-2.80	-3.80	0.00
LF4-MW1	9/4/14	-7.881	-2.29	-3.29	0.00
LF4-MW1	3/13/15	-8.174	-2.57	-3.57	0.00
LF4-MW1	9/16/15	-5.581	-0.06	-1.06	0.00
LF4-MW1	3/16/16	-7.891	-2.30	-3.30	0.00
LF4-MW1	9/21/16	-7.233	-1.66	-2.66	0.00
LF4-MW1	3/15/17	-7.659	-2.07	-3.07	0.00
LF4-MW1	9/8/17	-7.907	-2.31	-3.31	0.00
LF4-MW1	3/8/18	-6.395	-0.85	-1.85	0.00
LF4-MW1	9/11/18	-5.298	0.21	-0.79	0.00
LF4-MW1	3/7/19	-6.377	-0.83	-1.83	0.00
LF4-MW1	9/5/19	-6.502	-0.95	-1.95	0.00
LF4-MW1	3/12/20	-6.438	-0.89	-1.89	0.00
LF4-MW1	9/15/20	-6.348	-0.80	-1.80	0.00
LF4-MW1	3/4/21	-5.952	-0.42	-1.42	0.00
LF4-MW1	9/9/21	-6.908	-1.34	-2.34	0.00
LF4-MW1	3/2/22	-5.809	-0.28	-1.28	0.00
Background					
LF4-MW1	MEAN	-5.518			
LF4-MW1	STDEV	1.034			

Lead

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-4.595	0.39	-0.61	0.00
LF4-MW2	9/13/06	-4.415	0.54	-0.46	0.00
LF4-MW2	3/6/07	-4.855	0.16	-0.84	0.00
LF4-MW2	9/24/07	-5.415	-0.32	-1.32	0.00
LF4-MW2	3/26/08	-4.928	0.10	-0.90	0.00
LF4-MW2	9/16/08	-5.296	-0.22	-1.22	0.00
LF4-MW2	3/17/09	-5.298	-0.22	-1.22	0.00
LF4-MW2	9/17/09	-5.298	-0.22	-1.22	0.00
LF4-MW2	3/17/10	-4.678	0.32	-0.68	0.00
LF4-MW2	9/21/10	-5.809	-0.66	-1.66	0.00
LF4-MW2	3/15/11	-5.298	-0.22	-1.22	0.00
LF4-MW2	9/8/11	-5.298	-0.22	-1.22	0.00
LF4-MW2	3/14/12	-5.298	-0.22	-1.22	0.00
LF4-MW2	9/6/12	-5.298	-0.22	-1.22	0.00
LF4-MW2	3/5/13	-5.589	-0.47	-1.47	0.00
LF4-MW2	9/11/13	-5.447	-0.35	-1.35	0.00
LF4-MW2	3/5/14	-6.119	-0.93	-1.93	0.00
LF4-MW2	9/4/14	-6.921	-1.62	-2.62	0.00
LF4-MW2	3/13/15	-6.175	-0.98	-1.98	0.00
LF4-MW2	9/16/15	-6.266	-1.05	-2.05	0.00
LF4-MW2	3/16/16	-5.482	-0.38	-1.38	0.00
LF4-MW2	9/21/16	-6.320	-1.10	-2.10	0.00
LF4-MW2	3/15/17	-6.101	-0.91	-1.91	0.00
LF4-MW2	9/8/17	-6.250	-1.04	-2.04	0.00
LF4-MW2	3/8/18	-5.544	-0.43	-1.43	0.00
LF4-MW2	9/11/18	-5.298	-0.22	-1.22	0.00
LF4-MW2	3/7/19	-5.360	-0.27	-1.27	0.00
LF4-MW2	9/5/19	-6.119	-0.93	-1.93	0.00
LF4-MW2	3/12/20	-4.135	0.78	-0.22	0.00
LF4-MW2	9/15/20	-5.083	-0.03	-1.03	0.00
LF4-MW2	3/4/21	-4.906	0.12	-0.88	0.00
LF4-MW2	9/9/21	-5.221	-0.15	-1.15	0.00
LF4-MW2	3/2/22	-4.991	0.05	-0.95	0.00
Background					
LF4-MW2	MEAN	-5.045			
LF4-MW2	STDEV	1.159			

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Lead

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW3	3/13/06	-5.216	0.40	-0.60	0.00
LF4-MW3	9/14/06	-5.806	-0.32	-1.32	0.00
LF4-MW3	3/6/07	-6.041	-0.61	-1.61	0.00
LF4-MW3	9/25/07	-5.298	0.30	-0.70	0.00
LF4-MW3	3/26/08	-5.341	0.25	-0.75	0.00
LF4-MW3	9/16/08	-5.298	0.30	-0.70	0.00
LF4-MW3	3/17/09	-5.298	0.30	-0.70	0.00
LF4-MW3	9/17/09	-3.537	2.46	1.46	1.46
LF4-MW3	3/17/10	-5.298	0.30	-0.70	0.76
LF4-MW3	9/21/10	-5.298	0.30	-0.70	0.06
LF4-MW3	3/15/11	-5.298	0.30	-0.70	0.00
LF4-MW3	9/8/11	-5.298	0.30	-0.70	0.00
LF4-MW3	3/14/12	-5.298	0.30	-0.70	0.00
LF4-MW3	9/6/12	-5.298	0.30	-0.70	0.00
LF4-MW3	3/5/13	-5.404	0.17	-0.83	0.00
LF4-MW3	9/11/13	-5.767	-0.28	-1.28	0.00
LF4-MW3	3/5/14	-6.210	-0.82	-1.82	0.00
LF4-MW3	9/4/14	-6.210	-0.82	-1.82	0.00
LF4-MW3	3/13/15	-5.444	0.12	-0.88	0.00
LF4-MW3	9/16/15	-6.482	-1.15	-2.15	0.00
LF4-MW3	3/16/16	-6.028	-0.60	-1.60	0.00
LF4-MW3	9/21/16	-5.757	-0.26	-1.26	0.00
LF4-MW3	3/15/17	-5.793	-0.31	-1.31	0.00
LF4-MW3	9/8/17	-6.975	-1.76	-2.76	0.00
LF4-MW3	3/8/18	-5.840	-0.36	-1.36	0.00
LF4-MW3	9/11/18	-5.298	0.30	-0.70	0.00
LF4-MW3	3/7/19	-5.497	0.06	-0.94	0.00
LF4-MW3	9/5/19	-6.502	-1.18	-2.18	0.00
LF4-MW3	3/12/20	-4.722	1.01	0.01	0.01
LF4-MW3	9/15/20	-6.215	-0.83	-1.83	0.00
LF4-MW3	3/4/21	-5.150	0.48	-0.52	0.00
LF4-MW3	9/9/21	-5.655	-0.14	-1.14	0.00
LF4-MW3	3/2/22	-4.991	0.68	-0.32	0.00
Background					
LF4-MW3	MEAN	-5.542			
LF4-MW3	STDEV	0.816			

Lead

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW4	3/14/06	-4.457	1.08	0.08	0.08
LF4-MW4	9/14/06	-3.558	2.12	1.12	1.21
LF4-MW4	3/7/07	-5.298	0.11	-0.89	0.31
LF4-MW4	9/25/07	-5.298	0.11	-0.89	0.00
LF4-MW4	3/26/08	-5.298	0.11	-0.89	0.00
LF4-MW4	9/17/08	-5.181	0.24	-0.76	0.00
LF4-MW4	3/17/09	-5.310	0.09	-0.91	0.00
LF4-MW4	9/21/09	-5.298	0.11	-0.89	0.00
LF4-MW4	3/17/10	-5.708	-0.37	-1.37	0.00
LF4-MW4	9/21/10	-5.632	-0.28	-1.28	0.00
LF4-MW4	3/15/11	-5.638	-0.28	-1.28	0.00
LF4-MW4	9/8/11	-5.602	-0.24	-1.24	0.00
LF4-MW4	3/14/12	-5.298	0.11	-0.89	0.00
LF4-MW4	9/6/12	-5.298	0.11	-0.89	0.00
LF4-MW4	3/5/13	-5.298	0.11	-0.89	0.00
LF4-MW4	9/11/13	-5.339	0.06	-0.94	0.00
LF4-MW4	3/5/14	-6.898	-1.74	-2.74	0.00
LF4-MW4	9/4/14	-5.499	-0.12	-1.12	0.00
LF4-MW4	3/13/15	-7.417	-2.34	-3.34	0.00
LF4-MW4	9/16/15	-4.519	1.01	0.01	0.01
LF4-MW4	3/16/16	-7.807	-2.80	-3.80	0.00
LF4-MW4	9/21/16	-5.745	-0.41	-1.41	0.00
LF4-MW4	3/15/17	-7.249	-2.15	-3.15	0.00
LF4-MW4	9/8/17	-4.731	0.77	-0.23	0.00
LF4-MW4	3/8/18	-7.511	-2.45	-3.45	0.00
LF4-MW4	9/11/18	-4.934	0.53	-0.47	0.00
LF4-MW4	3/7/19	-6.725	-1.54	-2.54	0.00
LF4-MW4	9/5/19	-5.259	0.15	-0.85	0.00
LF4-MW4	3/12/20	-5.714	-0.37	-1.37	0.00
LF4-MW4	9/15/20	-5.259	0.15	-0.85	0.00
LF4-MW4	3/4/21	-6.812	-1.64	-2.64	0.00
LF4-MW4	9/9/21	-3.730	1.92	0.92	0.92
LF4-MW4	3/2/22	-2.564	3.27	2.27	3.20
Background					
LF4-MW4	MEAN	-5.392			
LF4-MW4	STDEV	0.864			

Lead

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW5	3/14/06	-5.401	0.29	-0.71	0.00
LF4-MW5	9/14/06	-4.538	1.36	0.36	0.36
LF4-MW5	3/7/07	-5.745	-0.13	-1.13	0.00
LF4-MW5	9/24/07	-5.298	0.42	-0.58	0.00
LF4-MW5	3/26/08	-5.298	0.42	-0.58	0.00
LF4-MW5	9/16/08	-5.298	0.42	-0.58	0.00
LF4-MW5	3/18/09	-5.298	0.42	-0.58	0.00
LF4-MW5	9/17/09	-5.298	0.42	-0.58	0.00
LF4-MW5	3/17/10	-5.298	0.42	-0.58	0.00
LF4-MW5	9/16/10	-5.440	0.24	-0.76	0.00
LF4-MW5	3/15/11	-4.695	1.17	0.17	0.17
LF4-MW5	9/8/11	-5.298	0.42	-0.58	0.00
LF4-MW5	3/14/12	-5.298	0.42	-0.58	0.00
LF4-MW5	9/6/12	-5.298	0.42	-0.58	0.00
LF4-MW5	3/5/13	-5.298	0.42	-0.58	0.00
LF4-MW5	9/11/13	-5.298	0.42	-0.58	0.00
LF4-MW5	3/5/14	-6.966	-1.65	-2.65	0.00
LF4-MW5	9/4/14	-7.357	-2.13	-3.13	0.00
LF4-MW5	3/13/15	-6.988	-1.67	-2.67	0.00
LF4-MW5	9/16/15	-7.419	-2.21	-3.21	0.00
LF4-MW5	3/16/16	-6.084	-0.55	-1.55	0.00
LF4-MW5	9/21/16	-7.343	-2.11	-3.11	0.00
LF4-MW5	3/15/17	-6.693	-1.31	-2.31	0.00
LF4-MW5	9/8/17	-7.243	-1.99	-2.99	0.00
LF4-MW5	3/8/18	-5.751	-0.14	-1.14	0.00
LF4-MW5	9/11/18	-5.298	0.42	-0.58	0.00
LF4-MW5	3/7/19	-6.075	-0.54	-1.54	0.00
LF4-MW5	9/5/19	-6.685	-1.30	-2.30	0.00
LF4-MW5	3/12/20	-6.502	-1.07	-2.07	0.00
LF4-MW5	9/15/20	-5.809	-0.21	-1.21	0.00
LF4-MW5	3/4/21	-5.655	-0.02	-1.02	0.00
LF4-MW5	9/9/21	-6.685	-1.30	-2.30	0.00
LF4-MW5	3/2/22	-5.592	0.06	-0.94	0.00
Background					
LF4-MW2	MEAN	-5.637			
LF4-MW2	STDEV	0.807			

Nickel

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-4.605	-0.59	-1.59	0.00
LF4-MW1	9/13/06	-4.351	0.46	-0.54	0.00
LF4-MW1	3/6/07	-4.605	-0.59	-1.59	0.00
LF4-MW1	9/24/07	-4.585	-0.51	-1.51	0.00
LF4-MW1	3/26/08	-4.117	1.42	0.42	0.42
LF4-MW1	9/16/08	-4.595	-0.55	-1.55	0.00
LF4-MW1	3/17/09	-4.398	0.26	-0.74	0.00
LF4-MW1	9/17/09	-4.510	-0.20	-1.20	0.00
LF4-MW1	3/17/10	-4.994	-2.19	-3.19	0.00
LF4-MW1	9/21/10	-4.283	0.74	-0.26	0.00
LF4-MW1	3/15/11	-3.958	2.07	1.07	1.07
LF4-MW1	9/8/11	-3.958	2.07	1.07	2.15
LF4-MW1	3/14/12	-3.887	2.36	1.36	3.51
LF4-MW1	9/6/12	-3.673	3.24	2.24	5.75
LF4-MW1	3/5/13	-3.768	2.85	1.85	7.61
LF4-MW1	9/11/13	-4.173	1.19	0.19	7.80
LF4-MW1	3/5/14	-4.034	1.76	0.76	8.56
LF4-MW1	9/4/14	-4.220	1.00	0.00	8.55
LF4-MW1	3/13/15	-3.942	2.14	1.14	9.69
LF4-MW1	9/16/15	-4.110	1.45	0.45	10.14
LF4-MW1	3/16/16	-3.812	2.67	1.67	11.81
LF4-MW1	9/21/16	-4.001	1.90	0.90	12.70
LF4-MW1	3/15/17	-3.826	2.62	1.62	14.32
LF4-MW1	9/8/17	-3.777	2.82	1.82	16.14
LF4-MW1	3/8/18	-4.001	1.90	0.90	17.04
LF4-MW1	9/11/18	-3.772	2.84	1.84	18.87
LF4-MW1	3/7/19	-3.772	2.84	1.84	20.71
LF4-MW1	9/5/19	-3.863	2.46	1.46	22.17
LF4-MW1	3/12/20	-3.817	2.65	1.65	23.83
LF4-MW1	9/15/20	-3.772	2.84	1.84	25.66
LF4-MW1	3/4/21	-3.772	2.84	1.84	27.50
LF4-MW1	9/9/21	-3.772	2.84	1.84	29.34
LF4-MW1	3/2/22	-3.772	2.84	1.84	31.18
Background					
LF4-MW1	MEAN	-4.462			
LF4-MW1	STDEV	0.243			

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Nickel

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-4.605	-0.82	-1.82	0.00
LF4-MW2	9/13/06	-3.979	0.46	-0.54	0.00
LF4-MW2	3/6/07	-4.528	-0.66	-1.66	0.00
LF4-MW2	9/24/07	-4.528	-0.66	-1.66	0.00
LF4-MW2	3/26/08	-4.628	-0.86	-1.86	0.00
LF4-MW2	9/16/08	-4.213	-0.02	-1.02	0.00
LF4-MW2	3/17/09	-2.684	3.11	2.11	2.11
LF4-MW2	9/17/09	-2.658	3.16	2.16	4.27
LF4-MW2	3/17/10	-2.736	3.00	2.00	6.26
LF4-MW2	9/21/10	-3.887	0.65	-0.35	5.91
LF4-MW2	3/15/11	-4.227	-0.04	-1.04	4.87
LF4-MW2	9/8/11	-4.200	0.01	-0.99	3.88
LF4-MW2	3/14/12	-4.457	-0.51	-1.51	2.37
LF4-MW2	9/6/12	-4.173	0.07	-0.93	1.44
LF4-MW2	3/5/13	-2.484	3.51	2.51	3.95
LF4-MW2	9/11/13	-2.787	2.90	1.90	5.85
LF4-MW2	3/5/14	-2.313	3.86	2.86	8.71
LF4-MW2	9/4/14	-3.119	2.22	1.22	9.93
LF4-MW2	3/13/15	-2.585	3.31	2.31	12.24
LF4-MW2	9/16/15	-3.192	2.07	1.07	13.31
LF4-MW2	3/16/16	-2.922	2.62	1.62	14.93
LF4-MW2	9/21/16	-3.014	2.43	1.43	16.36
LF4-MW2	3/15/17	-3.594	1.25	0.25	16.61
LF4-MW2	9/8/17	-3.677	1.08	0.08	16.69
LF4-MW2	3/8/18	-2.736	3.00	2.00	18.69
LF4-MW2	9/11/18	-2.937	2.59	1.59	20.27
LF4-MW2	3/7/19	-2.343	3.80	2.80	23.08
LF4-MW2	9/5/19	-2.765	2.94	1.94	25.02
LF4-MW2	3/12/20	-2.830	2.81	1.81	26.83
LF4-MW2	9/15/20	-2.733	3.01	2.01	28.83
LF4-MW2	3/4/21	-3.411	1.62	0.62	29.45
LF4-MW2	9/9/21	-2.996	2.47	1.47	30.92
LF4-MW2	3/2/22	-3.244	1.96	0.96	31.89
Background					
LF4-MW2	MEAN	-4.206			
LF4-MW2	STDEV	0.490			

Nickel

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW3	3/13/06	-4.605	0.45	-0.55	0.00
LF4-MW3	9/14/06	-4.173	1.14	0.14	0.14
LF4-MW3	3/6/07	-4.605	0.45	-0.55	0.00
LF4-MW3	9/25/07	-4.989	-0.17	-1.17	0.00
LF4-MW3	3/26/08	-5.093	-0.34	-1.34	0.00
LF4-MW3	9/16/08	-5.537	-1.06	-2.06	0.00
LF4-MW3	3/17/09	-5.658	-1.25	-2.25	0.00
LF4-MW3	9/17/09	-4.981	-0.16	-1.16	0.00
LF4-MW3	3/17/10	-4.605	0.45	-0.55	0.00
LF4-MW3	9/21/10	-5.929	-1.69	-2.69	0.00
LF4-MW3	3/15/11	-5.555	-1.08	-2.08	0.00
LF4-MW3	9/8/11	-5.658	-1.25	-2.25	0.00
LF4-MW3	3/14/12	-5.675	-1.28	-2.28	0.00
LF4-MW3	9/6/12	-5.621	-1.19	-2.19	0.00
LF4-MW3	3/5/13	-5.431	-0.88	-1.88	0.00
LF4-MW3	9/11/13	-4.605	0.45	-0.55	0.00
LF4-MW3	3/5/14	-5.860	-1.58	-2.58	0.00
LF4-MW3	9/4/14	-5.684	-1.29	-2.29	0.00
LF4-MW3	3/13/15	-5.693	-1.31	-2.31	0.00
LF4-MW3	9/16/15	-5.116	-0.38	-1.38	0.00
LF4-MW3	3/16/16	-5.836	-1.54	-2.54	0.00
LF4-MW3	9/21/16	-5.539	-1.06	-2.06	0.00
LF4-MW3	3/15/17	-5.802	-1.48	-2.48	0.00
LF4-MW3	9/8/17	-5.675	-1.28	-2.28	0.00
LF4-MW3	3/8/18	-5.864	-1.58	-2.58	0.00
LF4-MW3	9/11/18	-5.360	-0.77	-1.77	0.00
LF4-MW3	3/7/19	-5.714	-1.34	-2.34	0.00
LF4-MW3	9/5/19	-5.655	-1.25	-2.25	0.00
LF4-MW3	3/12/20	-5.404	-0.84	-1.84	0.00
LF4-MW3	9/15/20	-5.915	-1.67	-2.67	0.00
LF4-MW3	3/4/21	-5.185	-0.49	-1.49	0.00
LF4-MW3	9/9/21	-5.878	-1.61	-2.61	0.00
LF4-MW3	3/2/22	-5.599	-1.16	-2.16	0.00
Background					
LF4-MW3	MEAN	-4.882			
LF4-MW3	STDEV	0.620			

Nickel

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW4	3/14/06	-4.605	0.45	-0.55	0.00
LF4-MW4	9/14/06	-4.605	0.45	-0.55	0.00
LF4-MW4	3/7/07	-5.267	-0.62	-1.62	0.00
LF4-MW4	9/25/07	-5.468	-0.94	-1.94	0.00
LF4-MW4	3/26/08	-5.300	-0.67	-1.67	0.00
LF4-MW4	9/17/08	-5.428	-0.88	-1.88	0.00
LF4-MW4	3/17/09	-5.428	-0.88	-1.88	0.00
LF4-MW4	9/21/09	-5.867	-1.59	-2.59	0.00
LF4-MW4	3/17/10	-5.384	-0.81	-1.81	0.00
LF4-MW4	9/21/10	-5.539	-1.06	-2.06	0.00
LF4-MW4	3/15/11	-4.605	0.45	-0.55	0.00
LF4-MW4	9/8/11	-5.594	-1.15	-2.15	0.00
LF4-MW4	3/14/12	-4.605	0.45	-0.55	0.00
LF4-MW4	9/6/12	-4.605	0.45	-0.55	0.00
LF4-MW4	3/5/13	-4.605	0.45	-0.55	0.00
LF4-MW4	9/11/13	-4.751	0.21	-0.79	0.00
LF4-MW4	3/5/14	-5.964	-1.74	-2.74	0.00
LF4-MW4	9/4/14	-5.591	-1.14	-2.14	0.00
LF4-MW4	3/13/15	-6.161	-2.06	-3.06	0.00
LF4-MW4	9/16/15	-5.438	-0.90	-1.90	0.00
LF4-MW4	3/16/16	-6.119	-2.00	-3.00	0.00
LF4-MW4	9/21/16	-5.757	-1.41	-2.41	0.00
LF4-MW4	3/15/17	-6.079	-1.93	-2.93	0.00
LF4-MW4	9/8/17	-5.619	-1.19	-2.19	0.00
LF4-MW4	3/8/18	-6.522	-2.65	-3.65	0.00
LF4-MW4	9/11/18	-5.339	-0.74	-1.74	0.00
LF4-MW4	3/7/19	-5.991	-1.79	-2.79	0.00
LF4-MW4	9/5/19	-5.684	-1.29	-2.29	0.00
LF4-MW4	3/12/20	-6.119	-1.99	-2.99	0.00
LF4-MW4	9/15/20	-5.952	-1.73	-2.73	0.00
LF4-MW4	3/4/21	-6.032	-1.85	-2.85	0.00
LF4-MW4	9/9/21	-5.776	-1.44	-2.44	0.00
LF4-MW4	3/2/22	-6.320	-2.32	-3.32	0.00
Background					
LF4-MW4	MEAN	-4.882			
LF4-MW4	STDEV	0.620			

Nickel

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW5	3/14/06	-4.605	0.45	-0.55	0.00
LF4-MW5	9/14/06	-4.605	0.45	-0.55	0.00
LF4-MW5	3/7/07	-4.605	0.45	-0.55	0.00
LF4-MW5	9/24/07	-5.741	-1.39	-2.39	0.00
LF4-MW5	3/26/08	-5.896	-1.64	-2.64	0.00
LF4-MW5	9/16/08	-5.960	-1.74	-2.74	0.00
LF4-MW5	3/18/09	-4.605	0.45	-0.55	0.00
LF4-MW5	9/17/09	-4.605	0.45	-0.55	0.00
LF4-MW5	3/17/10	-5.754	-1.41	-2.41	0.00
LF4-MW5	9/16/10	-5.526	-1.04	-2.04	0.00
LF4-MW5	3/15/11	-5.265	-0.62	-1.62	0.00
LF4-MW5	9/8/11	-5.764	-1.42	-2.42	0.00
LF4-MW5	3/14/12	-4.605	0.45	-0.55	0.00
LF4-MW5	9/6/12	-4.605	0.45	-0.55	0.00
LF4-MW5	3/5/13	-4.605	0.45	-0.55	0.00
LF4-MW5	9/11/13	-4.605	0.45	-0.55	0.00
LF4-MW5	3/5/14	-6.049	-1.88	-2.88	0.00
LF4-MW5	9/4/14	-6.432	-2.50	-3.50	0.00
LF4-MW5	3/13/15	-6.271	-2.24	-3.24	0.00
LF4-MW5	9/16/15	-6.529	-2.66	-3.66	0.00
LF4-MW5	3/16/16	-5.941	-1.71	-2.71	0.00
LF4-MW5	9/21/16	-5.714	-1.34	-2.34	0.00
LF4-MW5	3/15/17	-6.180	-2.09	-3.09	0.00
LF4-MW5	9/8/17	-6.529	-2.66	-3.66	0.00
LF4-MW5	3/8/18	-5.889	-1.62	-2.62	0.00
LF4-MW5	9/11/18	-5.547	-1.07	-2.07	0.00
LF4-MW5	3/7/19	-5.547	-1.07	-2.07	0.00
LF4-MW5	9/5/19	-5.776	-1.44	-2.44	0.00
LF4-MW5	3/12/20	-6.032	-1.85	-2.85	0.00
LF4-MW5	9/15/20	-5.952	-1.73	-2.73	0.00
LF4-MW5	3/4/21	-5.240	-0.58	-1.58	0.00
LF4-MW5	9/9/21	-5.991	-1.79	-2.79	0.00
LF4-MW5	3/2/22	-5.521	-1.03	-2.03	0.00
Background					
LF4-MW5	MEAN	-4.882			
LF4-MW5	STDEV	0.620			

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Zinc

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-2.488	1.28	0.28	0.28
LF4-MW1	9/13/06	-3.493	-0.35	-1.35	0.00
LF4-MW1	3/6/07	-3.231	0.08	-0.92	0.00
LF4-MW1	9/24/07	-2.996	0.46	-0.54	0.00
LF4-MW1	3/26/08	-3.177	0.16	-0.84	0.00
LF4-MW1	9/16/08	-3.734	-0.74	-1.74	0.00
LF4-MW1	3/17/09	-3.355	-0.12	-1.12	0.00
LF4-MW1	9/17/09	-3.464	-0.30	-1.30	0.00
LF4-MW1	3/17/10	-4.335	-1.71	-2.71	0.00
LF4-MW1	9/21/10	-3.189	0.14	-0.86	0.00
LF4-MW1	3/15/11	-2.720	0.91	-0.09	0.00
LF4-MW1	9/8/11	-2.955	0.53	-0.47	0.00
LF4-MW1	3/14/12	-2.941	0.55	-0.45	0.00
LF4-MW1	9/6/12	-2.884	0.64	-0.36	0.00
LF4-MW1	3/5/13	-2.766	0.83	-0.17	0.00
LF4-MW1	9/11/13	-3.242	0.06	-0.94	0.00
LF4-MW1	3/5/14	-3.140	0.23	-0.77	0.00
LF4-MW1	9/4/14	-3.237	0.07	-0.93	0.00
LF4-MW1	3/13/15	-2.822	0.74	-0.26	0.00
LF4-MW1	9/16/15	-3.206	0.12	-0.88	0.00
LF4-MW1	3/16/16	-2.805	0.77	-0.23	0.00
LF4-MW1	9/21/16	-3.058	0.36	-0.64	0.00
LF4-MW1	3/15/17	-2.886	0.64	-0.36	0.00
LF4-MW1	9/8/17	-2.799	0.78	-0.22	0.00
LF4-MW1	3/8/18	-2.990	0.47	-0.53	0.00
LF4-MW1	9/11/18	-2.617	1.07	0.07	0.07
LF4-MW1	3/7/19	-2.847	0.70	-0.30	0.00
LF4-MW1	9/5/19	-1.897	2.24	1.24	1.24
LF4-MW1	3/12/20	-2.865	0.67	-0.33	0.91
LF4-MW1	9/15/20	-2.501	1.26	0.26	1.17
LF4-MW1	3/4/21	-2.453	1.34	0.34	1.51
LF4-MW1	9/9/21	-2.313	1.57	0.57	2.08
LF4-MW1	3/2/22	-1.966	2.13	1.13	3.21
Background					
LF4-MW1	MEAN	-3.278			
LF4-MW1	STDEV	0.616			

Zinc

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-2.915	-0.16	-1.16	0.00
LF4-MW2	9/13/06	-2.343	1.59	0.59	0.59
LF4-MW2	3/6/07	-3.338	-1.46	-2.46	0.00
LF4-MW2	9/24/07	-2.996	-0.41	-1.41	0.00
LF4-MW2	3/26/08	-4.069	-3.70	-4.70	0.00
LF4-MW2	9/16/08	-3.487	-1.91	-2.91	0.00
LF4-MW2	3/17/09	-0.691	6.66	5.66	5.66
LF4-MW2	9/17/09	-0.498	7.26	6.26	11.92
LF4-MW2	3/17/10	-0.120	8.41	7.41	19.33
LF4-MW2	9/21/10	-2.254	1.87	0.87	20.20
LF4-MW2	3/15/11	-2.655	0.64	-0.36	19.84
LF4-MW2	9/8/11	-2.608	0.78	-0.22	19.62
LF4-MW2	3/14/12	-2.902	-0.12	-1.12	18.50
LF4-MW2	9/6/12	-2.774	0.27	-0.73	17.77
LF4-MW2	3/5/13	-0.311	7.83	6.83	24.60
LF4-MW2	9/11/13	-0.892	6.05	5.05	29.65
LF4-MW2	3/5/14	0.020	8.84	7.84	37.49
LF4-MW2	9/4/14	-1.168	5.20	4.20	41.69
LF4-MW2	3/13/15	-0.191	8.20	7.20	48.89
LF4-MW2	9/16/15	-1.269	4.89	3.89	52.78
LF4-MW2	3/16/16	-0.835	6.22	5.22	58.00
LF4-MW2	9/21/16	-0.944	5.89	4.89	62.88
LF4-MW2	3/15/17	-1.743	3.44	2.44	65.32
LF4-MW2	9/8/17	-1.715	3.52	2.52	67.84
LF4-MW2	3/8/18	-0.312	7.82	6.82	74.67
LF4-MW2	9/11/18	-0.942	5.89	4.89	79.56
LF4-MW2	3/7/19	0.182	9.34	8.34	87.90
LF4-MW2	9/5/19	-0.654	6.78	5.78	93.68
LF4-MW2	3/12/20	-0.616	6.89	5.89	99.57
LF4-MW2	9/15/20	-0.777	6.40	5.40	104.97
LF4-MW2	3/4/21	-1.561	3.99	2.99	107.96
LF4-MW2	9/9/21	-1.022	5.65	4.65	112.61
LF4-MW2	3/2/22	-1.171	5.19	4.19	116.80
Background					
LF4-MW2	MEAN	-2.863			
LF4-MW2	STDEV	0.326			

Zinc

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW3	3/13/06	-3.858	-0.21	-1.21	0.00
LF4-MW3	9/14/06	-3.685	-0.05	-1.05	0.00
LF4-MW3	3/6/07	-3.642	-0.01	-1.01	0.00
LF4-MW3	9/25/07	-4.160	-0.48	-1.48	0.00
LF4-MW3	3/26/08	-4.141	-0.47	-1.47	0.00
LF4-MW3	9/16/08	-4.820	-1.09	-2.09	0.00
LF4-MW3	3/17/09	-4.200	-0.52	-1.52	0.00
LF4-MW3	9/17/09	-3.627	0.00	-1.00	0.00
LF4-MW3	3/17/10	-4.892	-1.15	-2.15	0.00
LF4-MW3	9/21/10	-5.124	-1.36	-2.36	0.00
LF4-MW3	3/15/11	-3.882	-0.23	-1.23	0.00
LF4-MW3	9/8/11	-4.595	-0.88	-1.88	0.00
LF4-MW3	3/14/12	-4.220	-0.54	-1.54	0.00
LF4-MW3	9/6/12	-4.069	-0.40	-1.40	0.00
LF4-MW3	3/5/13	-4.098	-0.43	-1.43	0.00
LF4-MW3	9/11/13	-2.996	0.58	-0.42	0.00
LF4-MW3	3/5/14	-4.605	-0.89	-1.89	0.00
LF4-MW3	9/4/14	-4.605	-0.89	-1.89	0.00
LF4-MW3	3/13/15	-4.206	-0.53	-1.53	0.00
LF4-MW3	9/16/15	-4.605	-0.89	-1.89	0.00
LF4-MW3	3/16/16	-4.605	-0.89	-1.89	0.00
LF4-MW3	9/21/16	-4.492	-0.79	-1.79	0.00
LF4-MW3	3/15/17	-4.566	-0.85	-1.85	0.00
LF4-MW3	9/8/17	-4.017	-0.35	-1.35	0.00
LF4-MW3	3/8/18	-4.255	-0.57	-1.57	0.00
LF4-MW3	9/11/18	-4.200	-0.52	-1.52	0.00
LF4-MW3	3/7/19	-4.135	-0.46	-1.46	0.00
LF4-MW3	9/5/19	-3.194	0.40	-0.60	0.00
LF4-MW3	3/12/20	-3.963	-0.30	-1.30	0.00
LF4-MW3	9/15/20	-2.937	0.63	-0.37	0.00
LF4-MW3	3/4/21	-3.124	0.46	-0.54	0.00
LF4-MW3	9/9/21	-4.605	-0.89	-1.89	0.00
LF4-MW3	3/2/22	-4.510	-0.80	-1.80	0.00
Background					
LF4-MW3	MEAN	-3.629			
LF4-MW3	STDEV	1.096			

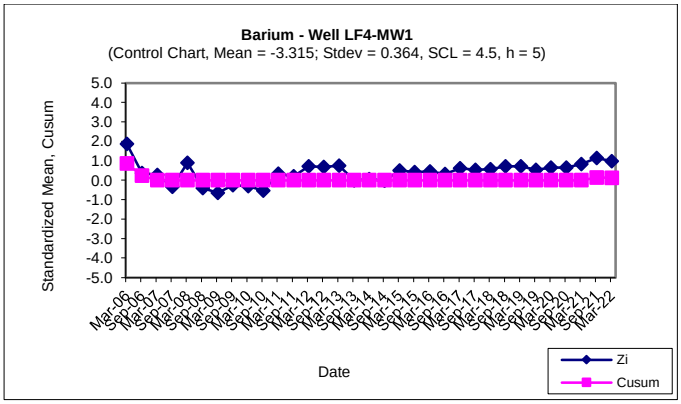
Zinc

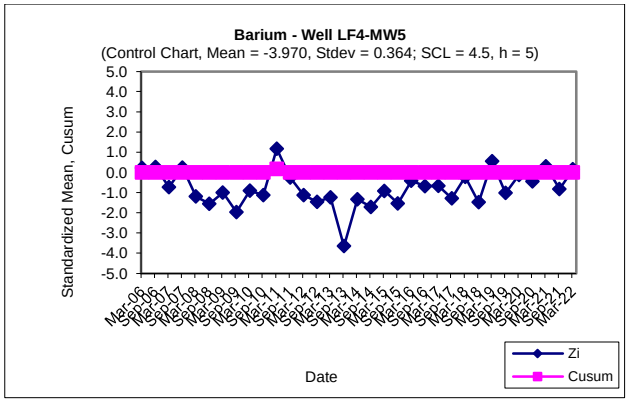
Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW4	3/14/06	-3.669	0.13	-0.87	0.00
LF4-MW4	9/14/06	-3.101	0.48	-0.52	0.00
LF4-MW4	3/7/07	-4.623	-1.17	-2.17	0.00
LF4-MW4	9/25/07	-4.269	-0.79	-1.79	0.00
LF4-MW4	3/26/08	-4.946	-1.52	-2.52	0.00
LF4-MW4	9/17/08	-4.029	-0.52	-1.52	0.00
LF4-MW4	3/17/09	-3.948	-0.44	-1.44	0.00
LF4-MW4	9/21/09	-4.941	-1.51	-2.51	0.00
LF4-MW4	3/17/10	-4.991	-1.57	-2.57	0.00
LF4-MW4	9/21/10	-4.351	-0.87	-1.87	0.00
LF4-MW4	3/15/11	-4.366	-0.89	-1.89	0.00
LF4-MW4	9/8/11	-4.585	-1.13	-2.13	0.00
LF4-MW4	3/14/12	-2.996	0.59	-0.41	0.00
LF4-MW4	9/6/12	-2.996	0.59	-0.41	0.00
LF4-MW4	3/5/13	-4.366	-0.89	-1.89	0.00
LF4-MW4	9/11/13	-4.440	-0.97	-1.97	0.00
LF4-MW4	3/5/14	-4.605	-1.15	-2.15	0.00
LF4-MW4	9/4/14	-4.605	-1.15	-2.15	0.00
LF4-MW4	3/13/15	-4.605	-1.15	-2.15	0.00
LF4-MW4	9/16/15	-4.057	-0.56	-1.56	0.00
LF4-MW4	3/16/16	-4.605	-1.15	-2.15	0.00
LF4-MW4	9/21/16	-4.069	-0.57	-1.57	0.00
LF4-MW4	3/15/17	-4.605	-1.15	-2.15	0.00
LF4-MW4	9/8/17	-3.423	0.13	-0.87	0.00
LF4-MW4	3/8/18	-4.605	-1.15	-2.15	0.00
LF4-MW4	9/11/18	-3.079	0.50	-0.50	0.00
LF4-MW4	3/7/19	-2.880	0.72	-0.28	0.00
LF4-MW4	9/5/19	-2.386	1.25	0.25	0.25
LF4-MW4	3/12/20	-4.422	-0.95	-1.95	0.00
LF4-MW4	9/15/20	-3.612	-0.07	-1.07	0.00
LF4-MW4	3/4/21	-4.605	-1.15	-2.15	0.00
LF4-MW4	9/9/21	-3.474	0.08	-0.92	0.00
LF4-MW4	3/2/22	-4.510	-1.05	-2.05	0.00
Background					
LF4-MW4	MEAN	-3.761			
LF4-MW4	STDEV	0.723			

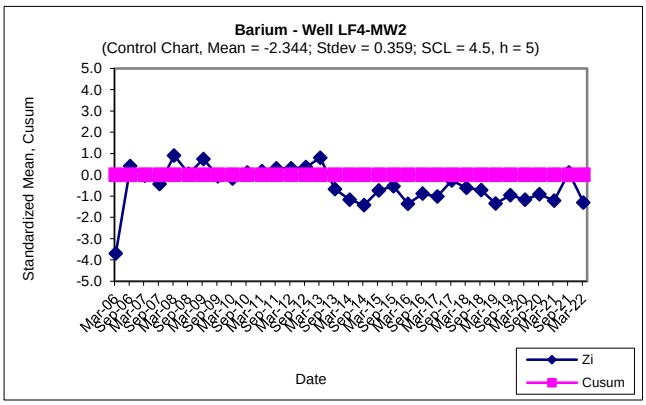
Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

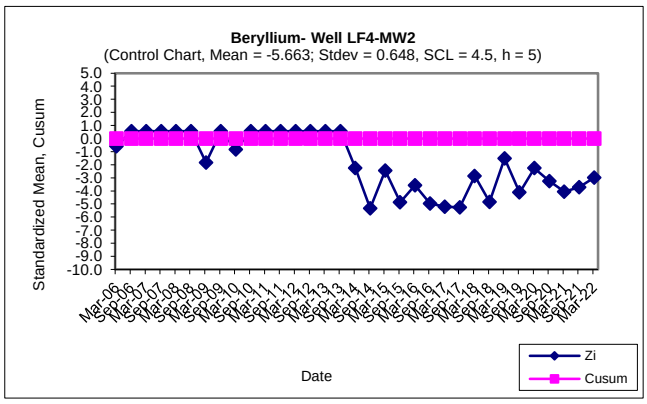
		Zinc			
Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW5	3/14/06	-4.358	-0.88	-1.88	0.00
LF4-MW5	9/14/06	-3.868	-0.35	-1.35	0.00
LF4-MW5	3/7/07	-3.974	-0.47	-1.47	0.00
LF4-MW5	9/24/07	-2.996	0.59	-0.41	0.00
LF4-MW5	3/26/08	-5.028	-1.61	-2.61	0.00
LF4-MW5	9/16/08	-5.067	-1.65	-2.65	0.00
LF4-MW5	3/18/09	-4.753	-1.31	-2.31	0.00
LF4-MW5	9/17/09	-5.176	-1.77	-2.77	0.00
LF4-MW5	3/17/10	-2.996	0.59	-0.41	0.00
LF4-MW5	9/16/10	-4.683	-1.23	-2.23	0.00
LF4-MW5	3/15/11	-4.200	-0.71	-1.71	0.00
LF4-MW5	9/8/11	-2.996	0.59	-0.41	0.00
LF4-MW5	3/14/12	-4.465	-1.00	-2.00	0.00
LF4-MW5	9/6/12	-2.996	0.59	-0.41	0.00
LF4-MW5	3/5/13	-4.510	-1.05	-2.05	0.00
LF4-MW5	9/11/13	-2.996	0.59	-0.41	0.00
LF4-MW5	3/5/14	-4.605	-1.15	-2.15	0.00
LF4-MW5	9/4/14	-4.605	-1.15	-2.15	0.00
LF4-MW5	3/13/15	-4.605	-1.15	-2.15	0.00
LF4-MW5	9/16/15	-4.605	-1.15	-2.15	0.00
LF4-MW5	3/16/16	-4.457	-0.99	-1.99	0.00
LF4-MW5	9/21/16	-4.605	-1.15	-2.15	0.00
LF4-MW5	3/15/17	-4.605	-1.15	-2.15	0.00
LF4-MW5	9/8/17	-4.605	-1.15	-2.15	0.00
LF4-MW5	3/8/18	-2.818	0.79	-0.21	0.00
LF4-MW5	9/11/18	-2.120	1.54	0.54	0.54
LF4-MW5	3/7/19	-3.863	-0.35	-1.35	0.00
LF4-MW5	9/5/19	-4.510	-1.05	-2.05	0.00
LF4-MW5	3/12/20	-4.343	-0.87	-1.87	0.00
LF4-MW5	9/15/20	0.000	3.84	2.84	2.84
LF4-MW5	3/4/21	-3.576	-0.03	-1.03	1.80
LF4-MW5	9/9/21	-3.612	-0.07	-1.07	0.73
LF4-MW5	3/2/22	-5.521	-2.14	-3.14	0.00
Background					
LF4-MW2	MEAN	-3.544			
LF4-MW2	STDEV	0.923			

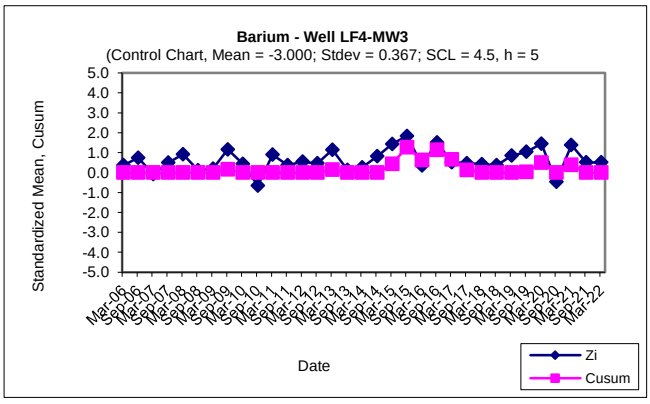
Attachment D3. Control Charts
Butler Green Industrial Landfill, Parcel 175(5), McClellan, Anniston, Alabama

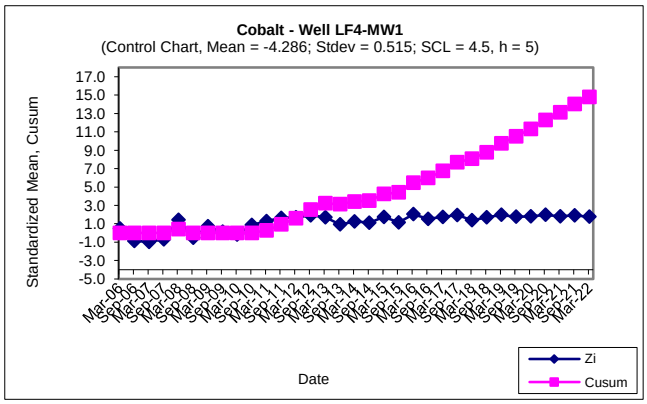


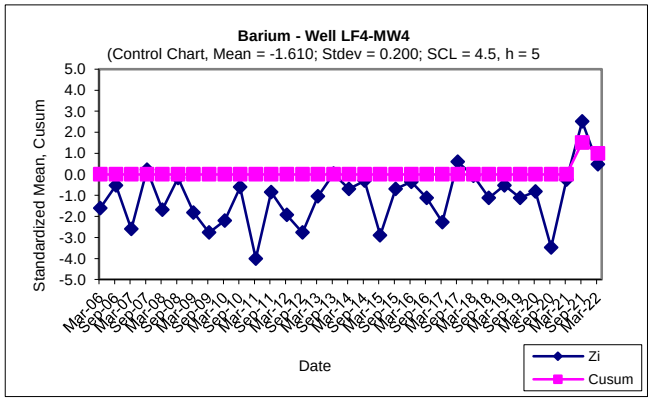


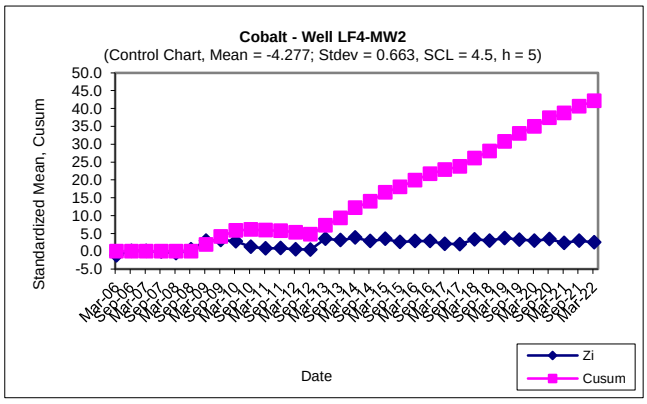




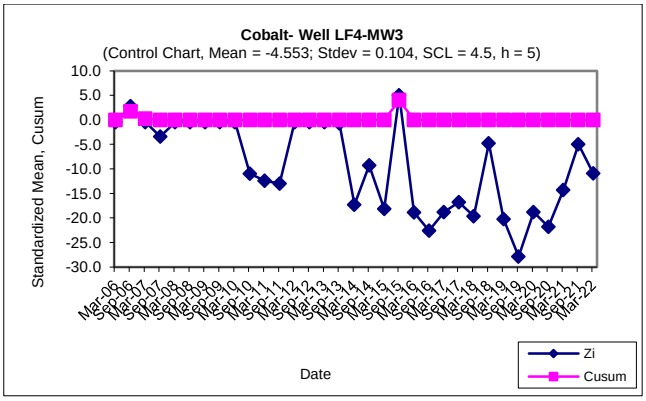


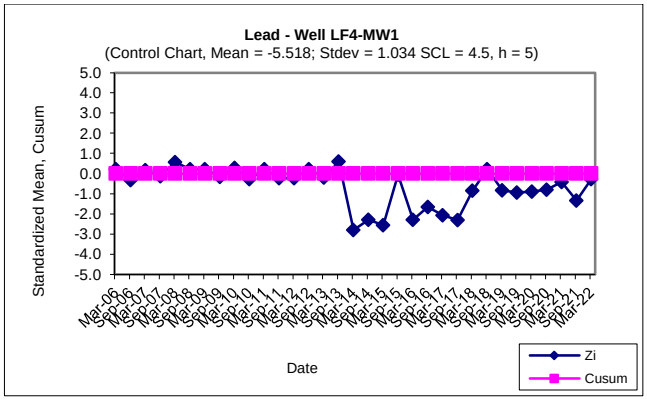


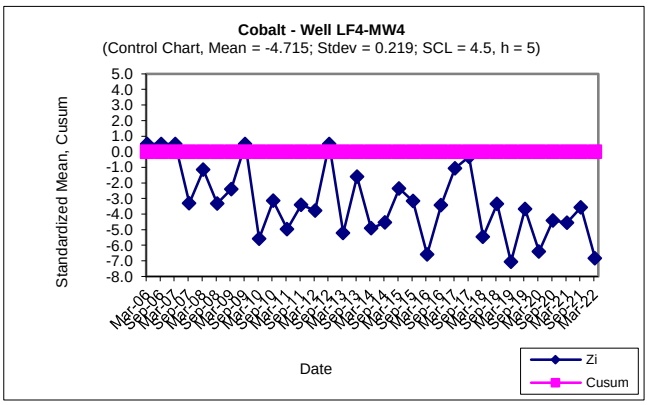


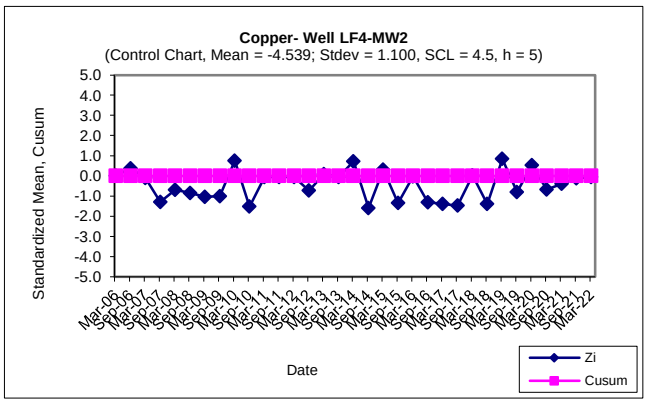


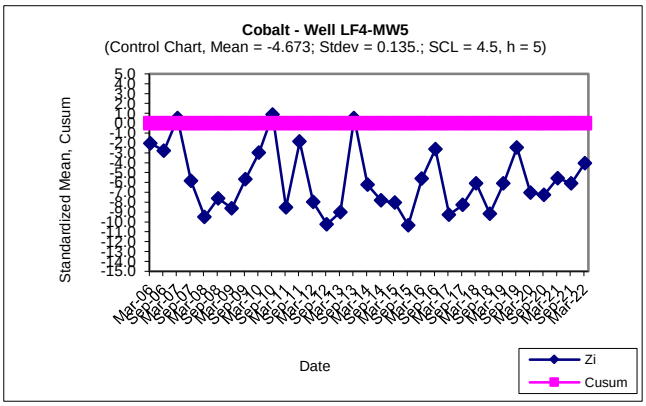
Attachment D3. Control Charts
Butler Green Industrial Landfill, Parcel 175(5), McClellan, Anniston, Alabama

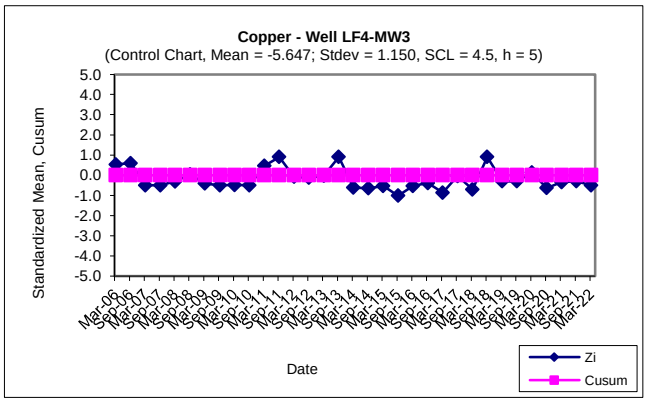


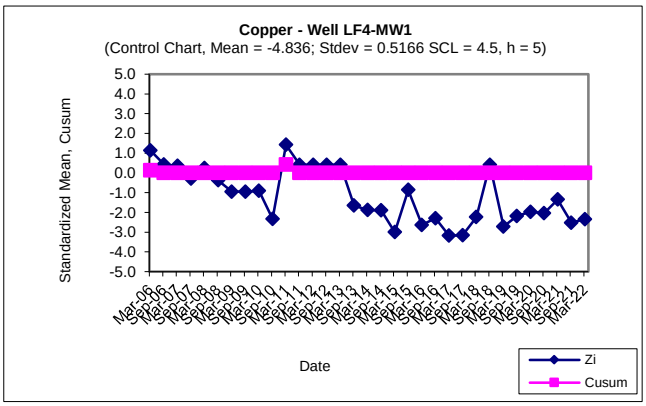


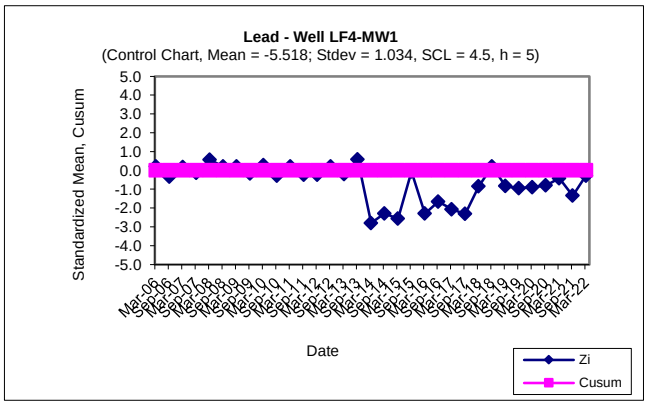




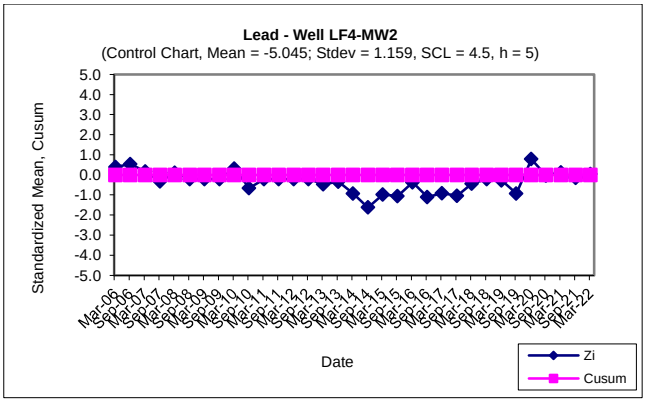


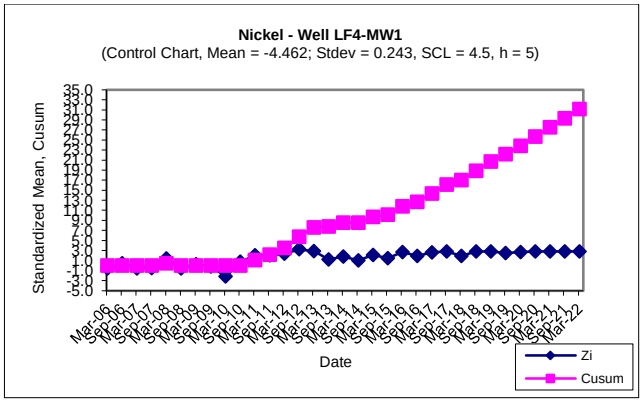


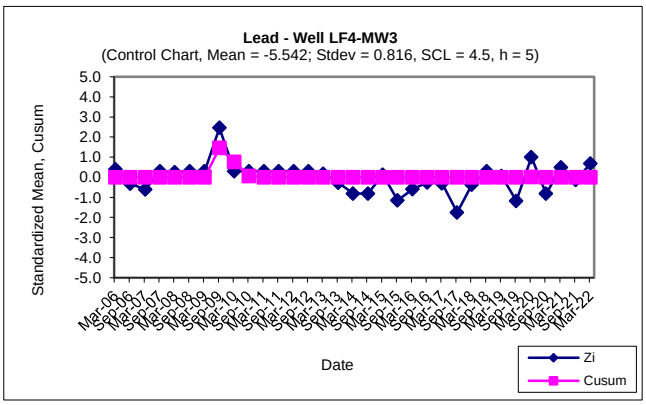


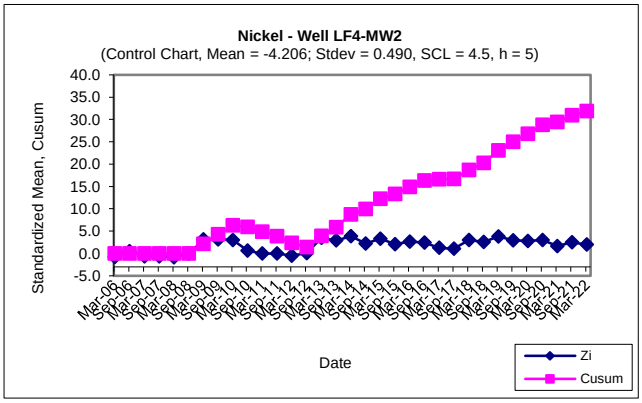


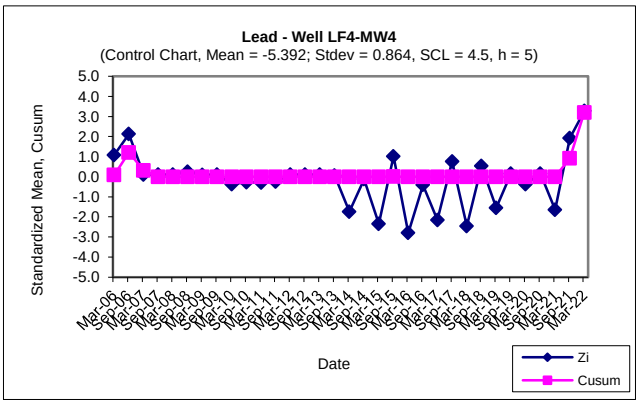
Attachment D3. Control Charts
Butler Green Industrial Landfill, Parcel 175(5), McClellan, Anniston, Alabama

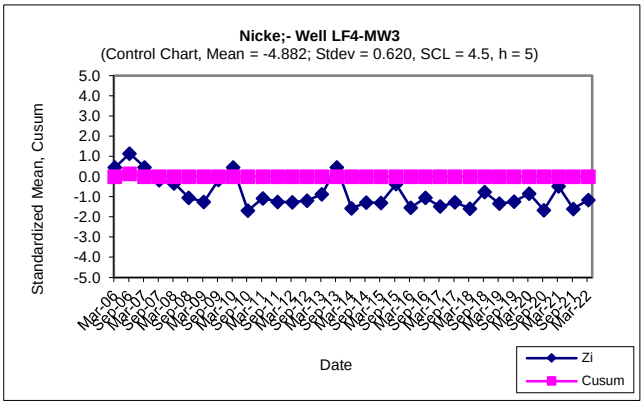


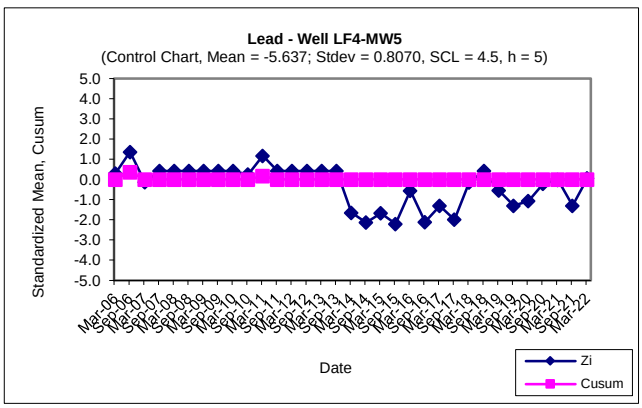


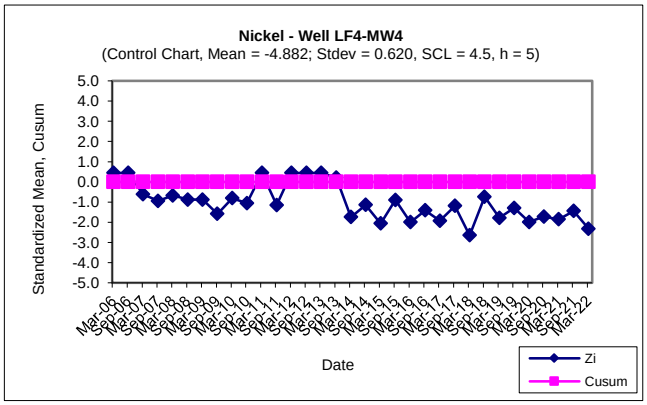












Attachment D3. Control Charts
Butler Green Industrial Landfill, Parcel 175(5), McClellan, Anniston, Alabama