Phase II Environmental Site Assessment

Former Huntington East Practice Field

7th Avenue and 29th Street
Huntington, West Virginia 25702

Triad Project No: 04-19-0133

Prepared for:
Region 2 Planning and Development Council
400 Third Avenue
Huntington, WV 25701

Prepared By:
Triad Engineering, Inc.
10541 Teays Valley Road
Scott Depot, WV 25560

October 31, 2022

October 31, 2022

Mr. Chris Chiles
Region 2 Planning and Development Council
400 Third Avenue
Huntington, WV 25701

Subject: **Phase II Environmental Site Assessment-Rev.0**
Former Huntington East Practice Field
7th Avenue and 29th Street
Huntington, Cabell County, West Virginia
Triad Project No: 04-19-0133

Dear Mr. Chiles:

Enclosed is the Phase II Environmental Site Assessment (ESA) report for the Former Huntington East Practice Field herein referred to as the Site, located at the corner of 7th Avenue and 29th Street in Huntington, Cabell County, West Virginia.

We have appreciated the opportunity to assist you with this project. If you have any questions or need additional information, please feel free to contact us.

Sincerely,

Triad Engineering, Inc.

Shannon L. Johnson
Senior Environmental Scientist

Heather A. Metz, LRS
Environmental Services Manager

cc: Chris Lesniak (EPA)
Dave Lieving (HADCO)

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ACRONYM LIST

AAI	All Appropriate Inquiry
ALS	ALS Environmental
AOPC	Areas of potential concern
ASTM	American Society of Testing and Materials
BGS	Below ground surface
COC	Contaminants of concern
COPC	Contaminants of potential concern
DPT	Direct-push technology
EnviroCore	EnviroCore, LLC
ESA	Environmental Site Assessment
FOIA	Freedom of Information Act
HADCO	Huntington Area Development Council
MCL	Maximum Contamination Limit
MDL	Maximum Detection Limit
MTG	Migration to groundwater
PAH	Polynuclear aromatic hydrocarbons
PCE	Tetrachloroethene
PID	Photo-Ionization Detector
RBC	Risk based concentration
RCRA	Resource Conservation and Recovery Act
REC	Recognized environmental condition
SVOC	Semi-Volatile Organic Compounds
TCE	Trichloroethene
Triad	Triad Engineering, Inc.
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
UST	Underground storage tank
VISL	Vapor Intrusion Screening Level
VRP	Voluntary Remediation Program
VRRA	West Virginia Voluntary Remediation and Redevelopment Act
VOC	Volatile organic compounds
WVDEP	West Virginia Department of Environmental Protection

1.0 EXECUTIVE SUMMARY

This report presents the results of a Phase II Environmental Site Assessment (ESA) performed by Triad Engineering, Inc. (Triad) at the Former Huntington East Practice Field Site (the Site), located at the corner of 7th Avenue and 29th Street in Huntington, Cabell County, West Virginia. Triad performed the Phase II ESA investigation in accordance with the American Society of Testing and Materials (ASTM) Practice E 1903-19, *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*, unless otherwise noted in the report.

The Former Huntington East Practice Field Site encompasses approximately 7.18 acres and consists of one tax parcel identified on the Huntington-Gideon Corp District 5, Tax Map 21, as Parcel 9.2 on file at the Cabell County Courthouse. The Site is owned by the Huntington Area Development Council (HADCO).

The Site was undeveloped until approximately 1900, at which time a portion of railroad tracks ran through the southwestern portion of the Site. In addition, CSX occupied the Site from that time through approximately the early to mid-1970's and then it was used as a practice field for the former Huntington East Hight School through the mid-1990's. Use as a practice field ceased following the construction of the new Huntington High School. From that time until approximately 2018, Marshall University's soccer and rugby teams would use the property as a practice field. Two small storage sheds were constructed in 2000 and remain present at the Site. The Site is currently vacant.

A Phase I ESA performed by Triad, dated September 22, 2021, identified the following recognized environmental concerns (RECs):

- CSX occupied the Site from approximately 1900 through the early to mid-1970's. It is unknown the activities conducted by CSX at the Site; however, a Limited Environmental Exploration – Phase I was conducted by American Geotech, Inc. during September 2018 which consisted of collecting four soil samples at the Site. Based on the findings of the assessment, railroad or industrial waste materials were encountered. In addition, polynuclear aromatic hydrocarbons (PAHs) were detected in soil samples at concentrations greater than the West Virginia Department of Environmental Protection (WVDEP) residential soil *de minimis* values.

- During the early 1900's, railroad tracks surround the Site and ran through the southwestern portion of the property. It is unknown if the Site has been impacted by the on-Site and/or adjoining former rail lines.
- The Site is bound to the south by railroad tracks. It is unknown if the Site has been impacted by the adjoining rail lines.

To investigate the potential for residual environmental contamination at the Site, Triad collected three surface soil, six subsurface soil, and three groundwater grab samples which were analyzed for volatile organic compounds (VOC), PAH, RCRA 8 metals, and herbicides.

The laboratory analytical results were compared to applicable regulatory criteria published by the WVDEP to determine if residual contamination is present at the Site. Based on the laboratory analytical results:

- Arsenic was detected at concentrations exceeding its WVDEP residential soil *de minimis* value in all surface soil and subsurface soil samples collected. However, arsenic did not exceed its natural background level in West Virginia soils in any of the samples, with the exception of surface soil sample SS-1.
- Benzo(a)pyrene and benzo(b)fluoranthene were detected at concentrations exceeding the WVDEP residential soil *de minimis* values in surface soil sample SS-1.
- Arsenic was detected at a concentration greater than its WVDEP groundwater *de minimis* value in groundwater sample GW-1.
- Trichloroethene (TCE) and vinyl chloride were detected at concentrations greater than their respective WVDEP groundwater *de minimis* values in the groundwater sample collected from GW-2.
- Benzo(a)anthracene was detected at a concentration greater than its respective WVDEP groundwater *de minimis* value in groundwater samples GW-1, GW-3, and GW-4.
- Naphthalene was detected at a concentration greater than its respective WVDEP groundwater *de minimis* value in groundwater samples GW-4 and GW-4 FD.

Based on the results of this Phase II ESA, the impacts to soil at the Site appear minimal and could be addressed with a Soil Management Plan during future redevelopment activities. However, laboratory analytical results revealed VOC and PAH exceedances in the groundwater screening samples collected at the Site. Although the specific source of the VOC and PAH are unknown, the contamination is likely from historical industrial activities at the Site. Triad recommends

installation of properly constructed monitoring wells to obtain a better representative sample of actual groundwater conditions at the Site.

2.0 INTRODUCTION

This report presents the results of the Phase II ESA performed by Triad at the Former Huntington East Practice Field Site located at the corner of 7th Avenue and 29th Street in Huntington, Cabell County, West Virginia.

Previously, Triad performed Phase I ESA investigations at the Site, which were summarized in the Phase I Environmental Site Assessment report dated September 22, 2021. As summarized in that report, recognized environmental conditions were identified. Triad performed the Phase II ESA investigation in accordance with ASTM Practice E 1903-19, *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process,* unless otherwise noted in this report.

2.1 Purpose

The purpose of the Phase II ESA investigation was to evaluate the property and to provide technically sound data that allow both an environmental professional and the data user to determine whether hazardous substances or petroleum products are present. In addition, the Phase II ESA is intended to provide sufficient information regarding the nature and extent of any contamination to assist the user in making informed business decisions regarding the property. The Phase II ESA is not intended to satisfy the level of inquiry necessary to support remedial solutions if they are required.

2.2 Special Terms and Conditions

Triad has prepared this Phase II ESA report on behalf of the Region 2 Planning and Development Council (Region 2). The information, data, conclusions, and opinions presented in this Phase II ESA report reflect results of the Site investigations performed under contract to Region 2. There were no special terms and conditions in-place with regard to the findings, recommendations, or our expressed opinion regarding recognized environmental conditions associated with the Site.

2.3 Limitations and Exceptions

Triad has prepared this report for the exclusive use of the Region 2 Planning and Development Council and their assigns as a Phase II ESA report on the subject property herein described as the Former Huntington East Practice Field Site. The opinions and conclusions expressed in this report are based on the results of our Phase II ESA work tasks.

For the purposes of this Phase II ESA, the terms “subject site,” “subject property,” and “Site” refer to the land within the property boundaries. The term “surrounding vicinity” generally refers to properties within a one-mile radius of the Site. The term “adjoining properties” refers to land contiguous to the Site. The term “adjacent properties” refers to land proximal to the Site.

The conclusions of the Phase II ESA are inherently limited by the nature and scope of the site characterization field investigation. Furthermore, the design and subsequent implementation of the Phase II ESA investigation is often based on information and data obtained from others. Therefore, Triad cannot be responsible for the accuracy of such information and assumes no responsibility for conditions that were not divulged to us during the preparation of this report.

It should also be noted that our assessment is considered to be valid only at the time and locations investigated and that conditions within the Site may vary with time. The nature and extent of these variations may only become evident during the course of future investigations or development. This report was not intended to establish the compliance status of the subject property with respect to Federal, State, or Local environmental regulations.

Triad has performed its services in general accordance with ASTM E 1903-19, *Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process* for conducting a Phase II ESA and make no other warranty, either expressed or implied, as to the professional services and advice contained herein.

2.4 Limiting Conditions and Methodology Used

Triad performed the Phase II ESA work tasks in general accordance with ASTM Practice E 1903-19, unless otherwise noted in this report. As such, the user may rely upon the findings and opinions of the Phase II ESA report, subject to the scope of services, significant assumptions, limitations and exceptions, and special terms and conditions as described in the Phase II ESA report. Triad emphasizes that this Phase II ESA does not guarantee that unobserved conditions, undocumented incidents, or information withheld concerning environmental conditions at the Site will not affect the level of environmental risk or potential liability at the Site.

3.0 BACKGROUND

3.1 Site Description and Features

The Site is located at the corner of 7th Avenue and 29th Street in Huntington, Cabell County, West Virginia. The Site encompasses approximately 7.18 acres and consists of one tax parcel. The Site is owned by HADCO. The Site consists of two small storage sheds and is currently vacant.

The Site can be accessed from 29th Street from the east. There are no other improvements present at the Site. The location of the Site is depicted on the attached **Figure 1, *Site Location Map*** on the *Huntington, WV* 7.5-minute topographic quadrangle map.

3.2 Physical Setting

The topography of the Site and immediately surrounding areas is flat lying to sloping toward the east. Current land-uses in the area adjoining and adjacent to the Site are residential and commercial.

3.3 Site History and Land Use

The Site was undeveloped until approximately 1900, at which time a portion of railroad tracks ran through the southwestern portion of the Site. In addition, CSX occupied the Site from that time through approximately the early to mid-1970's and was then used as a practice field for the former Huntington East High School through the mid-1990's following construction of the new Huntington High School. From that time until approximately 2018, Marshall University's soccer and rugby teams would use the property as a practice field. Two small storage sheds were constructed in 2000 and remain present at the Site. The Site is currently vacant.

3.4 Adjacent Property Land Use

Current land-uses of the properties that are immediately adjoining and adjacent to the Former Huntington East Practice Field Site are as follows:

North – The Site is bound to the north by St. Mary's urgent care.

South – The Site is bound to the south by CSX railroad tracks with 8th Avenue beyond.

East – The Site is bound to the east by 29th Street with residential property beyond.

West – The Site is bound to the west by wooded, undeveloped with CSX property beyond.

3.5 Summary of Previous Assessments

A Phase I ESA performed by Triad, dated September 22, 2021, identified the following RECs:

- CSX occupied the Site from approximately 1900 through the early to mid-1970's. It is unknown the activities conducted by CSX at the Site; however, a Limited Environmental Exploration – Phase I was conducted by American Geotech, Inc. during September 2018 which consisted of collecting four soil samples at the Site. Based on the findings of the assessment, railroad or industrial waste materials were encountered. In addition, PAHs were detected in soil samples at concentrations greater than the WVDEP residential soil *de minimis* values.
- During the early 1900's, railroad tracks surround the Site and ran through the southwestern portion of the property. It is unknown if the Site has been impacted by the on-Site and/or adjoining former rail lines.
- The Site is bound to the south by railroad tracks. It is unknown if the Site has been impacted by the adjoining rail lines.

4.0 PHASE II ACTIVITIES

4.1 Scope of Assessment

4.1.1 Supplemental Record Review

No supplemental record reviews were conducted as a part of this assessment.

4.1.2 Sampling Plan

Based on the information contained in the Phase I ESA report and the previous uses of the Site, the Phase II ESA investigation consisted of collecting surface soil, subsurface soil, and groundwater samples from various locations throughout the Site. Digital photographs of the sample locations are provided in **Appendix 1, *Site Photographs***.

4.1.3 Chemical Testing Plan

Based on the findings of the Phase I ESA, contaminants of potential concern (COPC) consisted of VOC, PAH, RCRA 8 metals, and herbicides.

4.1.4 Deviations from the Work Plan

Triad had initially intended to collect four surface soil, eight subsurface soil, and four groundwater samples at the Site. However, due to limited geoprobe accessibility along the southern portion of the Site due to recent heavy rainfall events, SS-2/SB-2/GW-2 and

SB-5 were unable to be collected. Additionally, due to limited recovery at the SB-4 sample location, SB-4 was only analyzed for VOCs.

4.2 Field Explorations and Methods

On August 1 and 2, 2022, Triad collected three surface soil samples, six subsurface soil samples, and three groundwater samples from various locations throughout the Site. EnviroCore, under contract to Triad, advanced a total of six borings using DPT. The sample locations are illustrated on the attached **Figure 2, *Sample Location Map***.

4.2.1 Test Borings

To collect the subsurface soil samples, EnviroCore collected continuous soil cores within approximately two-inch diameter clear PVC sleeves that were four feet in length. Triad visually described the soil samples within each core in the field in general accordance with the USCS. Three of the borings were advanced to the depth that groundwater was encountered (depths ranging from 12 feet below ground surface (bgs) at the SB-4 location to 40 feet bgs at the SB-1 and SB-3 locations) and the remaining borings were terminated at 12 feet bgs. A photoionization detector (PID) was used to screen the soil samples for evidence of VOC. The subsurface soil sample selected for laboratory analysis was determined based on field observations, which included discoloration, odor, depth to groundwater, and/or results of PID field screening. Soil descriptions, PID measurements, and sample location depths are included on the boring logs in **Appendix 2, *Soil Boring Logs***. The DPT sampling equipment was decontaminated with Liquinox® soap and distilled water between each boring.

4.2.2 Groundwater Samples

The groundwater grab samples were collected by advancing a Geoprobe® brand screenpoint water sampler into the saturated zone and then exposing the well screen at the bottom of the boring. Once the screen was exposed to the saturated horizon, tubing equipped with a check valve was used to bring groundwater to the surface.

4.3 Sampling and Chemical Analysis and Methods

4.3.1 Soil

Soil samples were collected in accordance with standard operating procedures included in *Appendix C* of the *Sampling and Analysis Plan.* The soil samples were placed in clean,

laboratory supplied sample containers and delivered via courier to a WVDEP certified laboratory, ALS Environmental (ALS) located in South Charleston, West Virginia, with chain-of-custody documentation. The samples were placed on ice and a temperature of 4°C plus or minus was maintained in the shipping container. The soil samples were analyzed for the following:

- VOC by EPA method 8260D;
- PAH by EPA method 8270E;
- Total RCRA 8 Metals by EPA method 6020B/7471B;
- Herbicides by EPA method 8151A.

4.3.2 Groundwater

Groundwater samples were collected in accordance with standard operating procedures included in *Appendix C* of the *Sampling and Analysis Plan.* The VOC sample containers were filled first to minimize volatilization. The metals samples were field filtered using a 0.45-micron groundwater filter connected to the end of the sample tubing. The groundwater samples were collected in clean, laboratory supplied sample containers and delivered via courier to a WVDEP certified laboratory, ALS, located in South Charleston, West Virginia, with chain-of-custody documentation. The samples were placed on ice and a temperature of 4°C plus or minus was maintained in the shipping container. The groundwater samples were analyzed for the following:

- VOC by EPA method 8260D;
- PAH by EPA method 8270E/SIM;
- RCRA 8 metals by EPA method 6020B/7470A; and
- Herbicides by EPA method 8151A.

5.0 EVALUATION AND PRESENTATION OF RESULTS

5.1 Subsurface Conditions

5.1.1 Geologic Setting

The Site is located within the Quaternary Alluvium which consists of deposits of sand, silt, gravel, and clay. Based on the field investigation, silty sandy clay or sandy clay was encountered across the Site, with the exception of the eastern portion of the Site, in the location of the two open-aired structures (SB-4). Primarily brown alluvial sand and rock deposits were encountered below the silty sandy clay or sandy clay to boring termination.

5.1.2 Hydrogeologic Conditions

Based on logs of environmental borings, a saturated zone was present at depths ranging from approximately 12 feet to 40 feet bgs. No groundwater monitoring wells, or piezometers were installed during this investigation; therefore, a site-specific groundwater gradient could not be determined.

5.2 Laboratory Analytical Results

5.2.1 Surface Soil

Surface soil data were compared to residential land-use *de minimis* values under the West Virginia VRRA program.

Arsenic was detected at concentrations exceeding its WVDEP residential soil *de minimis* value of 0.68 milligrams per kilogram (mg/kg) in surface soil samples SS-1 (15 mg/kg), SS-3 (8.7 mg/kg), and SS-4 (1.5 mg/kg). However, arsenic did not exceed its natural background concentration of 13.1 mg/kg for West Virginia soils in any of the samples, with the exception of the SS-1 (15 mg/kg) sample. Benzo(a)pyrene and benzo(b)fluoranthene were detected at concentrations greater than their WVDEP residential soil *de minimis* value of 0.11 mg/kg and 1.1 mg/kg, respectively in surface soil sample SS-1 (0.83 mg/kg and 1.4 mg/kg). No other COPC were detected in surface soil at concentrations exceeding their respective residential soil de minimis values.

A comparison of the laboratory analytical data to the residential soil *de minimis* is provided in **Table 1, *Analytical Summary – Surface Soil***. The laboratory analytical reports are included as **Appendix 3, *Laboratory Analytical Report***.

5.2.2 Subsurface Soil

Subsurface soil data were compared to residential land-use *de minimis* values under the West Virginia VRRA program.

Arsenic was detected at concentrations exceeding its WVDEP residential soil *de minimis* value of 0.68 mg/kg in subsurface soil samples SB-1 (5.2 mg/kg), SB-3 (2.7 mg/kg), SB-6 (4.8 mg/kg), SB-6 FD (8.1 mg/kg), SB-7 (5.8 mg/kg), and SB-8 (7.9 mg/kg). However, arsenic did not exceed its natural background concentration of 13.1 mg/kg for West

Virginia soils in any of the samples. No other COPC were detected in subsurface soil at concentrations exceeding their respective residential soil de minimis values.

A comparison of the laboratory analytical data to the residential soil *de minimis* is provided in **Table 2, *Analytical Summary – Subsurface Soil***. The laboratory analytical reports are included as **Appendix 3, *Laboratory Analytical Report***.

5.2.3 Groundwater

Groundwater samples were collected from three temporary screening groundwater wells at the Site. Several COPC were detected in groundwater at concentrations exceeding their respective groundwater *de minimis* values. COPC were also detected at concentrations exceeding their respective residential Vapor Intrusion Screening Levels (VISL). The groundwater exceedances are as follows:

- Arsenic was detected at a concentration greater than its respective groundwater *de minimis* value of 10 micrograms per liter (ug/L) in groundwater sample GW-1 (16 ug/L).
- TCE was detected at a concentration greater than its respective groundwater *de minimis* value of 5 ug/L and residential VISL value of 2 ug/L in groundwater sample GW-3 (8.6 ug/L). In addition, TCE exceeded the residential VISL value of 2 ug/L in groundwater sample GW-1 (2.1 ug/L).
- Vinyl chloride was detected at a concentration greater than its respective groundwater *de minimis* value of 2 ug/L and residential VISL value of 0.197 ug/L in groundwater sample GW-3 (5.4 ug/L).
- Benzo(a)anthracene was detected at a concentration greater than its respective groundwater *de minimis* value of 0.03 ug/L in groundwater samples GW-1 (0.075 ug/L), GW-3 (0.037 ug/L), and GW-4 (0.082 ug/L).
- Naphthalene was detected at a concentration greater than its respective groundwater *de minimis* value of 0.12 ug/L in groundwater samples GW-4 (9.5 ug/L) and GW-4 FD (5.4 ug/L).

Groundwater analytical results are summarized in **Table 3, *Analytical Summary-Groundwater***. Groundwater analytical reports are included in **Appendix 3, *Analytical Reports***.

5.3 Data Validation

Triad validated 100% of the laboratory analytical data in accordance with Triad's, *Quality Assurance Project Plan* (December 5, 2019). The validation was performed in accordance with the *National Functional Guidelines for Superfund Organic Data Review* (USEPA, November 2020) and *National Functional Guidelines for Inorganic Data Review* (USEPA, November 2020). The results are included in the attached **Appendix 4, *Data Validation Report***. All components evaluated and data presented by the laboratory met the applicable acceptance criteria and are considered fully usable.

6.0 DISCUSSION OF FINDINGS AND CONCLUSIONS

Triad performed the Phase II ESA investigation in accordance with ASTM Practice E 1903-19, Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process, unless otherwise noted in the report.

The COC detected in soils appear to be limited to arsenic, benzo(a)pyrene and benzo(b)fluoranthene and limited to the near surface in the area surrounding boring SS1/SB1 on the northwestern portion of the Site. COC were detected in each of the groundwater screening wells at the Site. However, the primary VOC impacts appear in groundwater sample GW-3, located in the central portion of the Site. A conceptual site model, which is presented on the attached **Figure 3, *Conceptual Site Model***, was developed to identify potential routes of exposure that could impact human health or ecological receptors.

7.0 RECOMMENDATIONS

Based on the results of this Phase II ESA, the impacts to soil at the Site appear minimal and could be addressed with a Soil Management Plan during future redevelopment activities. However, laboratory analytical results revealed VOC and PAH exceedances in the groundwater screening samples collected at the Site. Although the specific source of the VOC and PAH are unknown, the contamination is likely from historical industrial activities at the Site. Triad recommends installation of properly constructed monitoring wells to obtain a better representative sample of actual groundwater conditions at the Site.

8.0 REFERENCES

Triad Engineering, Inc., *Phase I Environmental Site Assessment (ESA)*, Former Huntington East Practice Field, September 22, 2021.

Triad Engineering, Inc., *Sampling and Analysis Plan (SAP)-Rev.1,* Former Huntington East Practice Field, July 14, 2022.

ASTM Practice E 1903-19, Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process.

WVDEP*, West Virginia Voluntary Remediation and Redevelopment Act Guidance Manual,* June 2020.

WVCSR 60-3 VRRA, March 29, 2022.

TRIAD ENGINEERING, INC.

FIGURES

Plotted by: jmay
y:\sw_sa_04\2019_1__\04-19-0133 brownfields coalition assessment grant\environmental\reports\former huntington east practice field\sap\cadd\19-0133 sample locations.dwg

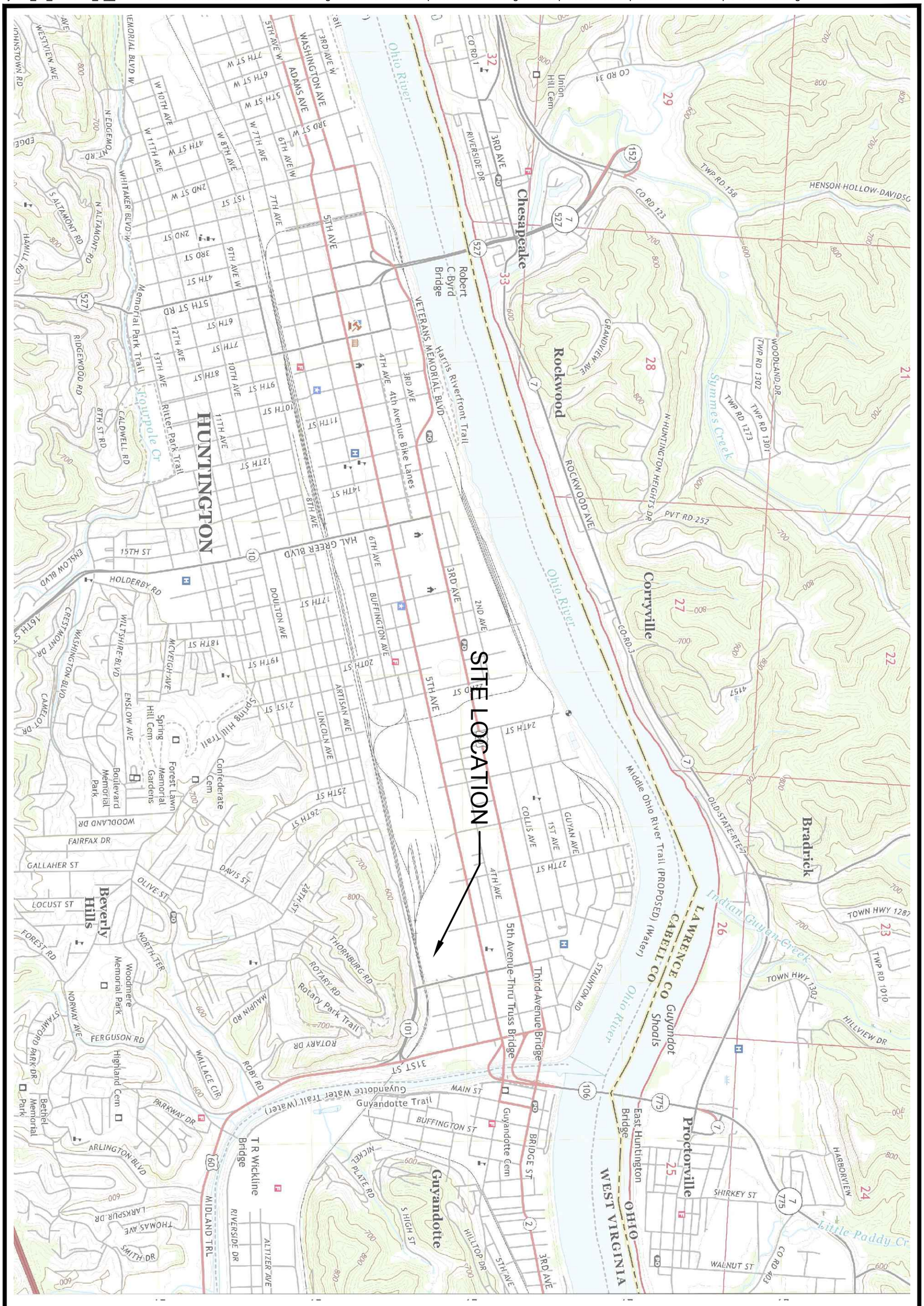

FIGURE 1	FORMER HUNTINGTON EAST PRACTICE FIELD HUNTINGTON, WEST VIRGINIA	CADD FILE: 19-0133 Sample Locations.dwg	**TRIAD ENGINEERING, INC.**
FIGURE No.:		PROJECT No.: 04-19-0133	10541 TEAYS VALLEY ROAD SCOTT DEPOT, WV 25560 PH: 304.755.0721 FAX: 304.755.1880
PROJECT No.: 04-19-0133	**SITE LOCATION**	DRAWN BY: JTM / CHECKED BY: SJ	OFFICE LOCATIONS MARYLAND ○ PENNSYLVANIA ○ VIRGINIA ○ WEST VIRGINIA ○ OHIO
TRIAD ENGINEERING, INC. www.triadeng.com		DATE: 10/26/2022 / SCALE: 1" = 2000'	

Plotted by: jmay
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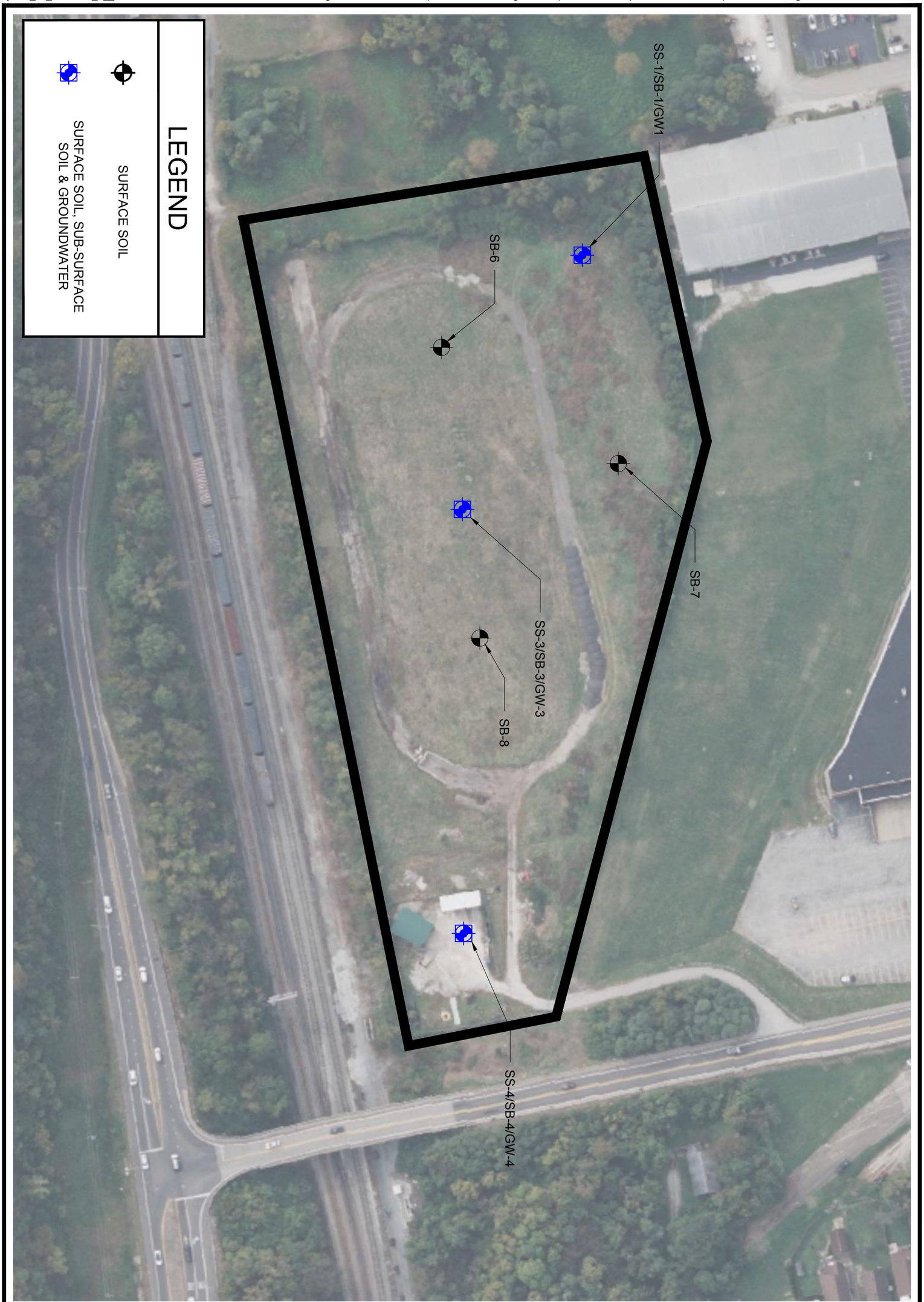

FIGURE 2

PROJECT No.: 04-19-0133

FIGURE No.:

TRIAD ENGINEERING, INC.
www.triadeng.com

FORMER HUNTINGTON EAST PRACTICE FIELD
HUNTINGTON, WEST VIRGINIA

SAMPLE LOCATIONS

CADD FILE: 19-0133 Sample Locations.dwg	
PROJECT No.: 04-19-0133	
DRAWN BY: JTM	CHECKED BY: SJ
DATE: 10/26/2022	SCALE: 1" = 100'

TRIAD ENGINEERING, INC.

10541 TEAYS VALLEY ROAD
SCOTT DEPOT, WV 25560
PH: 304.755.0721 FAX: 304.755.1880

OFFICE LOCATIONS
MARYLAND ○ PENNSYLVANIA ○ VIRGINIA ○ WEST VIRGINIA ○ OHIO

Contaminant Source	Contaminants of Potential Concern (COPCs)	Release Mechanism	Impacted Media	Migration Pathways	Expsure Media	Exposure Routes	Human Receptors: Site Worker	Construction & Utility Workers	Site Visitor/Trespasser	Future Residents
Former industrial activities and rail lines	VOC, PAH, RCRA 8 metals, and Herbicides	Spills or Leaks	Surface Soil		Surface Soil	Dermal				
						Ingestion				
						Inhalation				
		Spills or Leaks	Subsurface Soil		Subsurface Soil	Dermal	n/a	n/a	n/a	n/a
						Ingestion	n/a	n/a	n/a	n/a
						Inhalation	n/a	n/a	n/a	n/a
					Groundwater	Dermal				
						Ingestion				
						Inhalation				
					Soil Vapor	Dermal	?	?	?	?
						Ingestion	?	?	?	?
						Inhalation	?	?	?	?

LEGEND:

	Pathway is not complete: No data required.
n/a	Pathway is or may be complete, but insignificant or unlikely: No data required.
?	Pathway is or may be complete, and significance unknown.
	Pathway is complete and risk is significant.

TRIAD ENGINEERING, INC.
10541 TEAYS VALLEY ROAD
SCOTT DEPOT, WV 25560
PH: 304.755.0721 FAX: 304.755.1880
OFFICE LOCATIONS
MARYLAND ○ PENNSYLVANIA ○ VIRGINIA ○ WEST VIRGINIA ○ OHIO

CADD FILE: 19-0133 Sample Locations.dwg
PROJECT No.: 04-19-0133
DRAWN BY: JTM
CHECKED BY: SJ
DATE: 10/26/2022
SCALE: ##########

FORMER HUNTINGTON EAST PRACTICE FIELD
HUNTINGTON, WEST VIRGINIA

CONCEPTUAL SITE MODEL

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FIGURE No.:
FIGURE 2
PROJECT No.: 04-19-0133

TRIAD ENGINEERING, INC.

TABLES

Table 1. Analytical Summary - Surface Soil
Former Huntington East Practice Field
Huntington, Cabell County, WV

CAS No.	Analyte	Residential De Minimis / 90th Percentile	Sample ID/Depth/Date Collected					
			SS-1		SS-3		SS-4	
			0-2'		0-2'		0-2'	
			8/1/2022		8/1/2022		8/2/2022	
			Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q
Metals by SW6020B/SW7471B								
7440-38-2	**Arsenic**	**0.68/13.1**	**15**		**8.7**		**1.5**	
7440-39-3	Barium	15000/565	240		180		110	
7440-43-9	Cadmium	37/0.5	0.41		0.076	J	< 0.025	
16065-83-1	Chromium	120000/57.4	24		19		14	
7439-92-1	Lead	400/38	96		24		7.8	
7782-49-2	Selenium	390/0.8	0.93		0.43		0.46	
7440-22-4	Silver	390/1	0.11	J	< 0.054		< 0.055	
7439-97-6	Mercury	3.1/0.09	0.093		0.039		< 0.012	
VOC by SW8260C								
71-55-6	1,1,1-Trichloroethane	640	< 0.021		< 0.02		< 0.019	
79-34-5	1,1,2,2-Tetrachloroethane	0.64	< 0.02		< 0.019		< 0.019	
79-00-5	1,1,2-Trichloroethane	1.2	< 0.02		< 0.018		< 0.018	
76-13-1	1,1,2-Trichlorotrifluoroethane	910	< 0.029		< 0.027		< 0.027	
75-34-3	1,1-Dichloroethane	3.8	< 0.017		< 0.016		< 0.015	
75-35-4	1,1-Dichloroethene	240	< 0.015		< 0.014		< 0.014	
87-61-6	1,2,3-Trichlorobenzene	NV	< 0.056		< 0.052		< 0.051	
96-18-4	1,2,3-Trichloropropane	0.0051	< 0.019		< 0.018		< 0.018	
120-82-1	1,2,4-Trichlorobenzene	24	< 0.053		< 0.049		< 0.048	
95-63-6	1,2,4-Trimethylbenzene	220	< 0.034		< 0.032		< 0.031	
96-12-8	1,2-Dibromo-3-chloropropane	0.0057	< 0.043		< 0.04		< 0.039	
106-93-4	1,2-Dibromoethane	0.039	< 0.013		< 0.012		< 0.012	
95-50-1	1,2-Dichlorobenzene	380	< 0.018		< 0.016		< 0.016	
107-06-2	1,2-Dichloroethane	0.5	< 0.07		< 0.065		< 0.064	
78-87-5	1,2-Dichloropropane	2.7	< 0.034		< 0.032		< 0.031	
108-67-8	1,3,5-Trimethylbenzene	180	< 0.054		< 0.051		< 0.049	
541-73-1	1,3-Dichlorobenzene	NV	< 0.015		< 0.014		< 0.014	
106-46-7	1,4-Dichlorobenzene	2.8	< 0.011		< 0.01		< 0.01	
78-93-3	2-Butanone	28000	< 0.038		< 0.036		< 0.035	
591-78-6	2-Hexanone	NV	< 0.023		< 0.021		< 0.021	
108-10-1	4-Methyl-2-pentanone	3400	< 0.043		< 0.04		< 0.04	
67-64-1	Acetone	61000	0.15		0.52		0.59	
71-43-2	Benzene	1.2	< 0.022		< 0.021		< 0.021	
74-97-5	Bromochloromethane	NV	< 0.024		< 0.022		< 0.022	
75-27-4	Bromodichloromethane	0.31	< 0.026		< 0.024		< 0.024	
75-25-2	Bromoform	20	< 0.02		< 0.018		< 0.018	
74-83-9	Bromomethane	7.3	0.26		< 0.083		< 0.081	
75-15-0	Carbon disulfide	740	< 0.024		< 0.022		< 0.022	
56-23-5	Carbon tetrachloride	0.7	< 0.018		< 0.017		< 0.017	
108-90-7	Chlorobenzene	290	< 0.015		< 0.014		< 0.014	
75-00-3	Chloroethane	2100	< 0.046		< 0.043		< 0.042	
67-66-3	Chloroform	0.34	< 0.017		< 0.016		< 0.016	
74-87-3	Chloromethane	120	< 0.13		< 0.12		< 0.12	
156-59-2	cis-1,2-Dichloroethene	17	< 0.03		< 0.028		< 0.027	
542-75-6	cis-1,3-Dichloropropene	1.9	< 0.035		< 0.033		< 0.032	
110-82-7	Cyclohexane	120	< 0.042		< 0.039		< 0.038	

Table 1. Analytical Summary - Surface Soil
Former Huntington East Practice Field
Huntington, Cabell County, WV

CAS No.	Analyte	Residential De Minimis / 90th Percentile	Sample ID/Depth/Date Collected					
			SS-1		SS-3		SS-4	
			0-2'		0-2'		0-2'	
			8/1/2022		8/1/2022		8/2/2022	
			Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q
124-48-1	Dibromochloromethane	8.3	< 0.026		< 0.024		< 0.024	
75-71-8	Dichlorodifluoromethane	94	< 0.056		< 0.052		< 0.051	
100-41-4	Ethylbenzene	6.2	< 0.0098		< 0.0091		< 0.0089	
98-82-8	Isopropylbenzene	270	< 0.014		< 0.013		< 0.013	
179601-23-1	m,p-Xylene	NV	< 0.062		< 0.058		< 0.057	
79-20-9	Methyl acetate	23000	1.4		3.3		3.4	
1634-04-4	Methyl tert-butyl ether	50	< 0.013		< 0.012		< 0.012	
108-87-2	Methylcyclohexane	NV	< 0.018		0.046		0.061	
75-09-2	Methylene chloride	58	< 0.12		< 0.11		< 0.11	
95-47-6	o-Xylene	NV	< 0.018		0.018	J	0.018	J
100-42-5	Styrene	870	< 0.018		< 0.017		< 0.017	
127-18-4	Tetrachloroethene	25	< 0.028		< 0.026		< 0.026	
108-88-3	Toluene	820	< 0.013		0.025	J	< 0.012	
156-60-5	trans-1,2-Dichloroethene	75	< 0.017		< 0.016		< 0.016	
542-75-6	trans-1,3-Dichloropropene	1.9	< 0.026		< 0.024		< 0.024	
79-01-6	Trichloroethene	1	< 0.021		< 0.019		< 0.019	
75-69-4	Trichlorofluoromethane	790	< 0.024		< 0.022		< 0.022	
75-01-4	Vinyl chloride	0.061	< 0.031		< 0.029		< 0.028	
	1,2-Dichloroethene, Total	NV	< 0.017		< 0.016		< 0.016	
	1,3-Dichloropropene, Total	NV	< 0.035		< 0.033		< 0.032	
1330-20-7	Xylenes	260	< 0.062		< 0.058		< 0.057	
PAH by SW8270D								
90-12-0	1-Methylnaphthalene	18	0.05		< 0.0091		< 0.0081	
88-75-5	2-Chloronaphthalene	NV	< 0.012		< 0.012		< 0.01	
91-57-6	2-Methylnaphthalene	240	0.069		< 0.011		< 0.0095	
83-32-9	Acenaphthene	4100	0.29		< 0.013		< 0.012	
208-96-8	Acenaphthylene	4200	0.058		< 0.012		< 0.011	
120-12-7	Anthracene	23000	0.74		< 0.014		< 0.012	
56-55-3	Benzo(a)anthracene	1.5	1.2		< 0.015		< 0.013	
50-32-8	**Benzo(a)pyrene**	**0.11**	**0.83**		< 0.012		< 0.011	
205-99-2	**Benzo(b)fluoranthene**	**1.1**	**1.4**		< 0.013		< 0.012	
191-24-2	Benzo(g,h,i)perylene	1800	0.42		< 0.0087		< 0.0078	
207-08-9	Benzo(k)fluoranthene	11	0.54		< 0.012		< 0.011	
218-01-9	Chrysene	110	1.5		< 0.014		< 0.012	
53-70-3	Dibenzo(a,h)anthracene	0.11	0.095		< 0.012		< 0.011	
206-44-0	Fluoranthene	2400	3.7		< 0.012		< 0.011	
86-73-7	Fluorene	2900	0.3		< 0.012		< 0.011	
193-39-5	Indeno(1,2,3-cd)pyrene	1.1	0.65		< 0.013		< 0.012	
91-20-3	Naphthalene	2.4	0.091		< 0.015		< 0.013	
85-01-8	Phenanthrene	23000	2.9		< 0.0093		< 0.0084	
129-00-0	Pyrene	2300	2.5		< 0.015		< 0.013	
Herbicides by SW8151A								
93-76-5	2,4,5-T	630	< 0.0934		< 0.0965		< 0.084	
93-72-1	2,4,5-TP	510	< 0.0665		< 0.0687		< 0.0598	
96-76-4	2,4-D	NV	< 0.0608		< 0.0628		< 0.0547	

Table 1. Analytical Summary - Surface Soil
Former Huntington East Practice Field
Huntington, Cabell County, WV

CAS No.	Analyte	Residential De Minimis / 90th Percentile	Sample ID/Depth/Date Collected					
			SS-1		SS-3		SS-4	
			0-2'		0-2'		0-2'	
			8/1/2022		8/1/2022		8/2/2022	
			Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q
94-75-7	2,4-DB	NV	< 0.0722		< 0.0745		< 0.0649	
75-99-0	Dalapon	1900	< 0.0396		< 0.0409		< 0.0356	
1918-00-9	Dicamba	1900	< 0.0453		< 0.0468		< 0.0407	
120-36-5	Dichloroprop	NV	< 0.0707		< 0.0731		< 0.0637	
88-85-7	Dinoseb	63	< 0.106		< 0.11		< 0.0955	
94-74-6	MCPA	32	< 7.36		< 7.6		< 6.62	
7085-19-0	MCPP	NV	< 6.37		< 6.58		< 5.73	
87-86-5	Pentachlorophenol	1	< 0.0736		< 0.076		< 0.0662	

Notes:
Residential De minimis - March 29, 2022
90th Percentile- Table 3-3: Background Concentrations of Elements in WV Soils
VRP Guidance Manual, June 2020
NA - Not Analyzed
Q - Laboratory qualifier
J - Estimated Value
H - Analyzed outside of Holding Time
BOLD - Exceeds the Residential De Minimis

Table 2. Analytical Summary - Subsurface Soil
Former Huntington East Practice Field
Huntington, Cabell County, WV

CAS No.	Analyte	Residential De Minimis / 90th Percentile	Sample ID/Depth/Date Collected															
			SB-1		SB-3		SB-4		SB-6		SB-6 FD		SB-7		SB-8			
			13-15'		13-15'		6-8'		6-8'		6-8'		8-10'		6-8'			
			8/1/2022		8/1/2022		8/2/2022		8/1/2022		8/1/2022		8/2/2022		8/1/2022			
			Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q		
Metals by SW6020B/SW7471B																		
7440-38-2	**Arsenic**	**0.68/13.1**	**5.2**		**2.7**		NA		**4.8**		**8.1**		**5.8**		**7.9**			
7440-39-3	Barium	15000/565	140		120		NA		110		330		55		150			
7440-43-9	Cadmium	37/0.5	0.055	J	< 0.029		NA		0.031	J	0.11	J	< 0.031		0.032	J		
16065-83-1	Chromium	120000/57.4	14		13		NA		15		25		12		19			
7439-92-1	Lead	400/38	10		11		NA		13		16		15		15			
7782-49-2	Selenium	390/0.8	0.43	J	0.6		NA		0.44		< 0.48		< 0.47		0.64			
7440-22-4	Silver	390/1	< 0.061		< 0.064		NA		< 0.057		< 0.069		< 0.067		< 0.059			
7439-97-6	Mercury	3.1/0.09	0.04		0.03		NA		0.026		0.033		0.036		0.036			
VOC by SW8260C																		
71-55-6	1,1,1-Trichloroethane	640	< 0.016		< 0.019		< 0.02		< 0.016		< 0.024		< 0.018		< 0.019			
79-34-5	1,1,2,2-Tetrachloroethane	0.64	< 0.016		< 0.018		< 0.02		< 0.016		< 0.023		< 0.017		< 0.019			
79-00-5	1,1,2-Trichloroethane	1.2	< 0.015		< 0.018		< 0.019		< 0.015		< 0.023		< 0.016		< 0.018			
76-13-1	1,1,2-Trichlorotrifluoroethane	910	< 0.023		< 0.026		< 0.028		< 0.023		< 0.034		< 0.025		< 0.027			
75-34-3	1,1-Dichloroethane	3.8	< 0.013		< 0.015		< 0.016		< 0.013		< 0.019		< 0.014		< 0.015			
75-35-4	1,1-Dichloroethene	240	< 0.012		< 0.014		< 0.014		< 0.012		< 0.017		< 0.013		< 0.014			
87-61-6	1,2,3-Trichlorobenzene	NV	< 0.043		< 0.05		< 0.053		< 0.043		< 0.064		< 0.046		< 0.05			
96-18-4	1,2,3-Trichloropropane	0.0051	< 0.015		< 0.018		< 0.019		< 0.015		< 0.022		< 0.016		< 0.018			
120-82-1	1,2,4-Trichlorobenzene	24	< 0.04		< 0.047		< 0.05		< 0.041		< 0.06		< 0.044		< 0.048			
95-63-6	1,2,4-Trimethylbenzene	220	< 0.026		< 0.031		< 0.033		< 0.026		0.064		< 0.028		< 0.031			
96-12-8	1,2-Dibromo-3-chloropropane	0.0057	< 0.033		< 0.039		< 0.041		< 0.033		< 0.049		< 0.036		< 0.039			
106-93-4	1,2-Dibromoethane	0.039	< 0.01		< 0.012		< 0.013		< 0.01		< 0.015		< 0.011		< 0.012			
95-50-1	1,2-Dichlorobenzene	380	< 0.014		< 0.016		< 0.017		< 0.014		< 0.02		< 0.015		< 0.016			
107-06-2	1,2-Dichloroethane	0.5	< 0.054		< 0.063		< 0.067		< 0.054		< 0.08		< 0.058		< 0.063			
78-87-5	1,2-Dichloropropane	2.7	< 0.026		< 0.031		< 0.033		< 0.027		< 0.039		< 0.029		< 0.031			
108-67-8	1,3,5-Trimethylbenzene	180	< 0.042		< 0.049		< 0.052		< 0.042		< 0.062		< 0.045		< 0.049			
541-73-1	1,3-Dichlorobenzene	NV	< 0.012		< 0.014		< 0.015		< 0.012		< 0.018		< 0.013		< 0.014			
106-46-7	1,4-Dichlorobenzene	2.8	< 0.0086		< 0.01		< 0.011		< 0.0087		< 0.013		< 0.0093		< 0.01			
78-93-3	2-Butanone	28000	< 0.029		< 0.034		< 0.037		< 0.03		< 0.044		< 0.032		< 0.034			
591-78-6	2-Hexanone	NV	< 0.018		< 0.021		< 0.022		< 0.018		< 0.026		< 0.019		< 0.021			
108-10-1	4-Methyl-2-pentanone	3400	< 0.033		< 0.039		< 0.041		< 0.034		< 0.05		< 0.036		< 0.039			
67-64-1	Acetone	61000	0.44		< 0.12		0.42		< 0.11		0.19		0.47		0.14	J		
71-43-2	Benzene	1.2	< 0.017		< 0.02		< 0.022		< 0.017		< 0.026		< 0.019		< 0.02			
74-97-5	Bromochloromethane	NV	< 0.018		< 0.021		< 0.023		< 0.018		< 0.027		< 0.02		< 0.021			
75-27-4	Bromodichloromethane	0.31	< 0.02		< 0.023		< 0.025		< 0.02		< 0.03		< 0.022		< 0.023			
75-25-2	Bromoform	20	< 0.015		< 0.018		< 0.019		< 0.015		< 0.022		< 0.016		< 0.018			
74-83-9	Bromomethane	7.3	< 0.068		< 0.08		< 0.085		< 0.069		< 0.1		< 0.074		< 0.08			
75-15-0	Carbon disulfide	740	< 0.018		< 0.022		< 0.023		< 0.019		< 0.028		< 0.02		< 0.022			
56-23-5	Carbon tetrachloride	0.7	< 0.014		< 0.016		< 0.017		< 0.014		< 0.021		< 0.015		< 0.016			

Table 2. Analytical Summary - Subsurface Soil
Former Huntington East Practice Field
Huntington, Cabell County, WV

CAS No.	Analyte	Residential De Minimis / 90th Percentile	Sample ID/Depth/Date Collected															
			SB-1		SB-3		SB-4		SB-6		SB-6 FD		SB-7		SB-8			
			13-15'		13-15'		6-8'		6-8'		6-8'		8-10'		6-8'			
			8/1/2022		8/1/2022		8/2/2022		8/1/2022		8/1/2022		8/2/2022		8/1/2022			
			Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q		
108-90-7	Chlorobenzene	290	< 0.012		< 0.014		< 0.015		< 0.012		< 0.018		< 0.013		< 0.014			
75-00-3	Chloroethane	2100	< 0.035		< 0.041		< 0.044		< 0.036		< 0.052		< 0.038		< 0.041			
67-66-3	Chloroform	0.34	< 0.013		< 0.015		< 0.016		< 0.013		< 0.019		< 0.014		< 0.015			
74-87-3	Chloromethane	120	< 0.098		< 0.11		< 0.12		< 0.099		< 0.15		< 0.11		< 0.11			
156-59-2	cis-1,2-Dichloroethene	17	< 0.023		< 0.027		< 0.029		< 0.023		< 0.034		< 0.025		< 0.027			
542-75-6	cis-1,3-Dichloropropene	1.9	< 0.027		< 0.032		< 0.034		< 0.027		< 0.04		< 0.029		< 0.032			
110-82-7	Cyclohexane	120	< 0.032		< 0.038		< 0.04		< 0.032		0.097	J	< 0.035		< 0.038			
124-48-1	Dibromochloromethane	8.3	< 0.02		< 0.023		< 0.025		< 0.02		< 0.03		< 0.022		< 0.024			
75-71-8	Dichlorodifluoromethane	94	< 0.043		< 0.051		< 0.054		< 0.044		< 0.064		< 0.047		< 0.051			
100-41-4	Ethylbenzene	6.2	< 0.0075		< 0.0088		< 0.0094		< 0.0076		0.02	J	< 0.0082		< 0.0088			
98-82-8	Isopropylbenzene	270	< 0.011		< 0.013		< 0.014		< 0.011		< 0.016		< 0.012		< 0.013			
179601-23-1	m,p-Xylene	NV	< 0.048		< 0.056		< 0.059		< 0.048		0.11	J	< 0.052		< 0.056			
79-20-9	Methyl acetate	23000	4.9		1.3		2.9		0.048	J	1.5		5.6		1			
1634-04-4	Methyl tert-butyl ether	50	< 0.01		< 0.012		< 0.013		< 0.01		< 0.015		< 0.011		< 0.012			
108-87-2	Methylcyclohexane	NV	< 0.014		< 0.016		0.044	J	0.014	J	0.29		< 0.015		< 0.016			
75-09-2	Methylene chloride	58	< 0.095		< 0.11		< 0.12		< 0.096		< 0.14		< 0.1		< 0.11			
95-47-6	o-Xylene	NV	< 0.014		< 0.016		0.019	J	< 0.014		0.083		< 0.015		< 0.016			
100-42-5	Styrene	870	< 0.014		< 0.017		< 0.018		< 0.014		< 0.021		< 0.015		< 0.017			
127-18-4	Tetrachloroethene	25	< 0.022		< 0.025		< 0.027		< 0.022		< 0.032		< 0.023		< 0.025			
108-88-3	Toluene	820	< 0.0097		< 0.011		0.013	J	< 0.0099		0.024	J	< 0.011		< 0.011			
156-60-5	trans-1,2-Dichloroethene	75	< 0.013		< 0.015		< 0.016		< 0.013		< 0.02		< 0.014		< 0.015			
542-75-6	trans-1,3-Dichloropropene	1.9	< 0.02		< 0.023		< 0.025		< 0.02		< 0.03		< 0.022		< 0.023			
79-01-6	Trichloroethene	1	< 0.016		< 0.019		< 0.02		< 0.016		< 0.024		< 0.017		< 0.019			
75-69-4	Trichlorofluoromethane	790	< 0.018		< 0.021		< 0.023		< 0.018		< 0.027		< 0.02		< 0.021			
75-01-4	Vinyl chloride	0.061	< 0.024		< 0.028		< 0.03		< 0.024		< 0.035		< 0.026		< 0.028			
	1,2-Dichloroethene, Total	NV	< 0.013		< 0.015		< 0.016		< 0.013		< 0.02		< 0.014		< 0.015			
	1,3-Dichloropropene, Total	NV	< 0.027		< 0.032		< 0.034		< 0.027		< 0.04		< 0.029		< 0.032			
1330-20-7	Xylenes	260	< 0.048		< 0.056		< 0.059		< 0.048		0.19		< 0.052		< 0.056			
PAH by SW8270D																		
90-12-0	1-Methylnaphthalene	18	< 0.0046		< 0.0094		NA		< 0.0046		< 0.047		< 0.0045		< 0.036			
88-75-5	2-Chloronaphthalene	NV	< 0.0059		< 0.012		NA		< 0.0059		< 0.06		< 0.0058		< 0.046			

Table 2. Analytical Summary - Subsurface Soil
Former Huntington East Practice Field
Huntington, Cabell County, WV

CAS No.	Analyte	Residential De Minimis / 90th Percentile	Sample ID/Depth/Date Collected													
			SB-1		SB-3		SB-4		SB-6		SB-6 FD		SB-7		SB-8	
			13-15'		13-15'		6-8'		6-8'		6-8'		8-10'		6-8'	
			8/1/2022		8/1/2022		8/2/2022		8/1/2022		8/1/2022		8/2/2022		8/1/2022	
			Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q	Result mg/Kg	Q
91-57-6	2-Methylnaphthalene	240	< 0.0053		< 0.011		NA		< 0.0053		< 0.054		< 0.0053		< 0.042	
83-32-9	Acenaphthene	4100	< 0.0065		< 0.013		NA		< 0.0065		< 0.066		< 0.0064		< 0.051	
208-96-8	Acenaphthylene	4200	< 0.0061		< 0.013		NA		< 0.0061		< 0.062		< 0.006		< 0.048	
120-12-7	Anthracene	23000	< 0.0069		< 0.014		NA		< 0.0069		< 0.07		< 0.0068		< 0.054	
56-55-3	Benzo(a)anthracene	1.5	< 0.0074		< 0.015		NA		< 0.0074		< 0.075		< 0.0073		< 0.058	
50-32-8	Benzo(a)pyrene	0.11	< 0.0061		< 0.013		NA		< 0.0061		< 0.062		< 0.006		< 0.048	
205-99-2	Benzo(b)fluoranthene	1.1	< 0.0065		< 0.013		NA		< 0.0065		< 0.066		< 0.0064		< 0.051	
191-24-2	Benzo(g,h,i)perylene	1800	< 0.0044		< 0.0091		NA		< 0.0044		< 0.045		< 0.0043		< 0.034	
207-08-9	Benzo(k)fluoranthene	11	< 0.0063		< 0.013		NA		< 0.0063		< 0.064		< 0.0062		< 0.049	
218-01-9	Chrysene	110	< 0.007		< 0.014		NA		< 0.007		< 0.072		< 0.0069		< 0.055	
53-70-3	Dibenzo(a,h)anthracene	0.11	< 0.0062		< 0.013		NA		< 0.0062		< 0.063		< 0.0061		< 0.048	
206-44-0	Fluoranthene	2400	< 0.0061		< 0.012		NA		< 0.0061		< 0.062		< 0.006		< 0.047	
86-73-7	Fluorene	2900	< 0.006		< 0.012		NA		< 0.006		< 0.061		< 0.0059		< 0.047	
193-39-5	Indeno(1,2,3-cd)pyrene	1.1	< 0.0067		< 0.014		NA		< 0.0067		< 0.068		< 0.0066		< 0.052	
91-20-3	Naphthalene	2.4	< 0.0074		< 0.015		NA		< 0.0074		< 0.075		< 0.0073		< 0.058	
85-01-8	Phenanthrene	23000	< 0.0047		< 0.0097		NA		< 0.0047		< 0.048		< 0.0046		< 0.037	
129-00-0	Pyrene	2300	< 0.0073		< 0.015		NA		< 0.0074		< 0.075		< 0.0072		< 0.057	
Herbicides by SW8151A																
93-76-5	2,4,5-T	630	< 0.085		< 0.0877		NA		< 0.101		< 0.0903		< 0.0794		< 0.0785	
93-72-1	2,4,5-TP	510	< 0.0606		< 0.0624		NA		< 0.0716		< 0.043		< 0.0565		< 0.0559	
96-76-4	2,4-D	NV	< 0.0554		< 0.0571		NA		< 0.0655		< 0.0589		< 0.0517		< 0.0512	
94-75-7	2,4-DB	NV	< 0.0657		< 0.0677		NA		< 0.0777		< 0.0698		< 0.0614		< 0.0607	
75-99-0	Dalapon	1900	< 0.0361		< 0.0372		NA		< 0.0426		< 0.0383		< 0.0337		< 0.0333	
1918-00-9	Dicamba	1900	< 0.0412		< 0.0425		NA		< 0.0487		< 0.0438		< 0.0385		< 0.0381	
120-36-5	Dichloroprop	NV	< 0.0644		< 0.0664		NA		< 0.0761		< 0.0684		< 0.0601		< 0.0595	
88-85-7	Dinoseb	63	< 0.0966		< 0.0996		NA		< 0.114		< 0.103		< 0.0902		< 0.0893	
94-74-6	MCPA	32	< 6.7		< 6.91		NA		< 7.92		< 7.12		< 6.26		< 6.19	
7085-19-0	MCPP	NV	< 5.8		< 5.98		NA		< 6.85		< 6.16		< 5.41		< 5.36	
87-86-5	Pentachlorophenol	1	< 0.067		< 0.0691		NA		< 0.0792		< 0.0712		< 0.0626		< 0.0619	

Notes:
Residential De minimis - March 29, 2022
90th Percentile- Table 3-3: Background Concentrations of Elements in WV Soils
VRP Guidance Manual, June 2020
NA - Not Analyzed
Q - Laboratory qualifier
J - Estimated Value
H - Analyzed outside of Holding Time
BOLD - Exceeds the Residential De Minimis

Table 3. Analytical Summary - Groundwater
Former Huntington East Practice Field
Huntington, Cabell County, WV

CAS No.	Analyte	Groundwater De Minimis	Residential VISL Target Groundwater Concentration	Commercial VISL Target Groundwater Concentration	Sample ID/Date Collected							
					GW-1		GW-3		GW-4		GW-4 FD	
					8/2/2022		8/2/2022		8/2/2022		8/2/2022	
					Result ug/L	Q	Result ug/L	Q	Result ug/L	Q	Result ug/L	Q
Metals by SW6020B/7470A												
7440-38-2	**Arsenic**	**10**	NV	NV	**16**		0.3	J	2.4	J	2.4	J
7440-39-3	Barium	2000	NV	NV	81		0.061		900		870	
7440-43-9	Cadmium	5	NV	NV	< 0.15		< 0.15		< 0.15		< 0.15	
16065-83-1	Chromium	22000	NV	NV	5.6		< 1.2		< 1.2		< 1.2	
7439-92-1	Lead	15	NV	NV	4.8	J	< 0.72		< 0.72		< 0.72	
7782-49-2	Selenium	50	NV	NV	3.3	J	2.5	J	< 0.48		< 0.48	
7440-22-4	Silver	94	NV	NV	< 0.84		< 0.84		< 0.84		< 0.84	
7439-97-6	Mercury	2	NV	NV	< 0.16		< 0.16		< 0.16		< 0.16	
VOC by SW8260C												
71-55-6	1,1,1-Trichloroethane	200	12400	52100	< 0.46		< 0.46		< 0.46		< 0.46	
79-34-5	1,1,2,2-Tetrachloroethane	0.076	7	288	< 0.4		< 0.4		< 0.4		< 0.4	
79-00-5	1,1,2-Trichloroethane	5	9.82	49	< 0.46		< 0.46		< 0.46		< 0.46	
76-13-1	1,1,2-Trichlorotrifluoroethane	10000	NV	NV	< 0.52		< 0.52		< 0.52		< 0.52	
75-34-3	1,1-Dichloroethane	2.8	12	541	< 0.44		< 0.44		< 0.44		< 0.44	
75-35-4	1,1-Dichloroethene	7	297	1250	< 0.4		< 0.4		< 0.4		< 0.4	
87-61-6	1,2,3-Trichlorobenzene	NV	NV	NV	< 0.42		< 0.42		< 0.42		< 0.42	
96-18-4	1,2,3-Trichloropropane	0.00075	45.6	192	< 0.4		< 0.4		< 0.4		< 0.4	
120-82-1	1,2,4-Trichlorobenzene	70	87.8	369	< 0.45		< 0.45		< 0.45		< 0.45	
95-63-6	1,2,4-Trimethylbenzene	56	544	2290	< 0.45		< 0.45		< 0.45		< 0.45	
96-12-8	1,2-Dibromo-3-chloropropane	0.2	0.0648	7.84	< 0.43		< 0.43		< 0.43		< 0.43	
106-93-4	1,2-Dibromoethane	0.05	0.332	14.5	< 0.41		< 0.41		< 0.41		< 0.41	
95-50-1	1,2-Dichlorobenzene	600	5710	24000	< 0.32		< 0.32		< 0.32		< 0.32	
107-06-2	1,2-Dichloroethane	5	4	171	< 0.44		< 0.44		< 0.44		< 0.44	
78-87-5	1,2-Dichloropropane	5	12	268	< 0.48		< 0.48		< 0.48		< 0.48	
108-67-8	1,3,5-Trimethylbenzene	60	382	1600	< 0.65		< 0.65		< 0.65		< 0.65	
541-73-1	1,3-Dichlorobenzene	NV	NV	NV	< 0.33		< 0.33		< 0.33		< 0.33	
106-46-7	1,4-Dichlorobenzene	75	6	243	< 0.35		< 0.35		< 0.35		< 0.35	
78-93-3	2-Butanone	5600	3890000	16400000	< 0.52		< 0.52		< 0.52		0.63	J
591-78-6	2-Hexanone	NV	16500	69500	< 0.59		< 0.59		< 0.59		< 0.59	
108-10-1	4-Methyl-2-pentanone	1200	1060000	4470000	< 0.52		< 0.52		< 0.52		< 0.52	
67-64-1	Acetone	14000	36800000	155000000	3.1	J	2.6	J	5.3	J	6.8	J
71-43-2	Benzene	5	2.7	118	< 0.46		< 0.46		< 0.46		< 0.46	
74-97-5	Bromochloromethane	NV	1160	4870	< 0.45		< 0.45		< 0.45		< 0.45	
75-27-4	Bromodichloromethane	80	2	68	< 0.49		< 0.49		< 0.49		< 0.49	
75-25-2	Bromoform	80	243	10600	< 0.56		< 0.56		< 0.56		< 0.56	
74-83-9	Bromomethane	7.5	25	104	< 0.9		< 0.9		< 0.9		< 0.9	
75-15-0	Carbon disulfide	810	1910	8010	< 0.49		< 0.49		< 0.49		0.5	J
56-23-5	Carbon tetrachloride	5	1	30	< 0.4		< 0.4		< 0.4		< 0.4	
108-90-7	Chlorobenzene	100	786	3300	< 0.4		< 0.4		< 0.4		< 0.4	
75-00-3	Chloroethane	21000	NV	NV	< 0.68		< 0.68		< 0.68		< 0.68	
67-66-3	Chloroform	80	1	58	< 0.46		< 0.46		< 0.46		< 0.46	
74-87-3	Chloromethane	190	349	1460	< 0.83		< 0.83		< 0.83		< 0.83	
156-59-2	cis-1,2-Dichloroethene	70	NV	NV	3.9		64		< 0.42		< 0.42	
542-75-6	cis-1,3-Dichloropropene	0.47	NV	NV	< 0.57		< 0.57		< 0.57		< 0.57	

Table 3. Analytical Summary - Groundwater
Former Huntington East Practice Field
Huntington, Cabell County, WV

CAS No.	Analyte	Groundwater De Minimis	Residential VISL Target Groundwater Concentration	Commercial VISL Target Groundwater Concentration	Sample ID/Date Collected							
					GW-1		GW-3		GW-4		GW-4 FD	
					8/2/2022		8/2/2022		8/2/2022		8/2/2022	
					Result ug/L	Q	Result ug/L	Q	Result ug/L	Q	Result ug/L	Q
110-82-7	Cyclohexane	13000	953	4000	< 0.63		< 0.63		< 0.63		< 0.63	
124-48-1	Dibromochloromethane	80	NV	NV	< 0.4		< 0.4		< 0.4		< 0.4	
75-71-8	Dichlorodifluoromethane	200	10	41	< 0.68		< 0.68		< 0.68		< 0.68	
100-41-4	Ethylbenzene	700	7	299	< 0.34		< 0.34		< 0.34		< 0.34	
98-82-8	Isopropylbenzene	450	NV	NV	< 0.35		< 0.35		< 0.35		< 0.35	
179601-23-1	m,p-Xylene	NV	703	2950	< 0.81		< 0.81		< 0.81		< 0.81	
79-20-9	Methyl acetate	5300	NV	NV	< 0.59		< 0.59		< 0.59		< 0.59	
1634-04-4	Methyl tert-butyl ether	14	722	31500	< 0.45		< 0.45		< 0.45		< 0.45	
108-87-2	Methylcyclohexane	NV	NV	NV	< 0.35		< 0.35		< 0.35		< 0.35	
75-09-2	Methylene chloride	**5**	1200	31200	< 0.86		< 0.86		< 0.86		< 0.86	
95-47-6	o-Xylene	NV	985	4140	< 0.31		< 0.31		< 0.31		< 0.31	
100-42-5	Styrene	100	18600	78200	< 0.33		< 0.33		< 0.33		< 0.33	
127-18-4	Tetrachloroethene	**5**	28	456	< 0.39		2.2		< 0.39		< 0.39	
108-88-3	Toluene	1000	35200	148000	< 0.45		< 0.45		< 0.45		< 0.45	
156-60-5	trans-1,2-Dichloroethene	100	NV	NV	< 0.48		2.8		< 0.48		< 0.48	
542-75-6	trans-1,3-Dichloropropene	0.47	NV	NV	< 0.38		< 0.38		< 0.38		< 0.38	
79-01-6	**Trichloroethene**	**5**	**2**	38	**2.1**		**8.6**		< 0.43		< 0.43	
75-69-4	Trichlorofluoromethane	1100	NV	NV	< 0.52		< 0.52		< 0.52		< 0.52	
75-01-4	**Vinyl chloride**	**2**	**0.197**	33	< 0.53		**5.4**		< 0.53		< 0.53	
	1,2-Dichloroethene, Total	NV	NV	NV	3.9		67		< 0.48		< 0.48	
	1,3-Dichloropropene, Total	NV	NV	NV	< 0.57		< 0.57		< 0.57		< 0.57	
1330-20-7	Xylenes	10000	759	3190	< 0.81		< 0.81		< 0.81		< 0.81	
PAH by SW8270E SIM												
83-32-9	Acenaphthene	240	NV	NV	< 0.013		< 0.013		3.6		2.2	
208-96-8	Acenaphthylene	240	NV	NV	< 0.0052		< 0.0053		0.038		< 0.0053	
120-12-7	Anthracene	1800	NV	NV	0.032		0.021	J	0.14		0.038	
56-55-3	**Benzo(a)anthracene**	**0.03**	NV	NV	**0.075**		**0.037**		**0.082**		< 0.0098	
50-32-8	Benzo(a)pyrene	0.2	NV	NV	0.071		< 0.0085		0.066		< 0.0086	
205-99-2	Benzo(b)fluoranthene	0.25	NV	NV	0.071		< 0.0085		0.08		< 0.0086	
191-24-2	Benzo(g,h,i)perylene	600	NV	NV	0.059		< 0.008		0.043		< 0.008	
207-08-9	Benzo(k)fluoranthene	2.5	NV	NV	< 0.006		< 0.006		0.04		< 0.006	
218-01-9	Chrysene	25	NV	NV	0.076		0.024	J	0.075		< 0.0035	
53-70-3	Dibenzo(a,h)anthracene	0.025	NV	NV	0.023	J	< 0.013		< 0.013		< 0.013	
206-44-0	Fluoranthene	800	NV	NV	0.078		0.088		0.43		0.13	
86-73-7	Fluorene	150	NV	NV	0.011	J	0.014	J	1.4		0.58	
193-39-5	Indeno(1,2,3-cd)pyrene	0.25	NV	NV	0.052		< 0.013		0.062		< 0.013	
91-20-3	**Naphthalene**	**0.12**	11	479	0.066	B	0.048	B	**9.5**	B	**5.4**	B
85-01-8	Phenanthrene	1700	NV	NV	0.14		0.079		0.56		0.17	
129-00-0	Pyrene	79	NV	NV	0.075		0.052		0.23		0.064	
Herbicides by SW8151A												
93-76-5	2,4,5-T	160	NV	NV	< 0.48		< 0.12		< 0.06		< 0.06	
93-72-1	2,4,5-TP	50	NV	NV	< 0.72		< 0.18		< 0.09		< 0.09	
96-76-4	2,4-D	NV	NV	NV	< 5.3		< 1.3		< 0.66		< 0.66	
94-75-7	2,4-DB	NV	NV	NV	< 4.6		< 1.2		< 0.58		< 0.58	
75-99-0	Dalapon	200	NV	NV	< 0.96		< 0.24		< 0.12		< 0.12	

Table 3. Analytical Summary - Groundwater
Former Huntington East Practice Field
Huntington, Cabell County, WV

CAS No.	Analyte	Groundwater De Minimis	Residential VISL Target Groundwater Concentration	Commercial VISL Target Groundwater Concentration	Sample ID/Date Collected							
					GW-1		GW-3		GW-4		GW-4 FD	
					8/2/2022		8/2/2022		8/2/2022		8/2/2022	
					Result ug/L	Q	Result ug/L	Q	Result ug/L	Q	Result ug/L	Q
1918-00-9	Dicamba	570	NV	NV	< 0.56		< 0.14		< 0.07		< 0.07	
120-36-5	Dichloroprop	NV	NV	NV	< 0.72		< 0.18		< 0.09		< 0.09	
88-85-7	Dinoseb	7	NV	NV	< 0.48		< 0.12		< 0.06		< 0.06	
94-74-6	MCPA	7.5	NV	NV	< 80		< 20		< 10		< 10	
7085-19-0	MCPP	NV	NV	NV	< 528		< 132		< 66		< 66	
87-86-5	Pentachlorophenol	1	NV	NV	< 0.72		< 0.18		< 0.09		< 0.09	

Notes:
Groundwater De minimis - March 29, 2022
Residential VISL, 13ºC, TCR 10^{-6}, HQ-1
Commercial VISL, 13ºC, TCR 10^{-5}, HQ-1
NV - No Standard Established
Q - Laboratory qualifier
J - Estimated Value
H - Analyzed out of Holding Time
B - Analyte detected in the associated Method Blank above the Reporting Limit
BOLD - Exceeds the Groundwater De Minimis
BOLD - Exceeds the Groundwater VISIL Target Groundwater Concentration

TRIAD ENGINEERING, INC.

APPENDIX 1

SITE PHOTOGRAPHS

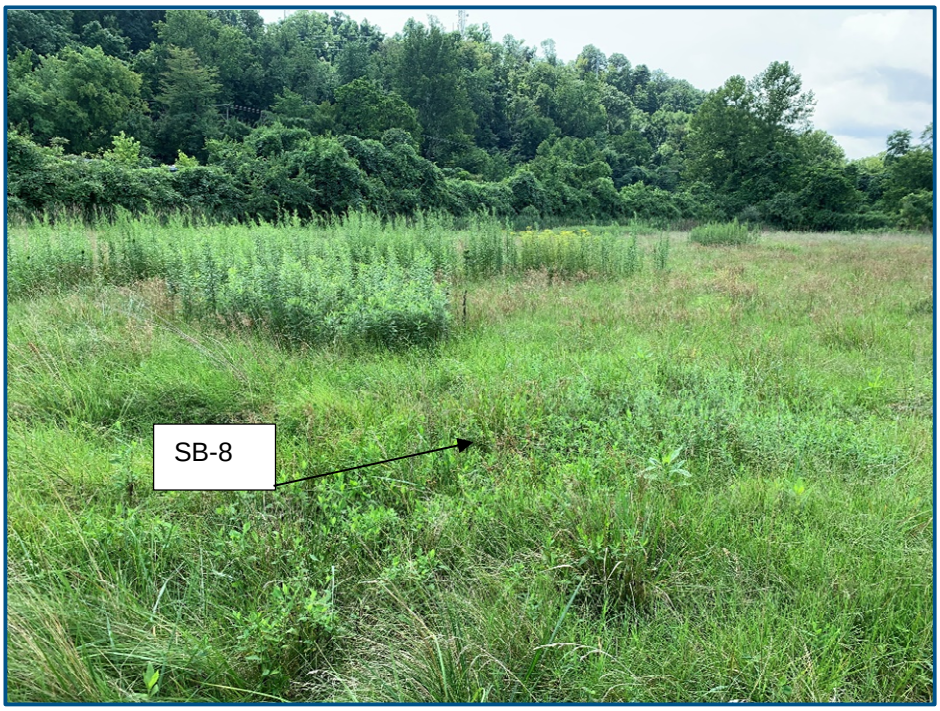
Photograph # 1
Facing east, looking at the SS-1/SB-1/GW-1 location.

Photograph # 2
Facing south, looking at the SS-3/SB-3/GW-3 location.

Photograph # 3
Facing southeast, looking at the SS-4/SB-4/GW-4 location.

Photograph # 4
Facing east, looking at the SB-6 location.

Photograph # 5
Facing northwest, looking at the SB-7 location.



Photograph # 6
Facing southwest, looking at the SB-8 location.

TRIAD ENGINEERING, INC.

APPENDIX 2

SOIL BORING LOGS

Project Name: Former Huntington East Practice Field

Project Number: 04-19-0133

TRIAD ENGINEERING, INC.

BORING LOG
SB-1

Location:
Well Elevation:

Depth, feet	Symbol/USCS	Lithologic Description	PID (ppm)	Sample ID	Observations
		Brown silty sandy CLAY, little moisture, no odor	0.0	SS-1	
		Black and brown silty sandy CLAY, moist, no odor	0.0		
			0.0		
10		Brown silty sandy CLAY, little moisture, no odor	0.0		
			0.0	SB-1 (13-15)	
		Brown clayey SAND, wet, no odor	0.0		
			0.0		
20			0.0		
			0.0		
		Brown SAND, moist, no odor	0.0		
			0.0		
30			0.0		
			0.0		
			0.0		
		Greyish brown SAND, wet, no odor	0.0		
40			0.0		

Completion Depth:	40'
Date Started:	8/1/2022
Date Completed:	8/1/2022
Engineer/Geologist:	SLJ
Driller:	EnviroCore

Remarks:
Groundwater sample GW-1 collected from this location.

The stratification lines represent approximate strata boundaries.
Transition may be gradual.

Project Name: Former Huntington East Practice Field

Project Number: 04-19-0133

TRIAD ENGINEERING, INC.

BORING LOG
SB-3

Location:
Well Elevation:

Depth, feet	Symbol/USCS	Lithologic Description	PID (ppm)	Sample ID	Observations
		Brown sandy CLAY, little moisture, no odor	0.0	SS-3	
			0.0		
		No recovery			
10		Brown clayey SAND, dry, no odor	0.0		
			0.0	SB-3 (13-15)	
		Grey clayey SAND, wet @ 15 feet	0.0		
20		Brown SAND, little moisture, no odor	0.0		
			0.0		
			0.0		
			0.0		
30			0.0		
			0.0		
		Greyish brown SAND, wet, no odor	0.0		
			0.0		
40			0.0		

Completion Depth:	40'
Date Started:	8/1/2022
Date Completed:	8/1/2022
Engineer/Geologist:	SLJ
Driller:	EnviroCore

Remarks:
Groundwater sample GW-3 collected from this location.

The stratification lines represent approximate strata boundaries.
Transition may be gradual.

Project Name: Former Huntington East Practice Field	TRIAD ENGINEERING, INC.	**BORING LOG SB-4**
Project Number: 04-19-0133		

Location:
Well Elevation:

Depth, feet	Symbol/USCS	Lithologic Description	PID (ppm)	Sample ID	Observations
5		GRAVEL fill with some silty sandy clay, little moisture, no odor	0.0 0.0 0.0 0.0 0.0	SS-4 SB-4 (6-8)	
10		No recovery			
15					
20					

Completion Depth:	12'
Date Started:	8/2/2022
Date Completed:	8/2/2022
Engineer/Geologist:	SLJ
Driller:	EnviroCore

Remarks:
Groundwater sample GW-4 collected from this location.

The stratification lines represent approximate strata boundaries.
Transition may be gradual.

Project Name: Former Huntington East Practice Field

Project Number: 04-19-0133

TRIAD ENGINEERING, INC.

BORING LOG
SB-6

Location:
Well Elevation:

Depth, feet	Symbol/USCS	Lithologic Description	PID (ppm)	Sample ID	Observations
		Brown and reddish brown silty sandy CLAY, little moisture, no odor	0.0		
			0.0		
5			0.0		
			0.0		
		Greyish brown silty sandy CLAY, little moisture, no odor	0.0	SB-6 (6-8)	
			0.0		
10		Grey clayey SAND, moist, no odor	0.0		
			0.0		
15					
20					

Completion Depth:	12'
Date Started:	8/1/2022
Date Completed:	8/1/2022
Engineer/Geologist:	SLJ
Driller:	EnviroCore

Remarks:

The stratification lines represent approximate strata boundaries.
Transition may be gradual.

Project Name: Former Huntington East Practice Field

Project Number: 04-19-0133

TRIAD ENGINEERING, INC.

BORING LOG
SB-7

Location:
Well Elevation:

Depth, feet	Symbol/USCS	Lithologic Description	PID (ppm)	Sample ID	Observations
		ORGANIC MATERIAL			
		Brown silty sandy CLAY, dry, no odor	0.0 0.0		
5		Brown sandy CLAY, little moisture, no odor	0.0 0.0 0.0 0.0		
10		Brown clayey SAND, little moisture, no odor	0.0 0.0 0.0	SB-7 (8-10)	
15					
20					

Completion Depth:	12'
Date Started:	8/2/2022
Date Completed:	8/2/2022
Engineer/Geologist:	SLJ
Driller:	EnviroCore

Remarks:

The stratification lines represent approximate strata boundaries.
Transition may be gradual.

Project Name: Former Huntington East Practice Field

Project Number: 04-19-0133

TRIAD ENGINEERING, INC.

BORING LOG
SB-8

Location:
Well Elevation:

Depth, feet	Symbol/USCS	Lithologic Description	PID (ppm)	Sample ID	Observations
5		Brown sandy CLAY, little moisture, no odor	0.0 0.0 0.0 0.0 0.0	SB-8 (6-8)	
10		Light brown clayey SAND, dry, no odor	0.0 0.0 0.0		
15					
20					

Completion Depth:	12'
Date Started:	8/1/2022
Date Completed:	8/1/2022
Engineer/Geologist:	SLJ
Driller:	EnviroCore

Remarks:

The stratification lines represent approximate strata boundaries.
Transition may be gradual.

TRIAD ENGINEERING, INC.

APPENDIX 3

LABORATORY ANALYTICAL REPORTS

19-Aug-2022

Shannon Johnson
Triad Engineering, Inc.
10541 Teays Valley Road
Scott Depot, WV 25560

Re: **Fmr Huntington East Practice Field** Work Order: **22080299**

Dear Shannon,

ALS Environmental received 15 samples on 03-Aug-2022 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 107.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Rebecca Kiser

Electronically approved by: Rebecca Kiser

Rebecca Kiser
Project Manager

ALS Group, USA

Date: 19-Aug-22

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Work Order: **22080299**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
22080299-01	SS-1 Grab	Soil		8/1/2022 12:50	8/3/2022 12:10	☐
22080299-01	SS-1 Grab	Soil		8/1/2022 12:50	8/4/2022 09:45	☐
22080299-02	SS-3 Grab	Soil		8/1/2022 13:05	8/3/2022 12:10	☐
22080299-02	SS-3 Grab	Soil		8/1/2022 13:05	8/4/2022 09:45	☐
22080299-03	SS-4 Grab	Soil		8/2/2022 10:50	8/3/2022 12:10	☐
22080299-03	SS-4 Grab	Soil		8/2/2022 10:50	8/4/2022 09:45	☐
22080299-04	SB-1 (13-15) Grab	Soil		8/1/2022 12:10	8/3/2022 12:10	☐
22080299-04	SB-1 (13-15) Grab	Soil		8/1/2022 12:10	8/4/2022 09:45	☐
22080299-05	SB-3 (13-15) Grab	Soil		8/1/2022 13:10	8/3/2022 12:10	☐
22080299-05	SB-3 (13-15) Grab	Soil		8/1/2022 13:10	8/4/2022 09:45	☐
22080299-06	SB-4 (6-8) Grab	Soil		8/2/2022 11:00	8/4/2022 09:45	☐
22080299-07	SB-6 (6-8) Grab	Soil		8/1/2022 12:45	8/3/2022 12:10	☐
22080299-07	SB-6 (6-8) Grab	Soil		8/1/2022 12:45	8/4/2022 09:45	☐
22080299-08	SB-6 FD (6-8) Grab	Soil		8/1/2022 12:45	8/3/2022 12:10	☐
22080299-08	SB-6 FD (6-8) Grab	Soil		8/1/2022 12:45	8/4/2022 09:45	☐
22080299-09	SB-7 (8-10) Grab	Soil		8/2/2022 10:25	8/3/2022 12:10	☐
22080299-09	SB-7 (8-10) Grab	Soil		8/2/2022 10:25	8/4/2022 09:45	☐
22080299-10	SB-8 (6-8) Grab	Soil		8/1/2022 14:00	8/3/2022 12:10	☐
22080299-10	SB-8 (6-8) Grab	Soil		8/1/2022 14:00	8/4/2022 09:45	☐
22080299-11	GW-1 Grab	Water		8/2/2022 12:30	8/3/2022 12:10	☐
22080299-11	GW-1 Grab	Water		8/2/2022 12:30	8/4/2022 09:45	☐
22080299-12	GW-3 Grab	Water		8/2/2022 13:00	8/3/2022 12:10	☐
22080299-12	GW-3 Grab	Water		8/2/2022 13:00	8/4/2022 09:45	☐
22080299-13	GW-4 Grab	Water		8/2/2022 11:15	8/3/2022 12:10	☐
22080299-13	GW-4 Grab	Water		8/2/2022 11:15	8/4/2022 09:45	☐
22080299-14	GW-4 FD Grab	Water		8/2/2022 11:15	8/3/2022 12:10	☐
22080299-14	GW-4 FD Grab	Water		8/2/2022 11:15	8/4/2022 09:45	☐
22080299-15	Trip Blank Grab	Water		8/1/2022 12:05	8/3/2022 12:10	☐

Client:	Triad Engineering, Inc.
Project:	Fmr Huntington East Practice Field
Work Order:	22080299

Case Narrative

Samples for the above noted Work Order were received on 08/03/2022. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:
Batch R350794a, Method SW8260D, Samples 22080299-13A,-14A,-15A: The Continuing Calibration Verification did not meet acceptance criteria with high bias, however, the sample results were non-detect for the following analytes: Bromomethane

Batch R350794a, Method SW8260D, Sample 10V-LCSW2-220809: The LCS recovery was above the upper control limit. All the sample results in the batch were non-detect. No qualification is necessary for this analyte: Trichlorofluoromethane

Batch R350794a, Method SW8260D, Sample 22080299-13A MS: The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: See QC report

Batch R350794a, Method SW8260D, Sample 22080299-13A MS: The MS and/or MSD recovery was above the upper control limit. The corresponding result in the parent sample was non-detect, therefore no qualification is necessary: Bromomethane, Chloroethane, Dichlorodifluoromethane, Trichlorofluoromethane

Batch R350794a, Method SW8260D, Sample 22080299-13A MSD: The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: See QC report

Batch R350794a, Method SW8260D, Sample 22080299-13A MS: The MS recovery was outside of the control limit. However, the MSD recovery and the RPD between the MS and

MSD was in control. No qualification is required for this analyte: 1,2-Dichlorobenzene

Batch R350808a, Method SW8260D, Sample 10V-LCSW1-220810: The LCS recovery was above the upper control limit. All the sample results in the batch were non-detect. No qualification is necessary for this analyte: Trichlorofluoromethane

Batch 200895, Method SW8260D, Sample 22080299-07A MS: The MS and/or MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Chloroethane

Batch 200895, Method SW8260D, Sample 22080299-07A MS: The MS and/or MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: Methyl Acetate

Batch 200895, Method SW8260D, Sample 22080299-07A MSD: The RPD between the MS and MSD was outside of the control limit. The corresponding result should be considered estimated for this compound: Methyl Acetate

Batch 200895, Method SW8260D, Sample 22080299-07A MS: The MS and/or MSD recovery was above the upper control limit. The corresponding result in the parent sample was non-detect, therefore no qualification is necessary: Tetrachloroethene

Batch 200895, Method SW8260D, Sample 22080299-07A MS: The MS recovery was outside of the control limit. However, the MSD recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: 1,1,2,2-Tetrachloroethane, Dibromochloromethane

Batch 200895, Method SW8260D, Sample 22080299-07A MSD: The MSD recovery was outside of the control limit. However, the MS recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: Acetone

Extractable Organics:
Batch 201062, Method SW8270E, Samples 22080299-13C,-14C: The concentration in the Method Blank was greater than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Naphthalene

Batch 201062, Method SW8270E, Sample SBLKW1-201062: The concentration in the Method Blank was greater than the quantitation limit. Positive results in the batch may be biased high for this analyte: Naphthalene

Batch 201306, Method SW8270E, Sample 22080299-07B MS: The MS recovery was below

the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Multiple compounds

Batch 201062, Method SW8270E, Sample 22080299-13C MS: The MS and/or MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Naphthalene

Batch 201062, Method SW8270E, Sample 22080299-13C MSD: The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Multiple Compounds

Batch 201306, Method SW8270E, Sample SB-6 (6-8) Grab (22080299-07B): Low surrogate recovery due to sample matrix effects confirmed by re-extraction.

Batch 201306, Method SW8270E, Samples 22080299-08B,-10B: One or more surrogate recoveries were below the lower control limits. The sample results may be biased low.

Batch 201306, Method SW8270E, Sample 22080299-07B MSD: The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Multiple compounds

Batch 201306, Method SW8270E, Sample 22080299-07B MSD: The RPD between the MS and MSD was outside of the control limit. The corresponding result should be considered estimated for this compound: Multiple compounds

Metals:
No other deviations or anomalies were noted.Batch 201221, Method SW6020B, Sample 22080299-07BMSD: The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Cd, Se, Ag

Batch 201221, Method SW6020B, Sample 22080299-07BMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Ba

Batch 201221, Method SW6020B, Sample 22080299-07BMSD: The MSD recovery was outside of the control limit. However, the MS recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: Pb

Batch 201221, Method SW6020B, Sample 22080299-07BMSD: The RPD between the MS and MSD was outside of the control limit. The corresponding result should be considered estimated for this compound: Cd, Se, Ag

Wet Chemistry:
No other deviations or anomalies were noted.

Subcontracted analytical data has been appended to this report in its entirety.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
WorkOrder: **22080299**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Analyte accreditation is not offered
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
µg/L	Micrograms per Liter
as noted	
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter

ALS Group, USA

Date: *19-Aug-22*

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SS-1 Grab
Collection Date: 8/1/2022 12:50 PM

Work Order: 22080299
Lab ID: 22080299-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 8/9/22		Analyst: **KRA**
Mercury	**0.093**		**0.015**	**0.023**	**mg/Kg-dry**	1	8/10/2022 12:34
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 8/11/22		Analyst: **DSC**
Arsenic	**15**		**0.063**	**0.52**	**mg/Kg-dry**	1	8/11/2022 22:09
Barium	**240**		**4.8**	**5.2**	**mg/Kg-dry**	10	8/12/2022 14:06
Cadmium	**0.41**		**0.031**	**0.21**	**mg/Kg-dry**	1	8/11/2022 22:09
Chromium	**24**		**0.23**	**0.52**	**mg/Kg-dry**	1	8/11/2022 22:09
Lead	**96**		**0.25**	**0.52**	**mg/Kg-dry**	1	8/11/2022 22:09
Selenium	**0.93**		**0.48**	**0.52**	**mg/Kg-dry**	1	8/11/2022 22:09
Silver	**0.11**	J	**0.069**	**0.52**	**mg/Kg-dry**	1	8/11/2022 22:09
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **ALS**
Subcontracted Analyses	**See attached**		**0**		**as noted-dry**	1	8/12/2022
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)		Method: **SW8270E**			Prep: SW3546 / 8/12/22		Analyst: **EEW**
1-Methylnaphthalene	**50**		**9.1**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
2-Chloronaphthalene	U		12	15	µg/Kg-dry	1	8/14/2022 19:19
2-Methylnaphthalene	**69**		**11**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Acenaphthene	**290**		**13**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Acenaphthylene	**58**		**12**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Anthracene	**740**		**14**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Benzo(a)anthracene	**1,200**		**15**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Benzo(a)pyrene	**830**		**12**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Benzo(b)fluoranthene	**1,400**		**13**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Benzo(g,h,i)perylene	**420**		**8.8**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Benzo(k)fluoranthene	**540**		**12**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Chrysene	**1,500**		**14**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Dibenzo(a,h)anthracene	**95**		**12**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Fluoranthene	**3,700**		**12**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Fluorene	**300**		**12**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Indeno(1,2,3-cd)pyrene	**650**		**13**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Naphthalene	**91**		**15**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Phenanthrene	**2,900**		**9.4**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Pyrene	**2,500**		**15**	**15**	**µg/Kg-dry**	1	8/14/2022 19:19
Surr: 2-Fluorobiphenyl	*88.3*			*20-140*	*%REC*	1	8/14/2022 19:19
Surr: 4-Terphenyl-d14	*52.5*			*22-172*	*%REC*	1	8/14/2022 19:19
Surr: Nitrobenzene-d5	*58.9*			*28-140*	*%REC*	1	8/14/2022 19:19
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**			Prep: SW5035A / 8/5/22		Analyst: **HJ**
1,1,1-Trichloroethane	U		21	46	µg/Kg-dry	1	8/10/2022 02:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SS-1 Grab
Collection Date: 8/1/2022 12:50 PM

Work Order: 22080299
Lab ID: 22080299-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2,2-Tetrachloroethane	U		20	46	µg/Kg-dry	1	8/10/2022 02:37
1,1,2-Trichloroethane	U		20	46	µg/Kg-dry	1	8/10/2022 02:37
1,1,2-Trichlorotrifluoroethane	U		29	46	µg/Kg-dry	1	8/10/2022 02:37
1,1-Dichloroethane	U		17	46	µg/Kg-dry	1	8/10/2022 02:37
1,1-Dichloroethene	U		15	46	µg/Kg-dry	1	8/10/2022 02:37
1,2,3-Trichlorobenzene	U		56	150	µg/Kg-dry	1	8/10/2022 02:37
1,2,3-Trichloropropane	U		19	46	µg/Kg-dry	1	8/10/2022 02:37
1,2,4-Trichlorobenzene	U		53	150	µg/Kg-dry	1	8/10/2022 02:37
1,2,4-Trimethylbenzene	U		34	46	µg/Kg-dry	1	8/10/2022 02:37
1,2-Dibromo-3-chloropropane	U		43	150	µg/Kg-dry	1	8/10/2022 02:37
1,2-Dibromoethane	U		13	46	µg/Kg-dry	1	8/10/2022 02:37
1,2-Dichlorobenzene	U		18	46	µg/Kg-dry	1	8/10/2022 02:37
1,2-Dichloroethane	U		70	150	µg/Kg-dry	1	8/10/2022 02:37
1,2-Dichloropropane	U		34	46	µg/Kg-dry	1	8/10/2022 02:37
1,3,5-Trimethylbenzene	U		54	150	µg/Kg-dry	1	8/10/2022 02:37
1,3-Dichlorobenzene	U		15	46	µg/Kg-dry	1	8/10/2022 02:37
1,4-Dichlorobenzene	U		11	46	µg/Kg-dry	1	8/10/2022 02:37
2-Butanone	U		38	310	µg/Kg-dry	1	8/10/2022 02:37
2-Hexanone	U		23	46	µg/Kg-dry	1	8/10/2022 02:37
4-Methyl-2-pentanone	U		43	46	µg/Kg-dry	1	8/10/2022 02:37
Acetone	**150**		**140**	**150**	**µg/Kg-dry**	1	8/10/2022 02:37
Benzene	U		22	46	µg/Kg-dry	1	8/10/2022 02:37
Bromochloromethane	U		24	46	µg/Kg-dry	1	8/10/2022 02:37
Bromodichloromethane	U		26	46	µg/Kg-dry	1	8/10/2022 02:37
Bromoform	U		20	46	µg/Kg-dry	1	8/10/2022 02:37
Bromomethane	**260**		**89**	**150**	**µg/Kg-dry**	1	8/10/2022 02:37
Carbon disulfide	U		24	46	µg/Kg-dry	1	8/10/2022 02:37
Carbon tetrachloride	U		18	46	µg/Kg-dry	1	8/10/2022 02:37
Chlorobenzene	U		15	46	µg/Kg-dry	1	8/10/2022 02:37
Chloroethane	U		46	150	µg/Kg-dry	1	8/10/2022 02:37
Chloroform	U		17	46	µg/Kg-dry	1	8/10/2022 02:37
Chloromethane	U		130	150	µg/Kg-dry	1	8/10/2022 02:37
cis-1,2-Dichloroethene	U		30	46	µg/Kg-dry	1	8/10/2022 02:37
cis-1,3-Dichloropropene	U		35	46	µg/Kg-dry	1	8/10/2022 02:37
Cyclohexane	U		42	150	µg/Kg-dry	1	8/10/2022 02:37
Dibromochloromethane	U		26	46	µg/Kg-dry	1	8/10/2022 02:37
Dichlorodifluoromethane	U		56	150	µg/Kg-dry	1	8/10/2022 02:37
Ethylbenzene	U		9.8	46	µg/Kg-dry	1	8/10/2022 02:37
Isopropylbenzene	U		14	46	µg/Kg-dry	1	8/10/2022 02:37
m,p-Xylene	U		62	93	µg/Kg-dry	1	8/10/2022 02:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SS-1 Grab
Collection Date: 8/1/2022 12:50 PM

Work Order: 22080299
Lab ID: 22080299-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	**1,400**		**56**	**390**	**µg/Kg-dry**	1	8/10/2022 02:37
Methyl tert-butyl ether	U		13	46	µg/Kg-dry	1	8/10/2022 02:37
Methylcyclohexane	U		18	46	µg/Kg-dry	1	8/10/2022 02:37
Methylene chloride	U		120	390	µg/Kg-dry	1	8/10/2022 02:37
o-Xylene	U		18	46	µg/Kg-dry	1	8/10/2022 02:37
Styrene	U		18	46	µg/Kg-dry	1	8/10/2022 02:37
Tetrachloroethene	U		28	46	µg/Kg-dry	1	8/10/2022 02:37
Toluene	U		13	46	µg/Kg-dry	1	8/10/2022 02:37
trans-1,2-Dichloroethene	U		17	46	µg/Kg-dry	1	8/10/2022 02:37
trans-1,3-Dichloropropene	U		26	46	µg/Kg-dry	1	8/10/2022 02:37
Trichloroethene	U		21	46	µg/Kg-dry	1	8/10/2022 02:37
Trichlorofluoromethane	U		24	46	µg/Kg-dry	1	8/10/2022 02:37
Vinyl chloride	U		31	46	µg/Kg-dry	1	8/10/2022 02:37
1,2-Dichloroethene, Total	U		17	93	µg/Kg-dry	1	8/10/2022 02:37
1,3-Dichloropropene, Total	U		35	93	µg/Kg-dry	1	8/10/2022 02:37
Xylenes, Total	U		62	140	µg/Kg-dry	1	8/10/2022 02:37
Surr: 1,2-Dichloroethane-d4	*103*			*80-120*	*%REC*	1	8/10/2022 02:37
Surr: 4-Bromofluorobenzene	*95.8*			*80-120*	*%REC*	1	8/10/2022 02:37
Surr: Dibromofluoromethane	*97.5*			*80-120*	*%REC*	1	8/10/2022 02:37
Surr: Toluene-d8	*98.3*			*80-120*	*%REC*	1	8/10/2022 02:37
MOISTURE		Method: **SW3550C**					Analyst: **ALG**
Moisture	**24**		**0.10**	**0.10**	**% of sample**	1	8/10/2022 12:47

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SS-3 Grab
Collection Date: 8/1/2022 01:05 PM

Work Order: 22080299
Lab ID: 22080299-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 8/9/22		Analyst: **KRA**
Mercury	**0.039**		**0.016**	**0.023**	**mg/Kg-dry**	1	8/10/2022 12:36
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 8/11/22		Analyst: **DSC**
Arsenic	**8.7**		**0.049**	**0.41**	**mg/Kg-dry**	1	8/11/2022 22:11
Barium	**180**		**3.7**	**4.1**	**mg/Kg-dry**	10	8/12/2022 14:07
Cadmium	**0.076**	J	**0.024**	**0.16**	**mg/Kg-dry**	1	8/11/2022 22:11
Chromium	**19**		**0.18**	**0.41**	**mg/Kg-dry**	1	8/11/2022 22:11
Lead	**24**		**0.20**	**0.41**	**mg/Kg-dry**	1	8/11/2022 22:11
Selenium	**0.43**		**0.37**	**0.41**	**mg/Kg-dry**	1	8/11/2022 22:11
Silver	U		0.054	0.41	mg/Kg-dry	1	8/11/2022 22:11
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **ALS**
Subcontracted Analyses	**See attached**		**0**		**as noted-dry**	1	8/12/2022
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)		Method: **SW8270E**			Prep: SW3546 / 8/12/22		Analyst: **EEW**
1-Methylnaphthalene	U		9.1	15	µg/Kg-dry	1	8/14/2022 19:34
2-Chloronaphthalene	U		12	15	µg/Kg-dry	1	8/14/2022 19:34
2-Methylnaphthalene	U		11	15	µg/Kg-dry	1	8/14/2022 19:34
Acenaphthene	U		13	15	µg/Kg-dry	1	8/14/2022 19:34
Acenaphthylene	U		12	15	µg/Kg-dry	1	8/14/2022 19:34
Anthracene	U		14	15	µg/Kg-dry	1	8/14/2022 19:34
Benzo(a)anthracene	U		15	15	µg/Kg-dry	1	8/14/2022 19:34
Benzo(a)pyrene	U		12	15	µg/Kg-dry	1	8/14/2022 19:34
Benzo(b)fluoranthene	U		13	15	µg/Kg-dry	1	8/14/2022 19:34
Benzo(g,h,i)perylene	U		8.7	15	µg/Kg-dry	1	8/14/2022 19:34
Benzo(k)fluoranthene	U		12	15	µg/Kg-dry	1	8/14/2022 19:34
Chrysene	U		14	15	µg/Kg-dry	1	8/14/2022 19:34
Dibenzo(a,h)anthracene	U		12	15	µg/Kg-dry	1	8/14/2022 19:34
Fluoranthene	U		12	15	µg/Kg-dry	1	8/14/2022 19:34
Fluorene	U		12	15	µg/Kg-dry	1	8/14/2022 19:34
Indeno(1,2,3-cd)pyrene	U		13	15	µg/Kg-dry	1	8/14/2022 19:34
Naphthalene	U		15	15	µg/Kg-dry	1	8/14/2022 19:34
Phenanthrene	U		9.3	15	µg/Kg-dry	1	8/14/2022 19:34
Pyrene	U		15	15	µg/Kg-dry	1	8/14/2022 19:34
Surr: 2-Fluorobiphenyl	*81.8*			*20-140*	*%REC*	1	8/14/2022 19:34
Surr: 4-Terphenyl-d14	*24.6*			*22-172*	*%REC*	1	8/14/2022 19:34
Surr: Nitrobenzene-d5	*35.1*			*28-140*	*%REC*	1	8/14/2022 19:34
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**			Prep: SW5035A / 8/5/22		Analyst: **HJ**
1,1,1-Trichloroethane	U		20	43	µg/Kg-dry	1	8/10/2022 02:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SS-3 Grab
Collection Date: 8/1/2022 01:05 PM

Work Order: 22080299
Lab ID: 22080299-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2,2-Tetrachloroethane	U		19	43	µg/Kg-dry	1	8/10/2022 02:54
1,1,2-Trichloroethane	U		18	43	µg/Kg-dry	1	8/10/2022 02:54
1,1,2-Trichlorotrifluoroethane	U		27	43	µg/Kg-dry	1	8/10/2022 02:54
1,1-Dichloroethane	U		16	43	µg/Kg-dry	1	8/10/2022 02:54
1,1-Dichloroethene	U		14	43	µg/Kg-dry	1	8/10/2022 02:54
1,2,3-Trichlorobenzene	U		52	140	µg/Kg-dry	1	8/10/2022 02:54
1,2,3-Trichloropropane	U		18	43	µg/Kg-dry	1	8/10/2022 02:54
1,2,4-Trichlorobenzene	U		49	140	µg/Kg-dry	1	8/10/2022 02:54
1,2,4-Trimethylbenzene	U		32	43	µg/Kg-dry	1	8/10/2022 02:54
1,2-Dibromo-3-chloropropane	U		40	140	µg/Kg-dry	1	8/10/2022 02:54
1,2-Dibromoethane	U		12	43	µg/Kg-dry	1	8/10/2022 02:54
1,2-Dichlorobenzene	U		16	43	µg/Kg-dry	1	8/10/2022 02:54
1,2-Dichloroethane	U		65	140	µg/Kg-dry	1	8/10/2022 02:54
1,2-Dichloropropane	U		32	43	µg/Kg-dry	1	8/10/2022 02:54
1,3,5-Trimethylbenzene	U		51	140	µg/Kg-dry	1	8/10/2022 02:54
1,3-Dichlorobenzene	U		14	43	µg/Kg-dry	1	8/10/2022 02:54
1,4-Dichlorobenzene	U		10	43	µg/Kg-dry	1	8/10/2022 02:54
2-Butanone	U		36	290	µg/Kg-dry	1	8/10/2022 02:54
2-Hexanone	U		21	43	µg/Kg-dry	1	8/10/2022 02:54
4-Methyl-2-pentanone	U		40	43	µg/Kg-dry	1	8/10/2022 02:54
Acetone	**520**		**130**	**140**	**µg/Kg-dry**	1	8/10/2022 02:54
Benzene	U		21	43	µg/Kg-dry	1	8/10/2022 02:54
Bromochloromethane	U		22	43	µg/Kg-dry	1	8/10/2022 02:54
Bromodichloromethane	U		24	43	µg/Kg-dry	1	8/10/2022 02:54
Bromoform	U		18	43	µg/Kg-dry	1	8/10/2022 02:54
Bromomethane	U		83	140	µg/Kg-dry	1	8/10/2022 02:54
Carbon disulfide	U		22	43	µg/Kg-dry	1	8/10/2022 02:54
Carbon tetrachloride	U		17	43	µg/Kg-dry	1	8/10/2022 02:54
Chlorobenzene	U		14	43	µg/Kg-dry	1	8/10/2022 02:54
Chloroethane	U		43	140	µg/Kg-dry	1	8/10/2022 02:54
Chloroform	U		16	43	µg/Kg-dry	1	8/10/2022 02:54
Chloromethane	U		120	140	µg/Kg-dry	1	8/10/2022 02:54
cis-1,2-Dichloroethene	U		28	43	µg/Kg-dry	1	8/10/2022 02:54
cis-1,3-Dichloropropene	U		33	43	µg/Kg-dry	1	8/10/2022 02:54
Cyclohexane	U		39	140	µg/Kg-dry	1	8/10/2022 02:54
Dibromochloromethane	U		24	43	µg/Kg-dry	1	8/10/2022 02:54
Dichlorodifluoromethane	U		52	140	µg/Kg-dry	1	8/10/2022 02:54
Ethylbenzene	U		9.1	43	µg/Kg-dry	1	8/10/2022 02:54
Isopropylbenzene	U		13	43	µg/Kg-dry	1	8/10/2022 02:54
m,p-Xylene	U		58	87	µg/Kg-dry	1	8/10/2022 02:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SS-3 Grab
Collection Date: 8/1/2022 01:05 PM

Work Order: 22080299
Lab ID: 22080299-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	**3,300**		**52**	**360**	**µg/Kg-dry**	1	8/10/2022 02:54
Methyl tert-butyl ether	U		12	43	µg/Kg-dry	1	8/10/2022 02:54
Methylcyclohexane	**46**		**17**	**43**	**µg/Kg-dry**	1	8/10/2022 02:54
Methylene chloride	U		110	360	µg/Kg-dry	1	8/10/2022 02:54
o-Xylene	**18**	J	**17**	**43**	**µg/Kg-dry**	1	8/10/2022 02:54
Styrene	U		17	43	µg/Kg-dry	1	8/10/2022 02:54
Tetrachloroethene	U		26	43	µg/Kg-dry	1	8/10/2022 02:54
Toluene	**25**	J	**12**	**43**	**µg/Kg-dry**	1	8/10/2022 02:54
trans-1,2-Dichloroethene	U		16	43	µg/Kg-dry	1	8/10/2022 02:54
trans-1,3-Dichloropropene	U		24	43	µg/Kg-dry	1	8/10/2022 02:54
Trichloroethene	U		19	43	µg/Kg-dry	1	8/10/2022 02:54
Trichlorofluoromethane	U		22	43	µg/Kg-dry	1	8/10/2022 02:54
Vinyl chloride	U		29	43	µg/Kg-dry	1	8/10/2022 02:54
1,2-Dichloroethene, Total	U		16	87	µg/Kg-dry	1	8/10/2022 02:54
1,3-Dichloropropene, Total	U		33	87	µg/Kg-dry	1	8/10/2022 02:54
Xylenes, Total	U		58	130	µg/Kg-dry	1	8/10/2022 02:54
Surr: 1,2-Dichloroethane-d4	*107*			*80-120*	*%REC*	1	8/10/2022 02:54
Surr: 4-Bromofluorobenzene	*95.3*			*80-120*	*%REC*	1	8/10/2022 02:54
Surr: Dibromofluoromethane	*96.5*			*80-120*	*%REC*	1	8/10/2022 02:54
Surr: Toluene-d8	*94.9*			*80-120*	*%REC*	1	8/10/2022 02:54
MOISTURE		Method: **SW3550C**					Analyst: **ALG**
Moisture	**18**		**0.10**	**0.10**	**% of sample**	1	8/10/2022 12:47

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *19-Aug-22*

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SS-4 Grab
Collection Date: 8/2/2022 10:50 AM

Work Order: 22080299
Lab ID: 22080299-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 8/9/22		Analyst: **KRA**
Mercury	U		0.012	0.018	mg/Kg-dry	1	8/10/2022 12:38
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 8/11/22		Analyst: **DSC**
Arsenic	**1.5**		**0.050**	**0.42**	**mg/Kg-dry**	1	8/11/2022 22:13
Barium	**110**		**0.39**	**0.42**	**mg/Kg-dry**	1	8/11/2022 22:13
Cadmium	U		0.025	0.17	mg/Kg-dry	1	8/11/2022 22:13
Chromium	**14**		**0.18**	**0.42**	**mg/Kg-dry**	1	8/11/2022 22:13
Lead	**7.8**		**0.20**	**0.42**	**mg/Kg-dry**	1	8/11/2022 22:13
Selenium	**0.46**		**0.39**	**0.42**	**mg/Kg-dry**	1	8/11/2022 22:13
Silver	U		0.055	0.42	mg/Kg-dry	1	8/11/2022 22:13
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **ALS**
Subcontracted Analyses	**See attached**		**0**		**as noted-dry**	1	8/12/2022
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)		Method: **SW8270E**			Prep: SW3546 / 8/12/22		Analyst: **EEW**
1-Methylnaphthalene	U		8.1	14	µg/Kg-dry	1	8/14/2022 19:50
2-Chloronaphthalene	U		10	14	µg/Kg-dry	1	8/14/2022 19:50
2-Methylnaphthalene	U		9.5	14	µg/Kg-dry	1	8/14/2022 19:50
Acenaphthene	U		12	14	µg/Kg-dry	1	8/14/2022 19:50
Acenaphthylene	U		11	14	µg/Kg-dry	1	8/14/2022 19:50
Anthracene	U		12	14	µg/Kg-dry	1	8/14/2022 19:50
Benzo(a)anthracene	U		13	14	µg/Kg-dry	1	8/14/2022 19:50
Benzo(a)pyrene	U		11	14	µg/Kg-dry	1	8/14/2022 19:50
Benzo(b)fluoranthene	U		12	14	µg/Kg-dry	1	8/14/2022 19:50
Benzo(g,h,i)perylene	U		7.8	14	µg/Kg-dry	1	8/14/2022 19:50
Benzo(k)fluoranthene	U		11	14	µg/Kg-dry	1	8/14/2022 19:50
Chrysene	U		12	14	µg/Kg-dry	1	8/14/2022 19:50
Dibenzo(a,h)anthracene	U		11	14	µg/Kg-dry	1	8/14/2022 19:50
Fluoranthene	U		11	14	µg/Kg-dry	1	8/14/2022 19:50
Fluorene	U		11	14	µg/Kg-dry	1	8/14/2022 19:50
Indeno(1,2,3-cd)pyrene	U		12	14	µg/Kg-dry	1	8/14/2022 19:50
Naphthalene	U		13	14	µg/Kg-dry	1	8/14/2022 19:50
Phenanthrene	U		8.4	14	µg/Kg-dry	1	8/14/2022 19:50
Pyrene	U		13	14	µg/Kg-dry	1	8/14/2022 19:50
Surr: 2-Fluorobiphenyl	*90.0*			*20-140*	*%REC*	1	8/14/2022 19:50
Surr: 4-Terphenyl-d14	*69.5*			*22-172*	*%REC*	1	8/14/2022 19:50
Surr: Nitrobenzene-d5	*70.6*			*28-140*	*%REC*	1	8/14/2022 19:50
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**			Prep: SW5035A / 8/5/22		Analyst: **HJ**
1,1,1-Trichloroethane	U		19	42	µg/Kg-dry	1	8/10/2022 03:10

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SS-4 Grab
Collection Date: 8/2/2022 10:50 AM

Work Order: 22080299
Lab ID: 22080299-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2,2-Tetrachloroethane	U		19	42	µg/Kg-dry	1	8/10/2022 03:10
1,1,2-Trichloroethane	U		18	42	µg/Kg-dry	1	8/10/2022 03:10
1,1,2-Trichlorotrifluoroethane	U		27	42	µg/Kg-dry	1	8/10/2022 03:10
1,1-Dichloroethane	U		15	42	µg/Kg-dry	1	8/10/2022 03:10
1,1-Dichloroethene	U		14	42	µg/Kg-dry	1	8/10/2022 03:10
1,2,3-Trichlorobenzene	U		51	140	µg/Kg-dry	1	8/10/2022 03:10
1,2,3-Trichloropropane	U		18	42	µg/Kg-dry	1	8/10/2022 03:10
1,2,4-Trichlorobenzene	U		48	140	µg/Kg-dry	1	8/10/2022 03:10
1,2,4-Trimethylbenzene	U		31	42	µg/Kg-dry	1	8/10/2022 03:10
1,2-Dibromo-3-chloropropane	U		39	140	µg/Kg-dry	1	8/10/2022 03:10
1,2-Dibromoethane	U		12	42	µg/Kg-dry	1	8/10/2022 03:10
1,2-Dichlorobenzene	U		16	42	µg/Kg-dry	1	8/10/2022 03:10
1,2-Dichloroethane	U		64	140	µg/Kg-dry	1	8/10/2022 03:10
1,2-Dichloropropane	U		31	42	µg/Kg-dry	1	8/10/2022 03:10
1,3,5-Trimethylbenzene	U		49	140	µg/Kg-dry	1	8/10/2022 03:10
1,3-Dichlorobenzene	U		14	42	µg/Kg-dry	1	8/10/2022 03:10
1,4-Dichlorobenzene	U		10	42	µg/Kg-dry	1	8/10/2022 03:10
2-Butanone	U		35	280	µg/Kg-dry	1	8/10/2022 03:10
2-Hexanone	U		21	42	µg/Kg-dry	1	8/10/2022 03:10
4-Methyl-2-pentanone	U		40	42	µg/Kg-dry	1	8/10/2022 03:10
Acetone	**590**		**130**	**140**	**µg/Kg-dry**	1	8/10/2022 03:10
Benzene	U		21	42	µg/Kg-dry	1	8/10/2022 03:10
Bromochloromethane	U		22	42	µg/Kg-dry	1	8/10/2022 03:10
Bromodichloromethane	U		24	42	µg/Kg-dry	1	8/10/2022 03:10
Bromoform	U		18	42	µg/Kg-dry	1	8/10/2022 03:10
Bromomethane	U		81	140	µg/Kg-dry	1	8/10/2022 03:10
Carbon disulfide	U		22	42	µg/Kg-dry	1	8/10/2022 03:10
Carbon tetrachloride	U		17	42	µg/Kg-dry	1	8/10/2022 03:10
Chlorobenzene	U		14	42	µg/Kg-dry	1	8/10/2022 03:10
Chloroethane	U		42	140	µg/Kg-dry	1	8/10/2022 03:10
Chloroform	U		16	42	µg/Kg-dry	1	8/10/2022 03:10
Chloromethane	U		120	140	µg/Kg-dry	1	8/10/2022 03:10
cis-1,2-Dichloroethene	U		27	42	µg/Kg-dry	1	8/10/2022 03:10
cis-1,3-Dichloropropene	U		32	42	µg/Kg-dry	1	8/10/2022 03:10
Cyclohexane	U		38	140	µg/Kg-dry	1	8/10/2022 03:10
Dibromochloromethane	U		24	42	µg/Kg-dry	1	8/10/2022 03:10
Dichlorodifluoromethane	U		51	140	µg/Kg-dry	1	8/10/2022 03:10
Ethylbenzene	U		8.9	42	µg/Kg-dry	1	8/10/2022 03:10
Isopropylbenzene	U		13	42	µg/Kg-dry	1	8/10/2022 03:10
m,p-Xylene	U		57	85	µg/Kg-dry	1	8/10/2022 03:10

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *19-Aug-22*

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SS-4 Grab
Collection Date: 8/2/2022 10:50 AM

Work Order: 22080299
Lab ID: 22080299-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	**3,400**		**51**	**350**	**µg/Kg-dry**	1	8/10/2022 03:10
Methyl tert-butyl ether	U		12	42	µg/Kg-dry	1	8/10/2022 03:10
Methylcyclohexane	**61**		**16**	**42**	**µg/Kg-dry**	1	8/10/2022 03:10
Methylene chloride	U		110	350	µg/Kg-dry	1	8/10/2022 03:10
o-Xylene	**18**	J	**16**	**42**	**µg/Kg-dry**	1	8/10/2022 03:10
Styrene	U		17	42	µg/Kg-dry	1	8/10/2022 03:10
Tetrachloroethene	U		26	42	µg/Kg-dry	1	8/10/2022 03:10
Toluene	U		12	42	µg/Kg-dry	1	8/10/2022 03:10
trans-1,2-Dichloroethene	U		16	42	µg/Kg-dry	1	8/10/2022 03:10
trans-1,3-Dichloropropene	U		24	42	µg/Kg-dry	1	8/10/2022 03:10
Trichloroethene	U		19	42	µg/Kg-dry	1	8/10/2022 03:10
Trichlorofluoromethane	U		22	42	µg/Kg-dry	1	8/10/2022 03:10
Vinyl chloride	U		28	42	µg/Kg-dry	1	8/10/2022 03:10
1,2-Dichloroethene, Total	U		16	85	µg/Kg-dry	1	8/10/2022 03:10
1,3-Dichloropropene, Total	U		32	85	µg/Kg-dry	1	8/10/2022 03:10
Xylenes, Total	U		57	130	µg/Kg-dry	1	8/10/2022 03:10
Surr: 1,2-Dichloroethane-d4	*108*			*80-120*	*%REC*	1	8/10/2022 03:10
Surr: 4-Bromofluorobenzene	*96.6*			*80-120*	*%REC*	1	8/10/2022 03:10
Surr: Dibromofluoromethane	*93.6*			*80-120*	*%REC*	1	8/10/2022 03:10
Surr: Toluene-d8	*96.3*			*80-120*	*%REC*	1	8/10/2022 03:10
MOISTURE		Method: **SW3550C**					Analyst: **ALG**
Moisture	**14**		**0.10**	**0.10**	**% of sample**	1	8/10/2022 12:47

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-1 (13-15) Grab
Collection Date: 8/1/2022 12:10 PM

Work Order: 22080299
Lab ID: 22080299-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			Method: **SW7471B**		Prep: SW7471 / 8/9/22		Analyst: **KRA**
Mercury	**0.040**		**0.015**	**0.023**	**mg/Kg-dry**	1	8/10/2022 13:30
METALS BY ICP-MS			Method: **SW6020B**		Prep: SW3050B / 8/11/22		Analyst: **DSC**
Arsenic	**5.2**		**0.055**	**0.46**	**mg/Kg-dry**	1	8/11/2022 22:15
Barium	**140**		**0.42**	**0.46**	**mg/Kg-dry**	1	8/11/2022 22:15
Cadmium	**0.055**	J	**0.028**	**0.18**	**mg/Kg-dry**	1	8/11/2022 22:15
Chromium	**14**		**0.20**	**0.46**	**mg/Kg-dry**	1	8/11/2022 22:15
Lead	**10**		**0.22**	**0.46**	**mg/Kg-dry**	1	8/11/2022 22:15
Selenium	**0.43**	J	**0.42**	**0.46**	**mg/Kg-dry**	1	8/11/2022 22:15
Silver	U		0.061	0.46	mg/Kg-dry	1	8/11/2022 22:15
SUBCONTRACTED ANALYSES			Method: **SUBCONTRACT**				Analyst: **ALS**
Subcontracted Analyses	**See attached**		**0**		**as noted-dry**	1	8/12/2022
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)			Method: **SW8270E**		Prep: SW3546 / 8/12/22		Analyst: **EEW**
1-Methylnaphthalene	U		4.6	7.6	µg/Kg-dry	1	8/14/2022 20:05
2-Chloronaphthalene	U		5.9	7.6	µg/Kg-dry	1	8/14/2022 20:05
2-Methylnaphthalene	U		5.3	7.6	µg/Kg-dry	1	8/14/2022 20:05
Acenaphthene	U		6.5	7.6	µg/Kg-dry	1	8/14/2022 20:05
Acenaphthylene	U		6.1	7.6	µg/Kg-dry	1	8/14/2022 20:05
Anthracene	U		6.9	7.6	µg/Kg-dry	1	8/14/2022 20:05
Benzo(a)anthracene	U		7.4	7.6	µg/Kg-dry	1	8/14/2022 20:05
Benzo(a)pyrene	U		6.1	7.6	µg/Kg-dry	1	8/14/2022 20:05
Benzo(b)fluoranthene	U		6.5	7.6	µg/Kg-dry	1	8/14/2022 20:05
Benzo(g,h,i)perylene	U		4.4	7.6	µg/Kg-dry	1	8/14/2022 20:05
Benzo(k)fluoranthene	U		6.3	7.6	µg/Kg-dry	1	8/14/2022 20:05
Chrysene	U		7.0	7.6	µg/Kg-dry	1	8/14/2022 20:05
Dibenzo(a,h)anthracene	U		6.2	7.6	µg/Kg-dry	1	8/14/2022 20:05
Fluoranthene	U		6.1	7.6	µg/Kg-dry	1	8/14/2022 20:05
Fluorene	U		6.0	7.6	µg/Kg-dry	1	8/14/2022 20:05
Indeno(1,2,3-cd)pyrene	U		6.7	7.6	µg/Kg-dry	1	8/14/2022 20:05
Naphthalene	U		7.4	7.6	µg/Kg-dry	1	8/14/2022 20:05
Phenanthrene	U		4.7	7.6	µg/Kg-dry	1	8/14/2022 20:05
Pyrene	U		7.3	7.6	µg/Kg-dry	1	8/14/2022 20:05
Surr: 2-Fluorobiphenyl	*81.9*			*20-140*	*%REC*	1	8/14/2022 20:05
Surr: 4-Terphenyl-d14	*34.4*			*22-172*	*%REC*	1	8/14/2022 20:05
Surr: Nitrobenzene-d5	*42.5*			*28-140*	*%REC*	1	8/14/2022 20:05
VOLATILE ORGANIC COMPOUNDS			Method: **SW8260D**		Prep: SW5035A / 8/5/22		Analyst: **HJ**
1,1,1-Trichloroethane	U		16	36	µg/Kg-dry	1	8/10/2022 03:27

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-1 (13-15) Grab
Collection Date: 8/1/2022 12:10 PM

Work Order: 22080299
Lab ID: 22080299-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2,2-Tetrachloroethane	U		16	36	µg/Kg-dry	1	8/10/2022 03:27
1,1,2-Trichloroethane	U		15	36	µg/Kg-dry	1	8/10/2022 03:27
1,1,2-Trichlorotrifluoroethane	U		23	36	µg/Kg-dry	1	8/10/2022 03:27
1,1-Dichloroethane	U		13	36	µg/Kg-dry	1	8/10/2022 03:27
1,1-Dichloroethene	U		12	36	µg/Kg-dry	1	8/10/2022 03:27
1,2,3-Trichlorobenzene	U		43	120	µg/Kg-dry	1	8/10/2022 03:27
1,2,3-Trichloropropane	U		15	36	µg/Kg-dry	1	8/10/2022 03:27
1,2,4-Trichlorobenzene	U		40	120	µg/Kg-dry	1	8/10/2022 03:27
1,2,4-Trimethylbenzene	U		26	36	µg/Kg-dry	1	8/10/2022 03:27
1,2-Dibromo-3-chloropropane	U		33	120	µg/Kg-dry	1	8/10/2022 03:27
1,2-Dibromoethane	U		10	36	µg/Kg-dry	1	8/10/2022 03:27
1,2-Dichlorobenzene	U		14	36	µg/Kg-dry	1	8/10/2022 03:27
1,2-Dichloroethane	U		54	120	µg/Kg-dry	1	8/10/2022 03:27
1,2-Dichloropropane	U		26	36	µg/Kg-dry	1	8/10/2022 03:27
1,3,5-Trimethylbenzene	U		42	120	µg/Kg-dry	1	8/10/2022 03:27
1,3-Dichlorobenzene	U		12	36	µg/Kg-dry	1	8/10/2022 03:27
1,4-Dichlorobenzene	U		8.6	36	µg/Kg-dry	1	8/10/2022 03:27
2-Butanone	U		29	240	µg/Kg-dry	1	8/10/2022 03:27
2-Hexanone	U		18	36	µg/Kg-dry	1	8/10/2022 03:27
4-Methyl-2-pentanone	U		33	36	µg/Kg-dry	1	8/10/2022 03:27
Acetone	**440**		**110**	**120**	**µg/Kg-dry**	1	8/10/2022 03:27
Benzene	U		17	36	µg/Kg-dry	1	8/10/2022 03:27
Bromochloromethane	U		18	36	µg/Kg-dry	1	8/10/2022 03:27
Bromodichloromethane	U		20	36	µg/Kg-dry	1	8/10/2022 03:27
Bromoform	U		15	36	µg/Kg-dry	1	8/10/2022 03:27
Bromomethane	U		68	120	µg/Kg-dry	1	8/10/2022 03:27
Carbon disulfide	U		18	36	µg/Kg-dry	1	8/10/2022 03:27
Carbon tetrachloride	U		14	36	µg/Kg-dry	1	8/10/2022 03:27
Chlorobenzene	U		12	36	µg/Kg-dry	1	8/10/2022 03:27
Chloroethane	U		35	120	µg/Kg-dry	1	8/10/2022 03:27
Chloroform	U		13	36	µg/Kg-dry	1	8/10/2022 03:27
Chloromethane	U		98	120	µg/Kg-dry	1	8/10/2022 03:27
cis-1,2-Dichloroethene	U		23	36	µg/Kg-dry	1	8/10/2022 03:27
cis-1,3-Dichloropropene	U		27	36	µg/Kg-dry	1	8/10/2022 03:27
Cyclohexane	U		32	120	µg/Kg-dry	1	8/10/2022 03:27
Dibromochloromethane	U		20	36	µg/Kg-dry	1	8/10/2022 03:27
Dichlorodifluoromethane	U		43	120	µg/Kg-dry	1	8/10/2022 03:27
Ethylbenzene	U		7.5	36	µg/Kg-dry	1	8/10/2022 03:27
Isopropylbenzene	U		11	36	µg/Kg-dry	1	8/10/2022 03:27
m,p-Xylene	U		48	71	µg/Kg-dry	1	8/10/2022 03:27

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *19-Aug-22*

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-1 (13-15) Grab
Collection Date: 8/1/2022 12:10 PM

Work Order: 22080299
Lab ID: 22080299-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	**4,900**		**43**	**300**	**µg/Kg-dry**	1	8/10/2022 03:27
Methyl tert-butyl ether	U		10	36	µg/Kg-dry	1	8/10/2022 03:27
Methylcyclohexane	U		14	36	µg/Kg-dry	1	8/10/2022 03:27
Methylene chloride	U		95	300	µg/Kg-dry	1	8/10/2022 03:27
o-Xylene	U		14	36	µg/Kg-dry	1	8/10/2022 03:27
Styrene	U		14	36	µg/Kg-dry	1	8/10/2022 03:27
Tetrachloroethene	U		22	36	µg/Kg-dry	1	8/10/2022 03:27
Toluene	U		9.7	36	µg/Kg-dry	1	8/10/2022 03:27
trans-1,2-Dichloroethene	U		13	36	µg/Kg-dry	1	8/10/2022 03:27
trans-1,3-Dichloropropene	U		20	36	µg/Kg-dry	1	8/10/2022 03:27
Trichloroethene	U		16	36	µg/Kg-dry	1	8/10/2022 03:27
Trichlorofluoromethane	U		18	36	µg/Kg-dry	1	8/10/2022 03:27
Vinyl chloride	U		24	36	µg/Kg-dry	1	8/10/2022 03:27
1,2-Dichloroethene, Total	U		13	71	µg/Kg-dry	1	8/10/2022 03:27
1,3-Dichloropropene, Total	U		27	71	µg/Kg-dry	1	8/10/2022 03:27
Xylenes, Total	U		48	110	µg/Kg-dry	1	8/10/2022 03:27
Surr: 1,2-Dichloroethane-d4	*105*			*80-120*	*%REC*	1	8/10/2022 03:27
Surr: 4-Bromofluorobenzene	*95.6*			*80-120*	*%REC*	1	8/10/2022 03:27
Surr: Dibromofluoromethane	*96.1*			*80-120*	*%REC*	1	8/10/2022 03:27
Surr: Toluene-d8	*96.5*			*80-120*	*%REC*	1	8/10/2022 03:27
MOISTURE		Method: **SW3550C**					Analyst: **ALG**
Moisture	**20**		**0.10**	**0.10**	**% of sample**	1	8/10/2022 12:47

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-3 (13-15) Grab
Collection Date: 8/1/2022 01:10 PM

Work Order: 22080299
Lab ID: 22080299-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 8/9/22		Analyst: **KRA**
Mercury	**0.030**		**0.014**	**0.021**	**mg/Kg-dry**	1	8/10/2022 13:31
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 8/11/22		Analyst: **DSC**
Arsenic	**2.7**		**0.058**	**0.49**	**mg/Kg-dry**	1	8/11/2022 22:48
Barium	**120**		**0.45**	**0.49**	**mg/Kg-dry**	1	8/11/2022 22:48
Cadmium	U		0.029	0.19	mg/Kg-dry	1	8/11/2022 22:48
Chromium	**13**		**0.21**	**0.49**	**mg/Kg-dry**	1	8/11/2022 22:48
Lead	**11**		**0.23**	**0.49**	**mg/Kg-dry**	1	8/11/2022 22:48
Selenium	**0.60**		**0.45**	**0.49**	**mg/Kg-dry**	1	8/11/2022 22:48
Silver	U		0.064	0.49	mg/Kg-dry	1	8/11/2022 22:48
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **ALS**
Subcontracted Analyses	**See attached**		**0**		**as noted-dry**	1	8/12/2022
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)		Method: **SW8270E**			Prep: SW3546 / 8/12/22		Analyst: **EEW**
1-Methylnaphthalene	U		9.4	16	µg/Kg-dry	1	8/14/2022 20:21
2-Chloronaphthalene	U		12	16	µg/Kg-dry	1	8/14/2022 20:21
2-Methylnaphthalene	U		11	16	µg/Kg-dry	1	8/14/2022 20:21
Acenaphthene	U		13	16	µg/Kg-dry	1	8/14/2022 20:21
Acenaphthylene	U		13	16	µg/Kg-dry	1	8/14/2022 20:21
Anthracene	U		14	16	µg/Kg-dry	1	8/14/2022 20:21
Benzo(a)anthracene	U		15	16	µg/Kg-dry	1	8/14/2022 20:21
Benzo(a)pyrene	U		13	16	µg/Kg-dry	1	8/14/2022 20:21
Benzo(b)fluoranthene	U		13	16	µg/Kg-dry	1	8/14/2022 20:21
Benzo(g,h,i)perylene	U		9.1	16	µg/Kg-dry	1	8/14/2022 20:21
Benzo(k)fluoranthene	U		13	16	µg/Kg-dry	1	8/14/2022 20:21
Chrysene	U		14	16	µg/Kg-dry	1	8/14/2022 20:21
Dibenzo(a,h)anthracene	U		13	16	µg/Kg-dry	1	8/14/2022 20:21
Fluoranthene	U		12	16	µg/Kg-dry	1	8/14/2022 20:21
Fluorene	U		12	16	µg/Kg-dry	1	8/14/2022 20:21
Indeno(1,2,3-cd)pyrene	U		14	16	µg/Kg-dry	1	8/14/2022 20:21
Naphthalene	U		15	16	µg/Kg-dry	1	8/14/2022 20:21
Phenanthrene	U		9.7	16	µg/Kg-dry	1	8/14/2022 20:21
Pyrene	U		15	16	µg/Kg-dry	1	8/14/2022 20:21
Surr: 2-Fluorobiphenyl	*91.9*			*20-140*	*%REC*	1	8/14/2022 20:21
Surr: 4-Terphenyl-d14	*83.0*			*22-172*	*%REC*	1	8/14/2022 20:21
Surr: Nitrobenzene-d5	*72.8*			*28-140*	*%REC*	1	8/14/2022 20:21
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**			Prep: SW5035A / 8/5/22		Analyst: **HJ**
1,1,1-Trichloroethane	U		19	42	µg/Kg-dry	1	8/10/2022 03:44

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-3 (13-15) Grab
Collection Date: 8/1/2022 01:10 PM

Work Order: 22080299
Lab ID: 22080299-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2,2-Tetrachloroethane	U		18	42	µg/Kg-dry	1	8/10/2022 03:44
1,1,2-Trichloroethane	U		18	42	µg/Kg-dry	1	8/10/2022 03:44
1,1,2-Trichlorotrifluoroethane	U		26	42	µg/Kg-dry	1	8/10/2022 03:44
1,1-Dichloroethane	U		15	42	µg/Kg-dry	1	8/10/2022 03:44
1,1-Dichloroethene	U		14	42	µg/Kg-dry	1	8/10/2022 03:44
1,2,3-Trichlorobenzene	U		50	140	µg/Kg-dry	1	8/10/2022 03:44
1,2,3-Trichloropropane	U		18	42	µg/Kg-dry	1	8/10/2022 03:44
1,2,4-Trichlorobenzene	U		47	140	µg/Kg-dry	1	8/10/2022 03:44
1,2,4-Trimethylbenzene	U		31	42	µg/Kg-dry	1	8/10/2022 03:44
1,2-Dibromo-3-chloropropane	U		39	140	µg/Kg-dry	1	8/10/2022 03:44
1,2-Dibromoethane	U		12	42	µg/Kg-dry	1	8/10/2022 03:44
1,2-Dichlorobenzene	U		16	42	µg/Kg-dry	1	8/10/2022 03:44
1,2-Dichloroethane	U		63	140	µg/Kg-dry	1	8/10/2022 03:44
1,2-Dichloropropane	U		31	42	µg/Kg-dry	1	8/10/2022 03:44
1,3,5-Trimethylbenzene	U		49	140	µg/Kg-dry	1	8/10/2022 03:44
1,3-Dichlorobenzene	U		14	42	µg/Kg-dry	1	8/10/2022 03:44
1,4-Dichlorobenzene	U		10	42	µg/Kg-dry	1	8/10/2022 03:44
2-Butanone	U		34	280	µg/Kg-dry	1	8/10/2022 03:44
2-Hexanone	U		21	42	µg/Kg-dry	1	8/10/2022 03:44
4-Methyl-2-pentanone	U		39	42	µg/Kg-dry	1	8/10/2022 03:44
Acetone	U		120	140	µg/Kg-dry	1	8/10/2022 03:44
Benzene	U		20	42	µg/Kg-dry	1	8/10/2022 03:44
Bromochloromethane	U		21	42	µg/Kg-dry	1	8/10/2022 03:44
Bromodichloromethane	U		23	42	µg/Kg-dry	1	8/10/2022 03:44
Bromoform	U		18	42	µg/Kg-dry	1	8/10/2022 03:44
Bromomethane	U		80	140	µg/Kg-dry	1	8/10/2022 03:44
Carbon disulfide	U		22	42	µg/Kg-dry	1	8/10/2022 03:44
Carbon tetrachloride	U		16	42	µg/Kg-dry	1	8/10/2022 03:44
Chlorobenzene	U		14	42	µg/Kg-dry	1	8/10/2022 03:44
Chloroethane	U		41	140	µg/Kg-dry	1	8/10/2022 03:44
Chloroform	U		15	42	µg/Kg-dry	1	8/10/2022 03:44
Chloromethane	U		110	140	µg/Kg-dry	1	8/10/2022 03:44
cis-1,2-Dichloroethene	U		27	42	µg/Kg-dry	1	8/10/2022 03:44
cis-1,3-Dichloropropene	U		32	42	µg/Kg-dry	1	8/10/2022 03:44
Cyclohexane	U		38	140	µg/Kg-dry	1	8/10/2022 03:44
Dibromochloromethane	U		23	42	µg/Kg-dry	1	8/10/2022 03:44
Dichlorodifluoromethane	U		51	140	µg/Kg-dry	1	8/10/2022 03:44
Ethylbenzene	U		8.8	42	µg/Kg-dry	1	8/10/2022 03:44
Isopropylbenzene	U		13	42	µg/Kg-dry	1	8/10/2022 03:44
m,p-Xylene	U		56	84	µg/Kg-dry	1	8/10/2022 03:44

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *19-Aug-22*

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-3 (13-15) Grab
Collection Date: 8/1/2022 01:10 PM

Work Order: 22080299
Lab ID: 22080299-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	**1,300**		**50**	**350**	**µg/Kg-dry**	1	8/10/2022 03:44
Methyl tert-butyl ether	U		12	42	µg/Kg-dry	1	8/10/2022 03:44
Methylcyclohexane	U		16	42	µg/Kg-dry	1	8/10/2022 03:44
Methylene chloride	U		110	350	µg/Kg-dry	1	8/10/2022 03:44
o-Xylene	U		16	42	µg/Kg-dry	1	8/10/2022 03:44
Styrene	U		17	42	µg/Kg-dry	1	8/10/2022 03:44
Tetrachloroethene	U		25	42	µg/Kg-dry	1	8/10/2022 03:44
Toluene	U		11	42	µg/Kg-dry	1	8/10/2022 03:44
trans-1,2-Dichloroethene	U		15	42	µg/Kg-dry	1	8/10/2022 03:44
trans-1,3-Dichloropropene	U		23	42	µg/Kg-dry	1	8/10/2022 03:44
Trichloroethene	U		19	42	µg/Kg-dry	1	8/10/2022 03:44
Trichlorofluoromethane	U		21	42	µg/Kg-dry	1	8/10/2022 03:44
Vinyl chloride	U		28	42	µg/Kg-dry	1	8/10/2022 03:44
1,2-Dichloroethene, Total	U		15	84	µg/Kg-dry	1	8/10/2022 03:44
1,3-Dichloropropene, Total	U		32	84	µg/Kg-dry	1	8/10/2022 03:44
Xylenes, Total	U		56	130	µg/Kg-dry	1	8/10/2022 03:44
Surr: 1,2-Dichloroethane-d4	*106*			*80-120*	*%REC*	1	8/10/2022 03:44
Surr: 4-Bromofluorobenzene	*98.1*			*80-120*	*%REC*	1	8/10/2022 03:44
Surr: Dibromofluoromethane	*91.7*			*80-120*	*%REC*	1	8/10/2022 03:44
Surr: Toluene-d8	*96.9*			*80-120*	*%REC*	1	8/10/2022 03:44
MOISTURE		Method: **SW3550C**					Analyst: **ALG**
Moisture	**24**		**0.10**	**0.10**	**% of sample**	1	8/10/2022 12:47

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *19-Aug-22*

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-4 (6-8) Grab
Collection Date: 8/2/2022 11:00 AM

Work Order: 22080299
Lab ID: 22080299-06
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**			Prep: SW5035A / 8/5/22		Analyst: **HJ**
1,1,1-Trichloroethane	U		20	45	µg/Kg-dry	1	8/10/2022 04:00
1,1,2,2-Tetrachloroethane	U		20	45	µg/Kg-dry	1	8/10/2022 04:00
1,1,2-Trichloroethane	U		19	45	µg/Kg-dry	1	8/10/2022 04:00
1,1,2-Trichlorotrifluoroethane	U		28	45	µg/Kg-dry	1	8/10/2022 04:00
1,1-Dichloroethane	U		16	45	µg/Kg-dry	1	8/10/2022 04:00
1,1-Dichloroethene	U		14	45	µg/Kg-dry	1	8/10/2022 04:00
1,2,3-Trichlorobenzene	U		53	150	µg/Kg-dry	1	8/10/2022 04:00
1,2,3-Trichloropropane	U		19	45	µg/Kg-dry	1	8/10/2022 04:00
1,2,4-Trichlorobenzene	U		50	150	µg/Kg-dry	1	8/10/2022 04:00
1,2,4-Trimethylbenzene	U		33	45	µg/Kg-dry	1	8/10/2022 04:00
1,2-Dibromo-3-chloropropane	U		41	150	µg/Kg-dry	1	8/10/2022 04:00
1,2-Dibromoethane	U		13	45	µg/Kg-dry	1	8/10/2022 04:00
1,2-Dichlorobenzene	U		17	45	µg/Kg-dry	1	8/10/2022 04:00
1,2-Dichloroethane	U		67	150	µg/Kg-dry	1	8/10/2022 04:00
1,2-Dichloropropane	U		33	45	µg/Kg-dry	1	8/10/2022 04:00
1,3,5-Trimethylbenzene	U		52	150	µg/Kg-dry	1	8/10/2022 04:00
1,3-Dichlorobenzene	U		15	45	µg/Kg-dry	1	8/10/2022 04:00
1,4-Dichlorobenzene	U		11	45	µg/Kg-dry	1	8/10/2022 04:00
2-Butanone	U		37	300	µg/Kg-dry	1	8/10/2022 04:00
2-Hexanone	U		22	45	µg/Kg-dry	1	8/10/2022 04:00
4-Methyl-2-pentanone	U		41	45	µg/Kg-dry	1	8/10/2022 04:00
Acetone	**420**		**130**	**150**	**µg/Kg-dry**	1	8/10/2022 04:00
Benzene	U		22	45	µg/Kg-dry	1	8/10/2022 04:00
Bromochloromethane	U		23	45	µg/Kg-dry	1	8/10/2022 04:00
Bromodichloromethane	U		25	45	µg/Kg-dry	1	8/10/2022 04:00
Bromoform	U		19	45	µg/Kg-dry	1	8/10/2022 04:00
Bromomethane	U		85	150	µg/Kg-dry	1	8/10/2022 04:00
Carbon disulfide	U		23	45	µg/Kg-dry	1	8/10/2022 04:00
Carbon tetrachloride	U		17	45	µg/Kg-dry	1	8/10/2022 04:00
Chlorobenzene	U		15	45	µg/Kg-dry	1	8/10/2022 04:00
Chloroethane	U		44	150	µg/Kg-dry	1	8/10/2022 04:00
Chloroform	U		16	45	µg/Kg-dry	1	8/10/2022 04:00
Chloromethane	U		120	150	µg/Kg-dry	1	8/10/2022 04:00
cis-1,2-Dichloroethene	U		29	45	µg/Kg-dry	1	8/10/2022 04:00
cis-1,3-Dichloropropene	U		34	45	µg/Kg-dry	1	8/10/2022 04:00
Cyclohexane	U		40	150	µg/Kg-dry	1	8/10/2022 04:00
Dibromochloromethane	U		25	45	µg/Kg-dry	1	8/10/2022 04:00
Dichlorodifluoromethane	U		54	150	µg/Kg-dry	1	8/10/2022 04:00

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-4 (6-8) Grab
Collection Date: 8/2/2022 11:00 AM

Work Order: 22080299
Lab ID: 22080299-06
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		9.4	45	µg/Kg-dry	1	8/10/2022 04:00
Isopropylbenzene	U		14	45	µg/Kg-dry	1	8/10/2022 04:00
m,p-Xylene	U		59	89	µg/Kg-dry	1	8/10/2022 04:00
Methyl acetate	**2,900**		**53**	**370**	**µg/Kg-dry**	1	8/10/2022 04:00
Methyl tert-butyl ether	U		13	45	µg/Kg-dry	1	8/10/2022 04:00
Methylcyclohexane	**44**	J	**17**	**45**	**µg/Kg-dry**	1	8/10/2022 04:00
Methylene chloride	U		120	370	µg/Kg-dry	1	8/10/2022 04:00
o-Xylene	**19**	J	**17**	**45**	**µg/Kg-dry**	1	8/10/2022 04:00
Styrene	U		18	45	µg/Kg-dry	1	8/10/2022 04:00
Tetrachloroethene	U		27	45	µg/Kg-dry	1	8/10/2022 04:00
Toluene	**13**	J	**12**	**45**	**µg/Kg-dry**	1	8/10/2022 04:00
trans-1,2-Dichloroethene	U		16	45	µg/Kg-dry	1	8/10/2022 04:00
trans-1,3-Dichloropropene	U		25	45	µg/Kg-dry	1	8/10/2022 04:00
Trichloroethene	U		20	45	µg/Kg-dry	1	8/10/2022 04:00
Trichlorofluoromethane	U		23	45	µg/Kg-dry	1	8/10/2022 04:00
Vinyl chloride	U		30	45	µg/Kg-dry	1	8/10/2022 04:00
1,2-Dichloroethene, Total	U		16	89	µg/Kg-dry	1	8/10/2022 04:00
1,3-Dichloropropene, Total	U		34	89	µg/Kg-dry	1	8/10/2022 04:00
Xylenes, Total	U		59	130	µg/Kg-dry	1	8/10/2022 04:00
Surr: 1,2-Dichloroethane-d4	*103*			*80-120*	*%REC*	1	8/10/2022 04:00
Surr: 4-Bromofluorobenzene	*94.5*			*80-120*	*%REC*	1	8/10/2022 04:00
Surr: Dibromofluoromethane	*93.2*			*80-120*	*%REC*	1	8/10/2022 04:00
Surr: Toluene-d8	*95.7*			*80-120*	*%REC*	1	8/10/2022 04:00

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-6 (6-8) Grab
Collection Date: 8/1/2022 12:45 PM

Work Order: 22080299
Lab ID: 22080299-07
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 8/9/22		Analyst: **KRA**
Mercury	**0.026**		**0.014**	**0.020**	**mg/Kg-dry**	1	8/10/2022 13:33
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 8/11/22		Analyst: **DSC**
Arsenic	**4.8**		**0.052**	**0.43**	**mg/Kg-dry**	1	8/11/2022 22:49
Barium	**110**		**0.40**	**0.43**	**mg/Kg-dry**	1	8/11/2022 22:49
Cadmium	**0.031**	J	**0.026**	**0.17**	**mg/Kg-dry**	1	8/11/2022 22:49
Chromium	**15**		**0.19**	**0.43**	**mg/Kg-dry**	1	8/11/2022 22:49
Lead	**13**		**0.21**	**0.43**	**mg/Kg-dry**	1	8/11/2022 22:49
Selenium	**0.44**		**0.40**	**0.43**	**mg/Kg-dry**	1	8/11/2022 22:49
Silver	U		0.057	0.43	mg/Kg-dry	1	8/11/2022 22:49
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **ALS**
Subcontracted Analyses	**See attached**		**0**		**as noted-dry**	1	8/12/2022
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)		Method: **SW8270E**			Prep: SW3546 / 8/12/22		Analyst: **EEW**
1-Methylnaphthalene	U		4.6	7.7	µg/Kg-dry	1	8/14/2022 19:03
2-Chloronaphthalene	U		5.9	7.7	µg/Kg-dry	1	8/14/2022 19:03
2-Methylnaphthalene	U		5.3	7.7	µg/Kg-dry	1	8/14/2022 19:03
Acenaphthene	U		6.5	7.7	µg/Kg-dry	1	8/14/2022 19:03
Acenaphthylene	U		6.1	7.7	µg/Kg-dry	1	8/14/2022 19:03
Anthracene	U		6.9	7.7	µg/Kg-dry	1	8/14/2022 19:03
Benzo(a)anthracene	U		7.4	7.7	µg/Kg-dry	1	8/14/2022 19:03
Benzo(a)pyrene	U		6.1	7.7	µg/Kg-dry	1	8/14/2022 19:03
Benzo(b)fluoranthene	U		6.5	7.7	µg/Kg-dry	1	8/14/2022 19:03
Benzo(g,h,i)perylene	U		4.4	7.7	µg/Kg-dry	1	8/14/2022 19:03
Benzo(k)fluoranthene	U		6.3	7.7	µg/Kg-dry	1	8/14/2022 19:03
Chrysene	U		7.0	7.7	µg/Kg-dry	1	8/14/2022 19:03
Dibenzo(a,h)anthracene	U		6.2	7.7	µg/Kg-dry	1	8/14/2022 19:03
Fluoranthene	U		6.1	7.7	µg/Kg-dry	1	8/14/2022 19:03
Fluorene	U		6.0	7.7	µg/Kg-dry	1	8/14/2022 19:03
Indeno(1,2,3-cd)pyrene	U		6.7	7.7	µg/Kg-dry	1	8/14/2022 19:03
Naphthalene	U		7.4	7.7	µg/Kg-dry	1	8/14/2022 19:03
Phenanthrene	U		4.7	7.7	µg/Kg-dry	1	8/14/2022 19:03
Pyrene	U		7.4	7.7	µg/Kg-dry	1	8/14/2022 19:03
Surr: 2-Fluorobiphenyl	*80.5*			*20-140*	*%REC*	1	8/14/2022 19:03
Surr: 4-Terphenyl-d14	*17.8*	S		*22-172*	*%REC*	1	8/14/2022 19:03
Surr: Nitrobenzene-d5	*28.6*			*28-140*	*%REC*	1	8/14/2022 19:03
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**			Prep: SW5035A / 8/5/22		Analyst: **HJ**
1,1,1-Trichloroethane	U		16	36	µg/Kg-dry	1	8/10/2022 04:17

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-6 (6-8) Grab
Collection Date: 8/1/2022 12:45 PM

Work Order: 22080299
Lab ID: 22080299-07
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2,2-Tetrachloroethane	U		16	36	µg/Kg-dry	1	8/10/2022 04:17
1,1,2-Trichloroethane	U		15	36	µg/Kg-dry	1	8/10/2022 04:17
1,1,2-Trichlorotrifluoroethane	U		23	36	µg/Kg-dry	1	8/10/2022 04:17
1,1-Dichloroethane	U		13	36	µg/Kg-dry	1	8/10/2022 04:17
1,1-Dichloroethene	U		12	36	µg/Kg-dry	1	8/10/2022 04:17
1,2,3-Trichlorobenzene	U		43	120	µg/Kg-dry	1	8/10/2022 04:17
1,2,3-Trichloropropane	U		15	36	µg/Kg-dry	1	8/10/2022 04:17
1,2,4-Trichlorobenzene	U		41	120	µg/Kg-dry	1	8/10/2022 04:17
1,2,4-Trimethylbenzene	U		26	36	µg/Kg-dry	1	8/10/2022 04:17
1,2-Dibromo-3-chloropropane	U		33	120	µg/Kg-dry	1	8/10/2022 04:17
1,2-Dibromoethane	U		10	36	µg/Kg-dry	1	8/10/2022 04:17
1,2-Dichlorobenzene	U		14	36	µg/Kg-dry	1	8/10/2022 04:17
1,2-Dichloroethane	U		54	120	µg/Kg-dry	1	8/10/2022 04:17
1,2-Dichloropropane	U		27	36	µg/Kg-dry	1	8/10/2022 04:17
1,3,5-Trimethylbenzene	U		42	120	µg/Kg-dry	1	8/10/2022 04:17
1,3-Dichlorobenzene	U		12	36	µg/Kg-dry	1	8/10/2022 04:17
1,4-Dichlorobenzene	U		8.7	36	µg/Kg-dry	1	8/10/2022 04:17
2-Butanone	U		30	240	µg/Kg-dry	1	8/10/2022 04:17
2-Hexanone	U		18	36	µg/Kg-dry	1	8/10/2022 04:17
4-Methyl-2-pentanone	U		34	36	µg/Kg-dry	1	8/10/2022 04:17
Acetone	U		110	120	µg/Kg-dry	1	8/10/2022 04:17
Benzene	U		17	36	µg/Kg-dry	1	8/10/2022 04:17
Bromochloromethane	U		18	36	µg/Kg-dry	1	8/10/2022 04:17
Bromodichloromethane	U		20	36	µg/Kg-dry	1	8/10/2022 04:17
Bromoform	U		15	36	µg/Kg-dry	1	8/10/2022 04:17
Bromomethane	U		69	120	µg/Kg-dry	1	8/10/2022 04:17
Carbon disulfide	U		19	36	µg/Kg-dry	1	8/10/2022 04:17
Carbon tetrachloride	U		14	36	µg/Kg-dry	1	8/10/2022 04:17
Chlorobenzene	U		12	36	µg/Kg-dry	1	8/10/2022 04:17
Chloroethane	U		36	120	µg/Kg-dry	1	8/10/2022 04:17
Chloroform	U		13	36	µg/Kg-dry	1	8/10/2022 04:17
Chloromethane	U		99	120	µg/Kg-dry	1	8/10/2022 04:17
cis-1,2-Dichloroethene	U		23	36	µg/Kg-dry	1	8/10/2022 04:17
cis-1,3-Dichloropropene	U		27	36	µg/Kg-dry	1	8/10/2022 04:17
Cyclohexane	U		32	120	µg/Kg-dry	1	8/10/2022 04:17
Dibromochloromethane	U		20	36	µg/Kg-dry	1	8/10/2022 04:17
Dichlorodifluoromethane	U		44	120	µg/Kg-dry	1	8/10/2022 04:17
Ethylbenzene	U		7.6	36	µg/Kg-dry	1	8/10/2022 04:17
Isopropylbenzene	U		11	36	µg/Kg-dry	1	8/10/2022 04:17
m,p-Xylene	U		48	72	µg/Kg-dry	1	8/10/2022 04:17

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *19-Aug-22*

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-6 (6-8) Grab
Collection Date: 8/1/2022 12:45 PM

Work Order: 22080299
Lab ID: 22080299-07
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	**48**	J	**43**	**300**	**µg/Kg-dry**	1	8/10/2022 04:17
Methyl tert-butyl ether	U		10	36	µg/Kg-dry	1	8/10/2022 04:17
Methylcyclohexane	**14**	J	**14**	**36**	**µg/Kg-dry**	1	8/10/2022 04:17
Methylene chloride	U		96	300	µg/Kg-dry	1	8/10/2022 04:17
o-Xylene	U		14	36	µg/Kg-dry	1	8/10/2022 04:17
Styrene	U		14	36	µg/Kg-dry	1	8/10/2022 04:17
Tetrachloroethene	U		22	36	µg/Kg-dry	1	8/10/2022 04:17
Toluene	U		9.9	36	µg/Kg-dry	1	8/10/2022 04:17
trans-1,2-Dichloroethene	U		13	36	µg/Kg-dry	1	8/10/2022 04:17
trans-1,3-Dichloropropene	U		20	36	µg/Kg-dry	1	8/10/2022 04:17
Trichloroethene	U		16	36	µg/Kg-dry	1	8/10/2022 04:17
Trichlorofluoromethane	U		18	36	µg/Kg-dry	1	8/10/2022 04:17
Vinyl chloride	U		24	36	µg/Kg-dry	1	8/10/2022 04:17
1,2-Dichloroethene, Total	U		13	72	µg/Kg-dry	1	8/10/2022 04:17
1,3-Dichloropropene, Total	U		27	72	µg/Kg-dry	1	8/10/2022 04:17
Xylenes, Total	U		48	110	µg/Kg-dry	1	8/10/2022 04:17
Surr: 1,2-Dichloroethane-d4	*106*			*80-120*	*%REC*	1	8/10/2022 04:17
Surr: 4-Bromofluorobenzene	*97.6*			*80-120*	*%REC*	1	8/10/2022 04:17
Surr: Dibromofluoromethane	*90.4*			*80-120*	*%REC*	1	8/10/2022 04:17
Surr: Toluene-d8	*98.9*			*80-120*	*%REC*	1	8/10/2022 04:17
MOISTURE		Method: **SW3550C**					Analyst: **ALG**
Moisture	**19**		**0.10**	**0.10**	**% of sample**	1	8/11/2022 11:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *19-Aug-22*

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-6 FD (6-8) Grab
Collection Date: 8/1/2022 12:45 PM

Work Order: 22080299
Lab ID: 22080299-08
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 8/9/22		Analyst: **KRA**
Mercury	**0.033**		**0.016**	**0.023**	**mg/Kg-dry**	1	8/10/2022 13:45
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 8/11/22		Analyst: **DSC**
Arsenic	**8.1**		**0.063**	**0.52**	**mg/Kg-dry**	1	8/11/2022 22:55
Barium	**330**		**4.8**	**5.2**	**mg/Kg-dry**	10	8/12/2022 14:12
Cadmium	**0.11**	J	**0.031**	**0.21**	**mg/Kg-dry**	1	8/11/2022 22:55
Chromium	**25**		**0.23**	**0.52**	**mg/Kg-dry**	1	8/11/2022 22:55
Lead	**16**		**0.25**	**0.52**	**mg/Kg-dry**	1	8/11/2022 22:55
Selenium	U		0.48	0.52	mg/Kg-dry	1	8/11/2022 22:55
Silver	U		0.069	0.52	mg/Kg-dry	1	8/11/2022 22:55
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **ALS**
Subcontracted Analyses	**See attached**		**0**		**as noted-dry**	1	8/12/2022
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)		Method: **SW8270E**			Prep: SW3546 / 8/15/22		Analyst: **SJB**
1-Methylnaphthalene	U		47	78	µg/Kg-dry	1	8/15/2022 20:24
2-Chloronaphthalene	U		60	78	µg/Kg-dry	1	8/15/2022 20:24
2-Methylnaphthalene	U		54	78	µg/Kg-dry	1	8/15/2022 20:24
Acenaphthene	U		66	78	µg/Kg-dry	1	8/15/2022 20:24
Acenaphthylene	U		62	78	µg/Kg-dry	1	8/15/2022 20:24
Anthracene	U		70	78	µg/Kg-dry	1	8/15/2022 20:24
Benzo(a)anthracene	U		75	78	µg/Kg-dry	1	8/15/2022 20:24
Benzo(a)pyrene	U		62	78	µg/Kg-dry	1	8/15/2022 20:24
Benzo(b)fluoranthene	U		66	78	µg/Kg-dry	1	8/15/2022 20:24
Benzo(g,h,i)perylene	U		45	78	µg/Kg-dry	1	8/15/2022 20:24
Benzo(k)fluoranthene	U		64	78	µg/Kg-dry	1	8/15/2022 20:24
Chrysene	U		72	78	µg/Kg-dry	1	8/15/2022 20:24
Dibenzo(a,h)anthracene	U		63	78	µg/Kg-dry	1	8/15/2022 20:24
Fluoranthene	U		62	78	µg/Kg-dry	1	8/15/2022 20:24
Fluorene	U		61	78	µg/Kg-dry	1	8/15/2022 20:24
Indeno(1,2,3-cd)pyrene	U		68	78	µg/Kg-dry	1	8/15/2022 20:24
Naphthalene	U		75	78	µg/Kg-dry	1	8/15/2022 20:24
Phenanthrene	U		48	78	µg/Kg-dry	1	8/15/2022 20:24
Pyrene	U		75	78	µg/Kg-dry	1	8/15/2022 20:24
Surr: 2-Fluorobiphenyl	*92.8*			*20-140*	*%REC*	1	8/15/2022 20:24
Surr: 4-Terphenyl-d14	*86.2*			*22-172*	*%REC*	1	8/15/2022 20:24
Surr: Nitrobenzene-d5	*80.4*			*28-140*	*%REC*	1	8/15/2022 20:24
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**			Prep: SW5035A / 8/5/22		Analyst: **HJ**
1,1,1-Trichloroethane	U		24	53	µg/Kg-dry	1	8/10/2022 04:33

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-6 FD (6-8) Grab
Collection Date: 8/1/2022 12:45 PM

Work Order: 22080299
Lab ID: 22080299-08
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2,2-Tetrachloroethane	U		23	53	µg/Kg-dry	1	8/10/2022 04:33
1,1,2-Trichloroethane	U		23	53	µg/Kg-dry	1	8/10/2022 04:33
1,1,2-Trichlorotrifluoroethane	U		34	53	µg/Kg-dry	1	8/10/2022 04:33
1,1-Dichloroethane	U		19	53	µg/Kg-dry	1	8/10/2022 04:33
1,1-Dichloroethene	U		17	53	µg/Kg-dry	1	8/10/2022 04:33
1,2,3-Trichlorobenzene	U		64	180	µg/Kg-dry	1	8/10/2022 04:33
1,2,3-Trichloropropane	U		22	53	µg/Kg-dry	1	8/10/2022 04:33
1,2,4-Trichlorobenzene	U		60	180	µg/Kg-dry	1	8/10/2022 04:33
1,2,4-Trimethylbenzene	**64**		**39**	**53**	**µg/Kg-dry**	1	8/10/2022 04:33
1,2-Dibromo-3-chloropropane	U		49	180	µg/Kg-dry	1	8/10/2022 04:33
1,2-Dibromoethane	U		15	53	µg/Kg-dry	1	8/10/2022 04:33
1,2-Dichlorobenzene	U		20	53	µg/Kg-dry	1	8/10/2022 04:33
1,2-Dichloroethane	U		80	180	µg/Kg-dry	1	8/10/2022 04:33
1,2-Dichloropropane	U		39	53	µg/Kg-dry	1	8/10/2022 04:33
1,3,5-Trimethylbenzene	U		62	180	µg/Kg-dry	1	8/10/2022 04:33
1,3-Dichlorobenzene	U		18	53	µg/Kg-dry	1	8/10/2022 04:33
1,4-Dichlorobenzene	U		13	53	µg/Kg-dry	1	8/10/2022 04:33
2-Butanone	U		44	350	µg/Kg-dry	1	8/10/2022 04:33
2-Hexanone	U		26	53	µg/Kg-dry	1	8/10/2022 04:33
4-Methyl-2-pentanone	U		50	53	µg/Kg-dry	1	8/10/2022 04:33
Acetone	**190**		**160**	**180**	**µg/Kg-dry**	1	8/10/2022 04:33
Benzene	U		26	53	µg/Kg-dry	1	8/10/2022 04:33
Bromochloromethane	U		27	53	µg/Kg-dry	1	8/10/2022 04:33
Bromodichloromethane	U		30	53	µg/Kg-dry	1	8/10/2022 04:33
Bromoform	U		22	53	µg/Kg-dry	1	8/10/2022 04:33
Bromomethane	U		100	180	µg/Kg-dry	1	8/10/2022 04:33
Carbon disulfide	U		28	53	µg/Kg-dry	1	8/10/2022 04:33
Carbon tetrachloride	U		21	53	µg/Kg-dry	1	8/10/2022 04:33
Chlorobenzene	U		18	53	µg/Kg-dry	1	8/10/2022 04:33
Chloroethane	U		52	180	µg/Kg-dry	1	8/10/2022 04:33
Chloroform	U		19	53	µg/Kg-dry	1	8/10/2022 04:33
Chloromethane	U		150	180	µg/Kg-dry	1	8/10/2022 04:33
cis-1,2-Dichloroethene	U		34	53	µg/Kg-dry	1	8/10/2022 04:33
cis-1,3-Dichloropropene	U		40	53	µg/Kg-dry	1	8/10/2022 04:33
Cyclohexane	**97**	J	**48**	**180**	**µg/Kg-dry**	1	8/10/2022 04:33
Dibromochloromethane	U		30	53	µg/Kg-dry	1	8/10/2022 04:33
Dichlorodifluoromethane	U		64	180	µg/Kg-dry	1	8/10/2022 04:33
Ethylbenzene	**20**	J	**11**	**53**	**µg/Kg-dry**	1	8/10/2022 04:33
Isopropylbenzene	U		16	53	µg/Kg-dry	1	8/10/2022 04:33
m,p-Xylene	**110**	J	**71**	**110**	**µg/Kg-dry**	1	8/10/2022 04:33

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-6 FD (6-8) Grab
Collection Date: 8/1/2022 12:45 PM

Work Order: 22080299
Lab ID: 22080299-08
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	**1,500**		**64**	**440**	**µg/Kg-dry**	1	8/10/2022 04:33
Methyl tert-butyl ether	U		15	53	µg/Kg-dry	1	8/10/2022 04:33
Methylcyclohexane	**290**		**20**	**53**	**µg/Kg-dry**	1	8/10/2022 04:33
Methylene chloride	U		140	440	µg/Kg-dry	1	8/10/2022 04:33
o-Xylene	**83**		**21**	**53**	**µg/Kg-dry**	1	8/10/2022 04:33
Styrene	U		21	53	µg/Kg-dry	1	8/10/2022 04:33
Tetrachloroethene	U		32	53	µg/Kg-dry	1	8/10/2022 04:33
Toluene	**24**	J	**15**	**53**	**µg/Kg-dry**	1	8/10/2022 04:33
trans-1,2-Dichloroethene	U		20	53	µg/Kg-dry	1	8/10/2022 04:33
trans-1,3-Dichloropropene	U		30	53	µg/Kg-dry	1	8/10/2022 04:33
Trichloroethene	U		24	53	µg/Kg-dry	1	8/10/2022 04:33
Trichlorofluoromethane	U		27	53	µg/Kg-dry	1	8/10/2022 04:33
Vinyl chloride	U		35	53	µg/Kg-dry	1	8/10/2022 04:33
1,2-Dichloroethene, Total	U		20	110	µg/Kg-dry	1	8/10/2022 04:33
1,3-Dichloropropene, Total	U		40	110	µg/Kg-dry	1	8/10/2022 04:33
Xylenes, Total	**190**		**71**	**160**	**µg/Kg-dry**	1	8/10/2022 04:33
Surr: 1,2-Dichloroethane-d4	*105*			*80-120*	*%REC*	1	8/10/2022 04:33
Surr: 4-Bromofluorobenzene	*93.7*			*80-120*	*%REC*	1	8/10/2022 04:33
Surr: Dibromofluoromethane	*91.8*			*80-120*	*%REC*	1	8/10/2022 04:33
Surr: Toluene-d8	*94.3*			*80-120*	*%REC*	1	8/10/2022 04:33
MOISTURE		Method: **SW3550C**					Analyst: **ALG**
Moisture	**22**		**0.10**	**0.10**	**% of sample**	1	8/10/2022 14:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-7 (8-10) Grab
Collection Date: 8/2/2022 10:25 AM

Work Order: 22080299
Lab ID: 22080299-09
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 8/9/22		Analyst: **KRA**
Mercury	**0.036**		**0.014**	**0.020**	**mg/Kg-dry**	1	8/10/2022 13:46
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 8/11/22		Analyst: **DSC**
Arsenic	**5.8**		**0.061**	**0.51**	**mg/Kg-dry**	1	8/11/2022 22:57
Barium	**55**		**0.47**	**0.51**	**mg/Kg-dry**	1	8/11/2022 22:57
Cadmium	U		0.031	0.20	mg/Kg-dry	1	8/11/2022 22:57
Chromium	**12**		**0.22**	**0.51**	**mg/Kg-dry**	1	8/11/2022 22:57
Lead	**15**		**0.25**	**0.51**	**mg/Kg-dry**	1	8/11/2022 22:57
Selenium	U		0.47	0.51	mg/Kg-dry	1	8/11/2022 22:57
Silver	U		0.067	0.51	mg/Kg-dry	1	8/11/2022 22:57
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **ALS**
Subcontracted Analyses	**See attached**		**0**		**as noted-dry**	1	8/12/2022
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)		Method: **SW8270E**			Prep: SW3546 / 8/12/22		Analyst: **EEW**
1-Methylnaphthalene	U		4.5	7.5	µg/Kg-dry	1	8/14/2022 20:52
2-Chloronaphthalene	U		5.8	7.5	µg/Kg-dry	1	8/14/2022 20:52
2-Methylnaphthalene	U		5.3	7.5	µg/Kg-dry	1	8/14/2022 20:52
Acenaphthene	U		6.4	7.5	µg/Kg-dry	1	8/14/2022 20:52
Acenaphthylene	U		6.0	7.5	µg/Kg-dry	1	8/14/2022 20:52
Anthracene	U		6.8	7.5	µg/Kg-dry	1	8/14/2022 20:52
Benzo(a)anthracene	U		7.3	7.5	µg/Kg-dry	1	8/14/2022 20:52
Benzo(a)pyrene	U		6.0	7.5	µg/Kg-dry	1	8/14/2022 20:52
Benzo(b)fluoranthene	U		6.4	7.5	µg/Kg-dry	1	8/14/2022 20:52
Benzo(g,h,i)perylene	U		4.3	7.5	µg/Kg-dry	1	8/14/2022 20:52
Benzo(k)fluoranthene	U		6.2	7.5	µg/Kg-dry	1	8/14/2022 20:52
Chrysene	U		6.9	7.5	µg/Kg-dry	1	8/14/2022 20:52
Dibenzo(a,h)anthracene	U		6.1	7.5	µg/Kg-dry	1	8/14/2022 20:52
Fluoranthene	U		6.0	7.5	µg/Kg-dry	1	8/14/2022 20:52
Fluorene	U		5.9	7.5	µg/Kg-dry	1	8/14/2022 20:52
Indeno(1,2,3-cd)pyrene	U		6.6	7.5	µg/Kg-dry	1	8/14/2022 20:52
Naphthalene	U		7.3	7.5	µg/Kg-dry	1	8/14/2022 20:52
Phenanthrene	U		4.6	7.5	µg/Kg-dry	1	8/14/2022 20:52
Pyrene	U		7.2	7.5	µg/Kg-dry	1	8/14/2022 20:52
Surr: 2-Fluorobiphenyl	*78.2*			*20-140*	*%REC*	1	8/14/2022 20:52
Surr: 4-Terphenyl-d14	*37.1*			*22-172*	*%REC*	1	8/14/2022 20:52
Surr: Nitrobenzene-d5	*43.9*			*28-140*	*%REC*	1	8/14/2022 20:52
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**			Prep: SW5035A / 8/5/22		Analyst: **HJ**
1,1,1-Trichloroethane	U		18	39	µg/Kg-dry	1	8/10/2022 04:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-7 (8-10) Grab
Collection Date: 8/2/2022 10:25 AM

Work Order: 22080299
Lab ID: 22080299-09
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2,2-Tetrachloroethane	U		17	39	µg/Kg-dry	1	8/10/2022 04:50
1,1,2-Trichloroethane	U		16	39	µg/Kg-dry	1	8/10/2022 04:50
1,1,2-Trichlorotrifluoroethane	U		25	39	µg/Kg-dry	1	8/10/2022 04:50
1,1-Dichloroethane	U		14	39	µg/Kg-dry	1	8/10/2022 04:50
1,1-Dichloroethene	U		13	39	µg/Kg-dry	1	8/10/2022 04:50
1,2,3-Trichlorobenzene	U		46	130	µg/Kg-dry	1	8/10/2022 04:50
1,2,3-Trichloropropane	U		16	39	µg/Kg-dry	1	8/10/2022 04:50
1,2,4-Trichlorobenzene	U		44	130	µg/Kg-dry	1	8/10/2022 04:50
1,2,4-Trimethylbenzene	U		28	39	µg/Kg-dry	1	8/10/2022 04:50
1,2-Dibromo-3-chloropropane	U		36	130	µg/Kg-dry	1	8/10/2022 04:50
1,2-Dibromoethane	U		11	39	µg/Kg-dry	1	8/10/2022 04:50
1,2-Dichlorobenzene	U		15	39	µg/Kg-dry	1	8/10/2022 04:50
1,2-Dichloroethane	U		58	130	µg/Kg-dry	1	8/10/2022 04:50
1,2-Dichloropropane	U		29	39	µg/Kg-dry	1	8/10/2022 04:50
1,3,5-Trimethylbenzene	U		45	130	µg/Kg-dry	1	8/10/2022 04:50
1,3-Dichlorobenzene	U		13	39	µg/Kg-dry	1	8/10/2022 04:50
1,4-Dichlorobenzene	U		9.3	39	µg/Kg-dry	1	8/10/2022 04:50
2-Butanone	U		32	260	µg/Kg-dry	1	8/10/2022 04:50
2-Hexanone	U		19	39	µg/Kg-dry	1	8/10/2022 04:50
4-Methyl-2-pentanone	U		36	39	µg/Kg-dry	1	8/10/2022 04:50
Acetone	**470**		**110**	**130**	**µg/Kg-dry**	1	8/10/2022 04:50
Benzene	U		19	39	µg/Kg-dry	1	8/10/2022 04:50
Bromochloromethane	U		20	39	µg/Kg-dry	1	8/10/2022 04:50
Bromodichloromethane	U		22	39	µg/Kg-dry	1	8/10/2022 04:50
Bromoform	U		16	39	µg/Kg-dry	1	8/10/2022 04:50
Bromomethane	U		74	130	µg/Kg-dry	1	8/10/2022 04:50
Carbon disulfide	U		20	39	µg/Kg-dry	1	8/10/2022 04:50
Carbon tetrachloride	U		15	39	µg/Kg-dry	1	8/10/2022 04:50
Chlorobenzene	U		13	39	µg/Kg-dry	1	8/10/2022 04:50
Chloroethane	U		38	130	µg/Kg-dry	1	8/10/2022 04:50
Chloroform	U		14	39	µg/Kg-dry	1	8/10/2022 04:50
Chloromethane	U		110	130	µg/Kg-dry	1	8/10/2022 04:50
cis-1,2-Dichloroethene	U		25	39	µg/Kg-dry	1	8/10/2022 04:50
cis-1,3-Dichloropropene	U		29	39	µg/Kg-dry	1	8/10/2022 04:50
Cyclohexane	U		35	130	µg/Kg-dry	1	8/10/2022 04:50
Dibromochloromethane	U		22	39	µg/Kg-dry	1	8/10/2022 04:50
Dichlorodifluoromethane	U		47	130	µg/Kg-dry	1	8/10/2022 04:50
Ethylbenzene	U		8.2	39	µg/Kg-dry	1	8/10/2022 04:50
Isopropylbenzene	U		12	39	µg/Kg-dry	1	8/10/2022 04:50
m,p-Xylene	U		52	77	µg/Kg-dry	1	8/10/2022 04:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *19-Aug-22*

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-7 (8-10) Grab
Collection Date: 8/2/2022 10:25 AM

Work Order: 22080299
Lab ID: 22080299-09
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	**5,600**		**46**	**320**	**µg/Kg-dry**	1	8/10/2022 04:50
Methyl tert-butyl ether	U		11	39	µg/Kg-dry	1	8/10/2022 04:50
Methylcyclohexane	U		15	39	µg/Kg-dry	1	8/10/2022 04:50
Methylene chloride	U		100	320	µg/Kg-dry	1	8/10/2022 04:50
o-Xylene	U		15	39	µg/Kg-dry	1	8/10/2022 04:50
Styrene	U		15	39	µg/Kg-dry	1	8/10/2022 04:50
Tetrachloroethene	U		23	39	µg/Kg-dry	1	8/10/2022 04:50
Toluene	U		11	39	µg/Kg-dry	1	8/10/2022 04:50
trans-1,2-Dichloroethene	U		14	39	µg/Kg-dry	1	8/10/2022 04:50
trans-1,3-Dichloropropene	U		22	39	µg/Kg-dry	1	8/10/2022 04:50
Trichloroethene	U		17	39	µg/Kg-dry	1	8/10/2022 04:50
Trichlorofluoromethane	U		20	39	µg/Kg-dry	1	8/10/2022 04:50
Vinyl chloride	U		26	39	µg/Kg-dry	1	8/10/2022 04:50
1,2-Dichloroethene, Total	U		14	77	µg/Kg-dry	1	8/10/2022 04:50
1,3-Dichloropropene, Total	U		29	77	µg/Kg-dry	1	8/10/2022 04:50
Xylenes, Total	U		52	120	µg/Kg-dry	1	8/10/2022 04:50
Surr: 1,2-Dichloroethane-d4	*105*			*80-120*	*%REC*	1	8/10/2022 04:50
Surr: 4-Bromofluorobenzene	*96.4*			*80-120*	*%REC*	1	8/10/2022 04:50
Surr: Dibromofluoromethane	*89.3*			*80-120*	*%REC*	1	8/10/2022 04:50
Surr: Toluene-d8	*97.6*			*80-120*	*%REC*	1	8/10/2022 04:50
MOISTURE		Method: **SW3550C**					Analyst: **ALG**
Moisture	**19**		**0.10**	**0.10**	**% of sample**	1	8/10/2022 14:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *19-Aug-22*

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-8 (6-8) Grab
Collection Date: 8/1/2022 02:00 PM

Work Order: 22080299
Lab ID: 22080299-10
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 8/9/22		Analyst: **KRA**
Mercury	**0.036**		**0.013**	**0.020**	**mg/Kg-dry**	1	8/10/2022 13:48
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 8/11/22		Analyst: **DSC**
Arsenic	**7.9**		**0.054**	**0.45**	**mg/Kg-dry**	1	8/11/2022 22:58
Barium	**150**		**0.41**	**0.45**	**mg/Kg-dry**	1	8/11/2022 22:58
Cadmium	**0.032**	J	**0.027**	**0.18**	**mg/Kg-dry**	1	8/11/2022 22:58
Chromium	**19**		**0.20**	**0.45**	**mg/Kg-dry**	1	8/11/2022 22:58
Lead	**15**		**0.22**	**0.45**	**mg/Kg-dry**	1	8/11/2022 22:58
Selenium	**0.64**		**0.41**	**0.45**	**mg/Kg-dry**	1	8/11/2022 22:58
Silver	U		0.059	0.45	mg/Kg-dry	1	8/11/2022 22:58
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **ALS**
Subcontracted Analyses	**See attached**		**0**		**as noted-dry**	1	8/12/2022
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)		Method: **SW8270E**			Prep: SW3546 / 8/15/22		Analyst: **SJB**
1-Methylnaphthalene	U		36	60	µg/Kg-dry	1	8/15/2022 20:39
2-Chloronaphthalene	U		46	60	µg/Kg-dry	1	8/15/2022 20:39
2-Methylnaphthalene	U		42	60	µg/Kg-dry	1	8/15/2022 20:39
Acenaphthene	U		51	60	µg/Kg-dry	1	8/15/2022 20:39
Acenaphthylene	U		48	60	µg/Kg-dry	1	8/15/2022 20:39
Anthracene	U		54	60	µg/Kg-dry	1	8/15/2022 20:39
Benzo(a)anthracene	U		58	60	µg/Kg-dry	1	8/15/2022 20:39
Benzo(a)pyrene	U		48	60	µg/Kg-dry	1	8/15/2022 20:39
Benzo(b)fluoranthene	U		51	60	µg/Kg-dry	1	8/15/2022 20:39
Benzo(g,h,i)perylene	U		34	60	µg/Kg-dry	1	8/15/2022 20:39
Benzo(k)fluoranthene	U		49	60	µg/Kg-dry	1	8/15/2022 20:39
Chrysene	U		55	60	µg/Kg-dry	1	8/15/2022 20:39
Dibenzo(a,h)anthracene	U		48	60	µg/Kg-dry	1	8/15/2022 20:39
Fluoranthene	U		47	60	µg/Kg-dry	1	8/15/2022 20:39
Fluorene	U		47	60	µg/Kg-dry	1	8/15/2022 20:39
Indeno(1,2,3-cd)pyrene	U		52	60	µg/Kg-dry	1	8/15/2022 20:39
Naphthalene	U		58	60	µg/Kg-dry	1	8/15/2022 20:39
Phenanthrene	U		37	60	µg/Kg-dry	1	8/15/2022 20:39
Pyrene	U		57	60	µg/Kg-dry	1	8/15/2022 20:39
Surr: 2-Fluorobiphenyl	*92.8*			*20-140*	*%REC*	1	8/15/2022 20:39
Surr: 4-Terphenyl-d14	*85.0*			*22-172*	*%REC*	1	8/15/2022 20:39
Surr: Nitrobenzene-d5	*79.6*			*28-140*	*%REC*	1	8/15/2022 20:39
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**			Prep: SW5035A / 8/5/22		Analyst: **HJ**
1,1,1-Trichloroethane	U		19	42	µg/Kg-dry	1	8/10/2022 05:07

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-8 (6-8) Grab
Collection Date: 8/1/2022 02:00 PM

Work Order: 22080299
Lab ID: 22080299-10
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2,2-Tetrachloroethane	U		19	42	µg/Kg-dry	1	8/10/2022 05:07
1,1,2-Trichloroethane	U		18	42	µg/Kg-dry	1	8/10/2022 05:07
1,1,2-Trichlorotrifluoroethane	U		27	42	µg/Kg-dry	1	8/10/2022 05:07
1,1-Dichloroethane	U		15	42	µg/Kg-dry	1	8/10/2022 05:07
1,1-Dichloroethene	U		14	42	µg/Kg-dry	1	8/10/2022 05:07
1,2,3-Trichlorobenzene	U		50	140	µg/Kg-dry	1	8/10/2022 05:07
1,2,3-Trichloropropane	U		18	42	µg/Kg-dry	1	8/10/2022 05:07
1,2,4-Trichlorobenzene	U		48	140	µg/Kg-dry	1	8/10/2022 05:07
1,2,4-Trimethylbenzene	U		31	42	µg/Kg-dry	1	8/10/2022 05:07
1,2-Dibromo-3-chloropropane	U		39	140	µg/Kg-dry	1	8/10/2022 05:07
1,2-Dibromoethane	U		12	42	µg/Kg-dry	1	8/10/2022 05:07
1,2-Dichlorobenzene	U		16	42	µg/Kg-dry	1	8/10/2022 05:07
1,2-Dichloroethane	U		63	140	µg/Kg-dry	1	8/10/2022 05:07
1,2-Dichloropropane	U		31	42	µg/Kg-dry	1	8/10/2022 05:07
1,3,5-Trimethylbenzene	U		49	140	µg/Kg-dry	1	8/10/2022 05:07
1,3-Dichlorobenzene	U		14	42	µg/Kg-dry	1	8/10/2022 05:07
1,4-Dichlorobenzene	U		10	42	µg/Kg-dry	1	8/10/2022 05:07
2-Butanone	U		34	280	µg/Kg-dry	1	8/10/2022 05:07
2-Hexanone	U		21	42	µg/Kg-dry	1	8/10/2022 05:07
4-Methyl-2-pentanone	U		39	42	µg/Kg-dry	1	8/10/2022 05:07
Acetone	**140**	J	**120**	**140**	**µg/Kg-dry**	1	8/10/2022 05:07
Benzene	U		20	42	µg/Kg-dry	1	8/10/2022 05:07
Bromochloromethane	U		21	42	µg/Kg-dry	1	8/10/2022 05:07
Bromodichloromethane	U		23	42	µg/Kg-dry	1	8/10/2022 05:07
Bromoform	U		18	42	µg/Kg-dry	1	8/10/2022 05:07
Bromomethane	U		80	140	µg/Kg-dry	1	8/10/2022 05:07
Carbon disulfide	U		22	42	µg/Kg-dry	1	8/10/2022 05:07
Carbon tetrachloride	U		16	42	µg/Kg-dry	1	8/10/2022 05:07
Chlorobenzene	U		14	42	µg/Kg-dry	1	8/10/2022 05:07
Chloroethane	U		41	140	µg/Kg-dry	1	8/10/2022 05:07
Chloroform	U		15	42	µg/Kg-dry	1	8/10/2022 05:07
Chloromethane	U		110	140	µg/Kg-dry	1	8/10/2022 05:07
cis-1,2-Dichloroethene	U		27	42	µg/Kg-dry	1	8/10/2022 05:07
cis-1,3-Dichloropropene	U		32	42	µg/Kg-dry	1	8/10/2022 05:07
Cyclohexane	U		38	140	µg/Kg-dry	1	8/10/2022 05:07
Dibromochloromethane	U		24	42	µg/Kg-dry	1	8/10/2022 05:07
Dichlorodifluoromethane	U		51	140	µg/Kg-dry	1	8/10/2022 05:07
Ethylbenzene	U		8.8	42	µg/Kg-dry	1	8/10/2022 05:07
Isopropylbenzene	U		13	42	µg/Kg-dry	1	8/10/2022 05:07
m,p-Xylene	U		56	84	µg/Kg-dry	1	8/10/2022 05:07

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *19-Aug-22*

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: SB-8 (6-8) Grab
Collection Date: 8/1/2022 02:00 PM

Work Order: 22080299
Lab ID: 22080299-10
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	**1,000**		**50**	**350**	**µg/Kg-dry**	1	8/10/2022 05:07
Methyl tert-butyl ether	U		12	42	µg/Kg-dry	1	8/10/2022 05:07
Methylcyclohexane	U		16	42	µg/Kg-dry	1	8/10/2022 05:07
Methylene chloride	U		110	350	µg/Kg-dry	1	8/10/2022 05:07
o-Xylene	U		16	42	µg/Kg-dry	1	8/10/2022 05:07
Styrene	U		17	42	µg/Kg-dry	1	8/10/2022 05:07
Tetrachloroethene	U		25	42	µg/Kg-dry	1	8/10/2022 05:07
Toluene	U		11	42	µg/Kg-dry	1	8/10/2022 05:07
trans-1,2-Dichloroethene	U		15	42	µg/Kg-dry	1	8/10/2022 05:07
trans-1,3-Dichloropropene	U		23	42	µg/Kg-dry	1	8/10/2022 05:07
Trichloroethene	U		19	42	µg/Kg-dry	1	8/10/2022 05:07
Trichlorofluoromethane	U		21	42	µg/Kg-dry	1	8/10/2022 05:07
Vinyl chloride	U		28	42	µg/Kg-dry	1	8/10/2022 05:07
1,2-Dichloroethene, Total	U		15	84	µg/Kg-dry	1	8/10/2022 05:07
1,3-Dichloropropene, Total	U		32	84	µg/Kg-dry	1	8/10/2022 05:07
Xylenes, Total	U		56	130	µg/Kg-dry	1	8/10/2022 05:07
Surr: 1,2-Dichloroethane-d4	*106*			*80-120*	*%REC*	1	8/10/2022 05:07
Surr: 4-Bromofluorobenzene	*98.4*			*80-120*	*%REC*	1	8/10/2022 05:07
Surr: Dibromofluoromethane	*93.3*			*80-120*	*%REC*	1	8/10/2022 05:07
Surr: Toluene-d8	*97.6*			*80-120*	*%REC*	1	8/10/2022 05:07
MOISTURE		Method: **SW3550C**					Analyst: **ALG**
Moisture	**17**		**0.10**	**0.10**	**% of sample**	1	8/10/2022 14:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: GW-1 Grab
Collection Date: 8/2/2022 12:30 PM

Work Order: 22080299
Lab ID: 22080299-11
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA (DISSOLVED)		Method: **SW7470A**			Prep: SW7470 / 8/8/22		Analyst: **KRA**
Mercury	U		0.00016	0.00020	mg/L	1	8/9/2022 10:59
METALS BY ICP-MS (DISSOLVED)		Method: **SW6020B**			Prep: SW3005A / 8/17/22		Analyst: **STP**
Arsenic	**0.016**		**0.00019**	**0.0050**	**mg/L**	1	8/17/2022 15:40
Barium	**0.081**		**0.0020**	**0.0050**	**mg/L**	1	8/17/2022 15:40
Cadmium	U		0.00015	0.0020	mg/L	1	8/17/2022 15:40
Chromium	**0.0056**		**0.0012**	**0.0050**	**mg/L**	1	8/17/2022 15:40
Lead	**0.0048**	J	**0.00072**	**0.0050**	**mg/L**	1	8/18/2022 13:43
Selenium	**0.0033**	J	**0.00048**	**0.0050**	**mg/L**	1	8/17/2022 15:40
Silver	U		0.00084	0.0050	mg/L	1	8/17/2022 15:40
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **ALS**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	8/12/2022
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS) - SIM		Method: **SW8270E**			Prep: SW3510 / 8/9/22		Analyst: **EE**
Acenaphthene	U		0.013	0.026	µg/L	1	8/12/2022 01:29
Acenaphthylene	U		0.0052	0.026	µg/L	1	8/12/2022 01:29
Anthracene	**0.032**		**0.0055**	**0.026**	**µg/L**	1	8/12/2022 01:29
Benzo(a)anthracene	**0.075**		**0.0097**	**0.026**	**µg/L**	1	8/12/2022 01:29
Benzo(a)pyrene	**0.071**		**0.0085**	**0.026**	**µg/L**	1	8/12/2022 01:29
Benzo(b)fluoranthene	**0.071**		**0.0085**	**0.026**	**µg/L**	1	8/12/2022 01:29
Benzo(g,h,i)perylene	**0.059**		**0.0079**	**0.042**	**µg/L**	1	8/12/2022 01:29
Benzo(k)fluoranthene	U		0.0060	0.026	µg/L	1	8/12/2022 01:29
Chrysene	**0.076**		**0.0035**	**0.026**	**µg/L**	1	8/12/2022 01:29
Dibenzo(a,h)anthracene	**0.023**	J	**0.013**	**0.026**	**µg/L**	1	8/12/2022 01:29
Fluoranthene	**0.078**		**0.0070**	**0.026**	**µg/L**	1	8/12/2022 01:29
Fluorene	**0.011**	J	**0.011**	**0.026**	**µg/L**	1	8/12/2022 01:29
Indeno(1,2,3-cd)pyrene	**0.052**		**0.013**	**0.026**	**µg/L**	1	8/12/2022 01:29
Naphthalene	**0.066**	B	**0.024**	**0.026**	**µg/L**	1	8/12/2022 01:29
Phenanthrene	**0.14**		**0.0069**	**0.042**	**µg/L**	1	8/12/2022 01:29
Pyrene	**0.075**		**0.0062**	**0.026**	**µg/L**	1	8/12/2022 01:29
Surr: 2-Fluorobiphenyl	*75.6*			*10-112*	*%REC*	1	8/12/2022 01:29
Surr: 4-Terphenyl-d14	*66.7*			*10-132*	*%REC*	1	8/12/2022 01:29
Surr: Nitrobenzene-d5	*77.0*			*15-110*	*%REC*	1	8/12/2022 01:29
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**					Analyst: **HJ**
1,1,1-Trichloroethane	U		0.46	1.0	µg/L	1	8/10/2022 12:55
1,1,2,2-Tetrachloroethane	U		0.40	1.0	µg/L	1	8/10/2022 12:55
1,1,2-Trichloroethane	U		0.46	1.0	µg/L	1	8/10/2022 12:55

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: GW-1 Grab
Collection Date: 8/2/2022 12:30 PM

Work Order: 22080299
Lab ID: 22080299-11
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2-Trichlorotrifluoroethane	U		0.52	1.0	µg/L	1	8/10/2022 12:55
1,1-Dichloroethane	U		0.44	1.0	µg/L	1	8/10/2022 12:55
1,1-Dichloroethene	U		0.40	1.0	µg/L	1	8/10/2022 12:55
1,2,3-Trichlorobenzene	U		0.42	1.0	µg/L	1	8/10/2022 12:55
1,2,3-Trichloropropane	U		0.40	1.0	µg/L	1	8/10/2022 12:55
1,2,4-Trichlorobenzene	U		0.45	1.0	µg/L	1	8/10/2022 12:55
1,2,4-Trimethylbenzene	U		0.45	1.0	µg/L	1	8/10/2022 12:55
1,2-Dibromo-3-chloropropane	U		0.43	1.0	µg/L	1	8/10/2022 12:55
1,2-Dibromoethane	U		0.41	1.0	µg/L	1	8/10/2022 12:55
1,2-Dichlorobenzene	U		0.32	1.0	µg/L	1	8/10/2022 12:55
1,2-Dichloroethane	U		0.44	1.0	µg/L	1	8/10/2022 12:55
1,2-Dichloropropane	U		0.48	1.0	µg/L	1	8/10/2022 12:55
1,3,5-Trimethylbenzene	U		0.65	1.0	µg/L	1	8/10/2022 12:55
1,3-Dichlorobenzene	U		0.33	1.0	µg/L	1	8/10/2022 12:55
1,4-Dichlorobenzene	U		0.35	1.0	µg/L	1	8/10/2022 12:55
2-Butanone	U		0.52	5.0	µg/L	1	8/10/2022 12:55
2-Hexanone	U		0.59	5.0	µg/L	1	8/10/2022 12:55
4-Methyl-2-pentanone	U		0.52	1.0	µg/L	1	8/10/2022 12:55
Acetone	**3.1**	J	**1.1**	**10**	**µg/L**	1	8/10/2022 12:55
Benzene	U		0.46	1.0	µg/L	1	8/10/2022 12:55
Bromochloromethane	U		0.45	1.0	µg/L	1	8/10/2022 12:55
Bromodichloromethane	U		0.49	1.0	µg/L	1	8/10/2022 12:55
Bromoform	U		0.56	1.0	µg/L	1	8/10/2022 12:55
Bromomethane	U		0.90	1.0	µg/L	1	8/10/2022 12:55
Carbon disulfide	U		0.49	1.0	µg/L	1	8/10/2022 12:55
Carbon tetrachloride	U		0.40	1.0	µg/L	1	8/10/2022 12:55
Chlorobenzene	U		0.40	1.0	µg/L	1	8/10/2022 12:55
Chloroethane	U		0.68	1.0	µg/L	1	8/10/2022 12:55
Chloroform	U		0.46	1.0	µg/L	1	8/10/2022 12:55
Chloromethane	U		0.83	1.0	µg/L	1	8/10/2022 12:55
cis-1,2-Dichloroethene	**3.9**		**0.42**	**1.0**	**µg/L**	1	8/10/2022 12:55
cis-1,3-Dichloropropene	U		0.57	1.0	µg/L	1	8/10/2022 12:55
Cyclohexane	U		0.63	2.0	µg/L	1	8/10/2022 12:55
Dibromochloromethane	U		0.40	1.0	µg/L	1	8/10/2022 12:55
Dichlorodifluoromethane	U		0.68	1.0	µg/L	1	8/10/2022 12:55
Ethylbenzene	U		0.34	1.0	µg/L	1	8/10/2022 12:55
Isopropylbenzene	U		0.35	1.0	µg/L	1	8/10/2022 12:55
m,p-Xylene	U		0.81	2.0	µg/L	1	8/10/2022 12:55
Methyl acetate	U		0.59	2.0	µg/L	1	8/10/2022 12:55
Methyl tert-butyl ether	U		0.45	1.0	µg/L	1	8/10/2022 12:55

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: GW-1 Grab
Collection Date: 8/2/2022 12:30 PM

Work Order: 22080299
Lab ID: 22080299-11
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		0.35	1.0	µg/L	1	8/10/2022 12:55
Methylene chloride	U		0.86	5.0	µg/L	1	8/10/2022 12:55
o-Xylene	U		0.31	1.0	µg/L	1	8/10/2022 12:55
Styrene	U		0.33	1.0	µg/L	1	8/10/2022 12:55
Tetrachloroethene	U		0.39	1.0	µg/L	1	8/10/2022 12:55
Toluene	U		0.45	1.0	µg/L	1	8/10/2022 12:55
trans-1,2-Dichloroethene	U		0.48	1.0	µg/L	1	8/10/2022 12:55
trans-1,3-Dichloropropene	U		0.38	1.0	µg/L	1	8/10/2022 12:55
Trichloroethene	**2.1**		**0.43**	**1.0**	**µg/L**	1	8/10/2022 12:55
Trichlorofluoromethane	U		0.52	1.0	µg/L	1	8/10/2022 12:55
Vinyl chloride	U		0.53	1.0	µg/L	1	8/10/2022 12:55
1,2-Dichloroethene, Total	**3.9**		**0.48**	**2.0**	**µg/L**	1	8/10/2022 12:55
1,3-Dichloropropene, Total	U		0.57	2.0	µg/L	1	8/10/2022 12:55
Xylenes, Total	U		0.81	2.0	µg/L	1	8/10/2022 12:55
Surr: 1,2-Dichloroethane-d4	*108*			*80-120*	*%REC*	1	8/10/2022 12:55
Surr: 4-Bromofluorobenzene	*95.2*			*80-120*	*%REC*	1	8/10/2022 12:55
Surr: Dibromofluoromethane	*106*			*80-120*	*%REC*	1	8/10/2022 12:55
Surr: Toluene-d8	*97.4*			*80-120*	*%REC*	1	8/10/2022 12:55

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: GW-3 Grab
Collection Date: 8/2/2022 01:00 PM

Work Order: 22080299
Lab ID: 22080299-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA (DISSOLVED)		Method: **SW7470A**			Prep: SW7470 / 8/8/22		Analyst: **KRA**
Mercury	U		0.00016	0.00020	mg/L	1	8/9/2022 11:01
METALS BY ICP-MS (DISSOLVED)		Method: **SW6020B**			Prep: SW3005A / 8/10/22		Analyst: **DSC**
Arsenic	**0.00030**	J	**0.00019**	**0.0050**	**mg/L**	1	8/10/2022 13:29
Barium	**0.061**		**0.0020**	**0.0050**	**mg/L**	1	8/10/2022 13:29
Cadmium	U		0.00015	0.0020	mg/L	1	8/10/2022 13:29
Chromium	U		0.0012	0.0050	mg/L	1	8/10/2022 13:29
Lead	U		0.00072	0.0050	mg/L	1	8/10/2022 13:29
Selenium	**0.0025**	J	**0.00048**	**0.0050**	**mg/L**	1	8/10/2022 13:29
Silver	U		0.00084	0.0050	mg/L	1	8/10/2022 13:29
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **ALS**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	8/12/2022
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS) - SIM		Method: **SW8270E**			Prep: SW3510 / 8/9/22		Analyst: **EE**
Acenaphthene	U		0.013	0.026	µg/L	1	8/12/2022 01:50
Acenaphthylene	U		0.0053	0.026	µg/L	1	8/12/2022 01:50
Anthracene	**0.021**	J	**0.0056**	**0.026**	**µg/L**	1	8/12/2022 01:50
Benzo(a)anthracene	**0.037**		**0.0098**	**0.026**	**µg/L**	1	8/12/2022 01:50
Benzo(a)pyrene	U		0.0085	0.026	µg/L	1	8/12/2022 01:50
Benzo(b)fluoranthene	U		0.0085	0.026	µg/L	1	8/12/2022 01:50
Benzo(g,h,i)perylene	U		0.0080	0.042	µg/L	1	8/12/2022 01:50
Benzo(k)fluoranthene	U		0.0060	0.026	µg/L	1	8/12/2022 01:50
Chrysene	**0.024**	J	**0.0035**	**0.026**	**µg/L**	1	8/12/2022 01:50
Dibenzo(a,h)anthracene	U		0.013	0.026	µg/L	1	8/12/2022 01:50
Fluoranthene	**0.088**		**0.0071**	**0.026**	**µg/L**	1	8/12/2022 01:50
Fluorene	**0.014**	J	**0.011**	**0.026**	**µg/L**	1	8/12/2022 01:50
Indeno(1,2,3-cd)pyrene	U		0.013	0.026	µg/L	1	8/12/2022 01:50
Naphthalene	**0.048**	B	**0.024**	**0.026**	**µg/L**	1	8/12/2022 01:50
Phenanthrene	**0.079**		**0.0070**	**0.042**	**µg/L**	1	8/12/2022 01:50
Pyrene	**0.052**		**0.0062**	**0.026**	**µg/L**	1	8/12/2022 01:50
Surr: 2-Fluorobiphenyl	*78.0*			*10-112*	*%REC*	1	8/12/2022 01:50
Surr: 4-Terphenyl-d14	*54.6*			*10-132*	*%REC*	1	8/12/2022 01:50
Surr: Nitrobenzene-d5	*78.6*			*15-110*	*%REC*	1	8/12/2022 01:50
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**					Analyst: **HJ**
1,1,1-Trichloroethane	U		0.46	1.0	µg/L	1	8/10/2022 13:11
1,1,2,2-Tetrachloroethane	U		0.40	1.0	µg/L	1	8/10/2022 13:11
1,1,2-Trichloroethane	U		0.46	1.0	µg/L	1	8/10/2022 13:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: GW-3 Grab
Collection Date: 8/2/2022 01:00 PM

Work Order: 22080299
Lab ID: 22080299-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2-Trichlorotrifluoroethane	U		0.52	1.0	µg/L	1	8/10/2022 13:11
1,1-Dichloroethane	U		0.44	1.0	µg/L	1	8/10/2022 13:11
1,1-Dichloroethene	U		0.40	1.0	µg/L	1	8/10/2022 13:11
1,2,3-Trichlorobenzene	U		0.42	1.0	µg/L	1	8/10/2022 13:11
1,2,3-Trichloropropane	U		0.40	1.0	µg/L	1	8/10/2022 13:11
1,2,4-Trichlorobenzene	U		0.45	1.0	µg/L	1	8/10/2022 13:11
1,2,4-Trimethylbenzene	U		0.45	1.0	µg/L	1	8/10/2022 13:11
1,2-Dibromo-3-chloropropane	U		0.43	1.0	µg/L	1	8/10/2022 13:11
1,2-Dibromoethane	U		0.41	1.0	µg/L	1	8/10/2022 13:11
1,2-Dichlorobenzene	U		0.32	1.0	µg/L	1	8/10/2022 13:11
1,2-Dichloroethane	U		0.44	1.0	µg/L	1	8/10/2022 13:11
1,2-Dichloropropane	U		0.48	1.0	µg/L	1	8/10/2022 13:11
1,3,5-Trimethylbenzene	U		0.65	1.0	µg/L	1	8/10/2022 13:11
1,3-Dichlorobenzene	U		0.33	1.0	µg/L	1	8/10/2022 13:11
1,4-Dichlorobenzene	U		0.35	1.0	µg/L	1	8/10/2022 13:11
2-Butanone	U		0.52	5.0	µg/L	1	8/10/2022 13:11
2-Hexanone	U		0.59	5.0	µg/L	1	8/10/2022 13:11
4-Methyl-2-pentanone	U		0.52	1.0	µg/L	1	8/10/2022 13:11
Acetone	**2.6**	J	**1.1**	**10**	**µg/L**	1	8/10/2022 13:11
Benzene	U		0.46	1.0	µg/L	1	8/10/2022 13:11
Bromochloromethane	U		0.45	1.0	µg/L	1	8/10/2022 13:11
Bromodichloromethane	U		0.49	1.0	µg/L	1	8/10/2022 13:11
Bromoform	U		0.56	1.0	µg/L	1	8/10/2022 13:11
Bromomethane	U		0.90	1.0	µg/L	1	8/10/2022 13:11
Carbon disulfide	U		0.49	1.0	µg/L	1	8/10/2022 13:11
Carbon tetrachloride	U		0.40	1.0	µg/L	1	8/10/2022 13:11
Chlorobenzene	U		0.40	1.0	µg/L	1	8/10/2022 13:11
Chloroethane	U		0.68	1.0	µg/L	1	8/10/2022 13:11
Chloroform	U		0.46	1.0	µg/L	1	8/10/2022 13:11
Chloromethane	U		0.83	1.0	µg/L	1	8/10/2022 13:11
cis-1,2-Dichloroethene	**64**		**0.42**	**1.0**	**µg/L**	1	8/10/2022 13:11
cis-1,3-Dichloropropene	U		0.57	1.0	µg/L	1	8/10/2022 13:11
Cyclohexane	U		0.63	2.0	µg/L	1	8/10/2022 13:11
Dibromochloromethane	U		0.40	1.0	µg/L	1	8/10/2022 13:11
Dichlorodifluoromethane	U		0.68	1.0	µg/L	1	8/10/2022 13:11
Ethylbenzene	U		0.34	1.0	µg/L	1	8/10/2022 13:11
Isopropylbenzene	U		0.35	1.0	µg/L	1	8/10/2022 13:11
m,p-Xylene	U		0.81	2.0	µg/L	1	8/10/2022 13:11
Methyl acetate	U		0.59	2.0	µg/L	1	8/10/2022 13:11
Methyl tert-butyl ether	U		0.45	1.0	µg/L	1	8/10/2022 13:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: GW-3 Grab
Collection Date: 8/2/2022 01:00 PM

Work Order: 22080299
Lab ID: 22080299-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		0.35	1.0	µg/L	1	8/10/2022 13:11
Methylene chloride	U		0.86	5.0	µg/L	1	8/10/2022 13:11
o-Xylene	U		0.31	1.0	µg/L	1	8/10/2022 13:11
Styrene	U		0.33	1.0	µg/L	1	8/10/2022 13:11
Tetrachloroethene	**2.2**		**0.39**	**1.0**	**µg/L**	1	8/10/2022 13:11
Toluene	U		0.45	1.0	µg/L	1	8/10/2022 13:11
trans-1,2-Dichloroethene	**2.8**		**0.48**	**1.0**	**µg/L**	1	8/10/2022 13:11
trans-1,3-Dichloropropene	U		0.38	1.0	µg/L	1	8/10/2022 13:11
Trichloroethene	**8.6**		**0.43**	**1.0**	**µg/L**	1	8/10/2022 13:11
Trichlorofluoromethane	U		0.52	1.0	µg/L	1	8/10/2022 13:11
Vinyl chloride	**5.4**		**0.53**	**1.0**	**µg/L**	1	8/10/2022 13:11
1,2-Dichloroethene, Total	**67**		**0.48**	**2.0**	**µg/L**	1	8/10/2022 13:11
1,3-Dichloropropene, Total	U		0.57	2.0	µg/L	1	8/10/2022 13:11
Xylenes, Total	U		0.81	2.0	µg/L	1	8/10/2022 13:11
Surr: 1,2-Dichloroethane-d4	*105*			*80-120*	*%REC*	1	8/10/2022 13:11
Surr: 4-Bromofluorobenzene	*93.8*			*80-120*	*%REC*	1	8/10/2022 13:11
Surr: Dibromofluoromethane	*103*			*80-120*	*%REC*	1	8/10/2022 13:11
Surr: Toluene-d8	*95.6*			*80-120*	*%REC*	1	8/10/2022 13:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: GW-4 Grab
Collection Date: 8/2/2022 11:15 AM

Work Order: 22080299
Lab ID: 22080299-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA (DISSOLVED)		Method: **SW7470A**			Prep: SW7470 / 8/8/22		Analyst: **KRA**
Mercury	U		0.00016	0.00020	mg/L	1	8/9/2022 11:02
METALS BY ICP-MS (DISSOLVED)		Method: **SW6020B**			Prep: SW3005A / 8/17/22		Analyst: **STP**
Arsenic	**0.0024**	J	**0.00019**	**0.0050**	**mg/L**	1	8/17/2022 15:42
Barium	**0.90**		**0.0020**	**0.0050**	**mg/L**	1	8/17/2022 15:42
Cadmium	U		0.00015	0.0020	mg/L	1	8/17/2022 15:42
Chromium	U		0.0012	0.0050	mg/L	1	8/17/2022 15:42
Lead	U		0.00072	0.0050	mg/L	1	8/18/2022 13:45
Selenium	U		0.00048	0.0050	mg/L	1	8/17/2022 15:42
Silver	U		0.00084	0.0050	mg/L	1	8/17/2022 15:42
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **ALS**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	8/12/2022
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS) - SIM		Method: **SW8270E**			Prep: SW3510 / 8/9/22		Analyst: **EE**
Acenaphthene	**3.6**		**0.013**	**0.026**	**µg/L**	1	8/11/2022 19:31
Acenaphthylene	**0.038**		**0.0052**	**0.026**	**µg/L**	1	8/11/2022 19:31
Anthracene	**0.14**		**0.0055**	**0.026**	**µg/L**	1	8/11/2022 19:31
Benzo(a)anthracene	**0.082**		**0.0097**	**0.026**	**µg/L**	1	8/11/2022 19:31
Benzo(a)pyrene	**0.066**		**0.0085**	**0.026**	**µg/L**	1	8/11/2022 19:31
Benzo(b)fluoranthene	**0.080**		**0.0085**	**0.026**	**µg/L**	1	8/11/2022 19:31
Benzo(g,h,i)perylene	**0.043**		**0.0079**	**0.042**	**µg/L**	1	8/11/2022 19:31
Benzo(k)fluoranthene	**0.040**		**0.0059**	**0.026**	**µg/L**	1	8/11/2022 19:31
Chrysene	**0.075**		**0.0034**	**0.026**	**µg/L**	1	8/11/2022 19:31
Dibenzo(a,h)anthracene	U		0.013	0.026	µg/L	1	8/11/2022 19:31
Fluoranthene	**0.43**		**0.0070**	**0.026**	**µg/L**	1	8/11/2022 19:31
Fluorene	**1.4**		**0.011**	**0.026**	**µg/L**	1	8/11/2022 19:31
Indeno(1,2,3-cd)pyrene	**0.062**		**0.013**	**0.026**	**µg/L**	1	8/11/2022 19:31
Naphthalene	**9.5**	B	**0.24**	**0.26**	**µg/L**	10	8/12/2022 19:50
Phenanthrene	**0.56**		**0.0069**	**0.042**	**µg/L**	1	8/11/2022 19:31
Pyrene	**0.23**		**0.0062**	**0.026**	**µg/L**	1	8/11/2022 19:31
Surr: 2-Fluorobiphenyl	*62.2*			*10-112*	*%REC*	1	8/11/2022 19:31
Surr: 4-Terphenyl-d14	*60.1*			*10-132*	*%REC*	1	8/11/2022 19:31
Surr: Nitrobenzene-d5	*60.1*			*15-110*	*%REC*	1	8/11/2022 19:31
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**					Analyst: **HJ**
1,1,1-Trichloroethane	U		0.46	1.0	µg/L	1	8/10/2022 02:04
1,1,2,2-Tetrachloroethane	U		0.40	1.0	µg/L	1	8/10/2022 02:04
1,1,2-Trichloroethane	U		0.46	1.0	µg/L	1	8/10/2022 02:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: GW-4 Grab
Collection Date: 8/2/2022 11:15 AM

Work Order: 22080299
Lab ID: 22080299-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2-Trichlorotrifluoroethane	U		0.52	1.0	µg/L	1	8/10/2022 02:04
1,1-Dichloroethane	U		0.44	1.0	µg/L	1	8/10/2022 02:04
1,1-Dichloroethene	U		0.40	1.0	µg/L	1	8/10/2022 02:04
1,2,3-Trichlorobenzene	U		0.42	1.0	µg/L	1	8/10/2022 02:04
1,2,3-Trichloropropane	U		0.40	1.0	µg/L	1	8/10/2022 02:04
1,2,4-Trichlorobenzene	U		0.45	1.0	µg/L	1	8/10/2022 02:04
1,2,4-Trimethylbenzene	U		0.45	1.0	µg/L	1	8/10/2022 02:04
1,2-Dibromo-3-chloropropane	U		0.43	1.0	µg/L	1	8/10/2022 02:04
1,2-Dibromoethane	U		0.41	1.0	µg/L	1	8/10/2022 02:04
1,2-Dichlorobenzene	U		0.32	1.0	µg/L	1	8/10/2022 02:04
1,2-Dichloroethane	U		0.44	1.0	µg/L	1	8/10/2022 02:04
1,2-Dichloropropane	U		0.48	1.0	µg/L	1	8/10/2022 02:04
1,3,5-Trimethylbenzene	U		0.65	1.0	µg/L	1	8/10/2022 02:04
1,3-Dichlorobenzene	U		0.33	1.0	µg/L	1	8/10/2022 02:04
1,4-Dichlorobenzene	U		0.35	1.0	µg/L	1	8/10/2022 02:04
2-Butanone	U		0.52	5.0	µg/L	1	8/10/2022 02:04
2-Hexanone	U		0.59	5.0	µg/L	1	8/10/2022 02:04
4-Methyl-2-pentanone	U		0.52	1.0	µg/L	1	8/10/2022 02:04
Acetone	**5.3**	J	**1.1**	**10**	**µg/L**	1	8/10/2022 02:04
Benzene	U		0.46	1.0	µg/L	1	8/10/2022 02:04
Bromochloromethane	U		0.45	1.0	µg/L	1	8/10/2022 02:04
Bromodichloromethane	U		0.49	1.0	µg/L	1	8/10/2022 02:04
Bromoform	U		0.56	1.0	µg/L	1	8/10/2022 02:04
Bromomethane	U		0.90	1.0	µg/L	1	8/10/2022 02:04
Carbon disulfide	U		0.49	1.0	µg/L	1	8/10/2022 02:04
Carbon tetrachloride	U		0.40	1.0	µg/L	1	8/10/2022 02:04
Chlorobenzene	U		0.40	1.0	µg/L	1	8/10/2022 02:04
Chloroethane	U		0.68	1.0	µg/L	1	8/10/2022 02:04
Chloroform	U		0.46	1.0	µg/L	1	8/10/2022 02:04
Chloromethane	U		0.83	1.0	µg/L	1	8/10/2022 02:04
cis-1,2-Dichloroethene	U		0.42	1.0	µg/L	1	8/10/2022 02:04
cis-1,3-Dichloropropene	U		0.57	1.0	µg/L	1	8/10/2022 02:04
Cyclohexane	U		0.63	2.0	µg/L	1	8/10/2022 02:04
Dibromochloromethane	U		0.40	1.0	µg/L	1	8/10/2022 02:04
Dichlorodifluoromethane	U		0.68	1.0	µg/L	1	8/10/2022 02:04
Ethylbenzene	U		0.34	1.0	µg/L	1	8/10/2022 02:04
Isopropylbenzene	U		0.35	1.0	µg/L	1	8/10/2022 02:04
m,p-Xylene	U		0.81	2.0	µg/L	1	8/10/2022 02:04
Methyl acetate	U		0.59	2.0	µg/L	1	8/10/2022 02:04
Methyl tert-butyl ether	U		0.45	1.0	µg/L	1	8/10/2022 02:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: GW-4 Grab
Collection Date: 8/2/2022 11:15 AM

Work Order: 22080299
Lab ID: 22080299-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		0.35	1.0	µg/L	1	8/10/2022 02:04
Methylene chloride	U		0.86	5.0	µg/L	1	8/10/2022 02:04
o-Xylene	U		0.31	1.0	µg/L	1	8/10/2022 02:04
Styrene	U		0.33	1.0	µg/L	1	8/10/2022 02:04
Tetrachloroethene	U		0.39	1.0	µg/L	1	8/10/2022 02:04
Toluene	U		0.45	1.0	µg/L	1	8/10/2022 02:04
trans-1,2-Dichloroethene	U		0.48	1.0	µg/L	1	8/10/2022 02:04
trans-1,3-Dichloropropene	U		0.38	1.0	µg/L	1	8/10/2022 02:04
Trichloroethene	U		0.43	1.0	µg/L	1	8/10/2022 02:04
Trichlorofluoromethane	U		0.52	1.0	µg/L	1	8/10/2022 02:04
Vinyl chloride	U		0.53	1.0	µg/L	1	8/10/2022 02:04
1,2-Dichloroethene, Total	U		0.48	2.0	µg/L	1	8/10/2022 02:04
1,3-Dichloropropene, Total	U		0.57	2.0	µg/L	1	8/10/2022 02:04
Xylenes, Total	U		0.81	2.0	µg/L	1	8/10/2022 02:04
Surr: 1,2-Dichloroethane-d4	*108*			*80-120*	*%REC*	1	8/10/2022 02:04
Surr: 4-Bromofluorobenzene	*96.2*			*80-120*	*%REC*	1	8/10/2022 02:04
Surr: Dibromofluoromethane	*105*			*80-120*	*%REC*	1	8/10/2022 02:04
Surr: Toluene-d8	*97.2*			*80-120*	*%REC*	1	8/10/2022 02:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: GW-4 FD Grab
Collection Date: 8/2/2022 11:15 AM

Work Order: 22080299
Lab ID: 22080299-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA (DISSOLVED)		Method: **SW7470A**			Prep: SW7470 / 8/8/22		Analyst: **KRA**
Mercury	U		0.00016	0.00020	mg/L	1	8/9/2022 11:13
METALS BY ICP-MS (DISSOLVED)		Method: **SW6020B**			Prep: SW3005A / 8/17/22		Analyst: **STP**
Arsenic	**0.0024**	J	**0.00019**	**0.0050**	**mg/L**	1	8/17/2022 15:48
Barium	**0.87**		**0.0020**	**0.0050**	**mg/L**	1	8/17/2022 15:48
Cadmium	U		0.00015	0.0020	mg/L	1	8/17/2022 15:48
Chromium	U		0.0012	0.0050	mg/L	1	8/17/2022 15:48
Lead	U		0.00072	0.0050	mg/L	1	8/18/2022 13:47
Selenium	U		0.00048	0.0050	mg/L	1	8/17/2022 15:48
Silver	U		0.00084	0.0050	mg/L	1	8/17/2022 15:48
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **ALS**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	8/12/2022
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS) - SIM		Method: **SW8270E**			Prep: SW3510 / 8/9/22		Analyst: **EE**
Acenaphthene	**2.2**		**0.013**	**0.026**	**µg/L**	1	8/12/2022 02:10
Acenaphthylene	U		0.0053	0.026	µg/L	1	8/12/2022 02:10
Anthracene	**0.038**		**0.0056**	**0.026**	**µg/L**	1	8/12/2022 02:10
Benzo(a)anthracene	U		0.0098	0.026	µg/L	1	8/12/2022 02:10
Benzo(a)pyrene	U		0.0086	0.026	µg/L	1	8/12/2022 02:10
Benzo(b)fluoranthene	U		0.0086	0.026	µg/L	1	8/12/2022 02:10
Benzo(g,h,i)perylene	U		0.0080	0.042	µg/L	1	8/12/2022 02:10
Benzo(k)fluoranthene	U		0.0060	0.026	µg/L	1	8/12/2022 02:10
Chrysene	U		0.0035	0.026	µg/L	1	8/12/2022 02:10
Dibenzo(a,h)anthracene	U		0.013	0.026	µg/L	1	8/12/2022 02:10
Fluoranthene	**0.13**		**0.0071**	**0.026**	**µg/L**	1	8/12/2022 02:10
Fluorene	**0.58**		**0.011**	**0.026**	**µg/L**	1	8/12/2022 02:10
Indeno(1,2,3-cd)pyrene	U		0.013	0.026	µg/L	1	8/12/2022 02:10
Naphthalene	**5.4**	B	**0.12**	**0.13**	**µg/L**	5	8/12/2022 20:11
Phenanthrene	**0.17**		**0.0070**	**0.042**	**µg/L**	1	8/12/2022 02:10
Pyrene	**0.064**		**0.0062**	**0.026**	**µg/L**	1	8/12/2022 02:10
Surr: 2-Fluorobiphenyl	*58.3*			*10-112*	*%REC*	1	8/12/2022 02:10
Surr: 4-Terphenyl-d14	*51.8*			*10-132*	*%REC*	1	8/12/2022 02:10
Surr: Nitrobenzene-d5	*59.0*			*15-110*	*%REC*	1	8/12/2022 02:10
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**					Analyst: **HJ**
1,1,1-Trichloroethane	U		0.46	1.0	µg/L	1	8/10/2022 02:21
1,1,2,2-Tetrachloroethane	U		0.40	1.0	µg/L	1	8/10/2022 02:21
1,1,2-Trichloroethane	U		0.46	1.0	µg/L	1	8/10/2022 02:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: GW-4 FD Grab
Collection Date: 8/2/2022 11:15 AM

Work Order: 22080299
Lab ID: 22080299-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2-Trichlorotrifluoroethane	U		0.52	1.0	µg/L	1	8/10/2022 02:21
1,1-Dichloroethane	U		0.44	1.0	µg/L	1	8/10/2022 02:21
1,1-Dichloroethene	U		0.40	1.0	µg/L	1	8/10/2022 02:21
1,2,3-Trichlorobenzene	U		0.42	1.0	µg/L	1	8/10/2022 02:21
1,2,3-Trichloropropane	U		0.40	1.0	µg/L	1	8/10/2022 02:21
1,2,4-Trichlorobenzene	U		0.45	1.0	µg/L	1	8/10/2022 02:21
1,2,4-Trimethylbenzene	U		0.45	1.0	µg/L	1	8/10/2022 02:21
1,2-Dibromo-3-chloropropane	U		0.43	1.0	µg/L	1	8/10/2022 02:21
1,2-Dibromoethane	U		0.41	1.0	µg/L	1	8/10/2022 02:21
1,2-Dichlorobenzene	U		0.32	1.0	µg/L	1	8/10/2022 02:21
1,2-Dichloroethane	U		0.44	1.0	µg/L	1	8/10/2022 02:21
1,2-Dichloropropane	U		0.48	1.0	µg/L	1	8/10/2022 02:21
1,3,5-Trimethylbenzene	U		0.65	1.0	µg/L	1	8/10/2022 02:21
1,3-Dichlorobenzene	U		0.33	1.0	µg/L	1	8/10/2022 02:21
1,4-Dichlorobenzene	U		0.35	1.0	µg/L	1	8/10/2022 02:21
2-Butanone	**0.63**	J	**0.52**	**5.0**	**µg/L**	1	8/10/2022 02:21
2-Hexanone	U		0.59	5.0	µg/L	1	8/10/2022 02:21
4-Methyl-2-pentanone	U		0.52	1.0	µg/L	1	8/10/2022 02:21
Acetone	**6.8**	J	**1.1**	**10**	**µg/L**	1	8/10/2022 02:21
Benzene	U		0.46	1.0	µg/L	1	8/10/2022 02:21
Bromochloromethane	U		0.45	1.0	µg/L	1	8/10/2022 02:21
Bromodichloromethane	U		0.49	1.0	µg/L	1	8/10/2022 02:21
Bromoform	U		0.56	1.0	µg/L	1	8/10/2022 02:21
Bromomethane	U		0.90	1.0	µg/L	1	8/10/2022 02:21
Carbon disulfide	**0.50**	J	**0.49**	**1.0**	**µg/L**	1	8/10/2022 02:21
Carbon tetrachloride	U		0.40	1.0	µg/L	1	8/10/2022 02:21
Chlorobenzene	U		0.40	1.0	µg/L	1	8/10/2022 02:21
Chloroethane	U		0.68	1.0	µg/L	1	8/10/2022 02:21
Chloroform	U		0.46	1.0	µg/L	1	8/10/2022 02:21
Chloromethane	U		0.83	1.0	µg/L	1	8/10/2022 02:21
cis-1,2-Dichloroethene	U		0.42	1.0	µg/L	1	8/10/2022 02:21
cis-1,3-Dichloropropene	U		0.57	1.0	µg/L	1	8/10/2022 02:21
Cyclohexane	U		0.63	2.0	µg/L	1	8/10/2022 02:21
Dibromochloromethane	U		0.40	1.0	µg/L	1	8/10/2022 02:21
Dichlorodifluoromethane	U		0.68	1.0	µg/L	1	8/10/2022 02:21
Ethylbenzene	U		0.34	1.0	µg/L	1	8/10/2022 02:21
Isopropylbenzene	U		0.35	1.0	µg/L	1	8/10/2022 02:21
m,p-Xylene	U		0.81	2.0	µg/L	1	8/10/2022 02:21
Methyl acetate	U		0.59	2.0	µg/L	1	8/10/2022 02:21
Methyl tert-butyl ether	U		0.45	1.0	µg/L	1	8/10/2022 02:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: GW-4 FD Grab
Collection Date: 8/2/2022 11:15 AM

Work Order: 22080299
Lab ID: 22080299-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		0.35	1.0	µg/L	1	8/10/2022 02:21
Methylene chloride	U		0.86	5.0	µg/L	1	8/10/2022 02:21
o-Xylene	U		0.31	1.0	µg/L	1	8/10/2022 02:21
Styrene	U		0.33	1.0	µg/L	1	8/10/2022 02:21
Tetrachloroethene	U		0.39	1.0	µg/L	1	8/10/2022 02:21
Toluene	U		0.45	1.0	µg/L	1	8/10/2022 02:21
trans-1,2-Dichloroethene	U		0.48	1.0	µg/L	1	8/10/2022 02:21
trans-1,3-Dichloropropene	U		0.38	1.0	µg/L	1	8/10/2022 02:21
Trichloroethene	U		0.43	1.0	µg/L	1	8/10/2022 02:21
Trichlorofluoromethane	U		0.52	1.0	µg/L	1	8/10/2022 02:21
Vinyl chloride	U		0.53	1.0	µg/L	1	8/10/2022 02:21
1,2-Dichloroethene, Total	U		0.48	2.0	µg/L	1	8/10/2022 02:21
1,3-Dichloropropene, Total	U		0.57	2.0	µg/L	1	8/10/2022 02:21
Xylenes, Total	U		0.81	2.0	µg/L	1	8/10/2022 02:21
Surr: 1,2-Dichloroethane-d4	*109*			*80-120*	*%REC*	1	8/10/2022 02:21
Surr: 4-Bromofluorobenzene	*96.5*			*80-120*	*%REC*	1	8/10/2022 02:21
Surr: Dibromofluoromethane	*107*			*80-120*	*%REC*	1	8/10/2022 02:21
Surr: Toluene-d8	*98.4*			*80-120*	*%REC*	1	8/10/2022 02:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *19-Aug-22*

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: Trip Blank Grab
Collection Date: 8/1/2022 12:05 PM

Work Order: 22080299
Lab ID: 22080299-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260D**					Analyst: **HJ**
1,1,1-Trichloroethane	U		0.46	1.0	µg/L	1	8/9/2022 23:51
1,1,2,2-Tetrachloroethane	U		0.40	1.0	µg/L	1	8/9/2022 23:51
1,1,2-Trichloroethane	U		0.46	1.0	µg/L	1	8/9/2022 23:51
1,1,2-Trichlorotrifluoroethane	U		0.52	1.0	µg/L	1	8/9/2022 23:51
1,1-Dichloroethane	U		0.44	1.0	µg/L	1	8/9/2022 23:51
1,1-Dichloroethene	U		0.40	1.0	µg/L	1	8/9/2022 23:51
1,2,3-Trichlorobenzene	U		0.42	1.0	µg/L	1	8/9/2022 23:51
1,2,3-Trichloropropane	U		0.40	1.0	µg/L	1	8/9/2022 23:51
1,2,4-Trichlorobenzene	U		0.45	1.0	µg/L	1	8/9/2022 23:51
1,2,4-Trimethylbenzene	U		0.45	1.0	µg/L	1	8/9/2022 23:51
1,2-Dibromo-3-chloropropane	U		0.43	1.0	µg/L	1	8/9/2022 23:51
1,2-Dibromoethane	U		0.41	1.0	µg/L	1	8/9/2022 23:51
1,2-Dichlorobenzene	U		0.32	1.0	µg/L	1	8/9/2022 23:51
1,2-Dichloroethane	U		0.44	1.0	µg/L	1	8/9/2022 23:51
1,2-Dichloropropane	U		0.48	1.0	µg/L	1	8/9/2022 23:51
1,3,5-Trimethylbenzene	U		0.65	1.0	µg/L	1	8/9/2022 23:51
1,3-Dichlorobenzene	U		0.33	1.0	µg/L	1	8/9/2022 23:51
1,4-Dichlorobenzene	U		0.35	1.0	µg/L	1	8/9/2022 23:51
2-Butanone	U		0.52	5.0	µg/L	1	8/9/2022 23:51
2-Hexanone	U		0.59	5.0	µg/L	1	8/9/2022 23:51
4-Methyl-2-pentanone	U		0.52	1.0	µg/L	1	8/9/2022 23:51
Acetone	**4.9**	J	**1.1**	**10**	**µg/L**	1	8/9/2022 23:51
Benzene	U		0.46	1.0	µg/L	1	8/9/2022 23:51
Bromochloromethane	U		0.45	1.0	µg/L	1	8/9/2022 23:51
Bromodichloromethane	U		0.49	1.0	µg/L	1	8/9/2022 23:51
Bromoform	U		0.56	1.0	µg/L	1	8/9/2022 23:51
Bromomethane	U		0.90	1.0	µg/L	1	8/9/2022 23:51
Carbon disulfide	U		0.49	1.0	µg/L	1	8/9/2022 23:51
Carbon tetrachloride	U		0.40	1.0	µg/L	1	8/9/2022 23:51
Chlorobenzene	U		0.40	1.0	µg/L	1	8/9/2022 23:51
Chloroethane	U		0.68	1.0	µg/L	1	8/9/2022 23:51
Chloroform	U		0.46	1.0	µg/L	1	8/9/2022 23:51
Chloromethane	U		0.83	1.0	µg/L	1	8/9/2022 23:51
cis-1,2-Dichloroethene	U		0.42	1.0	µg/L	1	8/9/2022 23:51
cis-1,3-Dichloropropene	U		0.57	1.0	µg/L	1	8/9/2022 23:51
Cyclohexane	U		0.63	2.0	µg/L	1	8/9/2022 23:51
Dibromochloromethane	U		0.40	1.0	µg/L	1	8/9/2022 23:51
Dichlorodifluoromethane	U		0.68	1.0	µg/L	1	8/9/2022 23:51

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *19-Aug-22*

Client: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field
Sample ID: Trip Blank Grab
Collection Date: 8/1/2022 12:05 PM

Work Order: 22080299
Lab ID: 22080299-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.34	1.0	µg/L	1	8/9/2022 23:51
Isopropylbenzene	U		0.35	1.0	µg/L	1	8/9/2022 23:51
m,p-Xylene	U		0.81	2.0	µg/L	1	8/9/2022 23:51
Methyl acetate	U		0.59	2.0	µg/L	1	8/9/2022 23:51
Methyl tert-butyl ether	U		0.45	1.0	µg/L	1	8/9/2022 23:51
Methylcyclohexane	U		0.35	1.0	µg/L	1	8/9/2022 23:51
Methylene chloride	U		0.86	5.0	µg/L	1	8/9/2022 23:51
o-Xylene	U		0.31	1.0	µg/L	1	8/9/2022 23:51
Styrene	U		0.33	1.0	µg/L	1	8/9/2022 23:51
Tetrachloroethene	U		0.39	1.0	µg/L	1	8/9/2022 23:51
Toluene	U		0.45	1.0	µg/L	1	8/9/2022 23:51
trans-1,2-Dichloroethene	U		0.48	1.0	µg/L	1	8/9/2022 23:51
trans-1,3-Dichloropropene	U		0.38	1.0	µg/L	1	8/9/2022 23:51
Trichloroethene	U		0.43	1.0	µg/L	1	8/9/2022 23:51
Trichlorofluoromethane	U		0.52	1.0	µg/L	1	8/9/2022 23:51
Vinyl chloride	U		0.53	1.0	µg/L	1	8/9/2022 23:51
1,2-Dichloroethene, Total	U		0.48	2.0	µg/L	1	8/9/2022 23:51
1,3-Dichloropropene, Total	U		0.57	2.0	µg/L	1	8/9/2022 23:51
Xylenes, Total	U		0.81	2.0	µg/L	1	8/9/2022 23:51
Surr: 1,2-Dichloroethane-d4	*104*			*80-120*	*%REC*	1	8/9/2022 23:51
Surr: 4-Bromofluorobenzene	*95.4*			*80-120*	*%REC*	1	8/9/2022 23:51
Surr: Dibromofluoromethane	*103*			*80-120*	*%REC*	1	8/9/2022 23:51
Surr: Toluene-d8	*97.4*			*80-120*	*%REC*	1	8/9/2022 23:51

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 19-Aug-22

Client: Triad Engineering, Inc.

QC BATCH REPORT

Work Order: 22080299

Project: Fmr Huntington East Practice Field

Batch ID: **201009** Instrument ID **HG4** Method: **SW7470A**

MBLK Sample ID: **MBLK-201009-201009** Units: **mg/L** Analysis Date: **8/9/2022 10:48 AM**

Client ID: Run ID: **HG4_220809A** SeqNo: **8689706** Prep Date: **8/8/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00016	0.00020								

LCS Sample ID: **LCS-201009-201009** Units: **mg/L** Analysis Date: **8/9/2022 10:50 AM**

Client ID: Run ID: **HG4_220809A** SeqNo: **8689707** Prep Date: **8/8/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.001695	0.00016	0.00020	0.002	0	84.8	80-120	0			

MS Sample ID: **22080299-13BMS** Units: **mg/L** Analysis Date: **8/9/2022 11:04 AM**

Client ID: **GW-4 Grab** Run ID: **HG4_220809A** SeqNo: **8689714** Prep Date: **8/8/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00201	0.00016	0.00020	0.002	-0.000027	102	75-125	0			

MSD Sample ID: **22080299-13BMSD** Units: **mg/L** Analysis Date: **8/9/2022 11:11 AM**

Client ID: **GW-4 Grab** Run ID: **HG4_220809A** SeqNo: **8689718** Prep Date: **8/8/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.001995	0.00016	0.00020	0.002	-0.000027	101	75-125	0.00201	0.749	20	

The following samples were analyzed in this batch:

22080299-11B 22080299-12B 22080299-13B
22080299-14B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201105** Instrument ID **HG4** Method: **SW7471B**

MBLK Sample ID: **MBLK-201105-201105** Units: **mg/Kg** Analysis Date: **8/10/2022 12:31 PM**
Client ID: Run ID: **HG4_220810A** SeqNo: **8694377** Prep Date: **8/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.014	0.020								

LCS Sample ID: **LCS-201105-201105** Units: **mg/Kg** Analysis Date: **8/10/2022 12:33 PM**
Client ID: Run ID: **HG4_220810A** SeqNo: **8694378** Prep Date: **8/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1683	0.014	0.020	0.1665	0	101	80-120	0			

MS Sample ID: **22080702-07BMS** Units: **mg/Kg** Analysis Date: **8/10/2022 12:57 PM**
Client ID: Run ID: **HG4_220810A** SeqNo: **8694391** Prep Date: **8/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1369	0.011	0.017	0.1374	0.00271	97.6	75-125	0			

MSD Sample ID: **22080702-07BMSD** Units: **mg/Kg** Analysis Date: **8/10/2022 12:59 PM**
Client ID: Run ID: **HG4_220810A** SeqNo: **8694392** Prep Date: **8/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1354	0.011	0.016	0.1301	0.00271	102	75-125	0.1369	1.06	35	

The following samples were analyzed in this batch: 22080299-01B 22080299-02B 22080299-03B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201106** Instrument ID **HG4** Method: **SW7471B**

MBLK Sample ID: **MBLK-201106-201106** Units: **mg/Kg** Analysis Date: **8/10/2022 01:26 PM**
Client ID: Run ID: **HG4_220810A** SeqNo: **8694407** Prep Date: **8/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.014	0.020								

LCS Sample ID: **LCS-201106-201106** Units: **mg/Kg** Analysis Date: **8/10/2022 01:28 PM**
Client ID: Run ID: **HG4_220810A** SeqNo: **8694408** Prep Date: **8/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1658	0.014	0.020	0.1665	0	99.6	80-120	0			

MS Sample ID: **22080299-07BMS** Units: **mg/Kg** Analysis Date: **8/10/2022 01:35 PM**
Client ID: **SB-6 (6-8) Grab** Run ID: **HG4_220810A** SeqNo: **8694412** Prep Date: **8/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1655	0.012	0.017	0.1413	0.02103	102	75-125	0			

MSD Sample ID: **22080299-07BMSD** Units: **mg/Kg** Analysis Date: **8/10/2022 01:42 PM**
Client ID: **SB-6 (6-8) Grab** Run ID: **HG4_220810A** SeqNo: **8694416** Prep Date: **8/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1674	0.011	0.016	0.1365	0.02103	107	75-125	0.1655	1.12	35	

The following samples were analyzed in this batch:

22080299-04B	22080299-05B	22080299-07B
22080299-08B	22080299-09B	22080299-10B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201100** Instrument ID **ICPMS3** Method: **SW6020B**

MBLK Sample ID: **MBLK-201100-201100** Units: **mg/L** Analysis Date: **8/10/2022 01:14 PM**
Client ID: Run ID: **ICPMS3_220810A** SeqNo: **8694899** Prep Date: **8/10/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.00019	0.0050								
Barium	U	0.002	0.0050								
Cadmium	U	0.00015	0.0020								
Chromium	U	0.0012	0.0050								
Lead	U	0.00072	0.0050								
Selenium	U	0.00048	0.0050								
Silver	U	0.00084	0.0050								

LCS Sample ID: **LCS-201100-201100** Units: **mg/L** Analysis Date: **8/10/2022 01:15 PM**
Client ID: Run ID: **ICPMS3_220810A** SeqNo: **8694900** Prep Date: **8/10/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.0993	0.00019	0.0050	0.1	0	99.3	80-120	0			
Barium	0.09952	0.002	0.0050	0.1	0	99.5	80-120	0			
Cadmium	0.09929	0.00015	0.0020	0.1	0	99.3	80-120	0			
Chromium	0.1	0.0012	0.0050	0.1	0	100	80-120	0			
Lead	0.1005	0.00072	0.0050	0.1	0	101	80-120	0			
Selenium	0.09902	0.00048	0.0050	0.1	0	99	80-120	0			
Silver	0.09821	0.00084	0.0050	0.1	0	98.2	80-120	0			

MS Sample ID: **22080299-12BMS** Units: **mg/L** Analysis Date: **8/10/2022 01:31 PM**
Client ID: **GW-3 Grab** Run ID: **ICPMS3_220810A** SeqNo: **8694911** Prep Date: **8/10/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09969	0.00019	0.0050	0.1	0.000296	99.4	75-125	0			
Barium	0.1612	0.002	0.0050	0.1	0.06072	101	75-125	0			
Cadmium	0.1011	0.00015	0.0020	0.1	0	101	75-125	0			
Chromium	0.09874	0.0012	0.0050	0.1	0	98.7	75-125	0			
Lead	0.1018	0.00072	0.0050	0.1	0	102	75-125	0			
Selenium	0.1061	0.00048	0.0050	0.1	0.002523	104	75-125	0			
Silver	0.09973	0.00084	0.0050	0.1	0	99.7	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201100** Instrument ID **ICPMS3** Method: **SW6020B**

MSD	Sample ID: **22080299-12BMSD**				Units: **mg/L**			Analysis Date: **8/10/2022 01:33 PM**			
Client ID: **GW-3 Grab**		Run ID: **ICPMS3_220810A**			SeqNo: **8694912**			Prep Date: **8/10/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1001	0.00019	0.0050	0.1	0.000296	99.8	75-125	0.09969	0.45	20	
Barium	0.1619	0.002	0.0050	0.1	0.06072	101	75-125	0.1612	0.405	20	
Cadmium	0.1016	0.00015	0.0020	0.1	0	102	75-125	0.1011	0.54	20	
Chromium	0.09794	0.0012	0.0050	0.1	0	97.9	75-125	0.09874	0.813	20	
Lead	0.1026	0.00072	0.0050	0.1	0	103	75-125	0.1018	0.725	20	
Selenium	0.1074	0.00048	0.0050	0.1	0.002523	105	75-125	0.1061	1.28	20	
Silver	0.09994	0.00084	0.0050	0.1	0	99.9	75-125	0.09973	0.204	20	

The following samples were analyzed in this batch: 22080299-12B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201221** Instrument ID **ICPMS3** Method: **SW6020B**

MBLK Sample ID: **MBLK-201221-201221** Units: **mg/Kg** Analysis Date: **8/11/2022 10:04 PM**
Client ID: Run ID: **ICPMS3_220811B** SeqNo: **8700215** Prep Date: **8/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.03	0.25								
Barium	U	0.23	0.25								
Cadmium	U	0.015	0.10								
Chromium	U	0.11	0.25								
Lead	U	0.12	0.25								
Selenium	U	0.23	0.25								
Silver	U	0.033	0.25								

LCS Sample ID: **LCS-201221-201221** Units: **mg/Kg** Analysis Date: **8/11/2022 10:06 PM**
Client ID: Run ID: **ICPMS3_220811B** SeqNo: **8700216** Prep Date: **8/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.768	0.03	0.25	5	0	95.4	80-120	0			
Barium	4.714	0.23	0.25	5	0	94.3	80-120	0			
Cadmium	4.82	0.015	0.10	5	0	96.4	80-120	0			
Chromium	4.981	0.11	0.25	5	0	99.6	80-120	0			
Lead	4.618	0.12	0.25	5	0	92.4	80-120	0			
Selenium	4.524	0.23	0.25	5	0	90.5	80-120	0			
Silver	5.085	0.033	0.25	5	0	102	80-120	0			

MS Sample ID: **22080299-07BMS** Units: **mg/Kg** Analysis Date: **8/11/2022 10:51 PM**
Client ID: **SB-6 (6-8) Grab** Run ID: **ICPMS3_220811B** SeqNo: **8700243** Prep Date: **8/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.841	0.042	0.35	7.082	3.87	84.3	75-125	0			
Barium	98.71	0.33	0.35	7.082	93.02	80.3	75-125	0			O
Cadmium	5.904	0.021	0.14	7.082	0.025	83	75-125	0			
Chromium	20.13	0.16	0.35	7.082	12.36	110	75-125	0			
Lead	17.46	0.17	0.35	7.082	10.62	96.6	75-125	0			
Selenium	5.858	0.33	0.35	7.082	0.3577	77.7	75-125	0			
Silver	5.951	0.047	0.35	7.082	0.01568	83.8	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201221** Instrument ID **ICPMS3** Method: **SW6020B**

MSD Sample ID: **22080299-07BMSD** Units: **mg/Kg** Analysis Date: **8/11/2022 10:53 PM**

Client ID: **SB-6 (6-8) Grab** Run ID: **ICPMS3_220811B** SeqNo: **8700244** Prep Date: **8/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.22	0.042	0.35	7.042	3.87	90.1	75-125	9.841	3.76	20	
Barium	154.4	0.32	0.35	7.042	93.02	871	75-125	98.71	44	20	SREO
Cadmium	4.775	0.021	0.14	7.042	0.025	67.5	75-125	5.904	21.1	20	SR
Chromium	18.37	0.15	0.35	7.042	12.36	85.3	75-125	20.13	9.16	20	
Lead	15.8	0.17	0.35	7.042	10.62	73.6	75-125	17.46	9.97	20	S
Selenium	4.691	0.32	0.35	7.042	0.3577	61.5	75-125	5.858	22.1	20	SR
Silver	4.857	0.046	0.35	7.042	0.01568	68.8	75-125	5.951	20.2	20	SR

The following samples were analyzed in this batch:

22080299-01B	22080299-02B	22080299-03B
22080299-04B	22080299-05B	22080299-07B
22080299-08B	22080299-09B	22080299-10B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201506** Instrument ID **ICPMS3** Method: **SW6020B**

MBLK Sample ID: **MBLK-201506-201506** Units: **mg/L** Analysis Date: **8/17/2022 03:36 PM**
Client ID: Run ID: **ICPMS3_220817A** SeqNo: **8717242** Prep Date: **8/17/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.00019	0.0050								
Barium	U	0.002	0.0050								
Cadmium	U	0.00015	0.0020								
Chromium	U	0.0012	0.0050								
Selenium	U	0.00048	0.0050								
Silver	U	0.00084	0.0050								

MBLK Sample ID: **MBLK-201506-201506** Units: **mg/L** Analysis Date: **8/18/2022 01:40 PM**
Client ID: Run ID: **ICPMS3_220818A** SeqNo: **8720036** Prep Date: **8/17/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	U	0.00072	0.0050								

LCS Sample ID: **LCS-201506-201506** Units: **mg/L** Analysis Date: **8/17/2022 03:37 PM**
Client ID: Run ID: **ICPMS3_220817A** SeqNo: **8717243** Prep Date: **8/17/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09717	0.00019	0.0050	0.1	0	97.2	80-120	0			
Barium	0.09393	0.002	0.0050	0.1	0	93.9	80-120	0			
Cadmium	0.09762	0.00015	0.0020	0.1	0	97.6	80-120	0			
Chromium	0.1006	0.0012	0.0050	0.1	0	101	80-120	0			
Lead	0.0986	0.00072	0.0050	0.1	0	98.6	80-120	0			
Selenium	0.09869	0.00048	0.0050	0.1	0	98.7	80-120	0			
Silver	0.1008	0.00084	0.0050	0.1	0	101	80-120	0			

MS Sample ID: **22080299-13BMS** Units: **mg/L** Analysis Date: **8/17/2022 03:44 PM**
Client ID: **GW-4 Grab** Run ID: **ICPMS3_220817A** SeqNo: **8717247** Prep Date: **8/17/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1064	0.00019	0.0050	0.1	0.002392	104	75-125	0			
Barium	0.9923	0.002	0.0050	0.1	0.8971	95.2	75-125	0			O
Cadmium	0.08952	0.00015	0.0020	0.1	0.000009	89.5	75-125	0			
Chromium	0.1058	0.0012	0.0050	0.1	0.00047	105	75-125	0			
Lead	0.1021	0.00072	0.0050	0.1	0.002198	99.9	75-125	0			
Selenium	0.09556	0.00048	0.0050	0.1	-0.000254	95.8	75-125	0			
Silver	0.09073	0.00084	0.0050	0.1	0.000027	90.7	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201506** Instrument ID **ICPMS3** Method: **SW6020B**

MS Sample ID: **22081014-32CMS** Units: **mg/L** Analysis Date: **8/17/2022 10:29 PM**
Client ID: Run ID: **ICPMS3_220817A** SeqNo: **8717454** Prep Date: **8/17/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.2218	0.00019	0.0050	0.1	0.1163	105	75-125	0			
Barium	1.439	0.002	0.0050	0.1	1.345	94.3	75-125	0			O
Cadmium	0.08986	0.00015	0.0020	0.1	0.003091	86.8	75-125	0			
Chromium	0.1087	0.0012	0.0050	0.1	0.004953	104	75-125	0			
Lead	0.1047	0.00072	0.0050	0.1	0.00592	98.8	75-125	0			
Silver	0.09043	0.00084	0.0050	0.1	0.000506	89.9	75-125	0			

MS Sample ID: **22081014-32CMS** Units: **mg/L** Analysis Date: **8/18/2022 03:28 PM**
Client ID: Run ID: **ICPMS3_220818A** SeqNo: **8720867** Prep Date: **8/17/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04766	0.0048	0.050	0.1	0.001417	46.2	75-125	0			JS

MSD Sample ID: **22081014-32CMSD** Units: **mg/L** Analysis Date: **8/17/2022 10:31 PM**
Client ID: Run ID: **ICPMS3_220817A** SeqNo: **8717455** Prep Date: **8/17/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.219	0.00019	0.0050	0.1	0.1163	103	75-125	0.2218	1.23	20	
Barium	1.414	0.002	0.0050	0.1	1.345	69.1	75-125	1.439	1.77	20	SO
Cadmium	0.08956	0.00015	0.0020	0.1	0.003091	86.5	75-125	0.08986	0.33	20	
Chromium	0.1081	0.0012	0.0050	0.1	0.004953	103	75-125	0.1087	0.5	20	
Lead	0.104	0.00072	0.0050	0.1	0.00592	98	75-125	0.1047	0.706	20	
Silver	0.08937	0.00084	0.0050	0.1	0.000506	88.9	75-125	0.09043	1.17	20	

MSD Sample ID: **22081014-32CMSD** Units: **mg/L** Analysis Date: **8/18/2022 03:30 PM**
Client ID: Run ID: **ICPMS3_220818A** SeqNo: **8720868** Prep Date: **8/17/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05812	0.0048	0.050	0.1	0.001417	56.7	75-125	0.04766	19.8	20	S

The following samples were analyzed in this batch: 22080299-11B 22080299-13B 22080299-14B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **201062** Instrument ID **SVMS7** Method: **SW8270E**

MBLK Sample ID: **SBLKW1-201062-201062** Units: **µg/L** Analysis Date: **8/11/2022 06:06 PM**
Client ID: Run ID: **SVMS7_220811A** SeqNo: **8702430** Prep Date: **8/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	U	0.013	0.025								
Acenaphthylene	U	0.005	0.025								
Anthracene	U	0.0053	0.025								
Benzo(a)anthracene	U	0.0093	0.025								
Benzo(a)pyrene	U	0.0081	0.025								
Benzo(b)fluoranthene	U	0.0081	0.025								
Benzo(g,h,i)perylene	U	0.0076	0.040								
Benzo(k)fluoranthene	U	0.0057	0.025								
Chrysene	U	0.0033	0.025								
Dibenzo(a,h)anthracene	U	0.013	0.025								
Fluoranthene	U	0.0067	0.025								
Fluorene	U	0.01	0.025								
Indeno(1,2,3-cd)pyrene	U	0.012	0.025								
Naphthalene	0.05937	0.023	0.025								
Phenanthrene	U	0.0066	0.040								
Pyrene	U	0.0059	0.025								
Surr: 2-Fluorobiphenyl	*4.065*	0	0	*5*	0	*81.3*	*10-112*	0			
Surr: 4-Terphenyl-d14	*3.999*	0	0	*5*	0	*80*	*10-132*	0			
Surr: Nitrobenzene-d5	*3.876*	0	0	*5*	0	*77.5*	*15-110*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201062** Instrument ID **SVMS7** Method: **SW8270E**

LCS	Sample ID: **SLCSW1-201062-201062**				Units: **µg/L**			Analysis Date: **8/11/2022 06:27 PM**			
Client ID:		Run ID: **SVMS7_220811A**			SeqNo: **8702431**			Prep Date: **8/9/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1.606	0.013	0.025	2	0	80.3	45-110	0			
Acenaphthylene	1.676	0.005	0.025	2	0	83.8	50-105	0			
Anthracene	1.766	0.0053	0.025	2	0	88.3	55-110	0			
Benzo(a)anthracene	1.784	0.0093	0.025	2	0	89.2	55-110	0			
Benzo(a)pyrene	1.934	0.0081	0.025	2	0	96.7	55-110	0			
Benzo(b)fluoranthene	1.769	0.0081	0.025	2	0	88.4	45-120	0			
Benzo(g,h,i)perylene	1.932	0.0076	0.040	2	0	96.6	40-125	0			
Benzo(k)fluoranthene	2.097	0.0057	0.025	2	0	105	45-120	0			
Chrysene	2.042	0.0033	0.025	2	0	102	55-110	0			
Dibenzo(a,h)anthracene	1.781	0.013	0.025	2	0	89	40-125	0			
Fluoranthene	1.752	0.0067	0.025	2	0	87.6	55-115	0			
Fluorene	1.709	0.01	0.025	2	0	85.4	50-110	0			
Indeno(1,2,3-cd)pyrene	1.889	0.012	0.025	2	0	94.4	45-125	0			
Naphthalene	1.566	0.023	0.025	2	0	78.3	40-100	0			B
Phenanthrene	1.821	0.0066	0.040	2	0	91	50-115	0			
Pyrene	1.522	0.0059	0.025	2	0	76.1	50-130	0			
Surr: 2-Fluorobiphenyl	*4.2*	0	0	*5*	0	*84*	*10-112*	0			
Surr: 4-Terphenyl-d14	*3.675*	0	0	*5*	0	*73.5*	*10-132*	0			
Surr: Nitrobenzene-d5	*4.271*	0	0	*5*	0	*85.4*	*15-110*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201062** Instrument ID **SVMS7** Method: **SW8270E**

MS Sample ID: **22080299-13C MS** Units: **µg/L** Analysis Date: **8/11/2022 06:48 PM**
Client ID: **GW-4 Grab** Run ID: **SVMS7_220811A** SeqNo: **8702432** Prep Date: **8/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	4.059	0.013	0.025	2.084	3.64	20.1	45-110	0			SE
Acenaphthylene	1.074	0.005	0.025	2.084	0.03758	49.7	50-105	0			S
Anthracene	1.569	0.0053	0.025	2.084	0.1396	68.6	55-110	0			
Benzo(a)anthracene	1.745	0.0093	0.025	2.084	0.08244	79.8	55-110	0			
Benzo(a)pyrene	1.935	0.0081	0.025	2.084	0.0662	89.6	55-110	0			
Benzo(b)fluoranthene	1.577	0.0081	0.025	2.084	0.07964	71.8	45-120	0			
Benzo(g,h,i)perylene	1.762	0.0076	0.040	2.084	0.0425	82.5	40-125	0			
Benzo(k)fluoranthene	1.871	0.0057	0.025	2.084	0.04005	87.8	45-120	0			
Chrysene	1.791	0.0033	0.025	2.084	0.07502	82.3	55-110	0			
Dibenzo(a,h)anthracene	1.653	0.013	0.025	2.084	0	79.3	40-125	0			
Fluoranthene	1.817	0.0067	0.025	2.084	0.4333	66.4	55-115	0			
Fluorene	2.292	0.01	0.025	2.084	1.399	42.8	50-110	0			S
Indeno(1,2,3-cd)pyrene	1.71	0.012	0.025	2.084	0.06175	79.1	45-125	0			
Naphthalene	8.008	0.023	0.025	2.084	8.075	-3.23	40-100	0			BSE
Phenanthrene	1.819	0.0066	0.040	2.084	0.5635	60.2	50-115	0			
Pyrene	1.459	0.0059	0.025	2.084	0.2273	59.1	50-130	0			
Surr: 2-Fluorobiphenyl	*3.051*	0	0	*5.211*	0	*58.6*	*10-112*	0			
Surr: 4-Terphenyl-d14	*3.084*	0	0	*5.211*	0	*59.2*	*10-132*	0			
Surr: Nitrobenzene-d5	*3.042*	0	0	*5.211*	0	*58.4*	*15-110*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201062** Instrument ID **SVMS7** Method: **SW8270E**

MSD	Sample ID: **22080299-13C MSD**				Units: **µg/L**			Analysis Date: **8/11/2022 07:09 PM**			
Client ID: **GW-4 Grab**		Run ID: **SVMS7_220811A**			SeqNo: **8702433**			Prep Date: **8/9/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	3.632	0.013	0.025	2.079	3.64	-0.355	45-110	4.059	11.1	40	S
Acenaphthylene	1.121	0.005	0.025	2.079	0.03758	52.1	50-105	1.074	4.32	40	
Anthracene	1.521	0.0053	0.025	2.079	0.1396	66.4	55-110	1.569	3.15	40	
Benzo(a)anthracene	1.727	0.0093	0.025	2.079	0.08244	79.1	55-110	1.745	1.04	40	
Benzo(a)pyrene	1.886	0.0081	0.025	2.079	0.0662	87.5	55-110	1.935	2.55	40	
Benzo(b)fluoranthene	1.562	0.0081	0.025	2.079	0.07964	71.3	45-120	1.577	0.941	40	
Benzo(g,h,i)perylene	1.676	0.0076	0.040	2.079	0.0425	78.6	40-125	1.762	4.96	40	
Benzo(k)fluoranthene	1.753	0.0057	0.025	2.079	0.04005	82.4	45-120	1.871	6.51	40	
Chrysene	1.732	0.0033	0.025	2.079	0.07502	79.7	55-110	1.791	3.34	40	
Dibenzo(a,h)anthracene	1.74	0.013	0.025	2.079	0	83.7	40-125	1.653	5.12	40	
Fluoranthene	1.783	0.0067	0.025	2.079	0.4333	64.9	55-115	1.817	1.88	40	
Fluorene	2.074	0.01	0.025	2.079	1.399	32.4	50-110	2.292	9.99	40	S
Indeno(1,2,3-cd)pyrene	1.618	0.012	0.025	2.079	0.06175	74.9	45-125	1.71	5.52	40	
Naphthalene	6.867	0.023	0.025	2.079	8.075	-58.1	40-100	8.008	15.3	40	BSE
Phenanthrene	1.682	0.0066	0.040	2.079	0.5635	53.8	50-115	1.819	7.83	40	
Pyrene	1.474	0.0059	0.025	2.079	0.2273	60	50-130	1.459	1.02	40	
Surr: 2-Fluorobiphenyl	*2.928*	0	0	*5.198*	0	*56.3*	*10-112*	3.051	*4.12*	*40*	
Surr: 4-Terphenyl-d14	*3.201*	0	0	*5.198*	0	*61.6*	*10-132*	3.084	*3.71*	*40*	
Surr: Nitrobenzene-d5	*2.962*	0	0	*5.198*	0	*57*	*15-110*	3.042	*2.67*	*40*	

The following samples were analyzed in this batch: 22080299-11C 22080299-12C 22080299-13C 22080299-14C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201306** Instrument ID **SVMS6** Method: **SW8270E**

MBLK Sample ID: **SBLKS1-201306-201306** Units: **µg/Kg** Analysis Date: **8/14/2022 04:59 PM**
Client ID: Run ID: **SVMS6_220814A** SeqNo: **8707686** Prep Date: **8/12/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	U	2.5	4.2								
2-Chloronaphthalene	U	3.2	4.2								
2-Methylnaphthalene	U	2.9	4.2								
Acenaphthene	U	3.5	4.2								
Acenaphthylene	U	3.3	4.2								
Anthracene	U	3.8	4.2								
Benzo(a)anthracene	U	4	4.2								
Benzo(a)pyrene	U	3.3	4.2								
Benzo(b)fluoranthene	U	3.5	4.2								
Benzo(g,h,i)perylene	U	2.4	4.2								
Benzo(k)fluoranthene	U	3.4	4.2								
Chrysene	U	3.8	4.2								
Dibenzo(a,h)anthracene	U	3.4	4.2								
Fluoranthene	U	3.3	4.2								
Fluorene	U	3.3	4.2								
Indeno(1,2,3-cd)pyrene	U	3.6	4.2								
Naphthalene	U	4	4.2								
Phenanthrene	U	2.6	4.2								
Pyrene	U	4	4.2								
Surr: 2-Fluorobiphenyl	*593.9*	0	0	*666.6*	0	*89.1*	*20-140*	0			
Surr: 4-Terphenyl-d14	*536.1*	0	0	*666.6*	0	*80.4*	*22-172*	0			
Surr: Nitrobenzene-d5	*512.9*	0	0	*666.6*	0	*76.9*	*28-140*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201306** Instrument ID **SVMS6** Method: **SW8270E**

LCS	Sample ID: **SLCSS1-201306-201306**				Units: **µg/Kg**			Analysis Date: **8/14/2022 05:15 PM**			
Client ID:		Run ID: **SVMS6_220814A**			SeqNo: **8707687**			Prep Date: **8/12/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	637.7	2.5	4.2	666.6	0	95.7	40-140	0			
2-Chloronaphthalene	586.1	3.2	4.2	666.6	0	87.9	40-140	0			
2-Methylnaphthalene	432.2	2.9	4.2	666.6	0	64.8	40-140	0			
Acenaphthene	571	3.5	4.2	666.6	0	85.7	40-140	0			
Acenaphthylene	583.9	3.3	4.2	666.6	0	87.6	40-140	0			
Anthracene	634.1	3.8	4.2	666.6	0	95.1	40-140	0			
Benzo(a)anthracene	637.7	4	4.2	666.6	0	95.7	40-140	0			
Benzo(a)pyrene	580.7	3.3	4.2	666.6	0	87.1	40-140	0			
Benzo(b)fluoranthene	628.7	3.5	4.2	666.6	0	94.3	40-140	0			
Benzo(g,h,i)perylene	585.7	2.4	4.2	666.6	0	87.9	40-140	0			
Benzo(k)fluoranthene	550.1	3.4	4.2	666.6	0	82.5	40-140	0			
Chrysene	666.3	3.8	4.2	666.6	0	100	40-140	0			
Dibenzo(a,h)anthracene	607	3.4	4.2	666.6	0	91.1	40-140	0			
Fluoranthene	663.3	3.3	4.2	666.6	0	99.5	40-140	0			
Fluorene	547.1	3.3	4.2	666.6	0	82.1	40-140	0			
Indeno(1,2,3-cd)pyrene	584.6	3.6	4.2	666.6	0	87.7	40-140	0			
Naphthalene	583	4	4.2	666.6	0	87.5	40-140	0			
Phenanthrene	615.2	2.6	4.2	666.6	0	92.3	40-140	0			
Pyrene	520.1	4	4.2	666.6	0	78	40-140	0			
Surr: 2-Fluorobiphenyl	*607.6*	0	0	*666.6*	0	*91.1*	*20-140*	0			
Surr: 4-Terphenyl-d14	*568.6*	0	0	*666.6*	0	*85.3*	*22-172*	0			
Surr: Nitrobenzene-d5	*406.8*	0	0	*666.6*	0	*61*	*28-140*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201306** Instrument ID **SVMS6** Method: **SW8270E**

LCS	Sample ID: **LM IDC 1-201306**				Units: **µg/Kg**			Analysis Date: **8/14/2022 05:30 PM**			
Client ID:		Run ID: **SVMS6_220814A**			SeqNo: **8707688**			Prep Date: **8/12/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	165.3	2.5	4.2	666.6	0	24.8	40-140	0			S
2-Chloronaphthalene	164.2	3.2	4.2	666.6	0	24.6	40-140	0			S
2-Methylnaphthalene	131.5	2.9	4.2	666.6	0	19.7	40-140	0			S
Acenaphthene	154.8	3.5	4.2	666.6	0	23.2	40-140	0			S
Acenaphthylene	165.7	3.3	4.2	666.6	0	24.9	40-140	0			S
Anthracene	183.6	3.8	4.2	666.6	0	27.5	40-140	0			S
Benzo(a)anthracene	179.6	4	4.2	666.6	0	26.9	40-140	0			S
Benzo(a)pyrene	168.4	3.3	4.2	666.6	0	25.3	40-140	0			S
Benzo(b)fluoranthene	170.9	3.5	4.2	666.6	0	25.6	40-140	0			S
Benzo(g,h,i)perylene	163.3	2.4	4.2	666.6	0	24.5	40-140	0			S
Benzo(k)fluoranthene	166.3	3.4	4.2	666.6	0	25	40-140	0			S
Chrysene	185.8	3.8	4.2	666.6	0	27.9	40-140	0			S
Dibenzo(a,h)anthracene	169.1	3.4	4.2	666.6	0	25.4	40-140	0			S
Fluoranthene	191.9	3.3	4.2	666.6	0	28.8	40-140	0			S
Fluorene	153.8	3.3	4.2	666.6	0	23.1	40-140	0			S
Indeno(1,2,3-cd)pyrene	159.2	3.6	4.2	666.6	0	23.9	40-140	0			S
Naphthalene	154.1	4	4.2	666.6	0	23.1	40-140	0			S
Phenanthrene	159.1	2.6	4.2	666.6	0	23.9	40-140	0			S
Pyrene	156.2	4	4.2	666.6	0	23.4	40-140	0			S
Surr: 2-Fluorobiphenyl	*250.9*	0	0	*666.6*	0	*37.6*	*20-140*	0			
Surr: 4-Terphenyl-d14	*243.2*	0	0	*666.6*	0	*36.5*	*22-172*	0			
Surr: Nitrobenzene-d5	*170*	0	0	*666.6*	0	*25.5*	*28-140*	0			*S*

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201306** Instrument ID **SVMS6** Method: **SW8270E**

LCS	Sample ID: **LM IDC 2-201306**				Units: **µg/Kg**			Analysis Date: **8/14/2022 05:46 PM**			
Client ID:		Run ID: **SVMS6_220814A**			SeqNo: **8707689**			Prep Date: **8/12/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	231.4	2.5	4.2	666.6	0	34.7	40-140	0			S
2-Chloronaphthalene	221.4	3.2	4.2	666.6	0	33.2	40-140	0			S
2-Methylnaphthalene	164.2	2.9	4.2	666.6	0	24.6	40-140	0			S
Acenaphthene	210	3.5	4.2	666.6	0	31.5	40-140	0			S
Acenaphthylene	223.7	3.3	4.2	666.6	0	33.6	40-140	0			S
Anthracene	248	3.8	4.2	666.6	0	37.2	40-140	0			S
Benzo(a)anthracene	240.6	4	4.2	666.6	0	36.1	40-140	0			S
Benzo(a)pyrene	224	3.3	4.2	666.6	0	33.6	40-140	0			S
Benzo(b)fluoranthene	228	3.5	4.2	666.6	0	34.2	40-140	0			S
Benzo(g,h,i)perylene	218.9	2.4	4.2	666.6	0	32.8	40-140	0			S
Benzo(k)fluoranthene	222	3.4	4.2	666.6	0	33.3	40-140	0			S
Chrysene	251.9	3.8	4.2	666.6	0	37.8	40-140	0			S
Dibenzo(a,h)anthracene	224.5	3.4	4.2	666.6	0	33.7	40-140	0			S
Fluoranthene	261.6	3.3	4.2	666.6	0	39.2	40-140	0			S
Fluorene	207.2	3.3	4.2	666.6	0	31.1	40-140	0			S
Indeno(1,2,3-cd)pyrene	212.8	3.6	4.2	666.6	0	31.9	40-140	0			S
Naphthalene	209.2	4	4.2	666.6	0	31.4	40-140	0			S
Phenanthrene	223.1	2.6	4.2	666.6	0	33.5	40-140	0			S
Pyrene	206.5	4	4.2	666.6	0	31	40-140	0			S
Surr: 2-Fluorobiphenyl	*353.7*	0	0	*666.6*	0	*53.1*	*20-140*	0			
Surr: 4-Terphenyl-d14	*334.3*	0	0	*666.6*	0	*50.2*	*22-172*	0			
Surr: Nitrobenzene-d5	*240.8*	0	0	*666.6*	0	*36.1*	*28-140*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201306** Instrument ID **SVMS6** Method: **SW8270E**

LCS	Sample ID: **LM IDC 3-201306**				Units: **µg/Kg**			Analysis Date: **8/14/2022 06:01 PM**			
Client ID:		Run ID: **SVMS6_220814A**			SeqNo: **8707690**			Prep Date: **8/12/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	124.1	2.5	4.2	666.6	0	18.6	40-140	0			S
2-Chloronaphthalene	125.4	3.2	4.2	666.6	0	18.8	40-140	0			S
2-Methylnaphthalene	97.67	2.9	4.2	666.6	0	14.7	40-140	0			S
Acenaphthene	116.2	3.5	4.2	666.6	0	17.4	40-140	0			S
Acenaphthylene	128.2	3.3	4.2	666.6	0	19.2	40-140	0			S
Anthracene	142.2	3.8	4.2	666.6	0	21.3	40-140	0			S
Benzo(a)anthracene	138	4	4.2	666.6	0	20.7	40-140	0			S
Benzo(a)pyrene	130.8	3.3	4.2	666.6	0	19.6	40-140	0			S
Benzo(b)fluoranthene	130.4	3.5	4.2	666.6	0	19.6	40-140	0			S
Benzo(g,h,i)perylene	126.2	2.4	4.2	666.6	0	18.9	40-140	0			S
Benzo(k)fluoranthene	130.1	3.4	4.2	666.6	0	19.5	40-140	0			S
Chrysene	144	3.8	4.2	666.6	0	21.6	40-140	0			S
Dibenzo(a,h)anthracene	129.5	3.4	4.2	666.6	0	19.4	40-140	0			S
Fluoranthene	150.4	3.3	4.2	666.6	0	22.6	40-140	0			S
Fluorene	116.6	3.3	4.2	666.6	0	17.5	40-140	0			S
Indeno(1,2,3-cd)pyrene	118.7	3.6	4.2	666.6	0	17.8	40-140	0			S
Naphthalene	113.5	4	4.2	666.6	0	17	40-140	0			S
Phenanthrene	117.9	2.6	4.2	666.6	0	17.7	40-140	0			S
Pyrene	119.6	4	4.2	666.6	0	17.9	40-140	0			S
Surr: 2-Fluorobiphenyl	*319.7*	0	0	*666.6*	0	*48*	*20-140*	0			
Surr: 4-Terphenyl-d14	*299.6*	0	0	*666.6*	0	*44.9*	*22-172*	0			
Surr: Nitrobenzene-d5	*214.5*	0	0	*666.6*	0	*32.2*	*28-140*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201306** Instrument ID **SVMS6** Method: **SW8270E**

LCS	Sample ID: **LM IDC 4-201306**					Units: **µg/Kg**			Analysis Date: **8/14/2022 06:17 PM**			
Client ID:		Run ID: **SVMS6_220814A**				SeqNo: **8707691**			Prep Date: **8/12/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	140.7	2.5	4.2	666.6	0	21.1	40-140		0			S
2-Chloronaphthalene	137.9	3.2	4.2	666.6	0	20.7	40-140		0			S
2-Methylnaphthalene	103.3	2.9	4.2	666.6	0	15.5	40-140		0			S
Acenaphthene	125.4	3.5	4.2	666.6	0	18.8	40-140		0			S
Acenaphthylene	140.1	3.3	4.2	666.6	0	21	40-140		0			S
Anthracene	156.6	3.8	4.2	666.6	0	23.5	40-140		0			S
Benzo(a)anthracene	142.5	4	4.2	666.6	0	21.4	40-140		0			S
Benzo(a)pyrene	137.8	3.3	4.2	666.6	0	20.7	40-140		0			S
Benzo(b)fluoranthene	136.9	3.5	4.2	666.6	0	20.5	40-140		0			S
Benzo(g,h,i)perylene	131.7	2.4	4.2	666.6	0	19.8	40-140		0			S
Benzo(k)fluoranthene	136.7	3.4	4.2	666.6	0	20.5	40-140		0			S
Chrysene	149	3.8	4.2	666.6	0	22.4	40-140		0			S
Dibenzo(a,h)anthracene	135.7	3.4	4.2	666.6	0	20.4	40-140		0			S
Fluoranthene	162.8	3.3	4.2	666.6	0	24.4	40-140		0			S
Fluorene	126	3.3	4.2	666.6	0	18.9	40-140		0			S
Indeno(1,2,3-cd)pyrene	127.2	3.6	4.2	666.6	0	19.1	40-140		0			S
Naphthalene	129.5	4	4.2	666.6	0	19.4	40-140		0			S
Phenanthrene	131.9	2.6	4.2	666.6	0	19.8	40-140		0			S
Pyrene	123	4	4.2	666.6	0	18.5	40-140		0			S
Surr: 2-Fluorobiphenyl	*330.6*	0	0	*666.6*	0	*49.6*	*20-140*		0			
Surr: 4-Terphenyl-d14	*300.1*	0	0	*666.6*	0	*45*	*22-172*		0			
Surr: Nitrobenzene-d5	*212.2*	0	0	*666.6*	0	*31.8*	*28-140*		0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201306** Instrument ID **SVMS6** Method: **SW8270E**

MS Sample ID: **22080299-07B MS** Units: **µg/Kg** Analysis Date: **8/14/2022 06:32 PM**
Client ID: **SB-6 (6-8) Grab** Run ID: **SVMS6_220814A** SeqNo: **8707692** Prep Date: **8/12/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	771.4	3.6	6.1	974.6	0	79.2	40-140	0			
2-Chloronaphthalene	761.6	4.7	6.1	974.6	0	78.1	40-140	0			
2-Methylnaphthalene	643.3	4.3	6.1	974.6	0	66	40-140	0			
Acenaphthene	670.1	5.2	6.1	974.6	0	68.8	40-140	0			
Acenaphthylene	321.3	4.9	6.1	974.6	0	33	40-140	0			S
Anthracene	582	5.5	6.1	974.6	0	59.7	40-140	0			
Benzo(a)anthracene	425	5.9	6.1	974.6	0	43.6	40-140	0			
Benzo(a)pyrene	284.2	4.9	6.1	974.6	0	29.2	40-140	0			S
Benzo(b)fluoranthene	320.1	5.2	6.1	974.6	0	32.8	40-140	0			S
Benzo(g,h,i)perylene	208.6	3.5	6.1	974.6	0	21.4	40-140	0			S
Benzo(k)fluoranthene	294.8	5	6.1	974.6	0	30.2	40-140	0			S
Chrysene	367.9	5.6	6.1	974.6	0	37.7	40-140	0			S
Dibenzo(a,h)anthracene	184.5	5	6.1	974.6	0	18.9	40-140	0			S
Fluoranthene	621.4	4.8	6.1	974.6	0	63.8	40-140	0			
Fluorene	586.2	4.8	6.1	974.6	0	60.2	40-140	0			
Indeno(1,2,3-cd)pyrene	188.6	5.3	6.1	974.6	0	19.4	40-140	0			S
Naphthalene	727.9	5.9	6.1	974.6	0	74.7	40-140	0			
Phenanthrene	634.4	3.7	6.1	974.6	0	65.1	40-140	0			
Pyrene	509.9	5.9	6.1	974.6	0	52.3	40-140	0			
Surr: 2-Fluorobiphenyl	*760.7*	0	0	*974.6*	0	*78.1*	*20-140*	0			
Surr: 4-Terphenyl-d14	*195.4*	0	0	*974.6*	0	*20.1*	*22-172*	0			*S*
Surr: Nitrobenzene-d5	*139.9*	0	0	*974.6*	0	*14.4*	*28-140*	0			*S*

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201306** Instrument ID **SVMS6** Method: **SW8270E**

MSD	Sample ID: **22080299-07B MSD**				Units: **µg/Kg**			Analysis Date: **8/14/2022 06:48 PM**			
Client ID: **SB-6 (6-8) Grab**		Run ID: **SVMS6_220814A**			SeqNo: **8707693**			Prep Date: **8/12/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	819.4	3.7	6.2	987.1	0	83	40-140	771.4	6.03	30	
2-Chloronaphthalene	774.2	4.8	6.2	987.1	0	78.4	40-140	761.6	1.65	30	
2-Methylnaphthalene	604.5	4.3	6.2	987.1	0	61.2	40-140	643.3	6.22	30	
Acenaphthene	704.7	5.3	6.2	987.1	0	71.4	40-140	670.1	5.03	30	
Acenaphthylene	631.7	4.9	6.2	987.1	0	64	40-140	321.3	65.1	30	R
Anthracene	723.4	5.6	6.2	987.1	0	73.3	40-140	582	21.7	30	
Benzo(a)anthracene	610.2	6	6.2	987.1	0	61.8	40-140	425	35.8	30	R
Benzo(a)pyrene	474.3	5	6.2	987.1	0	48.1	40-140	284.2	50.1	30	R
Benzo(b)fluoranthene	519.7	5.2	6.2	987.1	0	52.6	40-140	320.1	47.5	30	R
Benzo(g,h,i)perylene	355.5	3.6	6.2	987.1	0	36	40-140	208.6	52.1	30	SR
Benzo(k)fluoranthene	455.8	5.1	6.2	987.1	0	46.2	40-140	294.8	42.9	30	R
Chrysene	588.1	5.7	6.2	987.1	0	59.6	40-140	367.9	46.1	30	R
Dibenzo(a,h)anthracene	364.7	5	6.2	987.1	0	36.9	40-140	184.5	65.6	30	SR
Fluoranthene	753.5	4.9	6.2	987.1	0	76.3	40-140	621.4	19.2	30	
Fluorene	667.4	4.8	6.2	987.1	0	67.6	40-140	586.2	12.9	30	
Indeno(1,2,3-cd)pyrene	354.8	5.4	6.2	987.1	0	35.9	40-140	188.6	61.2	30	SR
Naphthalene	747.1	6	6.2	987.1	0	75.7	40-140	727.9	2.61	30	
Phenanthrene	720.4	3.8	6.2	987.1	0	73	40-140	634.4	12.7	30	
Pyrene	607	5.9	6.2	987.1	0	61.5	40-140	509.9	17.4	30	
Surr: 2-Fluorobiphenyl	*797.4*	0	0	*987.1*	0	*80.8*	*20-140*	760.7	*4.71*	*30*	
Surr: 4-Terphenyl-d14	*378.4*	0	0	*987.1*	0	*38.3*	*22-172*	195.4	*63.8*	*30*	*R*
Surr: Nitrobenzene-d5	*330.7*	0	0	*987.1*	0	*33.5*	*28-140*	139.9	*81.1*	*30*	*R*

The following samples were analyzed in this batch:

22080299-01B	22080299-02B	22080299-03B
22080299-04B	22080299-05B	22080299-07B
22080299-08B	22080299-09B	22080299-10B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201367** Instrument ID **SVMS6** Method: **SW8270E**

MBLK	Sample ID: **SBLKS1-201367-201367**				Units: **µg/Kg**			Analysis Date: **8/15/2022 05:39 PM**			
Client ID:		Run ID: **SVMS6_220815A**			SeqNo: **8711291**			Prep Date: **8/15/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	U	2.5	4.2								
2-Chloronaphthalene	U	3.2	4.2								
2-Methylnaphthalene	U	2.9	4.2								
Acenaphthene	U	3.5	4.2								
Acenaphthylene	U	3.3	4.2								
Anthracene	U	3.8	4.2								
Benzo(a)anthracene	U	4	4.2								
Benzo(a)pyrene	U	3.3	4.2								
Benzo(b)fluoranthene	U	3.5	4.2								
Benzo(g,h,i)perylene	U	2.4	4.2								
Benzo(k)fluoranthene	U	3.4	4.2								
Chrysene	U	3.8	4.2								
Dibenzo(a,h)anthracene	U	3.4	4.2								
Fluoranthene	U	3.3	4.2								
Fluorene	U	3.3	4.2								
Indeno(1,2,3-cd)pyrene	U	3.6	4.2								
Naphthalene	U	4	4.2								
Phenanthrene	U	2.6	4.2								
Pyrene	U	4	4.2								
Surr: 2-Fluorobiphenyl	*616.4*	0	0	*666.6*	0	*92.5*	*20-140*	0			
Surr: 4-Terphenyl-d14	*580.3*	0	0	*666.6*	0	*87*	*22-172*	0			
Surr: Nitrobenzene-d5	*529.6*	0	0	*666.6*	0	*79.4*	*28-140*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201367** Instrument ID **SVMS6** Method: **SW8270E**

LCS	Sample ID: **SLCSS1-201367-201367**				Units: **µg/Kg**			Analysis Date: **8/15/2022 05:54 PM**			
Client ID:		Run ID: **SVMS6_220815A**			SeqNo: **8711292**			Prep Date: **8/15/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	602.3	2.5	4.2	666.6	0	90.3	40-140	0			
2-Chloronaphthalene	597.8	3.2	4.2	666.6	0	89.7	40-140	0			
2-Methylnaphthalene	511.6	2.9	4.2	666.6	0	76.8	40-140	0			
Acenaphthene	572.1	3.5	4.2	666.6	0	85.8	40-140	0			
Acenaphthylene	592.4	3.3	4.2	666.6	0	88.9	40-140	0			
Anthracene	632	3.8	4.2	666.6	0	94.8	40-140	0			
Benzo(a)anthracene	668.5	4	4.2	666.6	0	100	40-140	0			
Benzo(a)pyrene	609.6	3.3	4.2	666.6	0	91.4	40-140	0			
Benzo(b)fluoranthene	664.7	3.5	4.2	666.6	0	99.7	40-140	0			
Benzo(g,h,i)perylene	587	2.4	4.2	666.6	0	88.1	40-140	0			
Benzo(k)fluoranthene	586.7	3.4	4.2	666.6	0	88	40-140	0			
Chrysene	668.8	3.8	4.2	666.6	0	100	40-140	0			
Dibenzo(a,h)anthracene	635.4	3.4	4.2	666.6	0	95.3	40-140	0			
Fluoranthene	677.3	3.3	4.2	666.6	0	102	40-140	0			
Fluorene	557.8	3.3	4.2	666.6	0	83.7	40-140	0			
Indeno(1,2,3-cd)pyrene	601.8	3.6	4.2	666.6	0	90.3	40-140	0			
Naphthalene	581.7	4	4.2	666.6	0	87.3	40-140	0			
Phenanthrene	613.7	2.6	4.2	666.6	0	92.1	40-140	0			
Pyrene	530.9	4	4.2	666.6	0	79.6	40-140	0			
Surr: 2-Fluorobiphenyl	*611.6*	0	0	*666.6*	0	*91.8*	*20-140*	0			
Surr: 4-Terphenyl-d14	*581.2*	0	0	*666.6*	0	*87.2*	*22-172*	0			
Surr: Nitrobenzene-d5	*430.7*	0	0	*666.6*	0	*64.6*	*28-140*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201367** Instrument ID **SVMS6** Method: **SW8270E**

MS Sample ID: **22080904-07B MS** Units: **µg/Kg** Analysis Date: **8/15/2022 06:10 PM**
Client ID: Run ID: **SVMS6_220815A** SeqNo: **8711293** Prep Date: **8/15/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	550.1	2.5	4.2	665.3	0	82.7	40-140	0			
2-Chloronaphthalene	537.5	3.2	4.2	665.3	0	80.8	40-140	0			
2-Methylnaphthalene	507.6	2.9	4.2	665.3	0	76.3	40-140	0			
Acenaphthene	495.6	3.5	4.2	665.3	0	74.5	40-140	0			
Acenaphthylene	504.3	3.3	4.2	665.3	0	75.8	40-140	0			
Anthracene	498.4	3.8	4.2	665.3	0	74.9	40-140	0			
Benzo(a)anthracene	437.1	4	4.2	665.3	0	65.7	40-140	0			
Benzo(a)pyrene	286.1	3.3	4.2	665.3	0	43	40-140	0			
Benzo(b)fluoranthene	378.7	3.5	4.2	665.3	0	56.9	40-140	0			
Benzo(g,h,i)perylene	241.8	2.4	4.2	665.3	0	36.3	40-140	0			S
Benzo(k)fluoranthene	336.1	3.4	4.2	665.3	0	50.5	40-140	0			
Chrysene	445.4	3.8	4.2	665.3	0	66.9	40-140	0			
Dibenzo(a,h)anthracene	284.3	3.4	4.2	665.3	0	42.7	40-140	0			
Fluoranthene	523	3.3	4.2	665.3	0	78.6	40-140	0			
Fluorene	475.3	3.3	4.2	665.3	0	71.4	40-140	0			
Indeno(1,2,3-cd)pyrene	253.4	3.6	4.2	665.3	0	38.1	40-140	0			S
Naphthalene	565.2	4	4.2	665.3	0	85	40-140	0			
Phenanthrene	505.7	2.6	4.2	665.3	0	76	40-140	0			
Pyrene	418	4	4.2	665.3	0	62.8	40-140	0			
Surr: 2-Fluorobiphenyl	*538.7*	0	0	*665.3*	0	*81*	*20-140*	0			
Surr: 4-Terphenyl-d14	*380.1*	0	0	*665.3*	0	*57.1*	*22-172*	0			
Surr: Nitrobenzene-d5	*428.1*	0	0	*665.3*	0	*64.4*	*28-140*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **201367** Instrument ID **SVMS6** Method: **SW8270E**

MSD Sample ID: **22080904-07B MSD** Units: **µg/Kg** Analysis Date: **8/15/2022 06:51 PM**
Client ID: Run ID: **SVMS6_220815A** SeqNo: **8711294** Prep Date: **8/15/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	553.6	2.5	4.1	658.7	0	84	40-140	550.1	0.644	30	
2-Chloronaphthalene	543.5	3.2	4.1	658.7	0	82.5	40-140	537.5	1.12	30	
2-Methylnaphthalene	498.4	2.9	4.1	658.7	0	75.7	40-140	507.6	1.82	30	
Acenaphthene	500	3.5	4.1	658.7	0	75.9	40-140	495.6	0.875	30	
Acenaphthylene	524.8	3.3	4.1	658.7	0	79.7	40-140	504.3	3.98	30	
Anthracene	528	3.7	4.1	658.7	0	80.2	40-140	498.4	5.78	30	
Benzo(a)anthracene	506	4	4.1	658.7	0	76.8	40-140	437.1	14.6	30	
Benzo(a)pyrene	387.8	3.3	4.1	658.7	0	58.9	40-140	286.1	30.2	30	R
Benzo(b)fluoranthene	489	3.5	4.1	658.7	0	74.2	40-140	378.7	25.4	30	
Benzo(g,h,i)perylene	360.1	2.4	4.1	658.7	0	54.7	40-140	241.8	39.3	30	R
Benzo(k)fluoranthene	423.4	3.4	4.1	658.7	0	64.3	40-140	336.1	23	30	
Chrysene	513.9	3.8	4.1	658.7	0	78	40-140	445.4	14.3	30	
Dibenzo(a,h)anthracene	414.7	3.3	4.1	658.7	0	63	40-140	284.3	37.3	30	R
Fluoranthene	572.7	3.3	4.1	658.7	0	86.9	40-140	523	9.08	30	
Fluorene	488.4	3.2	4.1	658.7	0	74.1	40-140	475.3	2.72	30	
Indeno(1,2,3-cd)pyrene	374.4	3.6	4.1	658.7	0	56.8	40-140	253.4	38.6	30	R
Naphthalene	554.3	4	4.1	658.7	0	84.2	40-140	565.2	1.94	30	
Phenanthrene	527.1	2.5	4.1	658.7	0	80	40-140	505.7	4.14	30	
Pyrene	447.1	4	4.1	658.7	0	67.9	40-140	418	6.73	30	
Surr: 2-Fluorobiphenyl	*541.9*	0	0	*658.7*	0	*82.3*	*20-140*	538.7	*0.59*	*30*	
Surr: 4-Terphenyl-d14	*430*	0	0	*658.7*	0	*65.3*	*22-172*	380.1	*12.3*	*30*	
Surr: Nitrobenzene-d5	*408.5*	0	0	*658.7*	0	*62*	*28-140*	428.1	*4.68*	*30*	

The following samples were analyzed in this batch: 22080299-08B 22080299-10B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **200895** Instrument ID **VMS10** Method: **SW8260D**

MBLK	Sample ID: **MBLK-200895-200895**				Units: **µg/Kg-dry**			Analysis Date: **8/9/2022 11:34 PM**			
Client ID:		Run ID: **VMS10_220809B**			SeqNo: **8693042**			Prep Date: **8/5/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	14	30								
1,1,2,2-Tetrachloroethane	U	13	30								
1,1,2-Trichloroethane	U	13	30								
1,1,2-Trichlorotrifluoroethane	U	19	30								
1,1-Dichloroethane	U	11	30								
1,1-Dichloroethene	U	9.7	30								
1,2,3-Trichlorobenzene	U	36	100								
1,2,3-Trichloropropane	U	13	30								
1,2,4-Trichlorobenzene	U	34	100								
1,2,4-Trimethylbenzene	U	22	30								
1,2-Dibromo-3-chloropropane	U	28	100								
1,2-Dibromoethane	U	8.4	30								
1,2-Dichlorobenzene	U	11	30								
1,2-Dichloroethane	U	45	100								
1,2-Dichloropropane	U	22	30								
1,3,5-Trimethylbenzene	U	35	100								
1,3-Dichlorobenzene	U	10	30								
1,4-Dichlorobenzene	U	7.2	30								
2-Butanone	U	25	200								
2-Hexanone	U	15	30								
4-Methyl-2-pentanone	U	28	30								
Acetone	U	89	100								
Benzene	U	15	30								
Bromochloromethane	U	15	30								
Bromodichloromethane	U	17	30								
Bromoform	U	13	30								
Bromomethane	U	57	100								
Carbon disulfide	U	16	30								
Carbon tetrachloride	U	12	30								
Chlorobenzene	U	10	30								
Chloroethane	U	30	100								
Chloroform	U	11	30								
Chloromethane	U	82	100								
cis-1,2-Dichloroethene	U	19	30								
cis-1,3-Dichloropropene	U	23	30								
Cyclohexane	U	27	100								
Dibromochloromethane	U	17	30								
Dichlorodifluoromethane	81.5	36	100								J
Ethylbenzene	U	6.3	30								
Isopropylbenzene	U	9.2	30								
m,p-Xylene	U	40	60								
Methyl acetate	U	36	250								
Methyl tert-butyl ether	U	8.6	30								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **200895** Instrument ID **VMS10** Method: **SW8260D**

Methylcyclohexane	U	11	30					
Methylene chloride	U	80	250					
o-Xylene	U	12	30					
Styrene	U	12	30					
Tetrachloroethene	U	18	30					
Toluene	U	8.2	30					
trans-1,2-Dichloroethene	U	11	30					
trans-1,3-Dichloropropene	U	17	30					
Trichloroethene	U	13	30					
Trichlorofluoromethane	U	15	30					
Vinyl chloride	U	20	30					
1,2-Dichloroethene, Total	U	11	60					
1,3-Dichloropropene, Total	U	23	60					
Xylenes, Total	U	40	90					
Surr: 1,2-Dichloroethane-d4	*1026*	0	0	*1000*	0	*103*	*80-120*	0
Surr: 4-Bromofluorobenzene	*998.5*	0	0	*1000*	0	*99.8*	*80-120*	0
Surr: Dibromofluoromethane	*912*	0	0	*1000*	0	*91.2*	*80-120*	0
Surr: Toluene-d8	*970.5*	0	0	*1000*	0	*97*	*80-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **200895** Instrument ID **VMS10** Method: **SW8260D**

LCS	Sample ID: **LCS-200895-200895**				Units: **µg/Kg-dry**			Analysis Date: **8/9/2022 10:44 PM**			
Client ID:		Run ID: **VMS10_220809B**			SeqNo: **8693040**			Prep Date: **8/5/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1003	14	30	1000	0	100	75-121	0			
1,1,2,2-Tetrachloroethane	1039	13	30	1000	0	104	79-125	0			
1,1,2-Trichloroethane	1062	13	30	1000	0	106	80-123	0			
1,1,2-Trichlorotrifluoroethane	987.5	19	30	1000	0	98.8	62-129	0			
1,1-Dichloroethane	1092	11	30	1000	0	109	74-124	0			
1,1-Dichloroethene	1070	9.7	30	1000	0	107	68-131	0			
1,2,3-Trichlorobenzene	949	36	100	1000	0	94.9	60-135	0			
1,2,3-Trichloropropane	1024	13	30	1000	0	102	77-121	0			
1,2,4-Trichlorobenzene	954	34	100	1000	0	95.4	63-130	0			
1,2,4-Trimethylbenzene	979.5	22	30	1000	0	98	64-126	0			
1,2-Dibromo-3-chloropropane	945.5	28	100	1000	0	94.6	55-135	0			
1,2-Dibromoethane	1070	8.4	30	1000	0	107	63-155	0			
1,2-Dichlorobenzene	1012	11	30	1000	0	101	77-122	0			
1,2-Dichloroethane	1070	45	100	1000	0	107	70-130	0			
1,2-Dichloropropane	1126	22	30	1000	0	113	71-130	0			
1,3,5-Trimethylbenzene	982	35	100	1000	0	98.2	66-130	0			
1,3-Dichlorobenzene	1018	10	30	1000	0	102	78-121	0			
1,4-Dichlorobenzene	1010	7.2	30	1000	0	101	78-122	0			
2-Butanone	1078	25	200	1000	0	108	47-164	0			
2-Hexanone	1057	15	30	1000	0	106	70-137	0			
4-Methyl-2-pentanone	1361	28	30	1000	0	136	57-200	0			
Acetone	1058	89	100	1000	0	106	52-190	0			
Benzene	1050	15	30	1000	0	105	78-122	0			
Bromochloromethane	1203	15	30	1000	0	120	68-130	0			
Bromodichloromethane	1010	17	30	1000	0	101	75-125	0			
Bromoform	945	13	30	1000	0	94.5	59-120	0			
Bromomethane	1488	57	100	1000	0	149	31-169	0			
Carbon disulfide	1344	16	30	1000	0	134	60-163	0			
Carbon tetrachloride	963.5	12	30	1000	0	96.4	69-123	0			
Chlorobenzene	994.5	10	30	1000	0	99.4	79-120	0			
Chloroethane	886.5	30	100	1000	0	88.6	38-132	0			
Chloroform	1066	11	30	1000	0	107	72-122	0			
Chloromethane	1039	82	100	1000	0	104	24-119	0			
cis-1,2-Dichloroethene	1091	19	30	1000	0	109	74-125	0			
cis-1,3-Dichloropropene	1171	23	30	1000	0	117	62-124	0			
Dibromochloromethane	905	17	30	1000	0	90.5	57-123	0			
Dichlorodifluoromethane	1204	36	100	1000	0	120	28-137	0			
Ethylbenzene	990.5	6.3	30	1000	0	99	75-121	0			
Isopropylbenzene	985	9.2	30	1000	0	98.5	74-121	0			
m,p-Xylene	2060	40	60	2000	0	103	67-129	0			
Methyl acetate	946	36	250	1000	0	94.6	61-125	0			
Methyl tert-butyl ether	1174	8.6	30	1000	0	117	79-139	0			
Methylene chloride	1224	80	250	1000	0	122	62-135	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **200895** Instrument ID **VMS10** Method: **SW8260D**

o-Xylene	1004	12	30	1000	0	100	75-120	0
Styrene	992	12	30	1000	0	99.2	74-126	0
Tetrachloroethene	990	18	30	1000	0	99	76-128	0
Toluene	960	8.2	30	1000	0	96	76-120	0
trans-1,2-Dichloroethene	1132	11	30	1000	0	113	72-127	0
trans-1,3-Dichloropropene	1082	17	30	1000	0	108	66-120	0
Trichloroethene	1004	13	30	1000	0	100	75-122	0
Trichlorofluoromethane	1115	15	30	1000	0	112	51-115	0
Vinyl chloride	1048	20	30	1000	0	105	43-128	0
1,2-Dichloroethene, Total	2224	11	60	2000	0	111	72-127	0
1,3-Dichloropropene, Total	2253	23	60	2000	0	113	62-124	0
Xylenes, Total	3064	40	90	3000	0	102	67-129	0
Surr: 1,2-Dichloroethane-d4	*1030*	0	0	*1000*	0	*103*	*80-120*	0
Surr: 4-Bromofluorobenzene	*1010*	0	0	*1000*	0	*101*	*80-120*	0
Surr: Dibromofluoromethane	*1071*	0	0	*1000*	0	*107*	*80-120*	0
Surr: Toluene-d8	*989.5*	0	0	*1000*	0	*99*	*80-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **200895** Instrument ID **VMS10** Method: **SW8260D**

MS Sample ID: **22080299-07A MS** Units: **µg/Kg-dry** Analysis Date: **8/10/2022 05:23 AM**
Client ID: **SB-6 (6-8) Grab** Run ID: **VMS10_220809B** SeqNo: **8693063** Prep Date: **8/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1143	18	40	1339	0	85.3	75-121	0			
1,1,2,2-Tetrachloroethane	1048	18	40	1339	0	78.3	79-125	0			S
1,1,2-Trichloroethane	1237	17	40	1339	0	92.4	80-123	0			
1,1,2-Trichlorotrifluoroethane	1268	25	40	1339	0	94.7	62-129	0			
1,1-Dichloroethane	1237	15	40	1339	0	92.4	74-124	0			
1,1-Dichloroethene	1256	13	40	1339	0	93.8	68-131	0			
1,2,3-Trichlorobenzene	1090	48	130	1339	0	81.5	60-135	0			
1,2,3-Trichloropropane	1285	17	40	1339	0	96	77-121	0			
1,2,4-Trichlorobenzene	1068	46	130	1339	0	79.8	63-130	0			
1,2,4-Trimethylbenzene	1197	29	40	1339	7.824	88.8	64-126	0			
1,2-Dibromo-3-chloropropane	953.2	37	130	1339	0	71.2	55-135	0			
1,2-Dibromoethane	1200	11	40	1339	0	89.6	63-155	0			
1,2-Dichlorobenzene	1177	15	40	1339	0	87.9	77-122	0			
1,2-Dichloroethane	1275	60	130	1339	0	95.2	70-130	0			
1,2-Dichloropropane	1300	30	40	1339	0	97.1	71-130	0			
1,3,5-Trimethylbenzene	1183	47	130	1339	0	88.4	66-130	0			
1,3-Dichlorobenzene	1168	13	40	1339	0	87.3	78-121	0			
1,4-Dichlorobenzene	1173	9.7	40	1339	0	87.7	78-122	0			
2-Butanone	1413	33	270	1339	0	106	47-164	0			
2-Hexanone	1469	20	40	1339	0	110	70-137	0			
4-Methyl-2-pentanone	1459	37	40	1339	0	109	57-200	0			
Acetone	2534	120	130	1339	0	189	52-190	0			
Benzene	1264	19	40	1339	0	94.4	78-122	0			
Bromochloromethane	1316	20	40	1339	0	98.3	68-130	0			
Bromodichloromethane	978.7	22	40	1339	0	73.1	75-125	0			S
Bromoform	1026	17	40	1339	0	76.6	59-120	0			
Bromomethane	1463	77	130	1339	0	109	31-169	0			
Carbon disulfide	1219	21	40	1339	0	91.1	60-163	0			
Carbon tetrachloride	1020	16	40	1339	0	76.2	69-123	0			
Chlorobenzene	1159	13	40	1339	0	86.6	79-120	0			
Chloroethane	275.8	40	130	1339	0	20.6	38-132	0			S
Chloroform	1200	15	40	1339	0	89.6	72-122	0			
Chloromethane	1226	110	130	1339	12.04	90.7	24-119	0			
cis-1,2-Dichloroethene	1208	26	40	1339	0	90.2	74-125	0			
cis-1,3-Dichloropropene	1154	30	40	1339	0	86.2	62-124	0			
Dibromochloromethane	934.5	23	40	1339	0	69.8	57-123	0			
Dichlorodifluoromethane	1631	49	130	1339	0	122	28-137	0			
Ethylbenzene	1174	8.5	40	1339	0	87.7	75-121	0			
Isopropylbenzene	1210	12	40	1339	0	90.3	74-121	0			
m,p-Xylene	2421	54	80	2678	8.425	90.1	67-129	0			
Methyl acetate	4421	48	330	1339	48.14	327	61-125	0			S
Methyl tert-butyl ether	1315	12	40	1339	0	98.2	79-139	0			
Methylene chloride	1352	110	330	1339	0	101	62-135	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **200895** Instrument ID **VMS10** Method: **SW8260D**

o-Xylene	1201	16	40	1339	0	89.7	75-120	0	
Styrene	1169	16	40	1339	0	87.3	74-126	0	
Tetrachloroethene	2200	24	40	1339	0	164	76-128	0	S
Toluene	1146	11	40	1339	9.027	84.9	76-120	0	
trans-1,2-Dichloroethene	1274	15	40	1339	0	95.2	72-127	0	
trans-1,3-Dichloropropene	1056	22	40	1339	0	78.9	66-120	0	
Trichloroethene	1305	18	40	1339	0	97.5	75-122	0	
Trichlorofluoromethane	1156	21	40	1339	0	86.4	51-115	0	
Vinyl chloride	1269	27	40	1339	0	94.7	43-128	0	
1,2-Dichloroethene, Total	2482	15	80	2678	0	92.7	72-127	0	
Xylenes, Total	3622	54	120	4016	0	90.2	67-129	0	
Surr: 1,2-Dichloroethane-d4	*1372*	0	0	*1339*	0	*102*	*80-120*	0	
Surr: 4-Bromofluorobenzene	*1408*	0	0	*1339*	0	*105*	*80-120*	0	
Surr: Dibromofluoromethane	*1301*	0	0	*1339*	0	*97.2*	*80-120*	0	
Surr: Toluene-d8	*1323*	0	0	*1339*	0	*98.9*	*80-120*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **200895** Instrument ID **VMS10** Method: **SW8260D**

MSD Sample ID: **22080299-07A MSD** Units: **µg/Kg-dry** Analysis Date: **8/10/2022 05:40 AM**
Client ID: **SB-6 (6-8) Grab** Run ID: **VMS10_220809B** SeqNo: **8693064** Prep Date: **8/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1380	20	45	1489	0	92.6	75-121	1143	18.8	30	
1,1,2,2-Tetrachloroethane	1387	20	45	1489	0	93.2	79-125	1048	27.9	30	
1,1,2-Trichloroethane	1526	19	45	1489	0	102	80-123	1237	20.9	30	
1,1,2-Trichlorotrifluoroethane	1512	28	45	1489	0	102	62-129	1268	17.6	30	
1,1-Dichloroethane	1513	16	45	1489	0	102	74-124	1237	20.1	30	
1,1-Dichloroethene	1530	14	45	1489	0	103	68-131	1256	19.6	30	
1,2,3-Trichlorobenzene	1351	54	150	1489	0	90.7	60-135	1090	21.3	30	
1,2,3-Trichloropropane	1531	19	45	1489	0	103	77-121	1285	17.4	30	
1,2,4-Trichlorobenzene	1310	51	150	1489	0	87.9	63-130	1068	20.4	30	
1,2,4-Trimethylbenzene	1448	33	45	1489	7.824	96.7	64-126	1197	19	30	
1,2-Dibromo-3-chloropropane	1116	41	150	1489	0	74.9	55-135	953.2	15.7	30	
1,2-Dibromoethane	1454	13	45	1489	0	97.6	63-155	1200	19.1	30	
1,2-Dichlorobenzene	1407	17	45	1489	0	94.5	77-122	1177	17.8	30	
1,2-Dichloroethane	1514	67	150	1489	0	102	70-130	1275	17.2	30	
1,2-Dichloropropane	1567	33	45	1489	0	105	71-130	1300	18.6	30	
1,3,5-Trimethylbenzene	1460	52	150	1489	0	98	66-130	1183	21	30	
1,3-Dichlorobenzene	1379	15	45	1489	0	92.6	78-121	1168	16.6	30	
1,4-Dichlorobenzene	1402	11	45	1489	0	94.1	78-122	1173	17.8	30	
2-Butanone	1389	37	300	1489	0	93.3	47-164	1413	1.75	30	
2-Hexanone	1660	22	45	1489	0	111	70-137	1469	12.2	30	
4-Methyl-2-pentanone	1836	42	45	1489	0	123	57-200	1459	22.9	30	
Acetone	2917	130	150	1489	0	196	52-190	2534	14	30	S
Benzene	1506	22	45	1489	0	101	78-122	1264	17.5	30	
Bromochloromethane	1601	23	45	1489	0	107	68-130	1316	19.5	30	
Bromodichloromethane	1225	25	45	1489	0	82.3	75-125	978.7	22.3	30	
Bromoform	1255	19	45	1489	0	84.3	59-120	1026	20	30	
Bromomethane	1652	85	150	1489	0	111	31-169	1463	12.1	30	
Carbon disulfide	1523	23	45	1489	0	102	60-163	1219	22.2	30	
Carbon tetrachloride	1256	17	45	1489	0	84.4	69-123	1020	20.7	30	
Chlorobenzene	1435	15	45	1489	0	96.3	79-120	1159	21.2	30	
Chloroethane	288.9	44	150	1489	0	19.4	38-132	275.8	4.64	30	S
Chloroform	1497	16	45	1489	0	101	72-122	1200	22	30	
Chloromethane	1529	120	150	1489	12.04	102	24-119	1226	21.9	30	
cis-1,2-Dichloroethene	1497	29	45	1489	0	101	74-125	1208	21.4	30	
cis-1,3-Dichloropropene	1425	34	45	1489	0	95.7	62-124	1154	21	30	
Dibromochloromethane	1145	25	45	1489	0	76.9	57-123	934.5	20.3	30	
Dichlorodifluoromethane	1912	54	150	1489	0	128	28-137	1631	15.8	30	
Ethylbenzene	1420	9.4	45	1489	0	95.3	75-121	1174	19	30	
Isopropylbenzene	1454	14	45	1489	0	97.6	74-121	1210	18.4	30	
m,p-Xylene	2932	60	89	2978	8.425	98.1	67-129	2421	19.1	30	
Methyl acetate	7588	53	370	1489	48.14	506	61-125	4421	52.7	30	SRE
Methyl tert-butyl ether	1585	13	45	1489	0	106	79-139	1315	18.6	30	
Methylene chloride	1618	120	370	1489	0	109	62-135	1352	17.9	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **200895** Instrument ID **VMS10** Method: **SW8260D**

o-Xylene	1483	17	45	1489	0	99.6	75-120	1201	21	30	
Styrene	1439	18	45	1489	0	96.6	74-126	1169	20.7	30	
Tetrachloroethene	2497	27	45	1489	0	168	76-128	2200	12.6	30	S
Toluene	1396	12	45	1489	9.027	93.1	76-120	1146	19.7	30	
trans-1,2-Dichloroethene	1500	16	45	1489	0	101	72-127	1274	16.3	30	
trans-1,3-Dichloropropene	1313	25	45	1489	0	88.2	66-120	1056	21.7	30	
Trichloroethene	1460	20	45	1489	0	98	75-122	1305	11.2	30	
Trichlorofluoromethane	1353	23	45	1489	0	90.9	51-115	1156	15.7	30	
Vinyl chloride	1556	30	45	1489	0	104	43-128	1269	20.4	30	
1,2-Dichloroethene, Total	2997	16	89	2978	0	101	72-127	2482	18.8	30	
1,3-Dichloropropene, Total	2739	34	89	2978	0	91.9	62-124	2300	17.4	30	
Xylenes, Total	4415	60	130	4468	0	98.8	67-129	3622	19.7	30	
Surr: 1,2-Dichloroethane-d4	*1524*	0	0	*1489*	0	*102*	*80-120*	1372	*10.5*	*30*	
Surr: 4-Bromofluorobenzene	*1579*	0	0	*1489*	0	*106*	*80-120*	1408	*11.4*	*30*	
Surr: Dibromofluoromethane	*1510*	0	0	*1489*	0	*101*	*80-120*	1301	*14.9*	*30*	
Surr: Toluene-d8	*1476*	0	0	*1489*	0	*99.1*	*80-120*	1323	*10.9*	*30*	

The following samples were analyzed in this batch:

22080299-01A	22080299-02A	22080299-03A
22080299-04A	22080299-05A	22080299-06A
22080299-07A	22080299-08A	22080299-09A
22080299-10A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **R350794a** Instrument ID **VMS10** Method: **SW8260D**

MBLK	Sample ID: **10V-BLKW2-220809-R350794a**				Units: **µg/L**			Analysis Date: **8/9/2022 11:18 PM**			
Client ID:		Run ID: **VMS10_220809B**			SeqNo: **8693010**			Prep Date:		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	0.46	1.0								
1,1,2,2-Tetrachloroethane	U	0.4	1.0								
1,1,2-Trichloroethane	U	0.46	1.0								
1,1,2-Trichlorotrifluoroethane	U	0.52	1.0								
1,1-Dichloroethane	U	0.44	1.0								
1,1-Dichloroethene	U	0.4	1.0								
1,2,3-Trichlorobenzene	U	0.42	1.0								
1,2,3-Trichloropropane	U	0.4	1.0								
1,2,4-Trichlorobenzene	U	0.45	1.0								
1,2,4-Trimethylbenzene	U	0.45	1.0								
1,2-Dibromo-3-chloropropane	U	0.43	1.0								
1,2-Dibromoethane	U	0.41	1.0								
1,2-Dichlorobenzene	U	0.32	1.0								
1,2-Dichloroethane	U	0.44	1.0								
1,2-Dichloropropane	U	0.48	1.0								
1,3,5-Trimethylbenzene	U	0.65	1.0								
1,3-Dichlorobenzene	U	0.33	1.0								
1,4-Dichlorobenzene	U	0.35	1.0								
2-Butanone	U	0.52	5.0								
2-Hexanone	U	0.59	5.0								
4-Methyl-2-pentanone	U	0.52	1.0								
Acetone	U	1.1	10								
Benzene	U	0.46	1.0								
Bromochloromethane	U	0.45	1.0								
Bromodichloromethane	U	0.49	1.0								
Bromoform	U	0.56	1.0								
Bromomethane	U	0.9	1.0								
Carbon disulfide	U	0.49	1.0								
Carbon tetrachloride	U	0.4	1.0								
Chlorobenzene	U	0.4	1.0								
Chloroethane	U	0.68	1.0								
Chloroform	U	0.46	1.0								
Chloromethane	U	0.83	1.0								
cis-1,2-Dichloroethene	U	0.42	1.0								
cis-1,3-Dichloropropene	U	0.57	1.0								
Cyclohexane	U	0.63	2.0								
Dibromochloromethane	U	0.4	1.0								
Dichlorodifluoromethane	U	0.68	1.0								
Ethylbenzene	U	0.34	1.0								
Isopropylbenzene	U	0.35	1.0								
m,p-Xylene	U	0.81	2.0								
Methyl acetate	U	0.59	2.0								
Methyl tert-butyl ether	U	0.45	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R350794a** Instrument ID **VMS10** Method: **SW8260D**

Methylcyclohexane	U	0.35	1.0					
Methylene chloride	U	0.86	5.0					
o-Xylene	U	0.31	1.0					
Styrene	U	0.33	1.0					
Tetrachloroethene	U	0.39	1.0					
Toluene	U	0.45	1.0					
trans-1,2-Dichloroethene	U	0.48	1.0					
trans-1,3-Dichloropropene	U	0.38	1.0					
Trichloroethene	U	0.43	1.0					
Trichlorofluoromethane	U	0.52	1.0					
Vinyl chloride	U	0.53	1.0					
1,2-Dichloroethene, Total	U	0.48	2.0					
1,3-Dichloropropene, Total	U	0.57	2.0					
Xylenes, Total	U	0.81	2.0					
Surr: 1,2-Dichloroethane-d4	*20.77*	0	0	*20*	0	*104*	*80-120*	0
Surr: 4-Bromofluorobenzene	*18.83*	0	0	*20*	0	*94.2*	*80-120*	0
Surr: Dibromofluoromethane	*20.54*	0	0	*20*	0	*103*	*80-120*	0
Surr: Toluene-d8	*19.25*	0	0	*20*	0	*96.2*	*80-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **R350794a** Instrument ID **VMS10** Method: **SW8260D**

LCS	Sample ID: **10V-LCSW2-220809-R350794a**				Units: **µg/L**			Analysis Date: **8/9/2022 10:28 PM**			
Client ID:		Run ID: **VMS10_220809B**			SeqNo: **8693008**			Prep Date:		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	20.13	0.46	1.0	20	0	101	75-119	0			
1,1,2,2-Tetrachloroethane	21.04	0.4	1.0	20	0	105	80-123	0			
1,1,2-Trichloroethane	20.94	0.46	1.0	20	0	105	83-118	0			
1,1,2-Trichlorotrifluoroethane	19.14	0.52	1.0	20	0	95.7	64-133	0			
1,1-Dichloroethane	21.44	0.44	1.0	20	0	107	73-122	0			
1,1-Dichloroethene	21.29	0.4	1.0	20	0	106	66-131	0			
1,2,3-Trichlorobenzene	19.03	0.42	1.0	20	0	95.2	65-140	0			
1,2,3-Trichloropropane	19.85	0.4	1.0	20	0	99.2	78-119	0			
1,2,4-Trichlorobenzene	19.85	0.45	1.0	20	0	99.2	73-127	0			
1,2,4-Trimethylbenzene	19.46	0.45	1.0	20	0	97.3	74-118	0			
1,2-Dibromo-3-chloropropane	18.55	0.43	1.0	20	0	92.8	52-141	0			
1,2-Dibromoethane	20.83	0.41	1.0	20	0	104	60-159	0			
1,2-Dichlorobenzene	20.1	0.32	1.0	20	0	100	80-119	0			
1,2-Dichloroethane	21.24	0.44	1.0	20	0	106	78-121	0			
1,2-Dichloropropane	21.86	0.48	1.0	20	0	109	78-120	0			
1,3,5-Trimethylbenzene	19.4	0.65	1.0	20	0	97	76-120	0			
1,3-Dichlorobenzene	20.59	0.33	1.0	20	0	103	80-120	0			
1,4-Dichlorobenzene	20.47	0.35	1.0	20	0	102	81-119	0			
2-Butanone	20.92	0.52	5.0	20	0	105	69-147	0			
2-Hexanone	21.1	0.59	5.0	20	0	106	67-140	0			
4-Methyl-2-pentanone	26.07	0.52	1.0	20	0	130	68-199	0			
Acetone	20.67	1.1	10	20	0	103	70-166	0			
Benzene	20.68	0.46	1.0	20	0	103	78-120	0			
Bromochloromethane	23.66	0.45	1.0	20	0	118	70-125	0			
Bromodichloromethane	20.11	0.49	1.0	20	0	101	73-126	0			
Bromoform	19.3	0.56	1.0	20	0	96.5	60-124	0			
Bromomethane	30.27	0.9	1.0	20	0	151	20-183	0			
Carbon disulfide	27.41	0.49	1.0	20	0	137	67-159	0			
Carbon tetrachloride	19.51	0.4	1.0	20	0	97.6	69-124	0			
Chlorobenzene	19.5	0.4	1.0	20	0	97.5	80-118	0			
Chloroethane	17.85	0.68	1.0	20	0	89.2	35-136	0			
Chloroform	21.03	0.46	1.0	20	0	105	75-119	0			
Chloromethane	20.94	0.83	1.0	20	0	105	26-117	0			
cis-1,2-Dichloroethene	21.49	0.42	1.0	20	0	107	75-123	0			
cis-1,3-Dichloropropene	23.57	0.57	1.0	20	0	118	69-120	0			
Cyclohexane	20.1	0.63	2.0	20	0	100	66-128	0			
Dibromochloromethane	18.52	0.4	1.0	20	0	92.6	63-117	0			
Dichlorodifluoromethane	23.78	0.68	1.0	20	0	119	36-133	0			
Ethylbenzene	19.46	0.34	1.0	20	0	97.3	76-116	0			
Isopropylbenzene	19.44	0.35	1.0	20	0	97.2	77-118	0			
m,p-Xylene	40.24	0.81	2.0	40	0	101	76-119	0			
Methyl tert-butyl ether	23.11	0.45	1.0	20	0	116	77-137	0			
Methylcyclohexane	17.9	0.35	1.0	20	0	89.5	66-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R350794a** Instrument ID **VMS10** Method: **SW8260D**

Methylene chloride	23.86	0.86	5.0	20	0	119	68-125	0	
o-Xylene	20.39	0.31	1.0	20	0	102	77-116	0	
Styrene	19.49	0.33	1.0	20	0	97.4	76-123	0	
Tetrachloroethene	19.53	0.39	1.0	20	0	97.6	80-124	0	
Toluene	19.09	0.45	1.0	20	0	95.4	78-116	0	
trans-1,2-Dichloroethene	22.61	0.48	1.0	20	0	113	73-124	0	
trans-1,3-Dichloropropene	21.5	0.38	1.0	20	0	108	67-118	0	
Trichloroethene	19.87	0.43	1.0	20	0	99.4	75-122	0	
Trichlorofluoromethane	23.24	0.52	1.0	20	0	116	52-115	0	S
Vinyl chloride	20.72	0.53	1.0	20	0	104	49-122	0	
1,2-Dichloroethene, Total	44.1	0.48	2.0	40	0	110	73-124	0	
1,3-Dichloropropene, Total	45.07	0.57	2.0	40	0	113	67-120	0	
Xylenes, Total	60.63	0.81	2.0	60	0	101	77-119	0	
Surr: 1,2-Dichloroethane-d4	*20.32*	0	0	*20*	0	*102*	*80-120*	0	
Surr: 4-Bromofluorobenzene	*20.66*	0	0	*20*	0	*103*	*80-120*	0	
Surr: Dibromofluoromethane	*21.2*	0	0	*20*	0	*106*	*80-120*	0	
Surr: Toluene-d8	*19.79*	0	0	*20*	0	*99*	*80-120*	0	

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **R350794a** Instrument ID **VMS10** Method: **SW8260D**

MS Sample ID: **22080299-13A MS** Units: **µg/L** Analysis Date: **8/10/2022 05:56 AM**

Client ID: **GW-4 Grab** Run ID: **VMS10_220809B** SeqNo: **8693034** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	20.78	0.46	1.0	20	0	104	75-119	0			
1,1,2,2-Tetrachloroethane	18.81	0.4	1.0	20	0	94	80-123	0			
1,1,2-Trichloroethane	19.23	0.46	1.0	20	0	96.2	83-118	0			
1,1,2-Trichlorotrifluoroethane	22.85	0.52	1.0	20	0	114	64-133	0			
1,1-Dichloroethane	21.41	0.44	1.0	20	0	107	73-122	0			
1,1-Dichloroethene	21.46	0.4	1.0	20	0	107	66-131	0			
1,2,3-Trichlorobenzene	13.43	0.42	1.0	20	0	67.2	65-140	0			
1,2,3-Trichloropropane	18.69	0.4	1.0	20	0	93.4	78-119	0			
1,2,4-Trichlorobenzene	12.87	0.45	1.0	20	0	64.4	73-127	0			S
1,2,4-Trimethylbenzene	16.67	0.45	1.0	20	0	83.4	74-118	0			
1,2-Dibromo-3-chloropropane	15.37	0.43	1.0	20	0	76.8	52-141	0			
1,2-Dibromoethane	17.31	0.41	1.0	20	0	86.6	60-159	0			
1,2-Dichlorobenzene	15.34	0.32	1.0	20	0	76.7	80-119	0			S
1,2-Dichloroethane	19.89	0.44	1.0	20	0	99.4	78-121	0			
1,2-Dichloropropane	21.16	0.48	1.0	20	0	106	78-120	0			
1,3,5-Trimethylbenzene	16.87	0.65	1.0	20	0	84.4	76-120	0			
1,3-Dichlorobenzene	14.91	0.33	1.0	20	0	74.6	80-120	0			S
1,4-Dichlorobenzene	14.52	0.35	1.0	20	0	72.6	81-119	0			S
2-Butanone	19.83	0.52	5.0	20	0	99.2	69-147	0			
2-Hexanone	20.06	0.59	5.0	20	0	100	67-140	0			
4-Methyl-2-pentanone	26.27	0.52	1.0	20	0	131	68-199	0			
Acetone	26.91	1.1	10	20	5.28	108	70-166	0			
Benzene	20.04	0.46	1.0	20	0	100	78-120	0			
Bromochloromethane	23.06	0.45	1.0	20	0	115	70-125	0			
Bromodichloromethane	17.96	0.49	1.0	20	0	89.8	73-126	0			
Bromoform	15.45	0.56	1.0	20	0	77.2	60-124	0			
Bromomethane	69.21	0.9	1.0	20	0	346	20-183	0			S
Carbon disulfide	22.83	0.49	1.0	20	0.34	112	67-159	0			
Carbon tetrachloride	19.27	0.4	1.0	20	0	96.4	69-124	0			
Chlorobenzene	16.09	0.4	1.0	20	0	80.4	80-118	0			
Chloroethane	89.93	0.68	1.0	20	0	450	35-136	0			S
Chloroform	20.35	0.46	1.0	20	0	102	75-119	0			
Chloromethane	20.79	0.83	1.0	20	0.13	103	26-117	0			
cis-1,2-Dichloroethene	19.06	0.42	1.0	20	0	95.3	75-123	0			
cis-1,3-Dichloropropene	18.56	0.57	1.0	20	0	92.8	69-120	0			
Cyclohexane	20.52	0.63	2.0	20	0	103	66-128	0			
Dibromochloromethane	15.71	0.4	1.0	20	0	78.6	63-117	0			
Dichlorodifluoromethane	27.3	0.68	1.0	20	0	136	36-133	0			S
Ethylbenzene	17.07	0.34	1.0	20	0	85.4	76-116	0			
Isopropylbenzene	17.6	0.35	1.0	20	0	88	77-118	0			
m,p-Xylene	35	0.81	2.0	40	0	87.5	76-119	0			
Methyl tert-butyl ether	22.44	0.45	1.0	20	0	112	77-137	0			
Methylcyclohexane	17.33	0.35	1.0	20	0	86.6	66-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R350794a**	Instrument ID **VMS10**			Method: **SW8260D**					
Methylene chloride	21.9	0.86	5.0	20	0	110	68-125	0	
o-Xylene	18.35	0.31	1.0	20	0	91.8	77-116	0	
Styrene	14.28	0.33	1.0	20	0	71.4	76-123	0	S
Tetrachloroethene	17.76	0.39	1.0	20	0	88.8	80-124	0	
Toluene	17.55	0.45	1.0	20	0	87.8	78-116	0	
trans-1,2-Dichloroethene	19.14	0.48	1.0	20	0	95.7	73-124	0	
trans-1,3-Dichloropropene	15.7	0.38	1.0	20	0	78.5	67-118	0	
Trichloroethene	17.34	0.43	1.0	20	0	86.7	75-122	0	
Trichlorofluoromethane	33.67	0.52	1.0	20	0	168	52-115	0	S
Vinyl chloride	21.41	0.53	1.0	20	0	107	49-122	0	
1,2-Dichloroethene, Total	38.2	0.48	2.0	40	0	95.5	73-124	0	
1,3-Dichloropropene, Total	34.26	0.57	2.0	40	0	85.6	67-120	0	
Xylenes, Total	53.35	0.81	2.0	60	0	88.9	77-119	0	
Surr: 1,2-Dichloroethane-d4	*20.64*	0	0	*20*	0	*103*	*80-120*	0	
Surr: 4-Bromofluorobenzene	*20.76*	0	0	*20*	0	*104*	*80-120*	0	
Surr: Dibromofluoromethane	*20.99*	0	0	*20*	0	*105*	*80-120*	0	
Surr: Toluene-d8	*19.87*	0	0	*20*	0	*99.4*	*80-120*	0	

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **R350794a** Instrument ID **VMS10** Method: **SW8260D**

MSD Sample ID: **22080299-13A MSD** Units: **µg/L** Analysis Date: **8/10/2022 06:13 AM**
Client ID: **GW-4 Grab** Run ID: **VMS10_220809B** SeqNo: **8693035** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	21.23	0.46	1.0	20	0	106	75-119	20.78	2.14	30	
1,1,2,2-Tetrachloroethane	19.21	0.4	1.0	20	0	96	80-123	18.81	2.1	30	
1,1,2-Trichloroethane	19.86	0.46	1.0	20	0	99.3	83-118	19.23	3.22	30	
1,1,2-Trichlorotrifluoroethane	23.03	0.52	1.0	20	0	115	64-133	22.85	0.785	30	
1,1-Dichloroethane	22.11	0.44	1.0	20	0	111	73-122	21.41	3.22	30	
1,1-Dichloroethene	22.31	0.4	1.0	20	0	112	66-131	21.46	3.88	30	
1,2,3-Trichlorobenzene	13.55	0.42	1.0	20	0	67.8	65-140	13.43	0.89	30	
1,2,3-Trichloropropane	19.43	0.4	1.0	20	0	97.2	78-119	18.69	3.88	30	
1,2,4-Trichlorobenzene	13.35	0.45	1.0	20	0	66.8	73-127	12.87	3.66	30	S
1,2,4-Trimethylbenzene	17.13	0.45	1.0	20	0	85.6	74-118	16.67	2.72	30	
1,2-Dibromo-3-chloropropane	16.55	0.43	1.0	20	0	82.8	52-141	15.37	7.39	30	
1,2-Dibromoethane	18.26	0.41	1.0	20	0	91.3	60-159	17.31	5.34	30	
1,2-Dichlorobenzene	16.03	0.32	1.0	20	0	80.2	80-119	15.34	4.4	30	
1,2-Dichloroethane	20.52	0.44	1.0	20	0	103	78-121	19.89	3.12	30	
1,2-Dichloropropane	22.12	0.48	1.0	20	0	111	78-120	21.16	4.44	30	
1,3,5-Trimethylbenzene	17.58	0.65	1.0	20	0	87.9	76-120	16.87	4.12	30	
1,3-Dichlorobenzene	15.43	0.33	1.0	20	0	77.2	80-120	14.91	3.43	30	S
1,4-Dichlorobenzene	15.12	0.35	1.0	20	0	75.6	81-119	14.52	4.05	30	S
2-Butanone	22.42	0.52	5.0	20	0	112	69-147	19.83	12.3	30	
2-Hexanone	20.3	0.59	5.0	20	0	102	67-140	20.06	1.19	30	
4-Methyl-2-pentanone	26.21	0.52	1.0	20	0	131	68-199	26.27	0.229	30	
Acetone	28.16	1.1	10	20	5.28	114	70-166	26.91	4.54	30	
Benzene	20.67	0.46	1.0	20	0	103	78-120	20.04	3.1	30	
Bromochloromethane	24.43	0.45	1.0	20	0	122	70-125	23.06	5.77	30	
Bromodichloromethane	18.94	0.49	1.0	20	0	94.7	73-126	17.96	5.31	30	
Bromoform	16.54	0.56	1.0	20	0	82.7	60-124	15.45	6.81	30	
Bromomethane	69.19	0.9	1.0	20	0	346	20-183	69.21	0.0289	30	S
Carbon disulfide	25.01	0.49	1.0	20	0.34	123	67-159	22.83	9.11	30	
Carbon tetrachloride	20.52	0.4	1.0	20	0	103	69-124	19.27	6.28	30	
Chlorobenzene	17.25	0.4	1.0	20	0	86.2	80-118	16.09	6.96	30	
Chloroethane	81.21	0.68	1.0	20	0	406	35-136	89.93	10.2	30	S
Chloroform	21.22	0.46	1.0	20	0	106	75-119	20.35	4.19	30	
Chloromethane	20.85	0.83	1.0	20	0.13	104	26-117	20.79	0.288	30	
cis-1,2-Dichloroethene	20.05	0.42	1.0	20	0	100	75-123	19.06	5.06	30	
cis-1,3-Dichloropropene	19.72	0.57	1.0	20	0	98.6	69-120	18.56	6.06	30	
Cyclohexane	20.9	0.63	2.0	20	0	104	66-128	20.52	1.83	30	
Dibromochloromethane	16.73	0.4	1.0	20	0	83.6	63-117	15.71	6.29	30	
Dichlorodifluoromethane	27.19	0.68	1.0	20	0	136	36-133	27.3	0.404	30	S
Ethylbenzene	17.79	0.34	1.0	20	0	89	76-116	17.07	4.13	30	
Isopropylbenzene	18.44	0.35	1.0	20	0	92.2	77-118	17.6	4.66	30	
m,p-Xylene	36.21	0.81	2.0	40	0	90.5	76-119	35	3.4	30	
Methyl tert-butyl ether	22.57	0.45	1.0	20	0	113	77-137	22.44	0.578	30	
Methylcyclohexane	17.83	0.35	1.0	20	0	89.2	66-125	17.33	2.84	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **R350794a** Instrument ID **VMS10** Method: **SW8260D**

Methylene chloride	22.47	0.86	5.0	20	0	112	68-125	21.9	2.57	30	
o-Xylene	18.67	0.31	1.0	20	0	93.4	77-116	18.35	1.73	30	
Styrene	14.97	0.33	1.0	20	0	74.8	76-123	14.28	4.72	30	S
Tetrachloroethene	18.94	0.39	1.0	20	0	94.7	80-124	17.76	6.43	30	
Toluene	18.12	0.45	1.0	20	0	90.6	78-116	17.55	3.2	30	
trans-1,2-Dichloroethene	20.05	0.48	1.0	20	0	100	73-124	19.14	4.64	30	
trans-1,3-Dichloropropene	16.77	0.38	1.0	20	0	83.8	67-118	15.7	6.59	30	
Trichloroethene	18.01	0.43	1.0	20	0	90	75-122	17.34	3.79	30	
Trichlorofluoromethane	33.98	0.52	1.0	20	0	170	52-115	33.67	0.916	30	S
Vinyl chloride	22.11	0.53	1.0	20	0	111	49-122	21.41	3.22	30	
1,2-Dichloroethene, Total	40.1	0.48	2.0	40	0	100	73-124	38.2	4.85	30	
1,3-Dichloropropene, Total	36.49	0.57	2.0	40	0	91.2	67-120	34.26	6.3	30	
Xylenes, Total	54.88	0.81	2.0	60	0	91.5	77-119	53.35	2.83	30	
Surr: 1,2-Dichloroethane-d4	*20.64*	0	0	*20*	0	*103*	*80-120*	20.64	*0*	*30*	
Surr: 4-Bromofluorobenzene	*20.75*	0	0	*20*	0	*104*	*80-120*	20.76	*0.0482*	*30*	
Surr: Dibromofluoromethane	*21.19*	0	0	*20*	0	*106*	*80-120*	20.99	*0.948*	*30*	
Surr: Toluene-d8	*19.74*	0	0	*20*	0	*98.7*	*80-120*	19.87	*0.656*	*30*	

The following samples were analyzed in this batch:

22080299-11A	22080299-12A	22080299-13A
22080299-14A	22080299-15A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **R350808a** Instrument ID **VMS10** Method: **SW8260D**

MBLK	Sample ID: **10V-BLKW1-220810-R350808a**				Units: **µg/L**			Analysis Date: **8/10/2022 11:31 AM**			
Client ID:		Run ID: **VMS10_220810A**			SeqNo: **8694013**			Prep Date:		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	0.46	1.0								
1,1,2,2-Tetrachloroethane	U	0.4	1.0								
1,1,2-Trichloroethane	U	0.46	1.0								
1,1,2-Trichlorotrifluoroethane	U	0.52	1.0								
1,1-Dichloroethane	U	0.44	1.0								
1,1-Dichloroethene	U	0.4	1.0								
1,2,3-Trichlorobenzene	U	0.42	1.0								
1,2,3-Trichloropropane	U	0.4	1.0								
1,2,4-Trichlorobenzene	U	0.45	1.0								
1,2,4-Trimethylbenzene	U	0.45	1.0								
1,2-Dibromo-3-chloropropane	U	0.43	1.0								
1,2-Dibromoethane	U	0.41	1.0								
1,2-Dichlorobenzene	U	0.32	1.0								
1,2-Dichloroethane	U	0.44	1.0								
1,2-Dichloropropane	U	0.48	1.0								
1,3,5-Trimethylbenzene	U	0.65	1.0								
1,3-Dichlorobenzene	U	0.33	1.0								
1,4-Dichlorobenzene	U	0.35	1.0								
2-Butanone	U	0.52	5.0								
2-Hexanone	U	0.59	5.0								
4-Methyl-2-pentanone	U	0.52	1.0								
Acetone	U	1.1	10								
Benzene	U	0.46	1.0								
Bromochloromethane	U	0.45	1.0								
Bromodichloromethane	U	0.49	1.0								
Bromoform	U	0.56	1.0								
Bromomethane	U	0.9	1.0								
Carbon disulfide	U	0.49	1.0								
Carbon tetrachloride	U	0.4	1.0								
Chlorobenzene	U	0.4	1.0								
Chloroethane	U	0.68	1.0								
Chloroform	U	0.46	1.0								
Chloromethane	U	0.83	1.0								
cis-1,2-Dichloroethene	U	0.42	1.0								
cis-1,3-Dichloropropene	U	0.57	1.0								
Cyclohexane	U	0.63	2.0								
Dibromochloromethane	U	0.4	1.0								
Dichlorodifluoromethane	U	0.68	1.0								
Ethylbenzene	U	0.34	1.0								
Isopropylbenzene	U	0.35	1.0								
m,p-Xylene	U	0.81	2.0								
Methyl acetate	U	0.59	2.0								
Methyl tert-butyl ether	U	0.45	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R350808a** Instrument ID **VMS10** Method: **SW8260D**

Methylcyclohexane	U	0.35	1.0					
Methylene chloride	U	0.86	5.0					
o-Xylene	U	0.31	1.0					
Styrene	U	0.33	1.0					
Tetrachloroethene	U	0.39	1.0					
Toluene	U	0.45	1.0					
trans-1,2-Dichloroethene	U	0.48	1.0					
trans-1,3-Dichloropropene	U	0.38	1.0					
Trichloroethene	U	0.43	1.0					
Trichlorofluoromethane	U	0.52	1.0					
Vinyl chloride	U	0.53	1.0					
1,2-Dichloroethene, Total	U	0.48	2.0					
1,3-Dichloropropene, Total	U	0.57	2.0					
Xylenes, Total	U	0.81	2.0					
Surr: 1,2-Dichloroethane-d4	*20.96*	0	0	*20*	0	*105*	*80-120*	0
Surr: 4-Bromofluorobenzene	*18.75*	0	0	*20*	0	*93.8*	*80-120*	0
Surr: Dibromofluoromethane	*20.46*	0	0	*20*	0	*102*	*80-120*	0
Surr: Toluene-d8	*19.2*	0	0	*20*	0	*96*	*80-120*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **R350808a** Instrument ID **VMS10** Method: **SW8260D**

LCS	Sample ID: **10V-LCSW1-220810-R350808a**				Units: **µg/L**			Analysis Date: **8/10/2022 10:41 AM**			
Client ID:		Run ID: **VMS10_220810A**			SeqNo: **8694011**			Prep Date:		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	20.53	0.46	1.0	20	0	103	75-119	0			
1,1,2,2-Tetrachloroethane	20.11	0.4	1.0	20	0	101	80-123	0			
1,1,2-Trichloroethane	20.65	0.46	1.0	20	0	103	83-118	0			
1,1,2-Trichlorotrifluoroethane	22.27	0.52	1.0	20	0	111	64-133	0			
1,1-Dichloroethane	21.29	0.44	1.0	20	0	106	73-122	0			
1,1-Dichloroethene	22.44	0.4	1.0	20	0	112	66-131	0			
1,2,3-Trichlorobenzene	19.59	0.42	1.0	20	0	98	65-140	0			
1,2,3-Trichloropropane	19.68	0.4	1.0	20	0	98.4	78-119	0			
1,2,4-Trichlorobenzene	20.21	0.45	1.0	20	0	101	73-127	0			
1,2,4-Trimethylbenzene	19.77	0.45	1.0	20	0	98.8	74-118	0			
1,2-Dibromo-3-chloropropane	17.46	0.43	1.0	20	0	87.3	52-141	0			
1,2-Dibromoethane	20.43	0.41	1.0	20	0	102	60-159	0			
1,2-Dichlorobenzene	20.15	0.32	1.0	20	0	101	80-119	0			
1,2-Dichloroethane	21.01	0.44	1.0	20	0	105	78-121	0			
1,2-Dichloropropane	21.89	0.48	1.0	20	0	109	78-120	0			
1,3,5-Trimethylbenzene	19.98	0.65	1.0	20	0	99.9	76-120	0			
1,3-Dichlorobenzene	20.64	0.33	1.0	20	0	103	80-120	0			
1,4-Dichlorobenzene	20.52	0.35	1.0	20	0	103	81-119	0			
2-Butanone	19.61	0.52	5.0	20	0	98	69-147	0			
2-Hexanone	19.5	0.59	5.0	20	0	97.5	67-140	0			
4-Methyl-2-pentanone	25.55	0.52	1.0	20	0	128	68-199	0			
Acetone	20.12	1.1	10	20	0	101	70-166	0			
Benzene	21.12	0.46	1.0	20	0	106	78-120	0			
Bromochloromethane	22.64	0.45	1.0	20	0	113	70-125	0			
Bromodichloromethane	19.12	0.49	1.0	20	0	95.6	73-126	0			
Bromoform	18.14	0.56	1.0	20	0	90.7	60-124	0			
Bromomethane	28.68	0.9	1.0	20	0	143	20-183	0			
Carbon disulfide	25.85	0.49	1.0	20	0	129	67-159	0			
Carbon tetrachloride	19.8	0.4	1.0	20	0	99	69-124	0			
Chlorobenzene	19.73	0.4	1.0	20	0	98.6	80-118	0			
Chloroethane	18.33	0.68	1.0	20	0	91.6	35-136	0			
Chloroform	20.18	0.46	1.0	20	0	101	75-119	0			
Chloromethane	19.95	0.83	1.0	20	0	99.8	26-117	0			
cis-1,2-Dichloroethene	21.62	0.42	1.0	20	0	108	75-123	0			
cis-1,3-Dichloropropene	23.01	0.57	1.0	20	0	115	69-120	0			
Cyclohexane	20.43	0.63	2.0	20	0	102	66-128	0			
Dibromochloromethane	16.97	0.4	1.0	20	0	84.8	63-117	0			
Dichlorodifluoromethane	23.19	0.68	1.0	20	0	116	36-133	0			
Ethylbenzene	19.99	0.34	1.0	20	0	100	76-116	0			
Isopropylbenzene	20.24	0.35	1.0	20	0	101	77-118	0			
m,p-Xylene	40.77	0.81	2.0	40	0	102	76-119	0			
Methyl tert-butyl ether	22.4	0.45	1.0	20	0	112	77-137	0			
Methylcyclohexane	19.65	0.35	1.0	20	0	98.2	66-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R350808a** Instrument ID **VMS10** Method: **SW8260D**

Methylene chloride	22.32	0.86	5.0	20	0	112	68-125	0	
o-Xylene	20.06	0.31	1.0	20	0	100	77-116	0	
Styrene	19.77	0.33	1.0	20	0	98.8	76-123	0	
Tetrachloroethene	20.62	0.39	1.0	20	0	103	80-124	0	
Toluene	19.38	0.45	1.0	20	0	96.9	78-116	0	
trans-1,2-Dichloroethene	22.13	0.48	1.0	20	0	111	73-124	0	
trans-1,3-Dichloropropene	20.95	0.38	1.0	20	0	105	67-118	0	
Trichloroethene	19.79	0.43	1.0	20	0	99	75-122	0	
Trichlorofluoromethane	23.86	0.52	1.0	20	0	119	52-115	0	S
Vinyl chloride	20.91	0.53	1.0	20	0	105	49-122	0	
1,2-Dichloroethene, Total	43.75	0.48	2.0	40	0	109	73-124	0	
1,3-Dichloropropene, Total	43.96	0.57	2.0	40	0	110	67-120	0	
Xylenes, Total	60.83	0.81	2.0	60	0	101	77-119	0	
Surr: 1,2-Dichloroethane-d4	*20.93*	0	0	*20*	0	*105*	*80-120*	0	
Surr: 4-Bromofluorobenzene	*20.66*	0	0	*20*	0	*103*	*80-120*	0	
Surr: Dibromofluoromethane	*21.75*	0	0	*20*	0	*109*	*80-120*	0	
Surr: Toluene-d8	*20.01*	0	0	*20*	0	*100*	*80-120*	0	

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **R350808a** Instrument ID **VMS10** Method: **SW8260D**

MS Sample ID: **22080666-01A MS** Units: **µg/L** Analysis Date: **8/10/2022 05:38 PM**
Client ID: Run ID: **VMS10_220810A** SeqNo: **8696717** Prep Date: DF: **100**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	2269	46	100	2000	0	113	75-119	0			
1,1,2,2-Tetrachloroethane	2055	40	100	2000	0	103	80-123	0			
1,1,2-Trichloroethane	2236	46	100	2000	0	112	83-118	0			
1,1,2-Trichlorotrifluoroethane	2565	52	100	2000	0	128	64-133	0			
1,1-Dichloroethane	2404	44	100	2000	0	120	73-122	0			
1,1-Dichloroethene	2556	40	100	2000	0	128	66-131	0			
1,2,3-Trichlorobenzene	1896	42	100	2000	0	94.8	65-140	0			
1,2,3-Trichloropropane	2076	40	100	2000	0	104	78-119	0			
1,2,4-Trichlorobenzene	1933	45	100	2000	0	96.6	73-127	0			
1,2,4-Trimethylbenzene	2236	45	100	2000	106	106	74-118	0			
1,2-Dibromo-3-chloropropane	1784	43	100	2000	0	89.2	52-141	0			
1,2-Dibromoethane	2172	41	100	2000	0	109	60-159	0			
1,2-Dichlorobenzene	2060	32	100	2000	0	103	80-119	0			
1,2-Dichloroethane	2269	44	100	2000	0	113	78-121	0			
1,2-Dichloropropane	2372	48	100	2000	0	119	78-120	0			
1,3,5-Trimethylbenzene	2193	65	100	2000	29	108	76-120	0			
1,3-Dichlorobenzene	2064	33	100	2000	0	103	80-120	0			
1,4-Dichlorobenzene	2065	35	100	2000	0	103	81-119	0			
2-Butanone	1702	52	500	2000	0	85.1	69-147	0			
2-Hexanone	1759	59	500	2000	0	88	67-140	0			
4-Methyl-2-pentanone	2358	52	100	2000	0	118	68-199	0			
Acetone	9863	110	1,000	2000	8292	78.6	70-166	0			O
Benzene	2282	46	100	2000	0	114	78-120	0			
Bromochloromethane	2600	45	100	2000	0	130	70-125	0			S
Bromodichloromethane	2221	49	100	2000	0	111	73-126	0			
Bromoform	2109	56	100	2000	0	105	60-124	0			
Bromomethane	6610	90	100	2000	0	330	20-183	0			S
Carbon disulfide	3560	49	100	2000	468	155	67-159	0			
Carbon tetrachloride	2273	40	100	2000	0	114	69-124	0			
Chlorobenzene	2128	40	100	2000	0	106	80-118	0			
Chloroethane	2034	68	100	2000	0	102	35-136	0			
Chloroform	2336	46	100	2000	0	117	75-119	0			
Chloromethane	2144	83	100	2000	0	107	26-117	0			
cis-1,2-Dichloroethene	2436	42	100	2000	0	122	75-123	0			
cis-1,3-Dichloropropene	2520	57	100	2000	0	126	69-120	0			S
Cyclohexane	2383	63	200	2000	0	119	66-128	0			
Dibromochloromethane	2013	40	100	2000	0	101	63-117	0			
Dichlorodifluoromethane	2417	68	100	2000	0	121	36-133	0			
Ethylbenzene	2166	34	100	2000	0	108	76-116	0			
Isopropylbenzene	2196	35	100	2000	0	110	77-118	0			
m,p-Xylene	4514	81	200	4000	52	112	76-119	0			
Methyl tert-butyl ether	2265	45	100	2000	0	113	77-137	0			
Methylcyclohexane	2132	35	100	2000	0	107	66-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R350808a** Instrument ID **VMS10** Method: **SW8260D**

Methylene chloride	2526	86	500	2000	0	126	68-125	0	S
o-Xylene	2233	31	100	2000	26	110	77-116	0	
Styrene	2130	33	100	2000	0	106	76-123	0	
Tetrachloroethene	2279	39	100	2000	0	114	80-124	0	
Toluene	2330	45	100	2000	246	104	78-116	0	
trans-1,2-Dichloroethene	2496	48	100	2000	0	125	73-124	0	S
trans-1,3-Dichloropropene	2175	38	100	2000	0	109	67-118	0	
Trichloroethene	2214	43	100	2000	0	111	75-122	0	
Trichlorofluoromethane	2855	52	100	2000	0	143	52-115	0	S
Vinyl chloride	2220	53	100	2000	0	111	49-122	0	
1,2-Dichloroethene, Total	4932	48	200	4000	0	123	73-124	0	
1,3-Dichloropropene, Total	4695	57	200	4000	0	117	67-120	0	
Xylenes, Total	6747	81	200	6000	0	112	77-119	0	
Surr: 1,2-Dichloroethane-d4	*2089*	0	0	*2000*	0	*104*	*80-120*	0	
Surr: 4-Bromofluorobenzene	*2180*	0	0	*2000*	0	*109*	*80-120*	0	
Surr: Dibromofluoromethane	*2186*	0	0	*2000*	0	*109*	*80-120*	0	
Surr: Toluene-d8	*2005*	0	0	*2000*	0	*100*	*80-120*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **R350808a** Instrument ID **VMS10** Method: **SW8260D**

MSD Sample ID: **22080666-01A MSD** Units: **µg/L** Analysis Date: **8/10/2022 05:55 PM**
Client ID: Run ID: **VMS10_220810A** SeqNo: **8696718** Prep Date: DF: **100**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	2339	46	100	2000	0	117	75-119	2269	3.04	30	
1,1,2,2-Tetrachloroethane	2152	40	100	2000	0	108	80-123	2055	4.61	30	
1,1,2-Trichloroethane	2192	46	100	2000	0	110	83-118	2236	1.99	30	
1,1,2-Trichlorotrifluoroethane	2578	52	100	2000	0	129	64-133	2565	0.506	30	
1,1-Dichloroethane	2425	44	100	2000	0	121	73-122	2404	0.87	30	
1,1-Dichloroethene	2588	40	100	2000	0	129	66-131	2556	1.24	30	
1,2,3-Trichlorobenzene	1993	42	100	2000	0	99.6	65-140	1896	4.99	30	
1,2,3-Trichloropropane	2070	40	100	2000	0	104	78-119	2076	0.289	30	
1,2,4-Trichlorobenzene	2022	45	100	2000	0	101	73-127	1933	4.5	30	
1,2,4-Trimethylbenzene	2246	45	100	2000	106	107	74-118	2236	0.446	30	
1,2-Dibromo-3-chloropropane	1848	43	100	2000	0	92.4	52-141	1784	3.52	30	
1,2-Dibromoethane	2160	41	100	2000	0	108	60-159	2172	0.554	30	
1,2-Dichlorobenzene	2124	32	100	2000	0	106	80-119	2060	3.06	30	
1,2-Dichloroethane	2229	44	100	2000	0	111	78-121	2269	1.78	30	
1,2-Dichloropropane	2401	48	100	2000	0	120	78-120	2372	1.22	30	S
1,3,5-Trimethylbenzene	2180	65	100	2000	29	108	76-120	2193	0.595	30	
1,3-Dichlorobenzene	2197	33	100	2000	0	110	80-120	2064	6.24	30	
1,4-Dichlorobenzene	2131	35	100	2000	0	107	81-119	2065	3.15	30	
2-Butanone	1668	52	500	2000	0	83.4	69-147	1702	2.02	30	
2-Hexanone	1759	59	500	2000	0	88	67-140	1759	0	30	
4-Methyl-2-pentanone	2356	52	100	2000	0	118	68-199	2358	0.0849	30	
Acetone	10240	110	1,000	2000	8292	97.4	70-166	9863	3.75	30	EO
Benzene	2261	46	100	2000	0	113	78-120	2282	0.924	30	
Bromochloromethane	2617	45	100	2000	0	131	70-125	2600	0.652	30	S
Bromodichloromethane	2278	49	100	2000	0	114	73-126	2221	2.53	30	
Bromoform	2085	56	100	2000	0	104	60-124	2109	1.14	30	
Bromomethane	7171	90	100	2000	0	359	20-183	6610	8.14	30	S
Carbon disulfide	3652	49	100	2000	468	159	67-159	3560	2.55	30	S
Carbon tetrachloride	2249	40	100	2000	0	112	69-124	2273	1.06	30	
Chlorobenzene	2111	40	100	2000	0	106	80-118	2128	0.802	30	
Chloroethane	2042	68	100	2000	0	102	35-136	2034	0.393	30	
Chloroform	2286	46	100	2000	0	114	75-119	2336	2.16	30	
Chloromethane	2059	83	100	2000	0	103	26-117	2144	4.04	30	
cis-1,2-Dichloroethene	2410	42	100	2000	0	120	75-123	2436	1.07	30	
cis-1,3-Dichloropropene	2468	57	100	2000	0	123	69-120	2520	2.09	30	S
Cyclohexane	2402	63	200	2000	0	120	66-128	2383	0.794	30	
Dibromochloromethane	1972	40	100	2000	0	98.6	63-117	2013	2.06	30	
Dichlorodifluoromethane	2344	68	100	2000	0	117	36-133	2417	3.07	30	
Ethylbenzene	2128	34	100	2000	0	106	76-116	2166	1.77	30	
Isopropylbenzene	2184	35	100	2000	0	109	77-118	2196	0.548	30	
m,p-Xylene	4493	81	200	4000	52	111	76-119	4514	0.466	30	
Methyl tert-butyl ether	2312	45	100	2000	0	116	77-137	2265	2.05	30	
Methylcyclohexane	2172	35	100	2000	0	109	66-125	2132	1.86	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **R350808a** Instrument ID **VMS10** Method: **SW8260D**

Methylene chloride	2421	86	500	2000	0	121	68-125	2526	4.24	30	
o-Xylene	2214	31	100	2000	26	109	77-116	2233	0.855	30	
Styrene	2117	33	100	2000	0	106	76-123	2130	0.612	30	
Tetrachloroethene	2276	39	100	2000	0	114	80-124	2279	0.132	30	
Toluene	2346	45	100	2000	246	105	78-116	2330	0.684	30	
trans-1,2-Dichloroethene	2451	48	100	2000	0	123	73-124	2496	1.82	30	
trans-1,3-Dichloropropene	2207	38	100	2000	0	110	67-118	2175	1.46	30	
Trichloroethene	2223	43	100	2000	0	111	75-122	2214	0.406	30	
Trichlorofluoromethane	2921	52	100	2000	0	146	52-115	2855	2.29	30	S
Vinyl chloride	2267	53	100	2000	0	113	49-122	2220	2.09	30	
1,2-Dichloroethene, Total	4861	48	200	4000	0	122	73-124	4932	1.45	30	
1,3-Dichloropropene, Total	4675	57	200	4000	0	117	67-120	4695	0.427	30	
Xylenes, Total	6707	81	200	6000	0	112	77-119	6747	0.595	30	
Surr: 1,2-Dichloroethane-d4	*2087*	0	0	*2000*	0	*104*	*80-120*	2089	*0.0958*	*30*	
Surr: 4-Bromofluorobenzene	*2051*	0	0	*2000*	0	*103*	*80-120*	2180	*6.1*	*30*	
Surr: Dibromofluoromethane	*2148*	0	0	*2000*	0	*107*	*80-120*	2186	*1.75*	*30*	
Surr: Toluene-d8	*1973*	0	0	*2000*	0	*98.6*	*80-120*	2005	*1.61*	*30*	

The following samples were analyzed in this batch: 22080299-11A 22080299-12A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **R350889** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R350889** Units: **% of sample** Analysis Date: **8/10/2022 12:47 PM**
Client ID: Run ID: **MOIST_220810B** SeqNo: **8697296** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.1	0.10								

LCS Sample ID: **LCS-R350889** Units: **% of sample** Analysis Date: **8/10/2022 12:47 PM**
Client ID: Run ID: **MOIST_220810B** SeqNo: **8697295** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.1	0.10	100	0	100	98-102	0			

DUP Sample ID: **22080299-01B DUP** Units: **% of sample** Analysis Date: **8/10/2022 12:47 PM**
Client ID: **SS-1 Grab** Run ID: **MOIST_220810B** SeqNo: **8697274** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	25.1	0.1	0.10	0	0	0	0-0	24.3	3.24	10	

DUP Sample ID: **22080782-04B DUP** Units: **% of sample** Analysis Date: **8/10/2022 12:47 PM**
Client ID: Run ID: **MOIST_220810B** SeqNo: **8697284** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	13.92	0.1	0.10	0	0	0	0-0	12.77	8.62	10	

The following samples were analyzed in this batch:

22080299-01B	22080299-02B	22080299-03B
22080299-04B	22080299-05B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **R350890** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R350890** Units: **% of sample** Analysis Date: **8/10/2022 02:04 PM**
Client ID: Run ID: **MOIST_220810C** SeqNo: **8697338** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.1	0.10								

LCS Sample ID: **LCS-R350890** Units: **% of sample** Analysis Date: **8/10/2022 02:04 PM**
Client ID: Run ID: **MOIST_220810C** SeqNo: **8697337** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.1	0.10	100	0	100	98-102	0			

DUP Sample ID: **22080299-07B DUP** Units: **% of sample** Analysis Date: **8/10/2022 02:04 PM**
Client ID: **SB-6 (6-8) Grab** Run ID: **MOIST_220810C** SeqNo: **8697328** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	15.15	0.1	0.10	0	0	0	0-0	18.63	20.6	10	R

The following samples were analyzed in this batch: 22080299-07B 22080299-08B 22080299-09B 22080299-10B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Triad Engineering, Inc.
Work Order: 22080299
Project: Fmr Huntington East Practice Field

QC BATCH REPORT

Batch ID: **R350980** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R350980** Units: **% of sample** Analysis Date: **8/11/2022 11:11 AM**
Client ID: Run ID: **MOIST_220811A** SeqNo: **8700589** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.1	0.10								

LCS Sample ID: **LCS-R350980** Units: **% of sample** Analysis Date: **8/11/2022 11:11 AM**
Client ID: Run ID: **MOIST_220811A** SeqNo: **8700588** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.1	0.10	100	0	100	98-102	0			

DUP Sample ID: **22080861-01A DUP** Units: **% of sample** Analysis Date: **8/11/2022 11:11 AM**
Client ID: Run ID: **MOIST_220811A** SeqNo: **8700578** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	22.53	0.1	0.10	0	0	0	0-0	22.37	0.713	10	

DUP Sample ID: **22080880-01A DUP** Units: **% of sample** Analysis Date: **8/11/2022 11:11 AM**
Client ID: Run ID: **MOIST_220811A** SeqNo: **8700587** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	82.62	0.1	0.10	0	0	0	0-0	82.83	0.254	10	

The following samples were analyzed in this batch: 22080299-07B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

☑ **ALS Environmental**
1740 Union Carbide Drive
South Charleston, WV 25303
(Tel) 304.356.3168
(Fax) 304.205.6262

Chain of Custody Form

Page —1— of —2—

☐ **ALS Environmental**
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

ALS Project Manager:		ALS Work Order #:	

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Fmr Huntington East Practice Field	A	VOC Method 8260B
Work Order		Project Number	04-19-0133	B	PAH Method 8270
Company Name	Triad Engineering, Inc.	Bill To Company	Triad Engineering, Inc.	C	RCRA 8 Metals
Send Report To	Shannon Johnson	Invoice Attn.	Karen Means	D	Herbicides
Address	10541 Teays Valley Road	Address	10541 Teays Valley Road	E	
				F	
City/State/Zip	Scott Depot, WV 25560	City/State/Zip	Scott Depot, WV 25560	G	
Phone	304.755.0721	Phone	304.755.0721	H	
Fax	304.755.1880	Fax	304.755.1880	I	
e-Mail Address	sjohnson@triadeng.com			J	

22080299

TRIADENGINEER: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field

No.	Sample Description	Comp / Grab	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	SS-1	Grab	8/1/2022	12:05	soil		5	X	X	X	X							
2	SS-3	Grab	8/1/2022	13:05	soil		5	X	X	X	X							
3	SS-4	Grab	8/2/2022	10:50	soil		5	X	X	X	X							
4	SB-1 (13-15)	Grab	8/1/2022	12:10	soil		5	X	X	X	X							
5	SB-3 (13-15)	Grab	8/1/2022	13:10	soil		5	X	X	X	X							
6	SB-4 (6-8)	Grab	8/2/2022	11:00	soil		3	X										
7	SB-6 (6-8)	Grab	8/1/2022	12:45	soil		5	X	X	X	X							
8	SB-6 FD (6-8)	Grab	8/1/2022	12:45	soil		5	X	X	X	X							
9	SB-7 (8-10)	Grab	8/2/2022	10:25	soil		5	X	X	X	X							
10	SB-8 (6-8)	Grab	8/1/2022	14:00	soil		5	X	X	X	X							

Sampler(s): Please Print & Sign
SLJ

Shipment Method:
courrier

Turnaround Time in Business Days (BD) ☐ Other _____
☑ 10 BD(STD) ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD

Results Due Date:

Relinquished by: Shannon Johnson	**Date:** 8/3/22	**Time:** 1145	**Received by:** ALS	**Temp:** 4.6°C	**Notes:** Please email spreadsheet and report
Relinquished by: ALS	**Date:** 8-3-22	**Time:** 1210	**Received by:**	Acst	SB-4 - Limited sample volume
Relinquished by:	**Date:** 8/3/22	**Time:** 1700	**Received by:** FedEx	**Temp:** <6.0c	**QC Package: (Check Box Below)**
Relinquished by: FedEx	**Date:** 8/4/22	**Time:** 9:35 ~~9:45~~	**Received by (Laboratory):**	ALS HN	Level II: Standard QC
Logged by (Laboratory):	**Date:** 8/4/22	**Time:** 16:16	**Checked by (Laboratory):**		Level III: Standard QC + Raw Data
					Level IV: SW846 Methods/CLP X
					Other: _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS

☑ **ALS Environmental**
1740 Union Carbide Drive
South Charleston, WV 25303
(Tel) 304.356.3168
(Fax) 304.205.6262

Chain of Custody Form

Page —2— of —2—

☐ **ALS Environmental**
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

ALS Project Manager:		ALS Work Order #:	

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Fmr Huntington East Practice Field	A	VOC Method 8260B
Work Order		Project Number	04-19-0133	B	PAH Method 8270
Company Name	Triad Engineering, Inc.	Bill To Company	Triad Engineering, Inc.	C	RCRA 8 Metals
Send Report To	Shannon Johnson	Invoice Attn.	Karen Means	D	PAH SIM
Address	10541 Teays Valley Road	Address	10541 Teays Valley Road	E	Herbicides
				F	
City/State/Zip	Scott Depot, WV 25560	City/State/Zip	Scott Depot, WV 25560	G	
Phone	304.755.0721	Phone	304.755.0721	H	
Fax	304.755.1880	Fax	304.755.1880	I	
e-Mail Address	sjohnson@triadeng.com			J	

22080299

TRIADENGINEER: Triad Engineering, Inc.
Project: Fmr Huntington East Practice Field

No.	Sample Description	Comp / Grab	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	GW-1	Grab	8/2/2022	12:30	water		8	X		X	X	X						
2	GW-3	Grab	8/2/2022	13:00	water		8	X		X	X	X						
3	GW-4	Grab	8/2/2022	11:15	water		8	X		X	X	X						
4	GW-4 FD	Grab	8/2/2022	11:15	water		8	X		X	X	X						
5	SB-6 (6-8) MS	Grab	8/1/2022	12:45	soil		5	X	X	X		X						
6	SB-6 (6-8) MSD	Grab	8/1/2022	12:45	soil		5	X	X	X		X						
7	Trip Blank	Grab	8/1/22	1205	water		~~4~~ 2	X										
8																		
9																		
10																		

Sampler(s): Please Print & Sign
SLJ

Shipment Method:
courrier

Turnaround Time in Business Days (BD) ☐ Other _____
☑ 10 BD(STD) ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD

Results Due Date:

Relinquished by:	Date: 8/3/22	Time: 1145	Received by:	Temp: 4.6°C	Notes: Please email spreadsheet and report
Relinquished by: ALS	Date: 8-3-22	Time: 1210	Received by:		MS/MSD received for SB-6
Relinquished by:	Date: 8/3/22	Time: 1700	Received by: FedEx	Temp: 4.0c	QC Package: (Check Box Below)
Relinquished by: FedEx	Date: 8/4/22	Time: 45ck 9:35	Received by (Laboratory):	ALSH,N	Level II: Standard QC
Logged by (Laboratory):	Date: 8/4/22	Time: 16:16	Checked by (Laboratory):		Level III: Standard QC + Raw Data
					Level IV: SW846 Methods/CLP X
					Other: _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS

ALS Environmental

1740 Union Carbide Drive
South Charleston, WV 25303

Sample Receiving Checklist

Received by:	Janet Smith
Date/Time:	8/3/22 1210
Carrier Name:	ALS Courier
Shipping container/cooler in good condition?	Yes / No / Not Present
Custody seals intact on shipping container/cooler?	Yes / No / Not Present
Custody seals intact on sample bottles?	Yes / No / Not Present
Chain of Custody present?	Yes / No
COC signed when relinquished and received?	Yes / No
COC agrees with sample labels?	Yes / No
Samples in proper container/bottle?	Yes / No
Sample containers intact?	Yes / No
Sufficient sample volume for indicated test?	Yes / No
All samples received within holding time?	Yes / No
All sample temperatures verified to be in compliance?	Yes / No
Temperature(s) (°C):	4.6°C
Thermometer(s):	IR
Sample(s) received on ice?	Yes / No
Matrix/Matrices:	Soil/water
Cooler(s)/Kit(s):	
Date/Time sample(s) sent to storage:	
Trip Blanks included? (for volatile analysis only)	Yes / No / N/A
Water – VOA vials have zero headspace?	Yes / No / No Vials
Water – pH acceptable upon receipt?	Yes / No / N/A
pH strip lot #: _____	Not checked
pH adjusted (note adjustments below)?	Yes / No / N/A
pH adjusted by:	

Login Notes:

Client listed MS/MSD for SB-6(6-8) on separate/second page note/sample.
Client Supplied MS/MSD for GW4, but not listed on COC - nor marked as such on Bottles - 4 sets GW4/GW4D.

ALS Group, USA
Holland, Michigan

Sample Receipt Checklist

Client Name: **TRIADENGINEER** Date/Time Received: **03-Aug-22 12:10**

Work Order: **22080299** Received by: **CMK**

Checklist completed by Caleb Kaitje eSignature 04-Aug-22 Date Reviewed by: Rebecca Kiser eSignature 04-Aug-22 Date

Matrices: Water
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	<6.0c	IR3	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	8/4/2022 4:27:17 PM		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes: pH check <2.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For **ALS Environmental-Holland**

Project AEH097|22080299
Workorder 3256496
Report ID 187193 on 8/12/2022

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Aug 04, 2022.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Sarah Leung (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
Amanda Grzybowski - ALS Environmental-Holland
Brandon Frye - ALS - Holland
Les Arnold - ALS Environmental-Holland
Rebecca Kiser - ALS Environmental-South Charleston

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Sarah Leung

Sarah Leung *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3256496001	SS-1 Grab	Solid	08/01/2022 12:50	08/04/2022 08:45	CBC	Collected By Client
3256496002	SS-3 Grab	Solid	08/01/2022 13:05	08/04/2022 08:45	CBC	Collected By Client
3256496003	SS-4 Grab	Solid	08/02/2022 10:50	08/04/2022 08:45	CBC	Collected By Client
3256496004	SB-1 (13-15) Grab	Solid	08/01/2022 12:10	08/04/2022 08:45	CBC	Collected By Client
3256496005	SB-3 (13-15) Grab	Solid	08/01/2022 13:10	08/04/2022 08:45	CBC	Collected By Client
3256496006	SB-6 FD (6-8) Grab	Solid	08/01/2022 12:45	08/04/2022 08:45	CBC	Collected By Client
3256496007	SB-7 (6-8) Grab	Solid	08/02/2022 10:25	08/04/2022 08:45	CBC	Collected By Client
3256496008	SB-8 (6-8) Grab	Solid	08/01/2022 14:00	08/04/2022 08:45	CBC	Collected By Client
3256496009	GW-1 Grab	Water	08/02/2022 12:30	08/04/2022 08:45	CBC	Collected By Client
3256496010	GW-3 Grab	Water	08/02/2022 13:00	08/04/2022 08:45	CBC	Collected By Client
3256496011	GW-4 FD Grab	Water	08/02/2022 11:15	08/04/2022 08:45	CBC	Collected By Client
3256496012	SB-6 (6-8) Grab	Solid	08/01/2022 12:45	08/04/2022 08:45	CBC	Collected By Client
3256496013	GW-4 Grab	Water	08/02/2022 11:15	08/04/2022 08:45	CBC	Collected By Client

Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The QC sample type DUP for method S2540G-11 was outside the control limits for the analyte Moisture. The RPD was reported as 11.9 and the upper control limit is 10.
2	The QC sample type DUP for method S2540G-11 was outside the control limits for the analyte Total Solids. The RPD was reported as 5.66 and the upper control limit is 5.
3	The QC sample type LCS for method SW846 8151A was outside the control limits for the analyte Dicamba. The % Recovery was reported as 131 and the control limits were 64 to 115.
4	The QC sample type LCS for method SW846 8151A was outside the control limits for the analyte Dichloroprop. The % Recovery was reported as 150 and the control limits were 61 to 125.
5	The QC sample type LCS for method SW846 8151A was outside the control limits for the analyte Dinoseb. The % Recovery was reported as 114 and the control limits were 1 to 98.
6	The QC sample type LCS for method SW846 8151A was outside the control limits for the analyte Pentachlorophenol. The % Recovery was reported as 128 and the control limits were 63 to 109.
7	The QC sample type LCS for method SW846 8151A was outside the control limits for the analyte 2,4,5-T. The % Recovery was reported as 128 and the control limits were 57 to 127.
8	The QC sample type LCS for method SW846 8151A was outside the control limits for the analyte 2,4,5-TP. The % Recovery was reported as 133 and the control limits were 58 to 123.
9	The QC sample type MSD for method SW846 8151A was outside the control limits for the analyte Dicamba. The RPD was reported as 27.7 and the upper control limit is 24.
10	The QC sample type MSD for method SW846 8151A was outside the control limits for the analyte MCPP. The RPD was reported as 50.7 and the upper control limit is 43.
11	The QC sample type MSD for method SW846 8151A was outside the control limits for the analyte 2,4,5-T. The RPD was reported as 20.7 and the upper control limit is 18.
12	The QC sample type MS for method SW846 8151A was outside the control limits for the analyte Dicamba. The % Recovery was reported as 121 and the control limits were 64 to 115.
13	The QC sample type MSD for method SW846 8151A was outside the control limits for the analyte Dicamba. The % Recovery was reported as 123 and the control limits were 64 to 115.
14	The QC sample type MS for method SW846 8151A was outside the control limits for the analyte Dichloroprop. The % Recovery was reported as 130 and the control limits were 61 to 125.
15	The QC sample type MSD for method SW846 8151A was outside the control limits for the analyte Dichloroprop. The % Recovery was reported as 135 and the control limits were 61 to 125.
16	The QC sample type MSD for method SW846 8151A was outside the control limits for the analyte Dinoseb. The % Recovery was reported as 101 and the control limits were 1 to 98.
17	The QC sample type MS for method SW846 8151A was outside the control limits for the analyte Dinoseb. The % Recovery was reported as 98.5 and the control limits were 1 to 98.
18	The QC sample type MS for method SW846 8151A was outside the control limits for the analyte MCPP. The % Recovery was reported as 326 and the control limits were 14 to 205.
19	The QC sample type MSD for method SW846 8151A was outside the control limits for the analyte MCPP. The % Recovery was reported as 330 and the control limits were 14 to 205.
20	The QC sample type MS for method SW846 8151A was outside the control limits for the analyte Pentachlorophenol. The % Recovery was reported as 0 and the control limits were 63 to 109.
21	The QC sample type MSD for method SW846 8151A was outside the control limits for the analyte Pentachlorophenol. The % Recovery was reported as 0 and the control limits were 63 to 109.

22	The QC sample type MS for method SW846 8151A was outside the control limits for the analyte 2,4,5-T. The % Recovery was reported as 137 and the control limits were 57 to 127.
23	The QC sample type MSD for method SW846 8151A was outside the control limits for the analyte 2,4,5-T. The % Recovery was reported as 139 and the control limits were 57 to 127.
24	The QC sample type MS for method SW846 8151A was outside the control limits for the analyte 2,4,5-TP. The % Recovery was reported as 127 and the control limits were 58 to 123.
25	The QC sample type MSD for method SW846 8151A was outside the control limits for the analyte 2,4,5-TP. The % Recovery was reported as 131 and the control limits were 58 to 123.

Detected Results Summary

Client Sample ID	**SS-1 Grab**	Collected	**08/01/2022 12:50**
Lab Sample ID	**3256496001**	Lab Receipt	**08/04/2022 08:45**

Compound	Result	Units	RDL	MDL	Method	Flag
WET CHEMISTRY						
Moisture	30.5	%	0.1	0.01	S2540G-11	#
Total Solids	69.5	%	0.1	0.01	S2540G-11	#

Detected Results Summary

Client Sample ID	**SS-3 Grab**	Collected	**08/01/2022 13:05**
Lab Sample ID	**3256496002**	Lab Receipt	**08/04/2022 08:45**

Compound	Result	Units	RDL	MDL	Method	Flag
WET CHEMISTRY						
Moisture	34.2	%	0.1	0.01	S2540G-11	#
Total Solids	65.8	%	0.1	0.01	S2540G-11	#

Detected Results Summary

Client Sample ID	**SS-4 Grab**	Collected	**08/02/2022 10:50**
Lab Sample ID	**3256496003**	Lab Receipt	**08/04/2022 08:45**

Compound	Result	Units	RDL	MDL	Method	Flag
WET CHEMISTRY						
Moisture	24.0	%	0.1	0.01	S2540G-11	#
Total Solids	76.0	%	0.1	0.01	S2540G-11	#

Detected Results Summary

Client Sample ID	SB-1 (13-15) Grab	Collected	08/01/2022 12:10
Lab Sample ID	3256496004	Lab Receipt	08/04/2022 08:45

Compound	Result	Units	RDL	MDL	Method	Flag
WET CHEMISTRY						
Moisture	24.2	%	0.1	0.01	S2540G-11	#
Total Solids	75.8	%	0.1	0.01	S2540G-11	#

Detected Results Summary

Client Sample ID	SB-3 (13-15) Grab	Collected	08/01/2022 13:10
Lab Sample ID	3256496005	Lab Receipt	08/04/2022 08:45

Compound	Result	Units	RDL	MDL	Method	Flag
WET CHEMISTRY						
Moisture	25.2	%	0.1	0.01	S2540G-11	#
Total Solids	74.8	%	0.1	0.01	S2540G-11	#

Detected Results Summary

Client Sample ID	**SB-6 FD (6-8) Grab**	Collected	**08/01/2022 12:45**
Lab Sample ID	**3256496006**	Lab Receipt	**08/04/2022 08:45**

Compound	Result	Units	RDL	MDL	Method	Flag
WET CHEMISTRY						
Moisture	27.4	%	0.1	0.01	S2540G-11	#
Total Solids	72.6	%	0.1	0.01	S2540G-11	#

Detected Results Summary

Client Sample ID	**SB-7 (6-8) Grab**	Collected	**08/02/2022 10:25**
Lab Sample ID	**3256496007**	Lab Receipt	**08/04/2022 08:45**

Compound	Result	Units	RDL	MDL	Method	Flag
WET CHEMISTRY						
Moisture	18.5	%	0.1	0.01	S2540G-11	#
Total Solids	81.5	%	0.1	0.01	S2540G-11	#

Detected Results Summary

Client Sample ID	**SB-8 (6-8) Grab**	Collected	**08/01/2022 14:00**
Lab Sample ID	**3256496008**	Lab Receipt	**08/04/2022 08:45**

Compound	Result	Units	RDL	MDL	Method	Flag
WET CHEMISTRY						
Moisture	16.2	%	0.1	0.01	S2540G-11	#
Total Solids	83.8	%	0.1	0.01	S2540G-11	#

Detected Results Summary

Client Sample ID	**SB-6 (6-8) Grab**	Collected	**08/01/2022 12:45**
Lab Sample ID	**3256496012**	Lab Receipt	**08/04/2022 08:45**

Compound	Result	Units	RDL	MDL	Method	Flag
WET CHEMISTRY						
Moisture	34.8	%	0.1	0.01	S2540G-11	#
Total Solids	65.2	%	0.1	0.01	S2540G-11	#

Results

Client Sample ID	**SS-1 Grab**	Collected	**08/01/2022 12:50**
Lab Sample ID	**3256496001**	Lab Receipt	**08/04/2022 08:45**

HERBICIDES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
2,4,5-T	241 U	U	ug/kg	241	93.4	SW846 8151A	1	08/09/2022 13:06	KJH	A
2,4,5-TP	141 U	U	ug/kg	141	66.5	SW846 8151A	1	08/09/2022 13:06	KJH	A
2,4-D	141 U	U	ug/kg	141	60.8	SW846 8151A	1	08/09/2022 13:06	KJH	A
2,4-DB	141 U	U	ug/kg	141	72.2	SW846 8151A	1	08/09/2022 13:06	KJH	A
Dalapon	141 U	U	ug/kg	141	39.6	SW846 8151A	1	08/09/2022 13:06	KJH	A
Dicamba	141 U	U	ug/kg	141	45.3	SW846 8151A	1	08/09/2022 13:06	KJH	A
Dichloroprop	141 U	U	ug/kg	141	70.7	SW846 8151A	1	08/09/2022 13:06	KJH	A
Dinoseb	241 U	U	ug/kg	241	106	SW846 8151A	1	08/09/2022 13:06	KJH	A
MCPA	17000 U	U	ug/kg	17000	7360	SW846 8151A	1	08/09/2022 13:06	KJH	A
MCPP	17000 U	U	ug/kg	17000	6370	SW846 8151A	1	08/09/2022 13:06	KJH	A
Pentachlorophenol	141 U	U	ug/kg	141	73.6	SW846 8151A	1	08/09/2022 13:06	KJH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	56.2%	36 – 113	08/09/2022 13:06	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	30.5		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	
Total Solids	69.5		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	

Results

Client Sample ID	**SS-3 Grab**	Collected	**08/01/2022 13:05**
Lab Sample ID	**3256496002**	Lab Receipt	**08/04/2022 08:45**

HERBICIDES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
2,4,5-T	248 U	U	ug/kg	248	96.5	SW846 8151A	1	08/09/2022 13:32	KJH	A
2,4,5-TP	146 U	U	ug/kg	146	68.7	SW846 8151A	1	08/09/2022 13:32	KJH	A
2,4-D	146 U	U	ug/kg	146	62.8	SW846 8151A	1	08/09/2022 13:32	KJH	A
2,4-DB	146 U	U	ug/kg	146	74.5	SW846 8151A	1	08/09/2022 13:32	KJH	A
Dalapon	146 U	U	ug/kg	146	40.9	SW846 8151A	1	08/09/2022 13:32	KJH	A
Dicamba	146 U	U	ug/kg	146	46.8	SW846 8151A	1	08/09/2022 13:32	KJH	A
Dichloroprop	146 U	U	ug/kg	146	73.1	SW846 8151A	1	08/09/2022 13:32	KJH	A
Dinoseb	248 U	U	ug/kg	248	110	SW846 8151A	1	08/09/2022 13:32	KJH	A
MCPA	17500 U	U	ug/kg	17500	7600	SW846 8151A	1	08/09/2022 13:32	KJH	A
MCPP	17500 U	U	ug/kg	17500	6580	SW846 8151A	1	08/09/2022 13:32	KJH	A
Pentachlorophenol	146 U	U	ug/kg	146	76.0	SW846 8151A	1	08/09/2022 13:32	KJH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	50%	36 – 113	08/09/2022 13:32	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	34.2	1	%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	
Total Solids	65.8	2	%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	

Results

Client Sample ID	**SS-4 Grab**	Collected	**08/02/2022 10:50**
Lab Sample ID	**3256496003**	Lab Receipt	**08/04/2022 08:45**

HERBICIDES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
2,4,5-T	216 U	U	ug/kg	216	84.0	SW846 8151A	1	08/09/2022 16:06	KJH	A
2,4,5-TP	127 U	U	ug/kg	127	59.8	SW846 8151A	1	08/09/2022 16:06	KJH	A
2,4-D	127 U	U	ug/kg	127	54.7	SW846 8151A	1	08/09/2022 16:06	KJH	A
2,4-DB	127 U	U	ug/kg	127	64.9	SW846 8151A	1	08/09/2022 16:06	KJH	A
Dalapon	127 U	U	ug/kg	127	35.6	SW846 8151A	1	08/09/2022 16:06	KJH	A
Dicamba	127 U	U	ug/kg	127	40.7	SW846 8151A	1	08/09/2022 16:06	KJH	A
Dichloroprop	127 U	U	ug/kg	127	63.7	SW846 8151A	1	08/09/2022 16:06	KJH	A
Dinoseb	216 U	U	ug/kg	216	95.5	SW846 8151A	1	08/09/2022 16:06	KJH	A
MCPA	15300 U	U	ug/kg	15300	6620	SW846 8151A	1	08/09/2022 16:06	KJH	A
MCPP	15300 U	U	ug/kg	15300	5730	SW846 8151A	1	08/09/2022 16:06	KJH	A
Pentachlorophenol	127 U	U	ug/kg	127	66.2	SW846 8151A	1	08/09/2022 16:06	KJH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	52.5%	36 – 113	08/09/2022 16:06	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	24.0		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	
Total Solids	76.0		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	

Results

Client Sample ID	**SB-1 (13-15) Grab**	Collected	**08/01/2022 12:10**
Lab Sample ID	**3256496004**	Lab Receipt	**08/04/2022 08:45**

HERBICIDES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
2,4,5-T	219 U	U	ug/kg	219	85.0	SW846 8151A	1	08/09/2022 13:58	KJH	A
2,4,5-TP	129 U	U	ug/kg	129	60.6	SW846 8151A	1	08/09/2022 13:58	KJH	A
2,4-D	129 U	U	ug/kg	129	55.4	SW846 8151A	1	08/09/2022 13:58	KJH	A
2,4-DB	129 U	U	ug/kg	129	65.7	SW846 8151A	1	08/09/2022 13:58	KJH	A
Dalapon	129 U	U	ug/kg	129	36.1	SW846 8151A	1	08/09/2022 13:58	KJH	A
Dicamba	129 U	U	ug/kg	129	41.2	SW846 8151A	1	08/09/2022 13:58	KJH	A
Dichloroprop	129 U	U	ug/kg	129	64.4	SW846 8151A	1	08/09/2022 13:58	KJH	A
Dinoseb	219 U	U	ug/kg	219	96.6	SW846 8151A	1	08/09/2022 13:58	KJH	A
MCPA	15500 U	U	ug/kg	15500	6700	SW846 8151A	1	08/09/2022 13:58	KJH	A
MCPP	15500 U	U	ug/kg	15500	5800	SW846 8151A	1	08/09/2022 13:58	KJH	A
Pentachlorophenol	129 U	U	ug/kg	129	67.0	SW846 8151A	1	08/09/2022 13:58	KJH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	54.5%	36 – 113	08/09/2022 13:58	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	24.2		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	
Total Solids	75.8		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	

Results

Client Sample ID	**SB-3 (13-15) Grab**	Collected	**08/01/2022 13:10**
Lab Sample ID	**3256496005**	Lab Receipt	**08/04/2022 08:45**

HERBICIDES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
2,4,5-T	226 U	U	ug/kg	226	87.7	SW846 8151A	1	08/09/2022 14:24	KJH	A
2,4,5-TP	133 U	U	ug/kg	133	62.4	SW846 8151A	1	08/09/2022 14:24	KJH	A
2,4-D	133 U	U	ug/kg	133	57.1	SW846 8151A	1	08/09/2022 14:24	KJH	A
2,4-DB	133 U	U	ug/kg	133	67.7	SW846 8151A	1	08/09/2022 14:24	KJH	A
Dalapon	133 U	U	ug/kg	133	37.2	SW846 8151A	1	08/09/2022 14:24	KJH	A
Dicamba	133 U	U	ug/kg	133	42.5	SW846 8151A	1	08/09/2022 14:24	KJH	A
Dichloroprop	133 U	U	ug/kg	133	66.4	SW846 8151A	1	08/09/2022 14:24	KJH	A
Dinoseb	226 U	U	ug/kg	226	99.6	SW846 8151A	1	08/09/2022 14:24	KJH	A
MCPA	15900 U	U	ug/kg	15900	6910	SW846 8151A	1	08/09/2022 14:24	KJH	A
MCPP	15900 U	U	ug/kg	15900	5980	SW846 8151A	1	08/09/2022 14:24	KJH	A
Pentachlorophenol	133 U	U	ug/kg	133	69.1	SW846 8151A	1	08/09/2022 14:24	KJH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	65.5%	36 – 113	08/09/2022 14:24	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	25.2		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	
Total Solids	74.8		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	

Results

Client Sample ID	**SB-6 FD (6-8) Grab**	Collected	**08/01/2022 12:45**
Lab Sample ID	**3256496006**	Lab Receipt	**08/04/2022 08:45**

HERBICIDES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
2,4,5-T	233 U	U	ug/kg	233	90.3	SW846 8151A	1	08/09/2022 14:50	KJH	A
2,4,5-TP	137 U	U	ug/kg	137	64.3	SW846 8151A	1	08/09/2022 14:50	KJH	A
2,4-D	137 U	U	ug/kg	137	58.9	SW846 8151A	1	08/09/2022 14:50	KJH	A
2,4-DB	137 U	U	ug/kg	137	69.8	SW846 8151A	1	08/09/2022 14:50	KJH	A
Dalapon	137 U	U	ug/kg	137	38.3	SW846 8151A	1	08/09/2022 14:50	KJH	A
Dicamba	137 U	U	ug/kg	137	43.8	SW846 8151A	1	08/09/2022 14:50	KJH	A
Dichloroprop	137 U	U	ug/kg	137	68.4	SW846 8151A	1	08/09/2022 14:50	KJH	A
Dinoseb	233 U	U	ug/kg	233	103	SW846 8151A	1	08/09/2022 14:50	KJH	A
MCPA	16400 U	U	ug/kg	16400	7120	SW846 8151A	1	08/09/2022 14:50	KJH	A
MCPP	16400 U	U	ug/kg	16400	6160	SW846 8151A	1	08/09/2022 14:50	KJH	A
Pentachlorophenol	137 U	U	ug/kg	137	71.2	SW846 8151A	1	08/09/2022 14:50	KJH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	50.4%	36 – 113	08/09/2022 14:50	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	27.4		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	
Total Solids	72.6		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	

Results

Client Sample ID	**SB-7 (6-8) Grab**	Collected	**08/02/2022 10:25**
Lab Sample ID	**3256496007**	Lab Receipt	**08/04/2022 08:45**

HERBICIDES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
2,4,5-T	205 U	U	ug/kg	205	79.4	SW846 8151A	1	08/09/2022 16:58	KJH	A
2,4,5-TP	120 U	U	ug/kg	120	56.5	SW846 8151A	1	08/09/2022 16:58	KJH	A
2,4-D	120 U	U	ug/kg	120	51.7	SW846 8151A	1	08/09/2022 16:58	KJH	A
2,4-DB	120 U	U	ug/kg	120	61.4	SW846 8151A	1	08/09/2022 16:58	KJH	A
Dalapon	120 U	U	ug/kg	120	33.7	SW846 8151A	1	08/09/2022 16:58	KJH	A
Dicamba	120 U	U	ug/kg	120	38.5	SW846 8151A	1	08/09/2022 16:58	KJH	A
Dichloroprop	120 U	U	ug/kg	120	60.1	SW846 8151A	1	08/09/2022 16:58	KJH	A
Dinoseb	205 U	U	ug/kg	205	90.2	SW846 8151A	1	08/09/2022 16:58	KJH	A
MCPA	14400 U	U	ug/kg	14400	6260	SW846 8151A	1	08/09/2022 16:58	KJH	A
MCPP	14400 U	U	ug/kg	14400	5410	SW846 8151A	1	08/09/2022 16:58	KJH	A
Pentachlorophenol	120 U	U	ug/kg	120	62.6	SW846 8151A	1	08/09/2022 16:58	KJH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	54.9%	36 – 113	08/09/2022 16:58	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	18.5		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	
Total Solids	81.5		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	

Results

Client Sample ID	**SB-8 (6-8) Grab**	Collected	**08/01/2022 14:00**
Lab Sample ID	**3256496008**	Lab Receipt	**08/04/2022 08:45**

HERBICIDES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
2,4,5-T	202 U	U	ug/kg	202	78.5	SW846 8151A	1	08/09/2022 17:24	KJH	A
2,4,5-TP	119 U	U	ug/kg	119	55.9	SW846 8151A	1	08/09/2022 17:24	KJH	A
2,4-D	119 U	U	ug/kg	119	51.2	SW846 8151A	1	08/09/2022 17:24	KJH	A
2,4-DB	119 U	U	ug/kg	119	60.7	SW846 8151A	1	08/09/2022 17:24	KJH	A
Dalapon	119 U	U	ug/kg	119	33.3	SW846 8151A	1	08/09/2022 17:24	KJH	A
Dicamba	119 U	U	ug/kg	119	38.1	SW846 8151A	1	08/09/2022 17:24	KJH	A
Dichloroprop	119 U	U	ug/kg	119	59.5	SW846 8151A	1	08/09/2022 17:24	KJH	A
Dinoseb	202 U	U	ug/kg	202	89.3	SW846 8151A	1	08/09/2022 17:24	KJH	A
MCPA	14300 U	U	ug/kg	14300	6190	SW846 8151A	1	08/09/2022 17:24	KJH	A
MCPP	14300 U	U	ug/kg	14300	5360	SW846 8151A	1	08/09/2022 17:24	KJH	A
Pentachlorophenol	119 U	U	ug/kg	119	61.9	SW846 8151A	1	08/09/2022 17:24	KJH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	55.6%	36 – 113	08/09/2022 17:24	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	16.2		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	
Total Solids	83.8		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	

Results

Client Sample ID	**GW-1 Grab**	Collected	**08/02/2022 12:30**
Lab Sample ID	**3256496009**	Lab Receipt	**08/04/2022 08:45**

HERBICIDES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
2,4,5-T	1.6 U	U,7	ug/L	1.6	0.48	SW846 8151A	1	08/06/2022 17:18	DXL	A
2,4,5-TP	1.6 U	U,8	ug/L	1.6	0.72	SW846 8151A	1	08/06/2022 17:18	DXL	A
2,4-D	8.0 U	U	ug/L	8.0	5.3	SW846 8151A	1	08/06/2022 17:18	DXL	A
2,4-DB	8.0 U	U	ug/L	8.0	4.6	SW846 8151A	1	08/06/2022 17:18	DXL	A
Dalapon	8.0 U	U	ug/L	8.0	0.96	SW846 8151A	1	08/06/2022 17:18	DXL	A
Dicamba	1.6 U	U,3	ug/L	1.6	0.56	SW846 8151A	1	08/06/2022 17:18	DXL	A
Dichloroprop	1.6 U	U,4	ug/L	1.6	0.72	SW846 8151A	1	08/06/2022 17:18	DXL	A
Dinoseb	8.0 U	U,5	ug/L	8.0	0.48	SW846 8151A	1	08/06/2022 17:18	DXL	A
MCPA	800 U	U	ug/L	800	80.0	SW846 8151A	1	08/06/2022 17:18	DXL	A
MCPP	800 U	U	ug/L	800	528	SW846 8151A	1	08/06/2022 17:18	DXL	A
Pentachlorophenol	1.6 U	U,6	ug/L	1.6	0.72	SW846 8151A	1	08/06/2022 17:18	DXL	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	63.4%	14 – 172	08/06/2022 17:18	

Results

Client Sample ID	**GW-3 Grab**	Collected	**08/02/2022 13:00**
Lab Sample ID	**3256496010**	Lab Receipt	**08/04/2022 08:45**

HERBICIDES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
2,4,5-T	0.40 U	U	ug/L	0.40	0.12	SW846 8151A	1	08/09/2022 23:26	EGO	A
2,4,5-TP	0.40 U	U	ug/L	0.40	0.18	SW846 8151A	1	08/09/2022 23:26	EGO	A
2,4-D	2.0 U	U	ug/L	2.0	1.3	SW846 8151A	1	08/09/2022 23:26	EGO	A
2,4-DB	2.0 U	U	ug/L	2.0	1.2	SW846 8151A	1	08/09/2022 23:26	EGO	A
Dalapon	2.0 U	U	ug/L	2.0	0.24	SW846 8151A	1	08/09/2022 23:26	EGO	A
Dicamba	0.40 U	U	ug/L	0.40	0.14	SW846 8151A	1	08/09/2022 23:26	EGO	A
Dichloroprop	0.40 U	U	ug/L	0.40	0.18	SW846 8151A	1	08/09/2022 23:26	EGO	A
Dinoseb	2.0 U	U	ug/L	2.0	0.12	SW846 8151A	1	08/09/2022 23:26	EGO	A
MCPA	200 U	U	ug/L	200	20.0	SW846 8151A	1	08/09/2022 23:26	EGO	A
MCPP	200 U	U	ug/L	200	132	SW846 8151A	1	08/09/2022 23:26	EGO	A
Pentachlorophenol	0.40 U	U	ug/L	0.40	0.18	SW846 8151A	1	08/09/2022 23:26	EGO	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	98.3%	14 – 172	08/09/2022 23:26	

Results

Client Sample ID	**GW-4 FD Grab**	Collected	**08/02/2022 11:15**
Lab Sample ID	**3256496011**	Lab Receipt	**08/04/2022 08:45**

HERBICIDES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
2,4,5-T	0.20 U	U,7	ug/L	0.20	0.060	SW846 8151A	1	08/06/2022 17:44	DXL	A
2,4,5-TP	0.20 U	U,8	ug/L	0.20	0.090	SW846 8151A	1	08/06/2022 17:44	DXL	A
2,4-D	1.0 U	U	ug/L	1.0	0.66	SW846 8151A	1	08/06/2022 17:44	DXL	A
2,4-DB	1.0 U	U	ug/L	1.0	0.58	SW846 8151A	1	08/06/2022 17:44	DXL	A
Dalapon	1.0 U	U	ug/L	1.0	0.12	SW846 8151A	1	08/06/2022 17:44	DXL	A
Dicamba	0.20 U	U,3	ug/L	0.20	0.070	SW846 8151A	1	08/06/2022 17:44	DXL	A
Dichloroprop	0.20 U	U,4	ug/L	0.20	0.090	SW846 8151A	1	08/06/2022 17:44	DXL	A
Dinoseb	1.0 U	U,5	ug/L	1.0	0.060	SW846 8151A	1	08/06/2022 17:44	DXL	A
MCPA	100 U	U	ug/L	100	10.0	SW846 8151A	1	08/06/2022 17:44	DXL	A
MCPP	100 U	U	ug/L	100	66.0	SW846 8151A	1	08/06/2022 17:44	DXL	A
Pentachlorophenol	0.20 U	U,6	ug/L	0.20	0.090	SW846 8151A	1	08/06/2022 17:44	DXL	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	117%	14 – 172	08/06/2022 17:44	

Results

Client Sample ID	**SB-6 (6-8) Grab**	Collected	**08/01/2022 12:45**
Lab Sample ID	**3256496012**	Lab Receipt	**08/04/2022 08:45**

HERBICIDES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
2,4,5-T	259 U	U,11	ug/kg	259	101	SW846 8151A	1	08/09/2022 17:50	KJH	A
2,4,5-TP	152 U	U	ug/kg	152	71.6	SW846 8151A	1	08/09/2022 17:50	KJH	A
2,4-D	152 U	U	ug/kg	152	65.5	SW846 8151A	1	08/09/2022 17:50	KJH	A
2,4-DB	152 U	U	ug/kg	152	77.7	SW846 8151A	1	08/09/2022 17:50	KJH	A
Dalapon	152 U	U	ug/kg	152	42.6	SW846 8151A	1	08/09/2022 17:50	KJH	A
Dicamba	152 U	U,9	ug/kg	152	48.7	SW846 8151A	1	08/09/2022 17:50	KJH	A
Dichloroprop	152 U	U	ug/kg	152	76.1	SW846 8151A	1	08/09/2022 17:50	KJH	A
Dinoseb	259 U	U	ug/kg	259	114	SW846 8151A	1	08/09/2022 17:50	KJH	A
MCPA	18300 U	U	ug/kg	18300	7920	SW846 8151A	1	08/09/2022 17:50	KJH	A
MCPP	18300 U	U,10	ug/kg	18300	6850	SW846 8151A	1	08/09/2022 17:50	KJH	A
Pentachlorophenol	152 U	U	ug/kg	152	79.2	SW846 8151A	1	08/09/2022 17:50	KJH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	69.7%	36 – 113	08/09/2022 17:50	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	34.8		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	
Total Solids	65.2		%	0.1	0.01	S2540G-11	1	08/10/2022 12:58	AXF	

Results

Client Sample ID	**GW-4 Grab**	Collected	**08/02/2022 11:15**
Lab Sample ID	**3256496013**	Lab Receipt	**08/04/2022 08:45**

HERBICIDES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
2,4,5-T	0.20 U	U,7,22,23	ug/L	0.20	0.060	SW846 8151A	1	08/06/2022 18:09	DXL	A
2,4,5-TP	0.20 U	U,8,24,25	ug/L	0.20	0.090	SW846 8151A	1	08/06/2022 18:09	DXL	A
2,4-D	1.0 U	U	ug/L	1.0	0.66	SW846 8151A	1	08/06/2022 18:09	DXL	A
2,4-DB	1.0 U	U	ug/L	1.0	0.58	SW846 8151A	1	08/06/2022 18:09	DXL	A
Dalapon	1.0 U	U	ug/L	1.0	0.12	SW846 8151A	1	08/06/2022 18:09	DXL	A
Dicamba	0.20 U	U,3,12,13	ug/L	0.20	0.070	SW846 8151A	1	08/06/2022 18:09	DXL	A
Dichloroprop	0.20 U	U,4,14,15	ug/L	0.20	0.090	SW846 8151A	1	08/06/2022 18:09	DXL	A
Dinoseb	1.0 U	U,5,16,17	ug/L	1.0	0.060	SW846 8151A	1	08/06/2022 18:09	DXL	A
MCPA	100 U	U	ug/L	100	10.0	SW846 8151A	1	08/06/2022 18:09	DXL	A
MCPP	100 U	U,18,19	ug/L	100	66.0	SW846 8151A	1	08/06/2022 18:09	DXL	A
Pentachlorophenol	0.20 U	U,6,20,21	ug/L	0.20	0.090	SW846 8151A	1	08/06/2022 18:09	DXL	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	117%	14 – 172	08/06/2022 18:09	

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3256496001	SS-1 Grab	SW846 8151A S2540G-11	SW846 8151A N/A	
3256496002	SS-3 Grab	SW846 8151A S2540G-11	SW846 8151A N/A	
3256496003	SS-4 Grab	SW846 8151A S2540G-11	SW846 8151A N/A	
3256496004	SB-1 (13-15) Grab	SW846 8151A S2540G-11	SW846 8151A N/A	
3256496005	SB-3 (13-15) Grab	SW846 8151A S2540G-11	SW846 8151A N/A	
3256496006	SB-6 FD (6-8) Grab	SW846 8151A S2540G-11	SW846 8151A N/A	
3256496007	SB-7 (6-8) Grab	SW846 8151A S2540G-11	SW846 8151A N/A	
3256496008	SB-8 (6-8) Grab	SW846 8151A S2540G-11	SW846 8151A N/A	
3256496009	GW-1 Grab	SW846 8151A	SW846 8151A	
3256496010	GW-3 Grab	SW846 8151A	SW846 8151A	
3256496011	GW-4 FD Grab	SW846 8151A	SW846 8151A	
3256496012	SB-6 (6-8) Grab	SW846 8151A S2540G-11	SW846 8151A N/A	
3256496013	GW-4 Grab	SW846 8151A	SW846 8151A	

QUALITY CONTROL SAMPLES

HERBICIDES

QC Batch

QC Batch	868854	Prep Method	SW846 8151A
Date	08/05/2022 11:55	Analysis Method	SW846 8151A
Tech.	CXK		

Associated Samples

3256496001	3256496002	3256496003	3256496004
3256496005	3256496006	3256496007	3256496008
3256496012			

Method Blank 3539031 (MB) Created on 08/04/2022 15:15 For QC Batch 868854

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
2,4,5-T	93-76-5	BLK	170 U	ug/kg	170	U
2,4,5-TP	93-72-1	BLK	100 U	ug/kg	100	U
2,4-D	94-75-7	BLK	100 U	ug/kg	100	U
2,4-DB	94-82-6	BLK	100 U	ug/kg	100	U
Dalapon	75-99-0	BLK	100 U	ug/kg	100	U
Dicamba	1918-00-9	BLK	100 U	ug/kg	100	U
Dichloroprop	120-36-5	BLK	100 U	ug/kg	100	U
Dinoseb	88-85-7	BLK	170 U	ug/kg	170	U
MCPA	94-74-6	BLK	12000 U	ug/kg	12000	U
MCPP	93-65-2	BLK	12000 U	ug/kg	12000	U
Pentachlorophenol	87-86-5	BLK	100 U	ug/kg	100	U

SURROGATES

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	BLK	430	833	51.6	36 - 113	

Lab Control Standard 3539032 (LCS) Created on 08/04/2022 15:15 For QC Batch 868854

RESULTS

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
2,4,5-T	93-76-5	LCS	55.50		83.30	66.6	22 - 132		U
2,4,5-TP	93-72-1	LCS	56.70		83.30	68	49 - 105		J
2,4-D	94-75-7	LCS	64.40		83.30	77.3	23 - 130		J
2,4-DB	94-82-6	LCS	55.80		83.30	66.9	10 - 130		J
Dalapon	75-99-0	LCS	39.90		83.30	47.9	24 - 65		J
Dicamba	1918-00-9	LCS	58		83.30	69.6	44 - 89		J
Dichloroprop	120-36-5	LCS	61.50		83.30	73.8	36 - 107		J
Dinoseb	88-85-7	LCS	40.60		83.30	48.7	25 - 100		U
MCPA	94-74-6	LCS	6610		8330	79.3	16 - 101		J
MCPP	93-65-2	LCS	3730		8330	44.8	18 - 102		U
Pentachlorophenol	87-86-5	LCS	52		83.30	62.4	43 - 90		J

QUALITY CONTROL SAMPLES

HERBICIDES (cont.)

SURROGATES

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	LCS	478	833	57.3	36 - 113	

Matrix Spike 3539033 (MS) 3256496012 For QC Batch 868854

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate 3539034 (MSD) 3256496012 For QC Batch 868854

RESULTS

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
2,4,5-T	93-76-5	MS	61.70	0	82.20	75	22 - 132		U
2,4,5-T	93-76-5	MSD	50.10	0	83.30	60.1	22 - 132	RPD 20.70* (Max-18)	U
2,4,5-TP	93-72-1	MS	58.40	0	82.20	71	49 - 105		J
2,4,5-TP	93-72-1	MSD	50.50	0	83.30	60.6	49 - 105	RPD 14.50 (Max-20)	J
2,4-D	94-75-7	MS	68.90	0	82.20	83.8	23 - 130		J
2,4-D	94-75-7	MSD	57.60	0	83.30	69.1	23 - 130	RPD 17.90 (Max-34)	J
2,4-DB	94-82-6	MS	55.60	0	82.20	67.6	10 - 130		J
2,4-DB	94-82-6	MSD	56.80	0	83.30	68.1	10 - 130	RPD 2.06 (Max-42)	J
Dalapon	75-99-0	MS	41.40	0	82.20	50.3	24 - 65		J
Dalapon	75-99-0	MSD	30.50	0	83.30	36.6	24 - 65	RPD 30.40 (Max-35)	J
Dicamba	1918-00-9	MS	68.20	0	82.20	82.9	44 - 89		J
Dicamba	1918-00-9	MSD	51.60	0	83.30	61.9	44 - 89	RPD 27.70* (Max-24)	J
Dichloroprop	120-36-5	MS	65	0	82.20	79	36 - 107		J
Dichloroprop	120-36-5	MSD	55.40	0	83.30	66.4	36 - 107	RPD 16 (Max-26)	J
Dinoseb	88-85-7	MS	54.50	0	82.20	66.3	25 - 100		U
Dinoseb	88-85-7	MSD	43.90	0	83.30	52.7	25 - 100	RPD 21.50 (Max-58)	U
MCPA	94-74-6	MS	6970	0	8220	84.8	16 - 101		J
MCPA	94-74-6	MSD	7890	0	8330	94.7	16 - 101	RPD 12.40 (Max-50)	J
MCPP	93-65-2	MS	4190	0	8220	50.9	18 - 102		U
MCPP	93-65-2	MSD	7030	0	8330	84.4	18 - 102	RPD 50.70* (Max-43)	J
Pentachlorophenol	87-86-5	MS	53.40	0	82.20	64.9	43 - 90		J
Pentachlorophenol	87-86-5	MSD	45.60	0	83.30	54.7	43 - 90	RPD 15.80 (Max-19)	U

SURROGATES

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	MS	588	822	71.6	36 - 113	
2,4-Dichlorophenylacetic acid	19719-28-9	MSD	442	833	53	36 - 113	

QUALITY CONTROL SAMPLES

HERBICIDES (cont.)

QC Batch

QC Batch	869168	Prep Method	SW846 8151A
Date	08/05/2022 11:00	Analysis Method	SW846 8151A
Tech.	SRL		

Associated Samples

3256496009 3256496011 3256496013

Matrix Spike 3539355 (MS) 3256555001 (non-Project Sample) For QC Batch 869168

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate 3539356 (MSD) 3256555001 (non-Project Sample) For QC Batch 869168

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
2,4,5-T	93-76-5	MS	14.50	0	12.50	116	57 - 127		
2,4,5-T	93-76-5	MSD	15.10	0	12.50	121	57 - 127	RPD 3.69 (Max-40)	
2,4,5-TP	93-72-1	MS	15	0	12.50	120	58 - 123		
2,4,5-TP	93-72-1	MSD	15.60	0	12.50	125*	58 - 123	RPD 3.88 (Max-40)	
2,4-D	94-75-7	MS	16.30	0	12.50	130	56 - 156		
2,4-D	94-75-7	MSD	16.70	0	12.50	134	56 - 156	RPD 2.77 (Max-40)	
2,4-DB	94-82-6	MS	12.70	0	12.50	102	23 - 174		
2,4-DB	94-82-6	MSD	14	0	12.50	112	23 - 174	RPD 9.32 (Max-40)	
Dalapon	75-99-0	MS	18.20	0	12.50	145	35 - 171		
Dalapon	75-99-0	MSD	19.60	0	12.50	157	35 - 171	RPD 7.71 (Max-40)	
Dicamba	1918-00-9	MS	15	0	12.50	120*	64 - 115		
Dicamba	1918-00-9	MSD	15.40	0	12.50	123*	64 - 115	RPD 2.53 (Max-40)	
Dichloroprop	120-36-5	MS	16.90	0	12.50	135*	61 - 125		
Dichloroprop	120-36-5	MSD	17.50	0	12.50	140*	61 - 125	RPD 3.67 (Max-40)	
Dinoseb	88-85-7	MS	11.90	0	12.50	95.2	1 - 98		
Dinoseb	88-85-7	MSD	12.20	0	12.50	97.7	1 - 98	RPD 2.52 (Max-80)	
MCPA	94-74-6	MS	1850	0	1250	148	11 - 194		
MCPA	94-74-6	MSD	1930	0	1250	154	11 - 194	RPD 4.11 (Max-40)	
MCPP	93-65-2	MS	2470	0	1250	198	14 - 205		
MCPP	93-65-2	MSD	2300	0	1250	184	14 - 205	RPD 7.01 (Max-40)	
Pentachlorophenol	87-86-5	MS	6.40	0	12.50	50.9*	63 - 109		
Pentachlorophenol	87-86-5	MSD	7.80	0	12.50	62.5*	63 - 109	RPD 20.50 (Max-40)	

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	MS	129	125	103	14 - 172	
2,4-Dichlorophenylacetic acid	19719-28-9	MSD	131	125	104	14 - 172	

Method Blank 3539351 (MB) Created on 08/05/2022 08:06 For QC Batch 869168

QUALITY CONTROL SAMPLES

HERBICIDES (cont.)

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
2,4,5-T	93-76-5	BLK	0.20 U	ug/L	0.20	U
2,4,5-TP	93-72-1	BLK	0.20 U	ug/L	0.20	U
2,4-D	94-75-7	BLK	1.0 U	ug/L	1.0	U
2,4-DB	94-82-6	BLK	1.0 U	ug/L	1.0	U
Dalapon	75-99-0	BLK	1.0 U	ug/L	1.0	U
Dicamba	1918-00-9	BLK	0.20 U	ug/L	0.20	U
Dichloroprop	120-36-5	BLK	0.20 U	ug/L	0.20	U
Dinoseb	88-85-7	BLK	1.0 U	ug/L	1.0	U
MCPA	94-74-6	BLK	100 U	ug/L	100	U
MCPP	93-65-2	BLK	100 U	ug/L	100	U
Pentachlorophenol	87-86-5	BLK	0.20 U	ug/L	0.20	U

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	BLK	137	125	109	14 - 172	

Lab Control Standard 3539352 (LCS) Created on 08/05/2022 08:06 For QC Batch 869168

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
2,4,5-T	93-76-5	LCS	16		12.50	128*	57 - 127		
2,4,5-TP	93-72-1	LCS	16.60		12.50	133*	58 - 123		
2,4-D	94-75-7	LCS	17.70		12.50	142	56 - 156		
2,4-DB	94-82-6	LCS	13.50		12.50	108	23 - 174		
Dalapon	75-99-0	LCS	20.40		12.50	163	35 - 171		
Dicamba	1918-00-9	LCS	16.30		12.50	131*	64 - 115		
Dichloroprop	120-36-5	LCS	18.70		12.50	150*	61 - 125		
Dinoseb	88-85-7	LCS	14.30		12.50	114*	1 - 98		
MCPA	94-74-6	LCS	2070		1250	166	11 - 194		
MCPP	93-65-2	LCS	2410		1250	192	14 - 205		
Pentachlorophenol	87-86-5	LCS	16		12.50	128*	63 - 109		

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	LCS	139	125	111	14 - 172	

Matrix Spike 3539353 (MS) 3256496013 For QC Batch 869168

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate 3539354 (MSD) 3256496013 For QC Batch 869168

QUALITY CONTROL SAMPLES

HERBICIDES (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
2,4,5-T	93-76-5	MS	17.10	0	12.50	137*	57 - 127		
2,4,5-T	93-76-5	MSD	17.40	0	12.50	139*	57 - 127	RPD 1.44 (Max-40)	
2,4,5-TP	93-72-1	MS	15.90	0	12.50	127*	58 - 123		
2,4,5-TP	93-72-1	MSD	16.40	0	12.50	131*	58 - 123	RPD 2.79 (Max-40)	
2,4-D	94-75-7	MS	15.70	0	12.50	126	56 - 156		
2,4-D	94-75-7	MSD	16.10	0	12.50	129	56 - 156	RPD 2.50 (Max-40)	
2,4-DB	94-82-6	MS	15.50	0	12.50	124	23 - 174		
2,4-DB	94-82-6	MSD	14.50	0	12.50	116	23 - 174	RPD 7.19 (Max-40)	
Dalapon	75-99-0	MS	20.30	0	12.50	162	35 - 171		
Dalapon	75-99-0	MSD	20.60	0	12.50	165	35 - 171	RPD 1.46 (Max-40)	
Dicamba	1918-00-9	MS	15.10	0	12.50	121*	64 - 115		
Dicamba	1918-00-9	MSD	15.40	0	12.50	123*	64 - 115	RPD 2.08 (Max-40)	
Dichloroprop	120-36-5	MS	16.30	0	12.50	130*	61 - 125		
Dichloroprop	120-36-5	MSD	16.90	0	12.50	135*	61 - 125	RPD 3.53 (Max-40)	
Dinoseb	88-85-7	MS	12.30	0	12.50	98.5*	1 - 98		
Dinoseb	88-85-7	MSD	12.70	0	12.50	101*	1 - 98	RPD 2.93 (Max-80)	
MCPA	94-74-6	MS	1060	0	1250	84.8	11 - 194		
MCPA	94-74-6	MSD	1180	0	1250	94	11 - 194	RPD 10.30 (Max-40)	
MCPP	93-65-2	MS	4070	0	1250	326*	14 - 205		
MCPP	93-65-2	MSD	4120	0	1250	330*	14 - 205	RPD 1.27 (Max-40)	
Pentachlorophenol	87-86-5	MS	0	0	12.50	0*	63 - 109		U
Pentachlorophenol	87-86-5	MSD	0	0	12.50	0*	63 - 109	RPD 0 (Max-40)	U

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	MS	127	125	102	14 - 172	
2,4-Dichlorophenylacetic acid	19719-28-9	MSD	134	125	107	14 - 172	

QC Batch

QC Batch	869825	Prep Method	SW846 8151A
Date	08/09/2022 10:20	Analysis Method	SW846 8151A
Tech.	SRL		

Associated Samples

3256496010

Matrix Spike 3540707 (MS) 3256591002 (non-Project Sample) For QC Batch 869825

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate 3540708 (MSD) 3256591002 (non-Project Sample) For QC Batch 869825

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers

QUALITY CONTROL SAMPLES

HERBICIDES (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
2,4,5-TP	93-72-1	MS	292	0	250	117	58 - 123		
2,4,5-TP	93-72-1	MSD	326	0	250	130*	58 - 123	RPD 11.20 (Max-40)	
2,4-D	94-75-7	MS	303	0	250	121	56 - 156		
2,4-D	94-75-7	MSD	332	0	250	133	56 - 156	RPD 9.15 (Max-40)	

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	MS	2310	2500	92.3	14 - 172	
2,4-Dichlorophenylacetic acid	19719-28-9	MSD	2470	2500	98.7	14 - 172	

Method Blank 3540705 (MB) Created on 08/09/2022 07:50 For QC Batch 869825

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
2,4,5-T	93-76-5	BLK	0.20 U	ug/L	0.20	U
2,4,5-TP	93-72-1	BLK	0.20 U	ug/L	0.20	U
2,4-D	94-75-7	BLK	1.0 U	ug/L	1.0	U
2,4-DB	94-82-6	BLK	1.0 U	ug/L	1.0	U
Dalapon	75-99-0	BLK	1.0 U	ug/L	1.0	U
Dicamba	1918-00-9	BLK	0.20 U	ug/L	0.20	U
Dichloroprop	120-36-5	BLK	0.20 U	ug/L	0.20	U
Dinoseb	88-85-7	BLK	1.0 U	ug/L	1.0	U
MCPA	94-74-6	BLK	100 U	ug/L	100	U
MCPP	93-65-2	BLK	100 U	ug/L	100	U
Pentachlorophenol	87-86-5	BLK	0.20 U	ug/L	0.20	U

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	BLK	123	125	98.2	14 - 172	

Lab Control Standard 3540706 (LCS) Created on 08/09/2022 07:50 For QC Batch 869825

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
2,4,5-T	93-76-5	LCS	9.40		12.50	75.3	57 - 127		
2,4,5-TP	93-72-1	LCS	10.30		12.50	82.7	58 - 123		
2,4-D	94-75-7	LCS	11		12.50	88.3	56 - 156		
2,4-DB	94-82-6	LCS	12.30		12.50	98.1	23 - 174		
Dalapon	75-99-0	LCS	12.70		12.50	101	35 - 171		
Dicamba	1918-00-9	LCS	11.20		12.50	89.8	64 - 115		

QUALITY CONTROL SAMPLES

HERBICIDES (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Dichloroprop	120-36-5	LCS	11.70		12.50	93.8	61 - 125		
Dinoseb	88-85-7	LCS	7.30		12.50	58.6	1 - 98		
MCPA	94-74-6	LCS	1290		1250	104	11 - 194		
MCPP	93-65-2	LCS	1540		1250	123	14 - 205		
Pentachlorophenol	87-86-5	LCS	9.70		12.50	78	63 - 109		

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2,4-Dichlorophenylacetic acid	19719-28-9	LCS	92.60	125	74.1	14 - 172	

QUALITY CONTROL SAMPLES

WET CHEMISTRY

QC Batch

QC Batch	870148	Prep Method	N/A
Date	N/A	Analysis Method	S2540G-11
Tech.			

Associated Samples

3256496001	3256496002	3256496003	3256496004
3256496005	3256496006	3256496007	3256496008
3256496012			

Duplicate 3541590 (DUP) 3256496002 For QC Batch 870148

****NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.

RESULTS

Compound	CAS No		Result (%)	Orig. Result (%)		Qualifiers
Moisture	MOISTURE	DUP	30.3754	34.2076	RPD 11.90* (Max-10)	
Total Solids	TSP	DUP	69.6245	65.7923	RPD 5.66* (Max-5)	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3256496001	SS-1 Grab	SW846 8151A N/A	868854 N/A	08/05/2022 11:55 N/A	CXK	SW846 8151A S2540G-11	869866 870148
3256496002	SS-3 Grab	SW846 8151A N/A	868854 N/A	08/05/2022 11:55 N/A	CXK	SW846 8151A S2540G-11	869866 870148
3256496003	SS-4 Grab	SW846 8151A N/A	868854 N/A	08/05/2022 11:55 N/A	CXK	SW846 8151A S2540G-11	869866 870148
3256496004	SB-1 (13-15) Grab	SW846 8151A N/A	868854 N/A	08/05/2022 11:55 N/A	CXK	SW846 8151A S2540G-11	869866 870148
3256496005	SB-3 (13-15) Grab	SW846 8151A N/A	868854 N/A	08/05/2022 11:55 N/A	CXK	SW846 8151A S2540G-11	869866 870148
3256496006	SB-6 FD (6-8) Grab	SW846 8151A N/A	868854 N/A	08/05/2022 11:55 N/A	CXK	SW846 8151A S2540G-11	869866 870148
3256496007	SB-7 (6-8) Grab	SW846 8151A N/A	868854 N/A	08/05/2022 11:55 N/A	CXK	SW846 8151A S2540G-11	869866 870148
3256496008	SB-8 (6-8) Grab	SW846 8151A N/A	868854 N/A	08/05/2022 11:55 N/A	CXK	SW846 8151A S2540G-11	869866 870148
3256496009	GW-1 Grab	SW846 8151A	869168	08/05/2022 11:00	SRL	SW846 8151A	869273
3256496010	GW-3 Grab	SW846 8151A	869825	08/09/2022 10:20	SRL	SW846 8151A	870016
3256496011	GW-4 FD Grab	SW846 8151A	869168	08/05/2022 11:00	SRL	SW846 8151A	869273
3256496012	SB-6 (6-8) Grab	SW846 8151A N/A	868854 N/A	08/05/2022 11:55 N/A	CXK	SW846 8151A S2540G-11	869866 870148
3256496013	GW-4 Grab	SW846 8151A	869168	08/05/2022 11:00	SRL	SW846 8151A	869273

3256496

Logged By: KSB
PM: SSL

03-Aug-22
20529
Due Date: 15-Aug-22

ALS Laboratory Group

Subcontractor:
ALS Environmental
301 Fulling Mill Road
Middletown, PA 17057

TEL: (717) 944-5541
FAX: (717) 944-1430
Acct #:

CHAIN-OF-CUST

Salesperson: Paul Painter

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	20-122021352	Project Name	22080299	A	Herbicides (8151)
Work Order		Project Number		B	
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp	C	
Send Report To	Rebecca Kiser	Inv Attn	Accounts Payable	D	
Address	1740 Union Carbide Dr	Address	1740 Union Carbide Dr	E	
				F	
City/State/Zip	So Charleston, WV 25303	City/State/Zip	So Charleston, WV 25303	G	
Phone	(304) 356-3168	Phone	(304) 356-3168	H	
Fax		Fax		I	
eMail Address	rebecca.kiser@alsglobal.com	eMail CC		J	

ALS Sample ID	Client Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D
22080299-01C	SS-1 Grab	Soil	1/Aug/2022 12:50	(1) 4OZGNEAT	X			
22080299-02C	SS-3 Grab	Soil	1/Aug/2022 13:05	(1) 4OZGNEAT	X			
22080299-03C	SS-4 Grab	Soil	2/Aug/2022 10:50	(1) 4OZGNEAT	X			
22080299-04C	SB-1 (13-15) Grab	Soil	1/Aug/2022 12:10	(1) 4OZGNEAT	X			
22080299-05C	SB-3 (13-15) Grab	Soil	1/Aug/2022 13:10	(1) 4OZGNEAT	X			
22080299-08C	SB-6 FD (6-8) Grab	Soil	1/Aug/2022 12:45	(1) 4OZGNEAT	X			
22080299-09C	SB-7 (8-10) Grab	Soil	2/Aug/2022 10:25	(1) 4OZGNEAT	X			
22080299-10C	SB-8 (6-8) Grab	Soil	1/Aug/2022 14:00	(1) 4OZGNEAT	X			
22080299-11D	GW-1 Grab	Water	2/Aug/2022 12:30	(2) 1LAMGNEAT	X			
22080299-12D	GW-3 Grab	Water	2/Aug/2022 13:00	(2) 1LAMGNEAT	X			
22080299-14D	GW-4 FD Grab	Water	2/Aug/2022 11:15	(2) 1LAMGNEAT	X			
22080299-07C	SB-6 (6-8) Grab	Soil	1/Aug/2022 12:45	(3) 4OZGNEAT	X			
22080299-13D	GW-4 Grab	Water	2/Aug/2022 11:15	(6) 1LAMGNEAT	X			

Temp Taken By: DP
WO Temp (°C): 10
Therm ID: 574
Receipt Info Completed By: DD
Cooler Custody Seal Intact: Y N NA
Sample Custody Seal Intact: Y N NA
Received on Ice: Y N NA
Cooler & Samples Intact: Y N
Correct Containers Provided: Y N
Sample Label/COC Agree: Y N
Adequate Sample Volumes: Y N
VOA Headspace Present: Y N NA
Voa Trip Blank: Y N NA
NJ≤ 4 Days?: Y N
Rad Screen (uCi): —
Courier/Tracking #: 777568585698
SDWA Compliance: Y N
PWSID
WV Containers 0-6°C: Y N NA
777568585893

Comments:

WV Samples. Sampler: S. Johnson. Samples are Level IV. Extra Volume for MS/MSD supplied for SB-6 (6-8) and GW-4.

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
Janet Johnson	8/3/221700	FEDEX			LEVEL IV
FEDEX		Dave Dutcher ALS	8/4/22 08:45		
Relinquished by:	Date/Time	Received by:	Date/Time		

TRIAD ENGINEERING, INC.

APPENDIX 4

DATA VALIDATION REPORT

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Triad Engineering, Inc
10541 Teays Valley Road
Scott Depot , WV 25560
ATTN: Ms. Shannon L. Johnson
sjohnson@triadeng.com

October 20, 2022

SUBJECT: Fmr Huntington East Practice Field - Data Validation

Dear Ms. Johnson,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on September 9, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #54960:

SDG #	Fraction
22080299	Volatiles, Polynuclear Aromatic Hydrocarbons, Metals

The data validation was performed under Stage 4 guidelines. The analysis were validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Region 2 Planning and Development Council, Brownfield Assessment Grant (Revision 1, December 2019)
- USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020)
- USEPA National Functional Guidelines (NFG) for Inorganic Superfund Methods Data Review (November 2020)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

515 pages-DL

Attachment 1

Level IV EDD **LDC# 54960 (Triad Engineering, Inc.-Scott Depot, WV / Fmr Huntington East Practice Field)**

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260C)		PAHs (8270E)		Metals (6020B)		Hg (7471B)		Diss. Metals (6020B)		Diss. Hg (7470A)																									
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	22080299	09/09/22	09/30/22	5	10	4	9	0	9	0	9	4	0	4	0																						
Total	TR/PG			5	10	4	9	0	9	0	9	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54

Shaded cells indicate Level IV validation (all other cells are Level III validation) These sample counts do not include MS/MSD and DUPs V:\LOGIN\Triad Engineering\Huntington East\54960ST.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Future Huntington East Practice Field

LDC Report Date: October 5, 2022

Parameters: Volatiles

Validation Level: Stage 4

Laboratory: ALS Environmental, Holland, MI

Sample Delivery Group (SDG): 22080299

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
SS-1 Grab	22080299-01	Soil	08/01/22
SS-3 Grab	22080299-02	Soil	08/01/22
SS-4 Grab	22080299-03	Soil	08/02/22
SB-1 (13-15) Grab	22080299-04	Soil	08/01/22
SB-3 (13-15) Grab	22080299-05	Soil	08/01/22
SB-4 (6-8) Grab	22080299-06	Soil	08/02/22
SB-6 (6-8) Grab	22080299-07	Soil	08/01/22
SB-6 FD (6-8) Grab	22080299-08	Soil	08/01/22
SB-7 (8-10) Grab	22080299-09	Soil	08/02/22
SB-8 (6-8) Grab	22080299-10	Soil	08/01/22
GW-1 Grab	22080299-11	Water	08/02/22
GW-3 Grab	22080299-12	Water	08/02/22
GW-4 Grab	22080299-13	Water	08/02/22
GW-4 FD Grab	22080299-14	Water	08/02/22
Trip Blank Grab	22080299-15	Water	08/01/22
SB-6 (6-8) GrabMS	22080299-07MS	Soil	08/01/22
SB-6 (6-8) GrabMSD	22080299-07MSD	Soil	08/01/22
GW-4 GrabMS	22080299-13MS	Water	08/02/22
GW-4 GrabMSD	22080299-13MSD	Water	08/02/22

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Quality Assurance Project Plan, Region 2 Planning and Development Council, Brownfield Assessment Grant (Revision 1, December 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.
The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) SW 846 Method 8260C

All sample results were subjected to Stage 4 data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For analytes where average relative response factors (RRFs) were utilized, the percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the analytes, all coefficients of determination (r^2) were greater than or equal to 0.990.

Average relative response factors (RRF) for all analytes were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all analytes.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all analytes with the following exceptions:

Date	Analyte	%D	Associated Samples	Flag	A or P
08/09/22	Bromomethane	25.0	SS-1 Grab SS-3 Grab SS-4 Grab SB-1 (13-15) Grab SB-3 (13-15) Grab SB-4 (6-8) Grab SB-6 (6-8) Grab SB-6 FD (6-8) Grab SB-7 (8-10) Grab SB-8 (6-8) Grab GW-4 Grab GW-4 FD Grab Trip Blank Grab	UJ (all non-detects)	A

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Analysis Date	Analyte	Concentration	Associated Samples
MBLK-200895	08/09/22	Dichlorodifluoromethane	81.5 ug/Kg	All soil samples in SDG 22080299

Sample concentrations were compared to concentrations detected in the laboratory blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated laboratory blanks.

VI. Field Blanks

Sample Trip Blank Grab was identified as a trip blank. No contaminants were found with the following exceptions:

Blank ID	Collection Date	Analyte	Concentration	Associated Samples
Trip Blank Grab	08/01/22	Acetone	4.9 ug/L	SS-1 Grab SS-3 Grab SS-4 Grab SB-1 (13-15) Grab SB-3 (13-15) Grab SB-4 (6-8) Grab SB-6 (6-8) Grab SB-6 FD (6-8) Grab SB-7 (8-10) Grab SB-8 (6-8) Grab GW-1 Grab GW-3 Grab GW-4 Grab GW-4 FD Grab

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated field blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
GW-1 Grab	Acetone	3.1 ug/L	10U ug/L
GW-3 Grab	Acetone	2.6 ug/L	10U ug/L

Sample	Analyte	Reported Concentration	Modified Final Concentration
GW-4 Grab	Acetone	5.3 ug/L	10U ug/L
GW-4 FD Grab	Acetone	6.8 ug/L	10U ug/L
SB-8 (6-8) Grab	Acetone	140 ug/Kg	140U ug/Kg

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
GW-4 GrabMS/MSD (GW-4 Grab)	1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Styrene	64.3 (73-127) 76.7 (80-119) 74.6 (80-120) 72.6 (81-119) 71.4 (76-123)	66.8 (73-127) - 77.1 (80-120) 75.6 (81-119) 74.8 (76-123)	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	A
GW-4 GrabMS/MSD (GW-4 Grab)	Bromomethane Chloroethane Dichlorodifluoromethane Trichlorofluoromethane	346 (20-183) 450 (35-136) 136 (36-133) 168 (52-115)	346 (20-183) 406 (35-136) 136 (36-133) 170 (52-115)	NA	-
SB-6 (6-8) GrabMS/MSD (SB-6 (6-8) Grab)	1,1,2,2-Tetrachloroethane Bromodichloromethane Chloroethane	78.3 (79-125) 73.1 (75-125) 20.6 (38-132)	- - 19.4 (38-132)	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	A
SB-6 (6-8) GrabMS/MSD (SB-6 (6-8) Grab)	Tetrachloroethene Acetone	164 (76-128) -	168 (76-128) 196 (52-190)	NA	-
SB-6 (6-8) GrabMS/MSD (SB-6 (6-8) Grab)	Methyl acetate	327 (61-125)	506 (61-125)	J (all detects)	A

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	RPD (Limits)	Flag	A or P
SB-6 (6-8) GrabMS/MSD (SB-6 (6-8) Grab)	Methyl acetate	52.7 (≤30)	J (all detects)	A

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Analyte	%R (Limits)	Flag	A or P
IOV-LCSV01-220810 (GW-1 Grab GW-3 Grab)	Trichlorofluoromethane	119 (52-115)	NA	-
IOV-LCSSV02-220809 (GW-4 Grab GW-4 FD Grab Trip Blank Grab)	Trichlorofluoromethane	116 (52-115)	NA	-

X. Field Duplicates

Samples SB-6 (6-8) Grab and SB-6 FD (6-8) Grab and samples GW-4 Grab and GW-4 FD Grab were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Analyte	Concentration (ug/Kg)		RPD (Limits)	Difference (Limits)	Flag	A or P
	SB-6 (6-8) Grab	SB-6 FD (6-8) Grab				
Methyl acetate	48	1500	-	1452 (≤880)	J (all detects)	A
Methylcyclohexane	14	290	-	276 (≤106)	J (all detects)	A
1,2,4-Trimethylbenzene	42U	64	-	22 (≤106)	-	-
Acetone	110U	190	-	80 (≤360)	-	-
Cyclohexane	32U	97	-	65 (≤360)	-	-
Ethylbenzene	7.6U	20	-	12.4 (≤106)	-	-
m,p-Xylene	48U	110	-	62 (≤220)	-	-
o-Xylene	14U	83	-	69 (≤106)	-	-

Analyte	Concentration (ug/Kg)		RPD (Limits)	Difference (Limits)	Flag	A or P
	SB-6 (6-8) Grab	SB-6 FD (6-8) Grab				
Toluene-d8	9.9U	24	-	14.1 (≤106)	-	-
Xylenes, total	48U	190	-	142 (≤320)	-	-

Analyte	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
	GW-4 Grab	GW-4 FD Grab				
Acetone	5.3	6.8	-	1.5 (≤20)	-	-
2-Butanone	0.52U	0.63	-	0.11 (≤10)	-	-
Carbon disulfide	0.49U	0.50	-	0.01 (≤2.0)	-	-

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Target Analyte Quantitation

All target analyte quantitations met validation criteria.

XIII. Target Analyte Identification

All target analyte identifications met validation criteria.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to MS/MSD %R and RPD and field duplicate difference, data were qualified as estimated in three samples.

Due to trip blank contamination, data were qualified as not detected in five samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

Future Huntington East Practice Field
Volatiles - Data Qualification Summary - SDG 22080299

Sample	Analyte	Flag	A or P	Reason
GW-4 Grab	1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Styrene	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)
SB-6 (6-8) Grab	1,1,2,2-Tetrachloroethane Bromodichloromethane Chloroethane	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)
SB-6 (6-8) Grab	Methyl acetate	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD)
SB-6 (6-8) Grab SB-6 FD (6-8) Grab	Methyl acetate Methylcyclohexane	J (all detects) J (all detects)	A	Field duplicates (Difference)

Future Huntington East Practice Field
Volatiles - Laboratory Blank Data Qualification Summary - SDG 22080299

No Sample Data Qualified in this SDG

Future Huntington East Practice Field
Volatiles - Field Blank Data Qualification Summary - SDG 22080299

Sample	Analyte	Modified Final Concentration	A or P
GW-1 Grab	Acetone	10U ug/L	A
GW-3 Grab	Acetone	10U ug/L	A
GW-4 Grab	Acetone	10U ug/L	A
GW-4 FD Grab	Acetone	10U ug/L	A
SB-8 (6-8) Grab	Acetone	140U ug/Kg	A

LDC #: 54960A1a **VALIDATION COMPLETENESS WORKSHEET** Date: 9/29/22
SDG #: 22080299 Level IV Page: 1 of 1
Laboratory: ALS Environmental, Holland, MI Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW-846 Method 8260C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	%RSD ≤ 20, r² ICV ≤ 30
IV.	Continuing calibration	SW	CCV ≤ 20
V.	Laboratory Blanks	SW	
VI.	Field blanks	SW	TB=15
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	SW	
IX.	Laboratory control samples	SW	LCS
X.	Field duplicates	SW	D = 7,8 13,14
XI.	Internal standards	A	
XII.	Target analyte quantitation	A	
XIII.	Target analyte identification	A	
XIV.	System performance	A	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	SS-1 Grab	22080299-01	Soil	08/01/22
2	SS-3 Grab	22080299-02	Soil	08/01/22
3	SS-4 Grab	22080299-03	Soil	08/02/22
4	SB-1 (13-15) Grab	22080299-04	Soil	08/01/22
5	SB-3 (13-15) Grab	22080299-05	Soil	08/01/22
6	SB-4 (6-8) Grab	22080299-06	Soil	08/02/22
7	SB-6 (6-8) Grab D	22080299-07	Soil	08/01/22
8	SB-6 FD (6-8) Grab D	22080299-08	Soil	08/01/22
9	SB-7 (8-10) Grab	22080299-09	Soil	08/02/22
10	SB-8 (6-8) Grab	22080299-10	Soil	08/01/22
11	GW-1 Grab	22080299-11	Water	08/02/22
12	GW-3 Grab	22080299-12	Water	08/02/22
13	GW-4 Grab D	22080299-13	Water	08/02/22
14	GW-4 FD Grab D	22080299-14	Water	08/02/22

LDC #: 54960A1a **VALIDATION COMPLETENESS WORKSHEET** Date: 9/29/22
SDG #: 22080299 Level IV Page: 2 of 2
Laboratory: ALS Environmental, Holland, MI Reviewer:
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW-846 Method 8260C)

	Client ID	Lab ID	Matrix	Date
15 1	Trip Blank Grab	22080299-15	Water	08/01/22
16 3	SB-6 (6-8) GrabMS	22080299-07MS	Soil	08/01/22
17 3	SB-6 (6-8) GrabMSD	22080299-07MSD	Soil	08/01/22
18 1	GW-4 GrabMS	22080299-13MS	Water	08/02/22
19 1	GW-4 GrabMSD	22080299-13MSD	Water	08/02/22
20				
21				
22				

Notes:

1	10V-BLKW2-220809					
2	10V-BLKW1-220810					
3	MBLK-200814					

LDC #: 54960A1a

VALIDATION FINDINGS CHECKLIST

Method: Volatiles (EPA SW 846 Method 8260C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ ~~30%/15%~~ 30% and relative response factors (RRF) ≥ 0.05?	✓			
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ ~~20%~~ 30%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) ≥ 0.05?		✓		
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks? If yes, please see the Blanks validation findings worksheet.	✓			
VI. Field blanks				
Were field blanks were identified in this SDG?	✓			
Were target analytes detected in the field blanks?	✓			
VII. Surrogate spikes				
Were all surrogate percent recovery (%R) within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	

Validation Area	Yes	No	NA	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
IX. Laboratory control samples				
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target analytes detected in the field duplicates?	✓			
XI. Internal standards				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XII. Target analyte quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the target analyte?	✓			
Were target analyte quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target analyte identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did analyte spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
Were manual integrations reviewed and found acceptable?	✓			
Did the laboratory provide before and after integration printouts?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	AA. Tetrachloroethene	AAA. 1,3,5-Trimethylbenzene	AAAA. Ethyl tert-butyl ether	A1. 1,3-Butadiene
B. Bromomethane	BB. 1,1,2,2-Tetrachloroethane	BBB. 4-Chlorotoluene	BBBB. tert-Amyl methyl ether	B1. Hexane
C. Vinyl choride	CC. Toluene	CCC. tert-Butylbenzene	CCCC. 1-Chlorohexane	C1. Heptane
D. Chloroethane	DD. Chlorobenzene	DDD. 1,2,4-Trimethylbenzene	DDDD. Isopropyl alcohol	D1. Propylene
E. Methylene chloride	EE. Ethylbenzene	EEE. sec-Butylbenzene	EEEE. Acetonitrile	E1. Freon 11
F. Acetone	FF. Styrene	FFF. 1,3-Dichlorobenzene	FFFF. Acrolein	F1. Freon 12
G. Carbon disulfide	GG. Xylenes, total	GGG. p-Isopropyltoluene	GGGG. Acrylonitrile	G1. Freon 113
H. 1,1-Dichloroethene	HH. Vinyl acetate	HHH. 1,4-Dichlorobenzene	HHHH. 1,4-Dioxane	H1. Freon 114
I. 1,1-Dichloroethane	II. 2-Chloroethylvinyl ether	III. n-Butylbenzene	IIII. Isobutyl alcohol	I1. 2-Nitropropane
J. 1,2-Dichloroethene, total	JJ. Dichlorodifluoromethane	JJJ. 1,2-Dichlorobenzene	JJJJ. Methacrylonitrile	J1. Dimethyl disulfide
K. Chloroform	KK. Trichlorofluoromethane	KKK. 1,2,4-Trichlorobenzene	KKKK. Propionitrile	K1. 2,3-Dimethyl pentane
L. 1,2-Dichloroethane	LL. Methyl-tert-butyl ether	LLL. Hexachlorobutadiene	LLLL. Ethyl ether	L1. 2,4-Dimethyl pentane
M. 2-Butanone	MM. 1,2-Dibromo-3-chloropropane	MMM. Naphthalene	MMMM. Benzyl chloride	M1. 3,3-Dimethyl pentane
N. 1,1,1-Trichloroethane	NN. Methyl ethyl ketone	NNN. 1,2,3-Trichlorobenzene	NNNN. Iodomethane	N1. 2-Methylpentane
O. Carbon tetrachloride	OO. 2,2-Dichloropropane	OOO. 1,3,5-Trichlorobenzene	OOOO.1,1-Difluoroethane	O1. 3-Methylpentane
P. Bromodichloromethane	PP. Bromochloromethane	PPP. trans-1,2-Dichloroethene	PPPP. Tetrahydrofuran	P1. 3-Ethylpentane
Q. 1,2-Dichloropropane	QQ. 1,1-Dichloropropene	QQQ. cis-1,2-Dichloroethene	QQQQ. Methyl acetate	Q1. 2,2-Dimethylpentane
R. cis-1,3-Dichloropropene	RR. Dibromomethane	RRR. m,p-Xylenes	RRRR. Ethyl acetate	R1. 2,2,3- Trimethylbutane
S. Trichloroethene	SS. 1,3-Dichloropropane	SSS. o-Xylene	SSSS. Cyclohexane	S1. 2,2,4-Trimethylpentane
T. Dibromochloromethane	TT. 1,2-Dibromoethane	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	TTTT. Methyl cyclohexane	T1. 2-Methylhexane
U. 1,1,2-Trichloroethane	UU. 1,1,1,2-Tetrachloroethane	UUU. 1,2-Dichlorotetrafluoroethane	UUUU. Allyl chloride	U1. Nonanal
V. Benzene	VV. Isopropylbenzene	VVV. 4-Ethyltoluene	VVVV. Methyl methacrylate	V1. 2-Methylnaphthalene
W. trans-1,3-Dichloropropene	WW. Bromobenzene	WWW. Ethanol	WWWW. Ethyl methacrylate	W1. Methanol
X. Bromoform	XX. 1,2,3-Trichloropropane	XXX. Di-isopropyl ether	XXXX. cis-1,4-Dichloro-2-butene	X1. 1,2,3-Trimethylbenzene
Y. 4-Methyl-2-pentanone	YY. n-Propylbenzene	YYY. tert-Butanol	YYYY. trans-1,4-Dichloro-2-butene	Y1. 2-Propanol
Z. 2-Hexanone	ZZ. 2-Chlorotoluene	ZZZ. tert-Butyl alcohol	ZZZZ. Pentachloroethane	Z1.

LDC #: 54960A1a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤20 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤20.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	8/9/22	CCV	B	25.0		13 → 15, 18, 19,	J/UJ/A ND
	10:11					all soils	
						10V - BLKW02, 220809,	
						MBLK - 200845	
	~~all passed~~	FI CCV				~~all soils~~	

CONCAL.wpd

LDC #: 54960A1a

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a method blank associated with every sample in this SDG?

Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?

Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 8/9/22

Conc. units: ug/kg

Associated Samples: All soils (ND)

Compound	Blank ID	Sample Identification								
	MBLK-200895									
2-JJ	8/.5									

Blank analysis date: _____

Conc. units: _____

Associated Samples: _____

Compound	Blank ID	Sample Identification								

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 54960A1a

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260C)
Y N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?
Blank units: ug/L **Associated sample units:** ug/L
Sampling date: 08/11/22
Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: TB Associated Samples: 1 → 14

Compound	Blank ID	Sample Identification								
	15	11	12	13	14	10				
F	4.9	3.1|10U	2.6|10U	5.3|10U	6.8|10U	10U				

Blank units: _____ **Associated sample units:** _____
Sampling date: _____
Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as Methylene chloride, Acetone, 2-Butanone and Carbon disulfide that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

.LDC #: 54960A1a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT

METHOD : GC/MS VOA (EPA SW 846 Method 8260C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	18+19	KKK	64.3 (73-127)	66.8 (73-127)	( )	13	J/UJ/A all ND
		JJJ	76.7 (80-119)	( )	( )		
		FFF	74.6 (80-120)	77.1 (80-120)	( )		
		HHH	72.6 (81-119)	75.6 (81-119)	( )		
		B	346 (20-183)	346 (20-183)	( )		
		D	490 (35-136)	406 (35-136)	( )		
		JJ	136 (36-133)	136 (36-133)	( )		
		LLL	75.1 (77-142)	75.4 (77-142)	( )		J/UJ/A
	~~Methyl Iodide~~		~~229 (10-200)~~	~~224 (10-200)~~	FT ( )		J dū/A
		III	69.4 (72-116)	71.4 (72-116)	( )		J/UJ/A
		FF	71.4 (76-123)	74.8 (76-123)	( )		
		KK	168 (52-115)	170 (52-115)	( )		J dū/A
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

.LDC #: 54960A1a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT

METHOD : GC/MS VOA (EPA SW 846 Method 8260 C

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	16 + 17	BB	78.3 (79-125)	( )	( )	7	J/UJ/A ND
		P	73.1 (75-125)	( )	( )		
		D	20.6 (38-132)	19.4 (38-132)	( )		
		QQQQ	327 (61-125)	506 (61-125)	( )		Jdet/A Det
		AA	164 (76-128)	168 (76-128)	( )		ND
		F	( )	196 (52-190)	( )		ND
		QQQQ	( )	( )	52.7 (30)		Jdet/A Det
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 54960A 1a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	10V-LCSW1-220810	KK	119 (52-115	( )	( )	11, 12,	Jdet /P ND
			( )	( )	( )	10V-BLKW1-220810	
			( )	( )	( )		
			( )	( )	( )		
	10V-LCSW2-220809	KK	116 (52-115	( )	( )	13 → 15	Jdet /P ND
			( )	( )	( )	10V-BLKW2-220809	
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC#: 54960A1a

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: FT

METHOD: GC/HPLC/GCMS (EPA SW 846 Method 8260C)
Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/kg) 7	8	RPD (≤ 50 %)	Difference	Limits	Qualifications (Parent Only)
QQQQ	48	1500		1452	(≤ ~~800~~ 880) F?	J det/A
TTTT	14	290		276	(≤ ~~77~~ 106) F?	J det/A
DDD	42U	64	~~64~~	22	(≤ 106)	
F	110U	190	~~89~~	80	(≤ 360)	
SSSS	32U	97		65	(≤ 360)	

Compound	Concentration (ng/kg) 7	8	RPD (≤ 50 %)	Difference	Limits	Qualifications (Parent Only)
EE	7.6U	20		12.4	(≤ 106)	
RRR	48U	110		62	(≤ 220)	
SSS	14U	83		69	(≤ 106)	
Tol	9.9U	24		14.1	(≤ 106)	
GG	48U	190		142	(≤ 320)	

Compound	Concentration (ug/L) 13	14	RPD (≤ 50 %)	Difference	Limits	Qualifications (Parent Only)
F	5.3	6.8		1.5	(≤ 30)	
M	0.52U	0.63		0.11	(≤ 1U)	
G	0.49U	0.50		0.01	(≤ 2.0)	
					(≤)	
					(≤)	

LDC #: 54960A1a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 C4)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the analytes identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalc RRF (10 std)	Reported Average RRF (initial)	Recalc Average RRF (initial)	Reported %RSD	Recalc %RSD
1	ICAL	07/21/22	QQQ (1st internal standard)	0.858	0.858	0.917	0.917	5.08	5.08
			V (2nd internal standard)	1.366	1.366	1.439	1.439	6.33	6.33
			CC (3rd internal standard)	1.568	1.568	1.673	1.673	5.79	5.79
	water		BB (4th internal standard)	1.272	1.272	1.337	1.337	7.57	7.57
2	~~ICAL~~	~~7/21/22~~	(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
	~~SOIL~~		(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 54960A1a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 C4

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the analytes identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1 B2	CCV	8/10/22 10:14 MS10	QQQ (1st internal standard)	0.917	0.995	0.995	8.5	8.5
			V (2nd internal standard)	1.439	1.477	1.477	2.6	2.6
			CC (3rd internal standard)	1.673	~~1.673~~ 1.647	1.647	1.6	1.6
			BB (4th internal standard)	1.337	1.385	1.385	3.6	3.6
2			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
3 B1	CCV	8/9/22 2211 MS10	QQQ (1st internal standard)	0.917	0.977	0.977	6.5	6.5
			V (2nd internal standard)	1.439	1.467	1.467	1.9	1.9
			CC (3rd internal standard)	1.673	1.673	1.673	0	0
			BB (4th internal standard)	1.337	1.357	1.357	1.5	1.5
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 54960 A1a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260~~B~~C)

The percent recoveries (%R) of surrogates were recalculated for the analytes identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #12

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	20.0	20.68	103	103	0
1,2-Dichloroethane-d4	↓	21.06	105	105	↓
Toluene-d8	↓	19.11	95.5	95.5	↓
Bromofluorobenzene	↓	18.75	93.8	93.8	↓

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 54960A1a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

METHOD: GC/MS VOA (EPA Method 8260~~B~~C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the analytes identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = I MSC - MSC I * 2/(MSC + MSDC)

MSC = Matrix spike concentration; MSDC = Matrix spike duplicate concentration

MS/MSD sample: 18 + 19

Compound	Spike Added (ug/L)		Sample Concentration (ug/L)	Spiked Sample Concentration (ug/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	20	20	ND	21.46	22.31	107	107	112	112	3.88	3.88
Trichloroethene	↓	↓	↓	17.34	18.01	86.7	86.7	90.1	90.1	3.79	3.79
Benzene				20.04	20.67	100	100	103	103	3.1	3.1
Toluene				17.55	18.12	87.8	87.8	90.6	90.6	3.2	3.2
Chlorobenzene				16.09	17.25	80.4	80.4	86.2	86.2	6.96	6.96

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 54960A1a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA Method 8260 C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the analytes identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration; SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: 10V - LCS W1 - 220810

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	200	NA	22.44	NA	112	112				
Trichloroethene	↓		19.79		98.9	98.9				
Benzene			21.12		106	106				
Toluene			19.38		96.9	96.9				
Chlorobenzene			19.73		98.6	98.6				

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 54960A1a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260 C)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target analytes agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #11, QQQ

Conc. = $\frac{(15701)(20)}{(88721)(0.917)}$

= 3.859 ug/L

#	Sample ID	Compound	Reported Concentration (ug/L)	Calculated Concentration (ug/L)	Qualification
	#11	QQQ	3.9	3.859	
	#8 CC =	24 ug/kg			
	$\frac{3058(20)(5)(5.946)}{133821(1.673)(4.3)(0.1)(0.78)}$		= 24.214 ug/kg		
				lab reported	24 ug/kg

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Future Huntington East Practice Field

LDC Report Date: October 5, 2022

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Stage 4

Laboratory: ALS Environmental, Holland, MI

Sample Delivery Group (SDG): 22080299

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
SS-1 Grab	22080299-01	Soil	08/01/22
SS-3 Grab	22080299-02	Soil	08/01/22
SS-4 Grab	22080299-03	Soil	08/02/22
SB-1 (13-15) Grab	22080299-04	Soil	08/01/22
SB-3 (13-15) Grab	22080299-05	Soil	08/01/22
SB-6 (6-8) Grab	22080299-07	Soil	08/01/22
SB-6 FD (6-8) Grab	22080299-08	Soil	08/01/22
SB-7 (8-10) Grab	22080299-09	Soil	08/02/22
SB-8 (6-8) Grab	22080299-10	Soil	08/01/22
GW-1 Grab	22080299-11	Water	08/02/22
GW-3 Grab	22080299-12	Water	08/02/22
GW-4 Grab	22080299-13	Water	08/02/22
GW-4 FD Grab	22080299-14	Water	08/02/22
SB-6 (6-8) GrabMS	22080299-07MS	Soil	08/01/22
SB-6 (6-8) GrabMSD	22080299-07MSD	Soil	08/01/22
GW-4 GrabMS	22080299-13MS	Water	08/02/22
GW-4 GrabMSD	22080299-13MSD	Water	08/02/22

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Quality Assurance Project Plan, Region 2 Planning and Development Council, Brownfield Assessment Grant (Revision 1, December 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polynuclear Aromatic Hydrocarbons (PAHs) by Environmental Protection Agency (EPA) SW 846 Method 8270E

All sample results were subjected to Stage 4 data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

Instrument performance check was performed at the required frequency.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

Average relative response factors (RRF) for all analytes were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all analytes with the following exceptions:

Date	Analyte	%D	Associated Samples	Flag	A or P
08/10/22	Naphthalene 2-Methylnaphthalene 1-Methylnaphthalene Fluorene Phenanthrene	33.4 44.9 32.6 35.0 54.1	All soil samples in SDG 22080299	J (all detects) UJ (all non-detects)	A

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all analytes.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. Surrogate recoveries (%R) were not within QC limits for sample SB-6 (6-8) Grab. Using professional judgment, no data were qualified when one surrogate %R was outside the QC limits and the %R was greater than or equal to 10%.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
GW-4 GrabMS/MSD (GW-4 Grab)	Acenaphthene Naphthalene	20.1 (45-110) -3.23 (40-100)	-0.355 (45-110) -58.1 (40-100)	J (all detects) J (all detects)	A
GW-4 GrabMS/MSD (GW-4 Grab)	Fluorene	42.8 (50-110)	32.4 (50-100)	J (all detects)	A
SB-6 (6-8) GrabMS/MSD (SB-6 (6-8) Grab)	Benzo(g,h,i)perylene Dibenzo(a,h)anthracene Indeno(1,2,3-cd)pyrene	21.4 (40-140) 18.9 (40-140) 19.4 (40-140)	36.0 (40-140) 36.9 (40-140) 35.9 (40-140)	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	A

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	RPD (Limits)	Flag	A or P
SB-6 (6-8) GrabMS/MSD (SB-6 (6-8) Grab)	Acenaphthylene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Indeno(1,2,3-cd)pyrene	65.1 (≤30) 35.8 (≤30) 50.1 (≤30) 47.5 (≤30) 52.1 (≤30) 42.9 (≤30) 46.1 (≤30) 65.6 (≤30) 61.2 (≤30)	NA	-

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

Samples SB-6 (6-8) Grab and SB-6 FD (6-8) Grab and samples GW-4 Grab and GW-4 FD Grab were identified as field duplicates. No results were detected in any of the samples.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Target Analyte Quantitation

All target analyte quantitations were within validation criteria.

XIII. Target Analyte Identification

All target analyte identifications were within validation criteria.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to ICV %D and MS/MSD %R, data were qualified as estimated in ten samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

Future Huntington East Practice Field
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 22080299

Sample	Analyte	Flag	A or P	Reason
SS-1 Grab SS-3 Grab SS-4 Grab SB-1 (13-15) Grab SB-3 (13-15) Grab SB-6 (6-8) Grab SB-6 FD (6-8) Grab SB-7 (8-10) Grab SB-8 (6-8) Grab	Naphthalene 2-Methylnaphthalene 1-Methylnaphthalene Fluorene Phenanthrene	J (all detects) UJ (all non-detects)	A	Initial calibration verification (%D)
GW-4 Grab	Acenaphthene Naphthalene Fluorene	J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)
SB-6 (6-8) Grab	Benzo(g,h,i)perylene Dibenzo(a,h)anthracene Indeno(1,2,3-cd)pyrene	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)

Future Huntington East Practice Field
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 22080299

No Sample Data Qualified in this SDG

Future Huntington East Practice Field
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 22080299

No Sample Data Qualified in this SDG

LDC #: 54960A2b

SDG #: 22080299

Laboratory: ALS Environmental, Holland, MI

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 9/29/22

Page: 1 of 2

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW-846 Method 8270E)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A /A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A SW	r² ICV ≤ 30
IV.	Continuing calibration	A	CCV ≤ 20
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	SW	
VIII.	Matrix spike/Matrix spike duplicates	SW	
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	SW	D* = 6,7 12, 13
XI.	Internal standards	A	
XII.	Target analyte quantitation	A	
XIII.	Target analyte identification	A	
XIV.	System performance	A	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID		Lab ID	Matrix	Date
1	SS-1 Grab		22080299-01	Soil	08/01/22
2	SS-3 Grab		22080299-02	Soil	08/01/22
3	SS-4 Grab		22080299-03	Soil	08/02/22
4	SB-1 (13-15) Grab		22080299-04	Soil	08/01/22
5	SB-3 (13-15) Grab		22080299-05	Soil	08/01/22
6	SB-6 (6-8) Grab	D	22080299-07	Soil	08/01/22
7	SB-6 FD (6-8) Grab	D	22080299-08	Soil	08/01/22
8	SB-7 (8-10) Grab		22080299-09	Soil	08/02/22
9	SB-8 (6-8) Grab		22080299-10	Soil	08/01/22
10	GW-1 Grab		22080299-11	Water	08/02/22
11	GW-3 Grab		22080299-12	Water	08/02/22
12	GW-4 Grab	D1	22080299-13	Water	08/02/22
13	GW-4 FD Grab	D1	22080299-14	Water	08/02/22
14	SB-6 (6-8) GrabMS		22080299-07MS	Soil	08/01/22

LDC #: 54960A2b **VALIDATION COMPLETENESS WORKSHEET** Date: 9/29/22
SDG #: 22080299 Level IV Page: 2 of 2
Laboratory: ALS Environmental, Holland, MI Reviewer:
2nd Reviewer: QB

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW-846 Method 8270E)

	Client ID	Lab ID	Matrix	Date
15	SB-6 (6-8) GrabMSD	22080299-07MSD	Soil	08/01/22
16	GW-4 GrabMS	22080299-13MS	Water	08/02/22
17	GW-4 GrabMSD	22080299-13MSD	Water	08/02/22
18				
19				
20				

Notes:

1	SBLKS1-201306						
2	SBLKS1-201367						

LDC #: 54960A26 **VALIDATION FINDINGS CHECKLIST** Page: 1 of 2
Reviewer: FT

Method: Semivolatiles (EPA SW 846 Method 8270 E)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20% 15/30% and relative response factors (RRF) within method criteria?			✓	
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 20% 30%?	.	✓		
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) within method criteria?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks? If yes, please see the blanks validation findings worksheet.		✓		
VI. Field blanks				
Were field blanks were identified in this SDG?		✓		
Were target analytes detected in the field blanks?			✓	
VII. Surrogate spikes				
Were all surrogate percent recovery (%R) within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any percent recoveries (%R) was less than 10%, was a reanalysis performed to confirm %R ?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			

Validation Area	Yes	No	NA	Findings/Comments
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target analytes detected in the field duplicates?	✓			
XI. Internal standards				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XII. Target analyte quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the target analyte?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target analyte identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
Were manual integrations reviewed and found acceptable?	✓			
Did the laboratory provide before and after integration printouts?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	CC. Dimethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	GGGG. C30-Hopane	I1. Methyl methanesulfonate
B. Bis (2-chloroethyl) ether	DD. Acenaphthylene	FFF. Di-n-octylphthalate	HHHH. 1-Methylphenanthrene	J1. Ethyl methanesulfonate
C. 2-Chlorophenol	EE. 2,6-Dinitrotoluene	GGG. Benzo(b)fluoranthene	IIII. 1,4-Dioxane	K1. o,o',o"-Triethylphosphorothioate
D. 1,3-Dichlorobenzene	FF. 3-Nitroaniline	HHH. Benzo(k)fluoranthene	JJJJ. Acetophenone	L1. n-Phenylene diamine
E. 1,4-Dichlorobenzene	GG. Acenaphthene	III. Benzo(a)pyrene	KKKK. Atrazine	M1. 1,4-Naphthoquinone
F. 1,2-Dichlorobenzene	HH. 2,4-Dinitrophenol	JJJ. Indeno(1,2,3-cd)pyrene	LLLL. Benzaldehyde	N1. N-Nitro-o-toluidine
G. 2-Methylphenol	II. 4-Nitrophenol	KKK. Dibenz(a,h)anthracene	MMMM. Caprolactam	O1. 1,3,5-Trinitrobenzene
H. 2,2'-Oxybis(1-chloropropane)	JJ. Dibenzofuran	LLL. Benzo(g,h,i)perylene	NNNN. 2,6-Dichlorophenol	P1. Pentachlorobenzene
I. 4-Methylphenol	KK. 2,4-Dinitrotoluene	MMM. Bis(2-Chloroisopropyl)ether	OOOO. 1,2-Diphenylhydrazine	Q1. 4-Aminobiphenyl
J. N-Nitroso-di-n-propylamine	LL. Diethylphthalate	NNN. Aniline	PPPP. 3-Methylphenol	R1. 2-Naphthylamine
K. Hexachloroethane	MM. 4-Chlorophenyl-phenyl ether	OOO. N-Nitrosodimethylamine	QQQQ. 3&4-Methylphenol	S1. Triphenylene
L. Nitrobenzene	NN. Fluorene	PPP. Benzoic Acid	RRRR. 4-Dimethyldibenzothiophene (4MDT)	T1. Octachlorostyrene
M. Isophorone	OO. 4-Nitroaniline	QQQ. Benzyl alcohol	SSSS. 2/3-Dimethyldibenzothiophene (4MDT)	U1. Famphur
N. 2-Nitrophenol	PP. 4,6-Dinitro-2-methylphenol	RRR. Pyridine	TTTT. 1-Methyldibenzothiophene (1MDT)	V1. 1,4-phenylenediamine
O. 2,4-Dimethylphenol	QQ. N-Nitrosodiphenylamine	SSS. Benzidine	UUUU.. 2,3,4,6-Tetrachlorophenol	W1. Methapyrilene
P. Bis(2-chloroethoxy)methane	RR. 4-Bromophenyl-phenylether	TTT. 1-Methylnaphthalene	VVVV. 1,2,4,5-Tetrachlorobenzene	X1. Pentachloroethane
Q. 2,4-Dichlorophenol	SS. Hexachlorobenzene	UUU.Benzo(b)thiophene	WWWW.. 2-Picoline	Y1. 3,3'-Dimethylbenzidine
R. 1,2,4-Trichlorobenzene	TT. Pentachlorophenol	VVV.Benzonaphthothiophene	XXXX. 3-Methylcholanthrene	Z1. o-Toluidine
S. Naphthalene	UU. Phenanthrene	WWW.Benzo(e)pyrene	YYYY. a,a-Dimethylphenethylamine	A2. 1-Naphthylamine
T. 4-Chloroaniline	VV. Anthracene	XXX. 2,6-Dimethylnaphthalene	ZZZZ. Hexachloropropene	B2. 4-Aminobiphenyl
U. Hexachlorobutadiene	WW. Carbazole	YYY. 2,3,5-Trimethylnaphthalene	A1. N-Nitrosodiethylamine	C2. 4-Nitroquinoline-1-oxide
V. 4-Chloro-3-methylphenol	XX. Di-n-butylphthalate	ZZZ. Perylene	B1. N-Nitrosodi-n-butylamine	D2. Hexachloropene
W. 2-Methylnaphthalene	YY. Fluoranthene	AAAA. Dibenzothiophene	C1. N-Nitrosomethylethylamine	E2. Bis (2-chloro-1-methylethyl) ether
X. Hexachlorocyclopentadiene	ZZ. Pyrene	BBBB. Benzo(a)fluoranthene	D1. N-Nitrosomorpholine	F2. Bifenthrin
Y. 2,4,6-Trichlorophenol	AAA. Butylbenzylphthalate	CCCC. Benzo(b)fluorene	E1. N-Nitrosopyrrolidine	G2. Cyfluthrin
Z. 2,4,5-Trichlorophenol	BBB. 3,3'-Dichlorobenzidine	DDDD. cis/trans-Decalin	F1. Phenacetin	H2. Cypermethrin
AA. 2-Chloronaphthalene	CCC. Benzo(a)anthracene	EEEE. 1,1'-Biphenyl	G1. 2-Acetylaminofluorene	I2. Permethrin (cis/trans)
BB. 2-Nitroaniline	DDD. Chrysene	FFFF. Retene	H1. Pronamide	J2. 5-Nitro-o-toluidine

LDC #: 54960A26

VALIDATION FINDINGS WORKSHEET
Initial Calibration Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270E)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was an initial calibration verification standard analyzed after each ICAL for each instrument?

Y N N/A Were all %D within the validation criteria of ≤ 20% 30 % D ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤20.0% 30%)	Associated Samples	Qualifications
	8/10/22 0908	ICV	S	33.4	All soils	J/UJ/A ND+Det
			W	44.9		
			TTT	32.6		
			~~DD~~	~~20.5~~ F7		
			~~GG~~	~~a~~		
			NN	35.0		
			UU	54.1		

LDC #: 54960A2b

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270 E)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A	Were percent recoveries (%R) for surrogates within QC limits?
Y N (N/A)	If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N (N/A)	If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Sample ID	Surrogate	%R (Limits)	Qualifications
	6	TPH	17.8 (22-172)	no qual
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	
			( )	

(NBZ) = Nitrobenzene - d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl - d14
(2FP) = 2-Fluorophenol
(TBP) = 2,4,6 -Tribromophenol
(2CP) = 2-Chlorophenol - d4

LDC #: 54960A26

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	16 + 17	GG	20.1 (45-110)	-0.355 (45-110)	( )	12	J/R/A all Det
		NN	42.8 (50-110)	32.4 (50-110)	( )		J/UJ/A
		S	-3.23 (40-100)	-58.1 (40-100)			J/R/A
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 54960A26

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	14 & 15	LLL	21.4 (40-140)	36.0 (40-140)	( )	6	J/UJ/A and ND
		KKK	18.9 (↓)	36.9 (↓)	( )		
		JJJ	19.4 (↓)	35.9 (↓)			↓
		DD	( )	( )	65.1 (30)		J/UJ/A
		CCC	( )	( )	35.8 ( )		
		III	( )	( )	50.1 ( )		
		GGG	( )	( )	47.5 ( )		
	LL	~~HHH~~	( )	( )	52.1 ( )		
		HHH	( )	( )	42.9 ( )		
		DDD	( )	( )	46.1 ( )		
		KKK	( )	( )	65.6 ( )		
		JJJ	( )	( )	61.2 ( )	↓	↓
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #:54960A2b

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer:___FT_____

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/11/2022	GCMS 7	S	1	0.0249000	0.0250	0.00062500
			2	0.0108900	0.0100	0.00010000
			3	0.1145000	0.1250	0.01562500
			4	0.2362500	0.2500	0.06250000
			5	0.4655000	0.5000	0.25000000
			6	0.9360000	1.0000	1.00000000
			7	0.7027500	0.7500	0.56250000
			8	0.0062750	0.0050	0.00002500

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*0.0012*	*c*	*0.0016*
Std Err of Y Est				
R Squared		*0.9999774*		*1.0000000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*9.28483E-01*	*6.7346E-03*	*9.24000E-01*	*1.1400E-02*
Std Err of Coef.				
Correlation Coefficient		*0.999989*		
Coefficient of Determination (r^2)		*0.999977*		

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/11/2022	GCMS 7	GG	1	0.0267000	0.0250	0.00062500
			2	0.0100500	0.0100	0.00010000
			3	0.1236250	0.1250	0.01562500
			4	0.2542500	0.2500	0.06250000
			5	0.4950000	0.5000	0.25000000
			6	1.0140000	1.0000	1.00000000
			7	0.7582500	0.7500	0.56250000
			8	0.0051050	0.0050	0.00002500

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*0.0011*	*c*	*0.0003*
Std Err of Y Est				
R Squared		*0.9999333*		*0.9999000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*9.84154E-01*	*2.9112E-02*	*9.94800E-01*	*1.7800E-02*
Std Err of Coef.				
Correlation Coefficient		*0.999967*		
Coefficient of Determination (r^2)		*0.999933*		

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/11/2022	GCMS 7	UU	1	0.0255250	0.0250	0.00062500
			2	0.0113200	0.0100	0.00010000
			3	0.1156250	0.1250	0.01562500
			4	0.2407500	0.2500	0.06250000
			5	0.4735000	0.5000	0.25000000
			6	0.9540000	1.0000	1.00000000
			7	0.7072500	0.7500	0.56250000
			8	0.0068750	0.0050	0.00002500

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*0.0022*	*c*	*0.0021*
Std Err of Y Est				
R Squared		*0.9999432*		*0.9999000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*9.31337E-01*	*1.8736E-02*	*9.31400E-01*	*1.8900E-02*
Std Err of Coef.				
Correlation Coefficient		*0.999972*		
Coefficient of Determination (r^2)		*0.999943*		

LDC #:54960A2b

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer:___FT_____

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/11/2022	GCMS 7	DDD	1	0.0284250	0.0250	0.00062500
			2	0.0111100	0.0100	0.00010000
			3	0.1347500	0.1250	0.01562500
			4	0.2825000	0.2500	0.06250000
			5	0.5755000	0.5000	0.25000000
			6	1.1310000	1.0000	1.00000000
			7	0.8475000	0.7500	0.56250000
			8	0.0058750	0.0050	0.00002500

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*-0.0019*	*c*	*0.0002*
Std Err of Y Est				
R Squared		*0.9999099*		*0.9998000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*1.15005E+00*	*-1.7574E-02*	*1.39520E+00*	*-2.6400E-01*
Std Err of Coef.				
Correlation Coefficient		*0.999955*		
Coefficient of Determination (r^2)		*0.999910*		

LDC #:54960A2b

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer:___FT_____

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/11/2022	GCMS 7	III	1	0.0103250	0.0250	0.00062500
			2	0.0037600	0.0100	0.00010000
			3	0.0556250	0.1250	0.01562500
			4	0.1280000	0.2500	0.06250000
			5	0.2880000	0.5000	0.25000000
			6	0.7100000	1.0000	1.00000000
			7	0.4957500	0.7500	0.56250000
			8	0.0018400	0.0050	0.00002500

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*-0.0023*	*c*	*-0.0006*
Std Err of Y Est				
R Squared		*0.9997403*		*0.9997000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*4.61994E-01*	*2.5399E-01*	*4.39900E-01*	*2.7790E-01*
Std Err of Coef.				
Correlation Coefficient		*0.999870*		
Coefficient of Determination (r^2)		*0.999740*		

LDC #: 54707P2a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: ____FT___

METHOD: GCMS 8270D

The calibration factors (RRFF), average RRFF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

RRF = (Ax)(Cis)/(Ais)(Cx)
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

Where:
Ax = Area of compound
Cx = Concentration of compound
S = Standard deviation of the RRFs
X = Mean of the RRFs
Ais = Area of associated internal standard
Cis = Concentration of internal Standard

#	Standard ID	Calibration Date	Compound	Reported (RRF 7.5ug/ml std)	Recalculated (RRF 7.5ug/ml std)	Reported AverageRRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
	ICAL	6/10/2022	A (IS1)	2.0723	2.0723	2.0007	2.0007	7.70	7.70
	HP18831		S (IS2)	1.0983	1.0983	1.0815	1.0815	4.90	4.90
			GG (IS3)	1.1265	1.1265	1.1140	1.1140	6.90	6.90
			UU (IS4)	1.0072	1.0072	1.0256	1.0256	3.70	3.70
			DDD (IS5)	1.0815	1.0815	1.0719	1.0719	5.50	5.50
			III (IS6)	1.0475	1.0475	1.0323	1.0323	6.90	6.90

LDC #:54907P1a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260C)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound	Reported RRF (5ug/L std)	Recalculated RRF (5ug/L std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL-19094	3/15/22	F	3.3060	3.3060	3.3846	3.3846	5.1	5.1
			V	1.1102	1.1102	1.1046	1.1046	1.9	1.9
			EE	1.9032	1.9032	1.8919	1.8919	1.5	1.5
			BB	0.5434	0.5434	0.5439	0.5439	5.1	5.1
2									
3									
4									

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: GCMS PAH 8270D - SIM

The calibration factors (RRFF), average RRFF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

RRF = (Ax)(Cis)/(Ais)(Cx)
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

Where:

Ax = Area of compound
Cx = Concentration of compound
S = Standard deviation of the RRFs
X = Mean of the RRFs
Ais = Area of associated internal standard
Cis = Concentration of internal Standard

#	Standard ID	Calibration Date	Compound	Reported (RRF 1ug/ml std)	Recalculated (RRF 1ug/ml std)	Reported AverageRRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
	ICAL HP10623	5/16/2022	W	0.6775	0.6775	0.6684	0.6684	7.3	7.3
			GG	1.0827	1.0827	1.1119	1.1119	7.1	7.1
			UU	1.0904	1.0904	1.1198	1.1198	7.3	7.3
			DDD	1.2836	1.2836	1.2910	1.2910	2.8	2.8
			III	1.2077	1.2077	1.0896	1.0896	17.9	17.9

LDC #:54907Mb

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: ____FT____

METHOD: GCMS PAH 8270D - SIM

The calibration factors (RRFF), average RRFF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

RRF = (Ax)(Cis)/(Ais)(Cx)
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

Where:

Ax = Area of compound
Cx = Concentration of compound
S = Standard deviation of the RRFs
X = Mean of the RRFs
Ais = Area of associated internal standard
Cis = Concentration of internal Standard

#	Standard ID	Calibration Date	Compound	Reported (RRF 1ug/ml std)	Recalculated (RRF 1ug/ml std)	Reported AverageRRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
	ICAL HP21585	6/21/2022	W	0.7101	0.7101	0.7309	0.7309	5.1	5.1
			GG	1.2609	1.2609	1.3050	1.3050	4.4	4.4
			UU	1.2091	1.2091	1.2946	1.2946	7.3	7.3
			DDD	1.4259	1.4259	1.5695	1.5695	10.3	10.3
			III	1.2495	1.2495	1.3380	1.3380	5.9	5.9

LDC #:54907M1a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260C)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound	Reported RRF (5ug/L std)	Recalculated RRF (5ug/L std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL-19094	3/15/22	F	3.3060	3.3060	3.3846	3.3846	5.1	5.1
			V	1.1102	1.1102	1.1046	1.1046	1.9	1.9
			EE	1.9032	1.9032	1.8919	1.8919	1.5	1.5
			BB	0.5434	0.5434	0.5439	0.5439	5.1	5.1
2									
3									
4									

LDC #:54907M1a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260C)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound	Reported RRF (5ug/L std)	Recalculated RRF (5ug/L std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL-19094	3/15/22	F	3.3060	3.3060	3.3846	3.3846	5.1	5.1
			V	1.1102	1.1102	1.1046	1.1046	1.9	1.9
			EE	1.9032	1.9032	1.8919	1.8919	1.5	1.5
			BB	0.5434	0.5434	0.5439	0.5439	5.1	5.1
2									
3									
4									

LDC #:54907M1a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT

METHOD: GC/MS VOA (EPA SW 846 Method 8260C)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound	Reported RRF (20ug/L std)	Recalculated RRF (20ug/L std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL-9685	05/04/22	F	0.9105	0.9105	0.9342	0.9342	11.7	11.7
			V	1.1492	1.1492	1.1464	1.1464	3.5	3.5
			EE	1.9965	1.9965	1.9441	1.9441	5.1	5.1
			BB	0.7034	0.7034	0.6574	0.6574	7.4	7.4
2									
3									
4									

LDC #:54907J2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: ____FT___

METHOD: GCMS PAH 8270D - SIM

The calibration factors (RRFF), average RRFF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

RRF = (Ax)(Cis)/(Ais)(Cx)
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

Where:

Ax = Area of compound
Cx = Concentration of compound
S = Standard deviation of the RRFs
X = Mean of the RRFs
Ais = Area of associated internal standard
Cis = Concentration of internal Standard

#	Standard ID	Calibration Date	Compound	Reported (RRF 1ug/ml std)	Recalculated (RRF 1ug/ml std)	Reported AverageRRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
	ICAL HP10976	4/7/2022	W	0.6710	0.6710	0.6604	0.6604	8.5	8.5
			GG	1.0630	1.0630	1.0939	1.0939	8.8	8.8
			UU	1.0496	1.0496	1.0588	1.0588	9.0	9.0
			DDD	1.2884	1.2884	1.3199	1.3199	9.3	9.3
			III	1.1733	1.1733	1.1047	1.1047	5.4	5.4

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: GCMS PAH 8270D - SIM

The calibration factors (RRFF), average RRFF, and relative standard deviation (%RSD) were recalculated for compounds identified below using the following calculations:

RRF = (Ax)(Cis)/(Ais)(Cx)
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

Where:

Ax = Area of compound
Cx = Concentration of compound
S = Standard deviation of the RRFs
X = Mean of the RRFs
Ais = Area of associated internal standard
Cis = Concentration of internal Standard

#	Standard ID	Calibration Date	Compound	Reported (RRF 1ug/ml std)	Recalculated (RRF 1ug/ml std)	Reported AverageRRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
	ICAL HP10976	4/7/2022	W	0.6710	0.6710	0.6604	0.6604	8.5	8.5
			GG	1.0630	1.0630	1.0939	1.0939	8.8	8.8
			UU	1.0496	1.0496	1.0588	1.0588	9.0	9.0
			DDD	1.2884	1.2884	1.3199	1.3199	9.3	9.3
			III	1.1733	1.1733	1.1047	1.1047	5.4	5.4

LDC #:54960A2b

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer:___FT_____

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/12/2022	GCMS 7	S	1	0.0247750	0.0250	0.00062500
			2	0.0108000	0.0100	0.00010000
			3	0.1141250	0.1250	0.01562500
			4	0.2377500	0.2500	0.06250000
			5	0.4635000	0.5000	0.25000000
			6	0.9350000	1.0000	1.00000000
			7	0.7080000	0.7500	0.56250000
			8	0.0060150	0.0050	0.00002500

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*0.0008*	*c*	*0.0014*
Std Err of Y Est				
R Squared		*0.9999075*		*0.9999000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*9.34713E-01*	*1.4287E-03*	*9.26000E-01*	*1.0300E-02*
Std Err of Coef.				
Correlation Coefficient		*0.999954*		
Coefficient of Determination (r^2)		*0.999907*		

LDC #:54960A2b

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer:___FT_____

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/12/2022	GCMS 7	GG	1	0.0257750	0.0250	0.00062500
			2	0.0096700	0.0100	0.00010000
			3	0.1235000	0.1250	0.01562500
			4	0.2570000	0.2500	0.06250000
			5	0.5045000	0.5000	0.25000000
			6	1.0210000	1.0000	1.00000000
			7	0.7717500	0.7500	0.56250000
			8	0.0051700	0.0050	0.00002500

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*-0.0006*	*c*	*0.0000*
Std Err of Y Est				
R Squared		*0.9999202*		*0.9999000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*1.01758E+00*	*6.1200E-03*	*1.01030E+00*	*1.4300E-02*
Std Err of Coef.				
Correlation Coefficient		*0.999960*		
Coefficient of Determination (r^2)		*0.999920*		

LDC #:54960A2b

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer:___FT_____

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/12/2022	GCMS 7	UU	1	0.0258000	0.0250	0.00062500
			2	0.0115200	0.0100	0.00010000
			3	0.1157500	0.1250	0.01562500
			4	0.2377500	0.2500	0.06250000
			5	0.4765000	0.5000	0.25000000
			6	0.9560000	1.0000	1.00000000
			7	0.7237500	0.7500	0.56250000
			8	0.0067000	0.0050	0.00002500

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*0.0006*	*c*	*0.0021*
Std Err of Y Est				
R Squared		*0.9999290*		*0.9999000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*9.52338E-01*	*5.6442E-03*	*9.34100E-01*	*2.5500E-02*
Std Err of Coef.				
Correlation Coefficient		*0.999964*		
Coefficient of Determination (r^2)		*0.999929*		

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/12/2022	GCMS 7	DDD	1	0.0275250	0.0250	0.00062500
			2	0.0111200	0.0100	0.00010000
			3	0.1341250	0.1250	0.01562500
			4	0.2820000	0.2500	0.06250000
			5	0.6150000	0.5000	0.25000000
			6	1.1630000	1.0000	1.00000000
			7	0.8842500	0.7500	0.56250000
			8	0.0059600	0.0050	0.00002500

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*-0.0068*	*c*	*-0.0004*
Std Err of Y Est				
R Squared		*0.9993536*		*0.9990000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*1.24004E+00*	*-6.7489E-02*	*1.15990E+00*	*1.8700E-02*
Std Err of Coef.				
Correlation Coefficient		*0.999677*		
Coefficient of Determination (r^2)		*0.999354*		

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/12/2022	GCMS 7	III	1	0.0099000	0.0250	0.00062500
			2	0.0036700	0.0100	0.00010000
			3	0.0565000	0.1250	0.01562500
			4	0.1322500	0.2500	0.06250000
			5	0.3060000	0.5000	0.25000000
			6	0.7120000	1.0000	1.00000000
			7	0.5070000	0.7500	0.56250000
			8	0.0018600	0.0050	0.00002500

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*-0.0045*	*c*	*-0.0010*
Std Err of Y Est				
R Squared		*0.9996026*		*0.9993000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*5.18991E-01*	*2.0203E-01*	*4.73380E-01*	*2.5060E-01*
Std Err of Coef.				
Correlation Coefficient		*0.999801*		
Coefficient of Determination (r^2)		*0.999603*		

LDC #:54960A2b

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer:___FT_____

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/10/2022	GCMS 6	S	1	0.0117350	0.0025	0.00000625
			2	0.0158000	0.0050	0.00002500
			3	0.2190000	0.1000	0.01000000
			4	0.4590000	0.2500	0.06250000
			5	0.8000000	0.5000	0.25000000
			6	0.1425000	0.1000	0.01000000
			7	0.2722000	0.2000	0.04000000
			8	0.5800000	0.5000	0.25000000
			9	0.8477000	0.7000	0.49000000
			10	0.9480000	1.0000	1.00000000
			11	1.2375000	1.5000	2.25000000
			12	1.4940000	2.0000	4.00000000

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*0.0590*	*c*	*0.0092*
Std Err of Y Est				
R Squared		*0.9726984*		*0.9963000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*1.28353E+00*	*-2.9684E-01*	*1.31990E+00*	*-3.0510E-01*
Std Err of Coef.				
Correlation Coefficient		*0.986255*		
Coefficient of Determination (r^2)		*0.972698*		

LDC #:54960A2b

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer:___FT_____

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/10/2022	GCMS 6	GG	1	0.0111625	0.0025	0.00000625
			2	0.0153600	0.0050	0.00002500
			3	0.2179000	0.1000	0.01000000
			4	0.4887500	0.2500	0.06250000
			5	0.8495000	0.5000	0.25000000
			6	0.1564000	0.1000	0.01000000
			7	0.2996000	0.2000	0.04000000
			8	0.6600000	0.5000	0.25000000
			9	0.9877000	0.7000	0.49000000
			10	1.1130000	1.0000	1.00000000
			11	1.4655000	1.5000	2.25000000
			12	1.7500000	2.0000	4.00000000

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*0.0475*	*c*	*0.0077*
Std Err of Y Est				
R Squared		*0.9846126*		*0.9970000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*1.49048E+00*	*-3.3190E-01*	*1.50950E+00*	*-3.3250E-01*
Std Err of Coef.				
Correlation Coefficient		*0.992276*		
Coefficient of Determination (r^2)		*0.984613*		

LDC #:54960A2b

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer:___FT_____

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/10/2022	GCMS 6	UU	1	0.0027525	0.0025	0.00000625
			2	0.0031500	0.0050	0.00002500
			3	0.0385000	0.1000	0.01000000
			4	0.0657500	0.2500	0.06250000
			5	0.1030000	0.5000	0.25000000
			6	0.0175000	0.1000	0.01000000
			7	0.0316000	0.2000	0.04000000
			8	0.0640000	0.5000	0.25000000
			9	0.0910000	0.7000	0.49000000
			10	0.0980000	1.0000	1.00000000
			11	0.1245000	1.5000	2.25000000
			12	0.1460000	2.0000	4.00000000

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*0.0128*	*c*	*0.0248*
Std Err of Y Est				
R Squared		*0.9068160*		*0.9946000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*1.38399E-01*	*-3.7945E-02*	*1.44020E+00*	*-3.8410E-01*
Std Err of Coef.				
Correlation Coefficient		*0.952269*		
Coefficient of Determination (r^2)		*0.906816*		

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/10/2022	GCMS 6	DDD	1	0.0067925	0.0025	0.00000625
			2	0.0111350	0.0050	0.00002500
			3	0.1965000	0.1000	0.01000000
			4	0.4740000	0.2500	0.06250000
			5	0.8855000	0.5000	0.25000000
			6	0.1663000	0.1000	0.01000000
			7	0.3252000	0.2000	0.04000000
			8	0.7325000	0.5000	0.25000000
			9	1.1389000	0.7000	0.49000000
			10	1.2930000	1.0000	1.00000000
			11	1.7865000	1.5000	2.25000000
			12	2.2280000	2.0000	4.00000000

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*0.0296*	*c*	*0.0030*
Std Err of Y Est				
R Squared		*0.9922358*		*0.9967000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*1.64009E+00*	*-2.8193E-01*	*1.66380E+00*	*-2.8970E-01*
Std Err of Coef.				
Correlation Coefficient		*0.996110*		
Coefficient of Determination (r^2)		*0.992236*		

LDC #:54960A2b

Validation Findings Worksheet
Initial Calibration Calculation Verification

Reviewer:___FT_____

Method: PAH 8270E

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Conc.	(X^2) Conc.
8/10/2022	GCMS 6	III	1	0.0033325	0.0025	0.00000625
			2	0.0054050	0.0050	0.00002500
			3	0.1009000	0.1000	0.01000000
			4	0.2610000	0.2500	0.06250000
			5	0.4885000	0.5000	0.25000000
			6	0.1007000	0.1000	0.01000000
			7	0.2026000	0.2000	0.04000000
			8	0.5250000	0.5000	0.25000000
			9	0.8533000	0.7000	0.49000000
			10	1.0470000	1.0000	1.00000000
			11	1.5330000	1.5000	2.25000000
			12	1.9700000	2.0000	4.00000000

Regression Output	**Calculated**		***Reported***	
Constant	*c*	*-0.0137*	*c*	*-0.0003*
Std Err of Y Est				
R Squared		*0.9969469*		*0.9967000*
Degrees of Freedom				
	a	*b*	*a*	*b*
X Coefficient(s)	*1.16127E+00*	*-8.4717E-02*	*1.56240E+00*	*-2.2750E-01*
Std Err of Coef.				
Correlation Coefficient		*0.998472*		
Coefficient of Determination (r^2)		*0.996947*		

LDC #: 54960A2b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270)
The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the target analytes identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
A_x = Area of target analyte
C_x = Concentration of target analyte
RRF = continuing calibration RRF
A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Target Analyte (Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	8/14/22 1627	S (1st IS)	500.0	442.861	442.861	11.4	11.4
			GG (2nd IS)	↓	445.538	445.538	10.9	10.9
			UU (3rd IS)		472.828	472.828	5.4	5.4
			DDD (4th IS)		481.675	481.675	3.7	3.7
			III (5th IS)		483.799	483.799	3.2	3.2
			(6th IS)					
2	CCV	8/15/22 1708	S (1st IS)		444.297	444.297	11.1	11.1
			GG (2nd IS)		443.596	443.596	11.3	11.3
			UU (3rd IS)		467.257	467.257	6.5	6.5
			DDD (4th IS)		481.752	481.752	3.6	3.6
			III (5th IS)		487.084	487.084	2.6	2.6
			(6th IS)					
3			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 54960A26

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270)
The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the target analytes identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
A_x = Area of target analyte
C_x = Concentration of target analyte
RRF = continuing calibration RRF
A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Target Analyte (Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	8/11/22 1641	S (1st IS)	1000.0	1006.226	1006.226	0.6	0.6
			GG (2nd IS)		1010.678	1010.678	1.1	1.1
			UU (3rd IS)		1009.711	1009.711	1.0	1.0
			DDD (4th IS)		989.716	989.716	1.0	1.0
			III (5th IS)		915.946	915.946	8.4	8.4
			(6th IS)					
2	CCV	8/12/22 1623	S (1st IS)		1011.655	1011.655	1.2	1.2
			GG (2nd IS)		1011.809	1011.809	1.2	1.2
			UU (3rd IS)		1022.769	1022.769	2.3	2.3
			DDD (4th IS)		997.943	997.943	0.2	0.2
			III (5th IS)		958.684	958.684	4.1	4.1
			(6th IS)					
3			(1st IS)					
			(2nd IS)					
			(3rd IS)					
			(4th IS)					
			(5th IS)					
			(6th IS)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #:_____

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 10

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	5000.0	3648.68	77.0	77.0	0
2-Fluorobiphenyl	↓	3779.04	75.6	75.6	
Terphenyl-d14	↓	3335.24	66.7	66.7	↓
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					

Sample ID: _____

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					

LDC #: 54960A26

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the target analytes identified below using the following calculation:

$$SSC = \frac{(A_X)(C_{IS})(Fv)(Df)}{(A_{IS})(RRF)(Vs \text{ or } Ws)(\%S/100)}$$

%Recovery = (SSC/SA)*100

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

Where: A_X= Area of the target analyte
A_{IS} = Area for the specific internal standard
C_{IS} = Concentration of internal standard
Fv =Final volume of extract
Df= Dilution factor
RRF= Average relative response factor of the target analyte
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid
SSC = Spiked sample concentration
SA= Spike added
MS= Matrix spike
MSD= Matrix spike duplicate

MS/MSD samples: 14 + 15

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalc
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene	974.6	987.1	ND	670.1	670	68.8	68.8	71.4	71.4	5.03	5.03
Pentachlorophenol											
Pyrene	974.6	987.1	↓	509.9	509.9	52.3	52.3	61.5	61.5	17.4	17.4

LDC #: 54960A2b

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the target analytes identified below using the following calculation:

$$SSC = \frac{(Ax)(C_{IS})(Fv)(Df)}{(A_{IS})(RRF)(Vs \text{ or } Ws)(\%S/100)}$$

%Recovery = (SSC/SA)*100

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where: A_X= Area of the target analyte
A_{IS}= Area for the specific internal standard
C_{IS} = Concentration of internal standard
Fv =Final volume of extract
Df= Dilution factor
RRF= Average relative response factor of the target analyte
Ws= Initial weight of the sample
%S= Percent Solid
SSC = Spiked sample concentration
LCS = Laboratory control sample
LCSD = Laboratory control sample duplicate
Vs= Initial volume of the sample

LCS/LCSD samples: SLCS51- 201306

Compound	Spike Added (ug/Kg)		Spike Concentration (ug/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol			571							
Acenaphthene	666.6	NA	~~583.9~~	NA	X5.7	85.7				
Pentachlorophenol										
Pyrene	666.6	↓	520.1	↓	78.0	78.0				

LDC #: 54960A26

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270 C)

The concentration of the sample was calculated for the target analyte identified below using the following calculation:

$$\text{Concentration} = \frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$$

A_x	=	Area of the characteristic ion (EICP) for the target analyte to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #1 , S

Conc. = $\frac{14.91\,(25)}{(5.41)\,(0.76)}$

=

90.66 ug/kg

#	Sample ID	Target Analyte	Reported Concentration (ug/kg)	Calculated Concentration ( )	Qualification
	#1	S	91		
	$\frac{25888}{898816} = 0.00092 + 1.3199\left(\frac{X}{100}\right) - 0.3051\left(\frac{X}{100}\right)^2$				
		$X = 14.91$			

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Future Huntington East Practice Field

LDC Report Date: October 18, 2022

Parameters: Metals

Validation Level: Stage 4

Laboratory: ALS Environmental, Holland, MI

Sample Delivery Group (SDG): 22080299

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
SS-1 Grab	22080299-01	Soil	08/01/22
SS-3 Grab	22080299-02	Soil	08/01/22
SS-4 Grab	22080299-03	Soil	08/02/22
SB-1 (13-15) Grab	22080299-04	Soil	08/01/22
SB-3 (13-15) Grab	22080299-05	Soil	08/01/22
SB-6 (6-8) Grab	22080299-07	Soil	08/01/22
SB-6 FD (6-8) Grab	22080299-08	Soil	08/01/22
SB-7 (8-10) Grab	22080299-09	Soil	08/02/22
SB-8 (6-8) Grab	22080299-10	Soil	08/01/22
GW-1 Grab	22080299-11	Water	08/02/22
GW-3 Grab	22080299-12	Water	08/02/22
GW-4 Grab	22080299-13	Water	08/02/22
GW-4 FD Grab	22080299-14	Water	08/02/22
SB-6 (6-8) GrabMS	22080299-07MS	Soil	08/01/22
SB-6 (6-8) GrabMSD	22080299-07MSD	Soil	08/01/22
GW-3 GrabMS	22080299-12MS	Water	08/02/22
GW-3 GrabMSD	22080299-12MSD	Water	08/02/22
GW-4 GrabMS	22080299-13MS	Water	08/02/22
GW-4 GrabMSD	22080299-13MSD	Water	08/02/22

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Quality Assurance Project Plan, Region 2 Planning and Development Council, Brownfield Assessment Grant (Revision 1, December 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Inorganic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.
The analyses were performed by the following methods:

Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, and Silver by Environmental Protection Agency (EPA) SW 846 Method 6020B
Mercury by EPA SW 846 Methods 7470A/7471B

All sample results were subjected to Stage 4 evaluation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5%.

III. Instrument Calibration

Initial and continuing calibrations were performed as required by the methods.

The initial calibration verification (ICV) and continuing calibration verification (CCV) standards were within QC limits.

IV. ICP Interference Check Sample Analysis

The frequency of interference check sample (ICS) analysis was met. All criteria were within QC limits.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Analyte	Maximum Concentration	Associated Samples
ICB/CCB	Selenium	0.000485 mg/L	GW-3 Grab
ICB/CCB	Selenium	0.002076 mg/L	All soil samples in SDG 22080299

Data qualification by the laboratory blanks was based on the maximum contaminant concentration in the laboratory blanks in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated laboratory blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
GW-3 Grab	Selenium	0.0025 mg/L	0.0050U mg/L
SB-1 (13-15) Grab	Selenium	0.43 mg/Kg	0.46U mg/Kg

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
SB-6 (6-8) GrabMS/MSD (All soil samples in SDG 22080299)	Cadmium Selenium Silver	- - -	67.5 (75-125) 61.5 (75-125) 68.8 (75-125)	J (all detects) UJ (all non-detects)	A
SB-6 (6-8) GrabMS/MSD (All soil samples in SDG 22080299)	Lead	-	73.6 (75-125)	J (all detects)	A

For SB-6 (6-8) GrabMS/MSD, no data were qualified for barium percent recoveries outside the QC limits since the parent sample results were greater than 4X the spike concentration.

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	RPD (Limits)	Flag	A or P
SB-6 (6-8) GrabMS/MSD (All soil samples in SDG 22080299)	Barium	44 (≤20)	J (all detects)	A
SB-6 (6-8) GrabMS/MSD (All soil samples in SDG 22080299)	Cadmium Selenium	21.1 (≤20) 22.1 (≤20)	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A

VIII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

IX. Serial Dilution

Serial dilution analysis was performed on an associated project sample. Percent differences (%D) were within QC limits.

X. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits.

XI. Field Duplicates

Samples SB-6 (6-8) Grab and SB-6 FD (6-8) Grab and samples GW-4 Grab and GW-4 FD Grab were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)	Difference (Limits)	Flag	A or P
	SB-6 (6-8) Grab	SB-6 FD (6-8) Grab				
Arsenic	4.8	8.1	51 (≤50)	-	J (all detects)	A
Barium	110	330	100 (≤50)	-	J (all detects)	A
Cadmium	0.031	0.11	-	0.079 (≤0.42)	-	-
Chromium	15	25	50 (≤50)	-	-	-
Lead	13	16	21 (≤50)	-	-	-
Mercury	0.026	0.033	24 (≤50)	-	-	-
Selenium	0.44	0.48U	-	0.04 (≤0.96)	-	-

Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
	GW-4 Grab	GW-4 FD Grab				
Arsenic	0.0024	0.0024	-	0 (≤0.01)	-	-
Barium	0.90	0.87	3 (≤50)	-	-	-

XII. Internal Standards (ICP-MS)

All internal standard percent recoveries (%R) were within QC limits.

XIII. Target Analyte Quantitation

All target analyte quantitations were acceptable.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to MS/MSD %R and RPD and field duplicate RPD, data were qualified as estimated in ten samples.

Due to laboratory blank contamination, data were qualified as not detected in two samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

Future Huntington East Practice Field
Metals - Data Qualification Summary - SDG 22080299

Sample	Analyte	Flag	A or P	Reason
SS-1 Grab SS-3 Grab SS-4 Grab SB-1 (13-15) Grab SB-3 (13-15) Grab SB-6 (6-8) Grab SB-6 FD (6-8) Grab SB-7 (8-10) Grab SB-8 (6-8) Grab	Silver	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)
SS-1 Grab SS-3 Grab SS-4 Grab SB-1 (13-15) Grab SB-3 (13-15) Grab SB-6 (6-8) Grab SB-6 FD (6-8) Grab SB-7 (8-10) Grab SB-8 (6-8) Grab	Cadmium Selenium	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD)
SS-1 Grab SS-3 Grab SS-4 Grab SB-1 (13-15) Grab SB-3 (13-15) Grab SB-6 (6-8) Grab SB-6 FD (6-8) Grab SB-7 (8-10) Grab SB-8 (6-8) Grab	Barium	J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD)
SB-6 (6-8) Grab SB-6 FD (6-8) Grab	Arsenic Barium	J (all detects) J (all detects)	A	Field duplicates (RPD)

Future Huntington East Practice Field
Metals - Laboratory Blank Data Qualification Summary - SDG 22080299

Sample	Analyte	Modified Final Concentration	A or P
GW-3 Grab	Selenium	0.0050U mg/L	A
SB-1 (13-15) Grab	Selenium	0.46U mg/Kg	A

Future Huntington East Practice Field
Metals - Field Blank Data Qualification Summary - SDG 22080299

No Sample Data Qualified in this SDG

LDC #: 54960A4a
SDG #: 22080299
Laboratory: ALS Environmental, Holland, MI

VALIDATION COMPLETENESS WORKSHEET
Level IV

Date: 10/14/22
Page: 1 of 2
Reviewer: ATV
2nd Reviewer: [illegible]

METHOD: Metals (EPA SW-846 Method 6020B/7470A/7471B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A A	
II.	ICP/MS Tune	A	
III.	Instrument Calibration	A	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Laboratory Blanks	SW	
VI.	Field Blanks	N	
VII.	Matrix Spike/Matrix Spike Duplicates	SW	(14,15), (16,17), (18,19)
VIII.	Duplicate sample analysis	N	
IX.	Serial Dilution	A	
X.	Laboratory control samples	A	LCS
XI.	Field Duplicates	SW	(6,7), (12,13)
XII.	Internal Standard (ICP-MS)	A	
XIII.	Target Analyte Quantitation	A	
XIV	Overall Assessment of Data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

Water samples were analyzed as dissolved.

	Client ID	Lab ID	Matrix	Date
1	SS-1 Grab	22080299-01	Soil	08/01/22
2	SS-3 Grab	22080299-02	Soil	08/01/22
3	SS-4 Grab	22080299-03	Soil	08/02/22
4	SB-1 (13-15) Grab	22080299-04	Soil	08/01/22
5	SB-3 (13-15) Grab	22080299-05	Soil	08/01/22
6	SB-6 (6-8) Grab	22080299-07	Soil	08/01/22
7	SB-6 FD (6-8) Grab	22080299-08	Soil	08/01/22
8	SB-7 (8-10) Grab	22080299-09	Soil	08/02/22
9	SB-8 (6-8) Grab	22080299-10	Soil	08/01/22
10	GW-1 Grab	22080299-11	Water	08/02/22
11	GW-3 Grab	22080299-12	Water	08/02/22
12	GW-4 Grab	22080299-13	Water	08/02/22
13	GW-4 FD Grab	22080299-14	Water	08/02/22
14	SB-6 (6-8) GrabMS	22080299-07MS	Soil	08/01/22
15	SB-6 (6-8) GrabMSD	22080299-07MSD	Soil	08/01/22

LDC #: 54960A4a
SDG #: 22080299
Laboratory: ALS Environmental, Holland, MI

VALIDATION COMPLETENESS WORKSHEET
Level IV

Date: 10/14/22

Reviewer: ATV
2nd Reviewer: CT

METHOD: Metals (EPA SW-846 Method 6020B/7470A/7471B)

	Client ID	Lab ID	Matrix	Date
16	GW-3 GrabMS	22080299-12MS	Water	08/02/22
17	GW-3 GrabMSD	22080299-12MSD	Water	08/02/22
18	GW-4 GrabMS	22080299-13MS	Water	08/02/22
19	GW-4 GrabMSD	22080299-13MSD	Water	08/02/22
20				
21				
22				

Notes:

METHOD: Trace Metals (EPA SW 846 Methods 6010/6020/7000)				
Validation Area	**Yes**	**No**	**NA**	**Comments**
I. Technical holding times				
Were all technical holding times met?	X			
Were all water samples preserved to a pH of <2.	X			
II. ICP-MS Tune				
Were mass resolutions within 0.1 amu for all isotopes in the tuning solution?	X			
Were %RSDs of isoptoes in the tuning solution ≤5%?	X			
III. Calibration				
Were all instruments calibrated daily?	X			
Were the proper standards used?	X			
Were all initial and continuing calibration verifications within the 90-110% (80-120% for mercury) QC limits?	X			
Were the low level standard checks within 70-130%?	X			
Were all initial calibration correlation coefficients within limits as specifed by the method?	X			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	X			
Was there contamination in the method blanks?		X		
Was there contamination in the initial and continuing calibration blanks?	X			
V. Interference Check Sample				
Were the interference check samples performed daily?	X			
Were the AB solution recoveries within 80-120%?	X			
VI. Matrix Spike/Matrix Spike Duplicates/Laboratory Duplicates				
Were MS/MSD recoveries within the QC limits? (If the sample concentration exceeded the spike concentration by a factor of 4, no action was taken.)		X		
Were the MS/MSD or laboratory duplicate relative percent differences (RPDs) within the QC limits?		X		
VII. Laboratory Control Samples				
SDG?	X			

Were the LCS recoveries and RPDs (if applicable) within QC limits?	X			
METHOD: Trace Metals (EPA SW 846 Methods 6010/6020/7000)				
Validation Area	**Yes**	**No**	**NA**	**Comments**
VIII. Internal Standards				
Were all percent recoveries within the 30-120% (60-125% for EPA Method 200.8) QC limits?	X			
If the recoveries were outside the limits, was a reanalysis performed?			X	
IX. Serial Dilution				
Were all percent differences <10%?	X			
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.		X		
X. Target Analyte Quantitation				
Were all reporting limits adjusted to reflect sample dilutions?	X			
Were all soil samples dry weight corrected?	X			
XI. Overall Assessment of Data				
Was the overall assessment of the data found to be acceptable?	X			
XII. Field Duplicates				
Were field duplicates identifed in this SDG?	X			
Were target analytes detected in the field duplicates?	X			
XIII. Field Blanks				
Were field blanks identified in this SDG?		X		
Were target analytes detected in the field blanks?			X	

All elements are applicable to each sample as noted below.

Sample ID	Target Analyte List
1 to 13	As,Ba,Cd,Cr,Pb,Se,Ag,Hg
QC	
18,19	Hg
14,15,16,17,18	As,Ba,Cd,Cr,Pb,Se,Ag

Analysis Method

ICP	
ICP-MS	
CVAA	

VALIDATION FINDINGS WORKSHEET
Laboratory Blank Contamination (PB/ICB/CCB)

METHOD: Trace Metals (EPA SW 846 Methods 6010/6020/7000)
Soil preparation factor applied (if applicable):

Sample Concentration, unless otherwise noted: mg/L Associated Samples: 11

				Sample Identification							
Analyte	**PB (mg/kg)**	**Maximum ICB/CCB (mg/L)**	**Action Level**	11							
Se		0.000485		0.0025/0.0050							

Sample Concentration, unless otherwise noted: mg/kg Associated Samples: all soil

				Sample Identification								
Analyte	**PB (mg/kg)**	**Maximum ICB/CCB (mg/L)**	**Action Level**	4								
Se		0.002076		0.43/0.46								

Comments: The listed analyte concentrtaion is the highest ICB or CCB detected in the analysis. The action level, when applicable, is established at 5X the highest ICB, CCB, or PB concentration.

METHOD: Trace Metals (EPA SW 846 Methods 6010/6020/7000)

MS/MSD analysis was performed by the laboratory. All MS/MSD percent recoveries (%R) and relative percent differences (RPDs) were within the acceptable limits with the following exceptions:

MS/MSD ID	Matrix	Analyte	MS %R	MSD %R	%R Limit	RPD	RPD Limit	Associated Samples	Qualification	Det/ND
14 & 15	S	Cd		67.5	75-125			all soil	J/UJ/A	Det/ND
		Pb		73.6				all soil	J/UJ/A	Det
		Se		61.5				all soil	J/UJ/A	Det/ND
		Ag		68.8				all soil	J/UJ/A	Det/ND
		Ba				44	20	all soil	J/UJ/A	Det
		Cd				21.1	20	all soil	J/UJ/A	Det/ND
		Se				22.1	20	all soil	J/UJ/A	Det/ND

Comments: 14/15: Ba > 4X

Method: Metals

Analyte	Concentration (mg/Kg)		RPD (≤ 50)	Diff.	Diff. Limits	Qualifiers (Parents Only)
	6	7				
Arsenic	4.8	8.1	51			Jdet/A
Barium	110	330	100			Jdet/A
Cadmium	0.031	0.11		0.079	(≤0.42)	
Chromium	15	25	50			
Lead	13	16	21			
Mercury	0.026	0.033	24			
Selenium	0.44	0.48U		0.04	(≤0.96)	

Analyte	Concentration (mg/L)		RPD (≤ 50)	Diff.	Diff. Limits	Qualifiers (Parents Only)
	12	13				
Arsenic	0.0024	0.0024		0	(≤0.01)	
Barium	0.90	0.87	3			

METHOD: Trace Metals (EPA SW 846 Methods 6010/6020/7000)

An intial calibration verification (ICV), continuing calibration verification (CCV), low level calibration check (LLCC), and interference check sample (ICSAB) percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = (Found/True) x 100

Found = concentration of each analyte measured in the analysis

True = concentration of each analyte in the source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
ICV	ICP						
CCV	ICP						
LLCC	ICP						
ICSAB	ICP						
ICV(8/17@13:19)	ICP-MS	Se	81.625	80	102.03125	102	Y
CCV(8/11@22:44)	ICP-MS	Cr	100.987	100	100.987	101	Y
LLCC(8/11@12:25)	ICP-MS	Ag	4.997	5	99.94	99.9	Y
ICSAB	ICP-MS						
ICV(8/9@09:51)	CVAA	Hg	2.06	2	103	103	Y
CCV(8/10@13:37)	CVAA	Hg	2.06	2	103	103	Y

ICP-MS Tune	QC Parameter	Mass	Actual	Required
10-Aug	Mass Axis	59	58.9	± 0.1 amu
11-Aug	%RSD	208	1.24	≤ 5%

VALIDATION FINDINGS CHECKLIST

Quality Control Sample Recalculations

Reviewer:

METHOD: Trace Metals (EPA SW 846 Methods 6010/6020/7000)

Percent recoveries (%R) for the laboratory control sample (LCS), matrix spike (MS), and post digestion spike (PDS) were recalculated using the following formula:

%R = (Found/True) x 100

Found = concentration of each analyte measured in the analysis. For the MS calculation, Found = SSR (Spiked Sample Result) - SR (Sample Result)

True = concentration of each analyte in the source

The sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

RPD = (Absolute value(S-D)x 200) / (S+D)

S = Original sample concentration

D = Duplicate sample concentration

The serial dilution percent difference (%D) was recalculated using the following formula.

%D = (Absolute value (I - SDR)) x 100 / (I)

I = Initial sample result

SDR = Serial dilution result (with a 5x dilution applied)

Sample ID	Type of Analysis	Element	Found/S/I	True/D/SDR	Recalculated %R/RPD/%D	Reported %R/RPD/%D	Acceptable (Y/N)
LCS (8/17)	LCS	Ba	0.093933	0.1	93.933	93.9	Y
18	MS	Hg	0.00201	0.002	100.5	102	Y
18 & 19	Duplicate	Hg	0.001995	0.00201	0.74906367	0.749	Y
6	PDS	Cd	6.232	7.062	88.24695554	88.3	Y
6	Serial dilution	Pb	14.674	13.417	9.368711336	7.76	Y

METHOD: Trace Metals (EPA SW 846 Methods 6010/6020/7000)
Analytes were recalculated and verified using the following equation:
Concentration = (Result from raw data x Final volume x Dilution factor) / (Percent solids x Initial weight)

Sample ID	Analyte	Raw Data (ppb)	Dilution	Initial Weight/ Volume (g)	Final Volume (ml)	Percent solids (%)	Reported Result (mg/kg)	Recalculated Result (mg/kg)	Acceptable (Y/N)
1	As	141.131	1	0.63	50	76	15	14.73799081	Y
2	Ba	2193.975	1	0.748	50	82	180	178.8488816	Y
3	Se	5.539	1	0.693	50	86	0.46	0.464696802	Y
4	Pb	110.744	1	0.679	50	80	10	10.19366716	Y
5	Cr	137.81	1	0.678	50	76	13	13.37234125	Y
6	Cd	0.354	1	0.708	50	81	0.031	0.030864198	Y
7	As	77.902	1	0.613	50	78	8.1	8.146358807	Y
8	Ba	544.305	1	0.606	50	81	55	55.44401662	Y
9	Cr	216.255	1	0.671	50	83	19	19.41491749	Y
1	Hg	0.98	1	0.696	50	76	0.093	0.092634604	Y
2	Hg	0.403	1	0.624	50	82	0.039	0.039380081	Y
3	Hg	0.05	1	0.785	50	86	ND	0.003703155	Y
4	Hg	0.424	1	0.661	50	80	0.04	0.040090772	Y
5	Hg	0.351	1	0.764	50	76	0.03	0.030225269	Y
6	Hg	0.31	1	0.737	50	81	0.026	0.025964454	Y
7	Hg	0.351	1	0.673	50	78	0.033	0.033432392	Y
8	Hg	0.418	1	0.726	50	81	0.036	0.035540591	
9	Hg	0.443	1	0.736	50	83	0.036	0.036259167	Y

VALIDATION FINDINGS CHECKLIST
Sample Calculation Verification

METHOD: Trace Metals (EPA SW 846 Methods 6010/6020/7000)
Analytes were recalculated and verified using the following equation:
Concentration = (Result from raw data x Final volume x Dilution factor) / (Initial volume)

Sample ID	Analyte	Raw Data (ppb)	Dilution	Initial Weight/ Volume (unit)	Final Volume (unit)	Reported Result (mg/L)	Recalculated Result (mg/L)	Acceptable (Y/N)
10	As	16.087	1	50	50	0.016	0.016087	Y
11	Se	2.523	1	50	50	0.0025	0.002523	Y
12	Ba	879.01	1	50	50	0.9	0.87901	Y
13	As	2.377	1	50	50	0.0024	0.002377	Y
10 to 13	Hg	0	1	10	15	ND	0	Y