DATA USABILITY SUMMARY REPORT (DUSR)

VOA Back Lot
Rochester, NY
NYSDEC BCP # C828126

SDG: 2142-01

6 Soil Samples
3 Trip Blanks

Prepared for:

Bergmann Associates
28 East Main Street
Rochester, NY 14614

October 2016

KR Applin & Associates 8806 Route 256 Dansville, NY 14437 585.335.5998

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Tables

REVIEWER'S NARRATIVE
SDG 2142-01

The data associated with this Sample Delivery Group (SDG) 2142-01, analyzed by Paradigm Environmental Services, Inc. Rochester, NY have been reviewed in accordance with assessment criteria provided by the New York State Department of Environmental Conservation following the review procedures provided in the USEPA Functional Guidelines for evaluating organic and inorganic data.

All analytical results reported by the laboratory are considered valid and acceptable except results that have been qualified as rejected, "R". Results qualified as estimated "J", or as non-detects, "U", are considered usable for the purpose of evaluating water and/or soil quality. However, these qualifiers indicate that the accuracy and/or precision of the analytical result is questionable. A summary of all data that have been qualified and the reasons for qualification are provided in the following data usability summary report (DUSR).

Two facts should be noted by all data users. First, the "R" qualifier means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Values qualified with an "R" should not appear on the final data tables because they cannot be relied upon, even as the last resort. Second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.

Reviewer's Signature: Michael K. Perry Date: 10/8/16

Michael K. Perry
Chemist

1.0 SUMMARY

SITE:	VOA Back Lot Rochester, NY
SAMPLING DATE:	May 26, 31 and June 1, 2016
SAMPLE TYPE:	6 soil samples and 3 trip blanks
LABORATORY:	Paradigm Environmental Services, Inc. Rochester, NY
SDG No.:	2142-01

2.0 INTRODUCTION

This data usability summary report (DUSR) was prepared in accordance with guidance provided by the New York State Department of Environmental Conservation (NYSDEC). The DUSR is based on a review and evaluation of the laboratory analytical data package. Specifically, the NYSDEC guidance recommends review and evaluation of the following elements of the data package:

- Completeness of the data package as defined under the requirements of the NYSDEC Analytical Services Protocols (ASP) Category B or the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) deliverables,
- Compliance with established analyte holding times,
- Adherence to quality control (QC) limits and specifications for blanks, instrument tuning and calibration, surrogate recoveries, spike recoveries, laboratory duplicate analyses, and other QC criteria,
- Adherence to established analytical protocols,
- Conformance of data summary sheets with raw analytical data, and
- Use of correct data qualifiers.

Data deficiencies, analytical protocol deviations, and quality control problems identified using the review criteria above and their effect on the analytical results are discussed in this report.

3.0 SAMPLE AND ANALYSIS SUMMARY

The data package consists of analytical results for six soil samples and three trip blanks collected on May 26, 31 and June 1, 2016. These samples were analyzed for some or all of the Part 375 volatile organic compounds, semi-volatile organic compounds, diesel range organics, and TAL metals.

All laboratory analyses were performed by Paradigm Environmental Services, Inc., Rochester, NY and analyzed as SDG 2142-01. The analytical results were provided in NYSDEC ASP Category B format, which includes all raw analytical data and laboratory QC data.

4.0 GUIDANCE DOCUMENTS AND DATA REVIEW CRITERIA

The guidance documents used for reviewing laboratory quality control (QC) data and assigning data qualifiers (flags) to analytical results are listed in Table 4-1. The QC limits established in the documents applicable to this data review were used to assess the quality of the analytical results. In some cases, however, QC limits established internally by the laboratory were taken into account to determine data quality.

The QC criteria considered for assessing the usability of the reported analytical results provided for each analyte type (i.e. VOCs, SVOCs, metals, etc.) are listed in Table 4-2. These criteria may vary with the analytical method utilized by the laboratory. These criteria comply with the guidance recommended in Section 2.0 above.

NOTE: The data package for SDG 2142-01 contained no laboratory QC data for the serial dilutions of metals (Form VIII). The laboratory director was contacted regarding the deficiency. He stated that no serial dilutions were analyzed with this data package. Therefore, no evaluation of the serial dilution results were performed by this data reviewer and no data were qualified as a result.

TABLE 4-1

DATA VALIDATION GUIDANCE DOCUMENTS

Analyte Type	Validation Guidance
VOCs	USEPA, 2008, Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry; SW-846 Method 8260B; SOP # HW-24, Rev. 2. USEPA, 2008, Statement of Work for Organic Analysis of Low/Medium Concentration of Volatile Organic Compounds SOM01.2; SOP HW-33, Rev. 2.
SVOCs	USEPA, 2007, Statement of Work for Organic Analysis of Low/Medium Concentration of Semivolatile Organic Compounds SOM01.2; SOP HW-35, Rev. 1.
Pesticides/PCBs	USEPA, 2006, CLP Organics Data Review and Preliminary Review (CLP/SOW OLMO 4.3); SOP # HW-6, Rev. 14, Part C.
Metals	USEPA, 2006, Validation of Metals for the Contract Laboratory Program (CLP) based on SOW ILMO 5.3 (SOP Revision 13), SOP # HW-2, Rev. 13.
Gen Chemistry	NYSDEC, 2005, Analytical Services Protocols (ASP)
VOCs (Ambient air)	USEPA, 2006, Validating Air Samples, Volatile Organic Analysis of Ambient Air in Canister by Method TO-15; SOP # HW-31, Rev. 4.

TABLE 4-2

QUALITY CONTROL CRITERIA USED FOR VALIDATING LABORATORY ANALYTICAL DATA

VOCs	SVOCs	Pesticides/PCBs	Metals	Gen Chemistry	Method TO-15
Completeness of Pkg	Completeness of Pkg	Completeness of Pkg	Completeness of Pkg	Completeness of Pkg	Completeness of Pkg
Sample Condition	Sample Condition	Sample Condition	Sample Condition	Sample Condition	Sample Condition
Holding Time	Holding Time	Holding Time	Holding Time	Holding Times	Holding Time
System Monitoring Compounds	Surrogate Recoveries	Surrogate Recoveries	Initial/Continuing Calibration	Calibration	Canister Certification
Lab Control Sample	Lab Control Sample	Matrix Spikes	CRDL Standards	Lab Control Samples	Lab Control Sample
Matrix Spikes	Matrix Spikes	Blanks	Blanks	Blanks	Instrument Tuning
Blanks	Blanks	Instrument Calibration & Verification	Interference Check Sample	Spike Recoveries	Blanks
Instrument Tuning	Instrument Tuning	Analyte ID	Spike Recoveries	Lab Duplicates	Initial Calibration & System Performance
Internal Standards	Internal Standards	Lab Qualifiers	Lab Duplicate		Daily Calibration
Initial Calibration	Initial Calibration	Field Duplicate	Lab Control Sample		Field Duplicate
Continuing Calibration	Continuing Calibration		ICP Serial Dilutions		
Lab Qualifiers	Lab Qualifiers		Lab Qualifiers		
Field Duplicate	Field Duplicate		Field Duplicate		

5.0 DATA VALIDATION QUALIFIERS

The letter qualifiers (flags) used to define data usability are described briefly below. These letters are assigned by the data validator to analytical results having questionable accuracy and/or precision as determined by reviewing the laboratory QC data associated with the analytical results.

The laboratory may also use various letters and symbols to flag analytical results generated when QC limits were exceeded. The meanings of these flags may differ from those used by the independent data validator. Those used by the laboratory are provided with the analytical results.

NOTE: The assignment of data qualifiers by the data reviewer (validator) to laboratory analytical results should not necessarily be interpreted by the data user as a measure of laboratory ability or proficiency. Rather, the qualifiers are intended to provide a measure of data accuracy and precision to the data user, which, for example, may provide a level of confidence in determining whether or not standards or cleanup objectives have been met.

U The analyte was analyzed for but was not detected at or above the sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the *approximate* concentration of the analyte in the sample. (The magnitude of any ± value associated with the result is not determined by data validation).

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is *approximate* and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample result is rejected (i.e., is unusable) due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

JN The analyte is considered to be "presumptively present." The associated numerical value represents its *approximate* concentration.

The validated analytical results are attached to this report. Validation qualifiers (flags) are indicated using red ink. Data sheets having qualified data are signed and dated by the data reviewer.

6.0 RESULTS OF THE DATA REVIEW

The results of the data review are summarized in Tables 6-1 through 6-4. The tables list the samples where QC criteria were found to exceed acceptable limits and the actions taken to qualify the associated analytical results.

7.0 TOTAL USABLE DATA

For SDG 2142-01, six samples and three trip blanks were analyzed and results were reported for 1053 analytes. Seventeen results were rejected. Even though some results were flagged with a "J" as estimated, all other results (98%) are considered usable. See the summary table for the analyses that have been rejected and the associated QC reasons.

Table 6-1 VOCs

SAMPLES AFFECTED	ANALYTES	ACTION	QC VIOLATION	COMMENTS
All samples	2-Butanone	none	Initial calibration RRF < 0.05	Based on the new low responders rule from SOM2.1, the RRF <0.01 is used
All samples	1,4-Dioxane	R	Initial and Continuing calibration RRF < 0.005 (0.004)	Based on the new low responders rule from SOM2.1, the RRF <0.005 is used
Excavation West	All analytes	UJ non-detect J detects	Surrogate BFB < QC limit	Results may be biased low
Excavation West	Some analytes	UJ non-detect J detects	Internal Std. 3 < QC limit	As above, results may be biased low
All samples	Bromomethane Acetone 2-Butanone	UJ non-detects J detects	CCV > 20 %	Data should be considered estimated

Table 6-2 SVOCs

SAMPLES AFFECTED	ANALYTES	ACTION	QC VIOLATION	COMMENTS
All samples	Atrazine	UJ	Single point ICAL	All samples non-detect
Excavation West Excavation South	Hexachlorocyclopentadiene	UJ non-detects J detects	CCV > 40 %	Data should be considered estimated

Table 6-3 DRO

SAMPLES AFFECTED	ANALYTES	ACTIONQC VIOLATION	COMMENTS
none		none	

Table 6-4 TAL Metals

SAMPLES AFFECTED	ANALYTES	ACTION	QC VIOLATION	COMMENTS
All samples	All	none	No CRDL Std in package	No evaluation can be made
Excavation Bottom	Barium Copper Manganese Zinc	J	RPD > 35 %	Detected results are estimated
Excavation Bottom	Barium	J / UJ	MS % < 75 %	Results may be biased low
Excavation Bottom	Mercury	J	MS % > 125 %	Detected results are estimated
Excavation Bottom	Copper Lead Antimony	R	MS % < 30 %	Data is rejected
Excavation Bottom	Manganese	R	MS % > 200 %	Data is rejected
Excavation West	Antimony Lead	J / UJ	MS % < 75 %	Results may be biased low

SDG 2142-01

Excavation West	Arsenic Lead Magnesium Selenium	J	RPD > 35 %	Detected results are estimated
Excavation Bottom 2 Excavation East Excavation South Excavation North	Calcium Magnesium Manganese	J	RPD > 35 %	Detected results are estimated
Excavation Bottom 2 Excavation East Excavation South Excavation North	Antimony Barium Beryllium Copper Lead Selenium Thallium Vanadium	J / UJ	MS % < 75 %	Results may be biased low
Excavation Bottom 2 Excavation East Excavation South Excavation North	Antimony	R	MS % < 30 %	Data is rejected

ACRONYMS

BSP	Blank Spike
CCAL	Continuing Calibration
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
%D	Percent Difference
ICAL	Initial Calibration
ICB	Initial Calibration Blank
IS	Internal Standard
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
QA	Quality Assurance
QC	Quality Control
%R	Percent recovery
RPD	Relative Percent Difference
%RSD	Percent Relative Standard Deviation
TAL	Target Analyte List (metals)
TCL	Target Compound List (organics)

Appendix A

Validated Analytical Results

LAB PROJECT NARRATIVE: 162142-2207-2221
PROJECT NAME: VOA Back Lot
SDG: 2142-01
CLIENT: Bergmann Associates

Six soil samples and three Trip Blanks were collected by Bergmann personnel on 05/26,31, and 06/01/2016 and received at the Paradigm laboratory on the same days. Container and holding times were acceptable at time of receipt; the samples were received at 12, 11, and 9° Centigrade and were on ice. The samples were submitted with the Chains-of-Custody requesting the TCL lists for VOCs and SVOCs, Diesel Range Organics, and TAL Metals. All analyses were performed using EPA SW-846 Methods and the associated holding times.

The items noted in this case narrative address compliance with the referenced methods, NYSDOH ELAP rules, and any project specific data quality requirements. These may be different from the usability criteria referenced in any "Functional Guidelines" or other data review standards used by data validators.

GENERAL NOTES

ALL ANALYSES

The initial and continuing calibration reports are only evaluated for compounds that are on the sample summary report.

Regarding results on QC summary forms versus included raw data, due to calculations made at the instrument where many significant figures may be used, there may be slight discrepancies between the summary report result and that recorded on the raw data. This does not affect data usability.

VOLATILES AND SEMIVOLATILES

Regarding initial calibrations, it should be noted that the Quantitation Report concentrations supplied for the initial calibration reflect the calibration prior to updating. The response factors and areas are correct.

Regarding Quantitation Reports, it should be noted that the "#" symbol that appears on some of the Quantitation Reports is a software artifact and should be disregarded.

VOLATILES

Soil samples were not sampled per EPA method 5035A compliance rules. Thus, an extra note has been added to all VOC reports.

Holding times were met for all samples.

The surrogate recoveries for the samples and the QC samples were within QC limits, except Bromofluorobenzene was out low in sample Excavation West. It has been flagged with an "*" on the QC Summary Table and sample report accordingly. Matrix Interference is suspected.

Site specific QC was not requested on this SDG. The Laboratory Control Samples recovered within acceptance limits.

The method blanks were free from contamination within the reportable ranges.

The instrument tunes passed all criteria.

The internal standards areas and retention times were within acceptance limits for the samples and the associated QC.

All data for the initial calibration was within acceptance limits. Compounds flagged with an "*" on the summary table have been calibrated using a non-average Response Factor calibration curve. The supporting curves are located after the initial calibration table. (see method 8000B, section 7.5.1.2.1).

All continuing calibration data was within acceptance limits, except 4-Methyl-2-pentanone was out high in CCV 06/02 and Bromomethane was out low in the same CCV. For the high outlier, associated samples were Non-Detect for this compound so no further action was required. For the low outlier, an additional 1ppb standard was analyzed and included to show adequate sensitivity in order to report Non-Detects for this compound. All samples associated with these outliers were Non-Detect for these compounds.

SEMI-VOLATILES

Holding times were met for all samples.

The surrogate recoveries for the samples and the associated QC were within acceptable limits, except Nitrobenzene-d5 was out low in samples Excavation East, North, and West. It has been flagged with an "*" on the QC Summary Table and sample reports accordingly. Matrix Interference is suspected.

Site specific QC was not requested on this SDG. The Laboratory Control Samples and Laboratory Control Sample Duplicate recovered within acceptance limits, except Pentachlorophenol was out high in the LCS Duplicate. It has been flagged with an "*" on the QC Summary Table and an "L" on the associated sample reports accordingly. The associated samples were Non-Detect for this compound so no further action was needed.

The method blanks were free from contamination within the reportable ranges.

The instrument tunes passed all criteria.

The internal standards areas and retention times were within acceptance ranges.

All data for the initial calibrations was within acceptance limits. Compounds flagged with an "*" on the summary table have been calibrated using a non-average Response Factor calibration curve. The supporting curves are located after the initial calibration table. (see method 8000B, section 7.5.1.2.1).

All continuing calibration data was within acceptance limits, except Atrazine was out low in all of the CCVs, Hexachlorocyclopentadiene was out low in CCVs 6/2, 6/3, and 6/6 and Hexachlorocyclopentadiene and Benzaldehyde were out high in CCVs 6/1 and 6/2. For the high outliers, associated samples were Non-Detect for these compounds so no further action was required. The low outliers were assessed for adequate sensitivity at the reporting limit by a 10ppm standard. As the associated samples were Non-Detect for these compounds, the results were deemed usable and no further action was required.

DRO

Holding times were met for all samples.

Site specific QC was not requested on this SDG. The Laboratory Control Samples recovered within acceptance limits.

The method blanks were free from contamination within the reportable ranges.

METALS

ICP-AES interelement and background corrections were applied. Raw data was not generated before application of background corrections.

Holding times were met for all samples.

Site specific QC was analyzed on samples Excavation Bottom, North, and West. Numerous Spike Recoveries and RPDs were outside QC limits (see the QC Summary Tables for specifics). They have been flagged with a "*" on the QC Summary Table and an "M" and "D" respectively on the sample reports. As there were outliers, Post Digest Spikes were analyzed accordingly. The raw data for these QC samples has been supplied on the attached ICP analytical worksheets, labeled as "PS". There are no data qualifiers or QC forms associated with the post digest spikes. Matrix Interference is suspected. The Laboratory Control Samples recovered within acceptable limits.

The method blanks were free from contamination within the reportable ranges, except low level "J" hits of Manganese at 0.420 mg/Kg in Blk 5/27 and Aluminum at 6.02 mg/Kg in Blk 6/2. These metals' results in the associated samples were higher than ten times the results in the blanks so no flagging or further action was required.

All data for the initial calibrations was within acceptance limits, except Cadmium for the ICV for run 060716b was outside limits high. The associated samples were all Non-Detect for this metal so the run was deemed as usable and no further action was needed.

All continuing calibrations data was within acceptance limits, except Cadmium for the CCVs for run 060716b was outside limits high. The associated samples were all Non-Detect for this metal so the run was deemed as usable and no further action was needed.

(signed) M. Hoogesteger for: (date) 7/27/16

Bruce Hoogesteger- President

SDG# : 2142-01
LAB PROJECT #: 162142-2207-2221
CLIENT: Bergmann Associates
PROJECT NAME: VOA Back Lot

BATCH COMPLETE: 6/1/2016
DATE DUE: 7/5/2016
PROTOCOL: SW846

LAB.SAMPLE#	FIELD ID	MATRIX	REQUESTED ANALYSIS	DATE SAMPLED	DATE REC'D
162142-01	Excavation Bottom	Soil	TCL-VOA,SVOA,8015-DRO, TAL-Met	5/26/2016	5/26/2016
162142-02	Trip Blank (T-707)	Water	TCL-VOA	5/26/2016	5/26/2016
162207-01	Excavation Bottom 2	Soil	TCL-VOA,SVOA,8015-DRO, TAL-Met	5/31/2016	5/31/2016
162207-02	Excavation East	Soil	TCL-VOA,SVOA,8015-DRO, TAL-Met	5/31/2016	5/31/2016
162207-03	Excavation South	Soil	TCL-VOA,SVOA,8015-DRO, TAL-Met	5/31/2016	5/31/2016
162207-04	Excavation North	Soil	TCL-VOA,SVOA,8015-DRO, TAL-Met	5/31/2016	5/31/2016
162207-05	Trip Blank (T-708)	Water	TCL-VOA	5/31/2016	5/31/2016
162221-01	Excavation West	Soil	TCL-VOA,SVOA,8015-DRO, TAL-Met	6/1/2016	6/1/2016
162221-02	Trip Blank (T-709)	Water	TCL-VOA	6/1/2016	6/1/2016

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

PARADIGM

CHAIN OF CUSTODY

162142

1 of 2

REPORT TO:		INVOICE TO:		
CLIENT:	Bergmann Associates	CLIENT:	Same	LAB PROJECT ID: VOA Back Lot
ADDRESS:	28 E. Main St	ADDRESS:	Same	
CITY:	Rochester STATE: NY ZIP: 14614	CITY:	Same STATE: Same ZIP: Same	Quotation #:
PHONE:	585 232 5135	PHONE:	Same	Email: sdemeo@bergmannpc.com mborruso@bergmannpc.com
ATTN:	Steve DeMeo / Megan Borruso	ATTN:	Same	

PROJECT REFERENCE

VOA Back Lot

Matrix Codes:

AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	8260 TCL	8270 TCL	TAL Metals	8015 DRO	REMARKS	PARADIGM LAB SAMPLE NUMBER
5/26/16	1300		X	Excavation Bottom	SO	1	X	X	X	X		01
5/26/16	1300		X	TRIP BLANK (T-707) per sample label @ 5/26/16	~~AQ~~/WA per Trip Blank method @ 5/26/16	1	X					02

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	X	None Required	X	None Required	
10 day		Batch QC		Basic EDD	
Rush 3 day		Category A		NYSDEC EDD	X
Rush 2 day		Category B	X per JD @ 5/26/16		
Rush 1 day					
Other please indicate date needed:		Other please indicate package needed:		Other EDD please indicate EDD needed:	

Megan E Borruso — Sampled By — 5/25/16 1300 — Date/Time

Megan E Borruso — Relinquished By — 5/26/16 1340 — Date/Time

Received By — 5/26/16 1340 — Date/Time

Received @ Lab By — 5/26/16 14:31 — Date/Time

Total Cost:

P.I.F.

12°C iced started in field 5/26/16 13:45. Custody Seal N/A, samples delivered by client. @ 5/26/16

By signing this form, client agrees to Paradigm Terms and Conditions (reverse).

See additional page for sample conditions.

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PARADIGM

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

REPORT TO:		INVOICE TO:		
CLIENT: Bergmann		CLIENT: Same		LAB PROJECT ID: 162207
ADDRESS: 28 E. Main St		ADDRESS: Same		
CITY: Rochester STATE: NY ZIP: 14614		CITY: Same STATE: Same ZIP: Same		Quotation #:
PHONE: 585 232 5135		PHONE: Same		Email: Sdemeo@bergmannpc.com mborruso@bergmannpc.com
ATTN: S. DeMeo / M. Borruso		ATTN: Same		

PROJECT REFERENCE

VOA BACK LOT

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	8260 TCL	8270 TCL	TAL METALS	8015 DRO	REMARKS	PARADIGM LAB SAMPLE NUMBER
5/31/16	1104		X	EXCAVATION ~~[illegible]~~ BOTTOM 2	SO	1	X	X	X	X	PID = 5.8 ppm	01
5/31/16	1108		X	EXCAVATION ~~[illegible]~~ EAST (MB)	SO	1	X	X	X	X	PID = 0.4 ppm	02
5/31/16	1115		X	EXCAVATION ~~[illegible]~~ SOUTH (MB)	SO	1	X	X	X	X	PID = 0.6 ppm	03
5/31/16	1325		X	EXCAVATION NORTH (MB)	SO	1	X	X	X	X	PID = 0.8 ppm	04
5/31/16	N/A		X	~~EXCAVATION~~ (MB) TRIP BLANK T708 MB 5/31/16	AQ	1	~~X~~ (MB)	~~X~~	~~X~~ (MB)	~~X~~ (MB)	~~[illegible]~~ (MB)	05

ND 5/31/16 1500

Iced by sampler, relin client, field custody seals N/A, delivered MV 5/31/16 1511

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	X	None Required		None Required	
10 day		Batch QC		Basic EDD	
Rush 3 day		Category A		NYSDEC EDD	X
Rush 2 day		Category B	X		
Rush 1 day					
Other (please indicate date needed:)		Other (please indicate package needed:)		Other EDD (please indicate EDD needed:)	

Signature	Date/Time	
Megan E Borruso — Sampled By	5/31/16 1500	Total Cost:
[signature] — Relinquished By	5/31/16 1500	
[signature] — Received By	5/31/16 1500	P.I.F.
[signature] — Received @ Lab By	5/31/16 1511	

By signing this form, client agrees to Paradigm Terms and Conditions (reverse).

See additional page for sample conditions.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

10

REPORT TO:		INVOICE TO:		LAB PROJECT ID
CLIENT:	Bergmann Associates	CLIENT:	Same	162221
ADDRESS:	28 E. Main St	ADDRESS:	Same	Quotation #:
CITY:	Rochester STATE: NY ZIP 14614	CITY:	Same STATE: ZIP:	Email: sdemeo@bergmannpc.com mbarruso@bergmannpc.com
PHONE:	585 232 5135	PHONE:	Same	
ATTN:	M. Barruso / S. DeMeo	ATTN:	Same	

PROJECT REFERENCE

VOA BACK LOT

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	8260 TCL	8270 TCL	TAL METALS	8015 DRO							REMARKS	PARADIGM LAB SAMPLE NUMBER
6/1/16	0815		X	EXCAVATION WEST	SO	1	X	X	X	X							PID = 0.0 ppm	01
6/1/16	—		X	TRIP BLANK (T-709) WA	AQ	1	X	X	per TB method							6P 6/8/16			02
				Per sample label 6P 6/1/16	per TB method				6P 6/1/16									

Turnaround Time		Report Supplements		
Availability contingent upon lab approval; additional fees may apply.				
Standard 5 day	X	None Required		None Required
10 day		Batch QC		Basic EDD
Rush 3 day		Category A		NYSDEC EDD X
Rush 2 day		Category B	X	
Rush 1 day				
Other please indicate date needed:		Other please indicate package needed:		Other EDD please indicate EDD needed:

Megan Barruso — 6/1/16 0815 — Sampled By / Date/Time

Megan E Barruso — 6/1/16 1105 — Relinquished By / Date/Time

Jane J Dalaki — 6/1/16 1105 — Received By / Date/Time

[signature] — 6/1/16 13:46 — Received @ Lab By / Date/Time

Total Cost:

P.I.F.

9°C iced started in fridge 6/1/16 11:16.

By signing this form, client agrees to Paradigm Terms and Conditions (reverse).

Custody Seal N/A, samples delivered by client. 6P 6/1/16

See additional page for sample conditions.

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162221

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation West
Lab Sample ID: 162221-01 **Date Sampled:** 6/1/2016
Matrix: Soil **Date Received:** 6/1/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 4.04 UJ	ug/Kg		6/6/2016 15:02
1,1,2,2-Tetrachloroethane	< 4.04	ug/Kg		6/6/2016 15:02
1,1,2-Trichloroethane	< 4.04	ug/Kg		6/6/2016 15:02
1,1-Dichloroethane	< 4.04	ug/Kg		6/6/2016 15:02
1,1-Dichloroethene	< 4.04	ug/Kg		6/6/2016 15:02
1,2,3-Trichlorobenzene	< 10.1	ug/Kg		6/6/2016 15:02
1,2,4-Trichlorobenzene	< 10.1	ug/Kg		6/6/2016 15:02
1,2-Dibromo-3-Chloropropane	< 20.2	ug/Kg		6/6/2016 15:02
1,2-Dibromoethane	< 4.04	ug/Kg		6/6/2016 15:02
1,2-Dichlorobenzene	< 4.04	ug/Kg		6/6/2016 15:02
1,2-Dichloroethane	< 4.04	ug/Kg		6/6/2016 15:02
1,2-Dichloropropane	< 4.04	ug/Kg		6/6/2016 15:02
1,3-Dichlorobenzene	< 4.04	ug/Kg		6/6/2016 15:02
1,4-Dichlorobenzene	< 4.04	ug/Kg		6/6/2016 15:02
1,4-dioxane	~~< 40.4~~ R	ug/Kg		6/6/2016 15:02
2-Butanone	< 20.2 UJ	ug/Kg		6/6/2016 15:02
2-Hexanone	< 10.1	ug/Kg		6/6/2016 15:02
4-Methyl-2-pentanone	< 10.1	ug/Kg		6/6/2016 15:02
Acetone	< 20.2	ug/Kg		6/6/2016 15:02
Benzene	< 4.04	ug/Kg		6/6/2016 15:02
Bromochloromethane	< 10.1	ug/Kg		6/6/2016 15:02
Bromodichloromethane	< 4.04	ug/Kg		6/6/2016 15:02
Bromoform	< 10.1	ug/Kg		6/6/2016 15:02
Bromomethane	< 4.04	ug/Kg		6/6/2016 15:02
Carbon disulfide	< 4.04	ug/Kg		6/6/2016 15:02
Carbon Tetrachloride	< 4.04	ug/Kg		6/6/2016 15:02
Chlorobenzene	< 4.04	ug/Kg		6/6/2016 15:02

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Report Prepared Wednesday, June 08, 2016

MRP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162221

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation West		
Lab Sample ID:	162221-01	**Date Sampled:**	6/1/2016
Matrix:	Soil	**Date Received:**	6/1/2016

Chloroethane	< 4.04	UJ	ug/Kg		6/6/2016	15:02
Chloroform	< 4.04		ug/Kg		6/6/2016	15:02
Chloromethane	< 4.04		ug/Kg		6/6/2016	15:02
cis-1,2-Dichloroethene	< 4.04		ug/Kg		6/6/2016	15:02
cis-1,3-Dichloropropene	< 4.04		ug/Kg		6/6/2016	15:02
Cyclohexane	< 20.2		ug/Kg		6/6/2016	15:02
Dibromochloromethane	< 4.04		ug/Kg		6/6/2016	15:02
Dichlorodifluoromethane	< 4.04		ug/Kg		6/6/2016	15:02
Ethylbenzene	< 4.04		ug/Kg		6/6/2016	15:02
Freon 113	< 4.04		ug/Kg		6/6/2016	15:02
Isopropylbenzene	< 4.04		ug/Kg		6/6/2016	15:02
m,p-Xylene	**2.25**	J	ug/Kg	J	6/6/2016	15:02
Methyl acetate	< 4.04	UJ	ug/Kg		6/6/2016	15:02
Methyl tert-butyl Ether	< 4.04		ug/Kg		6/6/2016	15:02
Methylcyclohexane	< 4.04		ug/Kg		6/6/2016	15:02
Methylene chloride	**6.31**	J	ug/Kg	J	6/6/2016	15:02
o-Xylene	< 4.04	UJ	ug/Kg		6/6/2016	15:02
Styrene	< 10.1		ug/Kg		6/6/2016	15:02
Tetrachloroethene	**18.9**	J	ug/Kg		6/6/2016	15:02
Toluene	< 4.04	UJ	ug/Kg		6/6/2016	15:02
trans-1,2-Dichloroethene	< 4.04		ug/Kg		6/6/2016	15:02
trans-1,3-Dichloropropene	< 4.04		ug/Kg		6/6/2016	15:02
Trichloroethene	< 4.04		ug/Kg		6/6/2016	15:02
Trichlorofluoromethane	< 4.04		ug/Kg		6/6/2016	15:02
Vinyl chloride	< 4.04		ug/Kg		6/6/2016	15:02

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Report Prepared Wednesday, June 08, 2016

MEP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162221

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation West
Lab Sample ID: 162221-01 **Date Sampled:** 6/1/2016
Matrix: Soil **Date Received:** 6/1/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	98.0	85.4 - 122		6/6/2016	15:02
4-Bromofluorobenzene	70.4	81.1 - 115	*	6/6/2016	15:02
Pentafluorobenzene	97.0	90.7 - 109		6/6/2016	15:02
Toluene-D8	88.9	88.5 - 110		6/6/2016	15:02

Internal standard outliers indicate probable matrix interference

Method Reference(s): EPA 8260C
EPA 5035

Data File: x32979.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162221

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Trip Blank (T-709)
Lab Sample ID: 162221-02 **Date Sampled:** 6/1/2016
Matrix: Water **Date Received:** 6/1/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		6/6/2016 17:01
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		6/6/2016 17:01
1,1,2-Trichloroethane	< 2.00	ug/L		6/6/2016 17:01
1,1-Dichloroethane	< 2.00	ug/L		6/6/2016 17:01
1,1-Dichloroethene	< 2.00	ug/L		6/6/2016 17:01
1,2,3-Trichlorobenzene	< 5.00	ug/L		6/6/2016 17:01
1,2,4-Trichlorobenzene	< 5.00	ug/L		6/6/2016 17:01
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		6/6/2016 17:01
1,2-Dibromoethane	< 2.00	ug/L		6/6/2016 17:01
1,2-Dichlorobenzene	< 2.00	ug/L		6/6/2016 17:01
1,2-Dichloroethane	< 2.00	ug/L		6/6/2016 17:01
1,2-Dichloropropane	< 2.00	ug/L		6/6/2016 17:01
1,3-Dichlorobenzene	< 2.00	ug/L		6/6/2016 17:01
1,4-Dichlorobenzene	< 2.00	ug/L		6/6/2016 17:01
1,4-dioxane	~~< 20.0~~ R	ug/L		6/6/2016 17:01
2-Butanone	< 10.0 UJ	ug/L		6/6/2016 17:01
2-Hexanone	< 5.00	ug/L		6/6/2016 17:01
4-Methyl-2-pentanone	< 5.00	ug/L		6/6/2016 17:01
Acetone	< 10.0 UJ	ug/L		6/6/2016 17:01
Benzene	< 1.00	ug/L		6/6/2016 17:01
Bromochloromethane	< 5.00	ug/L		6/6/2016 17:01
Bromodichloromethane	< 2.00	ug/L		6/6/2016 17:01
Bromoform	< 5.00	ug/L		6/6/2016 17:01
Bromomethane	< 2.00	ug/L		6/6/2016 17:01
Carbon disulfide	< 2.00	ug/L		6/6/2016 17:01
Carbon Tetrachloride	< 2.00	ug/L		6/6/2016 17:01
Chlorobenzene	< 2.00	ug/L		6/6/2016 17:01

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Report Prepared Wednesday, June 08, 2016

MFP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162221

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Trip Blank (T-709)
Lab Sample ID: 162221-02 **Date Sampled:** 6/1/2016
Matrix: Water **Date Received:** 6/1/2016

Chloroethane	< 2.00	ug/L	6/6/2016	17:01
Chloroform	< 2.00	ug/L	6/6/2016	17:01
Chloromethane	< 2.00	ug/L	6/6/2016	17:01
cis-1,2-Dichloroethene	< 2.00	ug/L	6/6/2016	17:01
cis-1,3-Dichloropropene	< 2.00	ug/L	6/6/2016	17:01
Cyclohexane	< 10.0	ug/L	6/6/2016	17:01
Dibromochloromethane	< 2.00	ug/L	6/6/2016	17:01
Dichlorodifluoromethane	< 2.00	ug/L	6/6/2016	17:01
Ethylbenzene	< 2.00	ug/L	6/6/2016	17:01
Freon 113	< 2.00	ug/L	6/6/2016	17:01
Isopropylbenzene	< 2.00	ug/L	6/6/2016	17:01
m,p-Xylene	< 2.00	ug/L	6/6/2016	17:01
Methyl acetate	< 2.00	ug/L	6/6/2016	17:01
Methyl tert-butyl Ether	< 2.00	ug/L	6/6/2016	17:01
Methylcyclohexane	< 2.00	ug/L	6/6/2016	17:01
Methylene chloride	< 5.00	ug/L	6/6/2016	17:01
o-Xylene	< 2.00	ug/L	6/6/2016	17:01
Styrene	< 5.00	ug/L	6/6/2016	17:01
Tetrachloroethene	< 2.00	ug/L	6/6/2016	17:01
Toluene	< 2.00	ug/L	6/6/2016	17:01
trans-1,2-Dichloroethene	< 2.00	ug/L	6/6/2016	17:01
trans-1,3-Dichloropropene	< 2.00	ug/L	6/6/2016	17:01
Trichloroethene	< 2.00	ug/L	6/6/2016	17:01
Trichlorofluoromethane	< 2.00	ug/L	6/6/2016	17:01
Vinyl chloride	< 2.00	ug/L	6/6/2016	17:01

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162221

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Trip Blank (T-709)
Lab Sample ID: 162221-02 **Date Sampled:** 6/1/2016
Matrix: Water **Date Received:** 6/1/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	94.2	81.1 - 122		6/6/2016	17:01
4-Bromofluorobenzene	92.2	78.7 - 116		6/6/2016	17:01
Pentafluorobenzene	99.5	88.6 - 112		6/6/2016	17:01
Toluene-D8	97.6	88.9 - 110		6/6/2016	17:01

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x32984.D

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Report Prepared Wednesday, June 08, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation Bottom 2		
Lab Sample ID:	162207-01	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 4.88	ug/Kg		6/6/2016 15:26
1,1,2,2-Tetrachloroethane	< 4.88	ug/Kg		6/6/2016 15:26
1,1,2-Trichloroethane	< 4.88	ug/Kg		6/6/2016 15:26
1,1-Dichloroethane	< 4.88	ug/Kg		6/6/2016 15:26
1,1-Dichloroethene	< 4.88	ug/Kg		6/6/2016 15:26
1,2,3-Trichlorobenzene	< 12.2	ug/Kg		6/6/2016 15:26
1,2,4-Trichlorobenzene	< 12.2	ug/Kg		6/6/2016 15:26
1,2-Dibromo-3-Chloropropane	< 24.4	ug/Kg		6/6/2016 15:26
1,2-Dibromoethane	< 4.88	ug/Kg		6/6/2016 15:26
1,2-Dichlorobenzene	< 4.88	ug/Kg		6/6/2016 15:26
1,2-Dichloroethane	< 4.88	ug/Kg		6/6/2016 15:26
1,2-Dichloropropane	< 4.88	ug/Kg		6/6/2016 15:26
1,3-Dichlorobenzene	< 4.88	ug/Kg		6/6/2016 15:26
1,4-Dichlorobenzene	< 4.88	ug/Kg		6/6/2016 15:26
1,4-dioxane	~~< 48.8~~ R	ug/Kg		6/6/2016 15:26
2-Butanone	< 24.4	ug/Kg		6/6/2016 15:26
2-Hexanone	< 12.2	ug/Kg		6/6/2016 15:26
4-Methyl-2-pentanone	< 12.2	ug/Kg		6/6/2016 15:26
Acetone	< 24.4 UJ	ug/Kg		6/6/2016 15:26
Benzene	< 4.88	ug/Kg		6/6/2016 15:26
Bromochloromethane	< 12.2	ug/Kg		6/6/2016 15:26
Bromodichloromethane	< 4.88	ug/Kg		6/6/2016 15:26
Bromoform	< 12.2	ug/Kg		6/6/2016 15:26
Bromomethane	< 4.88	ug/Kg		6/6/2016 15:26
Carbon disulfide	**4.40**	ug/Kg	J	6/6/2016 15:26
Carbon Tetrachloride	< 4.88	ug/Kg		6/6/2016 15:26
Chlorobenzene	< 4.88	ug/Kg		6/6/2016 15:26

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Report Prepared Tuesday, June 07, 2016

MKP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation Bottom 2
Lab Sample ID: 162207-01 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

Chloroethane	< 4.88	ug/Kg	6/6/2016	15:26
Chloroform	< 4.88	ug/Kg	6/6/2016	15:26
Chloromethane	< 4.88	ug/Kg	6/6/2016	15:26
cis-1,2-Dichloroethene	< 4.88	ug/Kg	6/6/2016	15:26
cis-1,3-Dichloropropene	< 4.88	ug/Kg	6/6/2016	15:26
Cyclohexane	< 24.4	ug/Kg	6/6/2016	15:26
Dibromochloromethane	< 4.88	ug/Kg	6/6/2016	15:26
Dichlorodifluoromethane	< 4.88	ug/Kg	6/6/2016	15:26
Ethylbenzene	**5.98**	ug/Kg	6/6/2016	15:26
Freon 113	< 4.88	ug/Kg	6/6/2016	15:26
Isopropylbenzene	**68.4**	ug/Kg	6/6/2016	15:26
m,p-Xylene	**7.36**	ug/Kg	6/6/2016	15:26
Methyl acetate	< 4.88	ug/Kg	6/6/2016	15:26
Methyl tert-butyl Ether	< 4.88	ug/Kg	6/6/2016	15:26
Methylcyclohexane	**45.4**	ug/Kg	6/6/2016	15:26
Methylene chloride	< 12.2	ug/Kg	6/6/2016	15:26
o-Xylene	**156**	ug/Kg	6/6/2016	15:26
Styrene	< 12.2	ug/Kg	6/6/2016	15:26
Tetrachloroethene	**9.61**	ug/Kg	6/6/2016	15:26
Toluene	< 4.88	ug/Kg	6/6/2016	15:26
trans-1,2-Dichloroethene	< 4.88	ug/Kg	6/6/2016	15:26
trans-1,3-Dichloropropene	< 4.88	ug/Kg	6/6/2016	15:26
Trichloroethene	< 4.88	ug/Kg	6/6/2016	15:26
Trichlorofluoromethane	< 4.88	ug/Kg	6/6/2016	15:26
Vinyl chloride	< 4.88	ug/Kg	6/6/2016	15:26

Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation Bottom 2

Lab Sample ID: 162207-01 **Date Sampled:** 5/31/2016

Matrix: Soil **Date Received:** 5/31/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**98.2**	85.4 - 122		6/6/2016	15:26
4-Bromofluorobenzene	**109**	81.1 - 115		6/6/2016	15:26
Pentafluorobenzene	**97.2**	90.7 - 109		6/6/2016	15:26
Toluene-D8	**109**	88.5 - 110		6/6/2016	15:26

Method Reference(s): EPA 8260C
EPA 5035

Data File: x32980.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation East
Lab Sample ID: 162207-02 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 3.97	ug/Kg		6/4/2016 15:38
1,1,2,2-Tetrachloroethane	< 3.97	ug/Kg		6/4/2016 15:38
1,1,2-Trichloroethane	< 3.97	ug/Kg		6/4/2016 15:38
1,1-Dichloroethane	< 3.97	ug/Kg		6/4/2016 15:38
1,1-Dichloroethene	< 3.97	ug/Kg		6/4/2016 15:38
1,2,3-Trichlorobenzene	< 9.92	ug/Kg		6/4/2016 15:38
1,2,4-Trichlorobenzene	< 9.92	ug/Kg		6/4/2016 15:38
1,2-Dibromo-3-Chloropropane	< 19.8	ug/Kg		6/4/2016 15:38
1,2-Dibromoethane	< 3.97	ug/Kg		6/4/2016 15:38
1,2-Dichlorobenzene	< 3.97	ug/Kg		6/4/2016 15:38
1,2-Dichloroethane	< 3.97	ug/Kg		6/4/2016 15:38
1,2-Dichloropropane	< 3.97	ug/Kg		6/4/2016 15:38
1,3-Dichlorobenzene	< 3.97	ug/Kg		6/4/2016 15:38
1,4-Dichlorobenzene	< 3.97	ug/Kg		6/4/2016 15:38
1,4-dioxane	~~< 39.7~~	ug/Kg	R	6/4/2016 15:38
2-Butanone	< 19.8	ug/Kg		6/4/2016 15:38
2-Hexanone	< 9.92	ug/Kg		6/4/2016 15:38
4-Methyl-2-pentanone	< 9.92	ug/Kg		6/4/2016 15:38
Acetone	**34.9**	ug/Kg	J	6/4/2016 15:38
Benzene	< 3.97	ug/Kg		6/4/2016 15:38
Bromochloromethane	< 9.92	ug/Kg		6/4/2016 15:38
Bromodichloromethane	< 3.97	ug/Kg		6/4/2016 15:38
Bromoform	< 9.92	ug/Kg		6/4/2016 15:38
Bromomethane	< 3.97	ug/Kg		6/4/2016 15:38
Carbon disulfide	< 3.97	ug/Kg		6/4/2016 15:38
Carbon Tetrachloride	< 3.97	ug/Kg		6/4/2016 15:38
Chlorobenzene	< 3.97	ug/Kg		6/4/2016 15:38

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Report Prepared Tuesday, June 07, 2016

MKP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation East		
Lab Sample ID:	162207-02	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

Chloroethane	< 3.97	ug/Kg	6/4/2016	15:38
Chloroform	< 3.97	ug/Kg	6/4/2016	15:38
Chloromethane	< 3.97	ug/Kg	6/4/2016	15:38
cis-1,2-Dichloroethene	< 3.97	ug/Kg	6/4/2016	15:38
cis-1,3-Dichloropropene	< 3.97	ug/Kg	6/4/2016	15:38
Cyclohexane	< 19.8	ug/Kg	6/4/2016	15:38
Dibromochloromethane	< 3.97	ug/Kg	6/4/2016	15:38
Dichlorodifluoromethane	< 3.97	ug/Kg	6/4/2016	15:38
Ethylbenzene	< 3.97	ug/Kg	6/4/2016	15:38
Freon 113	< 3.97	ug/Kg	6/4/2016	15:38
Isopropylbenzene	< 3.97	ug/Kg	6/4/2016	15:38
m,p-Xylene	< 3.97	ug/Kg	6/4/2016	15:38
Methyl acetate	< 3.97	ug/Kg	6/4/2016	15:38
Methyl tert-butyl Ether	< 3.97	ug/Kg	6/4/2016	15:38
Methylcyclohexane	< 3.97	ug/Kg	6/4/2016	15:38
Methylene chloride	< 9.92	ug/Kg	6/4/2016	15:38
o-Xylene	< 3.97	ug/Kg	6/4/2016	15:38
Styrene	< 9.92	ug/Kg	6/4/2016	15:38
Tetrachloroethene	< 3.97	ug/Kg	6/4/2016	15:38
Toluene	< 3.97	ug/Kg	6/4/2016	15:38
trans-1,2-Dichloroethene	< 3.97	ug/Kg	6/4/2016	15:38
trans-1,3-Dichloropropene	< 3.97	ug/Kg	6/4/2016	15:38
Trichloroethene	< 3.97	ug/Kg	6/4/2016	15:38
Trichlorofluoromethane	< 3.97	ug/Kg	6/4/2016	15:38
Vinyl chloride	< 3.97	ug/Kg	6/4/2016	15:38

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation East
Lab Sample ID: 162207-02 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**93.9**	85.4 - 122		6/4/2016	15:38
4-Bromofluorobenzene	**97.7**	81.1 - 115		6/4/2016	15:38
Pentafluorobenzene	**100**	90.7 - 109		6/4/2016	15:38
Toluene-D8	**97.8**	88.5 - 110		6/4/2016	15:38

Method Reference(s): EPA 8260C
EPA 5035
Data File: x32943.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation South
Lab Sample ID: 162207-03 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 4.50	ug/Kg		6/4/2016 15:14
1,1,2,2-Tetrachloroethane	< 4.50	ug/Kg		6/4/2016 15:14
1,1,2-Trichloroethane	< 4.50	ug/Kg		6/4/2016 15:14
1,1-Dichloroethane	< 4.50	ug/Kg		6/4/2016 15:14
1,1-Dichloroethene	< 4.50	ug/Kg		6/4/2016 15:14
1,2,3-Trichlorobenzene	< 11.2	ug/Kg		6/4/2016 15:14
1,2,4-Trichlorobenzene	< 11.2	ug/Kg		6/4/2016 15:14
1,2-Dibromo-3-Chloropropane	< 22.5	ug/Kg		6/4/2016 15:14
1,2-Dibromoethane	< 4.50	ug/Kg		6/4/2016 15:14
1,2-Dichlorobenzene	< 4.50	ug/Kg		6/4/2016 15:14
1,2-Dichloroethane	< 4.50	ug/Kg		6/4/2016 15:14
1,2-Dichloropropane	< 4.50	ug/Kg		6/4/2016 15:14
1,3-Dichlorobenzene	< 4.50	ug/Kg		6/4/2016 15:14
1,4-Dichlorobenzene	< 4.50	ug/Kg		6/4/2016 15:14
1,4-dioxane	~~< 45.0~~ R	ug/Kg		6/4/2016 15:14
2-Butanone	**12.1**	ug/Kg	J	6/4/2016 15:14
2-Hexanone	< 11.2	ug/Kg		6/4/2016 15:14
4-Methyl-2-pentanone	< 11.2	ug/Kg		6/4/2016 15:14
Acetone	**59.9** J	ug/Kg		6/4/2016 15:14
Benzene	< 4.50	ug/Kg		6/4/2016 15:14
Bromochloromethane	< 11.2	ug/Kg		6/4/2016 15:14
Bromodichloromethane	< 4.50	ug/Kg		6/4/2016 15:14
Bromoform	< 11.2	ug/Kg		6/4/2016 15:14
Bromomethane	< 4.50	ug/Kg		6/4/2016 15:14
Carbon disulfide	**13.1**	ug/Kg		6/4/2016 15:14
Carbon Tetrachloride	< 4.50	ug/Kg		6/4/2016 15:14
Chlorobenzene	< 4.50	ug/Kg		6/4/2016 15:14

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Tuesday, June 07, 2016

MAP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation South
Lab Sample ID: 162207-03 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

Chloroethane	< 4.50	ug/Kg	6/4/2016	15:14
Chloroform	< 4.50	ug/Kg	6/4/2016	15:14
Chloromethane	< 4.50	ug/Kg	6/4/2016	15:14
cis-1,2-Dichloroethene	< 4.50	ug/Kg	6/4/2016	15:14
cis-1,3-Dichloropropene	< 4.50	ug/Kg	6/4/2016	15:14
Cyclohexane	< 22.5	ug/Kg	6/4/2016	15:14
Dibromochloromethane	< 4.50	ug/Kg	6/4/2016	15:14
Dichlorodifluoromethane	< 4.50	ug/Kg	6/4/2016	15:14
Ethylbenzene	< 4.50	ug/Kg	6/4/2016	15:14
Freon 113	< 4.50	ug/Kg	6/4/2016	15:14
Isopropylbenzene	< 4.50	ug/Kg	6/4/2016	15:14
m,p-Xylene	< 4.50	ug/Kg	6/4/2016	15:14
Methyl acetate	< 4.50	ug/Kg	6/4/2016	15:14
Methyl tert-butyl Ether	< 4.50	ug/Kg	6/4/2016	15:14
Methylcyclohexane	< 4.50	ug/Kg	6/4/2016	15:14
Methylene chloride	< 11.2	ug/Kg	6/4/2016	15:14
o-Xylene	< 4.50	ug/Kg	6/4/2016	15:14
Styrene	< 11.2	ug/Kg	6/4/2016	15:14
Tetrachloroethene	< 4.50	ug/Kg	6/4/2016	15:14
Toluene	< 4.50	ug/Kg	6/4/2016	15:14
trans-1,2-Dichloroethene	< 4.50	ug/Kg	6/4/2016	15:14
trans-1,3-Dichloropropene	< 4.50	ug/Kg	6/4/2016	15:14
Trichloroethene	< 4.50	ug/Kg	6/4/2016	15:14
Trichlorofluoromethane	< 4.50	ug/Kg	6/4/2016	15:14
Vinyl chloride	< 4.50	ug/Kg	6/4/2016	15:14

Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation South
Lab Sample ID: 162207-03 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**97.2**	85.4 - 122		6/4/2016	15:14
4-Bromofluorobenzene	**91.9**	81.1 - 115		6/4/2016	15:14
Pentafluorobenzene	**99.4**	90.7 - 109		6/4/2016	15:14
Toluene-D8	**93.1**	88.5 - 110		6/4/2016	15:14

Method Reference(s): EPA 8260C
EPA 5035
Data File: x32942.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation North
Lab Sample ID: 162207-04
Matrix: Soil

Date Sampled: 5/31/2016
Date Received: 5/31/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 4.71	ug/Kg		6/4/2016 14:50
1,1,2,2-Tetrachloroethane	< 4.71	ug/Kg		6/4/2016 14:50
1,1,2-Trichloroethane	< 4.71	ug/Kg		6/4/2016 14:50
1,1-Dichloroethane	< 4.71	ug/Kg		6/4/2016 14:50
1,1-Dichloroethene	< 4.71	ug/Kg		6/4/2016 14:50
1,2,3-Trichlorobenzene	< 11.8	ug/Kg		6/4/2016 14:50
1,2,4-Trichlorobenzene	< 11.8	ug/Kg		6/4/2016 14:50
1,2-Dibromo-3-Chloropropane	< 23.6	ug/Kg		6/4/2016 14:50
1,2-Dibromoethane	< 4.71	ug/Kg		6/4/2016 14:50
1,2-Dichlorobenzene	< 4.71	ug/Kg		6/4/2016 14:50
1,2-Dichloroethane	< 4.71	ug/Kg		6/4/2016 14:50
1,2-Dichloropropane	< 4.71	ug/Kg		6/4/2016 14:50
1,3-Dichlorobenzene	< 4.71	ug/Kg		6/4/2016 14:50
1,4-Dichlorobenzene	< 4.71	ug/Kg		6/4/2016 14:50
1,4-dioxane	< ~~4.71~~ R	ug/Kg		6/4/2016 14:50
2-Butanone	< 23.6	ug/Kg		6/4/2016 14:50
2-Hexanone	< 11.8	ug/Kg		6/4/2016 14:50
4-Methyl-2-pentanone	< 11.8	ug/Kg		6/4/2016 14:50
Acetone	< 23.6 UJ	ug/Kg		6/4/2016 14:50
Benzene	< 4.71	ug/Kg		6/4/2016 14:50
Bromochloromethane	< 11.8	ug/Kg		6/4/2016 14:50
Bromodichloromethane	< 4.71	ug/Kg		6/4/2016 14:50
Bromoform	< 11.8	ug/Kg		6/4/2016 14:50
Bromomethane	< 4.71	ug/Kg		6/4/2016 14:50
Carbon disulfide	4.48	ug/Kg	J	6/4/2016 14:50
Carbon Tetrachloride	< 4.71	ug/Kg		6/4/2016 14:50
Chlorobenzene	< 4.71	ug/Kg		6/4/2016 14:50

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Report Prepared Tuesday, June 07, 2016

MKP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation North
Lab Sample ID: 162207-04 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

Chloroethane	< 4.71	ug/Kg	6/4/2016	14:50
Chloroform	< 4.71	ug/Kg	6/4/2016	14:50
Chloromethane	< 4.71	ug/Kg	6/4/2016	14:50
cis-1,2-Dichloroethene	< 4.71	ug/Kg	6/4/2016	14:50
cis-1,3-Dichloropropene	< 4.71	ug/Kg	6/4/2016	14:50
Cyclohexane	< 23.6	ug/Kg	6/4/2016	14:50
Dibromochloromethane	< 4.71	ug/Kg	6/4/2016	14:50
Dichlorodifluoromethane	< 4.71	ug/Kg	6/4/2016	14:50
Ethylbenzene	< 4.71	ug/Kg	6/4/2016	14:50
Freon 113	< 4.71	ug/Kg	6/4/2016	14:50
Isopropylbenzene	< 4.71	ug/Kg	6/4/2016	14:50
m,p-Xylene	< 4.71	ug/Kg	6/4/2016	14:50
Methyl acetate	< 4.71	ug/Kg	6/4/2016	14:50
Methyl tert-butyl Ether	< 4.71	ug/Kg	6/4/2016	14:50
Methylcyclohexane	< 4.71	ug/Kg	6/4/2016	14:50
Methylene chloride	< 11.8	ug/Kg	6/4/2016	14:50
o-Xylene	< 4.71	ug/Kg	6/4/2016	14:50
Styrene	< 11.8	ug/Kg	6/4/2016	14:50
Tetrachloroethene	**8.88**	ug/Kg	6/4/2016	14:50
Toluene	< 4.71	ug/Kg	6/4/2016	14:50
trans-1,2-Dichloroethene	< 4.71	ug/Kg	6/4/2016	14:50
trans-1,3-Dichloropropene	< 4.71	ug/Kg	6/4/2016	14:50
Trichloroethene	< 4.71	ug/Kg	6/4/2016	14:50
Trichlorofluoromethane	< 4.71	ug/Kg	6/4/2016	14:50
Vinyl chloride	< 4.71	ug/Kg	6/4/2016	14:50

Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation North
Lab Sample ID: 162207-04 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**96.4**	85.4 - 122		6/4/2016	14:50
4-Bromofluorobenzene	**91.1**	81.1 - 115		6/4/2016	14:50
Pentafluorobenzene	**101**	90.7 - 109		6/4/2016	14:50
Toluene-D8	**94.1**	88.5 - 110		6/4/2016	14:50

Method Reference(s): EPA 8260C
EPA 5035
Data File: x32941.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Trip Blank T-708
Lab Sample ID: 162207-05 **Date Sampled:** 5/31/2016
Matrix: Water **Date Received:** 5/31/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		6/1/2016 20:38
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		6/1/2016 20:38
1,1,2-Trichloroethane	< 2.00	ug/L		6/1/2016 20:38
1,1-Dichloroethane	< 2.00	ug/L		6/1/2016 20:38
1,1-Dichloroethene	< 2.00	ug/L		6/1/2016 20:38
1,2,3-Trichlorobenzene	< 5.00	ug/L		6/1/2016 20:38
1,2,4-Trichlorobenzene	< 5.00	ug/L		6/1/2016 20:38
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		6/1/2016 20:38
1,2-Dibromoethane	< 2.00	ug/L		6/1/2016 20:38
1,2-Dichlorobenzene	< 2.00	ug/L		6/1/2016 20:38
1,2-Dichloroethane	< 2.00	ug/L		6/1/2016 20:38
1,2-Dichloropropane	< 2.00	ug/L		6/1/2016 20:38
1,3-Dichlorobenzene	< 2.00	ug/L		6/1/2016 20:38
1,4-Dichlorobenzene	< 2.00	ug/L		6/1/2016 20:38
1,4-dioxane	< ~~20.0~~ R	ug/L		6/1/2016 20:38
2-Butanone	< 10.0 UJ	ug/L		6/1/2016 20:38
2-Hexanone	< 5.00	ug/L		6/1/2016 20:38
4-Methyl-2-pentanone	< 5.00	ug/L		6/1/2016 20:38
Acetone	< 10.0 UJ	ug/L		6/1/2016 20:38
Benzene	< 1.00	ug/L		6/1/2016 20:38
Bromochloromethane	< 5.00	ug/L		6/1/2016 20:38
Bromodichloromethane	< 2.00	ug/L		6/1/2016 20:38
Bromoform	< 5.00	ug/L		6/1/2016 20:38
Bromomethane	< 2.00	ug/L		6/1/2016 20:38
Carbon disulfide	< 2.00	ug/L		6/1/2016 20:38
Carbon Tetrachloride	< 2.00	ug/L		6/1/2016 20:38
Chlorobenzene	< 2.00	ug/L		6/1/2016 20:38

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Report Prepared Tuesday, June 07, 2016

MKP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Trip Blank T-708
Lab Sample ID: 162207-05
Matrix: Water
Date Sampled: 5/31/2016
Date Received: 5/31/2016

Chloroethane	< 2.00	ug/L		6/1/2016 20:38
Chloroform	< 2.00	ug/L		6/1/2016 20:38
Chloromethane	< 2.00	ug/L		6/1/2016 20:38
cis-1,2-Dichloroethene	< 2.00	ug/L		6/1/2016 20:38
cis-1,3-Dichloropropene	< 2.00	ug/L		6/1/2016 20:38
Cyclohexane	< 10.0	ug/L		6/1/2016 20:38
Dibromochloromethane	< 2.00	ug/L		6/1/2016 20:38
Dichlorodifluoromethane	< 2.00	ug/L		6/1/2016 20:38
Ethylbenzene	< 2.00	ug/L		6/1/2016 20:38
Freon 113	< 2.00	ug/L		6/1/2016 20:38
Isopropylbenzene	< 2.00	ug/L		6/1/2016 20:38
m,p-Xylene	< 2.00	ug/L		6/1/2016 20:38
Methyl acetate	< 2.00	ug/L		6/1/2016 20:38
Methyl tert-butyl Ether	< 2.00	ug/L		6/1/2016 20:38
Methylcyclohexane	< 2.00	ug/L		6/1/2016 20:38
Methylene chloride	< 5.00	ug/L		6/1/2016 20:38
o-Xylene	< 2.00	ug/L		6/1/2016 20:38
Styrene	< 5.00	ug/L		6/1/2016 20:38
Tetrachloroethene	< 2.00	ug/L		6/1/2016 20:38
Toluene	< 2.00	ug/L		6/1/2016 20:38
trans-1,2-Dichloroethene	< 2.00	ug/L		6/1/2016 20:38
trans-1,3-Dichloropropene	< 2.00	ug/L		6/1/2016 20:38
Trichloroethene	< 2.00	ug/L		6/1/2016 20:38
Trichlorofluoromethane	< 2.00	ug/L		6/1/2016 20:38
Vinyl chloride	< 2.00	ug/L		6/1/2016 20:38

Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Trip Blank T-708
Lab Sample ID: 162207-05 **Date Sampled:** 5/31/2016
Matrix: Water **Date Received:** 5/31/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**99.4**	81.1 - 122		6/1/2016	20:38
4-Bromofluorobenzene	**99.3**	78.7 - 116		6/1/2016	20:38
Pentafluorobenzene	**98.5**	88.6 - 112		6/1/2016	20:38
Toluene-D8	**103**	88.9 - 110		6/1/2016	20:38

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x32814.D

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Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162142

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation Bottom
Lab Sample ID: 162142-01
Matrix: Soil
Date Sampled: 5/26/2016
Date Received: 5/26/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 624	ug/Kg		6/2/2016 16:28
1,1,2,2-Tetrachloroethane	< 624	ug/Kg		6/2/2016 16:28
1,1,2-Trichloroethane	< 624	ug/Kg		6/2/2016 16:28
1,1-Dichloroethane	< 624	ug/Kg		6/2/2016 16:28
1,1-Dichloroethene	< 624	ug/Kg		6/2/2016 16:28
1,2,3-Trichlorobenzene	< 1560	ug/Kg		6/2/2016 16:28
1,2,4-Trichlorobenzene	< 1560	ug/Kg		6/2/2016 16:28
1,2-Dibromo-3-Chloropropane	< 3120	ug/Kg		6/2/2016 16:28
1,2-Dibromoethane	< 624	ug/Kg		6/2/2016 16:28
1,2-Dichlorobenzene	< 624	ug/Kg		6/2/2016 16:28
1,2-Dichloroethane	< 624	ug/Kg		6/2/2016 16:28
1,2-Dichloropropane	< 624	ug/Kg		6/2/2016 16:28
1,3-Dichlorobenzene	< 624	ug/Kg		6/2/2016 16:28
1,4-Dichlorobenzene	< 624	ug/Kg		6/2/2016 16:28
1,4-dioxane	< ~~6240~~ R	ug/Kg		6/2/2016 16:28
2-Butanone	< 3120 UJ	ug/Kg		6/2/2016 16:28
2-Hexanone	< 1560	ug/Kg		6/2/2016 16:28
4-Methyl-2-pentanone	< 1560	ug/Kg		6/2/2016 16:28
Acetone	< 3120 UJ	ug/Kg		6/2/2016 16:28
Benzene	< 624	ug/Kg		6/2/2016 16:28
Bromochloromethane	< 1560	ug/Kg		6/2/2016 16:28
Bromodichloromethane	< 624	ug/Kg		6/2/2016 16:28
Bromoform	< 1560	ug/Kg		6/2/2016 16:28
Bromomethane	< 624 UJ	ug/Kg		6/2/2016 16:28
Carbon disulfide	< 624	ug/Kg		6/2/2016 16:28
Carbon Tetrachloride	< 624	ug/Kg		6/2/2016 16:28
Chlorobenzene	< 624	ug/Kg		6/2/2016 16:28

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Report Prepared Friday, June 03, 2016

MKP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162142

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation Bottom
Lab Sample ID: 162142-01 **Date Sampled:** 5/26/2016
Matrix: Soil **Date Received:** 5/26/2016

Chloroethane	< 624	ug/Kg	6/2/2016	16:28
Chloroform	< 624	ug/Kg	6/2/2016	16:28
Chloromethane	< 624	ug/Kg	6/2/2016	16:28
cis-1,2-Dichloroethene	< 624	ug/Kg	6/2/2016	16:28
cis-1,3-Dichloropropene	< 624	ug/Kg	6/2/2016	16:28
Cyclohexane	< 3120	ug/Kg	6/2/2016	16:28
Dibromochloromethane	< 624	ug/Kg	6/2/2016	16:28
Dichlorodifluoromethane	< 624	ug/Kg	6/2/2016	16:28
Ethylbenzene	**2240**	ug/Kg	6/2/2016	16:28
Freon 113	< 624	ug/Kg	6/2/2016	16:28
Isopropylbenzene	**1190**	ug/Kg	6/2/2016	16:28
m,p-Xylene	**1050**	ug/Kg	6/2/2016	16:28
Methyl acetate	< 624	ug/Kg	6/2/2016	16:28
Methyl tert-butyl Ether	< 624	ug/Kg	6/2/2016	16:28
Methylcyclohexane	**753**	ug/Kg	6/2/2016	16:28
Methylene chloride	< 1560	ug/Kg	6/2/2016	16:28
o-Xylene	**1630**	ug/Kg	6/2/2016	16:28
Styrene	< 1560	ug/Kg	6/2/2016	16:28
Tetrachloroethene	< 624	ug/Kg	6/2/2016	16:28
Toluene	**899**	ug/Kg	6/2/2016	16:28
trans-1,2-Dichloroethene	< 624	ug/Kg	6/2/2016	16:28
trans-1,3-Dichloropropene	< 624	ug/Kg	6/2/2016	16:28
Trichloroethene	< 624	ug/Kg	6/2/2016	16:28
Trichlorofluoromethane	< 624	ug/Kg	6/2/2016	16:28
Vinyl chloride	< 624	ug/Kg	6/2/2016	16:28

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Report Prepared Friday, June 03, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162142

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation Bottom
Lab Sample ID: 162142-01 **Date Sampled:** 5/26/2016
Matrix: Soil **Date Received:** 5/26/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**93.1**	85.4 - 122		6/2/2016	16:28
4-Bromofluorobenzene	**110**	81.1 - 115		6/2/2016	16:28
Pentafluorobenzene	**101**	90.7 - 109		6/2/2016	16:28
Toluene-D8	**106**	88.5 - 110		6/2/2016	16:28

Method Reference(s): EPA 8260C
EPA 5035
Data File: x32858.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162142

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Trip Blank (T-707)
Lab Sample ID: 162142-02 **Date Sampled:** 5/26/2016
Matrix: Water **Date Received:** 5/26/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		6/1/2016 16:45
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		6/1/2016 16:45
1,1,2-Trichloroethane	< 2.00	ug/L		6/1/2016 16:45
1,1-Dichloroethane	< 2.00	ug/L		6/1/2016 16:45
1,1-Dichloroethene	< 2.00	ug/L		6/1/2016 16:45
1,2,3-Trichlorobenzene	< 5.00	ug/L		6/1/2016 16:45
1,2,4-Trichlorobenzene	< 5.00	ug/L		6/1/2016 16:45
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		6/1/2016 16:45
1,2-Dibromoethane	< 2.00	ug/L		6/1/2016 16:45
1,2-Dichlorobenzene	< 2.00	ug/L		6/1/2016 16:45
1,2-Dichloroethane	< 2.00	ug/L		6/1/2016 16:45
1,2-Dichloropropane	< 2.00	ug/L		6/1/2016 16:45
1,3-Dichlorobenzene	< 2.00	ug/L		6/1/2016 16:45
1,4-Dichlorobenzene	< 2.00	ug/L		6/1/2016 16:45
1,4-dioxane	~~< 20.0~~ R	ug/L		6/1/2016 16:45
2-Butanone	< 10.0 UJ	ug/L		6/1/2016 16:45
2-Hexanone	< 5.00	ug/L		6/1/2016 16:45
4-Methyl-2-pentanone	< 5.00	ug/L		6/1/2016 16:45
Acetone	< 10.0 UJ	ug/L		6/1/2016 16:45
Benzene	< 1.00	ug/L		6/1/2016 16:45
Bromochloromethane	< 5.00	ug/L		6/1/2016 16:45
Bromodichloromethane	< 2.00	ug/L		6/1/2016 16:45
Bromoform	< 5.00	ug/L		6/1/2016 16:45
Bromomethane	< 2.00	ug/L		6/1/2016 16:45
Carbon disulfide	< 2.00	ug/L		6/1/2016 16:45
Carbon Tetrachloride	< 2.00	ug/L		6/1/2016 16:45
Chlorobenzene	< 2.00	ug/L		6/1/2016 16:45

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Report Prepared Friday, June 03, 2016

MMP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162142

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Trip Blank (T-707)
Lab Sample ID: 162142-02 **Date Sampled:** 5/26/2016
Matrix: Water **Date Received:** 5/26/2016

Chloroethane	< 2.00	ug/L	6/1/2016	16:45
Chloroform	< 2.00	ug/L	6/1/2016	16:45
Chloromethane	< 2.00	ug/L	6/1/2016	16:45
cis-1,2-Dichloroethene	< 2.00	ug/L	6/1/2016	16:45
cis-1,3-Dichloropropene	< 2.00	ug/L	6/1/2016	16:45
Cyclohexane	< 10.0	ug/L	6/1/2016	16:45
Dibromochloromethane	< 2.00	ug/L	6/1/2016	16:45
Dichlorodifluoromethane	< 2.00	ug/L	6/1/2016	16:45
Ethylbenzene	< 2.00	ug/L	6/1/2016	16:45
Freon 113	< 2.00	ug/L	6/1/2016	16:45
Isopropylbenzene	< 2.00	ug/L	6/1/2016	16:45
m,p-Xylene	< 2.00	ug/L	6/1/2016	16:45
Methyl acetate	< 2.00	ug/L	6/1/2016	16:45
Methyl tert-butyl Ether	< 2.00	ug/L	6/1/2016	16:45
Methylcyclohexane	< 2.00	ug/L	6/1/2016	16:45
Methylene chloride	< 5.00	ug/L	6/1/2016	16:45
o-Xylene	< 2.00	ug/L	6/1/2016	16:45
Styrene	< 5.00	ug/L	6/1/2016	16:45
Tetrachloroethene	< 2.00	ug/L	6/1/2016	16:45
Toluene	< 2.00	ug/L	6/1/2016	16:45
trans-1,2-Dichloroethene	< 2.00	ug/L	6/1/2016	16:45
trans-1,3-Dichloropropene	< 2.00	ug/L	6/1/2016	16:45
Trichloroethene	< 2.00	ug/L	6/1/2016	16:45
Trichlorofluoromethane	< 2.00	ug/L	6/1/2016	16:45
Vinyl chloride	< 2.00	ug/L	6/1/2016	16:45

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162142

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Trip Blank (T-707)
Lab Sample ID: 162142-02 **Date Sampled:** 5/26/2016
Matrix: Water **Date Received:** 5/26/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**97.6**	81.1 - 122		6/1/2016	16:45
4-Bromofluorobenzene	**97.5**	78.7 - 116		6/1/2016	16:45
Pentafluorobenzene	**99.0**	88.6 - 112		6/1/2016	16:45
Toluene-D8	**101**	88.9 - 110		6/1/2016	16:45

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x32804.D

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Report Prepared Friday, June 03, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162221

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation West
Lab Sample ID: 162221-01
Matrix: Soil
Date Sampled: 6/1/2016
Date Received: 6/1/2016

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 334	ug/Kg		6/6/2016 20:27
1,2,4,5-Tetrachlorobenzene	< 334	ug/Kg		6/6/2016 20:27
1,2,4-Trichlorobenzene	< 334	ug/Kg		6/6/2016 20:27
1,2-Dichlorobenzene	< 334	ug/Kg		6/6/2016 20:27
1,3-Dichlorobenzene	< 334	ug/Kg		6/6/2016 20:27
1,4-Dichlorobenzene	< 334	ug/Kg		6/6/2016 20:27
2,2-Oxybis (1-chloropropane)	< 334	ug/Kg		6/6/2016 20:27
2,3,4,6-Tetrachlorophenol	< 334	ug/Kg		6/6/2016 20:27
2,4,5-Trichlorophenol	< 667	ug/Kg		6/6/2016 20:27
2,4,6-Trichlorophenol	< 334	ug/Kg		6/6/2016 20:27
2,4-Dichlorophenol	< 334	ug/Kg		6/6/2016 20:27
2,4-Dimethylphenol	< 334	ug/Kg		6/6/2016 20:27
2,4-Dinitrophenol	< 667	ug/Kg		6/6/2016 20:27
2,4-Dinitrotoluene	< 334	ug/Kg		6/6/2016 20:27
2,6-Dinitrotoluene	< 334	ug/Kg		6/6/2016 20:27
2-Chloronaphthalene	< 334	ug/Kg		6/6/2016 20:27
2-Chlorophenol	< 334	ug/Kg		6/6/2016 20:27
2-Methylnapthalene	< 334	ug/Kg		6/6/2016 20:27
2-Methylphenol	< 334	ug/Kg		6/6/2016 20:27
2-Nitroaniline	< 667	ug/Kg		6/6/2016 20:27
2-Nitrophenol	< 334	ug/Kg		6/6/2016 20:27
3&4-Methylphenol	< 334	ug/Kg		6/6/2016 20:27
3,3'-Dichlorobenzidine	< 334	ug/Kg		6/6/2016 20:27
3-Nitroaniline	< 667	ug/Kg		6/6/2016 20:27
4,6-Dinitro-2-methylphenol	< 667	ug/Kg		6/6/2016 20:27
4-Bromophenyl phenyl ether	< 334	ug/Kg		6/6/2016 20:27
4-Chloro-3-methylphenol	< 334	ug/Kg		6/6/2016 20:27

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162221

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation West
Lab Sample ID: 162221-01 **Date Sampled:** 6/1/2016
Matrix: Soil **Date Received:** 6/1/2016

4-Chloroaniline	< 334	ug/Kg	6/6/2016	20:27
4-Chlorophenyl phenyl ether	< 334	ug/Kg	6/6/2016	20:27
4-Nitroaniline	< 667	ug/Kg	6/6/2016	20:27
4-Nitrophenol	< 667	ug/Kg	6/6/2016	20:27
Acenaphthene	< 334	ug/Kg	6/6/2016	20:27
Acenaphthylene	< 334	ug/Kg	6/6/2016	20:27
Acetophenone	< 334	ug/Kg	6/6/2016	20:27
Anthracene	**366**	ug/Kg	6/6/2016	20:27
Atrazine	< 334 WJ	ug/Kg	6/6/2016	20:27
Benzaldehyde	< 334	ug/Kg	6/6/2016	20:27
Benzo (a) anthracene	**1550**	ug/Kg	6/6/2016	20:27
Benzo (a) pyrene	**1500**	ug/Kg	6/6/2016	20:27
Benzo (b) fluoranthene	**1540**	ug/Kg	6/6/2016	20:27
Benzo (g,h,i) perylene	**932**	ug/Kg	6/6/2016	20:27
Benzo (k) fluoranthene	**1060**	ug/Kg	6/6/2016	20:27
Bis (2-chloroethoxy) methane	< 334	ug/Kg	6/6/2016	20:27
Bis (2-chloroethyl) ether	< 334	ug/Kg	6/6/2016	20:27
Bis (2-ethylhexyl) phthalate	< 334	ug/Kg	6/6/2016	20:27
Butylbenzylphthalate	< 334	ug/Kg	6/6/2016	20:27
Caprolactam	< 334	ug/Kg	6/6/2016	20:27
Carbazole	< 334	ug/Kg	6/6/2016	20:27
Chrysene	**1740**	ug/Kg	6/6/2016	20:27
Dibenz (a,h) anthracene	**349**	ug/Kg	6/6/2016	20:27
Dibenzofuran	< 334	ug/Kg	6/6/2016	20:27
Diethyl phthalate	< 334	ug/Kg	6/6/2016	20:27
Dimethyl phthalate	< 667	ug/Kg	6/6/2016	20:27
Di-n-butyl phthalate	< 334	ug/Kg	6/6/2016	20:27
Di-n-octylphthalate	< 334	ug/Kg	6/6/2016	20:27
Fluoranthene	**2620**	ug/Kg	6/6/2016	20:27
Fluorene	< 334	ug/Kg	6/6/2016	20:27

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Report Prepared Wednesday, June 08, 2016

WP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162221

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation West
Lab Sample ID: 162221-01 **Date Sampled:** 6/1/2016
Matrix: Soil **Date Received:** 6/1/2016

Hexachlorobenzene	< 334	ug/Kg			6/6/2016 20:27
Hexachlorobutadiene	< 334	ug/Kg			6/6/2016 20:27
Hexachlorocyclopentadiene	< 334 UJ	ug/Kg			6/6/2016 20:27
Hexachloroethane	< 334	ug/Kg			6/6/2016 20:27
Indeno (1,2,3-cd) pyrene	**1160**	ug/Kg			6/6/2016 20:27
Isophorone	< 334	ug/Kg			6/6/2016 20:27
Naphthalene	< 334	ug/Kg			6/6/2016 20:27
Nitrobenzene	< 334	ug/Kg			6/6/2016 20:27
N-Nitroso-di-n-propylamine	< 334	ug/Kg			6/6/2016 20:27
N-Nitrosodiphenylamine	< 334	ug/Kg			6/6/2016 20:27
Pentachlorophenol	< 667	ug/Kg			6/6/2016 20:27
Phenanthrene	**1180**	ug/Kg			6/6/2016 20:27
Phenol	< 334	ug/Kg			6/6/2016 20:27
Pyrene	**2400**	ug/Kg			6/6/2016 20:27

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**65.1**	26.8 - 101		6/6/2016 20:27
2-Fluorobiphenyl	**38.4**	34.4 - 98.8		6/6/2016 20:27
2-Fluorophenol	**34.8**	31.4 - 89.7		6/6/2016 20:27
Nitrobenzene-d5	**33.2**	37.1 - 83.6	*	6/6/2016 20:27
Phenol-d5	**36.5**	36.3 - 94.5		6/6/2016 20:27
Terphenyl-d14	**68.0**	51.8 - 112		6/6/2016 20:27

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 6/3/2016
Data File: B12124.D

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Report Prepared Wednesday, June 08, 2016

MRP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation Bottom 2
Lab Sample ID: 162207-01
Matrix: Soil
Date Sampled: 5/31/2016
Date Received: 5/31/2016

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 338	ug/Kg		6/6/2016 19:29
1,2,4,5-Tetrachlorobenzene	< 338	ug/Kg		6/6/2016 19:29
1,2,4-Trichlorobenzene	< 338	ug/Kg		6/6/2016 19:29
1,2-Dichlorobenzene	< 338	ug/Kg		6/6/2016 19:29
1,3-Dichlorobenzene	< 338	ug/Kg		6/6/2016 19:29
1,4-Dichlorobenzene	< 338	ug/Kg		6/6/2016 19:29
2,2-Oxybis (1-chloropropane)	< 338	ug/Kg		6/6/2016 19:29
2,3,4,6-Tetrachlorophenol	< 338	ug/Kg		6/6/2016 19:29
2,4,5-Trichlorophenol	< 675	ug/Kg		6/6/2016 19:29
2,4,6-Trichlorophenol	< 338	ug/Kg		6/6/2016 19:29
2,4-Dichlorophenol	< 338	ug/Kg		6/6/2016 19:29
2,4-Dimethylphenol	< 338	ug/Kg		6/6/2016 19:29
2,4-Dinitrophenol	< 675	ug/Kg		6/6/2016 19:29
2,4-Dinitrotoluene	< 338	ug/Kg		6/6/2016 19:29
2,6-Dinitrotoluene	< 338	ug/Kg		6/6/2016 19:29
2-Chloronaphthalene	< 338	ug/Kg		6/6/2016 19:29
2-Chlorophenol	< 338	ug/Kg		6/6/2016 19:29
2-Methylnapthalene	< 338	ug/Kg		6/6/2016 19:29
2-Methylphenol	< 338	ug/Kg		6/6/2016 19:29
2-Nitroaniline	< 675	ug/Kg		6/6/2016 19:29
2-Nitrophenol	< 338	ug/Kg		6/6/2016 19:29
3&4-Methylphenol	< 338	ug/Kg		6/6/2016 19:29
3,3'-Dichlorobenzidine	< 338	ug/Kg		6/6/2016 19:29
3-Nitroaniline	< 675	ug/Kg		6/6/2016 19:29
4,6-Dinitro-2-methylphenol	< 675	ug/Kg		6/6/2016 19:29
4-Bromophenyl phenyl ether	< 338	ug/Kg		6/6/2016 19:29
4-Chloro-3-methylphenol	< 338	ug/Kg		6/6/2016 19:29

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Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation Bottom 2
Lab Sample ID: 162207-01 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

4-Chloroaniline	< 338	ug/Kg		6/6/2016	19:29
4-Chlorophenyl phenyl ether	< 338	ug/Kg		6/6/2016	19:29
4-Nitroaniline	< 675	ug/Kg		6/6/2016	19:29
4-Nitrophenol	< 675	ug/Kg		6/6/2016	19:29
Acenaphthene	**456**	ug/Kg		6/6/2016	19:29
Acenaphthylene	< 338	ug/Kg		6/6/2016	19:29
Acetophenone	< 338	ug/Kg		6/6/2016	19:29
Anthracene	**677**	ug/Kg		6/6/2016	19:29
Atrazine	< 338 UJ	ug/Kg		6/6/2016	19:29
Benzaldehyde	< 338	ug/Kg		6/6/2016	19:29
Benzo (a) anthracene	**1090**	ug/Kg		6/6/2016	19:29
Benzo (a) pyrene	**1060**	ug/Kg		6/6/2016	19:29
Benzo (b) fluoranthene	**1070**	ug/Kg		6/6/2016	19:29
Benzo (g,h,i) perylene	**647**	ug/Kg		6/6/2016	19:29
Benzo (k) fluoranthene	**727**	ug/Kg		6/6/2016	19:29
Bis (2-chloroethoxy) methane	< 338	ug/Kg		6/6/2016	19:29
Bis (2-chloroethyl) ether	< 338	ug/Kg		6/6/2016	19:29
Bis (2-ethylhexyl) phthalate	< 338	ug/Kg		6/6/2016	19:29
Butylbenzylphthalate	< 338	ug/Kg		6/6/2016	19:29
Caprolactam	< 338	ug/Kg		6/6/2016	19:29
Carbazole	**346**	ug/Kg		6/6/2016	19:29
Chrysene	**1260**	ug/Kg		6/6/2016	19:29
Dibenz (a,h) anthracene	**220**	ug/Kg	J	6/6/2016	19:29
Dibenzofuran	**346**	ug/Kg		6/6/2016	19:29
Diethyl phthalate	< 338	ug/Kg		6/6/2016	19:29
Dimethyl phthalate	< 675	ug/Kg		6/6/2016	19:29
Di-n-butyl phthalate	< 338	ug/Kg		6/6/2016	19:29
Di-n-octylphthalate	< 338	ug/Kg		6/6/2016	19:29
Fluoranthene	**3150**	ug/Kg		6/6/2016	19:29
Fluorene	**613**	ug/Kg		6/6/2016	19:29

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Report Prepared Tuesday, June 07, 2016

MKP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation Bottom 2
Lab Sample ID: 162207-01 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

Hexachlorobenzene	< 338	ug/Kg			6/6/2016 19:29
Hexachlorobutadiene	< 338	ug/Kg			6/6/2016 19:29
Hexachlorocyclopentadiene	< 338	ug/Kg			6/6/2016 19:29
Hexachloroethane	< 338	ug/Kg			6/6/2016 19:29
Indeno (1,2,3-cd) pyrene	**814**	ug/Kg			6/6/2016 19:29
Isophorone	< 338	ug/Kg			6/6/2016 19:29
Naphthalene	**1570**	ug/Kg			6/6/2016 19:29
Nitrobenzene	< 338	ug/Kg			6/6/2016 19:29
N-Nitroso-di-n-propylamine	< 338	ug/Kg			6/6/2016 19:29
N-Nitrosodiphenylamine	< 338	ug/Kg			6/6/2016 19:29
Pentachlorophenol	< 675	ug/Kg		L	6/6/2016 19:29
Phenanthrene	**3330**	ug/Kg			6/6/2016 19:29
Phenol	< 338	ug/Kg			6/6/2016 19:29
Pyrene	**2870**	ug/Kg			6/6/2016 19:29

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**60.9**	26.8 - 101		6/6/2016 19:29
2-Fluorobiphenyl	**47.6**	34.4 - 98.8		6/6/2016 19:29
2-Fluorophenol	**37.2**	31.4 - 89.7		6/6/2016 19:29
Nitrobenzene-d5	**37.7**	37.1 - 83.6		6/6/2016 19:29
Phenol-d5	**38.1**	36.3 - 94.5		6/6/2016 19:29
Terphenyl-d14	**67.4**	51.8 - 112		6/6/2016 19:29

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 6/3/2016
Data File: B12122.D

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation East
Lab Sample ID: 162207-02
Matrix: Soil

Date Sampled: 5/31/2016
Date Received: 5/31/2016

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 362	ug/Kg		6/3/2016 20:47
1,2,4,5-Tetrachlorobenzene	< 362	ug/Kg		6/3/2016 20:47
1,2,4-Trichlorobenzene	< 362	ug/Kg		6/3/2016 20:47
1,2-Dichlorobenzene	< 362	ug/Kg		6/3/2016 20:47
1,3-Dichlorobenzene	< 362	ug/Kg		6/3/2016 20:47
1,4-Dichlorobenzene	< 362	ug/Kg		6/3/2016 20:47
2,2-Oxybis (1-chloropropane)	< 362	ug/Kg		6/3/2016 20:47
2,3,4,6-Tetrachlorophenol	< 362	ug/Kg		6/3/2016 20:47
2,4,5-Trichlorophenol	< 724	ug/Kg		6/3/2016 20:47
2,4,6-Trichlorophenol	< 362	ug/Kg		6/3/2016 20:47
2,4-Dichlorophenol	< 362	ug/Kg		6/3/2016 20:47
2,4-Dimethylphenol	< 362	ug/Kg		6/3/2016 20:47
2,4-Dinitrophenol	< 724	ug/Kg		6/3/2016 20:47
2,4-Dinitrotoluene	< 362	ug/Kg		6/3/2016 20:47
2,6-Dinitrotoluene	< 362	ug/Kg		6/3/2016 20:47
2-Chloronaphthalene	< 362	ug/Kg		6/3/2016 20:47
2-Chlorophenol	< 362	ug/Kg		6/3/2016 20:47
2-Methylnapthalene	< 362	ug/Kg		6/3/2016 20:47
2-Methylphenol	< 362	ug/Kg		6/3/2016 20:47
2-Nitroaniline	< 724	ug/Kg		6/3/2016 20:47
2-Nitrophenol	< 362	ug/Kg		6/3/2016 20:47
3&4-Methylphenol	< 362	ug/Kg		6/3/2016 20:47
3,3'-Dichlorobenzidine	< 362	ug/Kg		6/3/2016 20:47
3-Nitroaniline	< 724	ug/Kg		6/3/2016 20:47
4,6-Dinitro-2-methylphenol	< 724	ug/Kg		6/3/2016 20:47
4-Bromophenyl phenyl ether	< 362	ug/Kg		6/3/2016 20:47
4-Chloro-3-methylphenol	< 362	ug/Kg		6/3/2016 20:47

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Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation East
Lab Sample ID: 162207-02
Matrix: Soil

Date Sampled: 5/31/2016
Date Received: 5/31/2016

4-Chloroaniline	< 362	ug/Kg		6/3/2016	20:47
4-Chlorophenyl phenyl ether	< 362	ug/Kg		6/3/2016	20:47
4-Nitroaniline	< 724	ug/Kg		6/3/2016	20:47
4-Nitrophenol	< 724	ug/Kg		6/3/2016	20:47
Acenaphthene	**210**	ug/Kg	J	6/3/2016	20:47
Acenaphthylene	< 362	ug/Kg		6/3/2016	20:47
Acetophenone	< 362	ug/Kg		6/3/2016	20:47
Anthracene	**594**	ug/Kg		6/3/2016	20:47
Atrazine	< 362 UJ	ug/Kg		6/3/2016	20:47
Benzaldehyde	< 362	ug/Kg		6/3/2016	20:47
Benzo (a) anthracene	**1020**	ug/Kg		6/3/2016	20:47
Benzo (a) pyrene	**1050**	ug/Kg		6/3/2016	20:47
Benzo (b) fluoranthene	**995**	ug/Kg		6/3/2016	20:47
Benzo (g,h,i) perylene	**629**	ug/Kg		6/3/2016	20:47
Benzo (k) fluoranthene	**646**	ug/Kg		6/3/2016	20:47
Bis (2-chloroethoxy) methane	< 362	ug/Kg		6/3/2016	20:47
Bis (2-chloroethyl) ether	< 362	ug/Kg		6/3/2016	20:47
Bis (2-ethylhexyl) phthalate	< 362	ug/Kg		6/3/2016	20:47
Butylbenzylphthalate	< 362	ug/Kg		6/3/2016	20:47
Caprolactam	< 362	ug/Kg		6/3/2016	20:47
Carbazole	< 362	ug/Kg		6/3/2016	20:47
Chrysene	**1110**	ug/Kg		6/3/2016	20:47
Dibenz (a,h) anthracene	**219**	ug/Kg	J	6/3/2016	20:47
Dibenzofuran	< 362	ug/Kg		6/3/2016	20:47
Diethyl phthalate	< 362	ug/Kg		6/3/2016	20:47
Dimethyl phthalate	< 724	ug/Kg		6/3/2016	20:47
Di-n-butyl phthalate	< 362	ug/Kg		6/3/2016	20:47
Di-n-octylphthalate	< 362	ug/Kg		6/3/2016	20:47
Fluoranthene	**2520**	ug/Kg		6/3/2016	20:47
Fluorene	**269**	ug/Kg	J	6/3/2016	20:47

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Report Prepared Tuesday, June 07, 2016

MKP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation East
Lab Sample ID: 162207-02 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

Hexachlorobenzene	< 362	ug/Kg			6/3/2016 20:47
Hexachlorobutadiene	< 362	ug/Kg			6/3/2016 20:47
Hexachlorocyclopentadiene	< 362	ug/Kg			6/3/2016 20:47
Hexachloroethane	< 362	ug/Kg			6/3/2016 20:47
Indeno (1,2,3-cd) pyrene	**674**	ug/Kg			6/3/2016 20:47
Isophorone	< 362	ug/Kg			6/3/2016 20:47
Naphthalene	**266**	ug/Kg		J	6/3/2016 20:47
Nitrobenzene	< 362	ug/Kg			6/3/2016 20:47
N-Nitroso-di-n-propylamine	< 362	ug/Kg			6/3/2016 20:47
N-Nitrosodiphenylamine	< 362	ug/Kg			6/3/2016 20:47
Pentachlorophenol	< 724	ug/Kg		L	6/3/2016 20:47
Phenanthrene	**1420**	ug/Kg			6/3/2016 20:47
Phenol	< 362	ug/Kg			6/3/2016 20:47
Pyrene	**2390**	ug/Kg			6/3/2016 20:47

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**62.9**	26.8 - 101		6/3/2016 20:47
2-Fluorobiphenyl	**39.4**	34.4 - 98.8		6/3/2016 20:47
2-Fluorophenol	**35.4**	31.4 - 89.7		6/3/2016 20:47
Nitrobenzene-d5	**33.9**	37.1 - 83.6	*	6/3/2016 20:47
Phenol-d5	**38.8**	36.3 - 94.5		6/3/2016 20:47
Terphenyl-d14	**68.5**	51.8 - 112		6/3/2016 20:47

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 6/3/2016
Data File: B12106.D

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Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation South
Lab Sample ID: 162207-03
Matrix: Soil
Date Sampled: 5/31/2016
Date Received: 5/31/2016

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 353	ug/Kg		6/3/2016 21:15
1,2,4,5-Tetrachlorobenzene	< 353	ug/Kg		6/3/2016 21:15
1,2,4-Trichlorobenzene	< 353	ug/Kg		6/3/2016 21:15
1,2-Dichlorobenzene	< 353	ug/Kg		6/3/2016 21:15
1,3-Dichlorobenzene	< 353	ug/Kg		6/3/2016 21:15
1,4-Dichlorobenzene	< 353	ug/Kg		6/3/2016 21:15
2,2-Oxybis (1-chloropropane)	< 353	ug/Kg		6/3/2016 21:15
2,3,4,6-Tetrachlorophenol	< 353	ug/Kg		6/3/2016 21:15
2,4,5-Trichlorophenol	< 706	ug/Kg		6/3/2016 21:15
2,4,6-Trichlorophenol	< 353	ug/Kg		6/3/2016 21:15
2,4-Dichlorophenol	< 353	ug/Kg		6/3/2016 21:15
2,4-Dimethylphenol	< 353	ug/Kg		6/3/2016 21:15
2,4-Dinitrophenol	< 706	ug/Kg		6/3/2016 21:15
2,4-Dinitrotoluene	< 353	ug/Kg		6/3/2016 21:15
2,6-Dinitrotoluene	< 353	ug/Kg		6/3/2016 21:15
2-Chloronaphthalene	< 353	ug/Kg		6/3/2016 21:15
2-Chlorophenol	< 353	ug/Kg		6/3/2016 21:15
2-Methylnapthalene	< 353	ug/Kg		6/3/2016 21:15
2-Methylphenol	< 353	ug/Kg		6/3/2016 21:15
2-Nitroaniline	< 706	ug/Kg		6/3/2016 21:15
2-Nitrophenol	< 353	ug/Kg		6/3/2016 21:15
3&4-Methylphenol	< 353	ug/Kg		6/3/2016 21:15
3,3'-Dichlorobenzidine	< 353	ug/Kg		6/3/2016 21:15
3-Nitroaniline	< 706	ug/Kg		6/3/2016 21:15
4,6-Dinitro-2-methylphenol	< 706	ug/Kg		6/3/2016 21:15
4-Bromophenyl phenyl ether	< 353	ug/Kg		6/3/2016 21:15
4-Chloro-3-methylphenol	< 353	ug/Kg		6/3/2016 21:15

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Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation South
Lab Sample ID: 162207-03 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

4-Chloroaniline	< 353	ug/Kg		6/3/2016	21:15
4-Chlorophenyl phenyl ether	< 353	ug/Kg		6/3/2016	21:15
4-Nitroaniline	< 706	ug/Kg		6/3/2016	21:15
4-Nitrophenol	< 706	ug/Kg		6/3/2016	21:15
Acenaphthene	**208**	ug/Kg	J	6/3/2016	21:15
Acenaphthylene	< 353	ug/Kg		6/3/2016	21:15
Acetophenone	< 353	ug/Kg		6/3/2016	21:15
Anthracene	**202**	ug/Kg	J	6/3/2016	21:15
Atrazine	< 353 UJ	ug/Kg		6/3/2016	21:15
Benzaldehyde	< 353	ug/Kg		6/3/2016	21:15
Benzo (a) anthracene	**694**	ug/Kg		6/3/2016	21:15
Benzo (a) pyrene	**672**	ug/Kg		6/3/2016	21:15
Benzo (b) fluoranthene	**680**	ug/Kg		6/3/2016	21:15
Benzo (g,h,i) perylene	**420**	ug/Kg		6/3/2016	21:15
Benzo (k) fluoranthene	**388**	ug/Kg		6/3/2016	21:15
Bis (2-chloroethoxy) methane	< 353	ug/Kg		6/3/2016	21:15
Bis (2-chloroethyl) ether	< 353	ug/Kg		6/3/2016	21:15
Bis (2-ethylhexyl) phthalate	< 353	ug/Kg		6/3/2016	21:15
Butylbenzylphthalate	< 353	ug/Kg		6/3/2016	21:15
Caprolactam	< 353	ug/Kg		6/3/2016	21:15
Carbazole	< 353	ug/Kg		6/3/2016	21:15
Chrysene	**629**	ug/Kg		6/3/2016	21:15
Dibenz (a,h) anthracene	< 353	ug/Kg		6/3/2016	21:15
Dibenzofuran	< 353	ug/Kg		6/3/2016	21:15
Diethyl phthalate	< 353	ug/Kg		6/3/2016	21:15
Dimethyl phthalate	< 706	ug/Kg		6/3/2016	21:15
Di-n-butyl phthalate	< 353	ug/Kg		6/3/2016	21:15
Di-n-octylphthalate	< 353	ug/Kg		6/3/2016	21:15
Fluoranthene	**1490**	ug/Kg		6/3/2016	21:15
Fluorene	**204**	ug/Kg	J	6/3/2016	21:15

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Report Prepared Tuesday, June 07, 2016

MKP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation South
Lab Sample ID: 162207-03 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

Hexachlorobenzene	< 353	ug/Kg		6/3/2016	21:15
Hexachlorobutadiene	< 353	ug/Kg		6/3/2016	21:15
Hexachlorocyclopentadiene	< 353 UJ	ug/Kg		6/3/2016	21:15
Hexachloroethane	< 353	ug/Kg		6/3/2016	21:15
Indeno (1,2,3-cd) pyrene	**516**	ug/Kg		6/3/2016	21:15
Isophorone	< 353	ug/Kg		6/3/2016	21:15
Naphthalene	< 353	ug/Kg		6/3/2016	21:15
Nitrobenzene	< 353	ug/Kg		6/3/2016	21:15
N-Nitroso-di-n-propylamine	< 353	ug/Kg		6/3/2016	21:15
N-Nitrosodiphenylamine	< 353	ug/Kg		6/3/2016	21:15
Pentachlorophenol	< 706	ug/Kg	L	6/3/2016	21:15
Phenanthrene	**470**	ug/Kg		6/3/2016	21:15
Phenol	< 353	ug/Kg		6/3/2016	21:15
Pyrene	**1340**	ug/Kg		6/3/2016	21:15

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
2,4,6-Tribromophenol	**65.0**	26.8 - 101		6/3/2016	21:15
2-Fluorobiphenyl	**48.6**	34.4 - 98.8		6/3/2016	21:15
2-Fluorophenol	**40.8**	31.4 - 89.7		6/3/2016	21:15
Nitrobenzene-d5	**41.0**	37.1 - 83.6		6/3/2016	21:15
Phenol-d5	**42.4**	36.3 - 94.5		6/3/2016	21:15
Terphenyl-d14	**68.5**	51.8 - 112		6/3/2016	21:15

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 6/3/2016
Data File: B12107.D

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Report Prepared Tuesday, June 07, 2016

MKP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation North
Lab Sample ID: 162207-04
Matrix: Soil
Date Sampled: 5/31/2016
Date Received: 5/31/2016

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 1710	ug/Kg		6/6/2016 19:58
1,2,4,5-Tetrachlorobenzene	< 1710	ug/Kg		6/6/2016 19:58
1,2,4-Trichlorobenzene	< 1710	ug/Kg		6/6/2016 19:58
1,2-Dichlorobenzene	< 1710	ug/Kg		6/6/2016 19:58
1,3-Dichlorobenzene	< 1710	ug/Kg		6/6/2016 19:58
1,4-Dichlorobenzene	< 1710	ug/Kg		6/6/2016 19:58
2,2-Oxybis (1-chloropropane)	< 1710	ug/Kg		6/6/2016 19:58
2,3,4,6-Tetrachlorophenol	< 1710	ug/Kg		6/6/2016 19:58
2,4,5-Trichlorophenol	< 3420	ug/Kg		6/6/2016 19:58
2,4,6-Trichlorophenol	< 1710	ug/Kg		6/6/2016 19:58
2,4-Dichlorophenol	< 1710	ug/Kg		6/6/2016 19:58
2,4-Dimethylphenol	< 1710	ug/Kg		6/6/2016 19:58
2,4-Dinitrophenol	< 3420	ug/Kg		6/6/2016 19:58
2,4-Dinitrotoluene	< 1710	ug/Kg		6/6/2016 19:58
2,6-Dinitrotoluene	< 1710	ug/Kg		6/6/2016 19:58
2-Chloronaphthalene	< 1710	ug/Kg		6/6/2016 19:58
2-Chlorophenol	< 1710	ug/Kg		6/6/2016 19:58
2-Methylnapthalene	< 1710	ug/Kg		6/6/2016 19:58
2-Methylphenol	< 1710	ug/Kg		6/6/2016 19:58
2-Nitroaniline	< 3420	ug/Kg		6/6/2016 19:58
2-Nitrophenol	< 1710	ug/Kg		6/6/2016 19:58
3&4-Methylphenol	< 1710	ug/Kg		6/6/2016 19:58
3,3'-Dichlorobenzidine	< 1710	ug/Kg		6/6/2016 19:58
3-Nitroaniline	< 3420	ug/Kg		6/6/2016 19:58
4,6-Dinitro-2-methylphenol	< 3420	ug/Kg		6/6/2016 19:58
4-Bromophenyl phenyl ether	< 1710	ug/Kg		6/6/2016 19:58
4-Chloro-3-methylphenol	< 1710	ug/Kg		6/6/2016 19:58

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation North
Lab Sample ID: 162207-04 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

4-Chloroaniline	< 1710	ug/Kg		6/6/2016	19:58
4-Chlorophenyl phenyl ether	< 1710	ug/Kg		6/6/2016	19:58
4-Nitroaniline	< 3420	ug/Kg		6/6/2016	19:58
4-Nitrophenol	< 3420	ug/Kg		6/6/2016	19:58
Acenaphthene	< 1710	ug/Kg		6/6/2016	19:58
Acenaphthylene	< 1710	ug/Kg		6/6/2016	19:58
Acetophenone	< 1710	ug/Kg		6/6/2016	19:58
Anthracene	**3140**	ug/Kg		6/6/2016	19:58
Atrazine	< 1710 UJ	ug/Kg		6/6/2016	19:58
Benzaldehyde	< 1710	ug/Kg		6/6/2016	19:58
Benzo (a) anthracene	**5720**	ug/Kg		6/6/2016	19:58
Benzo (a) pyrene	**5530**	ug/Kg		6/6/2016	19:58
Benzo (b) fluoranthene	**4980**	ug/Kg		6/6/2016	19:58
Benzo (g,h,i) perylene	**3310**	ug/Kg		6/6/2016	19:58
Benzo (k) fluoranthene	**3320**	ug/Kg		6/6/2016	19:58
Bis (2-chloroethoxy) methane	< 1710	ug/Kg		6/6/2016	19:58
Bis (2-chloroethyl) ether	< 1710	ug/Kg		6/6/2016	19:58
Bis (2-ethylhexyl) phthalate	< 1710	ug/Kg		6/6/2016	19:58
Butylbenzylphthalate	< 1710	ug/Kg		6/6/2016	19:58
Caprolactam	< 1710	ug/Kg		6/6/2016	19:58
Carbazole	**945**	ug/Kg	J	6/6/2016	19:58
Chrysene	**6020**	ug/Kg		6/6/2016	19:58
Dibenz (a,h) anthracene	**1160**	ug/Kg	J	6/6/2016	19:58
Dibenzofuran	**935**	ug/Kg	J	6/6/2016	19:58
Diethyl phthalate	< 1710	ug/Kg		6/6/2016	19:58
Dimethyl phthalate	< 3420	ug/Kg		6/6/2016	19:58
Di-n-butyl phthalate	< 1710	ug/Kg		6/6/2016	19:58
Di-n-octylphthalate	< 1710	ug/Kg		6/6/2016	19:58
Fluoranthene	**12400**	ug/Kg		6/6/2016	19:58
Fluorene	**1540**	ug/Kg	J	6/6/2016	19:58

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Report Prepared Tuesday, June 07, 2016

MEP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation North
Lab Sample ID: 162207-04 **Date Sampled:** 5/31/2016
Matrix: Soil **Date Received:** 5/31/2016

Hexachlorobenzene	< 1710	ug/Kg			6/6/2016 19:58
Hexachlorobutadiene	< 1710	ug/Kg			6/6/2016 19:58
Hexachlorocyclopentadiene	< 1710	ug/Kg			6/6/2016 19:58
Hexachloroethane	< 1710	ug/Kg			6/6/2016 19:58
Indeno (1,2,3-cd) pyrene	**4130**	ug/Kg			6/6/2016 19:58
Isophorone	< 1710	ug/Kg			6/6/2016 19:58
Naphthalene	< 1710	ug/Kg			6/6/2016 19:58
Nitrobenzene	< 1710	ug/Kg			6/6/2016 19:58
N-Nitroso-di-n-propylamine	< 1710	ug/Kg			6/6/2016 19:58
N-Nitrosodiphenylamine	< 1710	ug/Kg			6/6/2016 19:58
Pentachlorophenol	< 3420	ug/Kg		L	6/6/2016 19:58
Phenanthrene	**10900**	ug/Kg			6/6/2016 19:58
Phenol	< 1710	ug/Kg			6/6/2016 19:58
Pyrene	**10400**	ug/Kg			6/6/2016 19:58

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**70.6**	26.8 - 101		6/6/2016 19:58
2-Fluorobiphenyl	**46.7**	34.4 - 98.8		6/6/2016 19:58
2-Fluorophenol	**38.9**	31.4 - 89.7		6/6/2016 19:58
Nitrobenzene-d5	**36.1**	37.1 - 83.6	*	6/6/2016 19:58
Phenol-d5	**41.0**	36.3 - 94.5		6/6/2016 19:58
Terphenyl-d14	**75.6**	51.8 - 112		6/6/2016 19:58

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 6/3/2016
Data File: B12123.D

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Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162142

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation Bottom
Lab Sample ID: 162142-01
Matrix: Soil
Date Sampled: 5/26/2016
Date Received: 5/26/2016

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 1030	ug/Kg		6/2/2016 17:04
1,2,4,5-Tetrachlorobenzene	< 1030	ug/Kg		6/2/2016 17:04
1,2,4-Trichlorobenzene	< 1030	ug/Kg		6/2/2016 17:04
1,2-Dichlorobenzene	< 1030	ug/Kg		6/2/2016 17:04
1,3-Dichlorobenzene	< 1030	ug/Kg		6/2/2016 17:04
1,4-Dichlorobenzene	< 1030	ug/Kg		6/2/2016 17:04
2,2-Oxybis (1-chloropropane)	< 1030	ug/Kg		6/2/2016 17:04
2,3,4,6-Tetrachlorophenol	< 1030	ug/Kg		6/2/2016 17:04
2,4,5-Trichlorophenol	< 2060	ug/Kg		6/2/2016 17:04
2,4,6-Trichlorophenol	< 1030	ug/Kg		6/2/2016 17:04
2,4-Dichlorophenol	< 1030	ug/Kg		6/2/2016 17:04
2,4-Dimethylphenol	< 1030	ug/Kg		6/2/2016 17:04
2,4-Dinitrophenol	< 2060	ug/Kg		6/2/2016 17:04
2,4-Dinitrotoluene	< 1030	ug/Kg		6/2/2016 17:04
2,6-Dinitrotoluene	< 1030	ug/Kg		6/2/2016 17:04
2-Chloronaphthalene	< 1030	ug/Kg		6/2/2016 17:04
2-Chlorophenol	< 1030	ug/Kg		6/2/2016 17:04
2-Methylnapthalene	555	ug/Kg	J	6/2/2016 17:04
2-Methylphenol	< 1030	ug/Kg		6/2/2016 17:04
2-Nitroaniline	< 2060	ug/Kg		6/2/2016 17:04
2-Nitrophenol	< 1030	ug/Kg		6/2/2016 17:04
3&4-Methylphenol	< 1030	ug/Kg		6/2/2016 17:04
3,3'-Dichlorobenzidine	< 1030	ug/Kg		6/2/2016 17:04
3-Nitroaniline	< 2060	ug/Kg		6/2/2016 17:04
4,6-Dinitro-2-methylphenol	< 2060	ug/Kg		6/2/2016 17:04
4-Bromophenyl phenyl ether	< 1030	ug/Kg		6/2/2016 17:04
4-Chloro-3-methylphenol	< 1030	ug/Kg		6/2/2016 17:04

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162142

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation Bottom
Lab Sample ID: 162142-01
Matrix: Soil
Date Sampled: 5/26/2016
Date Received: 5/26/2016

4-Chloroaniline	< 1030	ug/Kg		6/2/2016	17:04
4-Chlorophenyl phenyl ether	< 1030	ug/Kg		6/2/2016	17:04
4-Nitroaniline	< 2060	ug/Kg		6/2/2016	17:04
4-Nitrophenol	< 2060	ug/Kg		6/2/2016	17:04
Acenaphthene	**516**	ug/Kg	J	6/2/2016	17:04
Acenaphthylene	< 1030	ug/Kg		6/2/2016	17:04
Acetophenone	< 1030	ug/Kg		6/2/2016	17:04
Anthracene	**1250**	ug/Kg		6/2/2016	17:04
Atrazine	< 1030 UJ	ug/Kg		6/2/2016	17:04
Benzaldehyde	< 1030	ug/Kg		6/2/2016	17:04
Benzo (a) anthracene	**2840**	ug/Kg		6/2/2016	17:04
Benzo (a) pyrene	**3010**	ug/Kg		6/2/2016	17:04
Benzo (b) fluoranthene	**2900**	ug/Kg		6/2/2016	17:04
Benzo (g,h,i) perylene	**2000**	ug/Kg		6/2/2016	17:04
Benzo (k) fluoranthene	**2180**	ug/Kg		6/2/2016	17:04
Bis (2-chloroethoxy) methane	< 1030	ug/Kg		6/2/2016	17:04
Bis (2-chloroethyl) ether	< 1030	ug/Kg		6/2/2016	17:04
Bis (2-ethylhexyl) phthalate	< 1030	ug/Kg		6/2/2016	17:04
Butylbenzylphthalate	< 1030	ug/Kg		6/2/2016	17:04
Caprolactam	< 1030	ug/Kg		6/2/2016	17:04
Carbazole	< 1030	ug/Kg		6/2/2016	17:04
Chrysene	**3370**	ug/Kg		6/2/2016	17:04
Dibenz (a,h) anthracene	**663**	ug/Kg	J	6/2/2016	17:04
Dibenzofuran	< 1030	ug/Kg		6/2/2016	17:04
Diethyl phthalate	< 1030	ug/Kg		6/2/2016	17:04
Dimethyl phthalate	< 2060	ug/Kg		6/2/2016	17:04
Di-n-butyl phthalate	< 1030	ug/Kg		6/2/2016	17:04
Di-n-octylphthalate	< 1030	ug/Kg		6/2/2016	17:04
Fluoranthene	**6700**	ug/Kg		6/2/2016	17:04
Fluorene	**717**	ug/Kg	J	6/2/2016	17:04

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Report Prepared Friday, June 03, 2016

MFP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162142

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation Bottom
Lab Sample ID: 162142-01 **Date Sampled:** 5/26/2016
Matrix: Soil **Date Received:** 5/26/2016

Hexachlorobenzene	< 1030	ug/Kg	6/2/2016	17:04
Hexachlorobutadiene	< 1030	ug/Kg	6/2/2016	17:04
Hexachlorocyclopentadiene	< 1030	ug/Kg	6/2/2016	17:04
Hexachloroethane	< 1030	ug/Kg	6/2/2016	17:04
Indeno (1,2,3-cd) pyrene	**2180**	ug/Kg	6/2/2016	17:04
Isophorone	< 1030	ug/Kg	6/2/2016	17:04
Naphthalene	**15600**	ug/Kg	6/2/2016	17:04
Nitrobenzene	< 1030	ug/Kg	6/2/2016	17:04
N-Nitroso-di-n-propylamine	< 1030	ug/Kg	6/2/2016	17:04
N-Nitrosodiphenylamine	< 1030	ug/Kg	6/2/2016	17:04
Pentachlorophenol	< 2060	ug/Kg	6/2/2016	17:04
Phenanthrene	**4470**	ug/Kg	6/2/2016	17:04
Phenol	< 1030	ug/Kg	6/2/2016	17:04
Pyrene	**6470**	ug/Kg	6/2/2016	17:04

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
2,4,6-Tribromophenol	**76.3**	26.8 - 101		6/2/2016	17:04
2-Fluorobiphenyl	**64.9**	34.4 - 98.8		6/2/2016	17:04
2-Fluorophenol	**47.4**	31.4 - 89.7		6/2/2016	17:04
Nitrobenzene-d5	**49.5**	37.1 - 83.6		6/2/2016	17:04
Phenol-d5	**53.7**	36.3 - 94.5		6/2/2016	17:04
Terphenyl-d14	**82.9**	51.8 - 112		6/2/2016	17:04

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 6/1/2016
Data File: B12058.D

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Report Prepared Friday, June 03, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162221

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation West		
Lab Sample ID:	162221-01	**Date Sampled:**	6/1/2016
Matrix:	Soil	**Date Received:**	6/1/2016

Diesel Range Organics (C10-C28)

Analyte	Result	Units	Qualifier	Date Analyzed
Diesel Range Organics	**115000**	ug/Kg		6/6/2016 14:34

Sample chromatographic pattern does not match a typical diesel fuel fingerprint.

Method Reference(s): EPA 8015D
EPA 3550c

Preparation Date: 6/6/2016

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Report Prepared Wednesday, June 08, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation Bottom 2		
Lab Sample ID:	162207-01	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

Diesel Range Organics (C10-C28)

Analyte	Result	Units	Qualifier	Date Analyzed
Diesel Range Organics	**625000**	ug/Kg		6/6/2016 12:30

Sample chromatographic pattern does not match a typical diesel fuel fingerprint.

Method Reference(s): EPA 8015D
EPA 3550c

Preparation Date: 6/6/2016

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Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation East		
Lab Sample ID:	162207-02	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

Diesel Range Organics (C10-C28)

Analyte	Result	Units	Qualifier	Date Analyzed
Diesel Range Organics	**201000**	ug/Kg		6/6/2016 13:07

Sample chromatographic pattern does not match a typical diesel fuel fingerprint.

Method Reference(s): EPA 8015D
EPA 3550c

Preparation Date: 6/6/2016

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Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation South		
Lab Sample ID:	162207-03	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

Diesel Range Organics (C10-C28)

Analyte	Result	Units	Qualifier	Date Analyzed
Diesel Range Organics	**447000**	ug/Kg		6/6/2016 14:05

Sample chromatographic pattern does not match a typical diesel fuel fingerprint.

Method Reference(s): EPA 8015D
EPA 3550c

Preparation Date: 6/6/2016

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Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation North		
Lab Sample ID:	162207-04	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

Diesel Range Organics (C10-C28)

Analyte	Result	Units	Qualifier	Date Analyzed
Diesel Range Organics	**234000**	ug/Kg		6/6/2016 13:36

Sample chromatographic pattern does not match a typical diesel fuel fingerprint.

Method Reference(s): EPA 8015D
EPA 3550c

Preparation Date: 6/6/2016

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Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162142

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation Bottom		
Lab Sample ID:	162142-01	**Date Sampled:**	5/26/2016
Matrix:	Soil	**Date Received:**	5/26/2016

Diesel Range Organics (C10-C28)

Analyte	Result	Units	Qualifier	Date Analyzed
Diesel Range Organics	**3330000**	ug/Kg		6/2/2016 13:19

Sample chromatographic pattern does not match a typical diesel fuel fingerprint.

Method Reference(s): EPA 8015D
EPA 3550c

Preparation Date: 6/2/2016

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Report Prepared Friday, June 03, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162221

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation West
Lab Sample ID: 162221-01
Matrix: Soil
Date Sampled: 6/1/2016
Date Received: 6/1/2016

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Aluminum	4010	mg/Kg	D	6/7/2016 13:19
Antimony	2.22 J	mg/Kg	JM	6/7/2016 13:19
Arsenic	9.26 J	mg/Kg	D	6/7/2016 13:19
Barium	42.8	mg/Kg	D	6/7/2016 13:19
Beryllium	0.293	mg/Kg		6/7/2016 13:19
Cadmium	< 0.275	mg/Kg		6/7/2016 13:19
Calcium	23900	mg/Kg	D	6/7/2016 13:19
Chromium	7.67	mg/Kg		6/7/2016 13:19
Cobalt	3.98	mg/Kg	D	6/7/2016 13:19
Copper	35.2	mg/Kg	D	6/7/2016 13:19
Iron	21900	mg/Kg		6/7/2016 13:19
Lead	89.7 J	mg/Kg	DM	6/7/2016 13:19
Magnesium	3620 J	mg/Kg	DM	6/7/2016 13:19
Manganese	100	mg/Kg		6/7/2016 13:19
Nickel	6.74	mg/Kg		6/7/2016 13:19
Potassium	718	mg/Kg		6/7/2016 13:19
Selenium	1.30 J	mg/Kg	D	6/6/2016 15:52
Silver	0.329	mg/Kg	J	6/7/2016 13:19
Sodium	457	mg/Kg		6/7/2016 13:19
Thallium	< 1.37	mg/Kg		6/7/2016 13:19
Vanadium	9.42	mg/Kg		6/7/2016 13:19
Zinc	59.5	mg/Kg	D	6/7/2016 13:19

Method Reference(s): EPA 6010C
EPA 3050B
Preparation Date: 6/2/2016
Data File: 060716b

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Report Prepared Wednesday, June 08, 2016

MKD 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162221

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation West		
Lab Sample ID:	162221-01	**Date Sampled:**	6/1/2016
Matrix:	Soil	**Date Received:**	6/1/2016

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.238**	mg/Kg		6/2/2016 18:01

Method Reference(s): EPA 7471B
Preparation Date: 6/2/2016
Data File: Hg160602A

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Report Prepared Wednesday, June 08, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation Bottom 2		
Lab Sample ID:	162207-01	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Aluminum	8240	mg/Kg		6/3/2016 15:50
Antimony	< 3.50 UJ	mg/Kg		6/3/2016 15:50
Arsenic	15.3	mg/Kg		6/6/2016 14:02
Barium	109 J	mg/Kg		6/3/2016 15:50
Beryllium	0.495 J	mg/Kg		6/3/2016 15:50
Cadmium	0.461	mg/Kg		6/3/2016 15:50
Calcium	20400 J	mg/Kg		6/3/2016 15:50
Chromium	9.93	mg/Kg		6/3/2016 15:50
Cobalt	12.9	mg/Kg		6/3/2016 15:50
Copper	120 J	mg/Kg		6/3/2016 15:50
Iron	22100	mg/Kg		6/3/2016 15:50
Lead	179 J	mg/Kg		6/3/2016 15:50
Magnesium	5230 J	mg/Kg		6/3/2016 15:50
Manganese	117 J	mg/Kg		6/3/2016 15:50
Nickel	28.3	mg/Kg		6/3/2016 15:50
Potassium	781	mg/Kg		6/3/2016 15:50
Selenium	1.82 J	mg/Kg		6/6/2016 14:02
Silver	< 0.584	mg/Kg		6/6/2016 14:02
Sodium	78.9	mg/Kg	J	6/3/2016 15:50
Thallium	< 1.46 UJ	mg/Kg		6/3/2016 15:50
Vanadium	13.2 J	mg/Kg		6/3/2016 15:50
Zinc	147	mg/Kg		6/3/2016 15:50

Method Reference(s):	EPA 6010C
	EPA 3050B
Preparation Date:	6/1/2016
Data File:	060316a

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Report Prepared Tuesday, June 07, 2016

MAP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation Bottom 2		
Lab Sample ID:	162207-01	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	0.203	mg/Kg		6/2/2016 17:28

Method Reference(s):	EPA 7471B
Preparation Date:	6/2/2016
Data File:	Hg160602A

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Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation East		
Lab Sample ID:	162207-02	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Aluminum	7580	mg/Kg		6/3/2016 15:54
Antimony	< 3.51 UJ	mg/Kg		6/3/2016 15:54
Arsenic	21.7	mg/Kg		6/6/2016 14:07
Barium	72.7 J	mg/Kg		6/3/2016 15:54
Beryllium	0.367 J	mg/Kg		6/3/2016 15:54
Cadmium	< 0.292	mg/Kg		6/3/2016 15:54
Calcium	12100 J	mg/Kg		6/3/2016 15:54
Chromium	10.6	mg/Kg		6/3/2016 15:54
Cobalt	14.3	mg/Kg		6/3/2016 15:54
Copper	63.9 J	mg/Kg		6/3/2016 15:54
Iron	19100	mg/Kg		6/3/2016 15:54
Lead	221 J	mg/Kg		6/3/2016 15:54
Magnesium	2350 J	mg/Kg		6/3/2016 15:54
Manganese	164 J	mg/Kg		6/3/2016 15:54
Nickel	22.7	mg/Kg		6/3/2016 15:54
Potassium	758	mg/Kg		6/3/2016 15:54
Selenium	2.64 J	mg/Kg		6/6/2016 14:07
Silver	0.392	mg/Kg	J	6/6/2016 14:07
Sodium	170	mg/Kg		6/3/2016 15:54
Thallium	< 1.46 UJ	mg/Kg		6/3/2016 15:54
Vanadium	13.4 J	mg/Kg		6/3/2016 15:54
Zinc	97.5	mg/Kg		6/3/2016 15:54

Method Reference(s):	EPA 6010C EPA 3050B
Preparation Date:	6/1/2016
Data File:	060316a

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Report Prepared Tuesday, June 07, 2016

MKP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation East		
Lab Sample ID:	162207-02	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	0.389	mg/Kg		6/2/2016 17:31

Method Reference(s):	EPA 7471B
Preparation Date:	6/2/2016
Data File:	Hg160602A

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Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation South		
Lab Sample ID:	162207-03	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Aluminum	6210	mg/Kg		6/3/2016 15:57
Antimony	< 3.67 UJ	mg/Kg		6/3/2016 15:57
Arsenic	4.94	mg/Kg		6/6/2016 14:10
Barium	60.6 J	mg/Kg		6/3/2016 15:57
Beryllium	0.358 J	mg/Kg		6/3/2016 15:57
Cadmium	< 0.306	mg/Kg		6/3/2016 15:57
Calcium	18000 J	mg/Kg		6/3/2016 15:57
Chromium	12.2	mg/Kg		6/3/2016 15:57
Cobalt	5.28	mg/Kg		6/3/2016 15:57
Copper	50.9 J	mg/Kg		6/3/2016 15:57
Iron	23900	mg/Kg		6/3/2016 15:57
Lead	92.0 J	mg/Kg		6/3/2016 15:57
Magnesium	5080 J	mg/Kg		6/3/2016 15:57
Manganese	475 J	mg/Kg		6/3/2016 15:57
Nickel	10.5	mg/Kg		6/3/2016 15:57
Potassium	1090	mg/Kg		6/3/2016 15:57
Selenium	0.550 J	mg/Kg	J	6/6/2016 14:10
Silver	0.520	mg/Kg	J	6/6/2016 14:10
Sodium	98.3	mg/Kg	J	6/3/2016 15:57
Thallium	< 1.53 UJ	mg/Kg		6/3/2016 15:57
Vanadium	12.3 J	mg/Kg		6/3/2016 15:57
Zinc	89.5	mg/Kg		6/3/2016 15:57

Method Reference(s):	EPA 6010C
	EPA 3050B
Preparation Date:	6/1/2016
Data File:	060316a

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Report Prepared Tuesday, June 07, 2016

MKD 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation South		
Lab Sample ID:	162207-03	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	1.62	mg/Kg		6/2/2016 17:41

Method Reference(s):	EPA 7471B
Preparation Date:	6/2/2016
Data File:	Hg160602A

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Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation North		
Lab Sample ID:	162207-04	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Aluminum	4450	mg/Kg		6/3/2016 16:02
Antimony	< 3.66 UJ	mg/Kg	M	6/3/2016 16:02
Arsenic	14.0	mg/Kg		6/6/2016 14:15
Barium	59.9 J	mg/Kg	M	6/3/2016 16:02
Beryllium	0.469 J	mg/Kg	DM	6/3/2016 16:02
Cadmium	< 0.305	mg/Kg		6/3/2016 16:02
Calcium	25800 J	mg/Kg	D	6/3/2016 16:02
Chromium	9.09	mg/Kg		6/3/2016 16:02
Cobalt	14.0	mg/Kg		6/3/2016 16:02
Copper	126 J	mg/Kg	M	6/3/2016 16:02
Iron	19500	mg/Kg		6/3/2016 16:02
Lead	295 J	mg/Kg	DM	6/3/2016 16:02
Magnesium	5450 J	mg/Kg	D	6/3/2016 16:02
Manganese	370 J	mg/Kg	DM	6/3/2016 16:02
Nickel	22.0	mg/Kg		6/3/2016 16:02
Potassium	568	mg/Kg		6/3/2016 16:02
Selenium	1.85 J	mg/Kg	M	6/6/2016 14:15
Silver	0.396	mg/Kg	JD	6/6/2016 14:25
Sodium	123	mg/Kg	J	6/3/2016 16:02
Thallium	< 1.52 UJ	mg/Kg	M	6/3/2016 16:02
Vanadium	9.84 J	mg/Kg	M	6/3/2016 16:02
Zinc	400	mg/Kg	M	6/3/2016 16:02

Method Reference(s):	EPA 6010C
	EPA 3050B
Preparation Date:	6/1/2016
Data File:	060316a

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Tuesday, June 07, 2016

MRP 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162207

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier:	Excavation North		
Lab Sample ID:	162207-04	**Date Sampled:**	5/31/2016
Matrix:	Soil	**Date Received:**	5/31/2016

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.598**	mg/Kg	M	6/2/2016 17:58

Method Reference(s):	EPA 7471B
Preparation Date:	6/2/2016
Data File:	Hg160602A

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Tuesday, June 07, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162142

Client: Bergmann Associates

Project Reference: VOA Back Lot

Sample Identifier: Excavation Bottom
Lab Sample ID: 162142-01
Matrix: Soil
Date Sampled: 5/26/2016
Date Received: 5/26/2016

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Aluminum	10800	mg/Kg		6/2/2016 19:49
Antimony	< 5.20 UJ	mg/Kg	M	6/2/2016 19:49
Arsenic	57.2	mg/Kg	D	6/2/2016 19:49
Barium	211 J	mg/Kg	DM	6/2/2016 19:49
Beryllium	0.547	mg/Kg		6/2/2016 19:49
Cadmium	< 0.434	mg/Kg		6/2/2016 19:49
Calcium	29300	mg/Kg		6/2/2016 19:49
Chromium	24.2	mg/Kg	D	6/2/2016 19:49
Cobalt	21.8	mg/Kg	D	6/2/2016 19:49
Copper	~~572~~ R	mg/Kg	DM	6/2/2016 19:49
Iron	31200	mg/Kg		6/2/2016 19:49
Lead	~~658~~ R	mg/Kg	M	6/2/2016 19:49
Magnesium	5870	mg/Kg	DM	6/2/2016 19:49
Manganese	~~204~~ R	mg/Kg	DM	6/2/2016 19:49
Nickel	38.4	mg/Kg	D	6/2/2016 19:49
Potassium	1240	mg/Kg		6/2/2016 19:49
Selenium	0.815	mg/Kg	J	6/2/2016 11:14
Silver	< 0.867	mg/Kg		6/2/2016 11:14
Sodium	167	mg/Kg	J	6/2/2016 19:49
Thallium	< 2.17	mg/Kg		6/2/2016 19:49
Vanadium	31.5	mg/Kg		6/2/2016 19:49
Zinc	115 J	mg/Kg	D	6/2/2016 19:49

Method Reference(s): EPA 6010C
EPA 3050B
Preparation Date: 5/27/2016
Data File: 060216b

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Friday, June 03, 2016

mkp 10/8/16

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 162142

Client: **Bergmann Associates**

Project Reference: VOA Back Lot

Sample Identifier:	Excavation Bottom		
Lab Sample ID:	162142-01	**Date Sampled:**	5/26/2016
Matrix:	Soil	**Date Received:**	5/26/2016

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	0.589 J	mg/Kg	M	5/28/2016 09:38

Method Reference(s):	EPA 7471B
Preparation Date:	5/27/2016
Data File:	Hg160528A

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Friday, June 03, 2016

MAP 10/8/16

Appendix B

Laboratory QC Documentation

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Paradigm Environmental Services Client Name: Bergmann Associates

Lab Project #: 162142-2207-2221 Client Project #: N/A SDG No.: 2142-01

Client Project Name: VOA Back Lot

Level: (low/med) low

	SAMPLE NO.		SMC1 (PFB)	SMC2 (DCE)	SMC3 (TOL)	SMC4 (BFB)	TOT OUT
01	Blk 06/04		99.3	96.7	97.0	94.6	0
02	LCS 06/04		104	93.2	101	101	0
03	Blk 06/06 s		99.7	100	97.9	92.0	0
04	LCS 06/06 s		101	89.3	100	100	0
05	Excavation Bottom	162142-01	101	93.1	106	110	0
06	Excavation Bottom 2	162207-01	97.2	98.2	109	109	0
07	Excavation East	162207-02	100	93.9	97.8	97.7	0
08	Excavation South	162207-03	99.4	97.2	93.1	91.9	0
09	Excavation North	162207-04	101	96.4	94.1	91.1	0
10	Excavation West	162221-01	97.0	98.0	88.9	70.4 *	1
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							

QC LIMITS %

SMC1 (PFB) = Pentafluorobenzene (90.7-109)

SMC2 (DCE) = 1,2-Dichloroethane-d4 (85.4-122)

SMC3 (TOL) = Toluene-d8 (88.5-110)

SMC4 (BFB) = 4-Bromofluorobenzene (81.1-115)

* Values outside of current required QC limits

D System Monitoring Compound diluted out

FORM II VOA-2

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Paradigm Environmental Services Client Name: Bergmann Associates

Lab Project #: 162142-2207-2221 Client Project #: N/A SDG#: 2142-01

Client Project Name: VOA Back Lot

Lab File ID: x32970.D Date Analyzed: 6/6/2016

Instrument ID: Instrument #1 Time Analyzed: 11:30

Heated Purge: Y

		IS1 AREA	FB RT	IS2 AREA	CB RT	IS3 AREA	1,4-DCB RT
	12 HOUR STD	291893	4.99	225247	7.93	137660	10.46
	UPPER LIMIT	583786	5.49	450494	8.43	275320	10.96
	LOWER LIMIT	145947	4.49	112624	7.43	68830	9.96
	LAB SAMPLE#						
1	Blk 06/06 s	275895	5.00	218487	7.93	129635	10.46
2	LCS 06/06 s	305552	4.99	232634	7.93	142458	10.46
3	162207-01	250804	4.99	182052	7.93	83266	10.47
4	162221-01	217071	4.99	134092	7.93	47735 *	10.46
5	Blk 06/06 w	286524	4.99	220199	7.93	129533	10.47
6	LCS 06/06 w	289393	4.99	219713	7.93	136776	10.47
7	162221-02	297008	4.99	230175	7.93	137535	10.46
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							

IS1=Fluorobenzene

IS2=Chlorobenzene-d5

IS3=1,4-Dichlorobenzene-d4

AREA UPPER LIMIT=+100% of internal standard area

AREA LOWER LIMIT=-50% of internal standard area

RT UPPER LIMIT=+.50 minutes of internal standard RT

RT LOWER LIMIT=-.50 minutes of internal standard RT

*Values outside of QC limits

Method Path : C:\msdchem\1\METHODS\
Method File : 160523.M
Title : 8260/624 Analysis
Last Update : Mon May 23 15:19:20 2016
Response Via : Initial Calibration

5/23/16 B/S

Calibration Files
1 =x32465b.D 2 =x32466.D 3 =x32467.D 4 =x32468.D 5 =x32469.D 6 =x32470.D 7 =x32471.D

		Compound	1	2	3	4	5	6	7	Avg	%RSD	
1)	I	Fluorobenzene	ISTD									
2)	P	Dichlorodifluo...	0.361	0.327	0.314	0.307	0.296	0.287	0.271	0.309	9.50	
3)	P	Chloromethane	0.463	0.432	0.408	0.405	0.412	0.418	0.408	0.421	4.91	
4)	P	Vinyl chloride	0.321	0.303	0.316	0.307	0.316	0.311	0.317	0.313	2.03	
5)	P	Bromomethane	0.257	0.221	0.182	0.165	0.157	0.142		0.187	23.20	*
6)	P	Chloroethane	0.217	0.186	0.174	0.161	0.156	0.140	0.129	0.166	17.80	
7)	P	Trichlorofluor...	0.506	0.458	0.460	0.443	0.426	0.397	0.381	0.439	9.56	
8)		Ethyl ether	0.196	0.199	0.209	0.202	0.209	0.200	0.192	0.201	3.07	
9)	P	Freon 113	0.228	0.216	0.220	0.212	0.213	0.200	0.193	0.212	5.63	
10)	P	1,1-Dichloroet...	0.422	0.397	0.398	0.387	0.389	0.363	0.352	0.387	6.01	
11)	P	Acetone	0.330	0.152	0.118	0.102	0.089	0.096	0.091	0.140	62.03	*
12)		Isopropyl Alcohol	0.026	0.019	0.019	0.016	0.017	0.018	0.017	0.019	17.51	
13)	P	Carbon disulfide	0.602	0.568	0.593	0.590	0.611	0.593	0.589	0.592	2.19	
14)	P	Methyl acetate	0.252	0.212	0.213	0.190	0.199	0.199	0.180	0.206	11.34	
15)	P	Methylene chlo...	0.474	0.283	0.247	0.230	0.232	0.227	0.223	0.274	33.13	*
16)		Acrylonitrile	0.117	0.140	0.101	0.117	0.097	0.109	0.092	0.110	14.53	
17)		tert-Butyl Alc...	0.037	0.033	0.034	0.029	0.031	0.034	0.030	0.033	8.62	
18)	P	Methyl tert-bu...	0.737	0.799	0.662	0.765	0.656	0.748	0.618	0.712	9.34	
19)	P	trans-1,2-Dich...	0.412	0.473	0.368	0.445	0.348	0.398	0.323	0.395	13.48	
20)	P	1,1-Dichloroet...	0.682	0.637	0.627	0.621	0.608	0.593	0.572	0.620	5.70	
21)		Vinyl acetate	0.523	0.522	0.598	0.615	0.626	0.631	0.583	0.585	7.90	
22)		2,2-Dichloropr...	0.428	0.427	0.443	0.453	0.451	0.443	0.428	0.439	2.55	
23)	P	2-Butanone		0.044	0.043	0.038	0.037	0.040	0.035	0.039#	8.33	~0.005 RF
24)	P	cis-1,2-Dichlo...	0.322	0.321	0.326	0.331	0.321	0.315	0.301	0.319	3.01	
25)		Bromochloromet...	0.178	0.163	0.159	0.155	0.150	0.149	0.143	0.157	7.44	
26)	P	Chloroform	0.607	0.601	0.584	0.566	0.541	0.529	0.503	0.562	6.91	
27)	S	Pentafluoroben...	0.526	0.552	0.572	0.559	0.555	0.557	0.549	0.553	2.52	
28)		Tetrahydrofuran	0.093	0.101	0.101	0.099	0.098	0.105	0.091	0.098	4.84	
29)	P	1,1,1-Trichlor...	0.490	0.482	0.487	0.477	0.470	0.460	0.442	0.473	3.61	
30)	P	Cyclohexane	0.662	0.621	0.661	0.653	0.598	0.569	0.551	0.616	7.34	
31)	S	1,2-Dichloroet...	0.321	0.322	0.325	0.312	0.308	0.309	0.294	0.313	3.40	
32)	P	Carbon Tetrach...	0.408	0.413	0.426	0.418	0.413	0.397	0.379	0.408	3.74	
33)	P	Benzene	1.286	1.273	1.230	1.200	1.147	1.114	1.059	1.187	7.11	
34)	P	1,2-Dichloroet...	0.530	0.494	0.472	0.463	0.450	0.438	0.410	0.465	8.39	
35)	P	Trichloroethene	0.338	0.323	0.315	0.317	0.320	0.311	0.305	0.318	3.25	
36)		tert-Butyl Ace...								0.000	-1.00	
37)	P	Methylcyclohexane	0.390	0.436	0.516	0.529	0.526	0.517	0.498	0.487	10.96	
38)		1,4-Dioxane			0.004	0.003	0.004	0.004	0.004	0.004	7.34	- RF <0.005 - "R" data

Initial Calibration Summary Table

131

* curve is not avg. of response factor

Method Path : C:\msdchem\1\METHODS\
Method File : 160523.M

39)	UN	Ethyl acetate								0.000	-1.00
40)	P	1,2-Dichloropr...	0.358	0.365	0.349	0.345	0.340	0.336	0.324	0.345	3.96
41)	UN	Isobutyl alcohol								0.000	-1.00
42)		Dibromomethane	0.190	0.191	0.186	0.183	0.180	0.180	0.170	0.183	4.04
43)	P	Bromodichlorom...	0.421	0.408	0.426	0.422	0.418	0.416	0.403	0.416	1.99
44)		2-Chloroethyl ...		0.010	0.018	0.020	0.030	0.035	0.034	0.024	41.23 * - NT
45)	UN	Isopropyl acetate								0.000	-1.00
46)		1,1-Dichloropr...	0.411	0.399	0.419	0.403	0.403	0.391	0.375	0.400	3.56
47)	P	cis-1,3-Dichlo...	0.363	0.407	0.481	0.501	0.515	0.515	0.497	0.468	12.67
48)	P	4-Methyl-2-pen...		0.098	0.130	0.130	0.137	0.148	0.132	0.129	12.99
49)	S	Toluene-D8	0.985	1.038	1.059	1.060	1.074	1.083	1.069	1.052	3.12
50)	P	Toluene	1.387	1.349	1.325	1.280	1.252	1.219	1.140	1.279	6.58
51)	P	trans-1,3-Dich...	0.352	0.391	0.450	0.469	0.491	0.492	0.463	0.444	11.86
52)	P	1,1,2-Trichlor...	0.356	0.299	0.291	0.272	0.272	0.270	0.250	0.287	11.95
53)		1,3-Dichloropr...	0.500	0.473	0.485	0.467	0.465	0.461	0.431	0.469	4.58
54)	P	Tetrachloroethene	0.406	0.375	0.377	0.365	0.358	0.350	0.334	0.367	6.25
55)	P	2-Hexanone	0.191	0.223	0.251	0.252	0.257	0.286	0.244	0.244	12.24
56)	P	Dibromochlorom...	0.296	0.281	0.315	0.321	0.324	0.334	0.315	0.312	5.82
57)	P	1,2-Dibromoethane	0.270	0.280	0.286	0.283	0.289	0.292	0.274	0.282	2.81
58)	I	Chlorobenzene-d5	----------ISTD----------								
59)	P	Chlorobenzene	1.265	1.078	1.044	0.977	0.957	0.930	0.897	1.021	12.18
60)		1,1,1,2-Tetrac...	0.396	0.369	0.381	0.372	0.368	0.361	0.350	0.371	3.96
61)	P	Ethylbenzene	1.752	1.698	1.789	1.727	1.681	1.598	1.528	1.682	5.40
62)	P	m,p-Xylene	0.639	0.695	0.699	0.671	0.631	0.600	0.568	0.643	7.56
63)	P	o-Xylene	0.530	0.574	0.654	0.646	0.625	0.600	0.575	0.600	7.43
64)	P	Styrene	0.811	1.036	1.157	1.104	1.066	1.018	0.961	1.022	10.94
65)	P	Bromoform	0.226	0.230	0.252	0.256	0.269	0.279	0.261	0.253	7.70
66)	P	Isopropylbenzene	1.318	1.541	1.818	1.753	1.703	1.622	1.556	1.616	10.27
67)		1,2,3-Trichlor...	0.170	0.145	0.146	0.132	0.132	0.131	0.121	0.140	11.47
68)	S	4-Bromofluorob...	0.519	0.543	0.550	0.535	0.539	0.541	0.537	0.538	1.78
69)		Bromobenzene	0.550	0.497	0.502	0.473	0.454	0.434	0.417	0.475	9.54
70)	P	1,1,2,2-Tetrac...	0.550	0.481	0.488	0.429	0.420	0.425	0.385	0.454	12.22
71)		n-Propylbenzene	2.058	2.053	2.227	2.060	1.976	1.877	1.771	2.003	7.33
72)		2-Chlorotoluene	0.443	0.434	0.454	0.426	0.415	0.395	0.380	0.421	6.26
73)		4-Chlorotoluene	0.459	0.483	0.484	0.437	0.422	0.396	0.374	0.436	9.67
74)		1,3,5-Trimethy...	1.254	1.485	1.632	1.538	1.462	1.367	1.293	1.433	9.46
75)		tert-Butylbenzene	0.264	0.316	0.359	0.345	0.334	0.315	0.301	0.319	9.81
76)		1,2,4-Trimethy...	1.192	1.568	1.687	1.595	1.527	1.441	1.365	1.482	11.14
77)		sec-Butylbenzene	1.487	1.781	2.015	1.937	1.856	1.747	1.654	1.782	9.95
78)		p-Isopropyltol...	1.358	1.595	1.773	1.681	1.614	1.510	1.424	1.565	9.26
79)	I	1,4-Dichlorobenzen...	----------ISTD----------								
80)	P	1,3-Dichlorobe...	1.698	1.509	1.534	1.450	1.444	1.426	1.392	1.493	6.85
81)	P	1,4-Dichlorobe...	2.133	1.618	1.585	1.457	1.456	1.431	1.378	1.580	16.36
82)		n-Butylbenzene	1.999	2.136	2.648	2.524	2.514	2.395	2.289	2.358	9.80
83)	P	1,2-Dichlorobe...	1.603	1.444	1.478	1.352	1.315	1.276	1.218	1.384	9.57
84)	UN	Tetraethyllead								0.000	-1.00

TCAL Summary Table

Method Path : C:\msdchem\1\METHODS\
Method File : 160523.M

85)	P	1,2-Dibromo-3-...	0.139	0.125	0.155	0.155	0.169	0.188	0.175	0.158	13.63
86)	P	1,2,4-Trichlor...	0.883	0.826	1.023	1.037	1.086	1.081	1.045	0.997	10.18
87)		1,2,3-Trichlor...	0.930	0.888	1.011	0.996	1.012	1.011	0.964	0.973	4.99
88)		Hexachlorobuta...	0.723	0.623	0.659	0.634	0.647	0.625	0.613	0.646	5.73
89)		Naphthalene	1.416	1.568	2.263	2.298	2.351	2.419	2.271	2.083	19.67

(#) = Out of Range

ECAL Summary Table

133

Response Factor Report Instrument #1

Method Path : C:\msdchem\1\METHODS\
Method File : 160604.M
Title : 8260/624 Analysis
Last Update : Sat Jun 04 13:45:24 2016
Response Via : Initial Calibration

6/4/16 B13

Calibration Files
1 =x32931.D 2 =x32932.D 3 =x32933.D 4 =x32934.D 5 =x32935.D 6 =x32936.D 7 =x32937.D

		Compound	1	2	3	4	5	6	7	Avg	%RSD	
1)	I	Fluorobenzene	ISTD									
2)	P	Dichlorodifluo...	0.285	0.292	0.289	0.290	0.282	0.267	0.260	0.281	4.46	
3)	P	Chloromethane	0.383	0.372	0.349	0.373	0.363	0.369	0.376	0.369	2.92	
4)	P	Vinyl chloride	0.260	0.260	0.256	0.279	0.276	0.257	0.274	0.266	3.78	
5)	P	Bromomethane	0.212	0.165	0.136	0.136	0.125	0.114		0.148	24.08	*
6)	P	Chloroethane	0.145	0.153	0.139	0.144	0.133	0.115	0.110	0.134	11.95	
7)	P	Trichlorofluor...	0.384	0.389	0.391	0.396	0.377	0.342	0.338	0.374	6.36	
8)		Ethyl ether	0.158	0.184	0.171	0.189	0.183	0.167	0.167	0.174	6.43	
9)	P	Freon 113	0.169	0.178	0.177	0.189	0.181	0.167	0.167	0.176	4.62	
10)	P	1,1-Dichloroet...	0.318	0.335	0.318	0.344	0.335	0.304	0.304	0.323	4.87	
11)	P	Acetone	0.716	0.185	0.099	0.095	0.087	0.077	0.076	0.191	123.14	*
12)		Isopropyl Alcohol	0.017	0.016	0.013	0.015	0.015	0.014	0.014	0.015	7.75	
13)	P	Carbon disulfide	0.442	0.480	0.482	0.531	0.524	0.487	0.504	0.493	6.12	
14)	P	Methyl acetate	0.203	0.188	0.164	0.181	0.173	0.158	0.159	0.175	9.60	
15)	P	Methylene chlo...	0.319	0.249	0.202	0.216	0.209	0.196	0.202	0.228	19.39	*
16)		Acrylonitrile	0.083	0.090	0.126	0.090	0.087		0.081	0.093	18.00	
17)		tert-Butyl Alc...	0.031	0.028	0.025	0.028	0.029	0.027	0.028	0.028	6.29	
18)	P	Methyl tert-bu...	0.582	0.570	0.722	0.592	0.595	0.732	0.557	0.622	11.82	
19)	P	trans-1,2-Dich...	0.301	0.307	0.436	0.319	0.305	0.395	0.278	0.334	17.27	
20)	P	1,1-Dichloroet...	0.577	0.584	0.563	0.579	0.570	0.541	0.537	0.565	3.33	
21)		Vinyl acetate	0.393	0.453	0.481	0.550	0.572	0.546	0.533	0.504	12.79	
22)		2,2-Dichloropr...	0.310	0.346	0.386	0.416	0.412	0.393	0.390	0.379	9.98	
23)	P	2-Butanone	0.042	0.037	0.035	0.038	0.038	0.036	0.035	0.037#	6.27	OK RF > 0.005
24)	P	cis-1,2-Dichlo...	0.247	0.279	0.300	0.318	0.312	0.291	0.286	0.291	8.13	
25)		Bromochloromet...	0.142	0.158	0.148	0.149	0.147	0.137	0.135	0.145	5.54	
26)	P	Chloroform	0.489	0.521	0.527	0.534	0.519	0.485	0.478	0.507	4.50	
27)	S	Pentafluoroben...	0.498	0.513	0.517	0.526	0.529	0.522	0.518	0.517	1.98	
28)		Tetrahydrofuran	0.074	0.086	0.086	0.099	0.100	0.093	0.089	0.089	10.13	
29)	P	1,1,1-Trichlor...	0.379	0.407	0.423	0.442	0.439	0.417	0.413	0.417	5.04	
30)	P	Cyclohexane	0.456	0.521	0.571	0.611	0.580	0.512	0.562	0.545	9.50	
31)	S	1,2-Dichloroet...	0.318	0.325	0.308	0.301	0.299	0.289	0.285	0.303	4.78	
32)	P	Carbon Tetrach...	0.318	0.323	0.359	0.382	0.375	0.354	0.348	0.351	6.80	
33)	P	Benzene	1.066	1.130	1.137	1.168	1.112	1.050	1.019	1.097	4.88	
34)	P	1,2-Dichloroet...	0.411	0.443	0.432	0.433	0.419	0.395	0.386	0.417	5.01	
35)	P	Trichloroethene	0.255	0.274	0.290	0.303	0.301	0.291	0.289	0.286	5.80	
36)		tert-Butyl Ace...								0.000	-1.00	
37)	P	Methylcyclohexane	0.304	0.369	0.464	0.501	0.506	0.475	0.469	0.441	17.12	
38)		1,4-Dioxane			0.003	0.004	0.004	0.004	0.004	0.004	12.69	RF < 0.005 'R' all Data

Initial Calibration Summary Table

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* curve is not ave of response factors

Method Path : C:\msdchem\1\METHODS\
Method File : 160604.M

39)	UN	Ethyl acetate								0.000	-1.00	
40)	P	1,2-Dichloropr...	0.283	0.320	0.327	0.339	0.330	0.316	0.309	0.318	5.76	
41)	UN	Isobutyl alcohol								0.000	-1.00	
42)		Dibromomethane	0.154	0.177	0.176	0.179	0.177	0.168	0.163	0.171	5.44	
43)	P	Bromodichlorom...	0.292	0.330	0.367	0.393	0.397	0.382	0.379	0.363	10.52	
44)		2-Chloroethyl ...		0.002	0.003	0.009	0.012	0.011	0.011	0.008	56.45	*
45)	UN	Isopropyl acetate								0.000	-1.00	
46)		1,1-Dichloropr...	0.337	0.361	0.372	0.385	0.385	0.358	0.354	0.364	4.84	
47)	P	cis-1,3-Dichlo...	0.260	0.333	0.414	0.477	0.490	0.479	0.479	0.419	21.41	*
48)	P	4-Methyl-2-pen...		0.094	0.112	0.134	0.143	0.141	0.140	0.127	15.58	
49)	S	Toluene-D8	0.892	0.948	0.955	0.976	0.985	0.988	0.990	0.962	3.62	
50)	P	Toluene	1.767	1.317	1.262	1.276	1.231	1.156	1.124	1.305	16.46	
51)	P	trans-1,3-Dich...	0.271	0.325	0.390	0.450	0.465	0.456	0.451	0.401	18.99	
52)	P	1,1,2-Trichlor...	0.327	0.284	0.272	0.277	0.273	0.259	0.253	0.278	8.65	
53)		1,3-Dichloropr...	0.395	0.438	0.446	0.465	0.463	0.439	0.430	0.439	5.39	
54)	P	Tetrachloroethene	0.333	0.339	0.352	0.363	0.353	0.335	0.329	0.343	3.70	
55)	P	2-Hexanone	0.177	0.204	0.211	0.250	0.268	0.268	0.259	0.234	15.46	
56)	P	Dibromochlorom...	0.196	0.226	0.266	0.306	0.313	0.305	0.306	0.274	16.95	
57)	P	1,2-Dibromoethane	0.238	0.253	0.266	0.284	0.288	0.285	0.281	0.271	7.09	
58)	I	Chlorobenzene-d5	----------	ISTD	----------							
59)	P	Chlorobenzene	1.081	1.104	1.098	1.103	1.065	1.019	0.989	1.065	4.23	
60)		1,1,1,2-Tetrac...	0.314	0.344	0.385	0.398	0.400	0.385	0.382	0.373	8.52	
61)	P	Ethylbenzene	1.419	1.630	1.868	1.963	1.897	1.776	1.714	1.752	10.59	
62)	P	m,p-Xylene	0.524	0.665	0.745	0.758	0.700	0.659	0.623	0.668	11.93	
63)	P	o-Xylene	0.378	0.555	0.702	0.751	0.719	0.669	0.645	0.631	20.32	
64)	P	Styrene		1.013	1.240	1.295	1.226	1.147	1.097	1.170	8.91	
65)	P	Bromoform		0.208	0.229	0.274	0.299	0.296	0.294	0.267	14.65	
66)	P	Isopropylbenzene	0.985	1.450	1.904	2.042	1.987	1.868	1.797	1.719	21.89	*
67)		1,2,3-Trichlor...	0.166	0.154	0.158	0.164	0.161	0.155	0.148	0.158	3.93	
68)	S	4-Bromofluorob...	0.498	0.527	0.536	0.545	0.540	0.539	0.536	0.532	2.99	
69)		Bromobenzene	0.486	0.511	0.545	0.550	0.532	0.496	0.479	0.514	5.59	
70)	P	1,1,2,2-Tetrac...	0.517	0.550	0.532	0.543	0.524	0.494	0.473	0.519	5.28	
71)		n-Propylbenzene	1.798	2.214	2.403	2.460	2.359	2.181	2.084	2.214	10.23	
72)		2-Chlorotoluene	0.358	0.439	0.496	0.505	0.487	0.458	0.444	0.455	10.97	
73)		4-Chlorotoluene	0.374	0.504	0.538	0.528	0.490	0.453	0.431	0.474	12.33	
74)		1,3,5-Trimethy...	1.080	1.486	1.787	1.840	1.720	1.589	1.504	1.572	16.31	
75)		tert-Butylbenzene	0.219	0.302	0.387	0.405	0.392	0.360	0.340	0.344	19.01	
76)		1,2,4-Trimethy...	0.962	1.613	1.917	1.940	1.841	1.702	1.610	1.655	20.21	
77)		sec-Butylbenzene	1.174	1.798	2.250	2.359	2.237	2.048	1.932	1.971	20.42	
78)		p-Isopropyltol...	1.062	1.586	1.958	2.044	1.907	1.764	1.662	1.712	19.25	
79)	I	1,4-Dichlorobenzen...	----------	ISTD	----------							
80)	P	1,3-Dichlorobe...	1.380	1.559	1.640	1.695	1.687	1.639	1.607	1.601	6.73	
81)	P	1,4-Dichlorobe...	1.835	1.731	1.689	1.737	1.688	1.632	1.607	1.703	4.42	
82)		n-Butylbenzene	1.638	2.216	2.835	3.005	2.945	2.744	2.662	2.578	18.96	
83)	P	1,2-Dichlorobe...	1.393	1.570	1.593	1.591	1.505	1.422	1.392	1.495	6.18	
84)	UN	Tetraethyllead								0.000	-1.00	

ICAL Summary Table

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Method Path : C:\msdchem\1\METHODS\
Method File : 160604.M

85)	P	1,2-Dibromo-3-...		0.128	0.149	0.180	0.205	0.209	0.209	0.180	19.13
86)	P	1,2,4-Trichlor...	0.775	0.861	1.081	1.232	1.253	1.217	1.216	1.091	17.97
87)		1,2,3-Trichlor...	0.768	0.919	1.064	1.168	1.170	1.149	1.139	1.054	14.63
88)		Hexachlorobuta...	0.664	0.626	0.704	0.725	0.728	0.706	0.704	0.694	5.27
89)		Naphthalene		1.630	2.342	2.723	2.841	2.773	2.747	2.509	18.55

(#) = Out of Range

ICAL Summary Table

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Evaluate Continuing Calibration Report

Data File: C:\msdchem\1\DATA\160601\x32790.D
DataAcq Meth:8260RUN.M
Acq On : 1 Jun 2016 11:17 am Operator: Bill Brew
Sample : 50ppb mega CC Inst : Instrument #1
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 01 11:36:36 2016
Quant Method : C:\msdchem\1\METHODS\160523.M
Quant Title : 8260/624 Analysis
QLast Update : Mon May 23 15:19:20 2016
Response via : Initial Calibration
Integrator: RTE

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

6/1/16 BB

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	109	0.00
2	P	Dichlorodifluoromethane	0.309	0.258	16.5	92	0.00
3	P	Chloromethane	0.421	0.372	11.6	100	0.00
4	P	Vinyl chloride	0.313	0.307	1.9	109	0.00
5	P	Bromomethane	0.187	0.173	7.5	114	0.02
6	P	Chloroethane	0.166	0.167	-0.6	113	0.01
7	P	Trichlorofluoromethane	0.439	0.385	12.3	94	0.01
8		Ethyl ether	0.201	0.209	-4.0	113	0.00
9	P	Freon 113	0.212	0.211	0.5	108	0.01
10	P	1,1-Dichloroethene	0.387	0.366	5.4	103	0.00
11	P	Acetone	0.140	0.109	22.1#	116	0.00
12		Isopropyl Alcohol	0.019	0.017	10.5	112	0.00
13	P	Carbon disulfide	0.592	0.611	-3.2	113	0.01
14	P	Methyl acetate	0.206	0.196	4.9	113	0.00
15	P	Methylene chloride	0.274	0.256	6.6	121	0.00
16		Acrylonitrile	0.110	0.102	7.3	95	0.00
17		tert-Butyl Alcohol	0.033	0.032	3.0	119	0.00
18	P	Methyl tert-butyl Ether	0.712	0.677	4.9	96	0.00
19	P	trans-1,2-Dichloroethene	0.395	0.356	9.9	87	0.00
20	P	1,1-Dichloroethane	0.620	0.614	1.0	108	0.00
21		Vinyl acetate	0.585	0.590	-0.9	104	0.00
22		2,2-Dichloropropane	0.439	0.438	0.2	105	0.00
23	P	2-Butanone	0.039	0.047#	-20.5#	133	0.00
24	P	cis-1,2-Dichloroethene	0.319	0.360	-12.9	119	0.00
25		Bromochloromethane	0.157	0.163	-3.8	114	0.00
26	P	Chloroform	0.562	0.550	2.1	106	0.00
27	S	Pentafluorobenzene	0.553	0.552	0.2	108	0.00
28		Tetrahydrofuran	0.098	0.102	-4.1	112	0.00
29	P	1,1,1-Trichloroethane	0.473	0.451	4.7	103	0.00
30	P	Cyclohexane	0.616	0.665	-8.0	111	0.00
31	S	1,2-Dichloroethane-d4	0.313	0.283	9.6	99	0.00
32	P	Carbon Tetrachloride	0.408	0.376	7.8	98	0.00
33	P	Benzene	1.187	1.290	-8.7	117	0.00
34	P	1,2-Dichloroethane	0.465	0.431	7.3	101	0.00
35	P	Trichloroethene	0.318	0.344	-8.2	118	0.00
36		tert-Butyl Acetate	0.000	0.000	0.0	0#	0.00
37	P	Methylcyclohexane	0.487	0.583	-19.7	120	0.00
38		1,4-Dioxane	0.004	0.004	0.0	136	0.00
39	UN	Ethyl acetate	0.000	0.000	0.0	0#	0.00
40	P	1,2-Dichloropropane	0.345	0.373	-8.1	118	0.00
41	UN	Isobutyl alcohol	0.000	0.000	0.0	0#	-0.06
42		Dibromomethane	0.183	0.189	-3.3	112	0.00
43	P	Bromodichloromethane	0.416	0.411	1.2	106	0.00
44		2-Chloroethyl vinyl Ether	0.024	0.009	62.5#	47#	0.00
45	UN	Isopropyl acetate	0.000	0.000	0.0	0#	0.00
46		1,1-Dichloropropene	0.400	0.423	-5.7	114	0.00
47	P	cis-1,3-Dichloropropene	0.468	0.539	-15.2	117	0.00

Evaluate Continuing Calibration Report

Data File: C:\msdchem\1\DATA\160601\x32790.D
DataAcq Meth:8260RUN.M
Acq On : 1 Jun 2016 11:17 am Operator: Bill Brew
Sample : 50ppb mega CC Inst : Instrument #1
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 01 11:36:36 2016
Quant Method : C:\msdchem\1\METHODS\160523.M
Quant Title : 8260/624 Analysis
QLast Update : Mon May 23 15:19:20 2016
Response via : Initial Calibration
Integrator: RTE

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
48	P	4-Methyl-2-pentanone	0.129	0.152	-17.8	127	0.00
49	S	Toluene-D8	1.052	1.111	-5.6	114	0.00
50	P	Toluene	1.279	1.424	-11.3	121	0.00
51	P	trans-1,3-Dichloropropene	0.444	0.490	-10.4	114	0.00
52	P	1,1,2-Trichloroethane	0.287	0.300	-4.5	120	0.00
53		1,3-Dichloropropane	0.469	0.512	-9.2	119	0.00
54	P	Tetrachloroethene	0.367	0.392	-6.8	117	0.00
55	P	2-Hexanone	0.244	0.278	-13.9	120	0.00
56	P	Dibromochloromethane	0.312	0.327	-4.8	111	0.00
57	P	1,2-Dibromoethane	0.282	0.313	-11.0	120	0.00
58	I	Chlorobenzene-d5	1.000	1.000	0.0	123	0.00
59	P	Chlorobenzene	1.021	0.976	4.4	122	0.00
60		1,1,1,2-Tetrachloroethane	0.371	0.342	7.8	113	0.00
61	P	Ethylbenzene	1.682	1.697	-0.9	120	0.00
62	P	m,p-Xylene	0.643	0.666	-3.6	122	0.00
63	P	o-Xylene	0.600	0.653	-8.8	124	0.00
64	P	Styrene	1.022	1.127	-10.3	125	0.00
65	P	Bromoform	0.253	0.244	3.6	117	0.00
66	P	Isopropylbenzene	1.616	1.762	-9.0	123	0.00
67		1,2,3-Trichloropropane	0.140	0.133	5.0	124	0.00
68	S	4-Bromofluorobenzene	0.538	0.560	-4.1	128	0.00
69		Bromobenzene	0.475	0.470	1.1	122	0.00
70	P	1,1,2,2-Tetrachloroethane	0.454	0.457	-0.7	131	0.00
71		n-Propylbenzene	2.003	2.088	-4.2	124	0.00
72		2-Chlorotoluene	0.421	0.435	-3.3	125	0.00
73		4-Chlorotoluene	0.436	0.454	-4.1	127	0.00
74		1,3,5-Trimethylbenzene	1.433	1.554	-8.4	124	0.00
75		tert-Butylbenzene	0.319	0.356	-11.6	126	0.00
76		1,2,4-Trimethylbenzene	1.482	1.630	-10.0	125	0.00
77		sec-Butylbenzene	1.782	1.980	-11.1	125	0.00
78		p-Isopropyltoluene.	1.565	1.704	-8.9	124	0.00
79	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	126	0.00
80	P	1,3-Dichlorobenzene	1.493	1.464	1.9	127	0.00
81	P	1,4-Dichlorobenzene	1.580	1.459	7.7	126	0.00
82		n-Butylbenzene	2.358	2.592	-9.9	129	0.00
83	P	1,2-Dichlorobenzene	1.384	1.353	2.2	126	0.00
84	UN	Tetraethyllead	0.000	0.000	0.0	0#	0.00
85	P	1,2-Dibromo-3-Chloropropane	0.158	0.158	0.0	128	0.00
86	P	1,2,4-Trichlorobenzene	0.997	1.067	-7.0	129	0.00
87		1,2,3-Trichlorobenzene	0.973	0.982	-0.9	124	0.00
88		Hexachlorobutadiene	0.646	0.600	7.1	119	0.00
89		Naphthalene	2.083	2.343	-12.5	128	0.00

(#) = Out of Range SPCC's out = 1 CCC's out = 0

Evaluate Continuing Calibration Report

Data File: C:\msdchem\1\DATA\160602\x32849.D
DataAcq Meth:8260RUN.M
Acq On : 2 Jun 2016 12:47 pm Operator: Bill Brew
Sample : 50ppb mega CC Inst : Instrument #1
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 02 16:37:39 2016
Quant Method : C:\msdchem\1\METHODS\160523.M
Quant Title : 8260/624 Analysis
QLast Update : Thu Jun 02 16:36:26 2016
Response via : Initial Calibration
Integrator: RTE

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

6/2/16 BB

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	96	0.00
2	P	Dichlorodifluoromethane	0.309	0.260	15.9	82	0.00
3	P	Chloromethane	0.421	0.346	17.8	82	0.00
4	P	Vinyl chloride	0.313	0.303	3.2	95	0.00
5	P	Bromomethane	0.187	0.116	38.0#	67	0.02
6	P	Chloroethane	0.166	0.170	-2.4	101	0.01
7	P	Trichlorofluoromethane	0.439	0.391	10.9	85	0.01
8		Ethyl ether	0.201	0.216	-7.5	103	0.00
9	P	Freon 113	0.212	0.213	-0.5	97	0.01
10	P	1,1-Dichloroethene	0.387	0.373	3.6	93	0.00
11	P	Acetone	0.140	0.111	20.7#	105	0.00
12		Isopropyl Alcohol	0.019	0.017	10.5	102	0.00
13	P	Carbon disulfide	0.592	0.625	-5.6	102	0.00
14	P	Methyl acetate	0.206	0.201	2.4	102	0.00
15	P	Methylene chloride	0.274	0.264	3.6	110	0.00
16		Acrylonitrile	0.110	0.101	8.2	83	0.00
17		tert-Butyl Alcohol	0.033	0.034	-3.0	111	0.00
18	P	Methyl tert-butyl Ether	0.712	0.714	-0.3	90	0.00
19	P	trans-1,2-Dichloroethene	0.395	0.357	9.6	77	0.00
20	P	1,1-Dichloroethane	0.620	0.644	-3.9	100	0.00
21		Vinyl acetate	0.585	0.614	-5.0	96	0.00
22		2,2-Dichloropropane	0.439	0.455	-3.6	97	0.00
23	P	2-Butanone	0.039	0.047#	-20.5#	118	0.00
24	P	cis-1,2-Dichloroethene	0.319	0.371	-16.3	108	0.00
25		Bromochloromethane	0.157	0.168	-7.0	104	0.00
26	P	Chloroform	0.562	0.582	-3.6	99	0.00
27	S	Pentafluorobenzene	0.553	0.560	-1.3	96	0.00
28		Tetrahydrofuran	0.098	0.107	-9.2	104	0.00
29	P	1,1,1-Trichloroethane	0.473	0.468	1.1	94	0.00
30	P	Cyclohexane	0.616	0.690	-12.0	102	0.00
31	S	1,2-Dichloroethane-d4	0.313	0.284	9.3	88	0.00
32	P	Carbon Tetrachloride	0.408	0.384	5.9	88	0.00
33	P	Benzene	1.187	1.342	-13.1	108	0.00
34	P	1,2-Dichloroethane	0.465	0.454	2.4	94	0.00
35	P	Trichloroethene	0.318	0.357	-12.3	108	0.00
36		tert-Butyl Acetate	0.000	0.000	0.0	0#	0.00
37	P	Methylcyclohexane	0.487	0.612	-25.7#	111	0.00
38		1,4-Dioxane	0.004	0.004	0.0	120	0.00
39	UN	Ethyl acetate	0.000	0.000	0.0	0#	0.00
40	P	1,2-Dichloropropane	0.345	0.388	-12.5	108	0.00
41	UN	Isobutyl alcohol	0.000	0.000	0.0	0#	-0.06
42		Dibromomethane	0.183	0.201	-9.8	106	0.00
43	P	Bromodichloromethane	0.416	0.427	-2.6	97	0.00
44		2-Chloroethyl vinyl Ether	0.024	0.004	83.3#	17#	0.00
45	UN	Isopropyl acetate	0.000	0.000	0.0	0#	0.00
46		1,1-Dichloropropene	0.400	0.443	-10.7	106	0.00
47	P	cis-1,3-Dichloropropene	0.468	0.561	-19.9	108	0.00

Evaluate Continuing Calibration Report

Data File: C:\msdchem\1\DATA\160602\x32849.D
DataAcq Meth:8260RUN.M
Acq On : 2 Jun 2016 12:47 pm Operator: Bill Brew
Sample : 50ppb mega CC Inst : Instrument #1
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 02 16:37:39 2016
Quant Method : C:\msdchem\1\METHODS\160523.M
Quant Title : 8260/624 Analysis
QLast Update : Thu Jun 02 16:36:26 2016
Response via : Initial Calibration
Integrator: RTE

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
48	P	4-Methyl-2-pentanone	0.129	0.159	-23.3#	118	0.00
49	S	Toluene-D8	1.052	1.122	-6.7	102	0.00
50	P	Toluene	1.279	1.458	-14.0	110	0.00
51	P	trans-1,3-Dichloropropene	0.444	0.514	-15.8	105	0.00
52	P	1,1,2-Trichloroethane	0.287	0.316	-10.1	112	0.00
53		1,3-Dichloropropane	0.469	0.533	-13.6	110	0.00
54	P	Tetrachloroethene	0.367	0.410	-11.7	108	0.00
55	P	2-Hexanone	0.244	0.283	-16.0	108	0.00
56	P	Dibromochloromethane	0.312	0.331	-6.1	99	0.00
57	P	1,2-Dibromoethane	0.282	0.331	-17.4	112	0.00
58	I	Chlorobenzene-d5	1.000	1.000	0.0	111	0.00
59	P	Chlorobenzene	1.021	0.997	2.4	113	0.00
60		1,1,1,2-Tetrachloroethane	0.371	0.341	8.1	102	0.00
61	P	Ethylbenzene	1.682	1.736	-3.2	112	0.00
62	P	m,p-Xylene	0.643	0.664	-3.3	110	0.00
63	P	o-Xylene	0.600	0.671	-11.8	115	0.00
64	P	Styrene	1.022	1.155	-13.0	116	0.00
65	P	Bromoform	0.253	0.234	7.5	102	0.00
66	P	Isopropylbenzene	1.616	1.793	-11.0	114	0.00
67		1,2,3-Trichloropropane	0.140	0.136	2.9	115	0.00
68	S	4-Bromofluorobenzene	0.538	0.566	-5.2	118	0.00
69		Bromobenzene	0.475	0.486	-2.3	114	0.00
70	P	1,1,2,2-Tetrachloroethane	0.454	0.472	-4.0	122	0.00
71		n-Propylbenzene	2.003	2.144	-7.0	116	0.00
72		2-Chlorotoluene	0.421	0.439	-4.3	114	0.00
73		4-Chlorotoluene	0.436	0.461	-5.7	117	0.00
74		1,3,5-Trimethylbenzene	1.433	1.576	-10.0	114	0.00
75		tert-Butylbenzene	0.319	0.358	-12.2	115	0.00
76		1,2,4-Trimethylbenzene	1.482	1.661	-12.1	116	0.00
77		sec-Butylbenzene	1.782	2.019	-13.3	116	0.00
78		p-Isopropyltoluene	1.565	1.742	-11.3	115	0.00
79	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	114	0.00
80	P	1,3-Dichlorobenzene	1.493	1.491	0.1	117	0.00
81	P	1,4-Dichlorobenzene	1.580	1.488	5.8	116	0.00
82		n-Butylbenzene	2.358	2.628	-11.5	118	0.00
83	P	1,2-Dichlorobenzene	1.384	1.394	-0.7	117	0.00
84	UN	Tetraethyllead	0.000	0.000	0.0	0#	0.00
85	P	1,2-Dibromo-3-Chloropropane	0.158	0.161	-1.9	118	0.00
86	P	1,2,4-Trichlorobenzene	0.997	1.118	-12.1	122	0.00
87		1,2,3-Trichlorobenzene	0.973	1.026	-5.4	117	0.00
88		Hexachlorobutadiene	0.646	0.627	2.9	112	0.00
89		Naphthalene	2.083	2.436	-16.9	120	0.00

(#) = Out of Range SPCC's out = 1 CCC's out = 0

Evaluate Continuing Calibration Report

Data File: C:\msdchem\1\DATA\160604\x32934.D
DataAcq Meth:8260RUN.M
Acq On : 4 Jun 2016 12:04 pm
Sample : 50ppb mega Cal
Misc :
ALS Vial : 7 Sample Multiplier: 1

Operator: Bill Brew
Inst : Instrument #1

Quant Time: Jun 06 10:30:14 2016
Quant Method : C:\msdchem\1\METHODS\160604.M
Quant Title : 8260/624 Analysis
QLast Update : Sat Jun 04 13:45:24 2016
Response via : Initial Calibration
Integrator: RTE

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

6/6/16 BB

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	100	0.00
2	P	Dichlorodifluoromethane	0.281	0.290	-3.2	100	0.00
3	P	Chloromethane	0.369	0.373	-1.1	100	0.00
4	P	Vinyl chloride	0.266	0.279	-4.9	100	0.00
5	P	Bromomethane	0.148	0.136	8.1	100	0.03
6	P	Chloroethane	0.134	0.144	-7.5	100	0.01
7	P	Trichlorofluoromethane	0.374	0.396	-5.9	100	0.01
8		Ethyl ether	0.174	0.189	-8.6	100	0.00
9	P	Freon 113	0.176	0.189	-7.4	100	0.01
10	P	1,1-Dichloroethene	0.323	0.344	-6.5	100	0.00
11	P	Acetone	0.191	0.095#	50.3#	101	0.00
12		Isopropyl Alcohol	0.015	0.015	0.0	100	0.00
13	P	Carbon disulfide	0.493	0.531	-7.7	100	0.00
14	P	Methyl acetate	0.175	0.181	-3.4	100	0.00
15	P	Methylene chloride	0.228	0.216	5.3	100	0.00
16		Acrylonitrile	0.093	0.090	3.2	100	0.00
17		tert-Butyl Alcohol	0.028	0.028	0.0	100	0.00
18	P	Methyl tert-butyl Ether	0.622	0.592	4.8	100	0.00
19	P	trans-1,2-Dichloroethene	0.334	0.319	4.5	100	0.00
20	P	1,1-Dichloroethane	0.565	0.579	-2.5	100	0.00
21		Vinyl acetate	0.504	0.550	-9.1	100	0.00
22		2,2-Dichloropropane	0.379	0.416	-9.8	100	0.00
23	P	2-Butanone	0.037	0.038#	-2.7	100	0.00
24	P	cis-1,2-Dichloroethene	0.291	0.318	-9.3	100	0.00
25		Bromochloromethane	0.145	0.149	-2.8	100	0.00
26	P	Chloroform	0.507	0.534	-5.3	100	0.00
27	S	Pentafluorobenzene	0.517	0.526	-1.7	100	0.00
28		Tetrahydrofuran	0.089	0.099	-11.2	100	0.00
29	P	1,1,1-Trichloroethane	0.417	0.442	-6.0	100	0.00
30	P	Cyclohexane	0.545	0.611	-12.1	100	0.00
31	S	1,2-Dichloroethane-d4	0.303	0.301	0.7	100	0.00
32	P	Carbon Tetrachloride	0.351	0.382	-8.8	100	0.00
33	P	Benzene	1.097	1.168	-6.5	100	0.00
34	P	1,2-Dichloroethane	0.417	0.433	-3.8	100	0.00
35	P	Trichloroethene	0.286	0.303	-5.9	100	0.00
36		tert-Butyl Acetate	0.000	0.000	0.0	0#	0.00
37	P	Methylcyclohexane	0.441	0.501	-13.6	100	0.00
38		1,4-Dioxane	0.004	0.004	0.0	100	0.00
39	UN	Ethyl acetate	0.000	0.000	0.0	0#	0.00
40	P	1,2-Dichloropropane	0.318	0.339	-6.6	100	0.00
41	UN	Isobutyl alcohol	0.000	0.000	0.0	0#	-0.07
42		Dibromomethane	0.171	0.179	-4.7	100	0.00
43	P	Bromodichloromethane	0.363	0.393	-8.3	100	0.00
44		2-Chloroethyl vinyl Ether	0.008	0.005	37.5#	54	0.00
45	UN	Isopropyl acetate	0.000	0.000	0.0	0#	0.00
46		1,1-Dichloropropene	0.364	0.385	-5.8	100	0.00
47	P	cis-1,3-Dichloropropene	0.419	0.477	-13.8	100	0.00

Evaluate Continuing Calibration Report

Data File: C:\msdchem\1\DATA\160604\x32934.D
DataAcq Meth:8260RUN.M
Acq On : 4 Jun 2016 12:04 pm Operator: Bill Brew
Sample : 50ppb mega Cal Inst : Instrument #1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 06 10:30:14 2016
Quant Method : C:\msdchem\1\METHODS\160604.M
Quant Title : 8260/624 Analysis
QLast Update : Sat Jun 04 13:45:24 2016
Response via : Initial Calibration
Integrator: RTE

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
48	P	4-Methyl-2-pentanone	0.127	0.134	-5.5	100	0.00
49	S	Toluene-D8	0.962	0.976	-1.5	100	0.00
50	P	Toluene	1.305	1.276	2.2	100	0.00
51	P	trans-1,3-Dichloropropene	0.401	0.450	-12.2	100	0.00
52	P	1,1,2-Trichloroethane	0.278	0.277	0.4	100	0.00
53		1,3-Dichloropropane	0.439	0.465	-5.9	100	0.00
54	P	Tetrachloroethene	0.343	0.363	-5.8	100	0.00
55	P	2-Hexanone	0.234	0.250	-6.8	100	0.00
56	P	Dibromochloromethane	0.274	0.306	-11.7	100	0.00
57	P	1,2-Dibromoethane	0.271	0.284	-4.8	100	0.00
58	I	Chlorobenzene-d5	1.000	1.000	0.0	100	0.00
59	P	Chlorobenzene	1.065	1.103	-3.6	100	0.00
60		1,1,1,2-Tetrachloroethane	0.373	0.398	-6.7	100	0.00
61	P	Ethylbenzene	1.752	1.963	-12.0	100	0.00
62	P	m,p-Xylene	0.668	0.758	-13.5	100	0.00
63	P	o-Xylene	0.631	0.751	-19.0	100	0.00
64	P	Styrene	1.170	1.295	-10.7	100	0.00
65	P	Bromoform	0.267	0.274	-2.6	100	0.00
66	P	Isopropylbenzene	1.719	2.042	-18.8	100	0.00
67		1,2,3-Trichloropropane	0.158	0.164	-3.8	100	0.00
68	S	4-Bromofluorobenzene	0.532	0.545	-2.4	100	0.00
69		Bromobenzene	0.514	0.550	-7.0	100	0.00
70	P	1,1,2,2-Tetrachloroethane	0.519	0.543	-4.6	100	0.00
71		n-Propylbenzene	2.214	2.460	-11.1	100	0.00
72		2-Chlorotoluene	0.455	0.505	-11.0	100	0.00
73		4-Chlorotoluene	0.474	0.528	-11.4	100	0.00
74		1,3,5-Trimethylbenzene	1.572	1.840	-17.0	100	0.00
75		tert-Butylbenzene	0.344	0.405	-17.7	100	0.00
76		1,2,4-Trimethylbenzene	1.655	1.940	-17.2	100	0.00
77		sec-Butylbenzene	1.971	2.359	-19.7	100	0.00
78		p-Isopropyltoluene	1.712	2.044	-19.4	100	0.00
79	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	100	0.00
80	P	1,3-Dichlorobenzene	1.601	1.695	-5.9	100	0.00
81	P	1,4-Dichlorobenzene	1.703	1.737	-2.0	100	0.00
82		n-Butylbenzene	2.578	3.005	-16.6	100	0.00
83	P	1,2-Dichlorobenzene	1.495	1.591	-6.4	100	0.00
84	UN	Tetraethyllead	0.000	0.000	0.0	0#	0.00
85	P	1,2-Dibromo-3-Chloropropane	0.180	0.180	0.0	100	0.00
86	P	1,2,4-Trichlorobenzene	1.091	1.232	-12.9	100	0.00
87		1,2,3-Trichlorobenzene	1.054	1.168	-10.8	100	0.00
88		Hexachlorobutadiene	0.694	0.725	-4.5	100	0.00
89		Naphthalene	2.509	2.723	-8.5	100	0.00

(#) = Out of Range SPCC's out = 2 CCC's out = 0

Evaluate Continuing Calibration Report

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Data File: C:\msdchem\1\DATA\160606\x32970.D
DataAcq Meth:8260RUN.M
Acq On : 6 Jun 2016 11:30 am Operator: Bill Brew
Sample : 50ppb mega CC Inst : Instrument #1
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 06 11:50:39 2016
Quant Method : C:\msdchem\1\METHODS\160604.M
Quant Title : 8260/624 Analysis
QLast Update : Sat Jun 04 13:45:24 2016
Response via : Initial Calibration
Integrator: RTE

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

6/6/16 13/3

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	121	0.00
2	P	Dichlorodifluoromethane	0.281	0.258	8.2	108	0.01
3	P	Chloromethane	0.369	0.346	6.2	113	0.00
4	P	Vinyl chloride	0.266	0.270	-1.5	117	0.00
5	P	Bromomethane	0.148	0.133	10.1	119	0.02
6	P	Chloroethane	0.134	0.140	-4.5	118	0.01
7	P	Trichlorofluoromethane	0.374	0.358	4.3	110	0.01
8		Ethyl ether	0.174	0.182	-4.6	117	0.00
9	P	Freon 113	0.176	0.183	-4.0	117	0.01
10	P	1,1-Dichloroethene	0.323	0.323	0.0	114	0.01
11	P	Acetone	0.191	0.090#	52.9#	115	0.00
12		Isopropyl Alcohol	0.015	0.015	0.0	121	0.00
13	P	Carbon disulfide	0.493	0.526	-6.7	120	0.01
14	P	Methyl acetate	0.175	0.173	1.1	116	0.00
15	P	Methylene chloride	0.228	0.211	7.5	119	0.00
16		Acrylonitrile	0.093	0.086	7.5	115	0.00
17		tert-Butyl Alcohol	0.028	0.028	0.0	120	0.00
18	P	Methyl tert-butyl Ether	0.622	0.583	6.3	120	0.00
19	P	trans-1,2-Dichloroethene	0.334	0.300	10.2	114	0.00
20	P	1,1-Dichloroethane	0.565	0.549	2.8	115	0.00
21		Vinyl acetate	0.504	0.538	-6.7	119	0.00
22		2,2-Dichloropropane	0.379	0.396	-4.5	116	0.00
23	P	2-Butanone	0.037	0.039#	-5.4	124	0.00
24	P	cis-1,2-Dichloroethene	0.291	0.312	-7.2	119	0.00
25		Bromochloromethane	0.145	0.146	-0.7	119	0.00
26	P	Chloroform	0.507	0.496	2.2	113	0.00
27	S	Pentafluorobenzene	0.517	0.523	-1.2	121	0.00
28		Tetrahydrofuran	0.089	0.097	-9.0	120	0.00
29	P	1,1,1-Trichloroethane	0.417	0.414	0.7	114	0.00
30	P	Cyclohexane	0.545	0.561	-2.9	112	0.00
31	S	1,2-Dichloroethane-d4	0.303	0.285	5.9	115	0.00
32	P	Carbon Tetrachloride	0.351	0.345	1.7	110	0.00
33	P	Benzene	1.097	1.117	-1.8	116	0.00
34	P	1,2-Dichloroethane	0.417	0.397	4.8	111	0.00
35	P	Trichloroethene	0.286	0.296	-3.5	118	0.00
36		tert-Butyl Acetate	0.000	0.000	0.0	0#	0.00
37	P	Methylcyclohexane	0.441	0.496	-12.5	120	0.00
38		1,4-Dioxane	0.004	0.004	0.0	135	0.00
39	UN	Ethyl acetate	0.000	0.000	0.0	0#	0.00
40	P	1,2-Dichloropropane	0.318	0.328	-3.1	117	0.00
41	UN	Isobutyl alcohol	0.000	0.000	0.0	0#	-0.06
42		Dibromomethane	0.171	0.172	-0.6	116	0.00
43	P	Bromodichloromethane	0.363	0.370	-1.9	114	0.00
44		2-Chloroethyl vinyl Ether	0.008	0.004	50.0#	55	0.00
45	UN	Isopropyl acetate	0.000	0.000	0.0	0#	0.00
46		1,1-Dichloropropene	0.364	0.370	-1.6	117	0.00
47	P	cis-1,3-Dichloropropene	0.419	0.477	-13.8	121	0.00

Evaluate Continuing Calibration Report

Data File: C:\msdchem\1\DATA\160606\x32970.D
DataAcq Meth:8260RUN.M
Acq On : 6 Jun 2016 11:30 am Operator: Bill Brew
Sample : 50ppb mega CC Inst : Instrument #1
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 06 11:50:39 2016
Quant Method : C:\msdchem\1\METHODS\160604.M
Quant Title : 8260/624 Analysis
QLast Update : Sat Jun 04 13:45:24 2016
Response via : Initial Calibration
Integrator: RTE

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
48	P	4-Methyl-2-pentanone	0.127	0.133	-4.7	121	0.00
49	S	Toluene-D8	0.962	0.973	-1.1	121	0.00
50	P	Toluene	1.305	1.246	4.5	118	0.00
51	P	trans-1,3-Dichloropropene	0.401	0.444	-10.7	120	0.00
52	P	1,1,2-Trichloroethane	0.278	0.266	4.3	117	0.00
53		1,3-Dichloropropane	0.439	0.454	-3.4	118	0.00
54	P	Tetrachloroethene	0.343	0.342	0.3	115	0.00
55	P	2-Hexanone	0.234	0.244	-4.3	118	0.00
56	P	Dibromochloromethane	0.274	0.292	-6.6	116	0.00
57	P	1,2-Dibromoethane	0.271	0.282	-4.1	120	0.00
58	I	Chlorobenzene-d5	1.000	1.000	0.0	121	0.00
59	P	Chlorobenzene	1.065	1.074	-0.8	118	0.00
60		1,1,1,2-Tetrachloroethane	0.373	0.388	-4.0	118	0.00
61	P	Ethylbenzene	1.752	1.888	-7.8	116	0.00
62	P	m,p-Xylene	0.668	0.734	-9.9	117	0.00
63	P	o-Xylene	0.631	0.730	-15.7	118	0.00
64	P	Styrene	1.170	1.253	-7.1	117	0.00
65	P	Bromoform	0.267	0.275	-3.0	122	0.00
66	P	Isopropylbenzene	1.719	1.976	-15.0	117	0.00
67		1,2,3-Trichloropropane	0.158	0.155	1.9	115	0.00
68	S	4-Bromofluorobenzene	0.532	0.541	-1.7	120	0.00
69		Bromobenzene	0.514	0.529	-2.9	116	0.00
70	P	1,1,2,2-Tetrachloroethane	0.519	0.526	-1.3	117	0.00
71		n-Propylbenzene	2.214	2.353	-6.3	116	0.00
72		2-Chlorotoluene	0.455	0.482	-5.9	116	0.00
73		4-Chlorotoluene	0.474	0.491	-3.6	112	0.00
74		1,3,5-Trimethylbenzene	1.572	1.731	-10.1	114	0.00
75		tert-Butylbenzene	0.344	0.393	-14.2	117	0.00
76		1,2,4-Trimethylbenzene	1.655	1.818	-9.8	113	0.00
77		sec-Butylbenzene	1.971	2.218	-12.5	114	0.00
78		p-Isopropyltoluene	1.712	1.911	-11.6	113	0:00
79	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	115	0.00
80	P	1,3-Dichlorobenzene	1.601	1.674	-4.6	114	0.00
81	P	1,4-Dichlorobenzene	1.703	1.692	0.6	112	0.00
82		n-Butylbenzene	2.578	2.971	-15.2	114	0.00
83	P	1,2-Dichlorobenzene	1.495	1.553	-3.9	112	0.00
84	UN	Tetraethyllead	0.000	0.000	0.0	0#	0.00
85	P	1,2-Dibromo-3-Chloropropane	0.180	0.181	-0.6	116	0.00
86	P	1,2,4-Trichlorobenzene	1.091	1.203	-10.3	112	0.00
87		1,2,3-Trichlorobenzene	1.054	1.112	-5.5	110	0.00
88		Hexachlorobutadiene	0.694	0.701	-1.0	111	0.00
89		Naphthalene	2.509	2.636	-5.1	112	0.00

(#) = Out of Range SPCC's out = 2 CCC's out = 0

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Paradigm Environmental Services Client Name: Bergmann Associates

Lab Project #: 162142-2207-2221 Client Project #: N/A SDG No.: 2142-01

Client Project Name: VOA Back Lot

	SAMPLE NO.		S1 2-FP	S2 P-d5	S3 NB-d5	S4 2-FBP	S5 2,4,6-TBP	S6 TP-d14	TOT OUT
01	Blk 06/01		47.8	49.1	44.7	47.4	52.6	60.5	0
02	LCS 06/01		50.1	53.0	47.9	51.0	69.7	80.8	0
03	Blk 06/03		61.0	63.9	59.2	63.0	71.5	86.5	0
04	LCS 06/03		67.8	72.6	67.5	70.4	79.2	88.1	0
05	LCS Dup 06/03		70.3	74.0	68.8	73.3	84.4	86.1	0
06	Excavation Bottom	162142-01	47.4	53.7	49.5	64.9	76.3	82.9	0
07	Excavation Bottom 2	162207-01	37.2	38.2	37.7	47.6	60.9	67.4	0
08	Excavation East	162207-02	35.4	38.8	33.9 *	39.4	62.9	68.5	1
09	Excavation South	162207-03	40.8	42.5	41.0	48.6	65.0	68.5	0
10	Excavation North	162207-04	38.9	41.0	36.1 *	46.7	70.6	75.6	1
11	Excavation West	162221-01	34.8	36.5	33.2 *	38.4	65.1	68.0	1
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

	QC LIMITS %
S1 (2-FP) =2-Fluorophenol	(31.4-89.7)
S2 (P-d5) = Phenol-d5	(36.3-94.5)
S3 (NB-d5) = Nitrobenzene-d5	(37.1-83.6)
S4 (2-FBP) = 2-Fluorobiphenyl	(34.4-98.8)
S5 (2,4,6-TBP) = 2,4,6-Tribromophenol	(26.8-101)
S6 (TP) = Terphenyl-d14	(51.8-112)

* Values outside of current required QC limits

D Surrogate diluted out

FORM II SV-1

Response Factor Report Instrument #1

Method Path : C:\msdchem\1\methods\
Method File : ABN160601.M
Title :
Last Update : Thu Jun 02 11:45:51 2016
Response Via : Initial Calibration

edf
6/2/16

Calibration Files
1 =B12008.D 2 =B12009.D 3 =B12010.D 4 =B12011.D 5 =B12012.D 6 =B12013.D 7 =B12014.D

		Compound	1	2	3	4	5	6	7	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	ISTD								
2)		Pyridine	1.498	1.483	1.409	1.164	1.268	1.146	1.012	1.283	14.54
3)	P	Benzaldehyde	1.055	0.966	0.846	0.705	0.648	0.502		0.787	26.35*
4)		Benzyl alcohol	0.823	0.810	0.903	0.887	0.905	0.908	0.901	0.877	4.75
5)	P	Bis (2-chloroe...	1.343	1.270	1.321	1.286	1.278	1.329	1.383	1.316	3.08
6)		Bis (2-chloroi...	1.615	1.578	1.668	1.600	1.618	1.613	1.593	1.612	1.76
7)	PM	2-Chlorophenol	1.471	1.438	1.458	1.411	1.416	1.415	1.362	1.424	2.51
8)		1,3-Dichlorobe...	1.593	1.535	1.576	1.528	1.542	1.572	1.519	1.552	1.82
9)	M	1,4-Dichlorobe...	1.583	1.558	1.599	1.547	1.573	1.577	1.542	1.569	1.30
10)		1,2-Dichlorobe...	1.519	1.475	1.527	1.471	1.491	1.489	1.433	1.487	2.13
11)	S	2-Fluorophenol	1.288	1.275	1.303	1.264	1.289	1.305	1.275	1.285	1.19
12)	P	Hexachloroethane	0.599	0.583	0.625	0.604	0.604	0.612	0.591	0.603	2.25
13)	P	2-Methylphenol	1.259	1.257	1.303	1.260	1.254	1.278	1.251	1.266	1.46
14)	P	3&4-Methylphenol	1.313	1.326	1.394	1.337	1.350	1.371	1.329	1.346	2.11
15)		N-Nitrosodimet...	0.731	0.659	0.678	0.726	0.761	0.786	0.772	0.730	6.52
16)	PM	N-Nitroso-di-n...	0.882	0.848	0.889	0.872	0.849	0.863	0.856	0.866	1.85
17)	PM	Phenol	1.766	1.758	1.805	1.744	1.736	1.735	1.699	1.749	1.88
18)	S	Phenol-d5	1.674	1.665	1.712	1.681	1.641	1.666	1.632	1.667	1.57
19)	P	Acetophenone	1.749	1.776	1.835	1.764	1.789	1.787	1.756	1.780	1.61
20)	P	2-Nitrophenol	0.697	0.725	0.768	0.767	0.766	0.771	0.757	0.750	3.76
21)	P	Bis (2-chloroe...	1.526	1.492	1.582	1.532	1.517	1.547	1.509	1.529	1.90
22)	I	Napthalene-d8	ISTD								
23)		Aniline	0.541	0.548	0.533	0.454	0.468	0.429	0.365	0.477	14.27
24)		Benzoic acid	0.162	0.177	0.223	0.228	0.239	0.246	0.251	0.218	15.97
25)	P	4-Chloroaniline	0.459	0.455	0.462	0.421	0.420	0.418	0.401	0.434	5.58
26)	PM	4-Chloro-3-met...	0.309	0.293	0.306	0.302	0.297	0.305	0.303	0.302	1.81
27)	PM	2,4-Dichloroph...	0.291	0.298	0.307	0.300	0.298	0.305	0.304	0.300	1.84
28)	M	2,6-Dichloroph...	0.272	0.273	0.279	0.266	0.267	0.271	0.274	0.272	1.68
29)	PM	2,4-Dimethylph...	0.233	0.282	0.318	0.271	0.290	0.308	0.316	0.288	10.41
30)	P	Hexachlorobuta...	0.155	0.164	0.160	0.159	0.155	0.157	0.157	0.158	2.03
31)	P	Isophorone	0.682	0.657	0.679	0.659	0.657	0.658	0.652	0.664	1.76
32)	P	2-Methylnaptha...	0.601	0.576	0.595	0.588	0.574	0.591	0.573	0.586	1.91
33)	P	Naphthalene	1.101	1.070	1.074	1.068	1.070	1.065	1.055	1.072	1.31
34)	P	Nitrobenzene	0.343	0.347	0.365	0.360	0.350	0.362	0.357	0.355	2.37
35)	S	Nitrobenzene-d5	0.373	0.361	0.371	0.370	0.359	0.369	0.376	0.368	1.66
36)		Azobenzene	0.723	0.709	0.695	0.686	0.785	0.785	0.775	0.737	5.92
37)	M	1,2,4-Trichlor...	0.325	0.310	0.326	0.313	0.312	0.316	0.313	0.317	1.98

Initial Calibration Summary Table

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Method Path : C:\msdchem\1\methods\
Method File : ABN160601.M

38)	P	Caprolactam	0.149	0.143	0.157	0.152	0.154	0.155	0.155	0.152	3.22
39)	P	1,2,4,5-Tetrac...	0.285	0.287	0.289	0.282	0.282	0.284	0.281	0.284	1.02
40)	P	Biphenyl	0.847	0.823	0.830	0.814	0.804	0.804	0.786	0.815	2.49
41)	I	Acenaphthene-d10	----------ISTD----------								
42)	P	2-Chloronaphth...	0.382	0.353	0.357	0.354	0.341	0.348	0.375	0.358#	4.14
43)	PM	Acenaphthene	1.201	1.176	1.185	1.171	1.155	1.177	1.163	1.175	1.29
44)	P	Acenaphthylene	1.950	1.925	1.928	1.841	1.846	1.848	1.823	1.880	2.77
45)	P	4-Chlorophenyl...	0.602	0.589	0.597	0.582	0.578	0.574	0.573	0.585	1.91
46)	P	Dibenzofuran	1.675	1.641	1.664	1.666	1.654	1.671	1.643	1.659	0.82
47)	P	Diethyl phthalate	1.293	1.256	1.270	1.246	1.242	1.244	1.226	1.254	1.76
48)	P	Dimethyl phtha...	1.291	1.268	1.283	1.262	1.252	1.256	1.247	1.266	1.29
49)	PM	2,4-Dinitrophenol	0.074	0.110	0.155	0.173	0.175	0.191	0.187	0.152	28.73*
50)	PM	2,4-Dinitrotol...	0.384	0.384	0.400	0.398	0.395	0.411	0.406	0.397	2.55
51)	P	2,6-Dinitrotol...	0.292	0.292	0.304	0.301	0.299	0.308	0.303	0.300	2.00
52)	P	Fluorene	1.337	1.349	1.352	1.326	1.323	1.341	1.315	1.335	1.05
53)	S	2-Fluorobiphenyl	1.346	1.319	1.338	1.324	1.309	1.335	1.321	1.327	0.95
54)	P	Hexachlorocycl...	0.167	0.214	0.261	0.178	0.215	0.218	0.208	0.209	14.61
55)	P	2-Nitroaniline	0.409	0.427	0.441	0.440	0.437	0.444	0.446	0.435	2.93
56)	P	3-Nitroaniline	0.370	0.358	0.382	0.368	0.377	0.381	0.371	0.373	2.24
57)	P	4-Nitroaniline	0.356	0.353	0.369	0.352	0.355	0.356	0.347	0.355	1.90
58)	PM	4-Nitrophenol	0.251	0.235	0.262	0.262	0.264	0.272	0.270	0.259	4.82
59)	S	2,4,6-Tribromo...	0.169	0.172	0.173	0.169	0.167	0.171	0.167	0.170	1.40
60)	PM	2,4,6-Trichlor...	0.360	0.357	0.343	0.337	0.339	0.352	0.356	0.349	2.66
61)	P	2,4,5-Trichlor...	0.370	0.369	0.370	0.358	0.356	0.376	0.381	0.369	2.46
62)	P	2,3,4,6-Tetrac...	0.279	0.270	0.248	0.248	0.264	0.274	0.277	0.266	4.93
63)	P	Atrazine			0.361					0.361	0.00**
64)	I	Phenanthrene-d10	----------ISTD----------								
65)	P	4-Bromophenyl ...	0.200	0.202	0.208	0.210	0.204	0.207	0.202	0.205	1.67
66)	P	Di-n-butyl pht...	1.272	1.275	1.301	1.316	1.308	1.322	1.320	1.302	1.60
67)	PM	4,6-Dinitro-2-...	0.092	0.105	0.132	0.136	0.142	0.148	0.151	0.129	17.39
68)	P	Fluoranthene	1.164	1.171	1.190	1.191	1.169	1.173	1.181	1.177	0.90
69)	P	Hexachlorobenzene	0.229	0.224	0.224	0.222	0.216	0.219	0.216	0.221	2.10
70)	P	N-Nitrosodiphe...	0.686	0.701	0.693	0.696	0.691	0.677	0.674	0.688	1.46
71)	PM	Pentachlorophenol	0.091	0.102	0.098	0.108	0.112	0.121	0.126	0.108	11.41
72)	P	Anthracene	1.168	1.178	1.171	1.173	1.160	1.159	1.143	1.164	1.01
73)	P	Phenanthrene	1.166	1.150	1.165	1.141	1.140	1.127	1.108	1.142	1.80
74)	P	Carbazole	1.138	1.136	1.136	1.121	1.102	1.126	1.113	1.125	1.20
75)	P	Benzo (a) anth...	1.044	1.033	1.066	1.048	1.033	1.055	1.047	1.046	1.13
76)	I	Chrysene-d12	----------ISTD----------								
77)		Benzidine	0.473	0.584	0.484					0.514	11.96**
78)	P	Bis (2-ethylhe...	0.826	0.842	0.872	0.868	0.875	0.868	0.897	0.864	2.67
79)	P	Butylbenzylpht...	0.598	0.606	0.640	0.628	0.637	0.632	0.648	0.627	2.94
80)	P	Chrysene	1.127	1.118	1.103	1.085	1.085	1.081	1.085	1.098	1.69
81)	P	3,3'-Dichlorob...	0.428	0.436	0.444	0.423	0.420	0.391	0.381	0.418	5.58
82)	PM	Pyrene	1.372	1.350	1.358	1.319	1.324	1.330	1.360	1.345	1.50

ICAL Summary Table

** single pt. calibration

Method Path : C:\msdchem\1\methods\
Method File : ABN160601.M

83)	S	Terphenyl-d14	0.835	0.846	0.864	0.844	0.848	0.856	0.856	0.850	1.13
84)	I	Perylene-d12	----------ISTD----------								
85)	P	Benzo (b) fluo...	1.188	1.196	1.258	1.308	1.255	1.264	1.420	1.270	6.15
86)	P	Benzo (k) fluo...	1.155	1.210	1.205	1.113	1.159	1.137	0.949	1.133	7.77
87)	P	Benzo (g,h,i) ...	1.075	1.082	1.096	1.092	1.096	1.084	1.075	1.086	0.84
88)	P	Benzo (a) pyrene	1.129	1.132	1.191	1.165	1.165	1.172	1.135	1.156	2.05
89)	P	Dibenz (a,h) a...	1.033	1.046	1.069	1.088	1.072	1.067	1.043	1.060	1.82
90)	P	Di-n-octylphth...	1.456	1.513	1.599	1.597	1.596	1.605	1.599	1.566	3.73
91)	P	Indeno (1,2,3-...	0.371	0.372	0.406	0.396	0.422	0.388	0.394	0.393#	4.57

(#) = Out of Range

* on non-average RF curve fit.

** Does not meet min point requirement for curve type - OK ND only.

ICAL Summary Table

(M)

Evaluate Continuing Calibration Report

Data File: C:\msdchem\1\data\160603\B12091.D
Acq On : 3 Jun 2016 1:35 pm
Sample : 8270 CCV 50ppm
Misc :
Operator : E. Farmen
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 03 14:16:41 2016
Quant Method : C:\msdchem\1\methods\ABN160601B.M
Quant Title :
QLast Update : Fri Jun 03 14:16:35 2016
Response via : Initial Calibration

edf 6/13/16

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	86	0.00
2		Pyridine	50.000	49.782	0.4	78	0.00
3	P	Benzaldehyde	50.000	56.035	-12.1	90	0.00
4		Benzyl alcohol	50.000	49.582	0.8	83	0.00
5	P	Bis (2-chloroethyl) ether	50.000	50.626	-1.3	87	0.00
6		Bis (2-chloroisopropyl) eth	50.000	53.494	-7.0	89	0.00
7	PM	2-Chlorophenol	50.000	51.265	-2.5	86	0.00
8		1,3-Dichlorobenzene	50.000	50.508	-1.0	86	0.00
9	M	1,4-Dichlorobenzene	50.000	50.673	-1.3	85	0.00
10		1,2-Dichlorobenzene	50.000	51.153	-2.3	86	0.00
11	S	2-Fluorophenol	100.000	99.623	0.4	84	0.00
12	P	Hexachloroethane	50.000	52.856	-5.7	88	0.00
13	P	2-Methylphenol	50.000	50.498	-1.0	84	0.00
14	P	3&4-Methylphenol	50.000	51.265	-2.5	85	0.00
15		N-Nitrosodimethylamine	50.000	53.179	-6.4	99	0.00
16	PM	N-Nitroso-di-n-propylamine	50.000	52.353	-4.7	88	0.00
17	PM	Phenol	50.000	51.963	-3.9	87	0.00
18	S	Phenol-d5	100.000	104.561	-4.6	88	0.00
19	P	Acetophenone	50.000	51.515	-3.0	86	0.00
20	P	2-Nitrophenol	50.000	51.038	-2.1	86	0.00
21	P	Bis (2-chloroethoxy) methan	50.000	51.743	-3.5	86	0.00
22	I	Napthalene-d8	40.000	40.000	0.0	86	0.00
23		Aniline	50.000	48.629	2.7	75	0.00
24		Benzoic acid	50.000	52.176	-4.4	88	0.00
25	P	4-Chloroaniline	50.000	50.156	-0.3	81	0.00
26	PM	4-Chloro-3-methylphenol	50.000	50.783	-1.6	86	0.00
27	PM	2,4-Dichlorophenol	50.000	50.133	-0.3	84	0.00
28	M	2,6-Dichlorophenol	50.000	50.154	-0.3	84	0.00
29	PM	2,4-Dimethylphenol	50.000	42.916	14.2	67	0.00
30	P	Hexachlorobutadiene	50.000	49.792	0.4	85	0.00
31	P	Isophorone	50.000	50.678	-1.4	85	0.00
32	P	2-Methylnapthalene	50.000	51.096	-2.2	86	0.00
33	P	Naphthalene	50.000	49.976	0.0	86	0.00
34	P	Nitrobenzene	50.000	51.770	-3.5	87	0.00
35	S	Nitrobenzene-d5	50.000	50.377	-0.8	86	0.00
36		Azobenzene	50.000	46.464	7.1	85	0.00
37	M	1,2,4-Trichlorobenzene	50.000	49.410	1.2	83	0.00
38	P	Caprolactam	50.000	51.132	-2.3	85	0.00
39	P	1,2,4,5-Tetrachlorobenzene	50.000	49.488	1.0	84	0.00
40	P	Biphenyl	50.000	50.104	-0.2	85	0.00
41	I	Acenaphthene-d10	40.000	40.000	0.0	84	0.00
42	P	2-Chloronaphthalene	50.000	49.794	0.4	84	0.00
43	PM	Acenaphthene	50.000	51.213	-2.4	85	0.00
44	P	Acenaphthylene	50.000	47.227	5.5	77	0.00
45	P	4-Chlorophenyl phenyl ether	50.000	50.054	-0.1	82	0.00
46	P	Dibenzofuran	50.000	49.996	0.0	84	0.00

~~See RL Std~~ T OK for ND

Evaluate Continuing Calibration Report

Data File: C:\msdchem\1\data\160603\B12091.D
Acq On : 3 Jun 2016 1:35 pm
Sample : 8270 CCV 50ppm
Misc :
Operator : E. Farmen
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 03 14:16:41 2016
Quant Method : C:\msdchem\1\methods\ABN160601B.M
Quant Title :
QLast Update : Fri Jun 03 14:16:35 2016
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)	
47	P	Diethyl phthalate	50.000	50.409	-0.8	83	0.00	
48	P	Dimethyl phthalate	50.000	51.004	-2.0	84	0.00	
49	PM	2,4-Dinitrophenol	50.000	45.790	8.4	83	0.00	
50	PM	2,4-Dinitrotoluene	50.000	50.715	-1.4	84	0.00	
51	P	2,6-Dinitrotoluene	50.000	50.516	-1.0	83	0.00	
52	P	Fluorene	50.000	50.399	-0.8	83	0.00	
53	S	2-Fluorobiphenyl	50.000	49.982	0.0	83	0.00	
54	P	Hexachlorocyclopentadiene	50.000	29.634	40.7#	40	0.00	See RL Std >40%
55	P	2-Nitroaniline	50.000	49.959	0.1	83	0.00	
56	P	3-Nitroaniline	50.000	51.192	-2.4	84	0.00	
57	P	4-Nitroaniline	50.000	50.766	-1.5	82	0.00	
58	PM	4-Nitrophenol	50.000	51.584	-3.2	86	0.00	
59	S	2,4,6-Tribromophenol	100.000	96.150	3.8	79	0.00	
60	PM	2,4,6-Trichlorophenol	50.000	48.900	2.2	83	0.00	
61	P	2,4,5-Trichlorophenol	50.000	49.282	1.4	82	0.00	
62	P	2,3,4,6-Tetrachlorophenol	50.000	46.324	7.4	83	0.00	
63	P	Atrazine	50.000	0.000	100.0#	0	-12.63#	See RL Std (Single pt. Calib.)
64	I	Phenanthrene-d10	40.000	40.000	0.0	82	0.00	
65	P	4-Bromophenyl phenyl ether	50.000	51.030	-2.1	83	0.00	
66	P	Di-n-butyl phthalate	50.000	51.286	-2.6	84	0.00	
67	PM	4,6-Dinitro-2-methylphenol	50.000	51.152	-2.3	82	0.00	
68	P	Fluoranthene	50.000	51.669	-3.3	84	0.00	
69	P	Hexachlorobenzene	50.000	49.574	0.9	81	0.00	
70	P	N-Nitrosodiphenylamine	50.000	51.197	-2.4	84	0.00	
71	PM	Pentachlorophenol	50.000	46.183	7.6	84	0.00	
72	P	Anthracene	50.000	50.338	-0.7	82	0.00	
73	P	Phenanthrene	50.000	51.816	-3.6	84	0.00	
74	P	Carbazole	50.000	50.594	-1.2	82	0.00	
75	P	Benzo (a) anthracene	50.000	50.071	-0.1	81	0.00	
76	I	Chrysene-d12	40.000	40.000	0.0	83	0.00	
77		Benzidine	50.000	6.380	87.2#	13	0.00	See RL Std (NT)
78	P	Bis (2-ethylhexyl) phthalat	50.000	50.382	-0.8	83	0.00	
79	P	Butylbenzylphthalate	50.000	51.086	-2.2	83	0.00	
80	P	Chrysene	50.000	49.293	1.4	82	0.00	
81	P	3,3'-Dichlorobenzidine	50.000	49.873	0.3	78	0.00	
82	PM	Pyrene	50.000	50.040	-0.1	83	0.00	
83	S	Terphenyl-d14	50.000	50.180	-0.4	82	0.00	
84	I	Perylene-d12	40.000	40.000	0.0	80	0.00	
85	P	Benzo (b) fluoranthene	50.000	52.927	-5.9	85	0.00	
86	P	Benzo (k) fluoranthene	50.000	51.898	-3.8	78	0.00	
87	P	Benzo (g,h,i) perylene	50.000	51.123	-2.2	81	0.00	
88	P	Benzo (a) pyrene	50.000	51.586	-3.2	80	0.00	
89	P	Dibenz (a,h) anthracene	50.000	51.464	-2.9	82	0.00	
90	P	Di-n-octylphthalate	50.000	53.578	-7.2	84	0.00	
91	P	Indeno (1,2,3-cd) pyrene	50.000	49.309	1.4	76	0.00	

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QC Report for Sample Spike and Sample Duplicate

SDG #: 2142-01
Client: Bergmann Associates
Lab Project ID: 162221
Project Reference: VOA Back Lot

Lab Sample ID: 162221-01
Sample Identifier: Excavation West
Matrix: Soil
Date Sampled: 6/1/2016
Date Received: 6/1/2016

TAL Metals (ICP)

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Aluminum	4010	mg/Kg	137	4130	NC	75 - 125		3030	27.8	20	*	6/7/2016
Antimony	2.22	mg/Kg	137	54.1	37.7	75 - 125	*	2.34	NC	20		6/7/2016
Arsenic	9.26	mg/Kg	137	135	91.7	75 - 125		5.37	53.1	20	*	6/7/2016
Barium	42.8	mg/Kg	137	166	89.6	75 - 125		34.5	21.5	20	*	6/7/2016
Beryllium	0.293	mg/Kg	27.5	25.7	92.3	75 - 125		0.317	7.82	20		6/7/2016
Cadmium	< 0.275	mg/Kg	55.0	47.7	86.8	75 - 125		<0.280	NC	20		6/7/2016
Calcium	23900	mg/Kg	220	25000	NC	75 - 125		31500	27.3	20	*	6/7/2016
Chromium	7.67	mg/Kg	137	136	93.6	75 - 125		7.21	6.26	20		6/7/2016
Cobalt	3.98	mg/Kg	55.0	58.0	98.3	75 - 125		3.05	26.7	20	*	6/7/2016
Copper	35.2	mg/Kg	137	163	92.8	75 - 125		25.5	32.0	20	*	6/7/2016
Iron	21900	mg/Kg	137	19600	NC	75 - 125		19800	10.1	20		6/7/2016
Lead	89.7	mg/Kg	137	182	67.2	75 - 125	*	62.8	35.3	20	*	6/7/2016
Magnesium	3620	mg/Kg	440	5410	407	75 - 125	*	7240	66.6	20	*	6/7/2016

Spiked too low

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Report Prepared Wednesday, June 08, 2016

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566

QC Report for Sample Spike and Sample Duplicate

SDG #: 2142-01

Client: Bergmann Associates

Lab Project ID: 162221

Project Reference: VOA Back Lot

Lab Sample ID: 162221-01

Sample Identifier: Excavation West

Matrix: Soil

Date Sampled: 6/1/2016

Date Received: 6/1/2016

TAL Metals (ICP)

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Manganese	100	mg/Kg	55.0	153	97.2	75 - 125		84.4	16.9	20		6/7/2016
Nickel	6.74	mg/Kg	275	261	92.4	75 - 125		5.56	19.2	20		6/7/2016
Potassium	718	mg/Kg	2200	3120	109	75 - 125		680	5.42	20		6/7/2016
Selenium	1.30	mg/Kg	137	129	92.7	75 - 125		0.762	52.4	20	*	6/6/2016
Silver	0.329	mg/Kg	13.7	13.7	97.5	75 - 125		<0.560	NC	20		6/7/2016
Sodium	457	mg/Kg	660	1070	93.6	75 - 125		417	9.26	20		6/7/2016
Thallium	< 1.37	mg/Kg	137	118	85.9	75 - 125		<1.40	NC	20		6/7/2016
Vanadium	9.42	mg/Kg	55.0	60.8	93.4	75 - 125		9.08	3.69	20		6/7/2016
Zinc	59.5	mg/Kg	137	182	89.3	75 - 125		42.1	34.3	20	*	6/7/2016

Method Reference(s): EPA 6010C
EPA 3050B

Preparation Date: 6/2/2016
060716b

QC Batch ID: QC160602soil

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Report Prepared Wednesday, June 08, 2016

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QC Report for Sample Spike and Sample Duplicate

SDG #: 2142-01
Client: Bergmann Associates
Lab Project ID: 162207
Project Reference: VOA Back Lot

Lab Sample ID: 162207-04
Sample Identifier: Excavation North
Matrix: Soil
Date Sampled: 5/31/2016
Date Received: 5/31/2016

TAL Metals (ICP)

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Aluminum	**4450**	mg/Kg	147	5760	NC	75 - 125		4200	5.73	20		6/3/2016
Antimony	< 3.66	mg/Kg	147	42.1	28.7	75 - 125	*	<3.42	NC	20		6/3/2016
Arsenic	**14.0**	mg/Kg	147	125	75.5	75 - 125		12.6	10.8	20		6/6/2016
Barium	**59.9**	mg/Kg	147	168	73.6	75 - 125	*	49.8	18.5	20		6/3/2016
Beryllium	**0.469**	mg/Kg	29.3	22.4	74.7	75 - 125	*	0.367	24.3	20	*	6/3/2016
Cadmium	< 0.305	mg/Kg	58.7	45.6	77.7	75 - 125		<0.285	NC	20		6/3/2016
Calcium	**25800**	mg/Kg	235	18000	NC	75 - 125		36900	35.6	20	*	6/3/2016
Chromium	**9.09**	mg/Kg	147	137	87.2	75 - 125		8.05	12.1	20		6/3/2016
Cobalt	**14.0**	mg/Kg	58.7	60.8	79.8	75 - 125		17.0	19.2	20		6/3/2016
Copper	**126**	mg/Kg	147	228	69.4	75 - 125	*	118	6.53	20		6/3/2016
Iron	**19500**	mg/Kg	147	24300	NC	75 - 125		23600	19.1	20		6/3/2016
Lead	**295**	mg/Kg	147	360	44.0	75 - 125	*	238	21.6	20	*	6/3/2016
Magnesium	**5450**	mg/Kg	469	3900	NC	75 - 125		14100	88.3	20	*	6/3/2016

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Report Prepared Tuesday, June 07, 2016

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563

QC Report for Sample Spike and Sample Duplicate

SDG #: 2142-01

Client: Bergmann Associates

Lab Project ID: 162207

Project Reference: VOA Back Lot

Lab Sample ID: 162207-04

Sample Identifier: Excavation North

Matrix: Soil

Date Sampled: 5/31/2016

Date Received: 5/31/2016

TAL Metals (ICP)

spiked too low

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Manganese	370	mg/Kg	58.7	361	-14.3	75 - 125	*	839	77.7	20	*	6/3/2016
Nickel	22.0	mg/Kg	293	244	75.8	75 - 125		24.1	8.81	20		6/3/2016
Potassium	568	mg/Kg	2350	2510	82.6	75 - 125		508	11.0	20		6/3/2016
Selenium	1.85	mg/Kg	147	108	72.2	75 - 125	*	1.95	4.85	20		6/6/2016
Silver	0.396	mg/Kg	14.7	11.7	77.3	75 - 125		0.799	NC	20		6/6/2016
Sodium	123	mg/Kg	704	656	75.7	75 - 125		124	NC	20		6/3/2016
Thallium	< 1.52	mg/Kg	147	101	68.8	75 - 125	*	<1.43	NC	20		6/3/2016
Vanadium	9.84	mg/Kg	58.7	53.1	73.7	75 - 125	*	8.98	9.13	20		6/3/2016
Zinc	400	mg/Kg	147	504	70.6	75 - 125	*	391	2.19	20		6/3/2016

Method Reference(s): EPA 6010C
EPA 3050B

Preparation Date: 6/1/2016
060316a

QC Batch ID: QC160601soil

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Report Prepared Tuesday, June 07, 2016

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QC Report for Sample Spike and Sample Duplicate

SDG #: 2142-01

Client: Bergmann Associates

Lab Project ID: 162207

Project Reference: VOA Back Lot

Lab Sample ID: 162207-04

Date Sampled: 5/31/2016

Sample Identifier: Excavation North

Date Received: 5/31/2016

Matrix: Soil

Mercury

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Mercury	0.598	mg/Kg	0.0915	0.799	219	75 - 125	*	0.648	7.91	20		6/2/2016

Spiked too low

Method Reference(s): EPA 7471B
Preparation Date: 6/2/2016
Hg160602A
QC Batch ID: QC160602Hgsoil

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Report Prepared Tuesday, June 07, 2016

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QC Report for Sample Spike and Sample Duplicate

SDG #: 2142-01

Client: Bergmann Associates

Lab Project ID: 162142

Project Reference: VOA Back Lot

Lab Sample ID: 162142-01

Sample Identifier: Excavation Bottom

Matrix: Soil

Date Sampled: 5/26/2016

Date Received: 5/26/2016

TAL Metals (ICP)

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Aluminum	**10800**	mg/Kg	228	11700	NC	75 - 125		9440	13.0	20		6/2/2016
Antimony	< 5.20	mg/Kg	228	66.3	29.1	75 - 125	*	<5.16	NC	20		6/2/2016
Arsenic	**57.2**	mg/Kg	228	252	85.3	75 - 125		46.6	20.5	20	*	6/2/2016
Barium	**211**	mg/Kg	228	310	43.3	75 - 125	*	111	62.7	20	*	6/2/2016
Beryllium	**0.547**	mg/Kg	45.5	41.6	90.2	75 - 125		0.510	7.05	20		6/2/2016
Cadmium	< 0.434	mg/Kg	91.1	77.4	85.0	75 - 125		<0.430	NC	20		6/2/2016
Calcium	**29300**	mg/Kg	364	33300	NC	75 - 125		35300	18.5	20		6/2/2016
Chromium	**24.2**	mg/Kg	228	226	88.5	75 - 125		17.5	32.4	20	*	6/2/2016
Cobalt	**21.8**	mg/Kg	91.1	110	97.4	75 - 125		16.9	25.2	20	*	6/2/2016
Copper	**572**	mg/Kg	228	532	-17.4	75 - 125	*	396	36.4	20	*	6/2/2016
Iron	**31200**	mg/Kg	228	35300	NC	75 - 125		34300	9.52	20		6/2/2016
Lead	**658**	mg/Kg	228	651	-3.02	75 - 125	*	672	2.17	20		6/2/2016
Magnesium	**5870**	mg/Kg	729	7200	182	75 - 125	*	8170	32.7	20	*	6/2/2016

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Report Prepared Friday, June 03, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

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QC Report for Sample Spike and Sample Duplicate

SDG #: 2142-01

Client: Bergmann Associates

Lab Project ID: 162142

Project Reference: VOA Back Lot

Lab Sample ID: 162142-01

Sample Identifier: Excavation Bottom

Matrix: Soil

Date Sampled: 5/26/2016

Date Received: 5/26/2016

TAL Metals (ICP)

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Manganese	**204**	mg/Kg	91.1	393	207	75 - 125	*	320	44.1	20	*	6/2/2016
Nickel	**38.4**	mg/Kg	455	447	89.8	75 - 125		30.9	21.6	20	*	6/2/2016
Potassium	**1240**	mg/Kg	3640	4870	99.6	75 - 125		1110	11.2	20		6/2/2016
Selenium	**0.815**	mg/Kg	228	197	86.0	75 - 125		0.894	NC	20		6/2/2016
Silver	< 0.867	mg/Kg	22.8	20.3	89.0	75 - 125		<0.859	NC	20		6/2/2016
Sodium	**167**	mg/Kg	1090	1390	112	75 - 125		197	NC	20		6/2/2016
Thallium	< 2.17	mg/Kg	228	173	76.2	75 - 125		<2.15	NC	20		6/2/2016
Vanadium	**31.5**	mg/Kg	91.1	117	94.1	75 - 125		32.1	2.00	20		6/2/2016
Zinc	**115**	mg/Kg	228	364	109	75 - 125		168	37.2	20	*	6/2/2016

Method Reference(s): EPA 6010C
EPA 3050B

Preparation Date: 5/27/2016
060216b

QC Batch ID: QC160527soil

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Report Prepared Friday, June 03, 2016

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QC Report for Sample Spike and Sample Duplicate

SDG #: 2142-01

Client: Bergmann Associates

Lab Project ID: 162142

Project Reference: VOA Back Lot

Lab Sample ID: 162142-01

Sample Identifier: Excavation Bottom

Matrix: Soil

Date Sampled: 5/26/2016

Date Received: 5/26/2016

Mercury

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Mercury	0.589	mg/Kg	0.138	0.794	149	75 - 125	*	0.633	7.22	20		5/28/2016

Method Reference(s): EPA 7471B
Preparation Date: 5/27/2016
Hg160528A
QC Batch ID: QC160527Hgsoil

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

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Method Blank Report

Client: Bergmann Associates
Project Reference: VOA Back Lot
Lab Project ID: 162142
SDG #: 2142-01
Matrix: Soil

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Aluminum	<9.80	mg/Kg		6/2/2016 19:36
Antimony	<2.94	mg/Kg		6/2/2016 19:36
Arsenic	<0.490	mg/Kg		6/2/2016 19:36
Barium	<4.90	mg/Kg		6/2/2016 19:36
Beryllium	<0.245	mg/Kg		6/2/2016 19:36
Cadmium	<0.245	mg/Kg		6/2/2016 19:36
Calcium	<123	mg/Kg		6/2/2016 19:36
Chromium	<0.490	mg/Kg		6/2/2016 19:36
Cobalt	<2.45	mg/Kg		6/2/2016 19:36
Copper	<1.23	mg/Kg		6/2/2016 19:36
Iron	<4.90	mg/Kg		6/2/2016 19:36
Lead	<0.490	mg/Kg		6/2/2016 19:36
Magnesium	<123	mg/Kg		6/2/2016 19:36
Manganese	0.420	mg/Kg	J	6/2/2016 19:36
Nickel	<1.96	mg/Kg		6/2/2016 19:36
Potassium	<123	mg/Kg		6/2/2016 19:36
Selenium	<0.490	mg/Kg		6/2/2016 19:36
Silver	<0.490	mg/Kg		6/2/2016 19:36
Sodium	<123	mg/Kg		6/2/2016 19:36
Thallium	<1.23	mg/Kg		6/2/2016 19:36
Vanadium	<1.23	mg/Kg		6/2/2016 19:36
Zinc	<2.94	mg/Kg		6/2/2016 19:36

Method Reference(s): EPA 6010C
EPA 3050B
Preparation Date: 5/27/2016
Data File: 060216b
QC Batch ID: QC160527soil
QC Number: 1

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Report Prepared Friday, June 03, 2016

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Method Blank Report

Client: Bergmann Associates
Project Reference: VOA Back Lot
Lab Project ID: 162142
SDG #: 2142-01
Matrix: Soil

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	<0.00762	mg/Kg		5/28/2016 09:22

Method Reference(s): EPA 7471B
Preparation Date: 5/27/2016
Data File: Hg160528A
QC Batch ID: QC160527Hgsoil
QC Number: 1

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Report Prepared Friday, June 03, 2016

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Method Blank Report

Client: Bergmann Associates
Project Reference: VOA Back Lot
Lab Project ID: 162221
SDG #: 2142-01
Matrix: Soil

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed	
Aluminum	6.02	mg/Kg	J	6/7/2016	13:06
Antimony	<2.86	mg/Kg		6/7/2016	13:06
Arsenic	<0.476	mg/Kg		6/7/2016	13:06
Barium	<4.76	mg/Kg		6/7/2016	13:06
Beryllium	<0.238	mg/Kg		6/7/2016	13:06
Cadmium	<0.238	mg/Kg		6/7/2016	13:06
Calcium	<119	mg/Kg		6/7/2016	13:06
Chromium	<0.476	mg/Kg		6/7/2016	13:06
Cobalt	<2.38	mg/Kg		6/7/2016	13:06
Copper	<1.19	mg/Kg		6/7/2016	13:06
Iron	<4.76	mg/Kg		6/7/2016	13:06
Lead	<0.476	mg/Kg		6/7/2016	13:06
Magnesium	<119	mg/Kg		6/7/2016	13:06
Manganese	<0.714	mg/Kg		6/7/2016	13:06
Nickel	<1.90	mg/Kg		6/7/2016	13:06
Potassium	<119	mg/Kg		6/7/2016	13:06
Selenium	<0.476	mg/Kg		6/7/2016	13:06
Silver	<0.476	mg/Kg		6/7/2016	13:06
Sodium	<119	mg/Kg		6/7/2016	13:06
Thallium	<1.19	mg/Kg		6/7/2016	13:06
Vanadium	<1.19	mg/Kg		6/7/2016	13:06
Zinc	<2.86	mg/Kg		6/7/2016	13:06

Method Reference(s):	EPA 6010C
	EPA 3050B
Preparation Date:	6/2/2016
Data File:	060716b
QC Batch ID:	QC160602soil
QC Number:	1

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Wednesday, June 08, 2016

Appendix C

Validator Qualifications

MICHAEL K. PERRY
Chemist/Data Validator

B.S. Chemistry, Georgia State University, Atlanta, GA

A.A.S., Chemical Technology, Alfred State College, Alfred, NY

Mr. Perry has over 30 years of experience in the analytical laboratory business. During his early career, he spent several years as a laboratory analyst performing the analysis of soil, water, and air samples for inorganic and organic chemical parameters. During his last 20 years in the environmental laboratory business, he managed and directed two major analytical laboratories in Rochester, NY. His management responsibilities included oversight of the daily operations of the lab, staff training and supervision, the selection, purchase, and maintenance of analytical instruments, the introduction of new laboratory methods, analytical quality assurance and quality control, data acquisition and management, and other business-related activities.

Mr. Perry has an extensive working knowledge of the methods and procedures used for sampling and analyzing both inorganic and organic analytes in soil, water, and air. He is an accomplished laboratory chemist and is familiar with the analytical methods and procedures established under the USEPA Contract Laboratory Protocols (CLP), the NYSDEC Analytical Services Protocols (ASP), and the NYSDOH Environmental Laboratory Approval Program (ELAP).

KENNETH R. APPLIN
Geochemist/Data Validator

Ph.D., Geochemistry and Mineralogy, The Pennsylvania State University

M.S., Geochemistry and Mineralogy, The Pennsylvania State University

B.A., Geological Sciences, SUNY at Geneseo, NY

Dr. Applin has over 35 years of experience working with the geochemistry of natural waters. His prior experience includes working as an Assistant Professor of Geology at the University of Missouri-Columbia and as Chief Hydrogeologist and Geochemist with a leading engineering firm in Rochester, NY. In 1993, he established KR Applin and Associates, a small consulting business that focuses on the geochemistry of natural waters, especially as applied to problems involving the contamination of groundwater and surface water.

Dr. Applin is also an experienced analytical data validator and has provided data validation services since 1994 to a variety of clients performing brownfield cleanup projects, hazardous waste remediation, groundwater monitoring at solid waste facilities, and other projects requiring third-party data validation. Dr. Applin has several years of hands-on experience with the laboratory analysis of natural waters and has successfully completed the USEPA Region II certification courses for performing inorganic and organic analytical data validation.

DATA USABILITY SUMMARY REPORT (DUSR)

VOA Backlot Site
Haidt Place Right of Way
Rochester, NY
NYSDEC BCP # 8-0688-05-04

SDG: 0310-01

6 soil samples

Prepared for:

Bergmann Associates
280 East Broad Street, suite 200
Rochester, NY 14604

October 2017

EDU Environmental Data Usability 10028 Deer Park Dr. Dansville, NY 14437 585.991.9156

Table of Contents

Tables

REVIEWER'S NARRATIVE
SDG 0310-01

The data associated with this Sample Delivery Group (SDG) 0310-01, analyzed by Paradigm Environmental Services, Inc. Rochester, NY have been reviewed in accordance with assessment criteria provided by the New York State Department of Environmental Conservation following the review procedures provided in the USEPA Functional Guidelines for evaluating organic and inorganic data.

All analytical results reported by the laboratory are considered valid and acceptable except results that have been qualified as rejected, "R". Results qualified as estimated "J", or as non-detects, "U", are considered usable for the purpose of evaluating water and/or soil quality. However, these qualifiers indicate that the accuracy and/or precision of the analytical result is questionable. A summary of all data that have been qualified and the reasons for qualification are provided in the following data usability summary report (DUSR).

Two facts should be noted by all data users. First, the "R" qualifier means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Values qualified with an "R" should not appear on the final data tables because they cannot be relied upon, even as the last resort. Second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.

Reviewer's Signature: Michael K. Perry Date: 10/5/17

Michael K. Perry
Chemist

1.0 SUMMARY

SITE:	VOA Backlot Site Haidt Place Right of Way Rochester, NY
SAMPLING DATE:	January 26, 2017
SAMPLE TYPE:	6 soil samples
LABORATORY:	Paradigm Environmental Services, Inc. Rochester, NY
SDG No.:	0310-01

2.0 INTRODUCTION

This data usability summary report (DUSR) was prepared in accordance with guidance provided by the New York State Department of Environmental Conservation (NYSDEC). The DUSR is based on a review and evaluation of the laboratory analytical data package. Specifically, the NYSDEC guidance recommends review and evaluation of the following elements of the data package:

- Completeness of the data package as defined under the requirements of the NYSDEC Analytical Services Protocols (ASP) Category B or the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) deliverables,
- Compliance with established analyte holding times,
- Adherence to quality control (QC) limits and specifications for blanks, instrument tuning and calibration, surrogate recoveries, spike recoveries, laboratory duplicate analyses, and other QC criteria,
- Adherence to established analytical protocols,
- Conformance of data summary sheets with raw analytical data, and
- Use of correct data qualifiers.

Data deficiencies, analytical protocol deviations, and quality control problems identified using the review criteria above and their effect on the analytical results are discussed in this report.

3.0 SAMPLE AND ANALYSIS SUMMARY

The data package consists of analytical results for six soil samples collected on January 26, 2017. These samples were analyzed for the TCL list of volatile organic compounds, semi-volatile organic compounds, Pesticides, PCBs, TAL metals, and TCN.

All laboratory analyses were performed by Paradigm Environmental Services, Inc., Rochester, NY and analyzed as SDG 0310-01. The analytical results were provided in NYSDEC ASP Category B format, which includes all raw analytical data and laboratory QC data.

4.0 GUIDANCE DOCUMENTS AND DATA REVIEW CRITERIA

The guidance documents used for reviewing laboratory quality control (QC) data and assigning data qualifiers (flags) to analytical results are listed in Table 4-1. The QC limits established in the documents applicable to this data review were used to assess the quality of the analytical results. In some cases, however, QC limits established internally by the laboratory were taken into account to determine data quality.

The QC criteria considered for assessing the usability of the reported analytical results provided for each analyte type (i.e. VOCs, SVOCs, metals, etc.) are listed in Table 4-2. These criteria may vary with the analytical method utilized by the laboratory. These criteria comply with the guidance recommended in Section 2.0 above.

5.0 DATA VALIDATION QUALIFIERS

The letter qualifiers (flags) used to define data usability are described briefly below. These letters are assigned by the data validator to analytical results having questionable accuracy and/or precision as determined by reviewing the laboratory QC data associated with the analytical results.

TABLE 4-1

DATA VALIDATION GUIDANCE DOCUMENTS

Analyte Type	Validation Guidance
VOCs	USEPA, 2008, Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry; SW-846 Method 8260B; SOP # HW-24, Rev. 2. USEPA, 2008, Statement of Work for Organic Analysis of Low/Medium Concentration of Volatile Organic Compounds SOM01.2; SOP HW-33, Rev. 2.
SVOCs	USEPA, 2007, Statement of Work for Organic Analysis of Low/Medium Concentration of Semivolatile Organic Compounds SOM01.2; SOP HW-35, Rev. 1.
Pesticides/PCBs	USEPA, 2006, CLP Organics Data Review and Preliminary Review (CLP/SOW OLMO 4.3); SOP # HW-6, Rev. 14, Part C.
Metals	USEPA, 2006, Validation of Metals for the Contract Laboratory Program (CLP) based on SOW ILMO 5.3 (SOP Revision 13), SOP # HW-2, Rev. 13.
Gen Chemistry	NYSDEC, 2005, Analytical Services Protocols (ASP)
VOCs (Ambient air)	USEPA, 2006, Validating Air Samples, Volatile Organic Analysis of Ambient Air in Canister by Method TO-15; SOP # HW-31, Rev. 4.

TABLE 4-2

QUALITY CONTROL CRITERIA USED FOR VALIDATING
LABORATORY ANALYTICAL DATA

VOCs	SVOCs	Pesticides/PCBs	Metals	Gen Chemistry	Method TO-15
Completeness of Pkg Sample Condition Holding Time System Monitoring Compounds Lab Control Sample Matrix Spikes Blanks Instrument Tuning Internal Standards Initial Calibration Continuing Calibration Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Condition Holding Time Surrogate Recoveries Lab Control Sample Matrix Spikes Blanks Instrument Tuning Internal Standards Initial Calibration Continuing Calibration Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Condition Holding Time Surrogate Recoveries Matrix Spikes Blanks Instrument Calibration & Verification Analyte ID Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Condition Holding Time Initial/Continuing Calibration CRDL Standards Blanks Interference Check Sample Spike Recoveries Lab Duplicate Lab Control Sample ICP Serial Dilutions Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Condition Holding Times Calibration Lab Control Samples Blanks Spike Recoveries Lab Duplicates	Completeness of Pkg Sample Condition Holding Time Canister Certification Lab Control Sample Instrument Tuning Blanks Initial Calibration & System Performance Daily Calibration Field Duplicate

The laboratory may also use various letters and symbols to flag analytical results generated when QC limits were exceeded. The meanings of these flags may differ from those used by the independent data validator. Those used by the laboratory are provided with the analytical results.

NOTE: The assignment of data qualifiers by the data reviewer (validator) to laboratory analytical results should not necessarily be interpreted by the data user as a measure of laboratory ability or proficiency. Rather, the qualifiers are intended to provide a measure of data accuracy and precision to the data user, which, for example, may provide a level of confidence in determining whether or not standards or cleanup objectives have been met.

U The analyte was analyzed for but was not detected at or above the sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the *approximate* concentration of the analyte in the sample. (The magnitude of any ± value associated with the result is not determined by data validation).

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is *approximate* and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample result is rejected (i.e., is unusable) due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

JN The analyte is considered to be "presumptively present." The associated numerical value represents its *approximate* concentration.

The validated analytical results are attached to this report. Validation qualifiers (flags) are indicated using red ink. Data sheets having qualified data are signed and dated by the data reviewer.

6.0 RESULTS OF THE DATA REVIEW

The results of the data review are summarized in Tables 6-1 through 6-6. The tables list the samples where QC criteria were found to exceed acceptable limits and the actions taken to qualify the associated analytical results.

7.0 TOTAL USABLE DATA

For SDG 0310-01, six samples were analyzed and results were reported for 964 analytes. Even though some results were flagged with a "J" as estimated, all (100%) are considered usable. See the summary table for the analyses and the associated QC concerns.

NOTE: 1) As noted by the laboratory, the soil samples were not collected following SW846 5035A protocol. This adds an element of uncertainty to the analytical results for volatile organic analytes (VOAs). Although not specifically indicated on the final data sheets with a "J" flag, the VOA analytical results should be considered estimated, but usable.

2) The data package for SDG 0310-01 contained no laboratory QC data for the serial dilutions of metals (Form VIII). The laboratory director was contacted regarding the deficiency. He stated that no serial dilutions were analyzed with this data package. Therefore, no evaluation of the serial dilution results were performed by this data reviewer and no data were qualified as a result.

Table 6-1 VOCs

SAMPLES AFFECTED	ANALYTES	ACTION	QC VIOLATION	COMMENTS
12-24 inch East ROW 2-12 inch West ROW	All analytes	UJ non-detects J detects	TOL-d8 and/or BFB surr rec < QC limit	Data should be considered estimated
12-24 inch East ROW 2-12 inch West ROW	All analytes	UJ non-detects J detects	IS3 area < QC limit	Data should be considered estimated
All samples	Acetone Methylene Chloride Bromomethane	UJ non-detects J detects	CCV > 20 %	Data should be considered estimated

Table 6-2 SVOCs

SAMPLES AFFECTED	ANALYTES	ACTION	QC VIOLATION	COMMENTS
0-2 inch East ROW	All analytes	UJ non-detects J detects	All surr rec < QC limit	Data should be considered estimated
All samples	Unknown TIC: RT 2.6 Unknown TIC: RT 3.6	R	Detected in MB	Aldo condensation products, do not use
All samples	Atrazine	UJ non-detects	Single point ICAL	Data should be considered estimated

Table 6-3 Pesticides

SAMPLES AFFECTED	ANALYTES	ACTION	QC VIOLATION	COMMENTS
0-2 inch East ROW	4,4'-DDD 4,4'-DDT cis-Chlordane Dieldrin Endosulfan Sulfate Endrin Endrin Aldehyde Endrin Ketone Methoxychlor trans-Chlordane	CRQL-U J CRQL-U JN JN CRQL-U JN J J CRQL-U	>25 % D between dual column analysis	Matrix interference suspected
2-12 inch East ROW	4,4'-DDD Endosulfan II Endrin Ketone Methoxychlor trans-Chlordane	J CRQL-U J J J	>25 % D between dual column analysis	Matrix interference suspected
12-24 inch East ROW	4,4'-DDT cis-Chlordane Endosulfan Sulfate Endrin Aldehyde Methoxychlor	CRQL-U J JN CRQL-U J	>25 % D between dual column analysis	Matrix interference suspected
0-2 inch West ROW	4,4'-DDD Endrin Aldehyde Endrin Ketone Methoxychlor	J CRQL-U J JN	>25 % D between dual column analysis	Matrix interference suspected

2-12 inch West ROW	4,4'-DDD 4,4'-DDT Aldrin Dieldrin Endrin Aldehyde Endrin Ketone Methoxychlor	JN CRQL-U J CRQL-U JN J J	>25 % D between dual column analysis	Matrix interference suspected
12-24 inch West ROW	cis-Chlordane Methoxychlor	J J	>25 % D between dual column analysis	Matrix interference suspected

Table 6-4 PCBs

SAMPLES AFFECTED	ANALYTES	ACTION	QC VIOLATION	COMMENTS
none			none	

6-5 TAL Metals

SAMPLES AFFECTED	ANALYTES	ACTION	QC VIOLATION	COMMENTS
12-24 inch West ROW	Mercury	UJ non-detects J detects	MS % < 75 %	Results may be biased low
All samples	Iron – 7.56 mg/kg Zinc – 3.82 mg/kg	none	Detected in method blank	No data affected, all data >10X method blank values

Table 6-6 TCN

SAMPLES AFFECTED	ANALYTES	ACTION	QC VIOLATION	COMMENTS
none			none	

ACRONYMS

BSP	Blank Spike
CCAL	Continuing Calibration
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
%D	Percent Difference
ICAL	Initial Calibration
ICB	Initial Calibration Blank
IS	Internal Standard
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
QA	Quality Assurance
QC	Quality Control
%R	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
%RSD	Percent Relative Standard Deviation
TAL	Target Analyte List (metals)
TCL	Target Compound List (organics)

Appendix A

Validated Analytical Results

LAB PROJECT NARRATIVE: 170310
PROJECT NAME: VOA Back Lot Site Haidt Place Right Of Way
SDG: 0310-01
CLIENT C & S Companies Bergmann Associates

Six soil samples were collected by the client on 01/26/2017 and received at the Paradigm laboratory on 01/27/2017. Container and holding times were acceptable at time of receipt; the samples were received at 5° Centigrade and were on ice. The samples were submitted with the Chains-of-Custody requesting the TCL/TAL lists for VOCs, SVOCs, PCBs and Pesticides, Total Cyanide, and Metals. TICs were requested and reported on the VOCs and the SVOCs. All analyses were performed using EPA SW-846 Methods and the associated holding times.

The items noted in this case narrative address compliance with the referenced methods, NYSDOH ELAP rules, and any project specific data quality requirements. These may be different from the usability criteria referenced in any "Functional Guidelines" or other data review standards used by data validators.

GENERAL NOTES

ALL ANALYSES

The initial and continuing calibration reports are only evaluated for compounds that are on the sample summary report.

Regarding results on QC summary forms versus included raw data, due to calculations made at the instrument where many significant figures may be used, there may be slight discrepancies between the summary report result and that recorded on the raw data. This does not affect data usability.

VOLATILES AND SEMIVOLATILES

Regarding initial calibrations, it should be noted that the Quantitation Report concentrations supplied for the initial calibration reflect the calibration prior to updating. The response factors and areas are correct.

Regarding Quantitation Reports, it should be noted that the "#" symbol that appears on some of the Quantitation Reports is a software artifact and should be disregarded.

VOLATILES

Soil samples were not sampled per EPA method 5035A compliance rules. Thus, an extra note has been added to all VOC reports.

Holding times were met for all samples.

The surrogate recoveries for the samples and QC samples were within QC limits, except Toluene-d8 was out low in sample 12-24 inch East ROW and 4-Bromofluorobenzene was out low in this same sample and sample 2-12 inch West ROW. These outliers have been flagged with an "*" on the QC Summary forms and sample reports accordingly. Matrix Interference is suspected.

Site specific QC was not requested on this SDG. The Laboratory Control Sample recovered within acceptance limits.

The method blank was free from contamination within the reportable ranges.

The instrument tunes passed all criteria.

The internal standards areas and retention times were within acceptance limits for the samples and the associated QC. except the area for IS#3 (1,4-Dichlorobenzene-d4) for samples 12-24 inch East ROW and 2-12 inch West ROW. It has been flagged with a "*" on the summary form, and annotated on the sample reports accordingly. These samples were repeated and confirmed. The raw data for the confirmations is included after the raw data for the reported results. No further evaluation of this data or corresponding summary forms has been made. Matrix Interference is suspected.

All data for the initial calibration was within acceptance limits. Compounds flagged with an "*" on the summary table have been calibrated using a non-average Response Factor calibration curve. The supporting curves are located after the initial calibration table.

All continuing calibration data was within acceptance limits, except Bromomethane was out low in CCV 2/1. An additional 1ppb standard was analyzed and included to show adequate sensitivity in order to report Non-Detects for this compound. All samples associated with this outlier were Non-Detect for this compound.

SEMI-VOLATILES

Holding times were met for all samples.

Several surrogate recoveries were out low in various samples (see the QC Summary Table for specifics). Outliers have been flagged with an "*" on the QC Summary Report and the sample report accordingly. Matrix Interference is suspected.

Site specific QC was not requested on this SDG. The Laboratory Control Sample recovered within acceptance limits.

The method blank was free from contamination within the reportable ranges, except two Unknown Ketone TICs at RTs 2.66 and 3.62. Any hits for these Ketones in the associated samples have been flagged with a "B" accordingly.

The instrument tunes passed all criteria.

The internal standards areas and retention times were within acceptance ranges.

All data for the initial calibrations was within acceptance limits. Compounds flagged with an "*" on the summary table have been calibrated using a non-average Response Factor calibration curve. The supporting curves are located after the initial calibration table.

All continuing calibration data was within acceptance limits, except and Atrazine and Hexachlorocyclopentadiene were out low in CCV 01/30. These low outliers were assessed for adequate

sensitivity at the reporting limit by a 10ppm standard. This is usable for determination of "Non-Detects" only. As the associated samples were Non-Detect for these compounds, the results were deemed usable and no further action was required.

PESTICIDES AND PCBS

Holding times were met for all samples.

The surrogate recoveries for the samples and the associated QC were within acceptable limits, except Decachlorobiphenyl was out high in sample 0-2 inch East ROW for Pesticides. This outlier has been flagged with an "*" on the QC Summary report. Matrix Interference is suspected.

Site specific QC was not requested on this SDG. The Laboratory Control Samples recovered within acceptance limits for all compounds.

All method blanks were free from contamination within the reportable ranges.

The internal standards areas and retention times were within acceptance ranges for the Pesticides.

All data for the initial calibrations were within acceptance limits. The internal acceptance criteria for the initial calibrations was 0.99 or better for each peak.

All continuing calibration data was within acceptable QC limits.

For all Pesticide hits, a Form 10 including Percent Difference has been included. Column confirmations above 40% difference have been flagged with a "P" on the sample reports and an "*" on the Form 10 indicating matrix interference. The reported result is always the lower of the two results.

METALS

ICP-AES interelement and background corrections were applied. Raw data was not generated before application of background corrections.

Holding times were met for all samples.

Site specific QC was not requested on this SDG but was analyzed on sample 12-24 inch West ROW for Mercury. The Matrix Spike Recovery was outside QC limits low and has been flagged with an "M" on the results page and a "*" on the QC summary report. Matrix interference is suspected with the outlier. The Laboratory Control Samples recovered within acceptable limits. All LCS % differences were within acceptance limits.

The method blanks were free from contamination within the reportable ranges, except hits of Iron at 7.56 mg/Kg and Zinc at 3.82 mg/Kg. As the results for these metals in the associated sample were higher than ten times these values, no flagging was required.

All data for the initial calibrations was within acceptance limits.

All continuing calibrations data was within acceptance limits.

INORGANICS-Total Cyanide, Percent Moisture

Holding times were met for all samples.

Site specific QC was not requested on this SDG. The Laboratory Control Samples recovered within acceptable limits.

All Initial and Continuing Blanks and the Method Blank were free from contamination and within acceptance limits.

All Initial and Continuing calibrations were within acceptance limits.

(signed) _____ (date) 4/21/2017

Bruce Hoogesteger- President

SDG# : 0310-01
LAB PROJECT #: 170310
CLIENT: Bergmann Associates
PROJECT NAME: VOA Back Lot Site Haidt Place Right Of Way

BATCH COMPLETE: 1/26/2017
DATE DUE: 2/26/2017
PROTOCOL: SW846

LAB.SAMPLE#	FIELD ID	MATRIX	REQUESTED ANALYSIS	DATE SAMPLED	DATE REC'D
170310-01	0-2 inch East Row	Soil	TCL-SVOA,Pest,PCB,TAL Mets,TCN	1/26/2017	1/27/2017
170310-02	2-12 inch East Row	Soil	TCL-VOA,SVOA,Pest,PCB,TAL Mets,TCN	1/26/2017	1/27/2017
170310-03	12-24 inch East Row	Soil	TCL-VOA,SVOA,Pest,PCB,TAL Mets,TCN	1/26/2017	1/27/2017
170310-04	0-2 inch West Row	Soil	TCL-SVOA,Pest,PCB,TAL Mets,TCN	1/26/2017	1/27/2017
170310-05	2-12 inch West Row	Soil	TCL-VOA,SVOA,Pest,PCB,TAL Mets,TCN	1/26/2017	1/27/2017
170310-06	12-24 inch West Row	Soil	TCL-VOA,SVOA,Pest,PCB,TAL Mets,TCN	1/26/2017	1/27/2017
			VOA/SVOA + TICs		

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC.

REPORT TO:		INVOICE TO:		
CLIENT:	Bergmann	CLIENT:		LAB PROJECT ID: 170310
ADDRESS:	280 Built Street	ADDRESS:		
CITY:	Rochester STATE: ZIP	CITY: STATE: ZIP:		Quotation #:
PHONE:		PHONE:		Email:
ATTN:	Steve DeMeo	ATTN:		

PROJECT REFERENCE: VOA Back Lot Site, Haidt Place Right of Way

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	TCL VOCs	TCL SVOCs	TAL Metals	Cyanide	PCBs	Pesticides	REMARKS	PARADIGM LAB SAMPLE NUMBER
1/26/17	0916		X	0-2 inch East ROW	SO	1		X	X	X	X	X	CAT B ASP data package	01
1/26/17	920		X	2-12 inch East ROW	SO	2	X	X	X	X	X	X	"	02
1/26/17	935		X	12-24 inch East ROW	SO	2	X	X	X	X	X	X	"	03
1/26/17	1030		X	0-2 inch West ROW	SO	1		X	X	X	X	X	"	04
1/26/17	1045		X	2-12 inch West ROW	SO	2	X	X	X	X	X	X	"	05
1/26/17	1100		X	12-24 inch West ROW	SO	2	X	X	X	X	X	X	"	06

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	X	None Required		None Required	
10 day		Batch QC		Basic EDD	
Rush 3 day		Category A		NYSDEC EDD	X
Rush 2 day		Category B	X		
Rush 1 day					
Other please indicate date needed:		Other please indicate package needed:		Other EDD please indicate EDD needed:	

Stephen J. DeMeo — Sampled By — 1/26/17 Date/Time

Relinquished By — 1/26/17 1700 Date/Time

Received By — Irene J. Dolan 1/26/17 1700 Date/Time

Received @ Lab By — 1/27/17 09:43 Date/Time

Total Cost:

P.I.F.

5°C iced 1/26/17 17:06

By signing this form, client agrees to Paradigm Terms and Conditions (reverse).

See additional page for sample conditions.

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch East ROW
Lab Sample ID: 170310-02
Matrix: Soil

Date Sampled: 1/26/2017
Date Received: 1/27/2017

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 4.17	ug/Kg		2/1/2017 15:22
1,1,2,2-Tetrachloroethane	< 4.17	ug/Kg		2/1/2017 15:22
1,1,2-Trichloroethane	< 4.17	ug/Kg		2/1/2017 15:22
1,1-Dichloroethane	< 4.17	ug/Kg		2/1/2017 15:22
1,1-Dichloroethene	< 4.17	ug/Kg		2/1/2017 15:22
1,2,3-Trichlorobenzene	< 10.4	ug/Kg		2/1/2017 15:22
1,2,4-Trichlorobenzene	< 10.4	ug/Kg		2/1/2017 15:22
1,2-Dibromo-3-Chloropropane	< 20.9	ug/Kg		2/1/2017 15:22
1,2-Dibromoethane	< 4.17	ug/Kg		2/1/2017 15:22
1,2-Dichlorobenzene	< 4.17	ug/Kg		2/1/2017 15:22
1,2-Dichloroethane	< 4.17	ug/Kg		2/1/2017 15:22
1,2-Dichloropropane	< 4.17	ug/Kg		2/1/2017 15:22
1,3-Dichlorobenzene	< 4.17	ug/Kg		2/1/2017 15:22
1,4-Dichlorobenzene	< 4.17	ug/Kg		2/1/2017 15:22
1,4-dioxane	< 41.7	ug/Kg		2/1/2017 15:22
2-Butanone	< 20.9	ug/Kg		2/1/2017 15:22
2-Hexanone	< 10.4	ug/Kg		2/1/2017 15:22
4-Methyl-2-pentanone	< 10.4	ug/Kg		2/1/2017 15:22
Acetone	< 20.9	ug/Kg		2/1/2017 15:22
Benzene	< 4.17	ug/Kg		2/1/2017 15:22
Bromochloromethane	< 10.4	ug/Kg		2/1/2017 15:22
Bromodichloromethane	< 4.17	ug/Kg		2/1/2017 15:22
Bromoform	< 10.4	ug/Kg		2/1/2017 15:22
Bromomethane	< 4.17	ug/Kg		2/1/2017 15:22
Carbon disulfide	< 4.17	ug/Kg		2/1/2017 15:22
Carbon Tetrachloride	< 4.17	ug/Kg		2/1/2017 15:22
Chlorobenzene	< 4.17	ug/Kg		2/1/2017 15:22

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Report Prepared Friday, February 03, 2017

MKP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch East ROW
Lab Sample ID: 170310-02
Matrix: Soil

Date Sampled: 1/26/2017
Date Received: 1/27/2017

Chloroethane	< 4.17	ug/Kg		2/1/2017 15:22
Chloroform	< 4.17	ug/Kg		2/1/2017 15:22
Chloromethane	< 4.17	ug/Kg		2/1/2017 15:22
cis-1,2-Dichloroethene	< 4.17	ug/Kg		2/1/2017 15:22
cis-1,3-Dichloropropene	< 4.17	ug/Kg		2/1/2017 15:22
Cyclohexane	< 20.9	ug/Kg		2/1/2017 15:22
Dibromochloromethane	< 4.17	ug/Kg		2/1/2017 15:22
Dichlorodifluoromethane	< 4.17	ug/Kg		2/1/2017 15:22
Ethylbenzene	< 4.17	ug/Kg		2/1/2017 15:22
Freon 113	< 4.17	ug/Kg		2/1/2017 15:22
Isopropylbenzene	< 4.17	ug/Kg		2/1/2017 15:22
m,p-Xylene	< 4.17	ug/Kg		2/1/2017 15:22
Methyl acetate	< 4.17	ug/Kg		2/1/2017 15:22
Methyl tert-butyl Ether	< 4.17	ug/Kg		2/1/2017 15:22
Methylcyclohexane	< 4.17	ug/Kg		2/1/2017 15:22
Methylene chloride	< 10.4 LAS	ug/Kg		2/1/2017 15:22
o-Xylene	< 4.17	ug/Kg		2/1/2017 15:22
Styrene	< 10.4	ug/Kg		2/1/2017 15:22
Tetrachloroethene	< 4.17	ug/Kg		2/1/2017 15:22
Toluene	**3.59**	ug/Kg	J	2/1/2017 15:22
trans-1,2-Dichloroethene	< 4.17	ug/Kg		2/1/2017 15:22
trans-1,3-Dichloropropene	< 4.17	ug/Kg		2/1/2017 15:22
Trichloroethene	< 4.17	ug/Kg		2/1/2017 15:22
Trichlorofluoromethane	< 4.17	ug/Kg		2/1/2017 15:22
Vinyl chloride	< 4.17	ug/Kg		2/1/2017 15:22

Report Prepared Friday, February 03, 2017

MKF 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch East ROW
Lab Sample ID: 170310-02 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**111**	82.1 - 123		2/1/2017	15:22
4-Bromofluorobenzene	**87.6**	84.6 - 112		2/1/2017	15:22
Pentafluorobenzene	**98.1**	91.4 - 111		2/1/2017	15:22
Toluene-D8	**97.9**	90.3 - 108		2/1/2017	15:22

Method Reference(s): EPA 8260C
EPA 5035A - L
Data File: x38823.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: **Bergmann Associates**

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch East ROW
Lab Sample ID: 170310-02 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
None Found	< 10.4	ug/Kg		2/1/2017
Total Reported TICS	< 10.4	ug/Kg		2/1/2017

Method Reference(s): EPA 8260C
EPA 5035A - L

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch East ROW
Lab Sample ID: 170310-03
Matrix: Soil

Date Sampled: 1/26/2017
Date Received: 1/27/2017

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 4.54	ug/Kg	UJ	2/1/2017 15:46
1,1,2,2-Tetrachloroethane	< 4.54	ug/Kg		2/1/2017 15:46
1,1,2-Trichloroethane	< 4.54	ug/Kg		2/1/2017 15:46
1,1-Dichloroethane	< 4.54	ug/Kg		2/1/2017 15:46
1,1-Dichloroethene	< 4.54	ug/Kg		2/1/2017 15:46
1,2,3-Trichlorobenzene	< 11.3	ug/Kg		2/1/2017 15:46
1,2,4-Trichlorobenzene	< 11.3	ug/Kg		2/1/2017 15:46
1,2-Dibromo-3-Chloropropane	< 22.7	ug/Kg		2/1/2017 15:46
1,2-Dibromoethane	< 4.54	ug/Kg		2/1/2017 15:46
1,2-Dichlorobenzene	< 4.54	ug/Kg		2/1/2017 15:46
1,2-Dichloroethane	< 4.54	ug/Kg		2/1/2017 15:46
1,2-Dichloropropane	< 4.54	ug/Kg		2/1/2017 15:46
1,3-Dichlorobenzene	< 4.54	ug/Kg		2/1/2017 15:46
1,4-Dichlorobenzene	< 4.54	ug/Kg		2/1/2017 15:46
1,4-dioxane	< 45.4	ug/Kg		2/1/2017 15:46
2-Butanone	< 22.7	ug/Kg		2/1/2017 15:46
2-Hexanone	< 11.3	ug/Kg		2/1/2017 15:46
4-Methyl-2-pentanone	< 11.3	ug/Kg		2/1/2017 15:46
Acetone	< 22.7	ug/Kg		2/1/2017 15:46
Benzene	< 4.54	ug/Kg		2/1/2017 15:46
Bromochloromethane	< 11.3	ug/Kg		2/1/2017 15:46
Bromodichloromethane	< 4.54	ug/Kg		2/1/2017 15:46
Bromoform	< 11.3	ug/Kg		2/1/2017 15:46
Bromomethane	< 4.54	ug/Kg		2/1/2017 15:46
Carbon disulfide	< 4.54	ug/Kg		2/1/2017 15:46
Carbon Tetrachloride	< 4.54	ug/Kg		2/1/2017 15:46
Chlorobenzene	< 4.54	ug/Kg		2/1/2017 15:46

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Report Prepared Friday, February 03, 2017

MKD 10/5/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	12-24 inch East ROW		
Lab Sample ID:	170310-03	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Chloroethane	< 4.54 UJ	ug/Kg		2/1/2017	15:46
Chloroform	< 4.54	ug/Kg		2/1/2017	15:46
Chloromethane	< 4.54	ug/Kg		2/1/2017	15:46
cis-1,2-Dichloroethene	< 4.54	ug/Kg		2/1/2017	15:46
cis-1,3-Dichloropropene	< 4.54	ug/Kg		2/1/2017	15:46
Cyclohexane	< 22.7	ug/Kg		2/1/2017	15:46
Dibromochloromethane	< 4.54	ug/Kg		2/1/2017	15:46
Dichlorodifluoromethane	< 4.54	ug/Kg		2/1/2017	15:46
Ethylbenzene	< 4.54	ug/Kg		2/1/2017	15:46
Freon 113	< 4.54	ug/Kg		2/1/2017	15:46
Isopropylbenzene	< 4.54	ug/Kg		2/1/2017	15:46
m,p-Xylene	**3.67** J	ug/Kg	J	2/1/2017	15:46
Methyl acetate	< 4.54 UJ	ug/Kg		2/1/2017	15:46
Methyl tert-butyl Ether	< 4.54	ug/Kg		2/1/2017	15:46
Methylcyclohexane	< 4.54	ug/Kg		2/1/2017	15:46
Methylene chloride	< 11.3	ug/Kg		2/1/2017	15:46
o-Xylene	< 4.54	ug/Kg		2/1/2017	15:46
Styrene	< 11.3	ug/Kg		2/1/2017	15:46
Tetrachloroethene	< 4.54	ug/Kg		2/1/2017	15:46
Toluene	**7.54** J	ug/Kg		2/1/2017	15:46
trans-1,2-Dichloroethene	< 4.54 UJ	ug/Kg		2/1/2017	15:46
trans-1,3-Dichloropropene	< 4.54	ug/Kg		2/1/2017	15:46
Trichloroethene	**5.69** J	ug/Kg		2/1/2017	15:46
Trichlorofluoromethane	< 4.54 UJ	ug/Kg		2/1/2017	15:46
Vinyl chloride	< 4.54	ug/Kg		2/1/2017	15:46

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Report Prepared Friday, February 03, 2017

MED 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch East ROW
Lab Sample ID: 170310-03 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	99.5	82.1 - 123		2/1/2017	15:46
4-Bromofluorobenzene	72.7	84.6 - 112	*	2/1/2017	15:46
Pentafluorobenzene	97.2	91.4 - 111		2/1/2017	15:46
Toluene-D8	81.2	90.3 - 108	*	2/1/2017	15:46

Internal standard outliers indicate probable matrix interference

Method Reference(s): EPA 8260C
EPA 5035A - L

Data File: x38824.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

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Report Prepared Friday, February 03, 2017

MAP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch East ROW
Lab Sample ID: 170310-03 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
None Found	< 11.3	ug/Kg		2/1/2017
Total Reported TICS	< 11.3	ug/Kg		2/1/2017

Method Reference(s): EPA 8260C
EPA 5035A - L

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	2-12 inch West ROW		
Lab Sample ID:	170310-05	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 4.46 UJ	ug/Kg		2/1/2017 16:09
1,1,2,2-Tetrachloroethane	< 4.46	ug/Kg		2/1/2017 16:09
1,1,2-Trichloroethane	< 4.46	ug/Kg		2/1/2017 16:09
1,1-Dichloroethane	< 4.46	ug/Kg		2/1/2017 16:09
1,1-Dichloroethene	< 4.46	ug/Kg		2/1/2017 16:09
1,2,3-Trichlorobenzene	< 11.2	ug/Kg		2/1/2017 16:09
1,2,4-Trichlorobenzene	< 11.2	ug/Kg		2/1/2017 16:09
1,2-Dibromo-3-Chloropropane	< 22.3	ug/Kg		2/1/2017 16:09
1,2-Dibromoethane	< 4.46	ug/Kg		2/1/2017 16:09
1,2-Dichlorobenzene	< 4.46	ug/Kg		2/1/2017 16:09
1,2-Dichloroethane	< 4.46	ug/Kg		2/1/2017 16:09
1,2-Dichloropropane	< 4.46	ug/Kg		2/1/2017 16:09
1,3-Dichlorobenzene	< 4.46	ug/Kg		2/1/2017 16:09
1,4-Dichlorobenzene	< 4.46	ug/Kg		2/1/2017 16:09
1,4-dioxane	< 44.6	ug/Kg		2/1/2017 16:09
2-Butanone	< 22.3	ug/Kg		2/1/2017 16:09
2-Hexanone	< 11.2	ug/Kg		2/1/2017 16:09
4-Methyl-2-pentanone	< 11.2	ug/Kg		2/1/2017 16:09
Acetone	< 22.3	ug/Kg		2/1/2017 16:09
Benzene	< 4.46	ug/Kg		2/1/2017 16:09
Bromochloromethane	< 11.2	ug/Kg		2/1/2017 16:09
Bromodichloromethane	< 4.46	ug/Kg		2/1/2017 16:09
Bromoform	< 11.2	ug/Kg		2/1/2017 16:09
Bromomethane	< 4.46	ug/Kg		2/1/2017 16:09
Carbon disulfide	< 4.46	ug/Kg		2/1/2017 16:09
Carbon Tetrachloride	< 4.46	ug/Kg		2/1/2017 16:09
Chlorobenzene	< 4.46	ug/Kg		2/1/2017 16:09

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Report Prepared Friday, February 03, 2017

MRP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch West ROW
Lab Sample ID: 170310-05 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Chloroethane	< 4.46 UJ	ug/Kg		2/1/2017	16:09
Chloroform	< 4.46	ug/Kg		2/1/2017	16:09
Chloromethane	< 4.46	ug/Kg		2/1/2017	16:09
cis-1,2-Dichloroethene	< 4.46	ug/Kg		2/1/2017	16:09
cis-1,3-Dichloropropene	< 4.46	ug/Kg		2/1/2017	16:09
Cyclohexane	< 22.3	ug/Kg		2/1/2017	16:09
Dibromochloromethane	< 4.46	ug/Kg		2/1/2017	16:09
Dichlorodifluoromethane	< 4.46	ug/Kg		2/1/2017	16:09
Ethylbenzene	< 4.46	ug/Kg		2/1/2017	16:09
Freon 113	< 4.46	ug/Kg		2/1/2017	16:09
Isopropylbenzene	< 4.46	ug/Kg		2/1/2017	16:09
m,p-Xylene	**3.54** J	ug/Kg	J	2/1/2017	16:09
Methyl acetate	< 4.46 UJ	ug/Kg		2/1/2017	16:09
Methyl tert-butyl Ether	< 4.46	ug/Kg		2/1/2017	16:09
Methylcyclohexane	< 4.46	ug/Kg		2/1/2017	16:09
Methylene chloride	**6.53** J	ug/Kg	J	2/1/2017	16:09
o-Xylene	< 4.46 UJ	ug/Kg		2/1/2017	16:09
Styrene	< 11.2	ug/Kg		2/1/2017	16:09
Tetrachloroethene	< 4.46	ug/Kg		2/1/2017	16:09
Toluene	**9.03** J	ug/Kg		2/1/2017	16:09
trans-1,2-Dichloroethene	< 4.46 UJ	ug/Kg		2/1/2017	16:09
trans-1,3-Dichloropropene	< 4.46	ug/Kg		2/1/2017	16:09
Trichloroethene	**4.17** J	ug/Kg	J	2/1/2017	16:09
Trichlorofluoromethane	< 4.46 UJ	ug/Kg		2/1/2017	16:09
Vinyl chloride	< 4.46	ug/Kg		2/1/2017	16:09

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Report Prepared Friday, February 03, 2017

MKP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: **Bergmann Associates**

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch West ROW
Lab Sample ID: 170310-05 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**115**	82.1 - 123		2/1/2017	16:09
4-Bromofluorobenzene	**78.4**	84.6 - 112	*	2/1/2017	16:09
Pentafluorobenzene	**98.0**	91.4 - 111		2/1/2017	16:09
Toluene-D8	**95.7**	90.3 - 108		2/1/2017	16:09

Internal standard outliers indicate probable matrix interference

Method Reference(s): EPA 8260C
EPA 5035A - L

Data File: x38825.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

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Report Prepared Friday, February 03, 2017

MAP 2/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch West ROW
Lab Sample ID: 170310-05
Matrix: Soil

Date Sampled: 1/26/2017
Date Received: 1/27/2017

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
None Found	< 11.2	ug/Kg		2/1/2017
Total Reported TICS	< 11.2	ug/Kg		2/1/2017

Method Reference(s): EPA 8260C
EPA 5035A - L

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	12-24 inch West ROW		
Lab Sample ID:	170310-06	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 4.36	ug/Kg		2/1/2017 16:33
1,1,2,2-Tetrachloroethane	< 4.36	ug/Kg		2/1/2017 16:33
1,1,2-Trichloroethane	< 4.36	ug/Kg		2/1/2017 16:33
1,1-Dichloroethane	< 4.36	ug/Kg		2/1/2017 16:33
1,1-Dichloroethene	< 4.36	ug/Kg		2/1/2017 16:33
1,2,3-Trichlorobenzene	< 10.9	ug/Kg		2/1/2017 16:33
1,2,4-Trichlorobenzene	< 10.9	ug/Kg		2/1/2017 16:33
1,2-Dibromo-3-Chloropropane	< 21.8	ug/Kg		2/1/2017 16:33
1,2-Dibromoethane	< 4.36	ug/Kg		2/1/2017 16:33
1,2-Dichlorobenzene	< 4.36	ug/Kg		2/1/2017 16:33
1,2-Dichloroethane	< 4.36	ug/Kg		2/1/2017 16:33
1,2-Dichloropropane	< 4.36	ug/Kg		2/1/2017 16:33
1,3-Dichlorobenzene	< 4.36	ug/Kg		2/1/2017 16:33
1,4-Dichlorobenzene	< 4.36	ug/Kg		2/1/2017 16:33
1,4-dioxane	< 43.6	ug/Kg		2/1/2017 16:33
2-Butanone	< 21.8	ug/Kg		2/1/2017 16:33
2-Hexanone	< 10.9	ug/Kg		2/1/2017 16:33
4-Methyl-2-pentanone	< 10.9	ug/Kg		2/1/2017 16:33
Acetone	< 21.8 UJ	ug/Kg		2/1/2017 16:33
Benzene	< 4.36	ug/Kg		2/1/2017 16:33
Bromochloromethane	< 10.9	ug/Kg		2/1/2017 16:33
Bromodichloromethane	< 4.36	ug/Kg		2/1/2017 16:33
Bromoform	< 10.9	ug/Kg		2/1/2017 16:33
Bromomethane	< 4.36 UJ	ug/Kg		2/1/2017 16:33
Carbon disulfide	< 4.36	ug/Kg		2/1/2017 16:33
Carbon Tetrachloride	< 4.36	ug/Kg		2/1/2017 16:33
Chlorobenzene	< 4.36	ug/Kg		2/1/2017 16:33

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Report Prepared Friday, February 03, 2017

MMD 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	12-24 inch West ROW		
Lab Sample ID:	170310-06	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Chloroethane	< 4.36	ug/Kg		2/1/2017	16:33
Chloroform	< 4.36	ug/Kg		2/1/2017	16:33
Chloromethane	< 4.36	ug/Kg		2/1/2017	16:33
cis-1,2-Dichloroethene	< 4.36	ug/Kg		2/1/2017	16:33
cis-1,3-Dichloropropene	< 4.36	ug/Kg		2/1/2017	16:33
Cyclohexane	< 21.8	ug/Kg		2/1/2017	16:33
Dibromochloromethane	< 4.36	ug/Kg		2/1/2017	16:33
Dichlorodifluoromethane	< 4.36	ug/Kg		2/1/2017	16:33
Ethylbenzene	< 4.36	ug/Kg		2/1/2017	16:33
Freon 113	< 4.36	ug/Kg		2/1/2017	16:33
Isopropylbenzene	< 4.36	ug/Kg		2/1/2017	16:33
m,p-Xylene	**2.55**	ug/Kg	J	2/1/2017	16:33
Methyl acetate	< 4.36	ug/Kg		2/1/2017	16:33
Methyl tert-butyl Ether	< 4.36	ug/Kg		2/1/2017	16:33
Methylcyclohexane	< 4.36	ug/Kg		2/1/2017	16:33
Methylene chloride	< 10.9 UJ	ug/Kg		2/1/2017	16:33
o-Xylene	< 4.36	ug/Kg		2/1/2017	16:33
Styrene	< 10.9	ug/Kg		2/1/2017	16:33
Tetrachloroethene	< 4.36	ug/Kg		2/1/2017	16:33
Toluene	**6.55**	ug/Kg		2/1/2017	16:33
trans-1,2-Dichloroethene	< 4.36	ug/Kg		2/1/2017	16:33
trans-1,3-Dichloropropene	< 4.36	ug/Kg		2/1/2017	16:33
Trichloroethene	**3.34**	ug/Kg	J	2/1/2017	16:33
Trichlorofluoromethane	< 4.36	ug/Kg		2/1/2017	16:33
Vinyl chloride	< 4.36	ug/Kg		2/1/2017	16:33

Report Prepared Friday, February 03, 2017

MAD 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch West ROW
Lab Sample ID: 170310-06 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**114**	82.1 - 123		2/1/2017	16:33
4-Bromofluorobenzene	**84.7**	84.6 - 112		2/1/2017	16:33
Pentafluorobenzene	**98.7**	91.4 - 111		2/1/2017	16:33
Toluene-D8	**98.9**	90.3 - 108		2/1/2017	16:33

Method Reference(s): EPA 8260C
EPA 5035A - L
Data File: x38826.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch West ROW
Lab Sample ID: 170310-06 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
None Found	< 10.9	ug/Kg		2/1/2017
Total Reported TICS	< 10.9	ug/Kg		2/1/2017

Method Reference(s): EPA 8260C
EPA 5035A - L

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	0-2 inch East ROW		
Lab Sample ID:	170310-01	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 335 UJ	ug/Kg		1/31/2017 19:44
1,2,4,5-Tetrachlorobenzene	< 335	ug/Kg		1/31/2017 19:44
1,2,4-Trichlorobenzene	< 335	ug/Kg		1/31/2017 19:44
1,2-Dichlorobenzene	< 335	ug/Kg		1/31/2017 19:44
1,3-Dichlorobenzene	< 335	ug/Kg		1/31/2017 19:44
1,4-Dichlorobenzene	< 335	ug/Kg		1/31/2017 19:44
2,2-Oxybis (1-chloropropane)	< 335	ug/Kg		1/31/2017 19:44
2,3,4,6-Tetrachlorophenol	< 335	ug/Kg		1/31/2017 19:44
2,4,5-Trichlorophenol	< 671	ug/Kg		1/31/2017 19:44
2,4,6-Trichlorophenol	< 335	ug/Kg		1/31/2017 19:44
2,4-Dichlorophenol	< 335	ug/Kg		1/31/2017 19:44
2,4-Dimethylphenol	< 335	ug/Kg		1/31/2017 19:44
2,4-Dinitrophenol	< 671	ug/Kg		1/31/2017 19:44
2,4-Dinitrotoluene	< 335	ug/Kg		1/31/2017 19:44
2,6-Dinitrotoluene	< 335	ug/Kg		1/31/2017 19:44
2-Chloronaphthalene	< 335	ug/Kg		1/31/2017 19:44
2-Chlorophenol	< 335	ug/Kg		1/31/2017 19:44
2-Methylnapthalene	< 335	ug/Kg		1/31/2017 19:44
2-Methylphenol	< 335	ug/Kg		1/31/2017 19:44
2-Nitroaniline	< 671	ug/Kg		1/31/2017 19:44
2-Nitrophenol	< 335	ug/Kg		1/31/2017 19:44
3&4-Methylphenol	< 335	ug/Kg		1/31/2017 19:44
3,3'-Dichlorobenzidine	< 335	ug/Kg		1/31/2017 19:44
3-Nitroaniline	< 671	ug/Kg		1/31/2017 19:44
4,6-Dinitro-2-methylphenol	< 671	ug/Kg		1/31/2017 19:44
4-Bromophenyl phenyl ether	< 335	ug/Kg		1/31/2017 19:44
4-Chloro-3-methylphenol	< 335	ug/Kg		1/31/2017 19:44

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Report Prepared Friday, February 03, 2017

MCP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 0-2 inch East ROW
Lab Sample ID: 170310-01 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

4-Chloroaniline	< 335	UJ	ug/Kg	1/31/2017 19:44
4-Chlorophenyl phenyl ether	< 335		ug/Kg	1/31/2017 19:44
4-Nitroaniline	< 671		ug/Kg	1/31/2017 19:44
4-Nitrophenol	< 671		ug/Kg	1/31/2017 19:44
Acenaphthene	< 335		ug/Kg	1/31/2017 19:44
Acenaphthylene	< 335		ug/Kg	1/31/2017 19:44
Acetophenone	< 335		ug/Kg	1/31/2017 19:44
Anthracene	< 335		ug/Kg	1/31/2017 19:44
Atrazine	< 335		ug/Kg	1/31/2017 19:44
Benzaldehyde	< 335		ug/Kg	1/31/2017 19:44
Benzo (a) anthracene	**726**	J	ug/Kg	1/31/2017 19:44
Benzo (a) pyrene	**760**	J	ug/Kg	1/31/2017 19:44
Benzo (b) fluoranthene	**858**	J	ug/Kg	1/31/2017 19:44
Benzo (g,h,i) perylene	**624**	J	ug/Kg	1/31/2017 19:44
Benzo (k) fluoranthene	**527**	J	ug/Kg	1/31/2017 19:44
Bis (2-chloroethoxy) methane	< 335	UJ	ug/Kg	1/31/2017 19:44
Bis (2-chloroethyl) ether	< 335		ug/Kg	1/31/2017 19:44
Bis (2-ethylhexyl) phthalate	< 335		ug/Kg	1/31/2017 19:44
Butylbenzylphthalate	< 335		ug/Kg	1/31/2017 19:44
Caprolactam	< 335		ug/Kg	1/31/2017 19:44
Carbazole	< 335		ug/Kg	1/31/2017 19:44
Chrysene	**794**	J	ug/Kg	1/31/2017 19:44
Dibenz (a,h) anthracene	< 335	UJ	ug/Kg	1/31/2017 19:44
Dibenzofuran	< 335		ug/Kg	1/31/2017 19:44
Diethyl phthalate	< 335		ug/Kg	1/31/2017 19:44
Dimethyl phthalate	< 671		ug/Kg	1/31/2017 19:44
Di-n-butyl phthalate	< 335		ug/Kg	1/31/2017 19:44
Di-n-octylphthalate	< 335		ug/Kg	1/31/2017 19:44
Fluoranthene	**1770**	J	ug/Kg	1/31/2017 19:44
Fluorene	< 335	UJ	ug/Kg	1/31/2017 19:44

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Report Prepared Friday, February 03, 2017

MKP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 0-2 inch East ROW
Lab Sample ID: 170310-01 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Hexachlorobenzene	< 335 UJ	ug/Kg		1/31/2017 19:44
Hexachlorobutadiene	< 335	ug/Kg		1/31/2017 19:44
Hexachlorocyclopentadiene	< 335	ug/Kg		1/31/2017 19:44
Hexachloroethane	< 335	ug/Kg		1/31/2017 19:44
Indeno (1,2,3-cd) pyrene	**582** J	ug/Kg		1/31/2017 19:44
Isophorone	< 335 UJ	ug/Kg		1/31/2017 19:44
Naphthalene	< 335	ug/Kg		1/31/2017 19:44
Nitrobenzene	< 335	ug/Kg		1/31/2017 19:44
N-Nitroso-di-n-propylamine	< 335	ug/Kg		1/31/2017 19:44
N-Nitrosodiphenylamine	< 335	ug/Kg		1/31/2017 19:44
Pentachlorophenol	< 671	ug/Kg		1/31/2017 19:44
Phenanthrene	**843** J	ug/Kg		1/31/2017 19:44
Phenol	< 335 UJ	ug/Kg		1/31/2017 19:44
Pyrene	**1290** J	ug/Kg		1/31/2017 19:44

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	36.8	43 - 120	*	1/31/2017 19:44
2-Fluorobiphenyl	21.5	33.7 - 113	*	1/31/2017 19:44
2-Fluorophenol	30.0	36.5 - 88.1	*	1/31/2017 19:44
Nitrobenzene-d5	24.2	33.3 - 91.5	*	1/31/2017 19:44
Phenol-d5	32.5	38.4 - 94.6	*	1/31/2017 19:44
Terphenyl-d14	32.9	66.1 - 113	*	1/31/2017 19:44

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 1/30/2017
Data File: B16760.D

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Report Prepared Friday, February 03, 2017

MKP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 0-2 inch East ROW
Lab Sample ID: 170310-01
Matrix: Soil

Date Sampled: 1/26/2017
Date Received: 1/27/2017

Semi-Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result		Units	Qualifier	Date Analyzed
~~Unknown ketone~~	~~600~~	R	ug/Kg	B	1/31/2017
Triacetin	483		ug/Kg		1/31/2017
Unknown PAH	192		ug/Kg		1/31/2017
Unknown	174		ug/Kg		1/31/2017
9,10-Anthracenedione	201		ug/Kg		1/31/2017
Unknown	243		ug/Kg		1/31/2017
Unknown	170		ug/Kg		1/31/2017
Unknown PAH	250		ug/Kg		1/31/2017
Unknown PAH	590		ug/Kg		1/31/2017
Unknown alkane	382		ug/Kg		1/31/2017
Unknown	275		ug/Kg		1/31/2017
Unknown PAH	223		ug/Kg		1/31/2017
Unknown PAH	174		ug/Kg		1/31/2017
Unknown PAH	165		ug/Kg		1/31/2017
Unknown sterol	639		ug/Kg		1/31/2017
Unknown	301		ug/Kg		1/31/2017
Unknown PAH	312		ug/Kg		1/31/2017
Unknown PAH	243		ug/Kg		1/31/2017
Unknown PAH	240		ug/Kg		1/31/2017
Unknown PAH	252		ug/Kg		1/31/2017
Total Reported TICS	6110		ug/Kg		1/31/2017

Method Reference(s): EPA 8270D
EPA 3550C

Preparation Date: 1/30/2017

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

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Report Prepared Friday, February 03, 2017

MKD 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch East ROW
Lab Sample ID: 170310-02
Matrix: Soil

Date Sampled: 1/26/2017
Date Received: 1/27/2017

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 326	ug/Kg		1/30/2017 20:47
1,2,4,5-Tetrachlorobenzene	< 326	ug/Kg		1/30/2017 20:47
1,2,4-Trichlorobenzene	< 326	ug/Kg		1/30/2017 20:47
1,2-Dichlorobenzene	< 326	ug/Kg		1/30/2017 20:47
1,3-Dichlorobenzene	< 326	ug/Kg		1/30/2017 20:47
1,4-Dichlorobenzene	< 326	ug/Kg		1/30/2017 20:47
2,2-Oxybis (1-chloropropane)	< 326	ug/Kg		1/30/2017 20:47
2,3,4,6-Tetrachlorophenol	< 326	ug/Kg		1/30/2017 20:47
2,4,5-Trichlorophenol	< 652	ug/Kg		1/30/2017 20:47
2,4,6-Trichlorophenol	< 326	ug/Kg		1/30/2017 20:47
2,4-Dichlorophenol	< 326	ug/Kg		1/30/2017 20:47
2,4-Dimethylphenol	< 326	ug/Kg		1/30/2017 20:47
2,4-Dinitrophenol	< 652	ug/Kg		1/30/2017 20:47
2,4-Dinitrotoluene	< 326	ug/Kg		1/30/2017 20:47
2,6-Dinitrotoluene	< 326	ug/Kg		1/30/2017 20:47
2-Chloronaphthalene	< 326	ug/Kg		1/30/2017 20:47
2-Chlorophenol	< 326	ug/Kg		1/30/2017 20:47
2-Methylnapthalene	< 326	ug/Kg		1/30/2017 20:47
2-Methylphenol	< 326	ug/Kg		1/30/2017 20:47
2-Nitroaniline	< 652	ug/Kg		1/30/2017 20:47
2-Nitrophenol	< 326	ug/Kg		1/30/2017 20:47
3&4-Methylphenol	< 326	ug/Kg		1/30/2017 20:47
3,3'-Dichlorobenzidine	< 326	ug/Kg		1/30/2017 20:47
3-Nitroaniline	< 652	ug/Kg		1/30/2017 20:47
4,6-Dinitro-2-methylphenol	< 652	ug/Kg		1/30/2017 20:47
4-Bromophenyl phenyl ether	< 326	ug/Kg		1/30/2017 20:47
4-Chloro-3-methylphenol	< 326	ug/Kg		1/30/2017 20:47

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	2-12 inch East ROW		
Lab Sample ID:	170310-02	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

4-Chloroaniline	< 326	ug/Kg		1/30/2017	20:47
4-Chlorophenyl phenyl ether	< 326	ug/Kg		1/30/2017	20:47
4-Nitroaniline	< 652	ug/Kg		1/30/2017	20:47
4-Nitrophenol	< 652	ug/Kg		1/30/2017	20:47
Acenaphthene	< 326	ug/Kg		1/30/2017	20:47
Acenaphthylene	< 326	ug/Kg		1/30/2017	20:47
Acetophenone	< 326	ug/Kg		1/30/2017	20:47
Anthracene	**178**	ug/Kg	J	1/30/2017	20:47
Atrazine	< 326 UJ	ug/Kg		1/30/2017	20:47
Benzaldehyde	< 326	ug/Kg		1/30/2017	20:47
Benzo (a) anthracene	**802**	ug/Kg		1/30/2017	20:47
Benzo (a) pyrene	**796**	ug/Kg		1/30/2017	20:47
Benzo (b) fluoranthene	**843**	ug/Kg		1/30/2017	20:47
Benzo (g,h,i) perylene	**639**	ug/Kg		1/30/2017	20:47
Benzo (k) fluoranthene	**598**	ug/Kg		1/30/2017	20:47
Bis (2-chloroethoxy) methane	< 326	ug/Kg		1/30/2017	20:47
Bis (2-chloroethyl) ether	< 326	ug/Kg		1/30/2017	20:47
Bis (2-ethylhexyl) phthalate	< 326	ug/Kg		1/30/2017	20:47
Butylbenzylphthalate	< 326	ug/Kg		1/30/2017	20:47
Caprolactam	< 326	ug/Kg		1/30/2017	20:47
Carbazole	< 326	ug/Kg		1/30/2017	20:47
Chrysene	**898**	ug/Kg		1/30/2017	20:47
Dibenz (a,h) anthracene	< 326	ug/Kg		1/30/2017	20:47
Dibenzofuran	< 326	ug/Kg		1/30/2017	20:47
Diethyl phthalate	< 326	ug/Kg		1/30/2017	20:47
Dimethyl phthalate	< 652	ug/Kg		1/30/2017	20:47
Di-n-butyl phthalate	< 326	ug/Kg		1/30/2017	20:47
Di-n-octylphthalate	< 326	ug/Kg		1/30/2017	20:47
Fluoranthene	**1690**	ug/Kg		1/30/2017	20:47
Fluorene	< 326	ug/Kg		1/30/2017	20:47

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Report Prepared Friday, February 03, 2017

MCP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch East ROW
Lab Sample ID: 170310-02 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Hexachlorobenzene	< 326	ug/Kg			1/30/2017 20:47
Hexachlorobutadiene	< 326	ug/Kg			1/30/2017 20:47
Hexachlorocyclopentadiene	< 326	ug/Kg			1/30/2017 20:47
Hexachloroethane	< 326	ug/Kg			1/30/2017 20:47
Indeno (1,2,3-cd) pyrene	**428**	ug/Kg			1/30/2017 20:47
Isophorone	< 326	ug/Kg			1/30/2017 20:47
Naphthalene	< 326	ug/Kg			1/30/2017 20:47
Nitrobenzene	< 326	ug/Kg			1/30/2017 20:47
N-Nitroso-di-n-propylamine	< 326	ug/Kg			1/30/2017 20:47
N-Nitrosodiphenylamine	< 326	ug/Kg			1/30/2017 20:47
Pentachlorophenol	< 652	ug/Kg			1/30/2017 20:47
Phenanthrene	**785**	ug/Kg			1/30/2017 20:47
Phenol	< 326	ug/Kg			1/30/2017 20:47
Pyrene	**1340**	ug/Kg			1/30/2017 20:47

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**54.7**	43 - 120		1/30/2017 20:47
2-Fluorobiphenyl	**44.9**	33.7 - 113		1/30/2017 20:47
2-Fluorophenol	**40.3**	36.5 - 88.1		1/30/2017 20:47
Nitrobenzene-d5	**39.3**	33.3 - 91.5		1/30/2017 20:47
Phenol-d5	**44.3**	38.4 - 94.6		1/30/2017 20:47
Terphenyl-d14	**64.6**	66.1 - 113	*	1/30/2017 20:47

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 1/30/2017
Data File: B16723.D

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Report Prepared Friday, February 03, 2017

MMP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch East ROW
Lab Sample ID: 170310-02 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Semi-Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
Unknown ketone	~~590~~ R	ug/Kg	B	1/30/2017
Phthalic anhydride	180	ug/Kg		1/30/2017
Unknown PAH	203	ug/Kg		1/30/2017
9,10-Anthracenedione	214	ug/Kg		1/30/2017
Unknown	298	ug/Kg		1/30/2017
Unknown	266	ug/Kg		1/30/2017
Unknown PAH	261	ug/Kg		1/30/2017
Unknown	189	ug/Kg		1/30/2017
Unknown PAH	596	ug/Kg		1/30/2017
Unknown	214	ug/Kg		1/30/2017
Unknown alkane	237	ug/Kg		1/30/2017
Unknown	281	ug/Kg		1/30/2017
Unknown PAH	289	ug/Kg		1/30/2017
Unknown PAH	207	ug/Kg		1/30/2017
Unknown PAH	213	ug/Kg		1/30/2017
Unknown sterol	362	ug/Kg		1/30/2017
Unknown PAH	313	ug/Kg		1/30/2017
Unknown PAH	213	ug/Kg		1/30/2017
Unknown PAH	171	ug/Kg		1/30/2017
Unknown PAH	349	ug/Kg		1/30/2017
Total Reported TICS	5640	ug/Kg		1/30/2017

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 1/30/2017

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

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Report Prepared Friday, February 03, 2017

mwd 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch East ROW
Lab Sample ID: 170310-03
Matrix: Soil

Date Sampled: 1/26/2017
Date Received: 1/27/2017

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 321	ug/Kg		1/30/2017 21:16
1,2,4,5-Tetrachlorobenzene	< 321	ug/Kg		1/30/2017 21:16
1,2,4-Trichlorobenzene	< 321	ug/Kg		1/30/2017 21:16
1,2-Dichlorobenzene	< 321	ug/Kg		1/30/2017 21:16
1,3-Dichlorobenzene	< 321	ug/Kg		1/30/2017 21:16
1,4-Dichlorobenzene	< 321	ug/Kg		1/30/2017 21:16
2,2-Oxybis (1-chloropropane)	< 321	ug/Kg		1/30/2017 21:16
2,3,4,6-Tetrachlorophenol	< 321	ug/Kg		1/30/2017 21:16
2,4,5-Trichlorophenol	< 642	ug/Kg		1/30/2017 21:16
2,4,6-Trichlorophenol	< 321	ug/Kg		1/30/2017 21:16
2,4-Dichlorophenol	< 321	ug/Kg		1/30/2017 21:16
2,4-Dimethylphenol	< 321	ug/Kg		1/30/2017 21:16
2,4-Dinitrophenol	< 642	ug/Kg		1/30/2017 21:16
2,4-Dinitrotoluene	< 321	ug/Kg		1/30/2017 21:16
2,6-Dinitrotoluene	< 321	ug/Kg		1/30/2017 21:16
2-Chloronaphthalene	< 321	ug/Kg		1/30/2017 21:16
2-Chlorophenol	< 321	ug/Kg		1/30/2017 21:16
2-Methylnapthalene	**304**	ug/Kg	J	1/30/2017 21:16
2-Methylphenol	< 321	ug/Kg		1/30/2017 21:16
2-Nitroaniline	< 642	ug/Kg		1/30/2017 21:16
2-Nitrophenol	< 321	ug/Kg		1/30/2017 21:16
3&4-Methylphenol	< 321	ug/Kg		1/30/2017 21:16
3,3'-Dichlorobenzidine	< 321	ug/Kg		1/30/2017 21:16
3-Nitroaniline	< 642	ug/Kg		1/30/2017 21:16
4,6-Dinitro-2-methylphenol	< 642	ug/Kg		1/30/2017 21:16
4-Bromophenyl phenyl ether	< 321	ug/Kg		1/30/2017 21:16
4-Chloro-3-methylphenol	< 321	ug/Kg		1/30/2017 21:16

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch East ROW
Lab Sample ID: 170310-03
Matrix: Soil

Date Sampled: 1/26/2017
Date Received: 1/27/2017

4-Chloroaniline	< 321	ug/Kg		1/30/2017	21:16
4-Chlorophenyl phenyl ether	< 321	ug/Kg		1/30/2017	21:16
4-Nitroaniline	< 642	ug/Kg		1/30/2017	21:16
4-Nitrophenol	< 642	ug/Kg		1/30/2017	21:16
Acenaphthene	< 321	ug/Kg		1/30/2017	21:16
Acenaphthylene	< 321	ug/Kg		1/30/2017	21:16
Acetophenone	< 321	ug/Kg		1/30/2017	21:16
Anthracene	**270**	ug/Kg	J	1/30/2017	21:16
Atrazine	< 321 UJ	ug/Kg		1/30/2017	21:16
Benzaldehyde	< 321	ug/Kg		1/30/2017	21:16
Benzo (a) anthracene	**805**	ug/Kg		1/30/2017	21:16
Benzo (a) pyrene	**660**	ug/Kg		1/30/2017	21:16
Benzo (b) fluoranthene	**694**	ug/Kg		1/30/2017	21:16
Benzo (g,h,i) perylene	**434**	ug/Kg		1/30/2017	21:16
Benzo (k) fluoranthene	**475**	ug/Kg		1/30/2017	21:16
Bis (2-chloroethoxy) methane	< 321	ug/Kg		1/30/2017	21:16
Bis (2-chloroethyl) ether	< 321	ug/Kg		1/30/2017	21:16
Bis (2-ethylhexyl) phthalate	< 321	ug/Kg		1/30/2017	21:16
Butylbenzylphthalate	< 321	ug/Kg		1/30/2017	21:16
Caprolactam	< 321	ug/Kg		1/30/2017	21:16
Carbazole	< 321	ug/Kg		1/30/2017	21:16
Chrysene	**812**	ug/Kg		1/30/2017	21:16
Dibenz (a,h) anthracene	< 321	ug/Kg		1/30/2017	21:16
Dibenzofuran	< 321	ug/Kg		1/30/2017	21:16
Diethyl phthalate	< 321	ug/Kg		1/30/2017	21:16
Dimethyl phthalate	< 642	ug/Kg		1/30/2017	21:16
Di-n-butyl phthalate	< 321	ug/Kg		1/30/2017	21:16
Di-n-octylphthalate	< 321	ug/Kg		1/30/2017	21:16
Fluoranthene	**1710**	ug/Kg		1/30/2017	21:16
Fluorene	< 321	ug/Kg		1/30/2017	21:16

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Report Prepared Friday, February 03, 2017

MKD 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch East ROW
Lab Sample ID: 170310-03 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Hexachlorobenzene	< 321	ug/Kg			1/30/2017 21:16
Hexachlorobutadiene	< 321	ug/Kg			1/30/2017 21:16
Hexachlorocyclopentadiene	< 321	ug/Kg			1/30/2017 21:16
Hexachloroethane	< 321	ug/Kg			1/30/2017 21:16
Indeno (1,2,3-cd) pyrene	**315**	ug/Kg		J	1/30/2017 21:16
Isophorone	< 321	ug/Kg			1/30/2017 21:16
Naphthalene	**164**	ug/Kg		J	1/30/2017 21:16
Nitrobenzene	< 321	ug/Kg			1/30/2017 21:16
N-Nitroso-di-n-propylamine	< 321	ug/Kg			1/30/2017 21:16
N-Nitrosodiphenylamine	< 321	ug/Kg			1/30/2017 21:16
Pentachlorophenol	< 642	ug/Kg			1/30/2017 21:16
Phenanthrene	**1310**	ug/Kg			1/30/2017 21:16
Phenol	< 321	ug/Kg			1/30/2017 21:16
Pyrene	**1370**	ug/Kg			1/30/2017 21:16

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**58.7**	43 - 120		1/30/2017 21:16
2-Fluorobiphenyl	**40.4**	33.7 - 113		1/30/2017 21:16
2-Fluorophenol	**37.5**	36.5 - 88.1		1/30/2017 21:16
Nitrobenzene-d5	**39.5**	33.3 - 91.5		1/30/2017 21:16
Phenol-d5	**41.8**	38.4 - 94.6		1/30/2017 21:16
Terphenyl-d14	**70.1**	66.1 - 113		1/30/2017 21:16

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 1/30/2017
Data File: B16724.D

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch East ROW
Lab Sample ID: 170310-03
Matrix: Soil

Date Sampled: 1/26/2017
Date Received: 1/27/2017

Semi-Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
Unknown ketone	~~504~~ R	ug/Kg	B	1/30/2017
Unknown PAH	309	ug/Kg		1/30/2017
Unknown alkane	324	ug/Kg		1/30/2017
Unknown PAH	366	ug/Kg		1/30/2017
Unknown PAH	312	ug/Kg		1/30/2017
Unknown alkane	414	ug/Kg		1/30/2017
Unknown alkane	540	ug/Kg		1/30/2017
Unknown	340	ug/Kg		1/30/2017
Unknown	350	ug/Kg		1/30/2017
Unknown PAH	331	ug/Kg		1/30/2017
Unknown PAH	469	ug/Kg		1/30/2017
Unknown PAH	366	ug/Kg		1/30/2017
Unknown alkane	311	ug/Kg		1/30/2017
Unknown alkane	392	ug/Kg		1/30/2017
Unknown alkane	495	ug/Kg		1/30/2017
Unknown	309	ug/Kg		1/30/2017
Unknown PAH	520	ug/Kg		1/30/2017
Unknown	430	ug/Kg		1/30/2017
Unknown	418	ug/Kg		1/30/2017
Unknown PAH	328	ug/Kg		1/30/2017
Total Reported TICS	7830	ug/Kg		1/30/2017

Method Reference(s): EPA 8270D
EPA 3550C

Preparation Date: 1/30/2017

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

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Report Prepared Friday, February 03, 2017

MKP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 0-2 inch West ROW
Lab Sample ID: 170310-04 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 331	ug/Kg		1/30/2017 21:45
1,2,4,5-Tetrachlorobenzene	< 331	ug/Kg		1/30/2017 21:45
1,2,4-Trichlorobenzene	< 331	ug/Kg		1/30/2017 21:45
1,2-Dichlorobenzene	< 331	ug/Kg		1/30/2017 21:45
1,3-Dichlorobenzene	< 331	ug/Kg		1/30/2017 21:45
1,4-Dichlorobenzene	< 331	ug/Kg		1/30/2017 21:45
2,2-Oxybis (1-chloropropane)	< 331	ug/Kg		1/30/2017 21:45
2,3,4,6-Tetrachlorophenol	< 331	ug/Kg		1/30/2017 21:45
2,4,5-Trichlorophenol	< 663	ug/Kg		1/30/2017 21:45
2,4,6-Trichlorophenol	< 331	ug/Kg		1/30/2017 21:45
2,4-Dichlorophenol	< 331	ug/Kg		1/30/2017 21:45
2,4-Dimethylphenol	< 331	ug/Kg		1/30/2017 21:45
2,4-Dinitrophenol	< 663	ug/Kg		1/30/2017 21:45
2,4-Dinitrotoluene	< 331	ug/Kg		1/30/2017 21:45
2,6-Dinitrotoluene	< 331	ug/Kg		1/30/2017 21:45
2-Chloronaphthalene	< 331	ug/Kg		1/30/2017 21:45
2-Chlorophenol	< 331	ug/Kg		1/30/2017 21:45
2-Methylnapthalene	< 331	ug/Kg		1/30/2017 21:45
2-Methylphenol	< 331	ug/Kg		1/30/2017 21:45
2-Nitroaniline	< 663	ug/Kg		1/30/2017 21:45
2-Nitrophenol	< 331	ug/Kg		1/30/2017 21:45
3&4-Methylphenol	< 331	ug/Kg		1/30/2017 21:45
3,3'-Dichlorobenzidine	< 331	ug/Kg		1/30/2017 21:45
3-Nitroaniline	< 663	ug/Kg		1/30/2017 21:45
4,6-Dinitro-2-methylphenol	< 663	ug/Kg		1/30/2017 21:45
4-Bromophenyl phenyl ether	< 331	ug/Kg		1/30/2017 21:45
4-Chloro-3-methylphenol	< 331	ug/Kg		1/30/2017 21:45

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 0-2 inch West ROW
Lab Sample ID: 170310-04 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

4-Chloroaniline	< 331	ug/Kg		1/30/2017	21:45
4-Chlorophenyl phenyl ether	< 331	ug/Kg		1/30/2017	21:45
4-Nitroaniline	< 663	ug/Kg		1/30/2017	21:45
4-Nitrophenol	< 663	ug/Kg		1/30/2017	21:45
Acenaphthene	< 331	ug/Kg		1/30/2017	21:45
Acenaphthylene	< 331	ug/Kg		1/30/2017	21:45
Acetophenone	< 331	ug/Kg		1/30/2017	21:45
Anthracene	**232**	ug/Kg	J	1/30/2017	21:45
Atrazine	< 331 UJ	ug/Kg		1/30/2017	21:45
Benzaldehyde	< 331	ug/Kg		1/30/2017	21:45
Benzo (a) anthracene	**936**	ug/Kg		1/30/2017	21:45
Benzo (a) pyrene	**1050**	ug/Kg		1/30/2017	21:45
Benzo (b) fluoranthene	**1250**	ug/Kg		1/30/2017	21:45
Benzo (g,h,i) perylene	**919**	ug/Kg		1/30/2017	21:45
Benzo (k) fluoranthene	**632**	ug/Kg		1/30/2017	21:45
Bis (2-chloroethoxy) methane	< 331	ug/Kg		1/30/2017	21:45
Bis (2-chloroethyl) ether	< 331	ug/Kg		1/30/2017	21:45
Bis (2-ethylhexyl) phthalate	< 331	ug/Kg		1/30/2017	21:45
Butylbenzylphthalate	< 331	ug/Kg		1/30/2017	21:45
Caprolactam	< 331	ug/Kg		1/30/2017	21:45
Carbazole	< 331	ug/Kg		1/30/2017	21:45
Chrysene	**1170**	ug/Kg		1/30/2017	21:45
Dibenz (a,h) anthracene	**260**	ug/Kg	J	1/30/2017	21:45
Dibenzofuran	< 331	ug/Kg		1/30/2017	21:45
Diethyl phthalate	< 331	ug/Kg		1/30/2017	21:45
Dimethyl phthalate	< 663	ug/Kg		1/30/2017	21:45
Di-n-butyl phthalate	< 331	ug/Kg		1/30/2017	21:45
Di-n-octylphthalate	< 331	ug/Kg		1/30/2017	21:45
Fluoranthene	**2240**	ug/Kg		1/30/2017	21:45
Fluorene	< 331	ug/Kg		1/30/2017	21:45

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Report Prepared Friday, February 03, 2017

MKP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 0-2 inch West ROW
Lab Sample ID: 170310-04 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Hexachlorobenzene	< 331	ug/Kg			1/30/2017 21:45
Hexachlorobutadiene	< 331	ug/Kg			1/30/2017 21:45
Hexachlorocyclopentadiene	< 331	ug/Kg			1/30/2017 21:45
Hexachloroethane	< 331	ug/Kg			1/30/2017 21:45
Indeno (1,2,3-cd) pyrene	**603**	ug/Kg			1/30/2017 21:45
Isophorone	< 331	ug/Kg			1/30/2017 21:45
Naphthalene	< 331	ug/Kg			1/30/2017 21:45
Nitrobenzene	< 331	ug/Kg			1/30/2017 21:45
N-Nitroso-di-n-propylamine	< 331	ug/Kg			1/30/2017 21:45
N-Nitrosodiphenylamine	< 331	ug/Kg			1/30/2017 21:45
Pentachlorophenol	< 663	ug/Kg			1/30/2017 21:45
Phenanthrene	**1110**	ug/Kg			1/30/2017 21:45
Phenol	< 331	ug/Kg			1/30/2017 21:45
Pyrene	**1720**	ug/Kg			1/30/2017 21:45

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**56.2**	43 - 120		1/30/2017 21:45
2-Fluorobiphenyl	**43.6**	33.7 - 113		1/30/2017 21:45
2-Fluorophenol	**38.9**	36.5 - 88.1		1/30/2017 21:45
Nitrobenzene-d5	**40.9**	33.3 - 91.5		1/30/2017 21:45
Phenol-d5	**44.9**	38.4 - 94.6		1/30/2017 21:45
Terphenyl-d14	**61.2**	66.1 - 113	*	1/30/2017 21:45

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 1/30/2017
Data File: B16725.D

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Report Prepared Friday, February 03, 2017

MKP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 0-2 inch West ROW
Lab Sample ID: 170310-04
Matrix: Soil
Date Sampled: 1/26/2017
Date Received: 1/27/2017

Semi-Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
Unknown ketone	~~587~~ R	ug/Kg	B	1/30/2017
Unknown	276	ug/Kg		1/30/2017
9,10-Anthracenedione	345	ug/Kg		1/30/2017
Unknown alkane	231	ug/Kg		1/30/2017
Unknown	401	ug/Kg		1/30/2017
Unknown PAH	325	ug/Kg		1/30/2017
Unknown PAH	825	ug/Kg		1/30/2017
Unknown	313	ug/Kg		1/30/2017
Unknown alkane	583	ug/Kg		1/30/2017
Unknown	477	ug/Kg		1/30/2017
Unknown PAH	574	ug/Kg		1/30/2017
Unknown PAH	597	ug/Kg		1/30/2017
Unknown PAH	269	ug/Kg		1/30/2017
Unknown	2000	ug/Kg		1/30/2017
Unknown	324	ug/Kg		1/30/2017
Unknown	316	ug/Kg		1/30/2017
Unknown	620	ug/Kg		1/30/2017
Unknown PAH	514	ug/Kg		1/30/2017
Unknown PAH	1010	ug/Kg		1/30/2017
Unknown	504	ug/Kg		1/30/2017
Total Reported TICS	11100	ug/Kg		1/30/2017

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 1/30/2017

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

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Report Prepared Friday, February 03, 2017

MKP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch West ROW
Lab Sample ID: 170310-05 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 331	ug/Kg		1/30/2017 22:15
1,2,4,5-Tetrachlorobenzene	< 331	ug/Kg		1/30/2017 22:15
1,2,4-Trichlorobenzene	< 331	ug/Kg		1/30/2017 22:15
1,2-Dichlorobenzene	< 331	ug/Kg		1/30/2017 22:15
1,3-Dichlorobenzene	< 331	ug/Kg		1/30/2017 22:15
1,4-Dichlorobenzene	< 331	ug/Kg		1/30/2017 22:15
2,2-Oxybis (1-chloropropane)	< 331	ug/Kg		1/30/2017 22:15
2,3,4,6-Tetrachlorophenol	< 331	ug/Kg		1/30/2017 22:15
2,4,5-Trichlorophenol	< 662	ug/Kg		1/30/2017 22:15
2,4,6-Trichlorophenol	< 331	ug/Kg		1/30/2017 22:15
2,4-Dichlorophenol	< 331	ug/Kg		1/30/2017 22:15
2,4-Dimethylphenol	< 331	ug/Kg		1/30/2017 22:15
2,4-Dinitrophenol	< 662	ug/Kg		1/30/2017 22:15
2,4-Dinitrotoluene	< 331	ug/Kg		1/30/2017 22:15
2,6-Dinitrotoluene	< 331	ug/Kg		1/30/2017 22:15
2-Chloronaphthalene	< 331	ug/Kg		1/30/2017 22:15
2-Chlorophenol	< 331	ug/Kg		1/30/2017 22:15
2-Methylnapthalene	< 331	ug/Kg		1/30/2017 22:15
2-Methylphenol	< 331	ug/Kg		1/30/2017 22:15
2-Nitroaniline	< 662	ug/Kg		1/30/2017 22:15
2-Nitrophenol	< 331	ug/Kg		1/30/2017 22:15
3&4-Methylphenol	< 331	ug/Kg		1/30/2017 22:15
3,3'-Dichlorobenzidine	< 331	ug/Kg		1/30/2017 22:15
3-Nitroaniline	< 662	ug/Kg		1/30/2017 22:15
4,6-Dinitro-2-methylphenol	< 662	ug/Kg		1/30/2017 22:15
4-Bromophenyl phenyl ether	< 331	ug/Kg		1/30/2017 22:15
4-Chloro-3-methylphenol	< 331	ug/Kg		1/30/2017 22:15

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	2-12 inch West ROW		
Lab Sample ID:	170310-05	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

4-Chloroaniline	< 331	ug/Kg	1/30/2017 22:15
4-Chlorophenyl phenyl ether	< 331	ug/Kg	1/30/2017 22:15
4-Nitroaniline	< 662	ug/Kg	1/30/2017 22:15
4-Nitrophenol	< 662	ug/Kg	1/30/2017 22:15
Acenaphthene	< 331	ug/Kg	1/30/2017 22:15
Acenaphthylene	< 331	ug/Kg	1/30/2017 22:15
Acetophenone	< 331	ug/Kg	1/30/2017 22:15
Anthracene	< 331	ug/Kg	1/30/2017 22:15
Atrazine	< 331 UJ	ug/Kg	1/30/2017 22:15
Benzaldehyde	< 331	ug/Kg	1/30/2017 22:15
Benzo (a) anthracene	**479**	ug/Kg	1/30/2017 22:15
Benzo (a) pyrene	**410**	ug/Kg	1/30/2017 22:15
Benzo (b) fluoranthene	**426**	ug/Kg	1/30/2017 22:15
Benzo (g,h,i) perylene	**352**	ug/Kg	1/30/2017 22:15
Benzo (k) fluoranthene	**339**	ug/Kg	1/30/2017 22:15
Bis (2-chloroethoxy) methane	< 331	ug/Kg	1/30/2017 22:15
Bis (2-chloroethyl) ether	< 331	ug/Kg	1/30/2017 22:15
Bis (2-ethylhexyl) phthalate	< 331	ug/Kg	1/30/2017 22:15
Butylbenzylphthalate	< 331	ug/Kg	1/30/2017 22:15
Caprolactam	< 331	ug/Kg	1/30/2017 22:15
Carbazole	< 331	ug/Kg	1/30/2017 22:15
Chrysene	**488**	ug/Kg	1/30/2017 22:15
Dibenz (a,h) anthracene	< 331	ug/Kg	1/30/2017 22:15
Dibenzofuran	< 331	ug/Kg	1/30/2017 22:15
Diethyl phthalate	< 331	ug/Kg	1/30/2017 22:15
Dimethyl phthalate	< 662	ug/Kg	1/30/2017 22:15
Di-n-butyl phthalate	< 331	ug/Kg	1/30/2017 22:15
Di-n-octylphthalate	< 331	ug/Kg	1/30/2017 22:15
Fluoranthene	**756**	ug/Kg	1/30/2017 22:15
Fluorene	< 331	ug/Kg	1/30/2017 22:15

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Report Prepared Friday, February 03, 2017

MKP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch West ROW
Lab Sample ID: 170310-05 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Hexachlorobenzene	< 331	ug/Kg			1/30/2017 22:15
Hexachlorobutadiene	< 331	ug/Kg			1/30/2017 22:15
Hexachlorocyclopentadiene	< 331	ug/Kg			1/30/2017 22:15
Hexachloroethane	< 331	ug/Kg			1/30/2017 22:15
Indeno (1,2,3-cd) pyrene	**249**	ug/Kg		J	1/30/2017 22:15
Isophorone	< 331	ug/Kg			1/30/2017 22:15
Naphthalene	< 331	ug/Kg			1/30/2017 22:15
Nitrobenzene	< 331	ug/Kg			1/30/2017 22:15
N-Nitroso-di-n-propylamine	< 331	ug/Kg			1/30/2017 22:15
N-Nitrosodiphenylamine	< 331	ug/Kg			1/30/2017 22:15
Pentachlorophenol	< 662	ug/Kg			1/30/2017 22:15
Phenanthrene	**339**	ug/Kg			1/30/2017 22:15
Phenol	< 331	ug/Kg			1/30/2017 22:15
Pyrene	**612**	ug/Kg			1/30/2017 22:15

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**51.5**	43 - 120		1/30/2017 22:15
2-Fluorobiphenyl	**45.8**	33.7 - 113		1/30/2017 22:15
2-Fluorophenol	**46.0**	36.5 - 88.1		1/30/2017 22:15
Nitrobenzene-d5	**48.9**	33.3 - 91.5		1/30/2017 22:15
Phenol-d5	**50.8**	38.4 - 94.6		1/30/2017 22:15
Terphenyl-d14	**68.9**	66.1 - 113		1/30/2017 22:15

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 1/30/2017
Data File: B16726.D

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch West ROW
Lab Sample ID: 170310-05
Matrix: Soil

Date Sampled: 1/26/2017
Date Received: 1/27/2017

Semi-Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
Unknown ketone	~~830~~ R	ug/Kg	B	1/30/2017
Unknown	457	ug/Kg		1/30/2017
Unknown	175	ug/Kg		1/30/2017
Unknown PAH	171	ug/Kg		1/30/2017
Unknown	175	ug/Kg		1/30/2017
Unknown	450	ug/Kg		1/30/2017
Unknown PAH	187	ug/Kg		1/30/2017
Unknown PAH	466	ug/Kg		1/30/2017
Unknown	221	ug/Kg		1/30/2017
Unknown	243	ug/Kg		1/30/2017
Unknown	198	ug/Kg		1/30/2017
Unknown	194	ug/Kg		1/30/2017
Unknown PAH	212	ug/Kg		1/30/2017
Unknown PAH	246	ug/Kg		1/30/2017
Unknown	523	ug/Kg		1/30/2017
Unknown	186	ug/Kg		1/30/2017
Unknown	177	ug/Kg		1/30/2017
Unknown PAH	299	ug/Kg		1/30/2017
Unknown	364	ug/Kg		1/30/2017
Unknown PAH	170	ug/Kg		1/30/2017
Total Reported TICS	5950	ug/Kg		1/30/2017

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 1/30/2017

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Friday, February 03, 2017

MEB 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch West ROW
Lab Sample ID: 170310-06 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 344	ug/Kg		1/30/2017 22:44
1,2,4,5-Tetrachlorobenzene	< 344	ug/Kg		1/30/2017 22:44
1,2,4-Trichlorobenzene	< 344	ug/Kg		1/30/2017 22:44
1,2-Dichlorobenzene	< 344	ug/Kg		1/30/2017 22:44
1,3-Dichlorobenzene	< 344	ug/Kg		1/30/2017 22:44
1,4-Dichlorobenzene	< 344	ug/Kg		1/30/2017 22:44
2,2-Oxybis (1-chloropropane)	< 344	ug/Kg		1/30/2017 22:44
2,3,4,6-Tetrachlorophenol	< 344	ug/Kg		1/30/2017 22:44
2,4,5-Trichlorophenol	< 688	ug/Kg		1/30/2017 22:44
2,4,6-Trichlorophenol	< 344	ug/Kg		1/30/2017 22:44
2,4-Dichlorophenol	< 344	ug/Kg		1/30/2017 22:44
2,4-Dimethylphenol	< 344	ug/Kg		1/30/2017 22:44
2,4-Dinitrophenol	< 688	ug/Kg		1/30/2017 22:44
2,4-Dinitrotoluene	< 344	ug/Kg		1/30/2017 22:44
2,6-Dinitrotoluene	< 344	ug/Kg		1/30/2017 22:44
2-Chloronaphthalene	< 344	ug/Kg		1/30/2017 22:44
2-Chlorophenol	< 344	ug/Kg		1/30/2017 22:44
2-Methylnapthalene	< 344	ug/Kg		1/30/2017 22:44
2-Methylphenol	< 344	ug/Kg		1/30/2017 22:44
2-Nitroaniline	< 688	ug/Kg		1/30/2017 22:44
2-Nitrophenol	< 344	ug/Kg		1/30/2017 22:44
3&4-Methylphenol	< 344	ug/Kg		1/30/2017 22:44
3,3'-Dichlorobenzidine	< 344	ug/Kg		1/30/2017 22:44
3-Nitroaniline	< 688	ug/Kg		1/30/2017 22:44
4,6-Dinitro-2-methylphenol	< 688	ug/Kg		1/30/2017 22:44
4-Bromophenyl phenyl ether	< 344	ug/Kg		1/30/2017 22:44
4-Chloro-3-methylphenol	< 344	ug/Kg		1/30/2017 22:44

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	12-24 inch West ROW		
Lab Sample ID:	170310-06	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

4-Chloroaniline	< 344		ug/Kg		1/30/2017 22:44
4-Chlorophenyl phenyl ether	< 344		ug/Kg		1/30/2017 22:44
4-Nitroaniline	< 688		ug/Kg		1/30/2017 22:44
4-Nitrophenol	< 688		ug/Kg		1/30/2017 22:44
Acenaphthene	< 344		ug/Kg		1/30/2017 22:44
Acenaphthylene	< 344		ug/Kg		1/30/2017 22:44
Acetophenone	< 344		ug/Kg		1/30/2017 22:44
Anthracene	< 344		ug/Kg		1/30/2017 22:44
Atrazine	< 344	UJ	ug/Kg		1/30/2017 22:44
Benzaldehyde	< 344		ug/Kg		1/30/2017 22:44
Benzo (a) anthracene	< 344		ug/Kg		1/30/2017 22:44
Benzo (a) pyrene	< 344		ug/Kg		1/30/2017 22:44
Benzo (b) fluoranthene	< 344		ug/Kg		1/30/2017 22:44
Benzo (g,h,i) perylene	< 344		ug/Kg		1/30/2017 22:44
Benzo (k) fluoranthene	< 344		ug/Kg		1/30/2017 22:44
Bis (2-chloroethoxy) methane	< 344		ug/Kg		1/30/2017 22:44
Bis (2-chloroethyl) ether	< 344		ug/Kg		1/30/2017 22:44
Bis (2-ethylhexyl) phthalate	< 344		ug/Kg		1/30/2017 22:44
Butylbenzylphthalate	< 344		ug/Kg		1/30/2017 22:44
Caprolactam	< 344		ug/Kg		1/30/2017 22:44
Carbazole	< 344		ug/Kg		1/30/2017 22:44
Chrysene	< 344		ug/Kg		1/30/2017 22:44
Dibenz (a,h) anthracene	< 344		ug/Kg		1/30/2017 22:44
Dibenzofuran	< 344		ug/Kg		1/30/2017 22:44
Diethyl phthalate	< 344		ug/Kg		1/30/2017 22:44
Dimethyl phthalate	< 688		ug/Kg		1/30/2017 22:44
Di-n-butyl phthalate	< 344		ug/Kg		1/30/2017 22:44
Di-n-octylphthalate	< 344		ug/Kg		1/30/2017 22:44
Fluoranthene	**249**		ug/Kg	J	1/30/2017 22:44
Fluorene	< 344		ug/Kg		1/30/2017 22:44

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Report Prepared Friday, February 03, 2017

MEP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch West ROW
Lab Sample ID: 170310-06 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Hexachlorobenzene	< 344	ug/Kg			1/30/2017 22:44
Hexachlorobutadiene	< 344	ug/Kg			1/30/2017 22:44
Hexachlorocyclopentadiene	< 344	ug/Kg			1/30/2017 22:44
Hexachloroethane	< 344	ug/Kg			1/30/2017 22:44
Indeno (1,2,3-cd) pyrene	< 344	ug/Kg			1/30/2017 22:44
Isophorone	< 344	ug/Kg			1/30/2017 22:44
Naphthalene	< 344	ug/Kg			1/30/2017 22:44
Nitrobenzene	< 344	ug/Kg			1/30/2017 22:44
N-Nitroso-di-n-propylamine	< 344	ug/Kg			1/30/2017 22:44
N-Nitrosodiphenylamine	< 344	ug/Kg			1/30/2017 22:44
Pentachlorophenol	< 688	ug/Kg			1/30/2017 22:44
Phenanthrene	< 344	ug/Kg			1/30/2017 22:44
Phenol	< 344	ug/Kg			1/30/2017 22:44
Pyrene	**214**	ug/Kg		J	1/30/2017 22:44

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**49.6**	43 - 120		1/30/2017 22:44
2-Fluorobiphenyl	**33.7**	33.7 - 113		1/30/2017 22:44
2-Fluorophenol	**37.4**	36.5 - 88.1		1/30/2017 22:44
Nitrobenzene-d5	**40.3**	33.3 - 91.5		1/30/2017 22:44
Phenol-d5	**40.2**	38.4 - 94.6		1/30/2017 22:44
Terphenyl-d14	**71.1**	66.1 - 113		1/30/2017 22:44

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 1/30/2017
Data File: B16727.D

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch West ROW
Lab Sample ID: 170310-06 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Semi-Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
Unknown ketone	~~609~~ R	ug/Kg	B	1/30/2017
Unknown	306	ug/Kg		1/30/2017
Unknown PAH	252	ug/Kg		1/30/2017
Unknown PAH	154	ug/Kg		1/30/2017
Unknown PAH	325	ug/Kg		1/30/2017
Unknown	141	ug/Kg		1/30/2017
Unknown PAH	182	ug/Kg		1/30/2017
Unknown PAH	146	ug/Kg		1/30/2017
Unknown PAH	217	ug/Kg		1/30/2017
Unknown	344	ug/Kg		1/30/2017
Unknown	214	ug/Kg		1/30/2017
Total Reported TICS	2890	ug/Kg		1/30/2017

Method Reference(s): EPA 8270D
EPA 3550C
Preparation Date: 1/30/2017

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

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Report Prepared Friday, February 03, 2017

MAD 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 0-2 inch East ROW
Lab Sample ID: 170310-01 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Chlorinated Pesticides

Analyte	Result	Units	Qualifier	Date Analyzed
4,4-DDD	~~2.51~~ 3.36 U	ug/Kg	JP	1/31/2017 18:13
4,4-DDE	< 3.36	ug/Kg		1/31/2017 18:13
4,4-DDT	5.17 J	ug/Kg		1/31/2017 18:13
Aldrin	< 3.36	ug/Kg		1/31/2017 18:13
alpha-BHC	< 3.36	ug/Kg		1/31/2017 18:13
beta-BHC	< 3.36	ug/Kg		1/31/2017 18:13
cis-Chlordane	~~1.76~~ 3.36 U	ug/Kg	JP	1/31/2017 18:13
delta-BHC	< 3.36	ug/Kg		1/31/2017 18:13
Dieldrin	4.43 JN	ug/Kg	P	1/31/2017 18:13
Endosulfan I	< 3.36	ug/Kg		1/31/2017 18:13
Endosulfan II	3.39 J	ug/Kg		1/31/2017 18:13
Endosulfan Sulfate	6.55 JN	ug/Kg	P	1/31/2017 18:13
Endrin	~~2.00~~ 3.36 U	ug/Kg	JP	1/31/2017 18:13
Endrin Aldehyde	4.05 JN	ug/Kg	P	1/31/2017 18:13
Endrin Ketone	6.02 J	ug/Kg	P	1/31/2017 18:13
gamma-BHC (Lindane)	< 3.36	ug/Kg		1/31/2017 18:13
Heptachlor	< 3.36	ug/Kg		1/31/2017 18:13
Heptachlor Epoxide	< 3.36	ug/Kg		1/31/2017 18:13
Methoxychlor	34.7 J	ug/Kg		1/31/2017 18:13
Toxaphene	< 33.6	ug/Kg		1/31/2017 18:13
trans-Chlordane	~~1.93~~ 3.36 U	ug/Kg	JP	1/31/2017 18:13

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl (1)	155	10 - 152	*	1/31/2017 18:13
Tetrachloro-m-xylene (1)	42.4	10 - 91.1		1/31/2017 18:13

Method Reference(s): EPA 8081B
EPA 3550C
Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

MKP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	2-12 inch East ROW		
Lab Sample ID:	170310-02	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Chlorinated Pesticides

Analyte	Result	Units	Qualifier	Date Analyzed
4,4-DDD	**4.93** J	ug/Kg		1/31/2017 18:27
4,4-DDE	< 3.31	ug/Kg		1/31/2017 18:27
4,4-DDT	**3.16**	ug/Kg	J	1/31/2017 18:27
Aldrin	**1.77**	ug/Kg	J	1/31/2017 18:27
alpha-BHC	< 3.31	ug/Kg		1/31/2017 18:27
beta-BHC	< 3.31	ug/Kg		1/31/2017 18:27
cis-Chlordane	< 3.31	ug/Kg		1/31/2017 18:27
delta-BHC	< 3.31	ug/Kg		1/31/2017 18:27
Dieldrin	**4.59**	ug/Kg		1/31/2017 18:27
Endosulfan I	< 3.31	ug/Kg		1/31/2017 18:27
Endosulfan II	~~2.24~~ 3.31 J	ug/Kg	JP	1/31/2017 18:27
Endosulfan Sulfate	< 3.31	ug/Kg		1/31/2017 18:27
Endrin	< 3.31	ug/Kg		1/31/2017 18:27
Endrin Aldehyde	< 3.31	ug/Kg		1/31/2017 18:27
Endrin Ketone	**3.44** J	ug/Kg	P	1/31/2017 18:27
gamma-BHC (Lindane)	< 3.31	ug/Kg		1/31/2017 18:27
Heptachlor	< 3.31	ug/Kg		1/31/2017 18:27
Heptachlor Epoxide	**2.75**	ug/Kg	J	1/31/2017 18:27
Methoxychlor	**17.8** J	ug/Kg	P	1/31/2017 18:27
Toxaphene	< 33.1	ug/Kg		1/31/2017 18:27
trans-Chlordane	**2.19** J	ug/Kg	JP	1/31/2017 18:27

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl (1)	**86.0**	10 - 152		1/31/2017 18:27
Tetrachloro-m-xylene (1)	**30.6**	10 - 91.1		1/31/2017 18:27

Method Reference(s): EPA 8081B
EPA 3550C

Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

MMP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch East ROW
Lab Sample ID: 170310-03 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Chlorinated Pesticides

Analyte	Result	Units	Qualifier	Date Analyzed
4,4-DDD	**6.24**	ug/Kg		1/31/2017 18:42
4,4-DDE	< 3.23	ug/Kg		1/31/2017 18:42
4,4-DDT	~~2.16~~ 3.23 U	ug/Kg	JP	1/31/2017 18:42
Aldrin	< 3.23	ug/Kg		1/31/2017 18:42
alpha-BHC	**3.67**	ug/Kg		1/31/2017 18:42
beta-BHC	< 3.23	ug/Kg		1/31/2017 18:42
cis-Chlordane	**4.68** J	ug/Kg	P	1/31/2017 18:42
delta-BHC	< 3.23	ug/Kg		1/31/2017 18:42
Dieldrin	**4.07**	ug/Kg		1/31/2017 18:42
Endosulfan I	< 3.23	ug/Kg		1/31/2017 18:42
Endosulfan II	< 3.23	ug/Kg		1/31/2017 18:42
Endosulfan Sulfate	**9.41** J N	ug/Kg	P	1/31/2017 18:42
Endrin	< 3.23	ug/Kg		1/31/2017 18:42
Endrin Aldehyde	~~2.89~~ 3.23 U	ug/Kg	JP	1/31/2017 18:42
Endrin Ketone	**4.00**	ug/Kg		1/31/2017 18:42
gamma-BHC (Lindane)	< 3.23	ug/Kg		1/31/2017 18:42
Heptachlor	< 3.23	ug/Kg		1/31/2017 18:42
Heptachlor Epoxide	< 3.23	ug/Kg		1/31/2017 18:42
Methoxychlor	**9.57** J	ug/Kg		1/31/2017 18:42
Toxaphene	< 32.3	ug/Kg		1/31/2017 18:42
trans-Chlordane	< 3.23	ug/Kg		1/31/2017 18:42

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl (1)	**36.7**	10 - 152		1/31/2017 18:42
Tetrachloro-m-xylene (1)	**23.5**	10 - 91.1		1/31/2017 18:42

Method Reference(s): EPA 8081B
EPA 3550C
Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

MMP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 0-2 inch West ROW
Lab Sample ID: 170310-04
Matrix: Soil
Date Sampled: 1/26/2017
Date Received: 1/27/2017

Chlorinated Pesticides

Analyte	Result	Units	Qualifier	Date Analyzed
4,4-DDD	4.50 J	ug/Kg	P	1/31/2017 18:56
4,4-DDE	< 3.28	ug/Kg		1/31/2017 18:56
4,4-DDT	1.85	ug/Kg	J	1/31/2017 18:56
Aldrin	< 3.28	ug/Kg		1/31/2017 18:56
alpha-BHC	< 3.28	ug/Kg		1/31/2017 18:56
beta-BHC	< 3.28	ug/Kg		1/31/2017 18:56
cis-Chlordane	< 3.28	ug/Kg		1/31/2017 18:56
delta-BHC	< 3.28	ug/Kg		1/31/2017 18:56
Dieldrin	< 3.28	ug/Kg		1/31/2017 18:56
Endosulfan I	< 3.28	ug/Kg		1/31/2017 18:56
Endosulfan II	< 3.28	ug/Kg		1/31/2017 18:56
Endosulfan Sulfate	4.33	ug/Kg		1/31/2017 18:56
Endrin	< 3.28	ug/Kg		1/31/2017 18:56
Endrin Aldehyde	~~1.76~~ 3.28 U	ug/Kg	JP	1/31/2017 18:56
Endrin Ketone	2.97 J	ug/Kg	J	1/31/2017 18:56
gamma-BHC (Lindane)	< 3.28	ug/Kg		1/31/2017 18:56
Heptachlor	< 3.28	ug/Kg		1/31/2017 18:56
Heptachlor Epoxide	2.02	ug/Kg	J	1/31/2017 18:56
Methoxychlor	11.3 JN	ug/Kg	P	1/31/2017 18:56
Toxaphene	< 32.8	ug/Kg		1/31/2017 18:56
trans-Chlordane	< 3.28	ug/Kg		1/31/2017 18:56

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl (1)	68.2	10 - 152		1/31/2017 18:56
Tetrachloro-m-xylene (1)	27.9	10 - 91.1		1/31/2017 18:56

Method Reference(s): EPA 8081B
EPA 3550C
Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

MMP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch West ROW
Lab Sample ID: 170310-05 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

Chlorinated Pesticides

Analyte	Result	Units	Qualifier	Date Analyzed
4,4-DDD	6.03 JN	ug/Kg	P	1/31/2017 19:11
4,4-DDE	< 3.36	ug/Kg		1/31/2017 19:11
4,4-DDT	~~2.02~~ 3.36 U	ug/Kg	JP	1/31/2017 19:11
Aldrin	2.16 J	ug/Kg	J	1/31/2017 19:11
alpha-BHC	< 3.36	ug/Kg		1/31/2017 19:11
beta-BHC	< 3.36	ug/Kg		1/31/2017 19:11
cis-Chlordane	< 3.36	ug/Kg		1/31/2017 19:11
delta-BHC	< 3.36	ug/Kg		1/31/2017 19:11
Dieldrin	~~1.94~~ 3.36 U	ug/Kg	JP	1/31/2017 19:11
Endosulfan I	< 3.36	ug/Kg		1/31/2017 19:11
Endosulfan II	< 3.36	ug/Kg		1/31/2017 19:11
Endosulfan Sulfate	< 3.36	ug/Kg		1/31/2017 19:11
Endrin	< 3.36	ug/Kg		1/31/2017 19:11
Endrin Aldehyde	3.49 JN	ug/Kg	P	1/31/2017 19:11
Endrin Ketone	4.33 J	ug/Kg	P	1/31/2017 19:11
gamma-BHC (Lindane)	< 3.36	ug/Kg		1/31/2017 19:11
Heptachlor	< 3.36	ug/Kg		1/31/2017 19:11
Heptachlor Epoxide	< 3.36	ug/Kg		1/31/2017 19:11
Methoxychlor	13.8 J	ug/Kg	P	1/31/2017 19:11
Toxaphene	< 33.6	ug/Kg		1/31/2017 19:11
trans-Chlordane	< 3.36	ug/Kg		1/31/2017 19:11

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl (1)	64.4	10 - 152		1/31/2017 19:11
Tetrachloro-m-xylene (1)	37.3	10 - 91.1		1/31/2017 19:11

Method Reference(s): EPA 8081B
EPA 3550C
Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

MPP 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch West ROW
Lab Sample ID: 170310-06
Matrix: Soil

Date Sampled: 1/26/2017
Date Received: 1/27/2017

Chlorinated Pesticides

Analyte	Result	Units	Qualifier	Date Analyzed
4,4-DDD	< 3.47	ug/Kg		1/31/2017 19:25
4,4-DDE	< 3.47	ug/Kg		1/31/2017 19:25
4,4-DDT	< 3.47	ug/Kg		1/31/2017 19:25
Aldrin	< 3.47	ug/Kg		1/31/2017 19:25
alpha-BHC	< 3.47	ug/Kg		1/31/2017 19:25
beta-BHC	< 3.47	ug/Kg		1/31/2017 19:25
cis-Chlordane	**1.81** J	ug/Kg	J	1/31/2017 19:25
delta-BHC	< 3.47	ug/Kg		1/31/2017 19:25
Dieldrin	< 3.47	ug/Kg		1/31/2017 19:25
Endosulfan I	< 3.47	ug/Kg		1/31/2017 19:25
Endosulfan II	< 3.47	ug/Kg		1/31/2017 19:25
Endosulfan Sulfate	< 3.47	ug/Kg		1/31/2017 19:25
Endrin	< 3.47	ug/Kg		1/31/2017 19:25
Endrin Aldehyde	< 3.47	ug/Kg		1/31/2017 19:25
Endrin Ketone	< 3.47	ug/Kg		1/31/2017 19:25
gamma-BHC (Lindane)	< 3.47	ug/Kg		1/31/2017 19:25
Heptachlor	< 3.47	ug/Kg		1/31/2017 19:25
Heptachlor Epoxide	< 3.47	ug/Kg		1/31/2017 19:25
Methoxychlor	**4.56** J	ug/Kg		1/31/2017 19:25
Toxaphene	< 34.7	ug/Kg		1/31/2017 19:25
trans-Chlordane	< 3.47	ug/Kg		1/31/2017 19:25

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl (1)	27.4	10 - 152		1/31/2017 19:25
Tetrachloro-m-xylene (1)	27.1	10 - 91.1		1/31/2017 19:25

Method Reference(s): EPA 8081B
EPA 3550C
Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

MMA 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 0-2 inch East ROW
Lab Sample ID: 170310-01 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

PCBs

Analyte	Result	Units	Qualifier	Date Analyzed
PCB-1016	< 0.0336	mg/Kg		1/31/2017 22:55
PCB-1221	< 0.0336	mg/Kg		1/31/2017 22:55
PCB-1232	< 0.0336	mg/Kg		1/31/2017 22:55
PCB-1242	< 0.0336	mg/Kg		1/31/2017 22:55
PCB-1248	< 0.0336	mg/Kg		1/31/2017 22:55
PCB-1254	< 0.0336	mg/Kg		1/31/2017 22:55
PCB-1260	< 0.0336	mg/Kg		1/31/2017 22:55
PCB-1262	< 0.0336	mg/Kg		1/31/2017 22:55
PCB-1268	< 0.0336	mg/Kg		1/31/2017 22:55

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl	75.5	10 - 142		1/31/2017 22:55
Tetrachloro-m-xylene	59.0	10 - 136		1/31/2017 22:55

Method Reference(s): EPA 8082A
EPA 3550C
Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	2-12 inch East ROW		
Lab Sample ID:	170310-02	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

PCBs

Analyte	Result	Units	Qualifier	Date Analyzed
PCB-1016	< 0.0331	mg/Kg		1/31/2017 23:17
PCB-1221	< 0.0331	mg/Kg		1/31/2017 23:17
PCB-1232	< 0.0331	mg/Kg		1/31/2017 23:17
PCB-1242	< 0.0331	mg/Kg		1/31/2017 23:17
PCB-1248	< 0.0331	mg/Kg		1/31/2017 23:17
PCB-1254	< 0.0331	mg/Kg		1/31/2017 23:17
PCB-1260	< 0.0331	mg/Kg		1/31/2017 23:17
PCB-1262	< 0.0331	mg/Kg		1/31/2017 23:17
PCB-1268	< 0.0331	mg/Kg		1/31/2017 23:17

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl	45.2	10 - 142		1/31/2017 23:17
Tetrachloro-m-xylene	39.9	10 - 136		1/31/2017 23:17

Method Reference(s): EPA 8082A
EPA 3550C

Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch East ROW
Lab Sample ID: 170310-03 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

PCBs

Analyte	Result	Units	Qualifier	Date Analyzed
PCB-1016	< 0.0323	mg/Kg		1/31/2017 23:40
PCB-1221	< 0.0323	mg/Kg		1/31/2017 23:40
PCB-1232	< 0.0323	mg/Kg		1/31/2017 23:40
PCB-1242	< 0.0323	mg/Kg		1/31/2017 23:40
PCB-1248	< 0.0323	mg/Kg		1/31/2017 23:40
PCB-1254	< 0.0323	mg/Kg		1/31/2017 23:40
PCB-1260	< 0.0323	mg/Kg		1/31/2017 23:40
PCB-1262	< 0.0323	mg/Kg		1/31/2017 23:40
PCB-1268	< 0.0323	mg/Kg		1/31/2017 23:40

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl	37.4	10 - 142		1/31/2017 23:40
Tetrachloro-m-xylene	29.5	10 - 136		1/31/2017 23:40

Method Reference(s): EPA 8082A
EPA 3550C
Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	0-2 inch West ROW		
Lab Sample ID:	170310-04	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

PCBs

Analyte	Result	Units	Qualifier	Date Analyzed
PCB-1016	< 0.0328	mg/Kg		2/1/2017 00:02
PCB-1221	< 0.0328	mg/Kg		2/1/2017 00:02
PCB-1232	< 0.0328	mg/Kg		2/1/2017 00:02
PCB-1242	< 0.0328	mg/Kg		2/1/2017 00:02
PCB-1248	< 0.0328	mg/Kg		2/1/2017 00:02
PCB-1254	< 0.0328	mg/Kg		2/1/2017 00:02
PCB-1260	< 0.0328	mg/Kg		2/1/2017 00:02
PCB-1262	< 0.0328	mg/Kg		2/1/2017 00:02
PCB-1268	< 0.0328	mg/Kg		2/1/2017 00:02

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl	**47.5**	10 - 142		2/1/2017 00:02
Tetrachloro-m-xylene	**41.8**	10 - 136		2/1/2017 00:02

Method Reference(s): EPA 8082A
EPA 3550C

Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	2-12 inch West ROW		
Lab Sample ID:	170310-05	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

PCBs

Analyte	Result	Units	Qualifier	Date Analyzed
PCB-1016	< 0.0336	mg/Kg		2/1/2017 00:24
PCB-1221	< 0.0336	mg/Kg		2/1/2017 00:24
PCB-1232	< 0.0336	mg/Kg		2/1/2017 00:24
PCB-1242	< 0.0336	mg/Kg		2/1/2017 00:24
PCB-1248	< 0.0336	mg/Kg		2/1/2017 00:24
PCB-1254	< 0.0336	mg/Kg		2/1/2017 00:24
PCB-1260	< 0.0336	mg/Kg		2/1/2017 00:24
PCB-1262	< 0.0336	mg/Kg		2/1/2017 00:24
PCB-1268	< 0.0336	mg/Kg		2/1/2017 00:24

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl	**62.5**	10 - 142		2/1/2017 00:24
Tetrachloro-m-xylene	**50.8**	10 - 136		2/1/2017 00:24

Method Reference(s): EPA 8082A
EPA 3550C

Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	12-24 inch West ROW		
Lab Sample ID:	170310-06	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

PCBs

Analyte	Result	Units	Qualifier	Date Analyzed
PCB-1016	< 0.0347	mg/Kg		2/1/2017 00:47
PCB-1221	< 0.0347	mg/Kg		2/1/2017 00:47
PCB-1232	< 0.0347	mg/Kg		2/1/2017 00:47
PCB-1242	< 0.0347	mg/Kg		2/1/2017 00:47
PCB-1248	< 0.0347	mg/Kg		2/1/2017 00:47
PCB-1254	< 0.0347	mg/Kg		2/1/2017 00:47
PCB-1260	< 0.0347	mg/Kg		2/1/2017 00:47
PCB-1262	< 0.0347	mg/Kg		2/1/2017 00:47
PCB-1268	< 0.0347	mg/Kg		2/1/2017 00:47

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
Decachlorobiphenyl	**46.0**	10 - 142		2/1/2017 00:47
Tetrachloro-m-xylene	**36.3**	10 - 136		2/1/2017 00:47

Method Reference(s): EPA 8082A
EPA 3550C

Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	0-2 inch East ROW		
Lab Sample ID:	170310-01	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Aluminum	**3870**	mg/Kg		2/1/2017 12:39
Antimony	**3.40**	mg/Kg		2/1/2017 12:39
Arsenic	**5.90**	mg/Kg		2/1/2017 12:39
Barium	**79.5**	mg/Kg		2/1/2017 12:39
Beryllium	**0.238**	mg/Kg	J	2/1/2017 12:39
Cadmium	**0.939**	mg/Kg		2/1/2017 12:39
Calcium	**55400**	mg/Kg		2/1/2017 12:43
Chromium	**14.5**	mg/Kg		2/1/2017 12:39
Cobalt	**5.35**	mg/Kg		2/1/2017 12:39
Copper	**53.6**	mg/Kg		2/1/2017 12:39
Iron	**12000**	mg/Kg		2/1/2017 12:39
Lead	**229**	mg/Kg		2/1/2017 12:39
Magnesium	**15100**	mg/Kg		2/1/2017 12:39
Manganese	**265**	mg/Kg		2/1/2017 12:39
Nickel	**12.2**	mg/Kg		2/1/2017 12:39
Potassium	**1040**	mg/Kg		2/1/2017 12:39
Selenium	**1.27**	mg/Kg		2/1/2017 12:39
Silver	**0.562**	mg/Kg		2/1/2017 12:39
Sodium	**208**	mg/Kg		2/1/2017 12:39
Thallium	**< 1.40**	mg/Kg		2/1/2017 12:39
Vanadium	**20.9**	mg/Kg		2/1/2017 12:39
Zinc	**195**	mg/Kg		2/1/2017 12:39

Method Reference(s):	EPA 6010C
	EPA 3050B
Preparation Date:	1/27/2017
Data File:	020117a

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	0-2 inch East ROW		
Lab Sample ID:	170310-01	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.754**	mg/Kg		1/28/2017 12:55

Method Reference(s):	EPA 7471B
Preparation Date:	1/27/2017
Data File:	Hg170128A

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 2-12 inch East ROW
Lab Sample ID: 170310-02 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Aluminum	**4540**	mg/Kg		2/1/2017 12:47
Antimony	**2.67**	mg/Kg	J	2/1/2017 12:47
Arsenic	**6.21**	mg/Kg		2/1/2017 12:47
Barium	**76.8**	mg/Kg		2/1/2017 12:47
Beryllium	**0.276**	mg/Kg	J	2/1/2017 12:47
Cadmium	**0.770**	mg/Kg		2/1/2017 12:47
Calcium	**84900**	mg/Kg		2/1/2017 12:52
Chromium	**10.7**	mg/Kg		2/1/2017 12:47
Cobalt	**3.82**	mg/Kg		2/1/2017 12:47
Copper	**44.6**	mg/Kg		2/1/2017 12:47
Iron	**11500**	mg/Kg		2/1/2017 12:47
Lead	**277**	mg/Kg		2/1/2017 12:47
Magnesium	**39300**	mg/Kg		2/1/2017 12:52
Manganese	**313**	mg/Kg		2/1/2017 12:47
Nickel	**10.8**	mg/Kg		2/1/2017 12:47
Potassium	**1440**	mg/Kg		2/1/2017 12:47
Selenium	**1.46**	mg/Kg		2/1/2017 12:47
Silver	**0.411**	mg/Kg	J	2/1/2017 12:47
Sodium	**248**	mg/Kg		2/1/2017 12:47
Thallium	< 1.41	mg/Kg		2/1/2017 12:47
Vanadium	**12.0**	mg/Kg		2/1/2017 12:47
Zinc	**157**	mg/Kg		2/1/2017 12:47

Method Reference(s): EPA 6010C
EPA 3050B
Preparation Date: 1/27/2017
Data File: 020117a

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	2-12 inch East ROW		
Lab Sample ID:	170310-02	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.658**	mg/Kg		1/28/2017 13:02

Method Reference(s):	EPA 7471B
Preparation Date:	1/27/2017
Data File:	Hg170128A

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch East ROW
Lab Sample ID: 170310-03 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Aluminum	**5140**	mg/Kg		2/1/2017 12:56
Antimony	**2.61**	mg/Kg	J	2/1/2017 12:56
Arsenic	**9.89**	mg/Kg		2/1/2017 12:56
Barium	**94.8**	mg/Kg		2/1/2017 12:56
Beryllium	**0.396**	mg/Kg		2/1/2017 12:56
Cadmium	**0.592**	mg/Kg		2/1/2017 12:56
Calcium	**36200**	mg/Kg		2/2/2017 11:58
Chromium	**10.6**	mg/Kg		2/1/2017 12:56
Cobalt	**5.29**	mg/Kg		2/1/2017 12:56
Copper	**67.1**	mg/Kg		2/1/2017 12:56
Iron	**13100**	mg/Kg		2/1/2017 12:56
Lead	**248**	mg/Kg		2/1/2017 12:56
Magnesium	**13000**	mg/Kg		2/1/2017 12:56
Manganese	**390**	mg/Kg		2/1/2017 12:56
Nickel	**11.5**	mg/Kg		2/1/2017 12:56
Potassium	**914**	mg/Kg		2/1/2017 12:56
Selenium	**1.47**	mg/Kg		2/1/2017 12:56
Silver	**1.06**	mg/Kg		2/1/2017 12:56
Sodium	**236**	mg/Kg		2/1/2017 12:56
Thallium	**< 1.30**	mg/Kg		2/1/2017 12:56
Vanadium	**13.9**	mg/Kg		2/1/2017 12:56
Zinc	**111**	mg/Kg		2/1/2017 12:56

Method Reference(s): EPA 6010C
EPA 3050B
Preparation Date: 1/27/2017
Data File: 020117a

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	12-24 inch East ROW		
Lab Sample ID:	170310-03	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.516**	mg/Kg		1/28/2017 13:06

Method Reference(s): EPA 7471B
Preparation Date: 1/27/2017
Data File: Hg170128A

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 0-2 inch West ROW
Lab Sample ID: 170310-04 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Aluminum	**5150**	mg/Kg		2/1/2017 13:09
Antimony	**2.14**	mg/Kg	J	2/1/2017 13:09
Arsenic	**5.01**	mg/Kg		2/1/2017 13:09
Barium	**163**	mg/Kg		2/1/2017 13:09
Beryllium	**0.295**	mg/Kg		2/1/2017 13:09
Cadmium	**0.796**	mg/Kg		2/1/2017 13:09
Calcium	**94800**	mg/Kg		2/1/2017 13:14
Chromium	**16.9**	mg/Kg		2/1/2017 13:09
Cobalt	**4.29**	mg/Kg		2/1/2017 13:09
Copper	**26.8**	mg/Kg		2/1/2017 13:09
Iron	**10400**	mg/Kg		2/1/2017 13:09
Lead	**237**	mg/Kg		2/2/2017 12:02
Magnesium	**25000**	mg/Kg		2/1/2017 13:09
Manganese	**436**	mg/Kg		2/1/2017 13:09
Nickel	**9.71**	mg/Kg		2/1/2017 13:09
Potassium	**1410**	mg/Kg		2/1/2017 13:09
Selenium	**1.77**	mg/Kg		2/1/2017 13:09
Silver	< 0.516	mg/Kg		2/1/2017 13:09
Sodium	**147**	mg/Kg		2/1/2017 13:09
Thallium	< 1.29	mg/Kg		2/1/2017 13:09
Vanadium	**13.6**	mg/Kg		2/1/2017 13:09
Zinc	**248**	mg/Kg		2/1/2017 13:09

Method Reference(s): EPA 6010C
EPA 3050B
Preparation Date: 1/27/2017
Data File: 020117a

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	0-2 inch West ROW		
Lab Sample ID:	170310-04	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.395**	mg/Kg		1/28/2017 13:10

Method Reference(s):	EPA 7471B
Preparation Date:	1/27/2017
Data File:	Hg170128A

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	2-12 inch West ROW		
Lab Sample ID:	170310-05	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Aluminum	**5640**	mg/Kg		2/1/2017 13:18
Antimony	**7.54**	mg/Kg		2/1/2017 13:18
Arsenic	**13.0**	mg/Kg		2/1/2017 13:18
Barium	**41600**	mg/Kg		2/2/2017 12:15
Beryllium	**0.334**	mg/Kg		2/1/2017 13:18
Cadmium	**7.12**	mg/Kg		2/1/2017 13:18
Calcium	**37500**	mg/Kg		2/2/2017 12:15
Chromium	**33.1**	mg/Kg		2/1/2017 13:18
Cobalt	**5.30**	mg/Kg		2/1/2017 13:18
Copper	**323**	mg/Kg		2/1/2017 13:18
Iron	**22000**	mg/Kg		2/1/2017 13:18
Lead	**40200**	mg/Kg		2/2/2017 12:15
Magnesium	**7900**	mg/Kg		2/1/2017 13:18
Manganese	**313**	mg/Kg		2/1/2017 13:18
Nickel	**17.1**	mg/Kg		2/1/2017 13:18
Potassium	**1070**	mg/Kg		2/1/2017 13:18
Selenium	**2.23**	mg/Kg		2/1/2017 13:18
Silver	< 0.512	mg/Kg		2/1/2017 13:18
Sodium	**763**	mg/Kg		2/1/2017 13:18
Thallium	< 1.28	mg/Kg		2/1/2017 13:18
Vanadium	**14.6**	mg/Kg		2/1/2017 13:18
Zinc	**2910**	mg/Kg		2/2/2017 12:15

Method Reference(s):	EPA 6010C
	EPA 3050B
Preparation Date:	1/27/2017
Data File:	020117a

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	2-12 inch West ROW		
Lab Sample ID:	170310-05	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	**0.524**	mg/Kg		1/28/2017 13:13

Method Reference(s):	EPA 7471B
Preparation Date:	1/27/2017
Data File:	Hg170128A

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier: 12-24 inch West ROW
Lab Sample ID: 170310-06 **Date Sampled:** 1/26/2017
Matrix: Soil **Date Received:** 1/27/2017

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed
Aluminum	**4750**	mg/Kg		2/1/2017 13:22
Antimony	**2.39**	mg/Kg	J	2/1/2017 13:22
Arsenic	**6.41**	mg/Kg		2/1/2017 13:22
Barium	**122**	mg/Kg		2/1/2017 13:22
Beryllium	**0.514**	mg/Kg		2/1/2017 13:22
Cadmium	**0.311**	mg/Kg		2/1/2017 13:22
Calcium	**5250**	mg/Kg		2/1/2017 13:22
Chromium	**8.25**	mg/Kg		2/1/2017 13:22
Cobalt	**7.19**	mg/Kg		2/1/2017 13:22
Copper	**308**	mg/Kg		2/1/2017 13:22
Iron	**7610**	mg/Kg		2/1/2017 13:22
Lead	**290**	mg/Kg		2/2/2017 12:19
Magnesium	**1580**	mg/Kg		2/1/2017 13:22
Manganese	**118**	mg/Kg		2/1/2017 13:22
Nickel	**13.7**	mg/Kg		2/1/2017 13:22
Potassium	**495**	mg/Kg		2/1/2017 13:22
Selenium	< 0.553	mg/Kg		2/1/2017 13:22
Silver	**0.954**	mg/Kg		2/1/2017 13:22
Sodium	**462**	mg/Kg		2/1/2017 13:22
Thallium	< 1.38	mg/Kg		2/1/2017 13:22
Vanadium	**18.6**	mg/Kg		2/1/2017 13:22
Zinc	**107**	mg/Kg		2/1/2017 13:22

Method Reference(s): EPA 6010C
EPA 3050B
Preparation Date: 1/27/2017
Data File: 020117a

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	12-24 inch West ROW		
Lab Sample ID:	170310-06	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Mercury

Analyte	Result	Units	Qualifier	Date Analyzed
Mercury	0.764 J	mg/Kg	M	1/28/2017 13:28

Method Reference(s):	EPA 7471B
Preparation Date:	1/27/2017
Data File:	Hg170128A

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Report Prepared Friday, February 03, 2017

MMD 10/2/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: **Bergmann Associates**

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	0-2 inch East ROW		
Lab Sample ID:	170310-01	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.486	mg/Kg		2/1/2017

Method Reference(s): EPA 9014
Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	2-12 inch East ROW		
Lab Sample ID:	170310-02	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.443	mg/Kg		2/1/2017

Method Reference(s): EPA 9014
Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	12-24 inch East ROW		
Lab Sample ID:	170310-03	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.349	mg/Kg		2/1/2017

Method Reference(s): EPA 9014
Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	0-2 inch West ROW		
Lab Sample ID:	170310-04	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.535	mg/Kg		2/1/2017

Method Reference(s): EPA 9014
Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	2-12 inch West ROW		
Lab Sample ID:	170310-05	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.468	mg/Kg		2/1/2017

Method Reference(s): EPA 9014
Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170310

Client: Bergmann Associates

Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Sample Identifier:	12-24 inch West ROW		
Lab Sample ID:	170310-06	**Date Sampled:**	1/26/2017
Matrix:	Soil	**Date Received:**	1/27/2017

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	< 0.401	mg/Kg		2/1/2017

Method Reference(s): EPA 9014
Preparation Date: 1/31/2017

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Report Prepared Friday, February 03, 2017

Appendix B

Laboratory QC Documentation

2D

VOLATILE SURROGATE RECOVERY

Lab Name: Paradigm Environmental Services
Lab Project #: 170310
QC Batch Number #: voaberg020117

Client Name: Bergmann Associates
Client Project #: N/A
Client Project Name: VOA Back Lot Site Haidt Place
SDG #: 0310-01

	SAMPLE NO.	S1 PFB	S2 1,2-DCEd4	S3 Td8	S4 4-BFB	TOT OUT
01	Blk1	99.9	110	101	98.5	0
02	LCS1	103	103	104	103	0
03	170310-02 2-12 inch East ROW	98.1	111	97.9	87.6	0
04	170310-03 12-24 inch East ROW	97.2	99.5	81.2 *	72.7 *	2
05	170310-05 2-12 inch West ROW	98.0	115	95.7	78.4 *	1
06	170310-06 12-24 inch West ROW	98.7	114	98.9	84.7	0
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

	QC LIMITS %
S1 (PFB) = Pentafluorobenzene	(91.4 - 111)
S2 (1,2-DCEd4) = 1,2-Dichloroethane-d4	(82.1 - 123)
S3 (Td8) = Toluene-d8	(90.3 - 108)
S4 (4-BFB) = 4-Bromofluorobenzene	(84.6 - 112)

Notes: * Values outside of current required QC limits
D Surrogate diluted out

8D

INTERNAL STANDARD RECOVERY

Lab Name: Paradigm Environmental Services
Lab Project #: 170310
QC Batch Number #: voaberg020117

Client Name: Bergmann Associates
Client Project #: N/A
Client Project Name: VOA Back Lot Site Haidt Place
SDG #: 0310-01

CCV	IS1 (FB) Area	IS1 (FB) RT	IS2 (CB-d5) Area	IS2 (CB-d5) RT	IS3 (14DCB-d4) AREA	IS3 (14DCB-d4) RT
12 Hour Standard	184236	4.99	178296	7.93	107646	10.46
Upper Limit	368472	5.49	356592	8.43	215292	10.96
Lower Limit	92118	4.49	89148	7.43	53823	9.96

Data File: x38813.D Date Analyzed: 2/1/2017 Time Analyzed: 11:17

	SAMPLE NO.						
01	Blk1	165890	4.99	164862	7.93	97942	10.46
02	LCS1	176675	4.99	171609	7.93	104653	10.46
03	170310-02 2-12 inch East ROW	154494	4.99	139672	7.93	63714	10.46
04	170310-03 12-24 inch East ROW	149607	4.99	95061	7.93	30682 *	10.46
05	170310-05 2-12 inch West ROW	123832	4.99	103683	7.93	40083 *	10.46
06	170310-06 12-24 inch West ROW	141729	4.99	128215	7.93	59792	10.46
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (FB) = fluorobenzene

IS2 (CB-d5) = Chlorobenzene-d5

IS3 (14DCBd4) = 1,4-Dichlorobenzene-d4

Notes: * Values outside of current required QC limits

Area Limits = -50% to +100% of 12 Hour Standard area

RT Limits = -0.50 to +0.50 minutes of 12 Hour Standard retention times

Evaluate Continuing Calibration Report

Data File: C:\msdchem\1\DATA\170201\x38813.D
DataAcq Meth:8260RUN.M
Acq On : 1 Feb 2017 11:17 am Operator: Bill Brew
Sample : 50ppb mega CC Inst : Instrument #1
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 01 11:39:24 2017
Quant Method : C:\msdchem\1\METHODS\170124.M
Quant Title : 8260/624 Analysis
QLast Update : Wed Feb 01 11:26:55 2017
Response via : Initial Calibration
Integrator: RTE

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

2/1/17 BB

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	103	0.00
2	P	Dichlorodifluoromethane	0.108	0.094#	13.0	76	0.00
3	P	Chloromethane	0.223	0.180	19.3	83	0.00
4	P	Vinyl chloride	0.232	0.216	6.9	87	0.00
5	P	Bromomethane	0.222	0.149	32.9#	80	0.00
6	P	Chloroethane	0.161	0.161	0.0	92	0.00
7	P	Trichlorofluoromethane	0.327	0.357	-9.2	93	0.00
8		Ethyl ether	0.223	0.214	4.0	98	0.00
9	P	Freon 113	0.197	0.218	-10.7	93	0.00
10	P	1,1-Dichloroethene	0.319	0.330	-3.4	95	0.00
11	P	Acetone	0.130	0.103	20.8#	133	0.00
12		Isopropyl Alcohol	0.021	0.018	14.3	107	0.01
13	P	Carbon disulfide	0.570	0.505	11.4	82	0.00
14	P	Methyl acetate	0.209	0.170	18.7	98	0.00
15	P	Methylene chloride	0.332	0.229	31.0#	84	0.00
16		Acrylonitrile	0.096	0.088	8.3	113	0.00
17		tert-Butyl Alcohol	0.034	0.030	11.8	111	0.00
18	P	Methyl tert-butyl Ether	0.696	0.654	6.0	100	0.00
19	P	trans-1,2-Dichloroethene	0.300	0.283	5.7	96	0.00
20	P	1,1-Dichloroethane	0.445	0.467	-4.9	113	0.00
21		Vinyl acetate	0.397	0.402	-1.3	125	0.00
22		2,2-Dichloropropane	0.369	0.396	-7.3	101	0.00
23	P	2-Butanone	0.040	0.041#	-2.5	114	0.00
24	P	cis-1,2-Dichloroethene	0.327	0.323	1.2	100	0.00
25		Bromochloromethane	0.149	0.147	1.3	101	0.00
26	P	Chloroform	0.536	0.520	3.0	99	0.00
27	S	Pentafluorobenzene	0.502	0.511	-1.8	105	0.00
28		Tetrahydrofuran	0.078	0.074	5.1	107	0.00
29	P	1,1,1-Trichloroethane	0.390	0.424	-8.7	102	0.00
30	P	Cyclohexane	0.341	0.408	-19.6	111	0.00
31	S	1,2-Dichloroethane-d4	0.250	0.255	-2.0	106	0.00
32	P	Carbon Tetrachloride	0.295	0.331	-12.2	102	0.00
33	P	Benzene	1.170	1.121	4.2	97	0.00
34	P	1,2-Dichloroethane	0.378	0.373	1.3	101	0.00
35	P	Trichloroethene	0.300	0.308	-2.7	103	0.00
36		tert-Butyl Acetate	0.128	0.133	-3.9	111	0.00
37	P	Methylcyclohexane	0.393	0.447	-13.7	95	0.00
38		1,4-Dioxane	0.005	0.005	0.0	109	0.01
39	UN	Ethyl acetate	0.000	0.000	0.0	0#	0.00
40	P	1,2-Dichloropropane	0.293	0.280	4.4	95	0.00
41	UN	Isobutyl alcohol	0.000	0.000	0.0	0#	0.00
42		Dibromomethane	0.186	0.184	1.1	101	0.00
43	P	Bromodichloromethane	0.358	0.373	-4.2	101	0.00
44		2-Chloroethyl vinyl Ether	0.051	0.031	39.2#	64	0.00
45	UN	Isopropyl acetate	0.000	0.000	0.0	0#	0.00
46		1,1-Dichloropropene	0.358	0.365	-2.0	97	0.00
47	P	cis-1,3-Dichloropropene	0.422	0.439	-4.0	99	0.00

-NT

2D

SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Paradigm Environmental Services
Lab Project #: 170310
QC Batch Number #: QC170130ABNS

Client Name: Bergmann Associates
Client Project #: N/A
Client Project Name: VOA Back Lot Site Haidt Place
SDG #: 0310-01

	SAMPLE NO.	S1 2-FP	S2 P-d5	S3 NB-d5	S4 2-FBP	S5 2,4,6-TBP	S6 TP-d14	TOT OUT
01	Blk1	67.7	68.8	70.0	63.5	65.7	84.5	0
02	LCS1	62.4	62.8	65.7	58.2	66.9	86.4	0
03	170310-01 0-2 inch East ROW	30.0 *	32.5 *	24.2 *	21.5 *	36.8 *	32.9 *	6
04	170310-02 2-12 inch East ROW	40.3	44.3	39.3	44.9	54.7	64.6 *	1
05	170310-03 12-24 inch East ROW	37.5	41.8	39.5	40.4	58.7	70.1	0
06	170310-04 0-2 inch West ROW	38.9	44.9	40.9	43.6	56.2	61.2 *	1
07	170310-05 2-12 inch West ROW	46.0	50.8	48.9	45.8	51.5	68.9	0
08	170310-06 12-24 inch West ROW	37.4	40.2	40.3	33.7 *	49.6	71.1	1
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

	QC LIMITS %
S1 (2-FP) =2-Fluorophenol	(36.5 - 88.1)
S2 (P-d5) = Phenol-d5	(38.4 - 94.6)
S3 (NB-d5) = Nitrobenzene-d5	(33.3 - 91.5)
S4 (2-FBP) = 2-Fluorobiphenyl	(33.7 - 113)
S5 (2,4,6-TBP) = 2,4,6-Tribromophenol	(43 - 120)
S6 (TP) = Terphenyl-d14	(66.1 - 113)

Notes: * Values outside of current required QC limits
D Surrogate diluted out

Response Factor Report Instrument #1

Method Path : C:\msdchem\1\methods\
Method File : ABN170131.M

38)	P	Caprolactam	0.169	0.181	0.180	0.179	0.181	0.181	0.185	0.179	2.71
39)	P	1,2,4,5-Tetrac...	0.296	0.308	0.314	0.312	0.322	0.328	0.346	0.318	4.99
40)	P	Biphenyl	0.815	0.833	0.872	0.867	0.902	0.933	0.994	0.888	6.92
41)	I	Acenaphthene-d10	----------ISTD----------								
42)	P	2-Chloronaphth...	0.428	0.420	0.440	0.430	0.445	0.462	0.462	0.441#	3.74
43)	PM	Acenaphthene	1.285	1.323	1.288	1.316	1.350	1.406	1.447	1.345	4.55
44)	P	Acenaphthylene	1.994	2.053	2.089	2.118	2.189	2.322	2.389	2.165	6.68
45)	P	4-Chlorophenyl...	0.699	0.683	0.698	0.721	0.757	0.791	0.815	0.738	6.88
46)	P	Dibenzofuran	1.833	1.831	1.819	1.841	1.900	1.984	2.029	1.891	4.44
47)	P	Diethyl phthalate	1.548	1.560	1.572	1.573	1.647	1.693	1.734	1.618	4.54
48)	P	Dimethyl phtha...	1.486	1.500	1.494	1.507	1.566	1.614	1.644	1.545	4.14
49)	PM	2,4-Dinitrophenol	0.092	0.136	0.184	0.204	0.220	0.235	0.231	0.186	28.90*
50)	PM	2,4-Dinitrotol...	0.453	0.460	0.461	0.463	0.482	0.488	0.505	0.473	4.02
51)	P	2,6-Dinitrotol...	0.334	0.336	0.343	0.337	0.345	0.360	0.367	0.346	3.71
52)	P	Fluorene	1.445	1.450	1.466	1.466	1.530	1.607	1.657	1.517	5.54
53)	S	2-Fluorobiphenyl	1.516	1.535	1.497	1.498	1.565	1.638	1.677	1.561	4.55
54)	P	Hexachlorocycl...	0.127	0.205	0.285	0.316	0.350	0.392	0.426	0.300	35.00*
55)	P	2-Nitroaniline	0.481	0.464	0.458	0.465	0.475	0.485	0.495	0.475	2.76
56)	P	3-Nitroaniline	0.404	0.419	0.405	0.401	0.406	0.421	0.428	0.412	2.55
57)	P	4-Nitroaniline	0.382	0.391	0.390	0.380	0.396	0.398	0.404	0.391	2.22
58)	PM	4-Nitrophenol	0.317	0.334	0.346	0.344	0.354	0.363	0.371	0.347	5.26
59)	S	2,4,6-Tribromo...	0.198	0.206	0.217	0.219	0.231	0.241	0.248	0.223	8.09
60)	PM	2,4,6-Trichlor...	0.397	0.412	0.407	0.407	0.423	0.428	0.443	0.417	3.76
61)	P	2,4,5-Trichlor...	0.414	0.432	0.425	0.426	0.437	0.457	0.475	0.438	4.82
62)	P	2,3,4,6-Tetrac...	0.340	0.353	0.364	0.367	0.378	0.396	0.409	0.373	6.41
63)	P	Atrazine			0.361					0.361	0.00** single pt calibration
64)	I	Phenanthrene-d10	----------ISTD----------								
65)	P	4-Bromophenyl ...	0.222	0.221	0.227	0.221	0.227	0.240	0.241	0.228	3.66
66)	P	Di-n-butyl pht...	1.319	1.319	1.358	1.337	1.357	1.389	1.404	1.355	2.42
67)	PM	4,6-Dinitro-2-...	0.099	0.120	0.137	0.141	0.145	0.151	0.153	0.135	14.35
68)	P	Fluoranthene	1.129	1.160	1.183	1.177	1.183	1.216	1.230	1.183	2.83
69)	P	Hexachlorobenzene	0.222	0.229	0.227	0.223	0.225	0.231	0.234	0.227	1.87
70)	P	N-Nitrosodiphe...	0.680	0.670	0.681	0.677	0.682	0.718	0.736	0.692	3.56
71)	PM	Pentachlorophenol	0.083	0.095	0.113	0.117	0.123	0.130	0.130	0.113	15.92
72)	P	Anthracene	1.171	1.174	1.198	1.170	1.210	1.233	1.255	1.202	2.77
73)	P	Phenanthrene	1.127	1.164	1.178	1.164	1.200	1.232	1.269	1.191	4.01
74)	P	Carbazole	1.087	1.079	1.052	1.036	1.059	1.059	1.078	1.064	1.69
75)	P	Benzo (a) anth...	1.052	1.056	1.079	1.070	1.098	1.134	1.142	1.090	3.32
76)	I	Chrysene-d12	----------ISTD----------								
77)		Benzidine	0.537	0.556	0.621	0.614	0.624	0.575	0.501	0.576	8.18*
78)	P	Bis (2-ethylhe...	0.828	0.856	0.884	0.879	0.918	0.938	0.954	0.894	5.03
79)	P	Butylbenzylpht...	0.621	0.634	0.659	0.654	0.677	0.686	0.688	0.660	3.93
80)	P	Chrysene	1.102	1.142	1.201	1.194	1.261	1.305	1.273	1.211	6.06
81)	P	3,3'-Dichlorob...	0.419	0.438	0.463	0.466	0.490	0.499	0.495	0.467	6.50
82)	PM	Pyrene	1.318	1.313	1.358	1.321	1.398	1.417	1.416	1.363	3.45

ICAL Summary Table

Method Path : C:\msdchem\1\methods\
Method File : ABN161230.M

38)	P	Caprolactam	0.166	0.169	0.164	0.166	0.163	0.166	0.167	0.166	1.10
39)	P	1,2,4,5-Tetrac...	0.303	0.301	0.300	0.298	0.300	0.306	0.314	0.303	1.79
40)	P	Biphenyl	0.821	0.812	0.827	0.837	0.835	0.863	0.878	0.839	2.81
41)	I	Acenaphthene-d10	----------ISTD----------								
42)	P	2-Chloronaphth...	0.432	0.424	0.420	0.416	0.417	0.417	0.412	0.420#	1.54
43)	PM	Acenaphthene	1.365	1.309	1.317	1.303	1.326	1.324	1.342	1.327	1.59
44)	P	Acenaphthylene	2.059	2.019	2.043	2.041	2.044	2.042	2.078	2.046	0.88
45)	P	4-Chlorophenyl...	0.687	0.673	0.675	0.676	0.673	0.689	0.697	0.681	1.39
46)	P	Dibenzofuran	1.831	1.813	1.809	1.795	1.798	1.841	1.847	1.819	1.13
47)	P	Diethyl phthalate	1.505	1.475	1.494	1.474	1.497	1.494	1.500	1.491	0.81
48)	P	Dimethyl phtha...	1.436	1.437	1.420	1.401	1.432	1.443	1.454	1.432	1.19
49)	PM	2,4-Dinitrophenol	0.113	0.144	0.197	0.197	0.225	0.225	0.236	0.191	24.09 *
50)	PM	2,4-Dinitrotol...	0.451	0.442	0.454	0.448	0.452	0.454	0.449	0.450	0.92
51)	P	2,6-Dinitrotol...	0.340	0.335	0.334	0.331	0.330	0.330	0.333	0.334	1.06
52)	P	Fluorene	1.499	1.469	1.488	1.487	1.500	1.513	1.540	1.500	1.51
53)	S	2-Fluorobiphenyl	1.523	1.497	1.476	1.474	1.500	1.506	1.537	1.502	1.54
54)	P	Hexachlorocycl...	0.149	0.195	0.257	0.282	0.304	0.293	0.286	0.252	23.09 *
55)	P	2-Nitroaniline	0.443	0.447	0.453	0.447	0.449	0.456	0.447	0.449	0.96
56)	P	3-Nitroaniline	0.379	0.376	0.380	0.383	0.382	0.380	0.380	0.380	0.61
57)	P	4-Nitroaniline	0.383	0.372	0.379	0.376	0.371	0.367	0.363	0.373	1.82
58)	PM	4-Nitrophenol	0.269	0.268	0.307	0.308	0.307	0.305	0.276	0.291	6.60
59)	S	2,4,6-Tribromo...	0.208	0.204	0.205	0.201	0.202	0.205	0.208	0.205	1.30
60)	PM	2,4,6-Trichlor...	0.416	0.412	0.378	0.380	0.381	0.389	0.389	0.392	3.94
61)	P	2,4,5-Trichlor...	0.423	0.429	0.388	0.385	0.398	0.405	0.411	0.406	4.15
62)	P	2,3,4,6-Tetrac...	0.350	0.349	0.311	0.311	0.311	0.324	0.331	0.327	5.31
63)	P	Atrazine			0.414					0.414	0.00 ** single pt. calibration
64)	I	Phenanthrene-d10	----------ISTD----------								
65)	P	4-Bromophenyl ...	0.215	0.219	0.213	0.212	0.220	0.220	0.217	0.216	1.57
66)	P	Di-n-butyl pht...	1.260	1.259	1.260	1.268	1.295	1.303	1.276	1.274	1.42
67)	PM	4,6-Dinitro-2-...	0.107	0.123	0.137	0.143	0.149	0.151	0.151	0.137	12.11
68)	P	Fluoranthene	1.134	1.145	1.133	1.136	1.159	1.161	1.163	1.147	1.18
69)	P	Hexachlorobenzene	0.234	0.220	0.215	0.215	0.218	0.220	0.215	0.220	3.00
70)	P	N-Nitrosodiphe...	0.665	0.661	0.666	0.653	0.662	0.668	0.650	0.661	1.01
71)	PM	Pentachlorophenol	0.088	0.100	0.101	0.103	0.113	0.119	0.126	0.107	12.06
72)	P	Anthracene	1.125	1.130	1.134	1.115	1.140	1.143	1.135	1.132	0.84
73)	P	Phenanthrene	1.115	1.105	1.084	1.080	1.095	1.095	1.078	1.093	1.24
74)	P	Carbazole	1.043	1.043	1.016	1.012	1.017	1.022	1.013	1.024	1.34
75)	P	Benzo (a) anth...	1.036	1.046	1.046	1.061	1.070	1.104	1.100	1.066	2.53
76)	I	Chrysene-d12	----------ISTD----------								
77)		Benzidine	0.420	0.453	0.379	0.367	0.341	0.233		0.366	20.81-outlier *
78)	P	Bis (2-ethylhe...	0.783	0.792	0.804	0.799	0.801	0.793	0.804	0.796	0.97
79)	P	Butylbenzylpht...	0.567	0.574	0.581	0.573	0.573	0.572	0.576	0.573	0.75
80)	P	Chrysene	1.037	1.039	1.010	1.009	1.015	1.006	0.982	1.014	1.91
81)	P	3,3'-Dichlorob...	0.425	0.423	0.419	0.407	0.403	0.379	0.364	0.403	5.76
82)	PM	Pyrene	1.235	1.206	1.209	1.177	1.192	1.173	1.177	1.196	1.89

Initial Calibration Summary Table

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client:	**Bergmann Associates**
Project Reference:	VOA Back Lot Site Haidt Place Right Of Way
Lab Project ID:	170310
SDG #:	0310-01
Matrix:	Soil

Semi-Volatile Tentatively Identified Compounds

Analyte		Result	Units	Qualifier	Date Analyzed
Unknown ketone	RT 2.6	190	ug/Kg		1/30/2017
Unknown ketone	RT 3.6	102	ug/Kg	J	1/30/2017

Method Reference(s): EPA 8270D
EPA 3550C

Preparation Date: 1/30/2017

QC Batch ID: QC170130ABNSTIC

QC Number: 1

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Friday, February 03, 2017

2F

SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: Paradigm Environmental Services Client Name: Bergmann Associates

Lab Project #: 170310 Client Project #: N/A SDG No.: 310-01

Client Project Name: VOA Back Lot Site Haidt Place

GC Column: Rtx-CLP Detector: ECD1 A ID(mm): 0.32-narrow bore

	SAMPLE NO.		TCmX %REC	DCBP %REC	TOT OUT
01	Blk 01/31		41.6	84.9	0
02	LCS 01/31		40.7	77.9	0
03	LCS TOX 01/31		30.9	53.0	0
04	0-2 inch East Row	170310-01	42.4	155 *	1
05	2-12 inch East Row	170310-02	30.6	86.0	0
06	12-24 inch East Row	170310-03	23.5	36.7	0
07	0-2 inch West Row	170310-04	27.9	68.2	0
08	2-12 inch West Row	170310-05	37.3	64.4	0
09	12-24 inch West Row	170310-06	27.1	27.4	0
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

QC LIMITS %

TCmX=Tetrachloro-m-xylene (10.0-91.1)

DCBP=Decachlorobiphenyl (10.0-152)

* Values outside of current required QC limits

D Surrogate diluted out

FORM II PEST-2

10A

PESTICIDE IDENTIFICATION SUMMARY

FOR SINGLE COMPONENT ANALYTES

SAMPLE ID: 0-2 inch East ROW

Lab Name: Paradigm Environmental Services Client Name: Bergmann Associate

Lab Project #: 170310 Client Project #: N/A

Client Project Name: VOA Back Lot Site Haidt Place SDG#: 0310-01

LAB SAMPLE#: 170310-01

GC Column 1: Rtx-CLP ID: (mm) 0.32 Instrument ID: Instrument 1

GC Column 2: Rtx-CLP2 ID: (mm) 0.32 Date(s) Analyzed: 1/31/2017

Detector 1: ECD1 A

Detector 2: ECD2 B

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D	Q	
4,4-DDD	1	4.28	4.21	4.35	11.9			
	2	5.01	4.90	5.04	2.51 J	130		CRQL
4,4-DDT	1	4.54	4.41	4.55	7.02			
	2	5.24	5.18	5.32	5.17	30.4		J
cis-Chlordane	1	3.73	3.67	3.81	19.8			
	2	4.33	4.24	4.38	1.76 J	167	*	CRQL
Dieldrin	1	4.00	3.95	4.09	4.43			
	2	4.63	4.53	4.67	11.8	90.8	*	JN
Endosulfan II	1	4.44	4.31	4.45	3.39			
	2	5.08	5.00	5.14	4.31	-23.9		
Endosulfan Sulfate	1	5.05	5.03	5.17	6.55			
	2	5.60	5.57	5.71	75.4	-168	*	JN
Endrin	1	4.22	4.13	4.27	4.26			
	2	4.90	4.80	4.94	2.00 J	72.2	*	CRQL
Endrin Aldehyde	1	4.73	4.65	4.79	4.05			
	2	5.36	5.31	5.45	23.3	-141	*	JN
Endin Ketone	1	5.36	5.28	5.42	9.41			
	2	6.22	6.10	6.24	6.02	43.9	*	J
Methoxychlor	1	4.87	4.83	4.97	34.7			
	2	5.92	5.84	5.98	50.4	-36.9		J
trans-Chlordane	1	3.65	3.58	3.72	1.93 J			
	2	4.25	4.13	4.27	3.27 J	-51.5	*	CRQL
	1							
	2							
	1							
	2							
	1							
	2							

%D=</= 40%; Passes

* = Outside QC limits

10A

PESTICIDE IDENTIFICATION SUMMARY

FOR SINGLE COMPONENT ANALYTES

SAMPLE ID: 2-12 inch East ROW

Lab Name: Paradigm Environmental Services Client Name: Bergmann Associate

Lab Project #: 170310 Client Project #: N/A

Client Project Name: VOA Back Lot Site Haidt Place SDG#: 0310-01

LAB SAMPLE#: 170310-02

GC Column 1: Rtx-CLP ID: (mm) 0.32 Instrument ID: Instrument 1

GC Column 2: Rtx-CLP2 ID: (mm) 0.32 Date(s) Analyzed: 1/31/2017

Detector 1: ECD1 A

Detector 2: ECD2 B

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D	Q	
4,4-DDD	1	4.27	4.21	4.35	6.42			
	2	5.00	4.90	5.04	4.93	26.3		J
4,4-DDT	1	4.50	4.41	4.55	3.83			
	2	5.26	5.18	5.32	3.16 J	19.2		
Aldrin	1	3.13	3.12	3.22	1.86 J			
	2	3.62	3.57	3.67	1.77 J	4.96		
Dieldrin	1	4.01	3.95	4.09	4.99			
	2	4.61	4.53	4.67	4.59	8.35		
Endosulfan II	1	4.44	4.31	4.45	2.24 J			
	2	5.08	5.00	5.14	4.00	-56.4	*	CRQL
Endin Ketone	1	5.36	5.28	5.42	6.49			
	2	6.21	6.10	6.24	3.44	61.4	*	J
Heptachlor Epoxide	1	3.56	3.49	3.63	2.75 J			
	2	4.05	3.98	4.12	2.79 J	-1.44		
Methoxychlor	1	4.88	4.83	4.97	17.8			
	2	5.92	5.84	5.98	30.3	-52.0	*	J
trans-Chlordane	1	3.65	3.58	3.72	2.19 J			
	2	4.22	4.13	4.27	3.30 J	-40.4	*	J
	1							
	2							
	1							
	2							
	1							
	2							
	1							
	2							
	1							
	2							

%D=</= 40%; Passes

* = Outside QC limits

10A

PESTICIDE IDENTIFICATION SUMMARY

FOR SINGLE COMPONENT ANALYTES

SAMPLE ID: 12-24 inch East ROW

Lab Name: Paradigm Environmental Services Client Name: Bergmann Associate

Lab Project #: 170310 Client Project #: N/A

Client Project Name: VOA Back Lot Site Haidt Place SDG#: 0310-01

LAB SAMPLE#: 170310-03

GC Column 1: Rtx-CLP ID: (mm) 0.32 Instrument ID: Instrument 1

GC Column 2: Rtx-CLP2 ID: (mm) 0.32 Date(s) Analyzed: 1/31/2017

Detector 1: ECD1 A

Detector 2: ECD2 B

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D	Q	
4,4-DDD	1	4.27	4.21	4.35	6.99			
	2	5.00	4.90	5.04	6.24	11.3		
4,4-DDT	1	4.49	4.41	4.55	2.16 J			
	2	5.25	5.18	5.32	4.63	-72.8	*	CRQL
alpha-BHC	1	2.50	2.46	2.56	3.67			
	2	2.81	2.80	2.90	3.83	-4.27		
cis-Chlordane	1	3.73	3.67	3.81	4.68			
	2	4.28	4.24	4.38	7.65	-48.2	*	J
Dieldrin	1	4.02	3.95	4.09	4.07			
	2	4.62	4.53	4.67	4.64	-13.1		
Endosulfan Sulfate	1	5.05	5.03	5.17	9.41			
	2	5.60	5.57	5.71	26.7	-95.8	*	JH
Endrin Aldehyde	1	4.71	4.65	4.79	2.89 J			
	2	5.36	5.31	5.45	8.50	-98.5	*	CRQL
Endin Ketone	1	5.36	5.28	5.42	4.53			
	2	6.21	6.10	6.24	4.00	12.4		
Methoxychlor	1	4.90	4.83	4.97	9.57			
	2	5.91	5.84	5.98	12.4	-25.8		J
	1							
	2							
	1							
	2							
	1							
	2							
	1							
	2							
	1							
	2							

%D=</= 40%; Passes

* = Outside QC limits

10A

PESTICIDE IDENTIFICATION SUMMARY

FOR SINGLE COMPONENT ANALYTES

SAMPLE ID: 0-2 inch West ROW

Lab Name: Paradigm Environmental Services Client Name: Bergmann Associate

Lab Project #: 170310 Client Project #: N/A

Client Project Name: VOA Back Lot Site Haidt Place SDG#: 0310-01

LAB SAMPLE#: 170310-04

GC Column 1: Rtx-CLP ID: (mm) 0.32 Instrument ID: Instrument 1

GC Column 2: Rtx-CLP2 ID: (mm) 0.32 Date(s) Analyzed: 1/31/2017

Detector 1: ECD1 A

Detector 2: ECD2 B

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D	Q	
4,4-DDD	1	4.28	4.21	4.35	7.52			
	2	4.95	4.90	5.04	4.50	50.2	*	J
4,4-DDT	1	4.51	4.41	4.55	2.26 J			
	2	5.25	5.18	5.32	1.85 J	20.0		
Endosulfan Sulfate	1	5.04	5.03	5.17	4.33			
	2	5.65	5.57	5.71	4.56	-5.17		
Endrin Aldehyde	1	4.71	4.65	4.79	1.76 J			
	2	5.36	5.31	5.45	7.21	-122	*	<RQL
Endin Ketone	1	5.36	5.28	5.42	4.08			
	2	6.21	6.10	6.24	2.97 J	31.5		J
Heptachlor Epoxide	1	3.56	3.49	3.63	2.06 J			
	2	4.05	3.98	4.12	2.02 J	1.96		
Methoxychlor	1	4.89	4.83	4.97	11.3			
	2	5.92	5.84	5.98	27.8	-84.4	*	J/Y
	1							
	2							
	1							
	2							
	1							
	2							
	1							
	2							
	1							
	2							
	1							
	2							

%D=</= 40%; Passes

* = Outside QC limits

10A

PESTICIDE IDENTIFICATION SUMMARY

FOR SINGLE COMPONENT ANALYTES

SAMPLE ID: 2-12 inch West ROW

Lab Name: Paradigm Environmental Services Client Name: Bergmann Associate

Lab Project #: 170310 Client Project #: N/A

Client Project Name: VOA Back Lot Site Haidt Place SDG#: 0310-01

LAB SAMPLE#: 170310-05

GC Column 1: Rtx-CLP ID: (mm) 0.32 Instrument ID: Instrument 1

GC Column 2: Rtx-CLP2 ID: (mm) 0.32 Date(s) Analyzed: 1/31/2017

Detector 1: ECD1 A

Detector 2: ECD2 B

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D	Q	
4,4-DDD	1	4.28	4.21	4.35	13.3			
	2	5.00	4.90	5.04	6.03	75.2	*	JN
4,4-DDT	1	4.50	4.41	4.55	4.49			
	2	5.27	5.18	5.32	2.02 J	75.9	*	CRQL
Aldrin	1	3.14	3.12	3.22	2.85 J			
	2	3.62	3.57	3.67	2.16 J	27.5		J
Dieldrin	1	4.03	3.95	4.09	1.94 J			
	2	4.62	4.53	4.67	11.8	-144	*	CRQL
Endrin Aldehyde	1	4.75	4.65	4.79	3.49			
	2	5.36	5.31	5.45	12.3	-112	*	JN
Endin Ketone	1	5.36	5.28	5.42	7.25			
	2	6.22	6.10	6.24	4.33	50.4	*	J
Methoxychlor	1	4.89	4.83	4.97	13.8			
	2	5.92	5.84	5.98	28.2	-68.6	*	J
	1							
	2							
	1							
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%D=</= 40%; Passes

* = Outside QC limits

10A

PESTICIDE IDENTIFICATION SUMMARY

FOR SINGLE COMPONENT ANALYTES

SAMPLE ID: 12-24 inch West ROW

Lab Name: Paradigm Environmental Services Client Name: Bergmann Associate

Lab Project #: 170310 Client Project #: N/A

Client Project Name: VOA Back Lot Site Haidt Place SDG#: 0310-01

LAB SAMPLE#: 170310-06

GC Column 1: Rtx-CLP ID: (mm) 0.32 Instrument ID: Instrument 1

GC Column 2: Rtx-CLP2 ID: (mm) 0.32 Date(s) Analyzed: 1/31/2017

Detector 1: ECD1 A

Detector 2: ECD2 B

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D	Q
cis-Chlordane	1	3.77	3.67	3.81	1.81 J		
	2	4.29	4.24	4.38	2.59 J	-35.5	J
Methoxychlor	1	4.91	4.83	4.97	4.56		
	2	5.93	5.84	5.98	6.18	-30.2	J
	1						
	2						
	1						
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%D=</= 40%; Passes

* = Outside QC limits

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: Bergmann Associates
Project Reference: VOA Back Lot Site Haidt Place Right Of Way
Lab Project ID: 170310
SDG #: 0310-01
Matrix: Soil

TAL Metals (ICP)

Analyte	Result	Units	Qualifier	Date Analyzed	
Aluminum	<10.0	mg/Kg		1/31/2017	11:15
Antimony	<3.00	mg/Kg		1/31/2017	11:15
Arsenic	<0.500	mg/Kg		1/31/2017	11:15
Barium	<5.00	mg/Kg		1/31/2017	11:15
Beryllium	<0.250	mg/Kg		1/31/2017	11:15
Cadmium	<0.250	mg/Kg		1/31/2017	11:15
Calcium	<125	mg/Kg		1/31/2017	11:15
Chromium	<0.500	mg/Kg		1/31/2017	11:15
Cobalt	<2.50	mg/Kg		1/31/2017	11:15
Copper	<1.25	mg/Kg		1/31/2017	11:15
Iron	7.56	mg/Kg		1/31/2017	11:15
Lead	<0.500	mg/Kg		1/30/2017	20:01
Magnesium	<125	mg/Kg		1/31/2017	11:15
Manganese	<0.750	mg/Kg		1/31/2017	11:15
Nickel	<2.00	mg/Kg		1/31/2017	11:15
Potassium	<125	mg/Kg		1/31/2017	11:15
Selenium	<0.500	mg/Kg		1/31/2017	11:15
Silver	<0.500	mg/Kg		1/31/2017	11:15
Sodium	<125	mg/Kg		1/31/2017	11:15
Thallium	<1.25	mg/Kg		1/31/2017	11:15
Vanadium	<1.25	mg/Kg		1/31/2017	11:15
Zinc	3.82	mg/Kg		1/31/2017	11:15

Method Reference(s):	EPA 6010C
	EPA 3050B
Preparation Date:	1/27/2017
Data File:	013117b
QC Batch ID:	QC170127soil2
QC Number:	1

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Thursday, February 02, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

595

QC Report for Sample Spike and Sample Duplicate

SDG #: 0310-01
Client: Bergmann Associates
Lab Project ID: 170310
Project Reference: VOA Back Lot Site Haidt Place Right Of Way

Lab Sample ID: 170310-06
Sample Identifier: 12-24 inch West ROW
Matrix: Soil
Date Sampled: 1/26/2017
Date Received: 1/27/2017

Mercury

Analyte	Sample Results	Result Units	Spike Added	Spike Result	Spike % Recovery	% Rec Limits	Spike Outliers	Duplicate Result	Relative % Difference	RPD Limit	RPD Outliers	Date Analyzed
Mercury	0.764	mg/Kg	0.0873	0.812	55.5	75 - 125	*	0.824	7.60	20		1/28/2017

Method Reference(s): EPA 7471B
Preparation Date: 1/27/2017
Hg170128A
QC Batch ID: QC170127Hgsoil

NC = Not Calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Thursday, February 02, 2017

Appendix C

Validator Qualifications

KENNETH R. APPLIN
Geochemist/Data Validator

Ph.D., Geochemistry and Mineralogy, The Pennsylvania State University

M.S., Geochemistry and Mineralogy, The Pennsylvania State University

B.A., Geological Sciences, SUNY at Geneseo, NY

Dr. Applin has over 35 years of experience working with the geochemistry of natural waters. His prior experience includes working as an Assistant Professor of Geology at the University of Missouri-Columbia and as Chief Hydrogeologist and Geochemist with a leading engineering firm in Rochester, NY. In 1993, he established KR Applin and Associates, a small consulting business that focuses on the geochemistry of natural waters, especially as applied to problems involving the contamination of groundwater and surface water.

Dr. Applin is also an experienced analytical data validator and has provided data validation services since 1994 to a variety of clients performing brownfield cleanup projects, hazardous waste remediation, groundwater monitoring at solid waste facilities, and other projects requiring third-party data validation. Dr. Applin has several years of hands-on experience with the laboratory analysis of natural waters and has successfully completed the USEPA Region II certification courses for performing inorganic and organic analytical data validation.

MICHAEL K. PERRY
Chemist/Data Validator

B.S. Chemistry, Georgia State University, Atlanta, GA

A.A.S., Chemical Technology, Alfred State College, Alfred, NY

Mr. Perry has over 30 years of experience in the analytical laboratory business. During his early career, he spent several years as a laboratory analyst performing the analysis of soil, water, and air samples for inorganic and organic chemical parameters. During his last 20 years in the environmental laboratory business, he managed and directed two major analytical laboratories in Rochester, NY. His management responsibilities included oversight of the daily operations of the lab, staff training and supervision, the selection, purchase, and maintenance of analytical instruments, the introduction of new laboratory methods, analytical quality assurance and quality control, data acquisition and management, and other business-related activities.

Mr. Perry has an extensive working knowledge of the methods and procedures used for sampling and analyzing both inorganic and organic analytes in soil, water, and air. He is an accomplished laboratory chemist and is familiar with the analytical methods and procedures established under the USEPA Contract Laboratory Protocols (CLP), the NYSDEC Analytical Services Protocols (ASP), and the NYSDOH Environmental Laboratory Approval Program (ELAP).