



AEI Consultants

October 18, 2019

LIMITED SOIL SAMPLING INVESTIGATION

Property Identification:

1701 Moorpark Avenue
San Jose, California 95128

AEI Project No. 396636

Prepared for:

Ms. Helen Tong-Ishikawa
MidPen Housing Corporation
303 Vintage Park Drive, Suite 250
Foster City, California 94404

Prepared by:

AEI Consultants
2500 Camino Diablo
Walnut Creek, California 94597
(925) 746-6000

Environmental
Due Diligence

Building
Assessments

Site Investigation
& Remediation

Energy Performance
& Benchmarking

Industrial Hygiene

Construction
Risk Management

Zoning Analysis
Reports & ALTA
Surveys

National Presence

Regional Focus

Local Solutions

TABLE OF CONTENTS

1.0 SITE DESCRIPTION	1
2.0 BACKGROUND	2
3.0 INVESTIGATION EFFORTS	2
3.1 Health and Safety Plan	2
3.2 Permitting and Utility Clearance	2
3.3 Soil Sample Collection	2
3.4 Boring Destruction	2
3.5 Laboratory Analyses	3
3.6 Investigation Derived Wastes	3
4.0 FINDINGS.....	3
4.1 Subsurface Conditions	3
4.2 Soil Sample Analytical Results	3
5.0 SUMMARY AND CONCLUSIONS.....	4
6.0 REFERENCES	5

FIGURES

Figure 1	Site Location Map
Figure 2	Site Map

TABLES

Table 1	Soil Sample Data Summary
---------	--------------------------

APPENDICES

Appendix A	Laboratory Analytical Reports
------------	-------------------------------



AEI

Consultants

October 18, 2019

Ms. Helen Tong-Ishikawa
MidPen Housing Corporation
303 Vintage Park Drive, Suite 250
Foster City, California 94404

Subject: Limited Soil Sampling Investigation
1710 Moorpark Avenue
San Jose, California 95128
AEI Project No. 396636

AEI Consultants (AEI) is pleased to provide this report which describes the activities and results of the Limited Soil Sampling Investigation performed at 1710 Moorpark Avenue in San Jose, California ("the Site"). This investigation was completed in general accordance with the authorized scope of services outlined in our authorized proposal number 61793 (Revision A). The investigation activities are presented below.

1.0 SITE DESCRIPTION

The Site consists of two one-story buildings and the associated west adjacent parking lot on the southeastern corner of Moorpark Avenue and Leigh Avenue in San Jose, California. Figure 1 presents the Site location and vicinity. Figure 2 presents the Site plan.

The Site is currently occupied by Immanuel Lutheran Church and associated administrative activities. The Site is covered by surface type asphalt and associated landscaping. The general land use in the vicinity of the Site is residential and commercial.

The Site is relatively flat at an elevation of about 125 feet above mean sea level (msl). The regional topographic gradient direction slopes toward the west to northwest and, therefore, the direction of groundwater flow beneath the Site is inferred to be to the west to northwest. The San Francisco Bay is located approximately 12 miles to the northwest.

Based on a review of the United States Geological Survey (USGS) San Francisco Bay Quadrangle Geologic Map and the United States Department of the Interior, the area surrounding the Site is underlain by Holocene era alluvium deposits. The soils at the Site are classified by urban land and are generally characterized as brown to dark brown, moist sand.

Refer to Section 4.1 below for additional information on the site geology and groundwater conditions.

2.0 BACKGROUND

A Phase I Environmental Site Assessment (ESA) was performed by AEI as detailed in a report dated October 30, 2018 (AEI Project Number 396636). The Site consisted of agricultural land use between at least 1939 to 1950. The two current buildings were constructed at two separate times with both being in place by 1964. Based on historical agricultural use, the potential existed for agricultural chemicals, such as pesticides, to have been used at the Site, potentially impacting the Site.

The northern portion of the Site is planned to be redeveloped with a multi-family residential complex, as such, the soil conditions of the northern portion of the Site was investigated. AEI understand that the development plans involve razing the existing structure on the northern portion of the site followed by construction of a 4 story multi-unit residential building with parking and multifunctional space on the ground floor. See Figure 2 for additional detail.

3.0 INVESTIGATION EFFORTS

AEI understands the Site is slated for residential redevelopment and as such testing for residual pesticide related impacts has been requested.

3.1 Health and Safety Plan

A site-specific health and safety plan was prepared, reviewed by onsite personnel, and kept onsite for the duration of the fieldwork.

3.2 Permitting and Utility Clearance

Drilling permits were not required for this investigation. The underground utility locating service USA North 811 was notified to identify public utilities in the work area.

3.3 Soil Sample Collection

On September 18, 2019, four (4) soil borings (SB-1 through SB-4) were advanced on the Site at the locations shown on Figure 2. AEI personnel advanced each of the soil borings using a hand auger. The borings were advanced to a total depth of 2.5 feet below ground surface (bgs). The location of each boring are shown on Figure 2.

The soil samples were collected for the analysis of pesticides, lead, and arsenic into individual eight-ounce glass jars. The soil samples were labeled with the project name, project number, boring number, sample depth, and sampling date/time then placed into a chilled ice chest containing crushed ice for transport to the analytical laboratory. Chain-of-custody documentation was completed and accompanied the samples during transport to the analytical laboratory.

3.4 Boring Destruction

Following completion of sample collection, the borings were backfilled with the original soil spoils to match the surrounding conditions.



3.5 Laboratory Analyses

The soil samples were labeled and placed into a cooler with ice. The samples were transferred under appropriate chain-of-custody documentation to Pace Analytical of Mount Juliet, Tennessee. Laboratory analytical documentation is provided in Appendix A.

Laboratory analysis of eight (8) soil samples consisted of the following:

- Organochloride (OC) Pesticides by EPA Testing Method 8081A
- Lead by EPA Testing Method 6010B
- Arsenic by EPA Testing Method 6010B

3.6 Investigation Derived Wastes

No investigation derived waste was created during this investigation.

4.0 FINDINGS

For the purpose of providing context to the data obtained during this investigation, analytical results are compared to available regulatory screening levels. The San Francisco Bay Regional Water Quality Control Board (RWQCB) has the responsibility for overseeing soil and groundwater cleanups which are managed under a variety of different regulatory programs. The results of this investigation were reviewed along with the residential and commercial/industrial levels.

4.1 Subsurface Conditions

Sediment encountered in each of the borings generally consisted of loose, moist sand with scattered pebbles.

Groundwater was not encountered in borings SB-1 through SB-4.

4.2 Soil Sample Analytical Results

Table 1 presents a summary of the soil sample analytical results. The results can be further summarized as follows:

- Chlordane was detected in borings SB-1, SB-2, and SB-3 at various concentrations. SB-1-1 had a concentration of 1.49 milligrams per kilogram (mg/kg) and SB-3-2.5 was detected at a concentration of 0.688 mg/kg, which exceeds the residential ESL of 0.48 mg/kg, however, do not exceed the commercial/industrial ESL of 2.2 mg/kg.
- Arsenic was detected in borings SB-1, SB-2, and SB-3 at various concentrations ranging from 3.85 mg/kg to 6.96 mg/kg which exceed both the residential and commercial/industrial screening levels. However, naturally occurring arsenic can be as high as 11 mg/kg, which all results are below.
- Lead was detected in each of the borings SB-1 through SB-4 at various concentrations. Lead in SB-1-1 was detected at a concentration of 174 mg/kg and SB-3-2.5 at a concentration of

82.6, which exceed the residential ESL of 80 mg/kg, however, do not exceed the commercial/industrial ESL of 320 mg/kg.

- Various other OC Pesticides were detected in each of the soil borings SB-1 through SB-4, however, none exceeded the screening levels for residential and commercial/industrial land use.

5.0 SUMMARY AND CONCLUSIONS

AEI has completed a limited soil sampling investigation at the Site. The purpose of the investigation was to evaluate current conditions related to the historical agricultural use which operated on the Site from at least 1939 through 1950 as revealed in a Phase I ESA by AEI Consultants dated October 30, 2019. A total of four (4) soil borings (SB-1 through SB-4) were advanced at the subject property for the collection of soil samples.

The results of this investigation were compared to residential and commercial/industrial levels. Chlordane, arsenic, and lead were identified in soil which exceeds the residential screening levels shown in Table 1.

Chlordane use is associated with termite treatments and was used as a general purpose pesticide prior to 1978. Chlordane detections at SB-1 and SB-3 are may be a result of termite treatment application at the exterior of the building(s) at the Site.

Arsenic, though exceeding residential and commercial/industrial ESLs are likely a result of natural background concentrations which can be as high as 11 mg/kg.

Lead may be associated with the historical use (and subsequent flaking) of lead-based paint at the Site, aerial deposition associated with the adjacent freeway, and was a historical component of some pesticides. Lead is not an uncommon soil contaminant at buildings built before 1978 and/or adjacent to major highways.

Based on the results of this investigation, soil conditions do exist with concentrations exceeding current residential regulatory screening levels. It is expected the impacts are limited to surface soils and may be adequately mitigated by focused removal and disposal followed by verification testing at the time of redevelopment. Further, planned redevelopment will effectively cover the Site with the building concrete pad and ground cover, limiting direct contact with any remaining impacted soils after redevelopment activities. These findings should be reviewed with the planned development timeline, grading plans, and building characteristics to determine the most appropriate mitigation approach.



6.0 REFERENCES

AEI Consultants, 2018. *Phase I Environmental Site Assessment, 1710 Moorpark Avenue, San Jose, Santa Clara County, California.* October.

San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), 2019, *Environmental Screening Levels*, dated August 2019, revision 2.

7.0 REPORT LIMITATIONS AND RELIANCE

This report presents a summary of work completed by AEI Consultants. The completed work includes observations and descriptions of site conditions encountered. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide the requested information, subject to scope of work for which AEI was retained and limitations inherent in this type of work, but it cannot be assumed that they are representative of areas not sampled. This report should not be regarded as a guarantee that no further contamination beyond that which could have been detected within the scope of this investigation is present beneath the subject property. Undocumented, unauthorized releases of hazardous material, the remains of which are not readily identifiable by visual inspection and are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation.

Any conclusions and/or recommendations are based on these analyses and observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document. These services were performed in accordance with generally accepted practices, in the environmental engineering and construction field, which existed at the time and location of the work. No other warranty, either expressed or implied, has been made.

This investigation was prepared for the sole use and benefit of MidPen Housing Corporation. All reports, both verbal and written, whether in draft or final, are for the benefit of MidPen Housing Corporation. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of AEI. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with AEI granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against AEI, its officers, employees, vendors, successors or assigns. Reliance is provided in accordance with AEI's Proposal and Standard Terms & Conditions executed by MidPen Housing Corporation. The limitation of liability defined in the Terms and Conditions is the aggregate limit of AEI's liability to the client and all relying parties.



Limited Soil Sampling Investigation

1710 Moorpark Avenue
San Jose, California 95128

If there are any questions regarding our investigation, please do not hesitate to contact Peter McIntyre at (925) 746-6004.

Sincerely,
AEI Consultants

DRAFT

Jeff Stromberg
Project Geologist

AEI Consultants
2500 Camino Diablo
Walnut Creek, California 94597
Phone: (925) 746-6000

DRAFT

Jacob T. Henry, P.G. (Lic. No.8504)
Senior Geologist

DRAFT

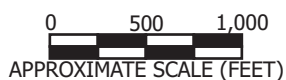


FIGURES



LEGEND

Map: San Jose West, CA
 Date: 2018
 Source: USGS

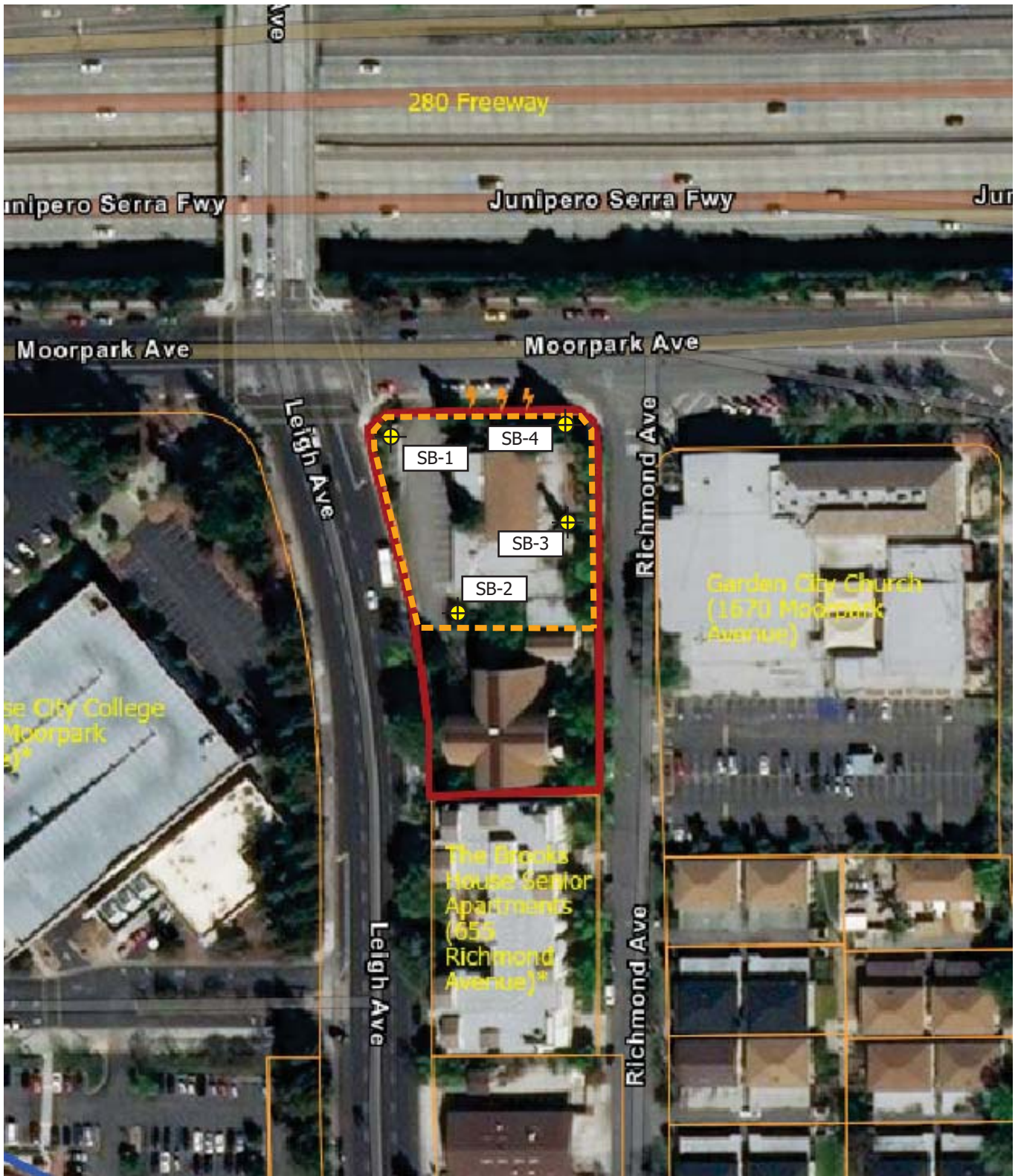


AEI Consultants


SITE LOCATION MAP

1710 Moorpark Avenue
 San Jose, California

FIGURE 1
 Project No. 396636



LEGEND

- Approximate Property Boundary
- - - Portion of Site Slated for Redevelopment
-  Soil Boring



AEI Consultants

SITE MAP

1710 Moorpark Avenue
San Jose, California

FIGURE 2
Project No. 396636

TABLES

**TABLE 1: SOIL SAMPLE DATA SUMMARY - PESTICIDES, ARSENIC, LEAD and TOTAL SOLIDS
1710 Moorpark Avenue, San Jose, California**

Location ID	Date	Depth (feet bgs)	Chlordane (mg/kg)	p,p-DDE (mg/kg)	p,p-DDT (mg/kg)	Heptachlor epoxide (mg/kg)	Remaining Pesticides (mg/kg)	Arsenic (mg/kg)	Lead (mg/kg)	Total Solids %
SB-1-1	9/18/2019	1	1.49	0.0859	0.135	<0.0213	<RDL	6.96	174	93.9
SB-1-2.5	9/18/2019	2.5	0.234	0.0383	0.0466	<0.0217	<RDL	3.85	45.8	92.1
SB-2-1	9/18/2019	1	0.166 J	0.0192 J	0.0245	<0.0225	<RDL	5.01	21.0	88.7
SB-2-2.5	9/18/2019	2.5	<0.226	0.00219 J	<0.0226	<0.0226	<RDL	4.67	11.9	88.5
SB-3-1	9/18/2019	1	0.396	0.00522 J	<0.0238	0.00156 J P	<RDL	4.19	46.5	84.1
SB-3-2.5	9/18/2019	2.5	0.688	0.00793 J	0.0195 J	<0.0223	<RDL	4.23	82.6	89.8
SB-4-1	9/18/2019	1	<0.205	<0.0205	<0.0205	<0.0205	<RDL	<2.05	0.905	97.7
SB-4-2.5	9/18/2019	2.5	<0.203	0.000169 J	<0.0203	<0.0203	<RDL	<2.03	0.967	98.3
<u>Comparison Values:</u>										
RWQCB ESL VI Res			0.48	1.8	1.9	0.062	Various	0.067 ¹	80	--
RWQCB ESL VI C/I			2.2	8.3	8.5	0.28	Various	0.31 ¹	320	--

Notes:

- mg/kg milligrams per kilogram
- <RDL less than the laboratory reporting limit
- bgs below ground surface
- DDE Dichlorodiphenyldichloroethylene
- DDT Dichlorodiphenyltrichloroethane
- J The identification of the analyte is acceptable; the reported value is an estimate
- P RPD between the primary and confirmatory analysis exceeded 40%
- Bold** Result exceeds a regulatory screening level
- No established regulatory screening level

Comparison Values:

San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) Direct Exposure Human Health (DEHH) Risk Levels for Residential (Res) and Commercial/Industrial (C/I) Shallow Soil Exposure risks (RWQCB, August 2019)

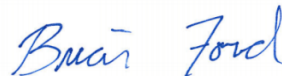
APPENDIX A
LABORATORY ANALYTICAL DATA

AEI Consultants - CA

Sample Delivery Group: L1141258
Samples Received: 09/19/2019
Project Number: 396636
Description:

Report To: Jacob Henry
2500 Camino Diablo
Walnut Creek, CA 94597

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Cp: Cover Page	1	1 Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	2 Tc
Cn: Case Narrative	5	
Sr: Sample Results	6	3 Ss
SB-1-1 L1141258-01	6	
SB-1-2.5 L1141258-02	7	4 Cn
SB-2-1 L1141258-03	8	5 Sr
SB-2-2.5 L1141258-04	9	
SB-3-1 L1141258-05	10	6 Qc
SB-3-2.5 L1141258-06	11	
SB-4-1 L1141258-07	12	7 Gl
SB-4-2.5 L1141258-08	13	8 Al
Qc: Quality Control Summary	14	
Total Solids by Method 2540 G-2011	14	9 Sc
Metals (ICP) by Method 6010B	15	
Pesticides (GC) by Method 8081	16	
Gl: Glossary of Terms	18	
Al: Accreditations & Locations	19	
Sc: Sample Chain of Custody	20	

SAMPLE SUMMARY



SB-1-1 L1141258-01 Solid

Collected by
Jeff Stromberg

Collected date/time
09/18/19 10:20

Received date/time
09/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1351540	1	09/25/19 13:16	09/25/19 13:23	JHH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1350131	1	09/22/19 09:20	09/24/19 13:06	EL	Mt. Juliet, TN
Pesticides (GC) by Method 8081	WG1350366	1	09/23/19 06:30	09/23/19 15:12	LEL	Mt. Juliet, TN

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

SB-1-2.5 L1141258-02 Solid

Collected by
Jeff Stromberg

Collected date/time
09/18/19 10:30

Received date/time
09/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1351540	1	09/25/19 13:16	09/25/19 13:23	JHH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1350131	1	09/22/19 09:20	09/24/19 13:09	EL	Mt. Juliet, TN
Pesticides (GC) by Method 8081	WG1350366	1	09/23/19 06:30	09/23/19 11:45	LEL	Mt. Juliet, TN

SB-2-1 L1141258-03 Solid

Collected by
Jeff Stromberg

Collected date/time
09/18/19 11:10

Received date/time
09/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1351540	1	09/25/19 13:16	09/25/19 13:23	JHH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1350131	1	09/22/19 09:20	09/24/19 13:12	EL	Mt. Juliet, TN
Pesticides (GC) by Method 8081	WG1350366	1	09/23/19 06:30	09/23/19 12:00	LEL	Mt. Juliet, TN

SB-2-2.5 L1141258-04 Solid

Collected by
Jeff Stromberg

Collected date/time
09/18/19 11:15

Received date/time
09/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1351540	1	09/25/19 13:16	09/25/19 13:23	JHH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1350131	1	09/22/19 09:20	09/24/19 13:15	EL	Mt. Juliet, TN
Pesticides (GC) by Method 8081	WG1350366	1	09/23/19 06:30	09/23/19 12:15	LEL	Mt. Juliet, TN

SB-3-1 L1141258-05 Solid

Collected by
Jeff Stromberg

Collected date/time
09/18/19 11:45

Received date/time
09/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1351540	1	09/25/19 13:16	09/25/19 13:23	JHH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1350131	1	09/22/19 09:20	09/24/19 13:18	EL	Mt. Juliet, TN
Pesticides (GC) by Method 8081	WG1350366	1	09/23/19 06:30	09/23/19 15:27	LEL	Mt. Juliet, TN

SB-3-2.5 L1141258-06 Solid

Collected by
Jeff Stromberg

Collected date/time
09/18/19 11:52

Received date/time
09/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1351540	1	09/25/19 13:16	09/25/19 13:23	JHH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1350131	1	09/22/19 09:20	09/24/19 13:21	EL	Mt. Juliet, TN
Pesticides (GC) by Method 8081	WG1350366	1	09/23/19 06:30	09/23/19 15:42	LEL	Mt. Juliet, TN

SAMPLE SUMMARY

SB-4-1 L1141258-07 Solid

Collected by: Jeff Stromberg
 Collected date/time: 09/18/19 12:20
 Received date/time: 09/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1351540	1	09/25/19 13:16	09/25/19 13:23	JHH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1350131	1	09/22/19 09:20	09/24/19 13:23	EL	Mt. Juliet, TN
Pesticides (GC) by Method 8081	WG1350366	1	09/23/19 06:30	09/23/19 12:30	LEL	Mt. Juliet, TN

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

SB-4-2.5 L1141258-08 Solid

Collected by: Jeff Stromberg
 Collected date/time: 09/18/19 12:30
 Received date/time: 09/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1351540	1	09/25/19 13:16	09/25/19 13:23	JHH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1350131	1	09/22/19 09:20	09/24/19 13:26	EL	Mt. Juliet, TN
Pesticides (GC) by Method 8081	WG1350366	1	09/23/19 06:30	09/23/19 12:44	LEL	Mt. Juliet, TN



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Collected date/time: 09/18/19 10:20

L1141258

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.9		1	09/25/2019 13:23	WG1351540

1 Cp

2 Tc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	6.96		0.490	2.13	1	09/24/2019 13:06	WG1350131
Lead	174		0.202	0.532	1	09/24/2019 13:06	WG1350131

3 Ss

4 Cn

5 Sr

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000248	0.0213	1	09/23/2019 15:12	WG1350366
Alpha BHC	U		0.000205	0.0213	1	09/23/2019 15:12	WG1350366
Beta BHC	U		0.000323	0.0213	1	09/23/2019 15:12	WG1350366
Delta BHC	U		0.000161	0.0213	1	09/23/2019 15:12	WG1350366
Gamma BHC	U		0.000261	0.0213	1	09/23/2019 15:12	WG1350366
4,4-DDD	U		0.000175	0.0213	1	09/23/2019 15:12	WG1350366
4,4-DDE	0.0859		0.000176	0.0213	1	09/23/2019 15:12	WG1350366
4,4-DDT	0.135		0.000283	0.0213	1	09/23/2019 15:12	WG1350366
Dieldrin	U		0.0000947	0.00213	1	09/23/2019 15:12	WG1350366
Endosulfan I	U		0.000228	0.0213	1	09/23/2019 15:12	WG1350366
Endosulfan II	U		0.000245	0.0213	1	09/23/2019 15:12	WG1350366
Endosulfan sulfate	U		0.000181	0.0213	1	09/23/2019 15:12	WG1350366
Endrin	U		0.000233	0.0213	1	09/23/2019 15:12	WG1350366
Endrin aldehyde	U		0.000258	0.0213	1	09/23/2019 15:12	WG1350366
Endrin ketone	U		0.000169	0.0213	1	09/23/2019 15:12	WG1350366
Heptachlor	U		0.000108	0.0213	1	09/23/2019 15:12	WG1350366
Heptachlor epoxide	U		0.000402	0.0213	1	09/23/2019 15:12	WG1350366
Hexachlorobenzene	U		0.000238	0.0213	1	09/23/2019 15:12	WG1350366
Methoxychlor	U		0.000282	0.0213	1	09/23/2019 15:12	WG1350366
Chlordane	1.49		0.0415	0.213	1	09/23/2019 15:12	WG1350366
Toxaphene	U		0.0383	0.426	1	09/23/2019 15:12	WG1350366
(S) Decachlorobiphenyl	79.9			10.0-135		09/23/2019 15:12	WG1350366
(S) Tetrachloro-m-xylene	90.7			10.0-139		09/23/2019 15:12	WG1350366

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 09/18/19 10:30

L1141258

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	92.1		1	09/25/2019 13:23	WG1351540

1 Cp

2 Tc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Arsenic	3.85		0.499	2.17	1	09/24/2019 13:09	WG1350131
Lead	45.8		0.206	0.543	1	09/24/2019 13:09	WG1350131

3 Ss

4 Cn

5 Sr

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Aldrin	U		0.000253	0.0217	1	09/23/2019 11:45	WG1350366
Alpha BHC	U		0.000209	0.0217	1	09/23/2019 11:45	WG1350366
Beta BHC	U		0.000329	0.0217	1	09/23/2019 11:45	WG1350366
Delta BHC	U		0.000164	0.0217	1	09/23/2019 11:45	WG1350366
Gamma BHC	U		0.000266	0.0217	1	09/23/2019 11:45	WG1350366
4,4-DDD	U		0.000178	0.0217	1	09/23/2019 11:45	WG1350366
4,4-DDE	0.0383		0.000179	0.0217	1	09/23/2019 11:45	WG1350366
4,4-DDT	0.0466		0.000289	0.0217	1	09/23/2019 11:45	WG1350366
Dieldrin	U		0.0000966	0.00217	1	09/23/2019 11:45	WG1350366
Endosulfan I	U		0.000232	0.0217	1	09/23/2019 11:45	WG1350366
Endosulfan II	U		0.000250	0.0217	1	09/23/2019 11:45	WG1350366
Endosulfan sulfate	U		0.000185	0.0217	1	09/23/2019 11:45	WG1350366
Endrin	U		0.000238	0.0217	1	09/23/2019 11:45	WG1350366
Endrin aldehyde	U		0.000263	0.0217	1	09/23/2019 11:45	WG1350366
Endrin ketone	U		0.000173	0.0217	1	09/23/2019 11:45	WG1350366
Heptachlor	U		0.000110	0.0217	1	09/23/2019 11:45	WG1350366
Heptachlor epoxide	U		0.000410	0.0217	1	09/23/2019 11:45	WG1350366
Hexachlorobenzene	U		0.000243	0.0217	1	09/23/2019 11:45	WG1350366
Methoxychlor	U		0.000288	0.0217	1	09/23/2019 11:45	WG1350366
Chlordane	0.234		0.0423	0.217	1	09/23/2019 11:45	WG1350366
Toxaphene	U		0.0391	0.434	1	09/23/2019 11:45	WG1350366
(S) Decachlorobiphenyl	93.7			10.0-135		09/23/2019 11:45	WG1350366
(S) Tetrachloro-m-xylene	98.6			10.0-139		09/23/2019 11:45	WG1350366

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 09/18/19 11:10

L1141258

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	88.7		1	09/25/2019 13:23	WG1351540

1 Cp

2 Tc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Arsenic	5.01		0.518	2.25	1	09/24/2019 13:12	WG1350131
Lead	21.0		0.214	0.564	1	09/24/2019 13:12	WG1350131

3 Ss

4 Cn

5 Sr

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Aldrin	U		0.000263	0.0225	1	09/23/2019 12:00	WG1350366
Alpha BHC	U		0.000218	0.0225	1	09/23/2019 12:00	WG1350366
Beta BHC	U		0.000342	0.0225	1	09/23/2019 12:00	WG1350366
Delta BHC	U		0.000170	0.0225	1	09/23/2019 12:00	WG1350366
Gamma BHC	U		0.000276	0.0225	1	09/23/2019 12:00	WG1350366
4,4-DDD	U		0.000185	0.0225	1	09/23/2019 12:00	WG1350366
4,4-DDE	0.0192	J	0.000186	0.0225	1	09/23/2019 12:00	WG1350366
4,4-DDT	0.0245		0.000300	0.0225	1	09/23/2019 12:00	WG1350366
Dieldrin	U		0.000100	0.00225	1	09/23/2019 12:00	WG1350366
Endosulfan I	U		0.000241	0.0225	1	09/23/2019 12:00	WG1350366
Endosulfan II	U		0.000259	0.0225	1	09/23/2019 12:00	WG1350366
Endosulfan sulfate	U		0.000192	0.0225	1	09/23/2019 12:00	WG1350366
Endrin	U		0.000247	0.0225	1	09/23/2019 12:00	WG1350366
Endrin aldehyde	U		0.000273	0.0225	1	09/23/2019 12:00	WG1350366
Endrin ketone	U		0.000179	0.0225	1	09/23/2019 12:00	WG1350366
Heptachlor	U		0.000114	0.0225	1	09/23/2019 12:00	WG1350366
Heptachlor epoxide	U		0.000426	0.0225	1	09/23/2019 12:00	WG1350366
Hexachlorobenzene	U		0.000252	0.0225	1	09/23/2019 12:00	WG1350366
Methoxychlor	U		0.000299	0.0225	1	09/23/2019 12:00	WG1350366
Chlordane	0.166	J	0.0440	0.225	1	09/23/2019 12:00	WG1350366
Toxaphene	U		0.0406	0.451	1	09/23/2019 12:00	WG1350366
(S) Decachlorobiphenyl	93.7			10.0-135		09/23/2019 12:00	WG1350366
(S) Tetrachloro-m-xylene	101			10.0-139		09/23/2019 12:00	WG1350366

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	88.5		1	09/25/2019 13:23	WG1351540

1 Cp

2 Tc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Arsenic	4.67		0.520	2.26	1	09/24/2019 13:15	WG1350131
Lead	11.9		0.215	0.565	1	09/24/2019 13:15	WG1350131

3 Ss

4 Cn

5 Sr

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Aldrin	U		0.000263	0.0226	1	09/23/2019 12:15	WG1350366
Alpha BHC	U		0.000218	0.0226	1	09/23/2019 12:15	WG1350366
Beta BHC	U		0.000343	0.0226	1	09/23/2019 12:15	WG1350366
Delta BHC	U		0.000171	0.0226	1	09/23/2019 12:15	WG1350366
Gamma BHC	U		0.000277	0.0226	1	09/23/2019 12:15	WG1350366
4,4-DDD	U		0.000185	0.0226	1	09/23/2019 12:15	WG1350366
4,4-DDE	0.00219	J	0.000187	0.0226	1	09/23/2019 12:15	WG1350366
4,4-DDT	U		0.000301	0.0226	1	09/23/2019 12:15	WG1350366
Dieldrin	U		0.000101	0.00226	1	09/23/2019 12:15	WG1350366
Endosulfan I	U		0.000242	0.0226	1	09/23/2019 12:15	WG1350366
Endosulfan II	U		0.000260	0.0226	1	09/23/2019 12:15	WG1350366
Endosulfan sulfate	U		0.000192	0.0226	1	09/23/2019 12:15	WG1350366
Endrin	U		0.000248	0.0226	1	09/23/2019 12:15	WG1350366
Endrin aldehyde	U		0.000274	0.0226	1	09/23/2019 12:15	WG1350366
Endrin ketone	U		0.000180	0.0226	1	09/23/2019 12:15	WG1350366
Heptachlor	U		0.000114	0.0226	1	09/23/2019 12:15	WG1350366
Heptachlor epoxide	U		0.000427	0.0226	1	09/23/2019 12:15	WG1350366
Hexachlorobenzene	U		0.000253	0.0226	1	09/23/2019 12:15	WG1350366
Methoxychlor	U		0.000300	0.0226	1	09/23/2019 12:15	WG1350366
Chlordane	U		0.0441	0.226	1	09/23/2019 12:15	WG1350366
Toxaphene	U		0.0407	0.452	1	09/23/2019 12:15	WG1350366
(S) Decachlorobiphenyl	85.8			10.0-135		09/23/2019 12:15	WG1350366
(S) Tetrachloro-m-xylene	94.9			10.0-139		09/23/2019 12:15	WG1350366

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	84.1		1	09/25/2019 13:23	WG1351540

1 Cp

2 Tc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Arsenic	4.19		0.547	2.38	1	09/24/2019 13:18	WG1350131
Lead	46.5		0.226	0.594	1	09/24/2019 13:18	WG1350131

3 Ss

4 Cn

5 Sr

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Aldrin	U		0.000277	0.0238	1	09/23/2019 15:27	WG1350366
Alpha BHC	U		0.000229	0.0238	1	09/23/2019 15:27	WG1350366
Beta BHC	U		0.000360	0.0238	1	09/23/2019 15:27	WG1350366
Delta BHC	U		0.000179	0.0238	1	09/23/2019 15:27	WG1350366
Gamma BHC	U		0.000291	0.0238	1	09/23/2019 15:27	WG1350366
4,4-DDD	U		0.000195	0.0238	1	09/23/2019 15:27	WG1350366
4,4-DDE	0.00522	J	0.000196	0.0238	1	09/23/2019 15:27	WG1350366
4,4-DDT	U		0.000316	0.0238	1	09/23/2019 15:27	WG1350366
Dieldrin	U		0.000106	0.00238	1	09/23/2019 15:27	WG1350366
Endosulfan I	U		0.000254	0.0238	1	09/23/2019 15:27	WG1350366
Endosulfan II	U		0.000273	0.0238	1	09/23/2019 15:27	WG1350366
Endosulfan sulfate	U		0.000202	0.0238	1	09/23/2019 15:27	WG1350366
Endrin	U		0.000260	0.0238	1	09/23/2019 15:27	WG1350366
Endrin aldehyde	U		0.000288	0.0238	1	09/23/2019 15:27	WG1350366
Endrin ketone	U		0.000189	0.0238	1	09/23/2019 15:27	WG1350366
Heptachlor	U		0.000120	0.0238	1	09/23/2019 15:27	WG1350366
Heptachlor epoxide	0.00156	J P	0.000449	0.0238	1	09/23/2019 15:27	WG1350366
Hexachlorobenzene	U		0.000266	0.0238	1	09/23/2019 15:27	WG1350366
Methoxychlor	U		0.000315	0.0238	1	09/23/2019 15:27	WG1350366
Chlordane	0.396		0.0464	0.238	1	09/23/2019 15:27	WG1350366
Toxaphene	U		0.0428	0.475	1	09/23/2019 15:27	WG1350366
(S) Decachlorobiphenyl	88.3			10.0-135		09/23/2019 15:27	WG1350366
(S) Tetrachloro-m-xylene	95.6			10.0-139		09/23/2019 15:27	WG1350366

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	89.8		1	09/25/2019 13:23	WG1351540

1 Cp

2 Tc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Arsenic	4.23		0.512	2.23	1	09/24/2019 13:21	WG1350131
Lead	82.6		0.211	0.557	1	09/24/2019 13:21	WG1350131

3 Ss

4 Cn

5 Sr

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Aldrin	U		0.000259	0.0223	1	09/23/2019 15:42	WG1350366
Alpha BHC	U		0.000215	0.0223	1	09/23/2019 15:42	WG1350366
Beta BHC	U		0.000337	0.0223	1	09/23/2019 15:42	WG1350366
Delta BHC	U		0.000168	0.0223	1	09/23/2019 15:42	WG1350366
Gamma BHC	U		0.000273	0.0223	1	09/23/2019 15:42	WG1350366
4,4-DDD	U		0.000183	0.0223	1	09/23/2019 15:42	WG1350366
4,4-DDE	0.00793	J	0.000184	0.0223	1	09/23/2019 15:42	WG1350366
4,4-DDT	0.0195	J	0.000296	0.0223	1	09/23/2019 15:42	WG1350366
Dieldrin	U		0.0000991	0.00223	1	09/23/2019 15:42	WG1350366
Endosulfan I	U		0.000238	0.0223	1	09/23/2019 15:42	WG1350366
Endosulfan II	U		0.000256	0.0223	1	09/23/2019 15:42	WG1350366
Endosulfan sulfate	U		0.000189	0.0223	1	09/23/2019 15:42	WG1350366
Endrin	U		0.000244	0.0223	1	09/23/2019 15:42	WG1350366
Endrin aldehyde	U		0.000269	0.0223	1	09/23/2019 15:42	WG1350366
Endrin ketone	U		0.000177	0.0223	1	09/23/2019 15:42	WG1350366
Heptachlor	U		0.000112	0.0223	1	09/23/2019 15:42	WG1350366
Heptachlor epoxide	U		0.000421	0.0223	1	09/23/2019 15:42	WG1350366
Hexachlorobenzene	U		0.000249	0.0223	1	09/23/2019 15:42	WG1350366
Methoxychlor	U		0.000295	0.0223	1	09/23/2019 15:42	WG1350366
Chlordane	0.688		0.0434	0.223	1	09/23/2019 15:42	WG1350366
Toxaphene	U		0.0401	0.445	1	09/23/2019 15:42	WG1350366
(S) Decachlorobiphenyl	93.9			10.0-135		09/23/2019 15:42	WG1350366
(S) Tetrachloro-m-xylene	116			10.0-139		09/23/2019 15:42	WG1350366

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	97.7		1	09/25/2019 13:23	WG1351540

1 Cp

2 Tc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Arsenic	U		0.471	2.05	1	09/24/2019 13:23	WG1350131
Lead	0.905		0.194	0.512	1	09/24/2019 13:23	WG1350131

3 Ss

4 Cn

5 Sr

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Aldrin	U		0.000238	0.0205	1	09/23/2019 12:30	WG1350366
Alpha BHC	U		0.000198	0.0205	1	09/23/2019 12:30	WG1350366
Beta BHC	U		0.000310	0.0205	1	09/23/2019 12:30	WG1350366
Delta BHC	U		0.000155	0.0205	1	09/23/2019 12:30	WG1350366
Gamma BHC	U		0.000251	0.0205	1	09/23/2019 12:30	WG1350366
4,4-DDD	U		0.000168	0.0205	1	09/23/2019 12:30	WG1350366
4,4-DDE	U		0.000169	0.0205	1	09/23/2019 12:30	WG1350366
4,4-DDT	U		0.000272	0.0205	1	09/23/2019 12:30	WG1350366
Dieldrin	U		0.0000911	0.00205	1	09/23/2019 12:30	WG1350366
Endosulfan I	U		0.000219	0.0205	1	09/23/2019 12:30	WG1350366
Endosulfan II	U		0.000235	0.0205	1	09/23/2019 12:30	WG1350366
Endosulfan sulfate	U		0.000174	0.0205	1	09/23/2019 12:30	WG1350366
Endrin	U		0.000224	0.0205	1	09/23/2019 12:30	WG1350366
Endrin aldehyde	U		0.000248	0.0205	1	09/23/2019 12:30	WG1350366
Endrin ketone	U		0.000163	0.0205	1	09/23/2019 12:30	WG1350366
Heptachlor	U		0.000103	0.0205	1	09/23/2019 12:30	WG1350366
Heptachlor epoxide	U		0.000387	0.0205	1	09/23/2019 12:30	WG1350366
Hexachlorobenzene	U		0.000229	0.0205	1	09/23/2019 12:30	WG1350366
Methoxychlor	U		0.000271	0.0205	1	09/23/2019 12:30	WG1350366
Chlordane	U		0.0399	0.205	1	09/23/2019 12:30	WG1350366
Toxaphene	U		0.0368	0.409	1	09/23/2019 12:30	WG1350366
(S) Decachlorobiphenyl	107			10.0-135		09/23/2019 12:30	WG1350366
(S) Tetrachloro-m-xylene	115			10.0-139		09/23/2019 12:30	WG1350366

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.3		1	09/25/2019 13:23	WG1351540

1 Cp

2 Tc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	U		0.468	2.03	1	09/24/2019 13:26	WG1350131
Lead	0.967		0.193	0.509	1	09/24/2019 13:26	WG1350131

3 Ss

4 Cn

5 Sr

Pesticides (GC) by Method 8081

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aldrin	U		0.000237	0.0203	1	09/23/2019 12:44	WG1350366
Alpha BHC	U		0.000196	0.0203	1	09/23/2019 12:44	WG1350366
Beta BHC	U		0.000308	0.0203	1	09/23/2019 12:44	WG1350366
Delta BHC	U		0.000154	0.0203	1	09/23/2019 12:44	WG1350366
Gamma BHC	U		0.000249	0.0203	1	09/23/2019 12:44	WG1350366
4,4-DDD	U		0.000167	0.0203	1	09/23/2019 12:44	WG1350366
4,4-DDE	0.000169	J	0.000168	0.0203	1	09/23/2019 12:44	WG1350366
4,4-DDT	U		0.000271	0.0203	1	09/23/2019 12:44	WG1350366
Dieldrin	U		0.0000905	0.00203	1	09/23/2019 12:44	WG1350366
Endosulfan I	U		0.000218	0.0203	1	09/23/2019 12:44	WG1350366
Endosulfan II	U		0.000234	0.0203	1	09/23/2019 12:44	WG1350366
Endosulfan sulfate	U		0.000173	0.0203	1	09/23/2019 12:44	WG1350366
Endrin	U		0.000223	0.0203	1	09/23/2019 12:44	WG1350366
Endrin aldehyde	U		0.000246	0.0203	1	09/23/2019 12:44	WG1350366
Endrin ketone	U		0.000162	0.0203	1	09/23/2019 12:44	WG1350366
Heptachlor	U		0.000103	0.0203	1	09/23/2019 12:44	WG1350366
Heptachlor epoxide	U		0.000384	0.0203	1	09/23/2019 12:44	WG1350366
Hexachlorobenzene	U		0.000228	0.0203	1	09/23/2019 12:44	WG1350366
Methoxychlor	U		0.000270	0.0203	1	09/23/2019 12:44	WG1350366
Chlordane	U		0.0397	0.203	1	09/23/2019 12:44	WG1350366
Toxaphene	U		0.0366	0.407	1	09/23/2019 12:44	WG1350366
(S) Decachlorobiphenyl	117			10.0-135		09/23/2019 12:44	WG1350366
(S) Tetrachloro-m-xylene	122			10.0-139		09/23/2019 12:44	WG1350366

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3454700-1 09/25/19 13:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1141258-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1141258-01 09/25/19 13:23 • (DUP) R3454700-3 09/25/19 13:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	93.9	93.8	1	0.135		10

Laboratory Control Sample (LCS)

(LCS) R3454700-2 09/25/19 13:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	



Method Blank (MB)

(MB) R3454138-1 09/24/19 12:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.460	2.00
Lead	U		0.190	0.500

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3454138-2 09/24/19 12:30 • (LCSD) R3454138-3 09/24/19 12:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	96.7	98.0	96.7	98.0	80.0-120			1.28	20
Lead	100	98.6	99.6	98.6	99.6	80.0-120			1.02	20

5 Sr

6 Qc

L1141262-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1141262-05 09/24/19 12:36 • (MS) R3454138-6 09/24/19 12:44 • (MSD) R3454138-7 09/24/19 12:46

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	131	10.6	119	129	83.0	90.9	1	75.0-125			8.30	20
Lead	131	11.9	125	137	87.0	95.9	1	75.0-125			8.90	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3453806-2 09/23/19 11:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.000233	0.0200
Alpha BHC	U		0.000193	0.0200
Beta BHC	U		0.000303	0.0200
Delta BHC	U		0.000151	0.0200
Gamma BHC	U		0.000245	0.0200
4,4-DDD	U		0.000164	0.0200
4,4-DDE	U		0.000165	0.0200
4,4-DDT	U		0.000266	0.0200
Dieldrin	U		0.0000890	0.00200
Endosulfan I	U		0.000214	0.0200
Endosulfan II	U		0.000230	0.0200
Endosulfan sulfate	U		0.000170	0.0200
Endrin	U		0.000219	0.0200
Endrin aldehyde	U		0.000242	0.0200
Endrin ketone	U		0.000159	0.0200
Heptachlor	U		0.000101	0.0200
Heptachlor epoxide	U		0.000378	0.0200
Hexachlorobenzene	U		0.000224	0.0200
Methoxychlor	U		0.000265	0.0200
Chlordane	U		0.0390	0.200
Toxaphene	U		0.0360	0.400
(S) Decachlorobiphenyl	115			10.0-135
(S) Tetrachloro-m-xylene	123			10.0-139

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3453806-1 09/23/19 11:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0613	92.0	34.0-136	
Alpha BHC	0.0666	0.0694	104	34.0-139	
Beta BHC	0.0666	0.0661	99.2	34.0-133	
Delta BHC	0.0666	0.0665	99.8	34.0-135	
Gamma BHC	0.0666	0.0656	98.5	34.0-136	
4,4-DDD	0.0666	0.0654	98.2	33.0-141	
4,4-DDE	0.0666	0.0650	97.6	34.0-134	
4,4-DDT	0.0666	0.0673	101	30.0-143	
Dieldrin	0.0666	0.0624	93.7	35.0-137	
Endosulfan I	0.0666	0.0611	91.7	34.0-134	



Laboratory Control Sample (LCS)

(LCS) R3453806-1 09/23/19 11:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Endosulfan II	0.0666	0.0583	87.5	35.0-132	
Endosulfan sulfate	0.0666	0.0609	91.4	35.0-132	
Endrin	0.0666	0.0628	94.3	34.0-137	
Endrin aldehyde	0.0666	0.0576	86.5	23.0-121	
Endrin ketone	0.0666	0.0645	96.8	35.0-144	
Heptachlor	0.0666	0.0654	98.2	36.0-141	
Heptachlor epoxide	0.0666	0.0619	92.9	36.0-134	
Hexachlorobenzene	0.0666	0.0678	102	33.0-129	
Methoxychlor	0.0666	0.0757	114	28.0-150	
(S) Decachlorobiphenyl			107	10.0-135	
(S) Tetrachloro-m-xylene			105	10.0-139	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1141268-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1141268-03 09/23/19 13:14 • (MS) R3453806-3 09/23/19 13:29 • (MSD) R3453806-4 09/23/19 13:43

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aldrin	0.0666	ND	0.0657	0.0627	98.6	94.1	1	20.0-135			4.67	37
Alpha BHC	0.0666	ND	0.0754	0.0719	113	108	1	27.0-140			4.75	35
Beta BHC	0.0666	ND	0.0713	0.0680	107	102	1	23.0-141			4.74	37
Delta BHC	0.0666	ND	0.0719	0.0691	108	104	1	21.0-138			3.97	35
Gamma BHC	0.0666	ND	0.0716	0.0680	108	102	1	27.0-137			5.16	36
4,4-DDD	0.0666	ND	0.0735	0.0698	110	105	1	15.0-152			5.16	39
4,4-DDE	0.0666	ND	0.0704	0.0670	106	101	1	10.0-152			4.95	40
4,4-DDT	0.0666	ND	0.0716	0.0675	108	101	1	10.0-151			5.90	40
Dieldrin	0.0666	ND	0.0670	0.0640	101	96.1	1	17.0-145			4.58	37
Endosulfan I	0.0666	ND	0.0623	0.0608	93.5	91.3	1	20.0-137			2.44	36
Endosulfan II	0.0666	ND	0.0529	0.0525	79.4	78.8	1	15.0-141			0.759	37
Endosulfan sulfate	0.0666	ND	0.0615	0.0583	92.3	87.5	1	15.0-143			5.34	38
Endrin	0.0666	ND	0.0657	0.0625	98.6	93.8	1	19.0-143			4.99	37
Endrin aldehyde	0.0666	ND	0.0493	0.0520	74.0	78.1	1	10.0-139			5.33	40
Endrin ketone	0.0666	ND	0.0678	0.0648	102	97.3	1	17.0-149			4.52	38
Heptachlor	0.0666	ND	0.0691	0.0662	104	99.4	1	22.0-138			4.29	37
Heptachlor epoxide	0.0666	ND	0.0665	0.0636	99.8	95.5	1	22.0-138			4.46	36
Hexachlorobenzene	0.0666	ND	0.0731	0.0696	110	105	1	25.0-126			4.91	35
Methoxychlor	0.0666	ND	0.0795	0.0749	119	112	1	10.0-159			5.96	40
(S) Decachlorobiphenyl					101	97.1		10.0-135				
(S) Tetrachloro-m-xylene					106	101		10.0-139				



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
P	RPD between the primary and confirmatory analysis exceeded 40%.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

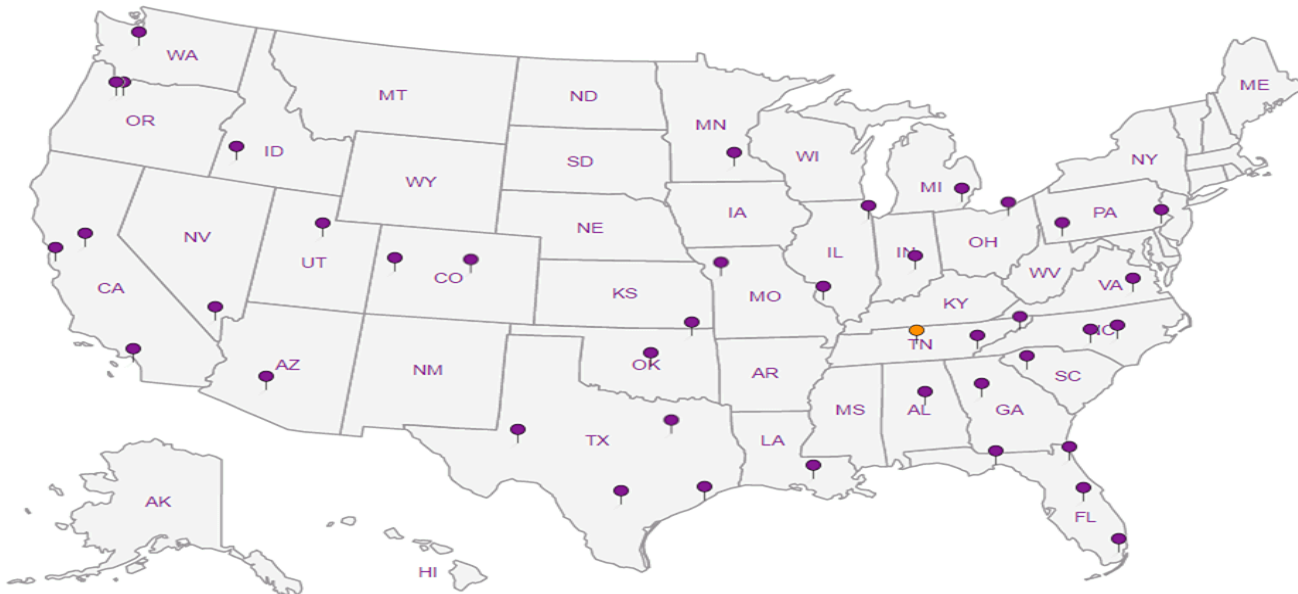
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



AEI Consultants
3880 S. Bascom Ave, Suite 109
San Jose, CA 95124

Billing Information:
AEI Consultants

Pres
 Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



Report to:
Jacob Henry

Email To:
jhenry@aeiconsultants.com

Project Description: **Sampling Performed by: Jeff Stromberg**

City/State Collected: **San Jose California**

Phone: **(949) 939-5523**
 Fax:

Client Project #
396636

Lab Project #

Collected by (print):

Site/Facility ID #

P.O. #
206802

Collected by (signature):

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
 Date Results Needed

Immediately Packed on Ice N Y X

No.
 of
 Cntrs

L# **1141258**

H117

Acctnum:

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Organochloride (OC)	Pesticides (8081A)	Lead (6010B)	Arsenic (6010B)	Remarks	Sample # (lab only)
SB-1-1	G	SS	1	9/18/19	1020	1	X	X	X			-01
SB-1-2.5			2.5		1030	1	X	X	X			02
SB-2-1			1		1110	1	X	X	X			03
SB-2-2.5			2.5		1115	1	X	X	X			04
SB-3-1			1		1145	1	X	X	X			05
SB-3-2.5			2.5		1152	1	X	X	X			06
SB-4-1			1		1220	1	X	X	X			07
SB-4-2.5			2.5		1230	2	X	X	X			08

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:

Samples returned via:

UPS FedEx Courier

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist

COC Seal Present/Intact: Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N

If Applicable

VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N

RAD SCREEN: <0.5 mR/hr

Relinquished by (Signature)

Date:

Time:

Received by: (Signature)

Trip Blank Received: Yes No

HCL / MeOH
 TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: _____ °C
 Bottles Received: 9

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 9/19/19 Time: 8:45

Hold:

Condition:
 NCF / OK