

SUBMITTED TO:
Aleut Field Services
250 Cushman Street, Suite 4A
Fairbanks, AK. 99701



BY:
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REV 01
FINAL

SUMMARY REPORT
Building 3025 Emergency Dispatch
Center and Antenna Tower
FORT WAINWRIGHT, ALASKA



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Submitted To: Aleut Field Services
250 Cushman Street, Suite 4A
Fairbanks, AK. 99701
Attn: Contact Name

Subject: FINAL SUMMARY REPORT, BUILDING 3025 EMERGENCY DISPATCH
CENTER AND ANTENNA TOWER, FORT WAINWRIGHT, ALASKA

Shannon & Wilson prepared this report and participated in this project as a subconsultant to Mr. Kevin Mahler of Aleut Field Services. Our scope of services was specified in our October 22, 2018 proposal and authorized under purchase order #1028046. This report presents the summary of our 2018 and 2019 activities and was prepared by the undersigned.

We appreciate the opportunity to be of service to you on this project. If you have questions concerning this report, or we may be of further service, please contact us.

Sincerely,

SHANNON & WILSON, INC.

Valerie Webb, C.P.G.
Associate

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ACRONYMS

°C	degree centigrade
ADEC	Alaska Department of Environmental Conservation
bgs	below the ground surface
COC	chain of custody
DPW	Fort Wainwright Department of Public Works
DQO	data quality objective
DRO	diesel range organics
FTW	Fort Wainwright
EPA	United States Environmental Protection Agency
FSP	Field Sampling Plan
GRO	gasoline range organics
MS	matrix spike
MSD	matrix spike duplicate
NELAP	National Environmental Laboratory Accreditation Program
OP	Organochlorine pesticides
PID	photoionization detector
PM	Project Manager
ppm	parts per million
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RCRA	Resource Conservation and Recovery Act
RPD	relative percent difference
RRO	residual range organics
SAP	Sampling and Analysis Plan
SGS	SGS North America, Inc.
SSHP	site safety and health plan
UST	underground storage tank
VOC	volatile organic compound

1 INTRODUCTION

Aleut Field Services (Aleut) was contracted to construct an antenna tower adjacent to Building 3025 at Fort Wainwright in Fairbanks, Alaska. As part of the project, they constructed a chain-link fence around the generator and mechanical equipment adjacent to the main entrance of the new dispatch center. The project included soil excavation and handling, including soil around the antenna-pad area, followed by fencepost excavations.



Exhibit 1-1: 2018 Excavation along the western perimeter of B3025.

This report covers the environmental services conducted in 2018 and 2019 to support the Building 3025 project. Per the August 17, 2018 approved *Final Sampling and Analysis Plan Building 3025 Emergency Dispatch Center Antenna Tower*, we prepared this summary report to include a narrative of work performed, analytical results, figures, laboratory reports, laboratory-data review checklists, quality control evaluations, photographs, and conclusions and recommendations.

2 BACKGROUND

This site is an Alaska Department of Environmental Conservation (ADEC)-listed



contaminated site (Fort Wainwright Bldg. 3025, ADEC File No. 108.38.092), with known or suspected contamination resulting from historic fuel releases and the operation of a dry cleaner. Petroleum-related contamination has been confirmed at this site and chlorinated-solvent contamination is suspected but has not been confirmed.

Exhibit 2-1: Analytical sampling along the western perimeter of B3025.

The environmental component of this project involved screening excavated soil for the presence of petroleum and chlorinated-solvent contaminants and collecting samples from the excavation base, sidewalls, and stockpiled soils.

The environmental component of this project was not intended to fully characterize the Building 3025 contaminated site. Rather, it was intended to characterize excavated soil for the purpose of determining disposal options and document contaminant concentrations at the limits of excavation.

On August 17, 2018, our sampling and analysis plan (SAP) was approved by Fort Wainwright and ADEC staff. In March 2019, the addendum to our SAP depicting 2019 activities was also approved.

2.1 Regulatory Framework

According to the ADEC Contaminated Sites database listing for this site, historic fuel contamination was discovered during utilidor installation behind the building. Analytical sampling indicated the presence of diesel range organics and benzene above ADEC cleanup levels.

The *US Army Garrison Fort Wainwright Fourth Five-Year Review Report* lists this site as a solvent site. A dry cleaner was located on the site and the potential for chlorinated solvents in soil and groundwater has not been fully evaluated or documented. Based on this report, we understand the Building 3025 site is under investigation. It is not in an Operable Unit under the Federal Facility Agreement authority. We have included the Fort Wainwright Source Evaluation Process flowchart as Appendix C.

ADEC site characterization regulations are presented in 18 Alaska Administrative Code (AAC) 75.335. While this project is not intended to be a site characterization or cleanup project, we are using these regulations as a guide for the screening, sampling, and handling of potentially contaminated soil encountered during excavation.

The U.S. Environmental Protection Agency (EPA) has established regulations governing the identification and handling of hazardous wastes. Chlorinated-solvent wastes generated by dry-cleaning operations are regulated as F-002 listed hazardous wastes.

3 FIELD ACTIVITIES

Our environmental scope of services was outlined in the approved 2018 SAP and the 2019 SAP Addendum. Figure 2 depicts the analytical results from the sampling.

Between 2018 and 2019, we visited the site six times to field-screen and sample soil during excavation. Our field notes are included in Appendix A.



Exhibit 3-1 Field-screening during excavation along the eastern perimeter of B3025.

4 SAMPLE HANDLING AND ANALYSIS



Exhibit 4-1: Analytical soil sample location along the eastern perimeter of B3025.

We submitted the samples to SGS North America, Inc. (SGS) in Fairbanks for analysis of gasoline range organics (GRO) by Alaska Method AK 101, diesel range organics (DRO) by AK 102, residual range organics (RRO) by AK 103, and low level volatile organic compounds (VOCs) by EPA Method 8260 LL SIM.

SGS has received approval by the ADEC underground storage tank (UST) program, meets United States Army Corps of Engineers acceptance criteria, and has received National Environmental Laboratory Accreditation Program validation.

5 ANALYTICAL RESULTS

We compared soil sample results to ADEC cleanup levels (CULs) from 18 AAC 75.341 Table B1 Method Two - Soil Cleanup

Levels Table B1 *Migration to Groundwater* and Table B2 Method Two - Petroleum Hydrocarbon Soil Cleanup Levels *Migration to Groundwater Under 40 Inch Zone*.

We reported analytical results to Aleut following each of the six sampling events throughout the course of this project. Following each event, we provided a summary table of results, a site figure depicting sample locations, the laboratory data report, and a completed copy of the ADEC laboratory-data review checklist (LDRC).

Analytical results were below their respective CUL in all of the samples. We did not find evidence of chlorinated solvent contamination.

6 QUALITY ASSURANCE (QA)/ QUALITY CONTROL (QC)

We reviewed analytical results provided by SGS for laboratory QC samples and conducted our QA assessment for this project. We reviewed chain-of-custody records and laboratory sample-receipt forms to document custody procedures, sample-holding times, and sample temperatures (between 0 degrees Celsius [°C] and 6°C) during shipping. Our QA review procedures allow us to document accuracy and precision of analytical data and document that the analyses were sufficiently sensitive to detect analytes at levels below regulatory levels.

The results of our QA procedures are included in the LDRCs in Appendix B.

7 CONCLUSIONS AND RECOMMENDATIONS

Analytical results for the samples we collected for this project were below ADEC cleanup levels. We reported the results as we received them, and it is our understanding that Aleut reported these results to the Department of Public Works (DPW) Environmental staff as they were received.

Excavated soil was stockpiled on-site awaiting analytical results. We estimate that approximately 110 cubic yards (cy) of soil was stockpiled in the "clean" stockpile (results below 10 parts per million). We also estimate that less than 3 cy of soil was stockpiled in the "potentially contaminated" stockpile.



Exhibit 7-1 "Clean" stockpile in the northern perimeter of B3025, looking north.

All analytical results from the stockpiled soil were below ADEC cleanup levels. Aleut consulted with the DPW Environmental staff to determine the disposal location for the clean soil.

Because of the analytical results, we recommend the stockpiled soil be used as clean fill or disposed off-site in an approved location. It is our understanding this disposal may have already occurred.

We further recommend this report be submitted to DPW Environmental. It is our understanding they will submit the report to ADEC for their review.

8 CLOSURE

This report was prepared for the exclusive use of Aleut Field Services and their representatives, in accordance with our scope of services. This report should not be used for other purposes without Shannon & Wilson's review. We have included *Important Information about Your Geotechnical/Environmental Report* to help you and others understand the use and limitations of this report.

This project did not include an evaluation of site characterization nor an evaluation of contaminated sites near the proposed project. Our scope also did not include conclusions or recommendations for construction planning. If Aleut would like us to conduct those services, we can prepare and submit to Aleut an estimate of probable cost.

Our observations represent site conditions as they existed during our sampling activities. Our observations are specific to the locations and times noted herein and may not be applicable to all areas of the site. No amount of sampling and analytical testing can precisely predict the characteristics, quality, or distribution of site conditions. Potential variations include, but are not limited to:

- The conditions between sampling points may vary.
- The passage of time or intervening causes (natural and manmade) may result in changes to site conditions.
- Contaminant concentrations may change in response to natural conditions, chemical reactions, and/or other events.
- The presence, distribution, and concentration of contaminants may vary from our sampling locations. Our tests may not represent the highest contaminant concentrations at the site.

The report should not be used without our approval if any of the following occurs:

- Conditions change due to natural forces or human activity under, at, or adjacent to the site.

- Project details change, or new information becomes available such that our analyses, conclusion, and recommendations may be affected.
- If the site ownership or land use has changed.
- More than ten years has passed since the date of this summary letter report.
- Regulations, laws, or CULs change.
- If the site's regulatory status has changed.

If any of these occur, we should be retained to review the applicability of our analyses, conclusions, and recommendations.

We appreciate this opportunity to be of service to you.

9 REFERENCES

Alaska Department of Environmental Conservation, October 2018, 18 AAC 75: Oil and Other Hazardous Substances Pollution Control: Juneau, Alaska, available:

<http://dec.alaska.gov/commish/regulations/>.

Alaska Department of Environmental Conservation, August 2017, *Field Sampling Guidance for Contaminated Sites and Leaking Underground Storage Tank Sites*, available:

https://dec.alaska.gov/spar/csp/guidance_forms/docs/Field_Sampling_Guidance_August_2017_Final.pdf

Alaska Department of Environmental Conservation, October 2018 18 AAC 75.341 Tables B1 and B2, Method Two – Soil Cleanup Level for Migration to Groundwater for the “Under 40 Inch Zone”.

Alaska Department of Environmental Conservation, September 2018, 18 AAC 78: Underground Storage Tanks: Juneau, Alaska, available:

<http://dec.alaska.gov/commish/regulations/>.

Alaska Department of Environmental Conservation, August 2017, *Field Sampling Guidance for Contaminated Sites and Leaking Underground Storage Tank Sites*, available:

https://dec.alaska.gov/spar/csp/guidance_forms/docs/Field_Sampling_Guidance_August_2017_Final.pdf

Alaska Department of Environmental Conservation, March 2017, *Site Characterization Work Plan and Reporting Guidance for Investigation of Contaminated Sites*: Juneau, Alaska, ADEC Division of Spill Prevention and Response, Contaminated Sites Program, available:

https://dec.alaska.gov/spar/csp/guidance_forms/docs/SiteCharacterizationWorkPlanReportingGuidance2017.pdf

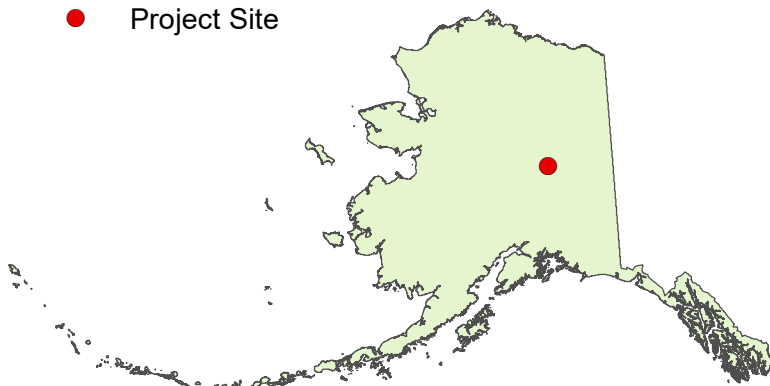
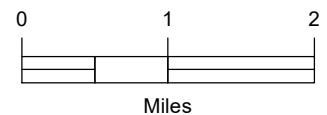
U.S. Occupational Safety and Health Administration (OSHA), March 2013, 29 CFR 1910: Hazardous waste operations and emergency response: Washington, DC., U.S. Government Printing Office.



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LEGEND

● Project Site



Building 3025
Sampling and Analysis Plan
Fort Wainwright, Alaska

VICINITY MAP

1/22/2020

100004-003

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure 1

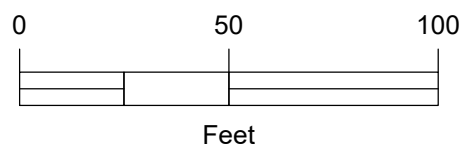


Map adapted from aerial imagery provided by Google, reproduced by permission granted by Google Mapping Service.

LEGEND

- Completed Trenching
- Tower
- Canopy
- Mechanical Equipment
- Gravel Pad
- Fence

- Analytical Results Below ADEC Cleanup Levels



Building 3025
Emergency Dispatch Center
Fort Wainwright, Alaska

LIMITS OF EXCAVATION ANALYTICAL RESULTS

1/22/2020

100004-003

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure 2

Appendix A

Field Activity Reports (FARs) and Field-screening Logs

CONTENTS

- October 15, 2018 FAR
- October 16, 2018 FAR
- October 29, 2018 FAR
- April 25, 2019 FAR
- May 8, 2019 FAR
- May 22, 2019 FAR
- June 17, 2019 FAR
- Field-screening logs for 2018 and 2019

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	100004-002
REPORT DATE:	10/15/2018
REPORT NO.:	001
SW FIELD REP.:	CRW, KLC
PERMIT NO.:	n/a

PROJECT LOCATION	B3025 Emergency Dispatch Center Antenna
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REPORT SUBMITTED TO:	CONTRACTOR NAME AND CONTACT:	WEATHER & TEMP.	Sunny, 40°F
Client Aleut Field Services	General	TIMES OF SITE VISITS:	
CC	Subcontractors for Construction		
	Weber, Inc.		
		from 7:00 am to 4:30 pm	
		from to	

CONSTRUCTION OBSERVATIONS

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
1	Chlorinated solvent and POL field screening.	<p>Approximately 58 cubic yards of soil was excavated to the 'clean' soil stockpile.</p> <p>17 POL field screening samples were taken from the excavated soil, with results ranging from 0.0 – 2.6 parts per million (ppm).</p> <p>6 Chlorinated solvent field screening samples were taken from the excavated soil, with all results at 0.0.</p> <p>An additional 13 POL field screening samples were taken from the sidewalls and base at the limits of excavation. All results on these screenings were below 0.6 ppm.</p>	None
2	Analytical Sampling – Base and sidewalls of excavation	<p>Analytical sampling on the sidewalls and base of excavation was completed by taking one discrete grab sample from each of the four sidewalls, along with a sample and field duplicate for the base of excavation.</p> <p>Samples will be submitted with the samples taken for stockpile analytics on 10/16/18 and submitted to the laboratory on a 5-day rush.</p>	None

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, procedures, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)



VEW 10/15/18

PROJECT NO.:	100004
REPORT DATE:	10/15/18
REPORT NO.:	001
SW FIELD REP.:	CRW, KLC
PERMIT NO.:	n/a

DAILY FIELD ACTIVITY REPORT

PROJECT NAME/LOCATION	B3025 Emergency Dispatch Center Antenna
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CONSTRUCTION OBSERVATIONS (continued)

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
		 <p>Photo #1. Completed excavation as of 10/15/18.</p>  <p>Photo #2. Chlorinated solvent field screening in progress.</p>	None.

OTHER GENERAL OBSERVATIONS

Meetings Attended:	
Attachments:	

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)

VEW 10/15/18



PROJECT NO.:	100004-002
REPORT DATE:	10/16/2018
REPORT NO.:	002
SW FIELD REP.:	CRW, KLC
PERMIT NO.:	n/a

DAILY FIELD ACTIVITY REPORT

PROJECT LOCATION	B3025 Emergency Dispatch Center Antenna
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REPORT SUBMITTED TO:	CONTRACTOR NAME AND CONTACT:	WEATHER & TEMP.	Sunny, 40°F
Client <u>Aleut Field Services</u>	General _____	TIMES OF SITE VISITS:	
CC _____	Subcontractors for Construction _____		
_____	<u>Weber, Inc.</u>		
		from <u>9:00 am</u> to <u>11:00 am</u>	
		from _____ to _____	

CONSTRUCTION OBSERVATIONS

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
1	Stockpile field screening and analytical sampling	<p>Six POL field screening samples were taken from the clean soil stockpile, with results ranging from 0.3 – 1.0 parts per million (ppm).</p> <p>Three analytical samples along with an additional field duplicate were taken from the stockpile.</p> <p>All analytical samples (taken 10/15 and 10/16) were submitted to the laboratory for GRO / LL VOC and DRO / RRO analysis.</p>	None
		 <p>Photo #1. Analytical Sampling.</p>  <p>Photo #2. Clean soil stockpile.</p>	None.

OTHER GENERAL OBSERVATIONS

Meetings Attended:	
Attachments:	

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, procedures, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)

 VEW 10/16/18 *VCW*

FIELD ACTIVITIES DAILY LOG

Date 10/29/18

Sheet 1 of 1

Project No. 100004

Project Name: B3025 Dispatch Antenna

Field activity subject: Daily Field Log

Description of daily activities and events: ~~0800~~ 0715 - Arrive at Shannon & Wilson office,

pack equipment into truck, depart for FTWH.

0800 - Arrive at B3025, unpack equipment at work site, CRW departs work site to pick up analytical sampler and Color-Tec.

0845 - CRW picks up Color Tec from Alaska Air Cargo

0900 - CRW picks up analytical sampling jar from SGS North America

0920 - Arrive back at worksite, set up remaining equipment

1000 - excavation begins, using mini-ex to dig trenches and placing dirt into larger loader. CRW begins sampling at a frequency of 1 screening per 2 cy for the first 10 cy, and 1 screening per 8 cy for yardage outside of 10 cy.

1245 - Excavation complete, CRW begins taking analytical samples - 3 samples and a field duplicate for the trenches, and 2 samples on the stockpile. 6 total samples are taken

1500 - CRW meets briefly with KM at worksite, then departs for S+W office.

6 analytical samples taken

7 POL field screenings - range 0.1 - 1.5 ppm

2 Color Tec screenings - 0.0

estimated yards of soil moved - 12-15 cy

Visitors on site: CRW

Changes from plans/specifications and other special orders and important decisions:

N/A

Weather conditions: 20°F, Sunny

Important telephone calls: N/A

Personnel on site: CRW

Signature: CRW

Date: 10/29/18

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	100004-002
REPORT DATE:	4/25/19
REPORT NO.:	001
SW FIELD REP.:	DHF, VEW
PERMIT NO.:	n/a

PROJECT LOCATION	B3025 Emergency Dispatch Center Antenna
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REPORT SUBMITTED TO:		CONTRACTOR NAME AND CONTACT:		WEATHER & TEMP.	Sunny, 28-52°F
Client	Aleut Field Services	General	Aleut Field Services		
CC		Subcontractors for Construction		TIMES OF SITE VISITS:	
		Weber, Inc.		from 8:00 am	to 5:30 pm
				from	to

CONSTRUCTION OBSERVATIONS

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
1	Chlorinated solvent and POL field screening.	<p>Approximately 7 cubic yards of soil was excavated to the 'clean' soil stockpile and 1 cubic yard of soil was excavated to the potentially contaminated stockpile.</p> <p>13 POL field screening samples were taken from the excavated soil, with results ranging from 0 – 13.2 parts per million (ppm). Per our approved Sampling and Analysis Plan, we contacted DPW Environmental when we observed a reading of 13.2 ppm in the northwest corner of the building. DPW Environmental Representative Mr. Bryan Adams recorded our notification and requested we collect GPS data on the sample location. We recorded the 13.2 ppm field-screening sample location and will report the coordinates in our final report.</p> <p>2 chlorinated solvent field screening samples were taken from the excavated soil, with all negative/absent results.</p> <p>An additional 34 POL and 2 chlorinated solvent field screening samples were taken from the sidewalls and base at the limits of excavation. All results on these screenings were below 2 ppm and non-detect for chlorinated solvents.</p>	None
2	Analytical Sampling – Base and sidewalls of excavation	<p>Analytical sampling on the sidewalls and base of excavation was completed by taking one discrete grab sample from the north, west, and south sidewalls. Three samples and a field duplicate were collected from the base of the excavation.</p> <p>Seven analytical samples were submitted to SGS North America on 4/26/19 and results were requested on a standard two-week turnaround.</p>	The two stockpiles will be sampled at the end of 2019 field activities.

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, procedures, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)



VEW 4/25/19

PROJECT NO.:	100004-002
REPORT DATE:	4/25/19
REPORT NO.:	001
SW FIELD REP.:	DHF, VEW
PERMIT NO.:	n/a

DAILY FIELD ACTIVITY REPORT

PROJECT NAME/LOCATION	B3025 Emergency Dispatch Center Antenna
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CONSTRUCTION OBSERVATIONS (continued)

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
		 <p>Photo #1. Weber crew hand-digging part of the excavation, Valerie Webb with Shannon & Wilson collecting a field screening sample.</p>  <p>Photo #2. Collecting analytical samples from the excavation on the south side of B3025.</p>	None.

OTHER GENERAL OBSERVATIONS

Meetings Attended:	Safety Briefing at 0830
Attachments:	None

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)

VEW 4/25/19

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	100004-005
REPORT DATE:	5/8/19
REPORT NO.:	002
SW FIELD REP.:	VEW, ALF, APW
PERMIT NO.:	n/a

PROJECT LOCATION	B3025 Emergency Dispatch Center Antenna
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REPORT SUBMITTED TO:		CONTRACTOR NAME AND CONTACT:		WEATHER & TEMP.	Light Rain, 45-52°F
Client	<u>Aleut Field Services</u>	General	<u>Aleut Field Services</u>		
CC	<u></u>	Subcontractors for Construction		TIMES OF SITE VISITS:	
	<u></u>	<u>Weber, Inc.</u>		from	<u>8:00 am</u> to <u>7:00 pm</u>
	<u></u>			from	to

CONSTRUCTION OBSERVATIONS

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
1	Chlorinated solvent and POL field screening.	<p>Approximately 59-61 cubic yards of soil was excavated to the 'clean' soil stockpile.</p> <p>Per the approved Sampling and Analysis Plan (SAP), 21 POL field screening samples were taken from the excavated soil, with results ranging from 0.1 – 1.9 parts per million (ppm)</p> <p>7 chlorinated solvent field screening samples were taken from the excavated soil, with all negative/absent results.</p> <p>An additional 82 POL and 4 chlorinated solvent field screening samples were taken from the sidewalls and base at the limits of excavation. All results on these screenings were below 2.2 ppm and non-detect for chlorinated solvents.</p>	None
2	Analytical Sampling – Base and sidewalls of excavation	<p>Analytical sampling on the sidewalls and base of excavation was completed by taking one discrete grab samples: 2 sidewall samples and 3 base of excavation samples plus a field duplicate were collected from the limits of the excavation. We recorded GPS locations of the analytical samples.</p> <p>5 analytical samples were submitted to SGS North America on 5/9/19 and results were requested on a standard two-week turnaround.</p>	The two stockpiles will be sampled at the end of 2019 field activities.

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, procedures, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)



VEW 05/08/19

PROJECT NO.: 100004-005
REPORT DATE: 5/8/19
REPORT NO.: 002
SW FIELD REP.: VEW, ALF, APW
PERMIT NO.: n/a

DAILY FIELD ACTIVITY REPORT

PROJECT NAME/LOCATION	B3025 Emergency Dispatch Center Antenna
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CONSTRUCTION OBSERVATIONS (continued)

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
		 <p>Photo #1. Shannon & Wilson staff collecting a Color Tec chlorinated solvents field screening sample.</p>  <p>Photo #2. Collecting analytical samples from the limits of excavation on the east side of B3025.</p>	None.

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)



VEW 05/08/19

PROJECT NO.: 100004-005
REPORT DATE: 5/8/19
REPORT NO.: 002
SW FIELD REP.: VEW, ALF, APW
PERMIT NO.: n/a

DAILY FIELD ACTIVITY REPORT

PROJECT NAME/LOCATION	B3025 Emergency Dispatch Center Antenna
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CONSTRUCTION OBSERVATIONS (continued)

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
		 <p>Photo #3. Weber excavating soil along the eastern perimeter of B3025.</p>  <p>Photo #4. Excavation progress nearing completion against the northeastern corner of B3025.</p>	

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)

VEW 05/08/19

PROJECT NO.:	100004-005
REPORT DATE:	5/8/19
REPORT NO.:	002
SW FIELD REP.:	VEW, ALF, APW
PERMIT NO.:	n/a

DAILY FIELD ACTIVITY REPORT

PROJECT NAME/LOCATION	B3025 Emergency Dispatch Center Antenna
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CONSTRUCTION OBSERVATIONS (continued)

OTHER GENERAL OBSERVATIONS

Meetings Attended:	Safety Briefing at 0830
Attachments:	None

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)

VEW 05/08/19

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	100004-005
REPORT DATE:	5/22/19
REPORT NO.:	003
SW FIELD REP.:	DHF
PERMIT NO.:	n/a

PROJECT LOCATION	B3025 Emergency Dispatch Center Antenna
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REPORT SUBMITTED TO:		CONTRACTOR NAME AND CONTACT:		WEATHER & TEMP.	Partly Cloudy, 50-70°F
Client	<u>Aleut Field Services</u>	General	<u>Aleut Field Services</u>	TIMES OF SITE VISITS:	
CC		Subcontractors for Construction			
		<u>Weber, Inc.</u>			
				from <u>8:00 am</u> to <u>5:00 pm</u>	
				from	to

CONSTRUCTION OBSERVATIONS

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
1	Chlorinated solvent and POL field screening.	<p>Approximately 12 cubic yards of soil was excavated to the 'clean' soil stockpile.</p> <p>Per the approved Sampling and Analysis Plan (SAP), 7 POL field screening samples were taken from the excavated soil, with results ranging from 0.2 – 5.6 parts per million (ppm)</p> <p>2 chlorinated solvent field screening samples were taken from the excavated soil, with all negative/absent results.</p> <p>An additional 27 POL and 3 chlorinated solvent field screening samples were taken from the sidewalls and base at the limits of excavation. All results on these screenings were below 5.4 ppm and non-detect for chlorinated solvents.</p>	None
2	Analytical Sampling – Base and sidewalls of excavation	<p>Analytical sampling on the sidewalls and base of excavation was completed by taking discrete grab samples. We recorded GPS locations of the analytical samples.</p> <p>East side excavation: 3 sidewall samples and 2 base of excavation samples.</p> <p>North side excavation: 1 sidewall sample and 2 base of excavation samples.</p> <p>West side excavation: 1 sidewall sample plus a field duplicate were collected from the limits of the excavation. We did not collect base of excavation samples because the base of the excavation was asphalt.</p> <p>10 analytical samples were submitted to SGS North America on 5/23/19 and results were requested on a standard two-week turnaround.</p>	The two stockpiles will be sampled at the end of 2019 field activities.

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, procedures, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)

VEW 05/23/19



PROJECT NO.: 100004-005
REPORT DATE: 5/22/19
REPORT NO.: 003
SW FIELD REP.: DHF
PERMIT NO.: n/a

DAILY FIELD ACTIVITY REPORT

PROJECT NAME/LOCATION

B3025 Emergency Dispatch Center Antenna

CONSTRUCTION OBSERVATIONS (continued)

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
		 <p>Photo #1. Weber digging the excavation for the sidewalk on the east side of B3025.</p>  <p>Photo #2. Part of the excavation on the north side of B3025.</p>	None.

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)

VEW 05/23/19

PROJECT NO.: 100004-005
REPORT DATE: 5/22/19
REPORT NO.: 003
SW FIELD REP.: DHF
PERMIT NO.: n/a

DAILY FIELD ACTIVITY REPORT

PROJECT NAME/LOCATION	B3025 Emergency Dispatch Center Antenna
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CONSTRUCTION OBSERVATIONS (continued)

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
		 <p>Photo #3. Weber excavating soil along the west side of B3025.</p>	

OTHER GENERAL OBSERVATIONS

Meetings Attended:	Safety Briefing at 0800
Attachments:	None

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)

VEW 05/23/19

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	100004-005
REPORT DATE:	6/17/19
REPORT NO.:	004
SW FIELD REP.:	DHF
PERMIT NO.:	n/a

PROJECT LOCATION	B3025 Emergency Dispatch Center Antenna
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REPORT SUBMITTED TO:		CONTRACTOR NAME AND CONTACT:		WEATHER & TEMP.	Sunny, 70°F
Client	<u>Aleut Field Services</u>	General	<u>Aleut Field Services</u>	TIMES OF SITE VISITS:	
CC		Subcontractors for Construction			
		<u>Weber, Inc.</u>			
				from <u>7:30 am</u>	to <u>1:00 pm</u>
				from	to

CONSTRUCTION OBSERVATIONS

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
1	POL and Chlorinated Solvent Field Screening – Fence Post Excavation	<p>Seventeen fence post holes were dug with an auger around the dispatch building.</p> <p>Per the approved Sampling and Analysis Plan (SAP), 8 POL field screening samples were taken from the excavated soil, with results ranging from 0.1 – 2.4 parts per million (ppm)</p> <p>One chlorinated solvent field screening sample was taken from the excavated soil, with a negative/absent result.</p> <p>One analytical sample was collected from the base of the fence post excavation.</p>	None
2	POL Field Screening and Analytical Sampling – Stockpile	<p>We estimate 110 cubic yards (cy) of soil in the “clean” stockpile. Per the SAP, 11 field screening samples and 4 analytical samples were collected from the “clean” stockpile.</p> <p>We estimate less than 3 cy of soil is in the “potentially contaminated” stockpile. Per the SAP, we collected 5 field screening and 3 analytical samples, including a duplicate, from the “potentially contaminated” stockpile.</p>	None

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, procedures, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)



VEW 6/17/19

PROJECT NO.: 100004-005
REPORT DATE: 6/17/19
REPORT NO.: 004
SW FIELD REP.: DHF
PERMIT NO.: n/a

DAILY FIELD ACTIVITY REPORT

PROJECT NAME/LOCATION	B3025 Emergency Dispatch Center Antenna
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CONSTRUCTION OBSERVATIONS (continued)

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
		 <p>Photo 1. AAA Fence auguring the fence post hole near the west entrance to B3025.</p>  <p>Photo 2. AAA Fence auguring the fence post hole near the west entrance to B3025 (with Aleut Superintendent looking on).</p>	None.

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)

VEW 6/17/19

PROJECT NO.:	100004-005
REPORT DATE:	6/17/19
REPORT NO.:	004
SW FIELD REP.:	DHF
PERMIT NO.:	n/a

DAILY FIELD ACTIVITY REPORT

PROJECT NAME/LOCATION	B3025 Emergency Dispatch Center Antenna
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CONSTRUCTION OBSERVATIONS (continued)

NO.	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATIONS AND RECOMMENDATIONS TO OWNER	FURTHER ACTION RECOMMENDED TO OWNER
		 <p>Photo 3. Overview of fence post holes.</p>  <p>Photo 4. Fence post holes near the west entrance to B3025.</p>	

OTHER GENERAL OBSERVATIONS

Meetings Attended:	
Attachments:	None

LIMITATIONS: The Shannon & Wilson field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Shannon & Wilson field representative and our acceptance of any non-conforming work or failure to reject any non-conforming work does not relieve the contractor from complying with its contract documents. Shannon & Wilson does not have the authority to direct the contractor's work. Any information provided by the Shannon & Wilson field inspector is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, construction site safety, quality of work, and adherence to the contract documents.

REVIEW BY (PM initial/date)

VEW 6/17/19

Project Number: 100004

B3075 Emergency Dispatch Center

Date: 10/15/18

Sampler: CRW

Calibration time, result: N/A

PIN number:

[illegible]

Project Number: 100004

Project Name: ~~1000~~ B3025 Dispatch Admin

Date: 10/29/18

Sampler: CRW

Calibration time, result: **NA**

PID number: N/A

[illegible]

FIELD SCREENING LOG (soil samples)

Project Number: 1000004

Project Name: B3025 Emergency Center Dispatch Avenue

Date: 10/15/18

Sampler: CRJ, KLC

Calibration time, result: 0900 ; 1000

PID number: 46

FS Sample Number	Sample Time	PID Reading	Depth (ft)	FS Sample Location	Soil Description/Notes
FS-1	9:07	0.0	-	~2 yd ³	
FS-2	9:23	0.0	-	~1 yd ³	
FS-3	9:41	0.0	-	~6 yd ³	
FS-4	9:56	0.0	-	~8 yd ³	
FS-5	10:11	0.0	-	~10 yd ³	
FS-6	10:27	0.0	-	~14 yd ³	
FS-7	10:42	2.6	-	~18 yd ³	
FS-8	10:56	0.1	-	~22 yd ³	
FS-9	11:09	0.0	-	~26 yd ³	
FS-10	11:23	0.0	-	~30 yd ³	
FS-11	11:40	0.0	-	~34 yd ³	
FS-12	11:51	0.0	-	~38 yd ³	
FS-13	12:57	0.0	-	~42 yd ³	
FS-14	13:13	0.0	-	~46 yd ³	
FS-15	13:26	0.0	-	~50 yd ³	
FS-16	13:38	0.0	-	~54 yd ³	
FS-17	13:54	0.0	-	~58 yd ³	
FS-18	14:12	0.0	8	Base	
FS-19	14:42	0.0	8		
FS-20	14:48	0.0	8		
FS-21	14:48	0.0	8		
FS-22	14:48	0.0	8		
FS-23	15:02	0.0	9	North sidewalk	
FS-24	15:02	0.6	9		
FS-25	15:03	0.0	9	South sidewalk	
FS-26	15:03	0.0	9		
FS-27	15:04	0.0	9	East sidewalk	
FS-28	15:04	0.0	9		
FS-29	15:05	0.0	9	West sidewalk	
FS-30	15:05	0.0	9		

Project Number:

Project Name:

Date:

Calibration time, result:

PID number:

Sampler:

[illegible]

Project Number:

Project Name: 63025

Date: 10/19/18

Sampler: Wick CPW

Calibration time, result: 9:30 99.4 ppm

PID number: #0

[illegible]

Project Number:	1000004
-----------------	---------

Project Name: B32025 D12pachn Aukman

Date: 10/29/18

Sampler: CLK

Calibration time, result: 0900, 1000.0

PID number: ~~#~~ 1

FS Sample Number	Sample Time	PID Reading	Depth (ft)	FS Sample Location	Soil Description/Notes
18-01	1016	0.1	<1.5	0-2 cy	
18-02	1028	0.2	<1.5	2-4 cy	
18-03	1041	0.5	<1.5	4-6 cy	
18-04	1050	0.4	<1.5	6-8 cy	
18-05	1057	0.1	<1.5	8-10 cy	
18-06	1130	1.5	<1.5	10-18 cy	
18-07	1212	0.7	<1.5	Abandon	

FIELD ACTIVITIES DAILY LOG

Date 4/25/19

Sheet 1 of 1

Project No. 100004-002

Project Name: Building 3025

Field activity subject: field screening for PCL and chlorinated solvents

Description of daily activities and events:

- 700 Calibrate PID to 100 ppm Isobutylene. Reading 100 ppm
- 730 Check in at Ft. Leavenworth visitor center
- 800 Safety meeting on-site with Aleut ~~crew~~ and Weber crew
- 830 Start hand digging at Southwest side of building.
- 1015 PID result from N side above 10 ppm. VEW call DPW.
- 1050 VEW leave site. Return in ~45 min w/GPS
- 1200 Weber lunch break. Mark FS locations in excavation.
- 1420 Weber finish excavation. PID field screening and color test screening.
- 1715 pack to leave
- 1745 arrive S&W, unpack.

Visitors on site: _____

Changes from plans/specifications and other special orders and important decisions: _____

Weather conditions: Sunny, 40°F

Important telephone calls: VEW call DPW to notify >10 ppm PID hit

Personnel on site: DHF, KSLW

Signature: [Signature]

Date: 4/25/19

Page 7 of 7

Sampler: DHC

[illegible]

Project Number: 10004

Project Name:

Date: 4/25/19

Sampler: VAD 1 D4F

Calibration time, result:

04/25 @ 7:30 (D4#)

PID number:

#1 (5+2)

FS Sample Number	Sample Time	Reading	Depth (ft)	FS Sample Location	Soil Description/Notes
WP-01	9:00	A.O.	6	West of building for building inspection truck	organic
WP-02	9:17	8.0	6	" "	organic
WP-03	9:28	6.8	6	" "	organic + gravel BM
WP-01	10:03	13.1	5	North of building for inspection truck	
WP-02	10:15	13.2	6	" "	
WP-04	10:42	1.3	0.5	North side of building	organics and gravel/sand fill
WP-05	11:13	1.4	0.5	West side of building	ambient air reading 0.4
WP-06	11:33	1.2	0.5	Northwest side of building	
WP-07	11:53	1.3	0.5	Northwest side of building	
WP-08	12:53	1.6	0.5	Northwest side of building	
NA-01	12:33	1.1	1.3	North side, base of ex.	background is 0.5
NA-02	12:35	1.3	1.3	" "	
NA-03	12:37	0.9	1.3	" "	
NA-04	12:39	1.3	1.3	" "	B3025 - N-01, B3025 - N-101
NA-05	12:40	1.4	1.3	" "	
WB-01	12:42	1.2	1.2	West side, base of ex.	
WB-02	12:45	1.4	1.2	" "	
WB-03	12:48	1.5	1.2	" "	
WB-04	12:51	1.5	1.2	" "	
WS-01	12:59	1.0	1.1	West side wall	B3025 - WS-01
NS-01	12:57	1.1	0.9	North side wall	B3025 - NS-01
SP-01	13:05	1.5	0.9	South of building R inspection truck	
SP-02	14:1	1.6	0.9	" "	
WSP-001	2:10	1.6	0.2	West side wall	
WB-06	13:50	1.8	1.5		
WB-07	13:52	2.0	1.5		
WB-08	14:55	1.2	1.5		
WB-09	14:42	0.9	1.5	base of ex - West side wall	B3025 - W-01
WB-10	14:43	0.6	1.5	" "	
WB-11	14:44	0.7	1.5	" "	
WB-12	14:47	0.7	1.5	" "	
WB-13	14:46	0.7	1.5	" "	
WB-14	14:47	0.8	1.5	" "	
WB-15	14:51	0.7	1.5	" "	

to parking lot and stockpiles location

Entrance

~2.5' wide

~18'

~69'

Location measurements:

Base of excavation

NB-01 to NB-05: every 3.7' from east end

WB-01 to WB-06: every 9' from northwest building corner

WB-06 to WB-07: 8'

WB-07 to WB-08: 7'

Sidewalks

NS-01: 0.9' bgs, 7.4' from NW corner

WS-01: 1.2' bgs, 26.5' from north sidewalk



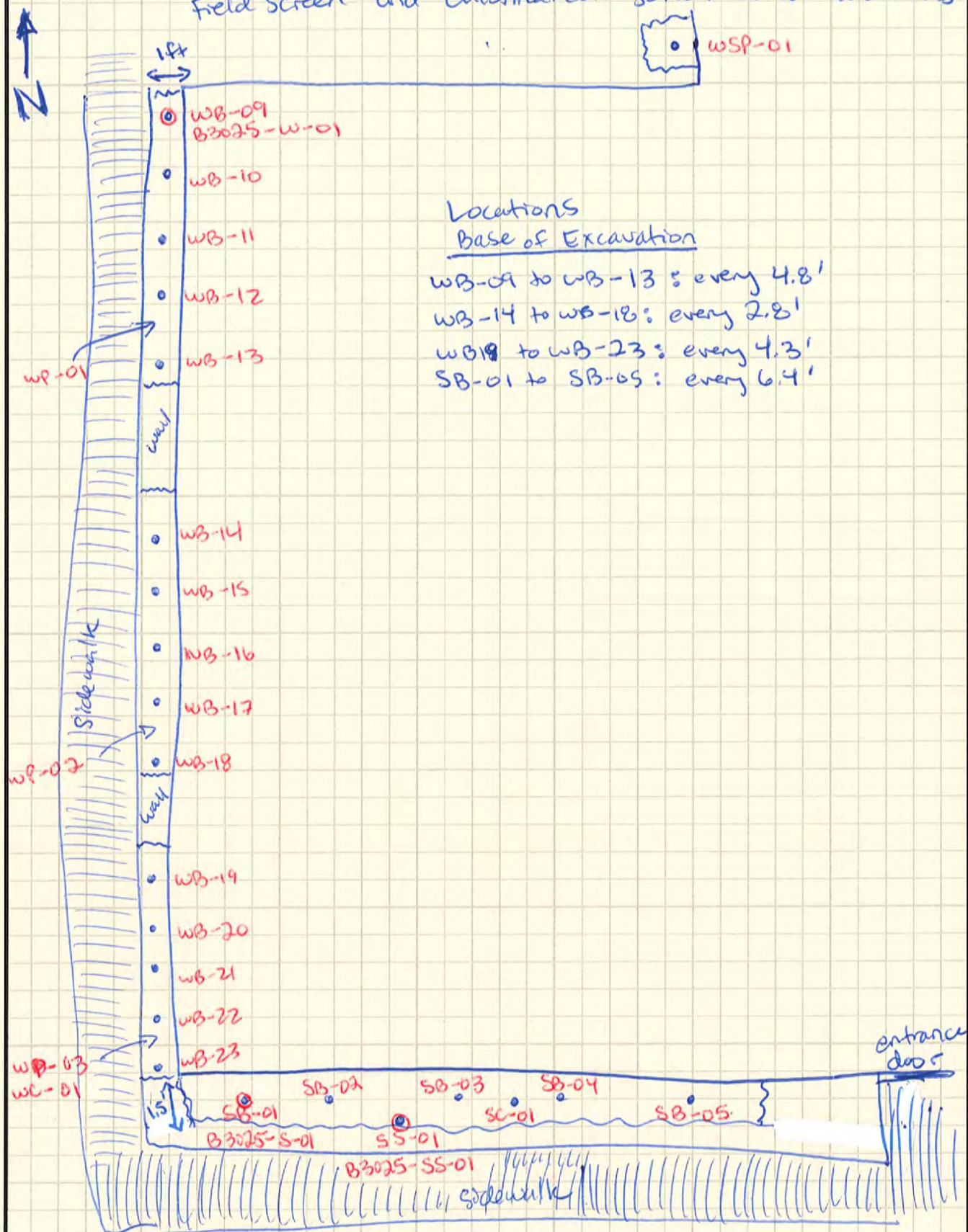
JOB NO. 100004-002

DATE 4/25/19

CHK'D.

SHEET 2 of 2

B3025 South half of Building
Field screen and chlorinated solvent screen locations





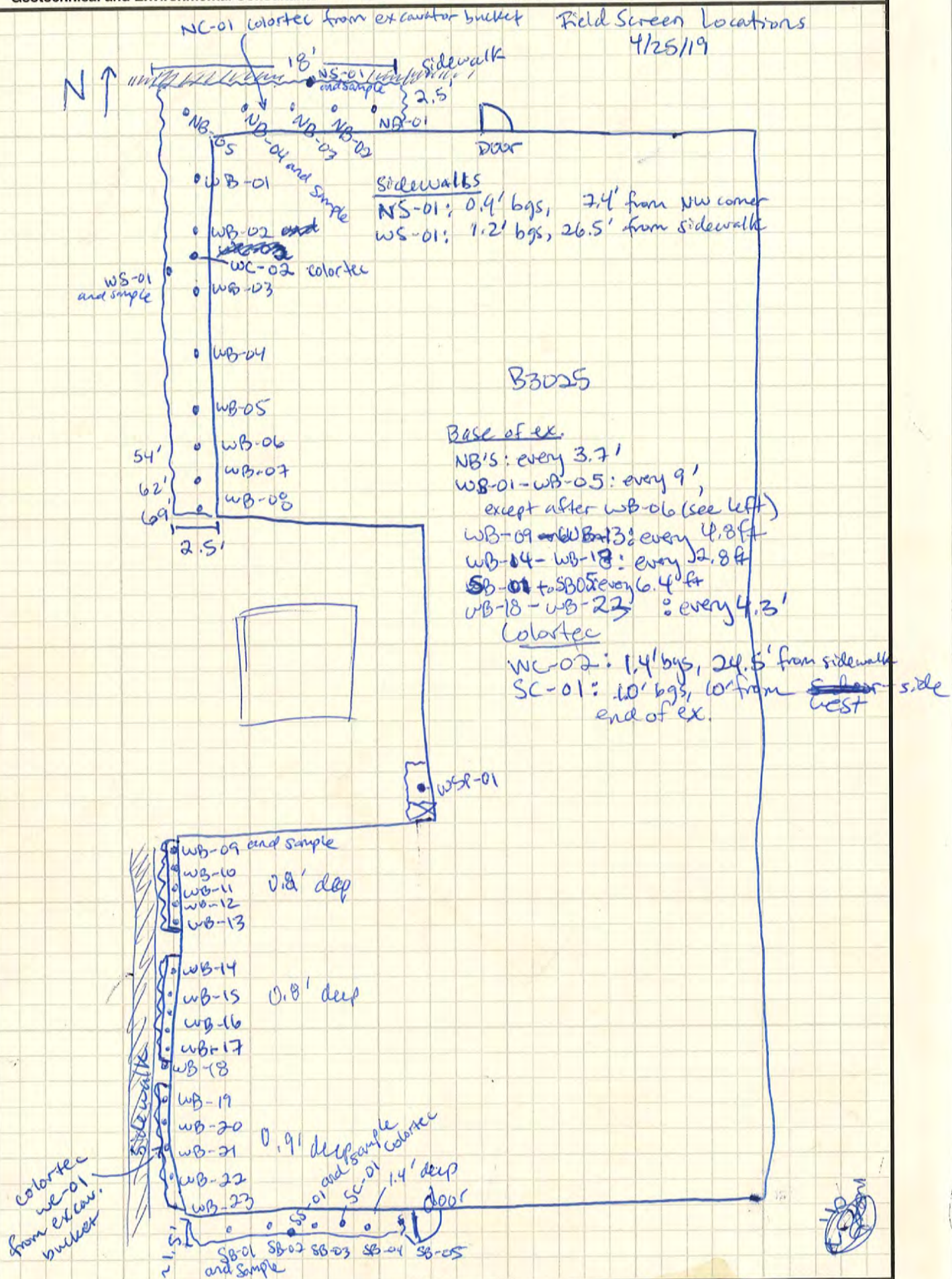
SUBJECT B3025 excavation

JOB NO.

DATE _____

BY _____ CHK'D _____

SHEET _____ of _____



FIELD SCREENING LOG (soil samples)

EAST SIDE OF BUILDING

Project Number: 100004

Project Name: 75005 Emergency Dumpsite

CA

Date: 5/8/19

Sampler: VSL

Calibration time, result: 0200 100.00%

PID number: 57-2 #1

FS Sample Number	Sample Time	PID Reading	Depth (ft)	FS Sample Location	Soil Description/Notes
2.5 to 3 cu	840	0.6	1.0	Organics + gravel fill - east of building	Organics + gravel
3 cu	850	0.3	1.0	"	"
6 cu	906	0.2	1.0	"	"
9 cu	939	0.3	1.5	"	"
12 cu	978	0.6	1.5	east of building	"
15 cu	1022	0.4	1.5	"	"
18 cu	1041	0.4	1.5	"	"
21 cu	1109	0.4	1.5	"	"
24 cu	1132	0.3	1.5	"	"
27 cu	1171	0.3	1.5	"	"
30 cu	1251	0.4	1.5	"	"
33 cu	1309	0.4	1.5	"	"
36 cu	1329	0.2	1.5	"	"
39 cu	1448	0.3	1.5	2 feet	"
42 cu	1515	0.2	1.5	north of tree	"
45 cu	1533	0.2	1.5	"	"
48 cu	2:47	0.1	1.5	north of tree	gravel / soil / white organic fill
51 cu	3:15	0.2	1.5	"	"
53 cu	4:18	1.4	1.5	"	"
56 cu	4:32	1.4	1.5	north corner of building	"
59 cu	4:47	1.3	1.5	"	"
62 cu	5:07	1.3	1.5	"	"

SAMPLE COLLECTION LOG

Project Number: 1000004-006

Location: FILL Bldg, 3025

Extent of Excavation - East side of building

Page 1 of 1

Date: 5-8-19

Base of Exc.

Sampler: ALE/VEB/APPL

Sample Number	Location	Sample Time	Depth Interval (ft)		Matrix Type	Sampling Method	Sample Type	PID Reading	Analyses
			top	bottom					
EB-1	2 ft north of southern stairwell	12:41	2.3	2.5	Soil	Grab	FS	0.5	Env Sample Time 14:06
EB-2	" "	12:41						0.2	
EB-3	" "	12:42						0.1	
EB-4	" "	12:42						0.1	
EB-5	" "	12:43						0.1	
EB-6	" "	12:44						0.1	
EB-7	" "	12:44						0.2	
EB-8	" "	12:45						0.4	
EB-9	" "	12:45						0.1	
EB-10	" "	12:46						0.1	
EB-11	" "	14:46						0.0	
EB-12	" "	14:46						0.0	
EB-13	" "	14:46						0.0	
EB-14	" "	14:47						0.0	
EB-15	" "	14:47						0.0	
EB-16	" "	15:49						0.0	
EB-17	" "	15:50						0.0	
EB-18	" "	15:50						0.9	Env. Sample 6:25
EB-19	" "	15:51						0.0	
EB-20	" "	15:51						0.0	
EB-21		17:30						0.1	
EB-22		17:32						0.3	
EB-23		17:34						0.1	
EB-24		17:36						0.2	
EB-25		17:38						0.2	
EB-26		17:40						0.3	

- north side of building

17:42

Matrix Type	Sampling Method	Sample Type	Sample Time
AR Air	Bailer/Coleman	ES Environmental sample	
GW Groundwater	Drill cuttings	ER Equipment rinse	
PR Product	Grab sampling	FB Field blank	
SB Substr. soil	Hand auger	FD Field duplicate	
SE Sediment	Tube liner	FM Field measurement	
SG Sludge	Pump (liquid)	FR Field replicate	
SS Surface soil	Spill spoon	MD Matrix spike duplicate	
SW Surface water	Shovel tube	MS Matrix spike duplicate	
WR Water	Vacuum (gas)	TB Trip blank	
	Wipe sampling		

SAMPLE COLLECTION LOG

Project Number: 100004-005 Location: FTRV Bldg. 3075 Extent of Excavation: Siskindall Sampling Page 1 of 2

Date: 5-8-19

Sampler: ME/VEW/ARW

Sample Number	East Siskindall Location	Sample Time		Depth Interval (ft)		Matrix Type	Sampling Method	Sample Type	PID Reading	Analyses
		Time		top	bottom					
ES-1	3 ft north of south siskindall	12:55			1.5	Soil	Grab	ES	0.0	
ES-2	8 ft								0.1	
ES-3	13 ft								0.2	
ES-4	18 ft								0.1	
ES-5	23 ft								0.2	
ES-6	28 ft								0.0	
ES-7	33 ft								0.0	
ES-8	38 ft								0.1	
ES-9	43 ft								0.2	
ES-10	48 ft								0.1	
ES-11	53 ft								0.1	
ES-12	58 ft								0.4	End Sample Time 14:09
ES-13	63 ft								0.3	
ES-14	68 ft								0.4	
ES-15	73 ft								0.4	
ES-16	78 ft								0.1	
ES-17	83 ft								0.3	
ES-18	88 ft								0.2	
ES-19	93 ft								0.0	
ES-20	98 ft	13:06							0.2	
ES-21	103 ft	14:45							1.0	
ES-22	108 ft	14:48							0.0	
ES-23	113 ft	14:48							0.0	
ES-24	118 ft	14:49							0.0	
ES-25	123 ft	14:49							0.8	
ES-26	128 ft	14:50							0.9	

Matrix Type		Sampling Method		Sample Type	
AR	Air	B	Balloon/Colman	ES	Environmental sample
GW	Groundwater	D	Drill cuttings	ER	Equipment residue
PR	Product	G	Grab sampling	FB	Field blank
SB	Substrat. soil	H	Hand auger	FD	Field duplicate
SE	Sediment	L	Tube liner	FM	Field measurement
SG	Sludge	P	Pump (liquid)	FR	Field replicate
SS	Surface soil	SS	Split spoon	MD	Matrix spike duplicate
SW	Surface water	T	Shovel tube	MS	Matrix spike duplicate
WR	Water	V	Vacuum (gas)	TS	Tip blank
		W	Wipe sampling		

SOIL SAMPLE COLLECTION LOG

Page 2 of 2

Project Number: 100004-005

Project Name: F16 Bldg 3025-Extend of Excavation Steward Stairway East Side of Bldg

Sampler: ALF/VEW/APP

Date	Sample Time	Sample ID	Location	Depth (ft)	Sample Type	PID Reading	Analyses
5-29	14:50	ES-27	133 ft north of south stairwell			0.3	
	14:52	ES-28	"			0.0	
	14:54	ES-29	"			0.2	
	15:01	ES-30	"			0.0	
	15:02	ES-31	"			0.0	
	15:03	ES-32	"			0.0	
	15:04	ES-33	"			0.0	
	15:05	ES-34	"			0.1	2.04 Enviro. Soil
	15:06	ES-35	"			0.0	ES-33
	15:07	ES-36	"			0.0	@ 6.35
	15:08	ES-37	"			0.0	ES-133
	15:09	ES-38	"			0.2	(duplicate)
	15:10	ES-39	"			0.1	
	15:11	ES-40	"			0.2	
	15:12	ES-41	"			0.4	
	15:13	ES-42	"			0.5	
	15:14	ES-43	"			0.3	
	15:15	ES-44	"			0.4	
	15:16	ES-45	"			0.3	
	15:17	ES-46	"			0.5	
	15:18	ES-47	"			0.2	
	15:19	ES-48	"			0.0	
	15:20	ES-49	"			0.1	
	15:21	ES-50	"			0.2	
	15:22	ES-51	"			0.0	
	15:23	ES-52	"			0.0	
	15:24	ES-53	"			0.0	
	15:25	ES-54	"			0.0	
	15:26	ES-55	"			0.0	

Sample Type FS = Field screening measurement only ES = Environmental sample FD = Field duplicate TB = Trip blank

Page 1 of 1

Sample Number

Sample Number	Location	Sample Time	Depth Interval (ft)		Matrix Type	Sampling Method	Sample Type	PDR Certificate Reading	Analyses
			top	bottom					
SC-100	South Corner Bldg. 3025	8:40	0	2	Soil	Grab	ES	01/4/200	Color-Tec Gran
SC-104	2nd Bay from South Corner	9:58	0	2	Soil	Grab	ES	01/4/200	bucket digging
SC-107	4th Bay from South Corner	11:10	0	2	Soil	Grab	ES	01/6/200	excavation
SC-111	6th Bay from South Corner	13:08	0	2	Soil	Grab	ES	01/6/200	
SC-114	8th Bay from South Corner	14:15	0	2	Soil	Grab	ES	01/4/200	
SC-117	10th Bay from South Corner	15:15	0	2	Soil	Grab	ES	01/4/200	
SC-119	12th Bay from South Corner	16:20	0	2	Soil	Grab	ES	01/4/200	
SC-540-1	40th Bay from South Corner	11:50	16.00	14.15	Soil	Grab	ES	01/4/200	Color-Tec Silica 11
SC-541-2	" "	16:00	1	1.5	Soil	Grab	ES	01/4/200	" "
SC-R-1	" "	16:03	2.3	2.5	Soil	Grab	ES	01/4/200	Color-Tec Box of 100
SC-R-2	" "	15:59	7.3	7.5	Soil	Grab	ES	01/4/200	" "

Matrix Type		Sampling Method		Sample Type	
AR	Air	B	Balloon/Culicena	ES	Environmental sample
GW	Groundwater	D	Drill cuttings	ER	Equipment residue
PR	Product	G	Grab sampling	FB	Field blank
SB	Subsant soil		Hand auger	FD	Field duplicate
SE	Sediment	L	Tube liner	FM	Field measurement
SG	Sludge	P	Pump (liquid)	FR	Field replicate
SS	Surface soil	SS	Split spoon	MD	Matrix spike duplicate
SW	Surface water	T	Shallow tube	MS	Matrix spike duplicate
WR	Water	V	Vacuum (gas)	TB	Trip blank

PID field screen

SAMPLE COLLECTION LOG

Project Number: 100004-005 Location: B3025 Fence post installation

Page 1 of 2

Date: 6/19/19

Sampler: DTH

Sample Number	Location	Sample Time	Depth Interval (ft)		Matrix Type	Sampling Method	Sample Type	PID Reading	Analyses
			top	bottom					
FS-01		825	0	4'	Soil	grab	FS	2.4	—
FS-02		838	0	4'				0.3	—
FS-03		847	0	4'				0.9	—
FS-04		854	0	4'				0.4	—
FS-05		902	0	4'				0.9	—
FS-06		914	0	4'				0.7	—
FS-07		924	0	30"				1.3	—
FS-08		931	0	3.5'				0.6	—
B3025-WB-01	at FS-01	950	—	4'			ES	2.4	DEO, LL, VOC, LL
SPN-1		1053					FS	1.5	—
SPN-2		1054						0.4	—
SPN-3		1055						3.0	—
SPN-4		1056						2.7	—
SPN-5		1057						2.5	—
SPN-6		1058						1.0	—
SPN-7		1059						2.1	—
SPN-8		1100						3.4	—
SPN-9		1101						3.1	—
SPN-10		1102						4.7	—
SPN-11		1103						1.8	—
B3025-SP-01	Location of SPN-3	1125					ES	2.0	DEO, LL, VOC
B3025-SP-02	Location of SPN-8	1133						3.4	—
B3025-SP-03	Location of SPN-9	1140						3.1	—
B3025-SP-04	Location of SPN-10	1144						4.7	—
SPC-1		1150					ES	0.7	—
SPC-2		1151					ES	2.8	—

Matrix Type		Sampling Method		Sample Type	
AR	Air	B	Bailer/Culverts	ES	Environmental sample
GW	Groundwater	D	Drill cuttings	ER	Equipment residue
PR	Product	G	Grab sampling	FB	Field blank
SB	Subsurf. soil	H	Hand auger	FD	Field duplicate
SE	Sediment	L	Tube liner	FM	Field measurement
SG	Sludge	P	Pump (liquid)	FR	Field replicate
SS	Surface soil	SS	Split spoon	MD	Matrix spike duplicate
SW	Surface water	T	Shelby tube	MS	Matrix spike duplicate
WR	Water	V	Vacuum (gas)	TB	Trip blank
		W	Wipe sampling		

Page 2 of 2

Sampler: DHT

Sample Number	Location	Sample Time	Depth Interval (ft)		Matrix Type	Sampling Method	Sample Type	PID Reading	Analyses
			top	bottom					
SPC-3		1152			soil	grab	ES	3.0	
SPC-4		1153						3.1	*
SPC-5		1154						3.4	*
83025-SP-05	location of SPC-4	1213					ES		DEO, L, VOC
83025-SP-06	(DUR) for 83025-SP-07	1218					ES		"
83025-SP-07	location of SPC-5	1200					ES		"

Location: B3075

Page 1 of 1

Date: 6/12/19

Sampler: 744

Public Addressing Form and Document Form for Results

PROJ B3025

PRJ # 100004-005

SUBJ _____

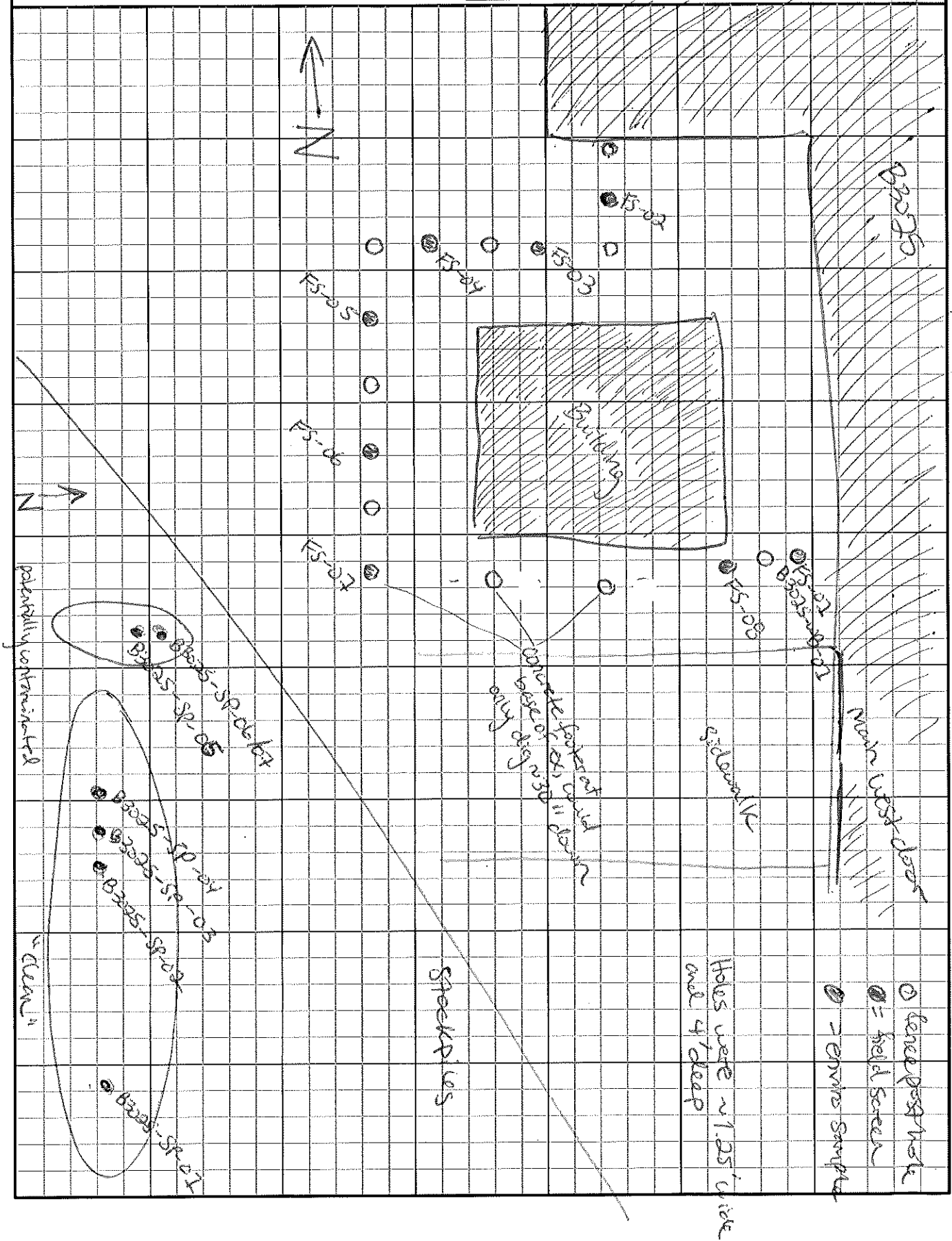
DATE 6/17/19

CALC _____

CKD _____

PG _____

OF _____



Appendix B

Analytical Results

APPENDIX B: ANALYTICAL RESULTS

TABLE 1
B3025 DISPATCH ANTENNA SOIL SAMPLE RESULTS

Analytical Method	Analyte	ADEC Soil-Cleanup Level	Units	18-3025-EB-01		18-3025-ES-01	18-3025-ES-02	18-3025-ES-03	18-3025-ES-04	18-3025-ST-01		18-3025-ST-02	18-3025-ST-03
				18-3025-EB-01	18-3025-EB-101	18-3025-ES-01	18-3025-ES-02	18-3025-ES-03	18-3025-ES-04	18-3025-ST-01	18-3025-ST-101	18-3025-ST-02	18-3025-ST-03
AK101	Gasoline Range Organics	300	mg/kg	<2.33	<1.77	<1.21	<1.39	<1.25	<1.85	<1.85	<1.85	<1.85	<1.85
AK102	Diesel Range Organics	250	mg/kg	<10.7	<10.8	<10.4	<11.0	6.80J	39.0	39.0	39.0	39.0	39.0
AK103	Residual Range Organics	11000	mg/kg	<10.7	<10.8	<10.4	<11.0	18.5J	90.1	90.1	90.1	90.1	90.1
LL SW8260C (VOCs)	1,1,2,2-Tetrachloroethane	0.003	mg/kg	<0.00186	<0.00142	<0.000965	<0.00111	<0.00100	<0.00148	<0.00141	<0.00142	<0.00123	<0.00147
	1,1,2-Trichloroethane	0.0014	mg/kg	<0.000745	<0.000565	<0.000385	<0.000445	<0.000400	<0.000590	<0.000565	<0.000565	<0.000492	<0.000590
	1,2,3-Trichloropropane	0.000031	mg/kg	<0.000935	<0.000710	<0.000482	<0.000555	<0.000500	<0.000740	<0.000705	<0.000710	<0.000615	<0.000735
	1,2-Dibromoethane	0.00024	mg/kg	<0.000935	<0.000710	<0.000482	<0.000555	<0.000500	<0.000740	<0.000705	<0.000710	<0.000615	<0.000735
	1,2-Dichloroethane	0.0055	mg/kg	<0.00186	<0.00142	<0.000965	<0.00111	<0.00100	<0.00148	<0.00141	<0.00142	<0.00123	<0.00147
	Bromodichloromethane	0.0043	mg/kg	<0.00186	<0.00142	<0.000965	<0.00111	<0.00100	<0.00148	<0.00141	<0.00142	<0.00123	<0.00147
	Bromomethane	0.024	mg/kg	<0.0187	<0.0141	<0.00965	<0.0111	<0.0100	<0.0147	<0.0141	<0.0141	<0.0123	<0.0147
	Chloroform	0.0071	mg/kg	<0.00186	<0.00142	<0.000965	<0.00111	<0.00100	<0.00148	<0.00141	<0.00142	<0.00123	<0.00147
	Dibromochloromethane	0.0027	mg/kg	<0.00186	<0.00142	<0.000965	<0.00111	<0.00100	<0.00148	<0.00141	<0.00142	<0.00123	<0.00147
	Trichloroethene	0.011	mg/kg	<0.00466	<0.00354	<0.00241	<0.00278	<0.00250	<0.00369	<0.00353	<0.00355	<0.00308	<0.00367
	Vinyl chloride	0.0008	mg/kg	<0.000745	<0.000565	<0.000385	<0.000445	<0.000400	<0.000590	<0.000565	<0.000565	<0.000492	<0.000590

Notes: ADEC Soil-Cleanup Levels from 18 AAC 75.341 Table B1 Method Two - Soil Cleanup Levels Table (Migration to Groundwater) and Table B2 Method Two - Petroleum Hydrocarbon Soil Cleanup Levels.

Sample 18-3025-ST-101 is the field duplicate of sample 18-3025-ST-01.

Sample 18-3025-EB-101 is the field duplicate of sample 18-3025-EB-01.

mg/kg milligram per kilogram

ADEC Alaska Department of Environmental Conservation

VOCs volatile organic compounds

< Analyte not detected; listed as less than the limit of detection (LOD).

J Estimated concentration, detected greater than the detection limit (DL) and less than the limit of quantitation (LOQ). Flag applied by the laboratory.

BOLD LOD exceeds the ADEC soil-cleanup level.

Laboratory Data Review Checklist

Completed By:

Cacy Wilfer

Title:

Environmental Engineering Staff

Date:

October 24, 2018

CS Report Name:

100004 B3025 Dispatch Antenna

Report Date:

October 23, 2018

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

SGS North America, Inc.

Laboratory Report Number:

1189871

ADEC File Number:

N/A

Hazard Identification Number:

N/A

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and
- perform
- all of the submitted sample analyses?

☒ Yes ☐ No

Comments:

- b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

☒ Yes ☐ No

Comments:

Analyses were performed by the SGS laboratory in Anchorage, AK. The laboratory is certified by the ADEC CSP for the requested analyses.

2. Chain of Custody (CoC)

- a. CoC information completed, signed, and dated (including released/received by)?

☒ Yes ☐ No

Comments:

- b. Correct Analyses requested?

☒ Yes ☐ No

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

☒ Yes ☐ No

Comments:

The sample receipt form notes the cooler temperature within the appropriate range.

- b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes ☐ No

Comments:

- c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes ☐ No

Comments:

The laboratory noted that samples were received in good condition.

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☒ Yes ☐ No

Comments:

There were no discrepancies.

- e. Data quality or usability affected?

Comments:

The data quality and usability were not affected.

4. Case Narrative

- a. Present and understandable?

☒ Yes ☐ No

Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

☒ Yes ☐ No

Comments:

The case narrative notes that vinyl chloride is detected in the method blank (1484031) greater than the LOQ. The narrative additionally notes that the analyte was not detected above the LOQ in the associated project samples.

- c. Were all corrective actions documented?

☒ Yes ☐ No

Comments:

Corrective actions were not necessary.

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The case narrative did not note any effect on data quality/usability. See Section 6.c. for discussion.

5. Samples Results

- a. Correct analyses performed/reported as requested on COC?

☒ Yes ☐ No

Comments:

- b. All applicable holding times met?

☒ Yes ☐ No

Comments:

c. All soils reported on a dry weight basis?

☒ Yes ☐ No

Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

☒ Yes ☐ No

Comments:

The following VOC analytes had reporting limits (limits of detections [LODs]) greater than their associated ADEC soil cleanup levels in each project samples for 1,2,3-trichloropropane and 1,2-dibromoethane.

e. Data quality or usability affected?

☐ Yes ☒ No

Comments:

Reported not-detected sample results with LODs above the applicable ADEC soil cleanup levels are noted on the analytical data table. We cannot assess if the samples are present in the samples at concentrations greater than the ADEC soil cleanup levels but less than the reporting limit.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☒ Yes ☐ No

Comments:

ii. All method blank results less than limit of quantitation (LOQ)?

☐ Yes ☒ No

Comments:

Method blank 1484031 (SW8260C LL) had a detection for vinyl chloride above the LOQ.

Method blank 1484031 had a detection for trichloroethene below the LOQ.

iii. If above LOQ, what samples are affected?

Comments:

There were no detections of vinyl chloride or trichloroethene in the associated project samples. The method blank detections did not affect sample results.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No

Comments:

N/A; see above.

v. Data quality or usability affected?

Comments:

Data quality or usability was not affected; see above.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☒ Yes ☐ No

Comments:

LCS/LCSD samples were reported for the GRO, DRO, and RRO analyses.

LCS and MS/MSD samples were reported LL VOC analyses.

- ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☒ Yes ☐ No

Comments:

Metals analyses were not included with this work order.

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No

Comments:

- iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No

Comments:

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A, %R and %RPD were not outside of acceptable limits.

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☒ Yes ☐ No

Comments:

N/A; see above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

No; see above.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☒ Yes ☐ No

Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☒ Yes ☐ No

Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☒ Yes ☐ No

Comments:

N/A, no sample results had failed surrogate recoveries.

iv. Data quality or usability affected?

Comments:

No; see above.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples?
(If not, enter explanation below.)

☒ Yes ☐ No

Comments:

Trip Blank results were reported for GRO / LL VOC analysis

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☒ Yes ☐ No

Comments:

iii. All results less than LOQ?

☒ Yes ☐ No

Comments:

iv. If above LOQ, what samples are affected?

Comments:

None; see above.

v. Data quality or usability affected?

Comments:

No; project analytes were not detected in the trip blank.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No

Comments:

ii. Submitted blind to lab?

☒ Yes ☐ No

Comments:

The field duplicate pairs *18-3025-EB-01 / 18-3025-EB-101* and *18-3025-ST-01 / 18-3025-ST-101* were submitted with this work order.

iii. Precision – All relative percent differences (RPD) less than specified DQOs?

(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

☒ Yes ☐ No

Comments:

The field-duplicate RPDs were within the project-specific DQO of 50%, where calculable for detected results.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

No; data quality is unaffected.

- f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below).

☐ Yes ☐ No ☒ Not Applicable

Project samples were collected with non-reusable sampling equipment.

- i. All results less than LOQ?

☐ Yes ☒ No

Comments:

N/A; see above.

- ii. If above LOQ, what samples are affected?

Comments:

N/A; see above.

- iii. Data quality or usability affected?

Comments:

No; see above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

- a. Defined and appropriate?

☐ Yes ☒ No

Comments:

Additional data flags or qualifiers are not required.

Laboratory Report of Analysis

To: Shannon & Wilson-Fairbanks
5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
907-479-0600

Report Number: **1189871**

Client Project: **100004 B3025 Dispatch Antenna**

Dear Valerie Webb,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Jennifer at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.



Alaska Division Technical Director

Stephen Ede

2018.10.23

11:04:30 -08'00'

Jennifer Dawkins
Project Manager
Jennifer.Dawkins@sgs.com

Date

Case Narrative

SGS Client: **Shannon & Wilson-Fairbanks**
SGS Project: **1189871**
Project Name/Site: **100004 B3025 Dispatch Antenna**
Project Contact: **Valerie Webb**

Refer to sample receipt form for information on sample condition.

MB for HBN 1788012 [VXX/33381] (1484031) MB

8260C - Vinyl chloride is detect in the MB greater than the LOQ. This analyte was not detected above the LOQ in the associated samples.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 10/23/2018 10:24:45AM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
18-3025-EB-01	1189871001	10/15/2018	10/17/2018	Soil/Solid (dry weight)
18-3025-EB-101	1189871002	10/15/2018	10/17/2018	Soil/Solid (dry weight)
18-3025-ES-01	1189871003	10/15/2018	10/17/2018	Soil/Solid (dry weight)
18-3025-ES-02	1189871004	10/15/2018	10/17/2018	Soil/Solid (dry weight)
18-3025-ES-03	1189871005	10/15/2018	10/17/2018	Soil/Solid (dry weight)
18-3025-ES-04	1189871006	10/15/2018	10/17/2018	Soil/Solid (dry weight)
18-3025-ST-01	1189871007	10/16/2018	10/17/2018	Soil/Solid (dry weight)
18-3025-ST-101	1189871008	10/16/2018	10/17/2018	Soil/Solid (dry weight)
18-3025-ST-02	1189871009	10/16/2018	10/17/2018	Soil/Solid (dry weight)
18-3025-ST-03	1189871010	10/16/2018	10/17/2018	Soil/Solid (dry weight)
Trip Blank	1189871011	10/15/2018	10/17/2018	Soil/Solid (dry weight)

<u>Method</u>	<u>Method Description</u>
AK102	Diesel/Residual Range Organics
AK103	Diesel/Residual Range Organics
AK101	Gasoline Range Organics (S)
SM21 2540G	Percent Solids SM2540G
SW8260C LL w/MeOH	VOC 8260 LL (S) w/MeOH

Print Date: 10/23/2018 10:24:47AM

Detectable Results Summary

Client Sample ID: **18-3025-ES-03**

Lab Sample ID: 1189871005

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	6.80J	mg/Kg
Residual Range Organics	18.5J	mg/Kg

Client Sample ID: **18-3025-ES-04**

Lab Sample ID: 1189871006

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	39.0	mg/Kg
Residual Range Organics	90.1	mg/Kg

Client Sample ID: **18-3025-ST-01**

Lab Sample ID: 1189871007

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	10.1J	mg/Kg
Residual Range Organics	40.1	mg/Kg

Client Sample ID: **18-3025-ST-101**

Lab Sample ID: 1189871008

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	11.8J	mg/Kg
Residual Range Organics	58.6	mg/Kg

Client Sample ID: **18-3025-ST-02**

Lab Sample ID: 1189871009

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	8.88J	mg/Kg
Residual Range Organics	13.9J	mg/Kg

Client Sample ID: **18-3025-ST-03**

Lab Sample ID: 1189871010

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	7.14J	mg/Kg
Residual Range Organics	8.52J	mg/Kg



Results of 18-3025-EB-01

Client Sample ID: 18-3025-EB-01
Client Project ID: 100004 B3025 Dispatch Antenna
Lab Sample ID: 1189871001
Lab Project ID: 1189871

Collection Date: 10/15/18 15:30
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):93.3
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.7 U	21.4	6.63	mg/Kg	1		10/22/18 12:10
Surrogates							
5a Androstane (surr)	94.6	50-150		%	1		10/22/18 12:10

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 10/22/18 12:10
Container ID: 1189871001-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.072 g
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	10.7 U	21.4	6.63	mg/Kg	1		10/22/18 12:10
Surrogates							
n-Triacontane-d62 (surr)	93.4	50-150		%	1		10/22/18 12:10

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK103
Analyst: CMS
Analytical Date/Time: 10/22/18 12:10
Container ID: 1189871001-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.072 g
Prep Extract Vol: 5 mL



Results of 18-3025-EB-01

Client Sample ID: 18-3025-EB-01
Client Project ID: 100004 B3025 Dispatch Antenna
Lab Sample ID: 1189871001
Lab Project ID: 1189871

Collection Date: 10/15/18 15:30
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):93.3
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	2.33 U	4.66	1.40	mg/Kg	1		10/19/18 16:49
Surrogates							
4-Bromofluorobenzene (surr)	67.5	50-150		%	1		10/19/18 16:49

Batch Information

Analytical Batch: VFC14516
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 10/19/18 16:49
Container ID: 1189871001-B

Prep Batch: VXX33383
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:30
Prep Initial Wt./Vol.: 31.146 g
Prep Extract Vol: 27.0955 mL

Print Date: 10/23/2018 10:24:49AM

J flagging is activated

**Results of 18-3025-EB-01**

Client Sample ID: **18-3025-EB-01**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871001
Lab Project ID: 1189871

Collection Date: 10/15/18 15:30
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):93.3
Location:

Results by Volatile GC/MS Low Level

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,2,2-Tetrachloroethane	0.00186 U	0.00373	0.00116	mg/Kg	1		10/19/18 13:07
1,1,2-Trichloroethane	0.000745 U	0.00149	0.000466	mg/Kg	1		10/19/18 13:07
1,2,3-Trichloropropane	0.000935 U	0.00187	0.000578	mg/Kg	1		10/19/18 13:07
1,2-Dibromoethane	0.000935 U	0.00187	0.000578	mg/Kg	1		10/19/18 13:07
1,2-Dichloroethane	0.00186 U	0.00373	0.00116	mg/Kg	1		10/19/18 13:07
Bromodichloromethane	0.00186 U	0.00373	0.00116	mg/Kg	1		10/19/18 13:07
Bromomethane	0.0187 U	0.0373	0.0116	mg/Kg	1		10/19/18 13:07
Chloroform	0.00186 U	0.00373	0.00116	mg/Kg	1		10/19/18 13:07
Dibromochloromethane	0.00186 U	0.00373	0.00116	mg/Kg	1		10/19/18 13:07
Trichloroethene	0.00466 U	0.00933	0.00280	mg/Kg	1		10/19/18 13:07
Vinyl chloride	0.000745 U	0.00149	0.000466	mg/Kg	1		10/19/18 13:07
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	71-136		%	1		10/19/18 13:07
4-Bromofluorobenzene (surr)	99.6	55-151		%	1		10/19/18 13:07
Toluene-d8 (surr)	103	85-116		%	1		10/19/18 13:07

Batch Information

Analytical Batch: VMS18471
Analytical Method: SW8260C LL w/MeOH
Analyst: NRO
Analytical Date/Time: 10/19/18 13:07
Container ID: 1189871001-B

Prep Batch: VXX33381
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:30
Prep Initial Wt./Vol.: 31.146 g
Prep Extract Vol: 27.0955 mL



Results of 18-3025-EB-101

Client Sample ID: **18-3025-EB-101**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871002
Lab Project ID: 1189871

Collection Date: 10/15/18 15:20
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):92.2
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.8 U	21.5	6.66	mg/Kg	1		10/22/18 12:20
Surrogates							
5a Androstane (surr)	90	50-150		%	1		10/22/18 12:20

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 10/22/18 12:20
Container ID: 1189871002-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.261 g
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	10.8 U	21.5	6.66	mg/Kg	1		10/22/18 12:20
Surrogates							
n-Triacontane-d62 (surr)	89.8	50-150		%	1		10/22/18 12:20

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK103
Analyst: CMS
Analytical Date/Time: 10/22/18 12:20
Container ID: 1189871002-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.261 g
Prep Extract Vol: 5 mL

Print Date: 10/23/2018 10:24:49AM

J flagging is activated



Results of 18-3025-EB-101

Client Sample ID: 18-3025-EB-101
Client Project ID: 100004 B3025 Dispatch Antenna
Lab Sample ID: 1189871002
Lab Project ID: 1189871

Collection Date: 10/15/18 15:20
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):92.2
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.77 U	3.54	1.06	mg/Kg	1		10/19/18 17:07
Surrogates							
4-Bromofluorobenzene (surr)	68.6	50-150		%	1		10/19/18 17:07

Batch Information

Analytical Batch: VFC14516
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 10/19/18 17:07
Container ID: 1189871002-B

Prep Batch: VXX33383
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:20
Prep Initial Wt./Vol.: 43.447 g
Prep Extract Vol: 28.3676 mL

**Results of 18-3025-EB-101**

Client Sample ID: **18-3025-EB-101**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871002
Lab Project ID: 1189871

Collection Date: 10/15/18 15:20
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):92.2
Location:

Results by Volatile GC/MS Low Level

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,2,2-Tetrachloroethane	0.00142 U	0.00283	0.000878	mg/Kg	1		10/19/18 13:22
1,1,2-Trichloroethane	0.000565 U	0.00113	0.000354	mg/Kg	1		10/19/18 13:22
1,2,3-Trichloropropane	0.000710 U	0.00142	0.000439	mg/Kg	1		10/19/18 13:22
1,2-Dibromoethane	0.000710 U	0.00142	0.000439	mg/Kg	1		10/19/18 13:22
1,2-Dichloroethane	0.00142 U	0.00283	0.000878	mg/Kg	1		10/19/18 13:22
Bromodichloromethane	0.00142 U	0.00283	0.000878	mg/Kg	1		10/19/18 13:22
Bromomethane	0.0141 U	0.0283	0.00878	mg/Kg	1		10/19/18 13:22
Chloroform	0.00142 U	0.00283	0.000878	mg/Kg	1		10/19/18 13:22
Dibromochloromethane	0.00142 U	0.00283	0.000878	mg/Kg	1		10/19/18 13:22
Trichloroethene	0.00354 U	0.00708	0.00212	mg/Kg	1		10/19/18 13:22
Vinyl chloride	0.000565 U	0.00113	0.000354	mg/Kg	1		10/19/18 13:22
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	71-136		%	1		10/19/18 13:22
4-Bromofluorobenzene (surr)	101	55-151		%	1		10/19/18 13:22
Toluene-d8 (surr)	102	85-116		%	1		10/19/18 13:22

Batch Information

Analytical Batch: VMS18471
Analytical Method: SW8260C LL w/MeOH
Analyst: NRO
Analytical Date/Time: 10/19/18 13:22
Container ID: 1189871002-B

Prep Batch: VXX33381
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:20
Prep Initial Wt./Vol.: 43.447 g
Prep Extract Vol: 28.3676 mL



Results of 18-3025-ES-01

Client Sample ID: **18-3025-ES-01**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871003
Lab Project ID: 1189871

Collection Date: 10/15/18 15:40
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):95.5
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.4 U	20.9	6.47	mg/Kg	1		10/22/18 12:31
Surrogates							
5a Androstane (surr)	98.7	50-150		%	1		10/22/18 12:31

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 10/22/18 12:31
Container ID: 1189871003-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.099 g
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	10.4 U	20.9	6.47	mg/Kg	1		10/22/18 12:31
Surrogates							
n-Triacontane-d62 (surr)	96.8	50-150		%	1		10/22/18 12:31

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK103
Analyst: CMS
Analytical Date/Time: 10/22/18 12:31
Container ID: 1189871003-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.099 g
Prep Extract Vol: 5 mL



Results of 18-3025-ES-01

Client Sample ID: **18-3025-ES-01**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871003
Lab Project ID: 1189871

Collection Date: 10/15/18 15:40
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):95.5
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.21 U	2.41	0.723	mg/Kg	1		10/19/18 17:25
Surrogates							
4-Bromofluorobenzene (surr)	67.9	50-150		%	1		10/19/18 17:25

Batch Information

Analytical Batch: VFC14516
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 10/19/18 17:25
Container ID: 1189871003-B

Prep Batch: VXX33383
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:40
Prep Initial Wt./Vol.: 60.201 g
Prep Extract Vol: 27.7059 mL

**Results of 18-3025-ES-01**

Client Sample ID: **18-3025-ES-01**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871003
Lab Project ID: 1189871

Collection Date: 10/15/18 15:40
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):95.5
Location:

Results by Volatile GC/MS Low Level

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,2,2-Tetrachloroethane	0.000965 U	0.00193	0.000598	mg/Kg	1		10/19/18 13:38
1,1,2-Trichloroethane	0.000385 U	0.000771	0.000241	mg/Kg	1		10/19/18 13:38
1,2,3-Trichloropropane	0.000482 U	0.000964	0.000299	mg/Kg	1		10/19/18 13:38
1,2-Dibromoethane	0.000482 U	0.000964	0.000299	mg/Kg	1		10/19/18 13:38
1,2-Dichloroethane	0.000965 U	0.00193	0.000598	mg/Kg	1		10/19/18 13:38
Bromodichloromethane	0.000965 U	0.00193	0.000598	mg/Kg	1		10/19/18 13:38
Bromomethane	0.00965 U	0.0193	0.00598	mg/Kg	1		10/19/18 13:38
Chloroform	0.000965 U	0.00193	0.000598	mg/Kg	1		10/19/18 13:38
Dibromochloromethane	0.000965 U	0.00193	0.000598	mg/Kg	1		10/19/18 13:38
Trichloroethene	0.00241 U	0.00482	0.00145	mg/Kg	1		10/19/18 13:38
Vinyl chloride	0.000385 U	0.000771	0.000241	mg/Kg	1		10/19/18 13:38
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	71-136		%	1		10/19/18 13:38
4-Bromofluorobenzene (surr)	100	55-151		%	1		10/19/18 13:38
Toluene-d8 (surr)	102	85-116		%	1		10/19/18 13:38

Batch Information

Analytical Batch: VMS18471
Analytical Method: SW8260C LL w/MeOH
Analyst: NRO
Analytical Date/Time: 10/19/18 13:38
Container ID: 1189871003-B

Prep Batch: VXX33381
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:40
Prep Initial Wt./Vol.: 60.201 g
Prep Extract Vol: 27.7059 mL



Results of 18-3025-ES-02

Client Sample ID: **18-3025-ES-02**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871004
Lab Project ID: 1189871

Collection Date: 10/15/18 15:42
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):89.8
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	11.0 U	22.0	6.80	mg/Kg	1		10/22/18 12:41
Surrogates							
5a Androstane (surr)	94.9	50-150		%	1		10/22/18 12:41

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 10/22/18 12:41
Container ID: 1189871004-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.441 g
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	11.0 U	22.0	6.80	mg/Kg	1		10/22/18 12:41
Surrogates							
n-Triacontane-d62 (surr)	94.2	50-150		%	1		10/22/18 12:41

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK103
Analyst: CMS
Analytical Date/Time: 10/22/18 12:41
Container ID: 1189871004-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.441 g
Prep Extract Vol: 5 mL



Results of 18-3025-ES-02

Client Sample ID: 18-3025-ES-02
Client Project ID: 100004 B3025 Dispatch Antenna
Lab Sample ID: 1189871004
Lab Project ID: 1189871

Collection Date: 10/15/18 15:42
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):89.8
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.39 U	2.78	0.834	mg/Kg	1		10/19/18 17:44
Surrogates							
4-Bromofluorobenzene (surr)	72.9	50-150		%	1		10/19/18 17:44

Batch Information

Analytical Batch: VFC14516
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 10/19/18 17:44
Container ID: 1189871004-B

Prep Batch: VXX33383
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:42
Prep Initial Wt./Vol.: 62.977 g
Prep Extract Vol: 31.4287 mL

**Results of 18-3025-ES-02**

Client Sample ID: **18-3025-ES-02**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871004
Lab Project ID: 1189871

Collection Date: 10/15/18 15:42
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):89.8
Location:

Results by Volatile GC/MS Low Level

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,2,2-Tetrachloroethane	0.00111 U	0.00222	0.000689	mg/Kg	1		10/19/18 13:53
1,1,2-Trichloroethane	0.000445 U	0.000889	0.000278	mg/Kg	1		10/19/18 13:53
1,2,3-Trichloropropane	0.000555 U	0.00111	0.000345	mg/Kg	1		10/19/18 13:53
1,2-Dibromoethane	0.000555 U	0.00111	0.000345	mg/Kg	1		10/19/18 13:53
1,2-Dichloroethane	0.00111 U	0.00222	0.000689	mg/Kg	1		10/19/18 13:53
Bromodichloromethane	0.00111 U	0.00222	0.000689	mg/Kg	1		10/19/18 13:53
Bromomethane	0.0111 U	0.0222	0.00689	mg/Kg	1		10/19/18 13:53
Chloroform	0.00111 U	0.00222	0.000689	mg/Kg	1		10/19/18 13:53
Dibromochloromethane	0.00111 U	0.00222	0.000689	mg/Kg	1		10/19/18 13:53
Trichloroethene	0.00278 U	0.00556	0.00167	mg/Kg	1		10/19/18 13:53
Vinyl chloride	0.000445 U	0.000889	0.000278	mg/Kg	1		10/19/18 13:53
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	71-136		%	1		10/19/18 13:53
4-Bromofluorobenzene (surr)	106	55-151		%	1		10/19/18 13:53
Toluene-d8 (surr)	101	85-116		%	1		10/19/18 13:53

Batch Information

Analytical Batch: VMS18471
Analytical Method: SW8260C LL w/MeOH
Analyst: NRO
Analytical Date/Time: 10/19/18 13:53
Container ID: 1189871004-B

Prep Batch: VXX33381
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:42
Prep Initial Wt./Vol.: 62.977 g
Prep Extract Vol: 31.4287 mL

Results of 18-3025-ES-03

Client Sample ID: **18-3025-ES-03**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189871005
 Lab Project ID: 1189871

Collection Date: 10/15/18 15:44
 Received Date: 10/17/18 09:18
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.0
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	6.80 J	21.2	6.57	mg/Kg	1		10/22/18 12:52
Surrogates							
5a Androstane (surr)	91.2	50-150		%	1		10/22/18 12:52

Batch Information

Analytical Batch: XFC14738
 Analytical Method: AK102
 Analyst: CMS
 Analytical Date/Time: 10/22/18 12:52
 Container ID: 1189871005-A

Prep Batch: XXX40751
 Prep Method: SW3550C
 Prep Date/Time: 10/17/18 15:03
 Prep Initial Wt./Vol.: 30.435 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	18.5 J	21.2	6.57	mg/Kg	1		10/22/18 12:52
Surrogates							
n-Triacontane-d62 (surr)	90.3	50-150		%	1		10/22/18 12:52

Batch Information

Analytical Batch: XFC14738
 Analytical Method: AK103
 Analyst: CMS
 Analytical Date/Time: 10/22/18 12:52
 Container ID: 1189871005-A

Prep Batch: XXX40751
 Prep Method: SW3550C
 Prep Date/Time: 10/17/18 15:03
 Prep Initial Wt./Vol.: 30.435 g
 Prep Extract Vol: 5 mL



Results of 18-3025-ES-03

Client Sample ID: **18-3025-ES-03**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871005
Lab Project ID: 1189871

Collection Date: 10/15/18 15:44
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):93.0
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.25 U	2.50	0.750	mg/Kg	1		10/19/18 18:02
Surrogates							
4-Bromofluorobenzene (surr)	69.9	50-150		%	1		10/19/18 18:02

Batch Information

Analytical Batch: VFC14516
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 10/19/18 18:02
Container ID: 1189871005-B

Prep Batch: VXX33383
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:44
Prep Initial Wt./Vol.: 63.328 g
Prep Extract Vol: 29.4348 mL

**Results of 18-3025-ES-03**

Client Sample ID: **18-3025-ES-03**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871005
Lab Project ID: 1189871

Collection Date: 10/15/18 15:44
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):93.0
Location:

Results by Volatile GC/MS Low Level

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,2,2-Tetrachloroethane	0.00100 U	0.00200	0.000620	mg/Kg	1		10/19/18 14:08
1,1,2-Trichloroethane	0.000400 U	0.000800	0.000250	mg/Kg	1		10/19/18 14:08
1,2,3-Trichloropropane	0.000500 U	0.00100	0.000310	mg/Kg	1		10/19/18 14:08
1,2-Dibromoethane	0.000500 U	0.00100	0.000310	mg/Kg	1		10/19/18 14:08
1,2-Dichloroethane	0.00100 U	0.00200	0.000620	mg/Kg	1		10/19/18 14:08
Bromodichloromethane	0.00100 U	0.00200	0.000620	mg/Kg	1		10/19/18 14:08
Bromomethane	0.0100 U	0.0200	0.00620	mg/Kg	1		10/19/18 14:08
Chloroform	0.00100 U	0.00200	0.000620	mg/Kg	1		10/19/18 14:08
Dibromochloromethane	0.00100 U	0.00200	0.000620	mg/Kg	1		10/19/18 14:08
Trichloroethene	0.00250 U	0.00500	0.00150	mg/Kg	1		10/19/18 14:08
Vinyl chloride	0.000400 U	0.000800	0.000250	mg/Kg	1		10/19/18 14:08
Surrogates							
1,2-Dichloroethane-D4 (surr)	102	71-136		%	1		10/19/18 14:08
4-Bromofluorobenzene (surr)	106	55-151		%	1		10/19/18 14:08
Toluene-d8 (surr)	103	85-116		%	1		10/19/18 14:08

Batch Information

Analytical Batch: VMS18471
Analytical Method: SW8260C LL w/MeOH
Analyst: NRO
Analytical Date/Time: 10/19/18 14:08
Container ID: 1189871005-B

Prep Batch: VXX33381
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:44
Prep Initial Wt./Vol.: 63.328 g
Prep Extract Vol: 29.4348 mL



Results of 18-3025-ES-04

Client Sample ID: **18-3025-ES-04**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871006
Lab Project ID: 1189871

Collection Date: 10/15/18 15:46
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):88.7
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	39.0	22.3	6.92	mg/Kg	1		10/22/18 13:02
Surrogates							
5a Androstane (surr)	98.2	50-150		%	1		10/22/18 13:02

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 10/22/18 13:02
Container ID: 1189871006-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.28 g
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	90.1	22.3	6.92	mg/Kg	1		10/22/18 13:02
Surrogates							
n-Triacontane-d62 (surr)	97.4	50-150		%	1		10/22/18 13:02

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK103
Analyst: CMS
Analytical Date/Time: 10/22/18 13:02
Container ID: 1189871006-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.28 g
Prep Extract Vol: 5 mL

Print Date: 10/23/2018 10:24:49AM

J flagging is activated



Results of 18-3025-ES-04

Client Sample ID: **18-3025-ES-04**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871006
Lab Project ID: 1189871

Collection Date: 10/15/18 15:46
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):88.7
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.85 U	3.69	1.11	mg/Kg	1		10/19/18 18:20
Surrogates							
4-Bromofluorobenzene (surr)	65.7	50-150		%	1		10/19/18 18:20

Batch Information

Analytical Batch: VFC14516
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 10/19/18 18:20
Container ID: 1189871006-B

Prep Batch: VXX33383
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:46
Prep Initial Wt./Vol.: 46.168 g
Prep Extract Vol: 30.2129 mL

**Results of 18-3025-ES-04**

Client Sample ID: **18-3025-ES-04**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871006
Lab Project ID: 1189871

Collection Date: 10/15/18 15:46
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):88.7
Location:

Results by Volatile GC/MS Low Level

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,2,2-Tetrachloroethane	0.00148 U	0.00295	0.000915	mg/Kg	1		10/19/18 14:24
1,1,2-Trichloroethane	0.000590 U	0.00118	0.000369	mg/Kg	1		10/19/18 14:24
1,2,3-Trichloropropane	0.000740 U	0.00148	0.000457	mg/Kg	1		10/19/18 14:24
1,2-Dibromoethane	0.000740 U	0.00148	0.000457	mg/Kg	1		10/19/18 14:24
1,2-Dichloroethane	0.00148 U	0.00295	0.000915	mg/Kg	1		10/19/18 14:24
Bromodichloromethane	0.00148 U	0.00295	0.000915	mg/Kg	1		10/19/18 14:24
Bromomethane	0.0147 U	0.0295	0.00915	mg/Kg	1		10/19/18 14:24
Chloroform	0.00148 U	0.00295	0.000915	mg/Kg	1		10/19/18 14:24
Dibromochloromethane	0.00148 U	0.00295	0.000915	mg/Kg	1		10/19/18 14:24
Trichloroethene	0.00369 U	0.00738	0.00221	mg/Kg	1		10/19/18 14:24
Vinyl chloride	0.000590 U	0.00118	0.000369	mg/Kg	1		10/19/18 14:24
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	71-136		%	1		10/19/18 14:24
4-Bromofluorobenzene (surr)	102	55-151		%	1		10/19/18 14:24
Toluene-d8 (surr)	101	85-116		%	1		10/19/18 14:24

Batch Information

Analytical Batch: VMS18471
Analytical Method: SW8260C LL w/MeOH
Analyst: NRO
Analytical Date/Time: 10/19/18 14:24
Container ID: 1189871006-B

Prep Batch: VXX33381
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:46
Prep Initial Wt./Vol.: 46.168 g
Prep Extract Vol: 30.2129 mL



Results of 18-3025-ST-01

Client Sample ID: **18-3025-ST-01**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871007
Lab Project ID: 1189871

Collection Date: 10/16/18 10:10
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):93.0
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.1 J	21.4	6.63	mg/Kg	1		10/22/18 13:13
Surrogates							
5a Androstane (surr)	95.3	50-150		%	1		10/22/18 13:13

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 10/22/18 13:13
Container ID: 1189871007-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.146 g
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	40.1	21.4	6.63	mg/Kg	1		10/22/18 13:13
Surrogates							
n-Triacontane-d62 (surr)	95	50-150		%	1		10/22/18 13:13

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK103
Analyst: CMS
Analytical Date/Time: 10/22/18 13:13
Container ID: 1189871007-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.146 g
Prep Extract Vol: 5 mL



Results of 18-3025-ST-01

Client Sample ID: 18-3025-ST-01
Client Project ID: 100004 B3025 Dispatch Antenna
Lab Sample ID: 1189871007
Lab Project ID: 1189871

Collection Date: 10/16/18 10:10
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):93.0
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.76 U	3.53	1.06	mg/Kg	1		10/19/18 19:15
Surrogates							
4-Bromofluorobenzene (surr)	64.5	50-150		%	1		10/19/18 19:15

Batch Information

Analytical Batch: VFC14516
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 10/19/18 19:15
Container ID: 1189871007-B

Prep Batch: VXX33383
Prep Method: SW5035A
Prep Date/Time: 10/16/18 10:10
Prep Initial Wt./Vol.: 42.645 g
Prep Extract Vol: 27.9852 mL

**Results of 18-3025-ST-01**

Client Sample ID: **18-3025-ST-01**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871007
Lab Project ID: 1189871

Collection Date: 10/16/18 10:10
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):93.0
Location:

Results by Volatile GC/MS Low Level

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,2,2-Tetrachloroethane	0.00141 U	0.00282	0.000875	mg/Kg	1		10/19/18 14:39
1,1,2-Trichloroethane	0.000565 U	0.00113	0.000353	mg/Kg	1		10/19/18 14:39
1,2,3-Trichloropropane	0.000705 U	0.00141	0.000437	mg/Kg	1		10/19/18 14:39
1,2-Dibromoethane	0.000705 U	0.00141	0.000437	mg/Kg	1		10/19/18 14:39
1,2-Dichloroethane	0.00141 U	0.00282	0.000875	mg/Kg	1		10/19/18 14:39
Bromodichloromethane	0.00141 U	0.00282	0.000875	mg/Kg	1		10/19/18 14:39
Bromomethane	0.0141 U	0.0282	0.00875	mg/Kg	1		10/19/18 14:39
Chloroform	0.00141 U	0.00282	0.000875	mg/Kg	1		10/19/18 14:39
Dibromochloromethane	0.00141 U	0.00282	0.000875	mg/Kg	1		10/19/18 14:39
Trichloroethene	0.00353 U	0.00706	0.00212	mg/Kg	1		10/19/18 14:39
Vinyl chloride	0.000565 U	0.00113	0.000353	mg/Kg	1		10/19/18 14:39
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	71-136		%	1		10/19/18 14:39
4-Bromofluorobenzene (surr)	98.8	55-151		%	1		10/19/18 14:39
Toluene-d8 (surr)	103	85-116		%	1		10/19/18 14:39

Batch Information

Analytical Batch: VMS18471
Analytical Method: SW8260C LL w/MeOH
Analyst: NRO
Analytical Date/Time: 10/19/18 14:39
Container ID: 1189871007-B

Prep Batch: VXX33381
Prep Method: SW5035A
Prep Date/Time: 10/16/18 10:10
Prep Initial Wt./Vol.: 42.645 g
Prep Extract Vol: 27.9852 mL



Results of 18-3025-ST-101

Client Sample ID: **18-3025-ST-101**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871008
Lab Project ID: 1189871

Collection Date: 10/16/18 10:00
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):93.0
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	11.8 J	21.4	6.63	mg/Kg	1		10/22/18 13:24
Surrogates							
5a Androstane (surr)	94.7	50-150		%	1		10/22/18 13:24

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 10/22/18 13:24
Container ID: 1189871008-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.19 g
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	58.6	21.4	6.63	mg/Kg	1		10/22/18 13:24
Surrogates							
n-Triacontane-d62 (surr)	92.6	50-150		%	1		10/22/18 13:24

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK103
Analyst: CMS
Analytical Date/Time: 10/22/18 13:24
Container ID: 1189871008-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.19 g
Prep Extract Vol: 5 mL



Results of 18-3025-ST-101

Client Sample ID: **18-3025-ST-101**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871008
Lab Project ID: 1189871

Collection Date: 10/16/18 10:00
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):93.0
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.77 U	3.54	1.06	mg/Kg	1		10/19/18 19:33
Surrogates							
4-Bromofluorobenzene (surr)	65.3	50-150		%	1		10/19/18 19:33

Batch Information

Analytical Batch: VFC14516
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 10/19/18 19:33
Container ID: 1189871008-B

Prep Batch: VXX33383
Prep Method: SW5035A
Prep Date/Time: 10/16/18 10:00
Prep Initial Wt./Vol.: 42.501 g
Prep Extract Vol: 27.9931 mL

**Results of 18-3025-ST-101**

Client Sample ID: **18-3025-ST-101**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871008
Lab Project ID: 1189871

Collection Date: 10/16/18 10:00
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):93.0
Location:

Results by Volatile GC/MS Low Level

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,2,2-Tetrachloroethane	0.00142 U	0.00283	0.000879	mg/Kg	1		10/19/18 14:54
1,1,2-Trichloroethane	0.000565 U	0.00113	0.000354	mg/Kg	1		10/19/18 14:54
1,2,3-Trichloropropane	0.000710 U	0.00142	0.000439	mg/Kg	1		10/19/18 14:54
1,2-Dibromoethane	0.000710 U	0.00142	0.000439	mg/Kg	1		10/19/18 14:54
1,2-Dichloroethane	0.00142 U	0.00283	0.000879	mg/Kg	1		10/19/18 14:54
Bromodichloromethane	0.00142 U	0.00283	0.000879	mg/Kg	1		10/19/18 14:54
Bromomethane	0.0141 U	0.0283	0.00879	mg/Kg	1		10/19/18 14:54
Chloroform	0.00142 U	0.00283	0.000879	mg/Kg	1		10/19/18 14:54
Dibromochloromethane	0.00142 U	0.00283	0.000879	mg/Kg	1		10/19/18 14:54
Trichloroethene	0.00355 U	0.00709	0.00213	mg/Kg	1		10/19/18 14:54
Vinyl chloride	0.000565 U	0.00113	0.000354	mg/Kg	1		10/19/18 14:54
Surrogates							
1,2-Dichloroethane-D4 (surr)	100	71-136		%	1		10/19/18 14:54
4-Bromofluorobenzene (surr)	95.9	55-151		%	1		10/19/18 14:54
Toluene-d8 (surr)	102	85-116		%	1		10/19/18 14:54

Batch Information

Analytical Batch: VMS18471
Analytical Method: SW8260C LL w/MeOH
Analyst: NRO
Analytical Date/Time: 10/19/18 14:54
Container ID: 1189871008-B

Prep Batch: VXX33381
Prep Method: SW5035A
Prep Date/Time: 10/16/18 10:00
Prep Initial Wt./Vol.: 42.501 g
Prep Extract Vol: 27.9931 mL



Results of 18-3025-ST-02

Client Sample ID: **18-3025-ST-02**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871009
Lab Project ID: 1189871

Collection Date: 10/16/18 10:12
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):90.0
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	8.88 J	21.9	6.79	mg/Kg	1		10/22/18 13:34
Surrogates							
5a Androstane (surr)	94.7	50-150		%	1		10/22/18 13:34

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 10/22/18 13:34
Container ID: 1189871009-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.437 g
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	13.9 J	21.9	6.79	mg/Kg	1		10/22/18 13:34
Surrogates							
n-Triacontane-d62 (surr)	93.8	50-150		%	1		10/22/18 13:34

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK103
Analyst: CMS
Analytical Date/Time: 10/22/18 13:34
Container ID: 1189871009-A

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/18 15:03
Prep Initial Wt./Vol.: 30.437 g
Prep Extract Vol: 5 mL

Print Date: 10/23/2018 10:24:49AM

J flagging is activated



Results of 18-3025-ST-02

Client Sample ID: 18-3025-ST-02
Client Project ID: 100004 B3025 Dispatch Antenna
Lab Sample ID: 1189871009
Lab Project ID: 1189871

Collection Date: 10/16/18 10:12
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):90.0
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.54 U	3.08	0.923	mg/Kg	1		10/19/18 19:51
Surrogates							
4-Bromofluorobenzene (surr)	67.2	50-150		%	1		10/19/18 19:51

Batch Information

Analytical Batch: VFC14516
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 10/19/18 19:51
Container ID: 1189871009-B

Prep Batch: VXX33383
Prep Method: SW5035A
Prep Date/Time: 10/16/18 10:12
Prep Initial Wt./Vol.: 55.085 g
Prep Extract Vol: 30.5089 mL

**Results of 18-3025-ST-02**

Client Sample ID: **18-3025-ST-02**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871009
Lab Project ID: 1189871

Collection Date: 10/16/18 10:12
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):90.0
Location:

Results by Volatile GC/MS Low Level

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,2,2-Tetrachloroethane	0.00123 U	0.00246	0.000763	mg/Kg	1		10/19/18 15:10
1,1,2-Trichloroethane	0.000492 U	0.000985	0.000308	mg/Kg	1		10/19/18 15:10
1,2,3-Trichloropropane	0.000615 U	0.00123	0.000382	mg/Kg	1		10/19/18 15:10
1,2-Dibromoethane	0.000615 U	0.00123	0.000382	mg/Kg	1		10/19/18 15:10
1,2-Dichloroethane	0.00123 U	0.00246	0.000763	mg/Kg	1		10/19/18 15:10
Bromodichloromethane	0.00123 U	0.00246	0.000763	mg/Kg	1		10/19/18 15:10
Bromomethane	0.0123 U	0.0246	0.00763	mg/Kg	1		10/19/18 15:10
Chloroform	0.00123 U	0.00246	0.000763	mg/Kg	1		10/19/18 15:10
Dibromochloromethane	0.00123 U	0.00246	0.000763	mg/Kg	1		10/19/18 15:10
Trichloroethene	0.00308 U	0.00615	0.00185	mg/Kg	1		10/19/18 15:10
Vinyl chloride	0.000492 U	0.000985	0.000308	mg/Kg	1		10/19/18 15:10
Surrogates							
1,2-Dichloroethane-D4 (surr)	99.8	71-136		%	1		10/19/18 15:10
4-Bromofluorobenzene (surr)	104	55-151		%	1		10/19/18 15:10
Toluene-d8 (surr)	101	85-116		%	1		10/19/18 15:10

Batch Information

Analytical Batch: VMS18471
Analytical Method: SW8260C LL w/MeOH
Analyst: NRO
Analytical Date/Time: 10/19/18 15:10
Container ID: 1189871009-B

Prep Batch: VXX33381
Prep Method: SW5035A
Prep Date/Time: 10/16/18 10:12
Prep Initial Wt./Vol.: 55.085 g
Prep Extract Vol: 30.5089 mL

Results of 18-3025-ST-03

Client Sample ID: **18-3025-ST-03**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189871010
 Lab Project ID: 1189871

Collection Date: 10/16/18 10:14
 Received Date: 10/17/18 09:18
 Matrix: Soil/Solid (dry weight)
 Solids (%):86.5
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	7.14 J	22.8	7.07	mg/Kg	1		10/22/18 13:44
Surrogates							
5a Androstane (surr)	88.9	50-150		%	1		10/22/18 13:44

Batch Information

Analytical Batch: XFC14738
 Analytical Method: AK102
 Analyst: CMS
 Analytical Date/Time: 10/22/18 13:44
 Container ID: 1189871010-A

Prep Batch: XXX40751
 Prep Method: SW3550C
 Prep Date/Time: 10/17/18 15:03
 Prep Initial Wt./Vol.: 30.388 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	8.52 J	22.8	7.07	mg/Kg	1		10/22/18 13:44
Surrogates							
n-Triacontane-d62 (surr)	88.6	50-150		%	1		10/22/18 13:44

Batch Information

Analytical Batch: XFC14738
 Analytical Method: AK103
 Analyst: CMS
 Analytical Date/Time: 10/22/18 13:44
 Container ID: 1189871010-A

Prep Batch: XXX40751
 Prep Method: SW3550C
 Prep Date/Time: 10/17/18 15:03
 Prep Initial Wt./Vol.: 30.388 g
 Prep Extract Vol: 5 mL



Results of 18-3025-ST-03

Client Sample ID: 18-3025-ST-03
Client Project ID: 100004 B3025 Dispatch Antenna
Lab Sample ID: 1189871010
Lab Project ID: 1189871

Collection Date: 10/16/18 10:14
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):86.5
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.84 U	3.67	1.10	mg/Kg	1		10/19/18 20:09
Surrogates							
4-Bromofluorobenzene (surr)	72.3	50-150		%	1		10/19/18 20:09

Batch Information

Analytical Batch: VFC14516
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 10/19/18 20:09
Container ID: 1189871010-B

Prep Batch: VXX33383
Prep Method: SW5035A
Prep Date/Time: 10/16/18 10:14
Prep Initial Wt./Vol.: 49.901 g
Prep Extract Vol: 31.7222 mL

**Results of 18-3025-ST-03**

Client Sample ID: **18-3025-ST-03**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871010
Lab Project ID: 1189871

Collection Date: 10/16/18 10:14
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):86.5
Location:

Results by Volatile GC/MS Low Level

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,2,2-Tetrachloroethane	0.00147 U	0.00294	0.000911	mg/Kg	1		10/19/18 15:25
1,1,2-Trichloroethane	0.000590 U	0.00118	0.000367	mg/Kg	1		10/19/18 15:25
1,2,3-Trichloropropane	0.000735 U	0.00147	0.000455	mg/Kg	1		10/19/18 15:25
1,2-Dibromoethane	0.000735 U	0.00147	0.000455	mg/Kg	1		10/19/18 15:25
1,2-Dichloroethane	0.00147 U	0.00294	0.000911	mg/Kg	1		10/19/18 15:25
Bromodichloromethane	0.00147 U	0.00294	0.000911	mg/Kg	1		10/19/18 15:25
Bromomethane	0.0147 U	0.0294	0.00911	mg/Kg	1		10/19/18 15:25
Chloroform	0.00147 U	0.00294	0.000911	mg/Kg	1		10/19/18 15:25
Dibromochloromethane	0.00147 U	0.00294	0.000911	mg/Kg	1		10/19/18 15:25
Trichloroethene	0.00367 U	0.00735	0.00220	mg/Kg	1		10/19/18 15:25
Vinyl chloride	0.000590 U	0.00118	0.000367	mg/Kg	1		10/19/18 15:25
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	71-136		%	1		10/19/18 15:25
4-Bromofluorobenzene (surr)	114	55-151		%	1		10/19/18 15:25
Toluene-d8 (surr)	103	85-116		%	1		10/19/18 15:25

Batch Information

Analytical Batch: VMS18471
Analytical Method: SW8260C LL w/MeOH
Analyst: NRO
Analytical Date/Time: 10/19/18 15:25
Container ID: 1189871010-B

Prep Batch: VXX33381
Prep Method: SW5035A
Prep Date/Time: 10/16/18 10:14
Prep Initial Wt./Vol.: 49.901 g
Prep Extract Vol: 31.7222 mL



Results of Trip Blank

Client Sample ID: **Trip Blank**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871011
Lab Project ID: 1189871

Collection Date: 10/15/18 15:30
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.25 U	2.51	0.752	mg/Kg	1		10/19/18 13:48
Surrogates							
4-Bromofluorobenzene (surr)	66.9	50-150		%	1		10/19/18 13:48

Batch Information

Analytical Batch: VFC14516
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 10/19/18 13:48
Container ID: 1189871011-A

Prep Batch: VXX33383
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:30
Prep Initial Wt./Vol.: 49.865 g
Prep Extract Vol: 25 mL

Print Date: 10/23/2018 10:24:49AM

J flagging is activated



Results of Trip Blank

Client Sample ID: **Trip Blank**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189871011
Lab Project ID: 1189871

Collection Date: 10/15/18 15:30
Received Date: 10/17/18 09:18
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

Results by Volatile GC/MS Low Level

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,2,2-Tetrachloroethane	0.00101 U	0.00201	0.000622	mg/Kg	1		10/18/18 14:38
1,1,2-Trichloroethane	0.000401 U	0.000802	0.000251	mg/Kg	1		10/18/18 14:38
1,2,3-Trichloropropane	0.000500 U	0.00100	0.000311	mg/Kg	1		10/18/18 14:38
1,2-Dibromoethane	0.000500 U	0.00100	0.000311	mg/Kg	1		10/18/18 14:38
1,2-Dichloroethane	0.00101 U	0.00201	0.000622	mg/Kg	1		10/18/18 14:38
Bromodichloromethane	0.00101 U	0.00201	0.000622	mg/Kg	1		10/18/18 14:38
Bromomethane	0.0101 U	0.0201	0.00622	mg/Kg	1		10/18/18 14:38
Chloroform	0.00101 U	0.00201	0.000622	mg/Kg	1		10/18/18 14:38
Dibromochloromethane	0.00101 U	0.00201	0.000622	mg/Kg	1		10/18/18 14:38
Trichloroethene	0.00250 U	0.00501	0.00150	mg/Kg	1		10/18/18 14:38
Vinyl chloride	0.000401 U	0.000802	0.000251	mg/Kg	1		10/18/18 14:38
Surrogates							
1,2-Dichloroethane-D4 (surr)	98.7	71-136		%	1		10/18/18 14:38
4-Bromofluorobenzene (surr)	84.7	55-151		%	1		10/18/18 14:38
Toluene-d8 (surr)	103	85-116		%	1		10/18/18 14:38

Batch Information

Analytical Batch: VMS18469
Analytical Method: SW8260C LL w/MeOH
Analyst: NRO
Analytical Date/Time: 10/18/18 14:38
Container ID: 1189871011-A

Prep Batch: VXX33379
Prep Method: SW5035A
Prep Date/Time: 10/15/18 15:30
Prep Initial Wt./Vol.: 49.865 g
Prep Extract Vol: 25 mL



Method Blank

Blank ID: MB for HBN 1787883 [SPT/10657]
Blank Lab ID: 1483415

Matrix: Soil/Solid (dry weight)

QC for Samples:

1189871001, 1189871002, 1189871003, 1189871004, 1189871005, 1189871006, 1189871007, 1189871008, 1189871009, 1189871010

Results by SM21 2540G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Solids	100			%

Batch Information

Analytical Batch: SPT10657
Analytical Method: SM21 2540G
Instrument:
Analyst: E.M
Analytical Date/Time: 10/17/2018 7:49:00PM

Print Date: 10/23/2018 10:24:52AM

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Duplicate Sample Summary

Original Sample ID: 1189871001

Duplicate Sample ID: 1483416

QC for Samples:

1189871001, 1189871002, 1189871003, 1189871004, 1189871005, 1189871006, 1189871007, 1189871008, 1189871009, 1189871010

Analysis Date: 10/17/2018 19:49

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	93.3	93.3	%	0.02	(< 15)

Batch Information

Analytical Batch: SPT10657

Analytical Method: SM21 2540G

Instrument:

Analyst: E.M

Print Date: 10/23/2018 10:24:53AM

Method Blank

Blank ID: MB for HBN 1788003 [VXX/33379]
Blank Lab ID: 1483996

Matrix: Soil/Solid (dry weight)

QC for Samples:
1189871011

Results by SW8260C LL w/MeOH

Parameter	Results	LOQ/CL	DL	Units
1,1,2,2-Tetrachloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,1,2-Trichloroethane	0.000400U	0.000800	0.000250	mg/Kg
1,2,3-Trichloropropane	0.000500U	0.00100	0.000310	mg/Kg
1,2-Dibromoethane	0.000500U	0.00100	0.000310	mg/Kg
1,2-Dichloroethane	0.00100U	0.00200	0.000620	mg/Kg
Bromodichloromethane	0.00100U	0.00200	0.000620	mg/Kg
Bromomethane	0.0100U	0.0200	0.00620	mg/Kg
Chloroform	0.00100U	0.00200	0.000620	mg/Kg
Dibromochloromethane	0.00100U	0.00200	0.000620	mg/Kg
Trichloroethene	0.00250U	0.00500	0.00150	mg/Kg
Vinyl chloride	0.000400U	0.000800	0.000250	mg/Kg

Surrogates

1,2-Dichloroethane-D4 (surr)	97.7	71-136	%
4-Bromofluorobenzene (surr)	105	55-151	%
Toluene-d8 (surr)	103	85-116	%

Batch Information

Analytical Batch: VMS18469
Analytical Method: SW8260C LL w/MeOH
Instrument: VQA 7890/5975 GC/MS
Analyst: NRO
Analytical Date/Time: 10/18/2018 12:20:00PM

Prep Batch: VXX33379
Prep Method: SW5035A
Prep Date/Time: 10/18/2018 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1189871 [VXX33379]

Blank Spike Lab ID: 1483997

Date Analyzed: 10/18/2018 12:37

Matrix: Soil/Solid (dry weight)

QC for Samples: 1189871011

Results by SW8260C LL w/MeOH

Blank Spike (mg/Kg)

Parameter	Spike	Result	Rec (%)	CL
1,1,2,2-Tetrachloroethane	0.750	0.729	97	(70-124)
1,1,2-Trichloroethane	0.750	0.787	105	(78-121)
1,2,3-Trichloropropane	0.750	0.732	98	(73-125)
1,2-Dibromoethane	0.750	0.772	103	(78-122)
1,2-Dichloroethane	0.750	0.654	87	(73-128)
Bromodichloromethane	0.750	0.687	92	(75-127)
Bromomethane	0.750	0.666	89	(53-143)
Chloroform	0.750	0.686	92	(78-123)
Dibromochloromethane	0.750	0.753	100	(74-126)
Trichloroethene	0.750	0.813	108	(77-123)
Vinyl chloride	0.750	0.709	95	(56-135)

Surrogates

1,2-Dichloroethane-D4 (surr)	0.750	85.5	86	(71-136)
4-Bromofluorobenzene (surr)	0.750	104	104	(55-151)
Toluene-d8 (surr)	0.750	106	106	(85-116)

Batch Information

Analytical Batch: VMS18469

Analytical Method: SW8260C LL w/MeOH

Instrument: VQA 7890/5975 GC/MS

Analyst: NRO

Prep Batch: VXX33379

Prep Method: SW5035A

Prep Date/Time: 10/18/2018 06:00

Spike Init Wt./Vol.: 0.750 mg/Kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Matrix Spike Summary

Original Sample ID: 1483995
MS Sample ID: 1483998 MS
MSD Sample ID: 1483999 MSD

Analysis Date: 10/18/2018 14:55
Analysis Date: 10/18/2018 13:17
Analysis Date: 10/18/2018 13:33
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1189871011

Results by SW8260C LL w/MeOH

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,2,2-Tetrachloroethane	0.000985U	0.740	0.684	92	0.740	0.720	97	70-124	5.10	(< 20)
1,1,2-Trichloroethane	0.000394U	0.740	0.769	104	0.740	0.822	111	78-121	6.60	(< 20)
1,2,3-Trichloropropane	0.000494U	0.740	0.696	94	0.740	0.725	98	73-125	4.00	(< 20)
1,2-Dibromoethane	0.000494U	0.740	0.747	101	0.740	0.800	108	78-122	6.80	(< 20)
1,2-Dichloroethane	0.000985U	0.740	0.665	90	0.740	0.675	91	73-128	1.50	(< 20)
Bromodichloromethane	0.000985U	0.740	0.702	95	0.740	0.714	97	75-127	1.80	(< 20)
Bromomethane	0.00985U	0.740	0.736	100	0.740	0.709	96	53-143	3.70	(< 20)
Chloroform	0.000985U	0.740	0.708	96	0.740	0.708	96	78-123	0.04	(< 20)
Dibromochloromethane	0.000985U	0.740	0.732	99	0.740	0.784	106	74-126	6.90	(< 20)
Trichloroethene	0.00247U	0.740	0.835	113	0.740	0.838	113	77-123	0.37	(< 20)
Vinyl chloride	0.000394U	0.740	0.759	103	0.740	0.694	94	56-135	8.90	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		0.740	0.657	89	0.740	0.657	89	71-136	0.05	
4-Bromofluorobenzene (surr)		1.23	0.745	60	1.23	0.784	64	55-151	5.10	
Toluene-d8 (surr)		0.740	0.780	105	0.740	0.785	106	85-116	0.60	

Batch Information

Analytical Batch: VMS18469
Analytical Method: SW8260C LL w/MeOH
Instrument: VQA 7890/5975 GC/MS
Analyst: NRO
Analytical Date/Time: 10/18/2018 1:17:00PM

Prep Batch: VXX33379
Prep Method: Vol. Extraction SW8260 LL w/MeOH
Prep Date/Time: 10/18/2018 6:00:00AM
Prep Initial Wt./Vol.: 50.67g
Prep Extract Vol: 25.00mL

Method Blank

Blank ID: MB for HBN 1788012 [VXX/33381]
Blank Lab ID: 1484031

Matrix: Soil/Solid (dry weight)

QC for Samples:

1189871001, 1189871002, 1189871003, 1189871004, 1189871005, 1189871006, 1189871007, 1189871008, 1189871009, 1189871010

Results by SW8260C LL w/MeOH

Parameter	Results	LOQ/CL	DL	Units
1,1,2,2-Tetrachloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,1,2-Trichloroethane	0.000400U	0.000800	0.000250	mg/Kg
1,2,3-Trichloropropane	0.000500U	0.00100	0.000310	mg/Kg
1,2-Dibromoethane	0.000500U	0.00100	0.000310	mg/Kg
1,2-Dichloroethane	0.00100U	0.00200	0.000620	mg/Kg
Bromodichloromethane	0.00100U	0.00200	0.000620	mg/Kg
Bromomethane	0.0100U	0.0200	0.00620	mg/Kg
Chloroform	0.00100U	0.00200	0.000620	mg/Kg
Dibromochloromethane	0.00100U	0.00200	0.000620	mg/Kg
Trichloroethene	0.00153J	0.00500	0.00150	mg/Kg
Vinyl chloride	0.00194*	0.000800	0.000250	mg/Kg

Surrogates

1,2-Dichloroethane-D4 (surr)	102	71-136	%
4-Bromofluorobenzene (surr)	103	55-151	%
Toluene-d8 (surr)	102	85-116	%

Batch Information

Analytical Batch: VMS18471
Analytical Method: SW8260C LL w/MeOH
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: NRO
Analytical Date/Time: 10/19/2018 10:28:00AM

Prep Batch: VXX33381
Prep Method: SW5035A
Prep Date/Time: 10/19/2018 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1189871 [VXX33381]

Blank Spike Lab ID: 1484032

Date Analyzed: 10/19/2018 10:43

Matrix: Soil/Solid (dry weight)

QC for Samples: 1189871001, 1189871002, 1189871003, 1189871004, 1189871005, 1189871006, 1189871007, 1189871008, 1189871009, 1189871010

Results by SW8260C LL w/MeOH

Blank Spike (mg/Kg)

Parameter	Spike	Result	Rec (%)	CL
1,1,2,2-Tetrachloroethane	0.750	0.816	109	(70-124)
1,1,2-Trichloroethane	0.750	0.777	104	(78-121)
1,2,3-Trichloropropane	0.750	0.798	106	(73-125)
1,2-Dibromoethane	0.750	0.765	102	(78-122)
1,2-Dichloroethane	0.750	0.733	98	(73-128)
Bromodichloromethane	0.750	0.738	99	(75-127)
Bromomethane	0.750	0.750	100	(53-143)
Chloroform	0.750	0.736	98	(78-123)
Dibromochloromethane	0.750	0.784	105	(74-126)
Trichloroethene	0.750	0.778	104	(77-123)
Vinyl chloride	0.750	0.769	103	(56-135)

Surrogates

1,2-Dichloroethane-D4 (surr)	0.750	97	97	(71-136)
4-Bromofluorobenzene (surr)	0.750	104	104	(55-151)
Toluene-d8 (surr)	0.750	103	103	(85-116)

Batch Information

Analytical Batch: VMS18471

Analytical Method: SW8260C LL w/MeOH

Instrument: VRA Agilent GC/MS 7890B/5977A

Analyst: NRO

Prep Batch: VXX33381

Prep Method: SW5035A

Prep Date/Time: 10/19/2018 06:00

Spike Init Wt./Vol.: 0.750 mg/Kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Matrix Spike Summary

Original Sample ID: 1189871001
MS Sample ID: 1484033 MS
MSD Sample ID: 1484034 MSD

Analysis Date: 10/19/2018 13:07
Analysis Date: 10/19/2018 11:35
Analysis Date: 10/19/2018 11:50
Matrix: Soil/Solid (dry weight)

QC for Samples: 1189871001, 1189871002, 1189871003, 1189871004, 1189871005, 1189871006, 1189871007, 1189871008, 1189871009, 1189871010

Results by SW8260C LL w/MeOH

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,2,2-Tetrachloroethane	0.00186U	1.29	1.35	104	1.29	1.38	107	70-124	2.60	(< 20)
1,1,2-Trichloroethane	0.000745U	1.29	1.28	99	1.29	1.36	106	78-121	6.60	(< 20)
1,2,3-Trichloropropane	0.000935U	1.29	1.32	102	1.29	1.36	105	73-125	2.70	(< 20)
1,2-Dibromoethane	0.000935U	1.29	1.26	98	1.29	1.34	104	78-122	5.90	(< 20)
1,2-Dichloroethane	0.00186U	1.29	1.20	93	1.29	1.28	99	73-128	5.70	(< 20)
Bromodichloromethane	0.00186U	1.29	1.21	94	1.29	1.29	100	75-127	5.50	(< 20)
Bromomethane	0.0187U	1.29	1.18	91	1.29	1.28	99	53-143	8.00	(< 20)
Chloroform	0.00186U	1.29	1.21	94	1.29	1.26	98	78-123	4.40	(< 20)
Dibromochloromethane	0.00186U	1.29	1.29	100	1.29	1.36	105	74-126	5.10	(< 20)
Trichloroethene	0.00466U	1.29	1.26	98	1.29	1.33	103	77-123	5.10	(< 20)
Vinyl chloride	0.000745U	1.29	1.20	93	1.29	1.31	102	56-135	9.10	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		1.29	1.25	97	1.29	1.28	99	71-136	2.10	
4-Bromofluorobenzene (surr)		2.15	1.91	89	2.15	1.90	88	55-151	0.68	
Toluene-d8 (surr)		1.29	1.32	102	1.29	1.34	104	85-116	1.30	

Batch Information

Analytical Batch: VMS18471
Analytical Method: SW8260C LL w/MeOH
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: NRO
Analytical Date/Time: 10/19/2018 11:35:00AM

Prep Batch: VXX33381
Prep Method: Vol. Extraction SW8260 LL w/MeOH
Prep Date/Time: 10/19/2018 6:00:00AM
Prep Initial Wt./Vol.: 31.15g
Prep Extract Vol: 25.00mL

Method Blank

Blank ID: MB for HBN 1788022 [VXX/33383]
Blank Lab ID: 1484071

Matrix: Soil/Solid (dry weight)

QC for Samples:

1189871001, 1189871002, 1189871003, 1189871004, 1189871005, 1189871006, 1189871007, 1189871008, 1189871009, 1189871010, 1189871011

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.25U	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	85	50-150		%

Batch Information

Analytical Batch: VFC14516
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 10/19/2018 1:30:00PM

Prep Batch: VXX33383
Prep Method: SW5035A
Prep Date/Time: 10/19/2018 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 10/23/2018 10:25:01AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1189871 [VXX33383]
 Blank Spike Lab ID: 1484072
 Date Analyzed: 10/19/2018 12:54

Spike Duplicate ID: LCSD for HBN 1189871
 [VXX33383]
 Spike Duplicate Lab ID: 1484073
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1189871001, 1189871002, 1189871003, 1189871004, 1189871005, 1189871006, 1189871007,
 1189871008, 1189871009, 1189871010, 1189871011

Results by AK101

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	11.6	93	12.5	11.5	92	(60-120)	0.84	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	88.8	89	1.25	92.3	92	(50-150)	3.90	

Batch Information

Analytical Batch: **VFC14516**
 Analytical Method: **AK101**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ST**

Prep Batch: **VXX33383**
 Prep Method: **SW5035A**
 Prep Date/Time: **10/19/2018 08:00**
 Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 10/23/2018 10:25:03AM

Method Blank

Blank ID: MB for HBN 1787864 [XXX/40751]
Blank Lab ID: 1483332

Matrix: Soil/Solid (dry weight)

QC for Samples:

1189871001, 1189871002, 1189871003, 1189871004, 1189871005, 1189871006, 1189871007, 1189871008, 1189871009, 1189871010

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
5a Androstane (surr)	99.8	60-120		%

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK102
Instrument: Agilent 7890B F
Analyst: CMS
Analytical Date/Time: 10/22/2018 11:38:00AM

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/2018 3:03:51PM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Print Date: 10/23/2018 10:25:06AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1189871 [XXX40751]
 Blank Spike Lab ID: 1483333
 Date Analyzed: 10/22/2018 11:48

Spike Duplicate ID: LCSD for HBN 1189871
 [XXX40751]
 Spike Duplicate Lab ID: 1483334
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1189871001, 1189871002, 1189871003, 1189871004, 1189871005, 1189871006, 1189871007,
 1189871008, 1189871009, 1189871010

Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	833	821	99	833	813	98	(75-125)	0.94	(< 20)
Surrogates									
5a Androstane (surr)	16.7	109	109	16.7	104	104	(60-120)	4.60	

Batch Information

Analytical Batch: **XFC14738**
 Analytical Method: **AK102**
 Instrument: **Agilent 7890B F**
 Analyst: **CMS**

Prep Batch: **XXX40751**
 Prep Method: **SW3550C**
 Prep Date/Time: **10/17/2018 15:03**
 Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

Print Date: 10/23/2018 10:25:08AM

Method Blank

Blank ID: MB for HBN 1787864 [XXX/40751]
Blank Lab ID: 1483332

Matrix: Soil/Solid (dry weight)

QC for Samples:

1189871001, 1189871002, 1189871003, 1189871004, 1189871005, 1189871006, 1189871007, 1189871008, 1189871009, 1189871010

Results by AK103

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
n-Triacontane-d62 (surr)	99.3	60-120		%

Batch Information

Analytical Batch: XFC14738
Analytical Method: AK103
Instrument: Agilent 7890B F
Analyst: CMS
Analytical Date/Time: 10/22/2018 11:38:00AM

Prep Batch: XXX40751
Prep Method: SW3550C
Prep Date/Time: 10/17/2018 3:03:51PM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Print Date: 10/23/2018 10:25:09AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1189871 [XXX40751]
 Blank Spike Lab ID: 1483333
 Date Analyzed: 10/22/2018 11:48

Spike Duplicate ID: LCSD for HBN 1189871
 [XXX40751]
 Spike Duplicate Lab ID: 1483334
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1189871001, 1189871002, 1189871003, 1189871004, 1189871005, 1189871006, 1189871007,
 1189871008, 1189871009, 1189871010

Results by AK103

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	833	887	106	833	874	105	(60-120)	1.50	(< 20)
Surrogates									
n-Triacontane-d62 (surr)	16.7	101	101	16.7	95.6	96	(60-120)	5.80	

Batch Information

Analytical Batch: **XFC14738**
 Analytical Method: **AK103**
 Instrument: **Agilent 7890B F**
 Analyst: **CMS**

Prep Batch: **XXX40751**
 Prep Method: **SW3550C**
 Prep Date/Time: **10/17/2018 15:03**
 Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

Print Date: 10/23/2018 10:25:10AM

1189871



2355 Hill Road
Fairbanks, AK 99709
(907) 479-0600
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SHANNON & WILSON
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

ECORD

Laboratory SGS Page 1 of 2
Attn: Sen Dawkins

Analytical Methods (include preservative if used)

Turn Around Time:
☐ Normal ☒ Rush
5-day
 Please Specify

Quote No.:
 J-Flags: ☒ Yes ☐ No

Sample Identity	Lab No.	Time	Date Sampled	GR/L VGS - MESH AK101/EPA 8260 LL AK102/AK103 DRO/RRO	Total Number of Containers	Remarks/Matrix Composition/Grab? Sample Containers
18-3025-EB-01	① A-B	15:30	10/15/18	✓	2	SGS
18-3025-EB-101	② A-B	15:20	10/15/18	✓	2	
18-3025-ES-01	③ A-B	15:40	10/15/18	✓	2	
18-3025-ES-02	④ A-B	15:42	10/15/18	✓	2	
18-3025-ES-03	⑤ A-B	15:44	10/15/18	✓	2	
18-3025-ES-04	⑥ A-B	15:46	10/15/18	✓	2	
18-3025-ST-01	⑦ A-B	10:10	10/16/18	✓	2	
18-3025-ST-101	⑧ A-B	10:00	10/16/18	✓	2	
18-3025-ST-02	⑨ A-B	10:12	10/16/18	✓	2	
18-3025-ST-03	⑩ A-B	10:14	10/16/18	✓	2	

RUSH

Project Information
 Number: 100004
 Name: B3025 Dispatch Antenna
 Contact: EWEV
 Ongoing Project? Yes ☒ No ☐
 Sampler: CRW/KLC

Sample Receipt
 Total No. of Containers:
 COC Seals/Intact? Y/N/NA
 Received Good Cond./Cold
 Temp: 4.8
 Delivery Method:

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: <u>Chad</u> Printed Name: <u>Cary Wilke</u> Company: <u>Shannon & Wilson</u>	Signature: <u>Sen Dawkins</u> Printed Name: <u>Sen Dawkins</u> Company: <u>SGS</u>	Signature: <u>Kyle Tolkkien</u> Printed Name: <u>Kyle Tolkkien</u> Company: <u>SGS</u>
Time: 12:30 Date: 10/16	Time: 13:45 Date: 10/16	Time: 02:18 Date: 10/17/18
Received By: 1.	Received By: 2.	Received By: 3.
Signature: <u>Sen Dawkins</u> Printed Name: <u>Sen Dawkins</u> Company: <u>SGS</u>	Signature: <u>Sen Dawkins</u> Printed Name: <u>Sen Dawkins</u> Company: <u>SGS</u>	Signature: <u>Sen Dawkins</u> Printed Name: <u>Sen Dawkins</u> Company: <u>SGS</u>
Time: 17:30 Date: 10/16	Time: 17:30 Date: 10/16	Time: 02:18 Date: 10/17/18

Notes:

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
 Yellow - w/shipment - for consignee files
 Pink - Shannon & Wilson - job file

ANCH: TEMP: 1.5 DSC
CS: 19.18

No. 35720



Returned Bottles Inventory

Name of
individual
returning
bottles:

Date
Received:

10/17/18

Client Name:

Shannon & Wilson

Received by:

ACT

Project Name:

100004 B3025
Dispatch antenna

SGS PM:

HDPE/Nalgene:	1-L					
	500-ml					
	250-ml or 8-oz					
	125-ml or 4-oz					
	60-ml or 2-oz					
	other					
amber glass:	1-L					
	500-ml					
	250-ml or 8-oz					
	125-ml or 4-oz with or without septa	24 jars @ \$4 ea.				
	40-ml VOA vial	12 methanol vials @ \$8 ea.				
	other					
Subtotal:						

Note: Returned bottles (regardless of size/pres.) are billed back at \$4/bottle **unless otherwise quoted**.

Amount to Invoice Client \$:

WO#:

1189871



e-Sample Receipt Form

SGS Workorder #:

1189871



1 1 8 9 8 7 1

Review Criteria		Condition (Yes, No, N/A)	Exceptions Noted below	
Chain of Custody / Temperature Requirements			n/a	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location		yes	1-front 1-back	
COC accompanied samples?		yes		
n/a		**Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?		yes	Cooler ID: 1	@ 1.5 °C Therm. ID: D36
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?		n/a		
If <0°C, were sample containers ice free?		n/a		
If samples received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled".				
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.				
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.		
Were samples received within holding time?		yes		
Do samples match COC ** (i.e., sample IDs, dates/times collected)?		yes		
**Note: If times differ <1hr, record details & login per COC.				
Were analyses requested unambiguous? (i.e., method is specified for analyses with >1 option for analysis)		yes		
n/a		***Exemption permitted for metals (e.g. 200.8/6020A).		
Were proper containers (type/mass/volume/preservative***) used?		yes		
Volatile / LL-Hg Requirements				
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?		yes		
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?		n/a		
Were all soil VOAs field extracted with MeOH+BFB?		yes		
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.				
Additional notes (if applicable):				

Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1189871001-A	No Preservative Required	OK			
1189871001-B	Methanol field pres. 4 C	OK			
1189871002-A	No Preservative Required	OK			
1189871002-B	Methanol field pres. 4 C	OK			
1189871003-A	No Preservative Required	OK			
1189871003-B	Methanol field pres. 4 C	OK			
1189871004-A	No Preservative Required	OK			
1189871004-B	Methanol field pres. 4 C	OK			
1189871005-A	No Preservative Required	OK			
1189871005-B	Methanol field pres. 4 C	OK			
1189871006-A	No Preservative Required	OK			
1189871006-B	Methanol field pres. 4 C	OK			
1189871007-A	No Preservative Required	OK			
1189871007-B	Methanol field pres. 4 C	OK			
1189871008-A	No Preservative Required	OK			
1189871008-B	Methanol field pres. 4 C	OK			
1189871009-A	No Preservative Required	OK			
1189871009-B	Methanol field pres. 4 C	OK			
1189871010-A	No Preservative Required	OK			
1189871010-B	Methanol field pres. 4 C	OK			
1189871011-A	Methanol field pres. 4 C	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

TABLE 1
B3025 DISPTACH ANTENNA SOIL SAMPLE REULTS - SECOND VISIT

Analytical Method	Analyte	Cleanup Level	Units	18-3025-EL-01		18-3025-EL-02	18-3025-EL-03	18-3025-ST-04	18-3025-ST-05
				18-3025-EL-01	18-3025-EL-101	18-3025-EL-02	18-3025-EL-03	18-3025-ST-04	18-3025-ST-05
AK101	Gasoline Range Organics	300	mg/kg	<1.65	<1.56	<1.78	<1.91	<1.43	<1.99
AK102	Diesel Range Organics	250	mg/kg	26.5	19.8 J	9.59 J	7.70 J	<10.4	8.44 J
AK103	Residual Range Organics	11000	mg/kg	117	120	31.5	36.6	32.9	78.4
SW8260C (LL VOC)	1,1,2,2-Tetrachloroethane	0.003	mg/kg	<0.00132	<0.00125	<0.00143	<0.00153	<0.00115	<0.00159
	1,1,2-Trichloroethane	0.0014	mg/kg	<0.000530	<0.000499	<0.000570	<0.000610	<0.000458	<0.000635
	1,2,3-Trichloropropane	0.000031	mg/kg	<0.000660	<0.000625	<0.000715	<0.000760	<0.000570	<0.000795
	1,2-Dibromoethane	0.00024	mg/kg	<0.000660	<0.000625	<0.000715	<0.000760	<0.000570	<0.000795
	1,2-Dichloroethane	0.0055	mg/kg	<0.00132	<0.00125	<0.00143	<0.00153	<0.00115	<0.00159
	Bromodichloromethane	0.0043	mg/kg	<0.00132	<0.00125	<0.00143	<0.00153	<0.00115	<0.00159
	Bromomethane	0.024	mg/kg	<0.0132	<0.0124	<0.0143	<0.0153	<0.0115	<0.0159
	Chloroform	0.0071	mg/kg	<0.00132	<0.00125	<0.00143	<0.00153	<0.00115	<0.00159
	Dibromochloromethane	0.0027	mg/kg	<0.00132	<0.00125	<0.00143	<0.00153	<0.00115	<0.00159
	Trichloroethene	0.011	mg/kg	<0.00330	<0.00312	<0.00357	<0.00381	<0.00286	<0.00398
	Vinyl chloride	0.0008	mg/kg	<0.000530	<0.000499	<0.000570	<0.000610	<0.000458	<0.000635

Notes: ADEC Soil-Cleanup Levels from 18 AAC 75.341 Table B1 Method Two - Soil Cleanup Levels Table (Migration to Groundwater) and Table B2 Method Two - Petroleum Hydrocarbon Soil Cleanup Levels.
Sample 18-3025-EL-101 is the field-duplicate of sample 18-3025-EL-01.

- mg/kg milligram per kilogram
- ADEC Alaska Department of Environmental Conservation
- LL VOCs low level volatile organic compounds
- < Analyte not detected; listed as less than the limit of detection (LOD).
- J Estimated concentration, detected greater than the detection limit (DL) and less than the limit of quantitation (LOQ). Flag applied by the laboratory.
- BOLD LOD exceeds the ADEC soil-cleanup level.

Laboratory Data Review Checklist

Completed By:

Michael Jaramillo

Title:

Environmental Chemist IV

Date:

November 8, 2018

CS Report Name:

100004 B3025 Dispatch Antenna

Report Date:

November 7, 2018

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

SGS North America, Inc.

Laboratory Report Number:

1189918

ADEC File Number:

N/A

Hazard Identification Number:

N/A

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and
- perform
- all of the submitted sample analyses?

☒ Yes ☐ No

Comments:

- b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

☐ Yes ☒ No

Comments:

Analyses were performed by the SGS laboratory in Anchorage, AK. The laboratory is certified by the ADEC CSP for the requested analyses.

2. Chain of Custody (CoC)

- a. CoC information completed, signed, and dated (including released/received by)?

☒ Yes ☐ No

Comments:

- b. Correct Analyses requested?

☒ Yes ☐ No

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

☒ Yes ☐ No

Comments:

The sample receipt form notes the cooler temperature within the appropriate range.

- b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes ☐ No

Comments:

- c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes ☐ No

Comments:

The laboratory noted that samples were received in good condition.

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☐ Yes ☒ No

Comments:

There were no discrepancies.

- e. Data quality or usability affected?

Comments:

The data quality and usability were not affected.

4. Case Narrative

- a. Present and understandable?

☒ Yes ☐ No

Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

☒ Yes ☐ No

Comments:

There were no discrepancies, errors, or QC failures identified by the laboratory.

- c. Were all corrective actions documented?

☒ Yes ☐ No

Comments:

Corrective actions were not necessary.

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The case narrative did not note any effect on data quality/usability.

5. Samples Results

- a. Correct analyses performed/reported as requested on COC?

☒ Yes ☐ No

Comments:

- b. All applicable holding times met?

☒ Yes ☐ No

Comments:

c. All soils reported on a dry weight basis?

☒ Yes ☐ No

Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

☒ Yes ☐ No

Comments:

The following VOC analytes had reporting limits (limits of detections [LODs]) greater than their associated ADEC soil cleanup levels in each project samples for 1,2,3-trichloropropane and 1,2-dibromoethane.

e. Data quality or usability affected?

☐ Yes ☒ No

Comments:

Reported not-detected sample results with LODs above the applicable ADEC soil cleanup levels are noted on the analytical data table. We cannot assess if the analytes listed in 5.d. are present in the samples at concentrations greater than the ADEC soil cleanup levels but less than the reporting limit.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☒ Yes ☐ No

Comments:

ii. All method blank results less than limit of quantitation (LOQ)?

☒ Yes ☐ No

Comments:

However, the method blank 1486777 associated with preparatory batch VXX33498 had an estimated detection for chloroform below the LOQ.

iii. If above LOQ, what samples are affected?

Comments:

There were no detections of chloroform in the associated project samples. The method blank detection does not affect sample results.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No

Comments:

N/A; see above.

v. Data quality or usability affected?

Comments:

Data quality or usability was not affected; see above.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☐ Yes ☒ No

Comments:

LCS/LCSD samples were reported for GRO, DRO, and RRO analyses.

LCS and MS/MSD samples were reported for LL VOC analyses.

- ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☐ Yes ☒ No

Comments:

Metals analyses were not included with this work order.

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No

Comments:

- iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No

Comments:

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A, %R and %RPD were not outside of acceptable limits.

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No

Comments:

N/A; see above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

No; see above.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☒ Yes ☐ No

Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☒ Yes ☐ No

Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☒ Yes ☐ No

Comments:

N/A, no sample results had failed surrogate recoveries.

iv. Data quality or usability affected?

Comments:

No; see above.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples?
(If not, enter explanation below.)

☒ Yes ☐ No

Comments:

Trip Blank results were reported for GRO / LL VOC analysis

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☒ Yes ☐ No

Comments:

iii. All results less than LOQ?

☒ Yes ☐ No

Comments:

iv. If above LOQ, what samples are affected?

Comments:

None; see above.

v. Data quality or usability affected?

Comments:

No; project analytes were not detected in the trip blank.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No

Comments:

ii. Submitted blind to lab?

☒ Yes ☐ No

Comments:

The project sample *18-3025-EL-101* is the field-duplicate of *18-3025-EL-01*.

iii. Precision – All relative percent differences (RPD) less than specified DQOs?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
 R_2 = Field Duplicate Concentration

☒ Yes ☐ No

Comments:

The field-duplicate RPDs were within the project-specific DQO of 50%, where calculable for detected results.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

No; data quality is unaffected.

- f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below).

☐ Yes ☐ No ☒ Not Applicable

Project samples were collected with non-reusable sampling equipment.

- i. All results less than LOQ?

☐ Yes ☒ No

Comments:

N/A; see above.

- ii. If above LOQ, what samples are affected?

Comments:

N/A; see above.

- iii. Data quality or usability affected?

Comments:

No; see above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

- a. Defined and appropriate?

☐ Yes ☒ No

Comments:

Additional data flags or qualifiers are not required.

Laboratory Report of Analysis

To: Shannon & Wilson-Fairbanks
5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
907-479-0600

Report Number: **1189918**

Client Project: **100004 B3025 Dispatch Antenna**

Dear Valerie Webb,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Jennifer at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.



Alaska Division Technical Director

Stephen Ede

2018.11.07

15:21:48 -09'00'

Jennifer Dawkins
Project Manager
Jennifer.Dawkins@sgs.com

Date

Case Narrative

SGS Client: **Shannon & Wilson-Fairbanks**
SGS Project: **1189918**
Project Name/Site: **100004 B3025 Dispatch Antenna**
Project Contact: **Valerie Webb**

Refer to sample receipt form for information on sample condition.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 11/07/2018 1:28:08PM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
18-3025-EL-01	1189918001	10/29/2018	10/31/2018	Soil/Solid (dry weight)
18-3025-EL-101	1189918002	10/29/2018	10/31/2018	Soil/Solid (dry weight)
18-3025-EL-02	1189918003	10/29/2018	10/31/2018	Soil/Solid (dry weight)
18-3025-EL-03	1189918004	10/29/2018	10/31/2018	Soil/Solid (dry weight)
18-3025-ST-04	1189918005	10/29/2018	10/31/2018	Soil/Solid (dry weight)
18-3025-ST-05	1189918006	10/29/2018	10/31/2018	Soil/Solid (dry weight)
Trip Blank	1189918007	10/29/2018	10/31/2018	Soil/Solid (dry weight)

<u>Method</u>	<u>Method Description</u>
AK102	Diesel/Residual Range Organics
AK103	Diesel/Residual Range Organics
AK101	Gasoline Range Organics (S)
SM21 2540G	Percent Solids SM2540G
SW8260C LL w/MeOH	VOC 8260 LL (S) w/MeOH

Detectable Results Summary

Client Sample ID: **18-3025-EL-01**

Lab Sample ID: 1189918001

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	26.5	mg/Kg
Residual Range Organics	117	mg/Kg

Client Sample ID: **18-3025-EL-101**

Lab Sample ID: 1189918002

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	19.8J	mg/Kg
Residual Range Organics	120	mg/Kg

Client Sample ID: **18-3025-EL-02**

Lab Sample ID: 1189918003

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	9.59J	mg/Kg
Residual Range Organics	31.5	mg/Kg

Client Sample ID: **18-3025-EL-03**

Lab Sample ID: 1189918004

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	7.70J	mg/Kg
Residual Range Organics	36.6	mg/Kg

Client Sample ID: **18-3025-ST-04**

Lab Sample ID: 1189918005

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	32.9	mg/Kg

Client Sample ID: **18-3025-ST-05**

Lab Sample ID: 1189918006

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	8.44J	mg/Kg
Residual Range Organics	78.4	mg/Kg

Results of 18-3025-EL-01

Client Sample ID: **18-3025-EL-01**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918001
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:15
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):90.4
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	26.5	22.0	6.82	mg/Kg	1		11/06/18 11:50
Surrogates							
5a Androstane (surr)	96.7	50-150		%	1		11/06/18 11:50

Batch Information

Analytical Batch: XFC14782
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 11/06/18 11:50
 Container ID: 1189918001-A

Prep Batch: XXX40855
 Prep Method: SW3550C
 Prep Date/Time: 11/05/18 11:34
 Prep Initial Wt./Vol.: 30.143 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	117	22.0	6.82	mg/Kg	1		11/06/18 11:50
Surrogates							
n-Triacontane-d62 (surr)	104	50-150		%	1		11/06/18 11:50

Batch Information

Analytical Batch: XFC14782
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 11/06/18 11:50
 Container ID: 1189918001-A

Prep Batch: XXX40855
 Prep Method: SW3550C
 Prep Date/Time: 11/05/18 11:34
 Prep Initial Wt./Vol.: 30.143 g
 Prep Extract Vol: 5 mL

Results of 18-3025-EL-01

Client Sample ID: **18-3025-EL-01**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918001
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:15
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):90.4
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.65 U	3.30	0.990	mg/Kg	1		11/02/18 00:10
Surrogates							
4-Bromofluorobenzene (surr)	65.6	50-150		%	1		11/02/18 00:10

Batch Information

Analytical Batch: VFC14551
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 11/02/18 00:10
 Container ID: 1189918001-B

Prep Batch: VXX33480
 Prep Method: SW5035A
 Prep Date/Time: 10/29/18 13:15
 Prep Initial Wt./Vol.: 49.901 g
 Prep Extract Vol: 29.7771 mL

Results of 18-3025-EL-01

Client Sample ID: **18-3025-EL-01**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918001
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:15
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):90.4
 Location:

Results by Volatile GC/MS Low Level

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,2,2-Tetrachloroethane	0.00132 U	0.00264	0.000818	mg/Kg	1		11/03/18 05:05
1,1,2-Trichloroethane	0.000530 U	0.00106	0.000330	mg/Kg	1		11/03/18 05:05
1,2,3-Trichloropropane	0.000660 U	0.00132	0.000409	mg/Kg	1		11/03/18 05:05
1,2-Dibromoethane	0.000660 U	0.00132	0.000409	mg/Kg	1		11/03/18 05:05
1,2-Dichloroethane	0.00132 U	0.00264	0.000818	mg/Kg	1		11/03/18 05:05
Bromodichloromethane	0.00132 U	0.00264	0.000818	mg/Kg	1		11/03/18 05:05
Bromomethane	0.0132 U	0.0264	0.00818	mg/Kg	1		11/03/18 05:05
Chloroform	0.00132 U	0.00264	0.000818	mg/Kg	1		11/03/18 05:05
Dibromochloromethane	0.00132 U	0.00264	0.000818	mg/Kg	1		11/03/18 05:05
Trichloroethene	0.00330 U	0.00660	0.00198	mg/Kg	1		11/03/18 05:05
Vinyl chloride	0.000530 U	0.00106	0.000330	mg/Kg	1		11/03/18 05:05
Surrogates							
1,2-Dichloroethane-D4 (surr)	108	71-136		%	1		11/03/18 05:05
4-Bromofluorobenzene (surr)	95	55-151		%	1		11/03/18 05:05
Toluene-d8 (surr)	99.4	85-116		%	1		11/03/18 05:05

Batch Information

Analytical Batch: VMS18538
 Analytical Method: SW8260C LL w/MeOH
 Analyst: NRO
 Analytical Date/Time: 11/03/18 05:05
 Container ID: 1189918001-B

Prep Batch: VXX33498
 Prep Method: SW5035A
 Prep Date/Time: 10/29/18 13:15
 Prep Initial Wt./Vol.: 49.901 g
 Prep Extract Vol: 29.7771 mL

Results of 18-3025-EL-101

Client Sample ID: **18-3025-EL-101**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918002
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:05
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):89.8
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	19.8 J	22.1	6.84	mg/Kg	1		11/06/18 12:00
Surrogates							
5a Androstane (surr)	97.5	50-150		%	1		11/06/18 12:00

Batch Information

Analytical Batch: XFC14782
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 11/06/18 12:00
 Container ID: 1189918002-A

Prep Batch: XXX40855
 Prep Method: SW3550C
 Prep Date/Time: 11/05/18 11:34
 Prep Initial Wt./Vol.: 30.274 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	120	22.1	6.84	mg/Kg	1		11/06/18 12:00
Surrogates							
n-Triacontane-d62 (surr)	104	50-150		%	1		11/06/18 12:00

Batch Information

Analytical Batch: XFC14782
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 11/06/18 12:00
 Container ID: 1189918002-A

Prep Batch: XXX40855
 Prep Method: SW3550C
 Prep Date/Time: 11/05/18 11:34
 Prep Initial Wt./Vol.: 30.274 g
 Prep Extract Vol: 5 mL

Results of 18-3025-EL-101

Client Sample ID: **18-3025-EL-101**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918002
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:05
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):89.8
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.56 U	3.12	0.935	mg/Kg	1		11/02/18 00:28
Surrogates							
4-Bromofluorobenzene (surr)	73.9	50-150		%	1		11/02/18 00:28

Batch Information

Analytical Batch: VFC14551
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 11/02/18 00:28
 Container ID: 1189918002-B

Prep Batch: VXX33480
 Prep Method: SW5035A
 Prep Date/Time: 10/29/18 13:05
 Prep Initial Wt./Vol.: 54.502 g
 Prep Extract Vol: 30.5358 mL

Results of 18-3025-EL-101

Client Sample ID: **18-3025-EL-101**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918002
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:05
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):89.8
 Location:

Results by Volatile GC/MS Low Level

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,2,2-Tetrachloroethane	0.00125 U	0.00249	0.000773	mg/Kg	1		11/03/18 05:22
1,1,2-Trichloroethane	0.000499 U	0.000998	0.000312	mg/Kg	1		11/03/18 05:22
1,2,3-Trichloropropane	0.000625 U	0.00125	0.000387	mg/Kg	1		11/03/18 05:22
1,2-Dibromoethane	0.000625 U	0.00125	0.000387	mg/Kg	1		11/03/18 05:22
1,2-Dichloroethane	0.00125 U	0.00249	0.000773	mg/Kg	1		11/03/18 05:22
Bromodichloromethane	0.00125 U	0.00249	0.000773	mg/Kg	1		11/03/18 05:22
Bromomethane	0.0124 U	0.0249	0.00773	mg/Kg	1		11/03/18 05:22
Chloroform	0.00125 U	0.00249	0.000773	mg/Kg	1		11/03/18 05:22
Dibromochloromethane	0.00125 U	0.00249	0.000773	mg/Kg	1		11/03/18 05:22
Trichloroethene	0.00312 U	0.00624	0.00187	mg/Kg	1		11/03/18 05:22
Vinyl chloride	0.000499 U	0.000998	0.000312	mg/Kg	1		11/03/18 05:22

Surrogates

1,2-Dichloroethane-D4 (surr)	108	71-136	%	1		11/03/18 05:22
4-Bromofluorobenzene (surr)	110	55-151	%	1		11/03/18 05:22
Toluene-d8 (surr)	98.4	85-116	%	1		11/03/18 05:22

Batch Information

Analytical Batch: VMS18538
 Analytical Method: SW8260C LL w/MeOH
 Analyst: NRO
 Analytical Date/Time: 11/03/18 05:22
 Container ID: 1189918002-B

Prep Batch: VXX33498
 Prep Method: SW5035A
 Prep Date/Time: 10/29/18 13:05
 Prep Initial Wt./Vol.: 54.502 g
 Prep Extract Vol: 30.5358 mL

Results of 18-3025-EL-02

Client Sample ID: **18-3025-EL-02**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918003
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:30
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.8
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	9.59 J	21.2	6.58	mg/Kg	1		11/06/18 12:11
Surrogates							
5a Androstane (surr)	97.2	50-150		%	1		11/06/18 12:11

Batch Information

Analytical Batch: XFC14782
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 11/06/18 12:11
 Container ID: 1189918003-A

Prep Batch: XXX40855
 Prep Method: SW3550C
 Prep Date/Time: 11/05/18 11:34
 Prep Initial Wt./Vol.: 30.135 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	31.5	21.2	6.58	mg/Kg	1		11/06/18 12:11
Surrogates							
n-Triacontane-d62 (surr)	104	50-150		%	1		11/06/18 12:11

Batch Information

Analytical Batch: XFC14782
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 11/06/18 12:11
 Container ID: 1189918003-A

Prep Batch: XXX40855
 Prep Method: SW3550C
 Prep Date/Time: 11/05/18 11:34
 Prep Initial Wt./Vol.: 30.135 g
 Prep Extract Vol: 5 mL



Results of 18-3025-EL-02

Client Sample ID: 18-3025-EL-02
Client Project ID: 100004 B3025 Dispatch Antenna
Lab Sample ID: 1189918003
Lab Project ID: 1189918

Collection Date: 10/29/18 13:30
Received Date: 10/31/18 09:45
Matrix: Soil/Solid (dry weight)
Solids (%):93.8
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.78 U	3.57	1.07	mg/Kg	1		11/02/18 01:22
Surrogates							
4-Bromofluorobenzene (surr)	61.7	50-150		%	1		11/02/18 01:22

Batch Information

Analytical Batch: VFC14551
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 11/02/18 01:22
Container ID: 1189918003-B

Prep Batch: VXX33480
Prep Method: SW5035A
Prep Date/Time: 10/29/18 13:30
Prep Initial Wt./Vol.: 41.243 g
Prep Extract Vol: 27.5768 mL

Results of 18-3025-EL-02

Client Sample ID: **18-3025-EL-02**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918003
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:30
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.8
 Location:

Results by Volatile GC/MS Low Level

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,2,2-Tetrachloroethane	0.00143 U	0.00285	0.000884	mg/Kg	1		11/03/18 05:38
1,1,2-Trichloroethane	0.000570 U	0.00114	0.000357	mg/Kg	1		11/03/18 05:38
1,2,3-Trichloropropane	0.000715 U	0.00143	0.000442	mg/Kg	1		11/03/18 05:38
1,2-Dibromoethane	0.000715 U	0.00143	0.000442	mg/Kg	1		11/03/18 05:38
1,2-Dichloroethane	0.00143 U	0.00285	0.000884	mg/Kg	1		11/03/18 05:38
Bromodichloromethane	0.00143 U	0.00285	0.000884	mg/Kg	1		11/03/18 05:38
Bromomethane	0.0143 U	0.0285	0.00884	mg/Kg	1		11/03/18 05:38
Chloroform	0.00143 U	0.00285	0.000884	mg/Kg	1		11/03/18 05:38
Dibromochloromethane	0.00143 U	0.00285	0.000884	mg/Kg	1		11/03/18 05:38
Trichloroethene	0.00357 U	0.00713	0.00214	mg/Kg	1		11/03/18 05:38
Vinyl chloride	0.000570 U	0.00114	0.000357	mg/Kg	1		11/03/18 05:38
Surrogates							
1,2-Dichloroethane-D4 (surr)	108	71-136		%	1		11/03/18 05:38
4-Bromofluorobenzene (surr)	101	55-151		%	1		11/03/18 05:38
Toluene-d8 (surr)	96.8	85-116		%	1		11/03/18 05:38

Batch Information

Analytical Batch: VMS18538
 Analytical Method: SW8260C LL w/MeOH
 Analyst: NRO
 Analytical Date/Time: 11/03/18 05:38
 Container ID: 1189918003-B

Prep Batch: VXX33498
 Prep Method: SW5035A
 Prep Date/Time: 10/29/18 13:30
 Prep Initial Wt./Vol.: 41.243 g
 Prep Extract Vol: 27.5768 mL

Results of 18-3025-EL-03

Client Sample ID: **18-3025-EL-03**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918004
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:36
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.9
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	7.70 J	21.3	6.59	mg/Kg	1		11/06/18 12:21
Surrogates							
5a Androstane (surr)	96.7	50-150		%	1		11/06/18 12:21

Batch Information

Analytical Batch: XFC14782
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 11/06/18 12:21
 Container ID: 1189918004-A

Prep Batch: XXX40855
 Prep Method: SW3550C
 Prep Date/Time: 11/05/18 11:34
 Prep Initial Wt./Vol.: 30.041 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	36.6	21.3	6.59	mg/Kg	1		11/06/18 12:21
Surrogates							
n-Triacontane-d62 (surr)	104	50-150		%	1		11/06/18 12:21

Batch Information

Analytical Batch: XFC14782
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 11/06/18 12:21
 Container ID: 1189918004-A

Prep Batch: XXX40855
 Prep Method: SW3550C
 Prep Date/Time: 11/05/18 11:34
 Prep Initial Wt./Vol.: 30.041 g
 Prep Extract Vol: 5 mL

Results of 18-3025-EL-03

Client Sample ID: **18-3025-EL-03**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918004
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:36
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.9
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.91 U	3.81	1.14	mg/Kg	1		11/02/18 01:39
Surrogates							
4-Bromofluorobenzene (surr)	63.2	50-150		%	1		11/02/18 01:39

Batch Information

Analytical Batch: VFC14551
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 11/02/18 01:39
 Container ID: 1189918004-B

Prep Batch: VXX33480
 Prep Method: SW5035A
 Prep Date/Time: 10/29/18 13:36
 Prep Initial Wt./Vol.: 38.188 g
 Prep Extract Vol: 27.3234 mL

**Results of 18-3025-EL-03**

Client Sample ID: **18-3025-EL-03**
Client Project ID: **100004 B3025 Dispatch Antenna**
Lab Sample ID: 1189918004
Lab Project ID: 1189918

Collection Date: 10/29/18 13:36
Received Date: 10/31/18 09:45
Matrix: Soil/Solid (dry weight)
Solids (%):93.9
Location:

Results by Volatile GC/MS Low Level

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,2,2-Tetrachloroethane	0.00153 U	0.00305	0.000945	mg/Kg	1		11/03/18 05:55
1,1,2-Trichloroethane	0.000610 U	0.00122	0.000381	mg/Kg	1		11/03/18 05:55
1,2,3-Trichloropropane	0.000760 U	0.00152	0.000472	mg/Kg	1		11/03/18 05:55
1,2-Dibromoethane	0.000760 U	0.00152	0.000472	mg/Kg	1		11/03/18 05:55
1,2-Dichloroethane	0.00153 U	0.00305	0.000945	mg/Kg	1		11/03/18 05:55
Bromodichloromethane	0.00153 U	0.00305	0.000945	mg/Kg	1		11/03/18 05:55
Bromomethane	0.0153 U	0.0305	0.00945	mg/Kg	1		11/03/18 05:55
Chloroform	0.00153 U	0.00305	0.000945	mg/Kg	1		11/03/18 05:55
Dibromochloromethane	0.00153 U	0.00305	0.000945	mg/Kg	1		11/03/18 05:55
Trichloroethene	0.00381 U	0.00762	0.00229	mg/Kg	1		11/03/18 05:55
Vinyl chloride	0.000610 U	0.00122	0.000381	mg/Kg	1		11/03/18 05:55
Surrogates							
1,2-Dichloroethane-D4 (surr)	108	71-136		%	1		11/03/18 05:55
4-Bromofluorobenzene (surr)	95.8	55-151		%	1		11/03/18 05:55
Toluene-d8 (surr)	98.5	85-116		%	1		11/03/18 05:55

Batch Information

Analytical Batch: VMS18538
Analytical Method: SW8260C LL w/MeOH
Analyst: NRO
Analytical Date/Time: 11/03/18 05:55
Container ID: 1189918004-B

Prep Batch: VXX33498
Prep Method: SW5035A
Prep Date/Time: 10/29/18 13:36
Prep Initial Wt./Vol.: 38.188 g
Prep Extract Vol: 27.3234 mL

Results of 18-3025-ST-04

Client Sample ID: **18-3025-ST-04**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918005
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:45
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):94.6
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.4 U	20.9	6.47	mg/Kg	1		11/06/18 12:32
Surrogates							
5a Androstane (surr)	96.1	50-150		%	1		11/06/18 12:32

Batch Information

Analytical Batch: XFC14782
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 11/06/18 12:32
 Container ID: 1189918005-A

Prep Batch: XXX40855
 Prep Method: SW3550C
 Prep Date/Time: 11/05/18 11:34
 Prep Initial Wt./Vol.: 30.365 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	32.9	20.9	6.47	mg/Kg	1		11/06/18 12:32
Surrogates							
n-Triacontane-d62 (surr)	104	50-150		%	1		11/06/18 12:32

Batch Information

Analytical Batch: XFC14782
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 11/06/18 12:32
 Container ID: 1189918005-A

Prep Batch: XXX40855
 Prep Method: SW3550C
 Prep Date/Time: 11/05/18 11:34
 Prep Initial Wt./Vol.: 30.365 g
 Prep Extract Vol: 5 mL

Results of 18-3025-ST-04

Client Sample ID: **18-3025-ST-04**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918005
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:45
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):94.6
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.43 U	2.86	0.858	mg/Kg	1		11/02/18 01:57
Surrogates							
4-Bromofluorobenzene (surr)	64.5	50-150		%	1		11/02/18 01:57

Batch Information

Analytical Batch: VFC14551
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 11/02/18 01:57
 Container ID: 1189918005-B

Prep Batch: VXX33480
 Prep Method: SW5035A
 Prep Date/Time: 10/29/18 13:45
 Prep Initial Wt./Vol.: 51.301 g
 Prep Extract Vol: 27.7584 mL

Results of 18-3025-ST-04

Client Sample ID: **18-3025-ST-04**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918005
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:45
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):94.6
 Location:

Results by Volatile GC/MS Low Level

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,2,2-Tetrachloroethane	0.00115 U	0.00229	0.000709	mg/Kg	1		11/03/18 06:11
1,1,2-Trichloroethane	0.000458 U	0.000915	0.000286	mg/Kg	1		11/03/18 06:11
1,2,3-Trichloropropane	0.000570 U	0.00114	0.000355	mg/Kg	1		11/03/18 06:11
1,2-Dibromoethane	0.000570 U	0.00114	0.000355	mg/Kg	1		11/03/18 06:11
1,2-Dichloroethane	0.00115 U	0.00229	0.000709	mg/Kg	1		11/03/18 06:11
Bromodichloromethane	0.00115 U	0.00229	0.000709	mg/Kg	1		11/03/18 06:11
Bromomethane	0.0115 U	0.0229	0.00709	mg/Kg	1		11/03/18 06:11
Chloroform	0.00115 U	0.00229	0.000709	mg/Kg	1		11/03/18 06:11
Dibromochloromethane	0.00115 U	0.00229	0.000709	mg/Kg	1		11/03/18 06:11
Trichloroethene	0.00286 U	0.00572	0.00172	mg/Kg	1		11/03/18 06:11
Vinyl chloride	0.000458 U	0.000915	0.000286	mg/Kg	1		11/03/18 06:11
Surrogates							
1,2-Dichloroethane-D4 (surr)	107	71-136		%	1		11/03/18 06:11
4-Bromofluorobenzene (surr)	98	55-151		%	1		11/03/18 06:11
Toluene-d8 (surr)	99.6	85-116		%	1		11/03/18 06:11

Batch Information

Analytical Batch: VMS18538
 Analytical Method: SW8260C LL w/MeOH
 Analyst: NRO
 Analytical Date/Time: 11/03/18 06:11
 Container ID: 1189918005-B

Prep Batch: VXX33498
 Prep Method: SW5035A
 Prep Date/Time: 10/29/18 13:45
 Prep Initial Wt./Vol.: 51.301 g
 Prep Extract Vol: 27.7584 mL

Results of 18-3025-ST-05

Client Sample ID: **18-3025-ST-05**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918006
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:50
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):92.3
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	8.44 J	21.4	6.65	mg/Kg	1		11/06/18 12:42
Surrogates							
5a Androstane (surr)	96.8	50-150		%	1		11/06/18 12:42

Batch Information

Analytical Batch: XFC14782
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 11/06/18 12:42
 Container ID: 1189918006-A

Prep Batch: XXX40855
 Prep Method: SW3550C
 Prep Date/Time: 11/05/18 11:34
 Prep Initial Wt./Vol.: 30.301 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	78.4	21.4	6.65	mg/Kg	1		11/06/18 12:42
Surrogates							
n-Triacontane-d62 (surr)	103	50-150		%	1		11/06/18 12:42

Batch Information

Analytical Batch: XFC14782
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 11/06/18 12:42
 Container ID: 1189918006-A

Prep Batch: XXX40855
 Prep Method: SW3550C
 Prep Date/Time: 11/05/18 11:34
 Prep Initial Wt./Vol.: 30.301 g
 Prep Extract Vol: 5 mL

Results of 18-3025-ST-05

Client Sample ID: **18-3025-ST-05**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918006
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:50
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):92.3
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.99 U	3.98	1.19	mg/Kg	1		11/02/18 02:15
Surrogates							
4-Bromofluorobenzene (surr)	63	50-150		%	1		11/02/18 02:15

Batch Information

Analytical Batch: VFC14551
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 11/02/18 02:15
 Container ID: 1189918006-B

Prep Batch: VXX33480
 Prep Method: SW5035A
 Prep Date/Time: 10/29/18 13:50
 Prep Initial Wt./Vol.: 38.018 g
 Prep Extract Vol: 27.9134 mL

Results of 18-3025-ST-05

Client Sample ID: **18-3025-ST-05**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918006
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:50
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):92.3
 Location:

Results by Volatile GC/MS Low Level

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,2,2-Tetrachloroethane	0.00159 U	0.00318	0.000986	mg/Kg	1		11/04/18 13:41
1,1,2-Trichloroethane	0.000635 U	0.00127	0.000398	mg/Kg	1		11/04/18 13:41
1,2,3-Trichloropropane	0.000795 U	0.00159	0.000493	mg/Kg	1		11/04/18 13:41
1,2-Dibromoethane	0.000795 U	0.00159	0.000493	mg/Kg	1		11/04/18 13:41
1,2-Dichloroethane	0.00159 U	0.00318	0.000986	mg/Kg	1		11/04/18 13:41
Bromodichloromethane	0.00159 U	0.00318	0.000986	mg/Kg	1		11/04/18 13:41
Bromomethane	0.0159 U	0.0318	0.00986	mg/Kg	1		11/04/18 13:41
Chloroform	0.00159 U	0.00318	0.000986	mg/Kg	1		11/04/18 13:41
Dibromochloromethane	0.00159 U	0.00318	0.000986	mg/Kg	1		11/04/18 13:41
Trichloroethene	0.00398 U	0.00795	0.00239	mg/Kg	1		11/04/18 13:41
Vinyl chloride	0.000635 U	0.00127	0.000398	mg/Kg	1		11/04/18 13:41
Surrogates							
1,2-Dichloroethane-D4 (surr)	111	71-136		%	1		11/04/18 13:41
4-Bromofluorobenzene (surr)	92.4	55-151		%	1		11/04/18 13:41
Toluene-d8 (surr)	99.1	85-116		%	1		11/04/18 13:41

Batch Information

Analytical Batch: VMS18545
 Analytical Method: SW8260C LL w/MeOH
 Analyst: NRO
 Analytical Date/Time: 11/04/18 13:41
 Container ID: 1189918006-B

Prep Batch: VXX33502
 Prep Method: SW5035A
 Prep Date/Time: 10/29/18 13:50
 Prep Initial Wt./Vol.: 38.018 g
 Prep Extract Vol: 27.9134 mL

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918007
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:50
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.25 U	2.51	0.752	mg/Kg	1		11/01/18 23:17
Surrogates							
4-Bromofluorobenzene (surr)	60.4	50-150		%	1		11/01/18 23:17

Batch Information

Analytical Batch: VFC14551
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 11/01/18 23:17
 Container ID: 1189918007-A

Prep Batch: VXX33480
 Prep Method: SW5035A
 Prep Date/Time: 10/29/18 13:50
 Prep Initial Wt./Vol.: 49.865 g
 Prep Extract Vol: 25 mL

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004 B3025 Dispatch Antenna**
 Lab Sample ID: 1189918007
 Lab Project ID: 1189918

Collection Date: 10/29/18 13:50
 Received Date: 10/31/18 09:45
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile GC/MS Low Level

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,2,2-Tetrachloroethane	0.00101 U	0.00201	0.000622	mg/Kg	1		11/03/18 01:14
1,1,2-Trichloroethane	0.000401 U	0.000802	0.000251	mg/Kg	1		11/03/18 01:14
1,2,3-Trichloropropane	0.000500 U	0.00100	0.000311	mg/Kg	1		11/03/18 01:14
1,2-Dibromoethane	0.000500 U	0.00100	0.000311	mg/Kg	1		11/03/18 01:14
1,2-Dichloroethane	0.00101 U	0.00201	0.000622	mg/Kg	1		11/03/18 01:14
Bromodichloromethane	0.00101 U	0.00201	0.000622	mg/Kg	1		11/03/18 01:14
Bromomethane	0.0101 U	0.0201	0.00622	mg/Kg	1		11/03/18 01:14
Chloroform	0.00101 U	0.00201	0.000622	mg/Kg	1		11/03/18 01:14
Dibromochloromethane	0.00101 U	0.00201	0.000622	mg/Kg	1		11/03/18 01:14
Trichloroethene	0.00250 U	0.00501	0.00150	mg/Kg	1		11/03/18 01:14
Vinyl chloride	0.000401 U	0.000802	0.000251	mg/Kg	1		11/03/18 01:14
Surrogates							
1,2-Dichloroethane-D4 (surr)	106	71-136		%	1		11/03/18 01:14
4-Bromofluorobenzene (surr)	94.3	55-151		%	1		11/03/18 01:14
Toluene-d8 (surr)	99.1	85-116		%	1		11/03/18 01:14

Batch Information

Analytical Batch: VMS18538
 Analytical Method: SW8260C LL w/MeOH
 Analyst: NRO
 Analytical Date/Time: 11/03/18 01:14
 Container ID: 1189918007-A

Prep Batch: VXX33498
 Prep Method: SW5035A
 Prep Date/Time: 10/29/18 13:50
 Prep Initial Wt./Vol.: 49.865 g
 Prep Extract Vol: 25 mL

Method Blank

Blank ID: MB for HBN 1788528 [SPT/10674]
Blank Lab ID: 1486204

Matrix: Soil/Solid (dry weight)

QC for Samples:

1189918001, 1189918002, 1189918003, 1189918004, 1189918005, 1189918006

Results by SM21 2540G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Solids	99.7			%

Batch Information

Analytical Batch: SPT10674
Analytical Method: SM21 2540G
Instrument:
Analyst: E.M
Analytical Date/Time: 10/31/2018 6:00:00PM

Print Date: 11/07/2018 1:28:13PM

Duplicate Sample Summary

Original Sample ID: 1189911004

Duplicate Sample ID: 1486206

QC for Samples:

Analysis Date: 10/31/2018 18:00

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	81.7	81.2	%	0.54	(< 15)

Batch Information

Analytical Batch: SPT10674

Analytical Method: SM21 2540G

Instrument:

Analyst: E.M

Print Date: 11/07/2018 1:28:14PM

Duplicate Sample Summary

Original Sample ID: 1189911010

Duplicate Sample ID: 1486207

QC for Samples:

1189918001, 1189918002, 1189918003, 1189918004, 1189918005, 1189918006

Analysis Date: 10/31/2018 18:00

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	83.4	82.6	%	0.96	(< 15)

Batch Information

Analytical Batch: SPT10674

Analytical Method: SM21 2540G

Instrument:

Analyst: E.M

Print Date: 11/07/2018 1:28:14PM

Method Blank

Blank ID: MB for HBN 1788597 [VXX/33480]
Blank Lab ID: 1486476

Matrix: Soil/Solid (dry weight)

QC for Samples:

1189918001, 1189918002, 1189918003, 1189918004, 1189918005, 1189918006, 1189918007

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.25U	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	81.7	50-150		%

Batch Information

Analytical Batch: VFC14551
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 11/1/2018 9:47:00PM

Prep Batch: VXX33480
Prep Method: SW5035A
Prep Date/Time: 11/1/2018 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1189918 [VXX33480]
 Blank Spike Lab ID: 1486477
 Date Analyzed: 11/01/2018 22:05

Spike Duplicate ID: LCSD for HBN 1189918 [VXX33480]
 Spike Duplicate Lab ID: 1486478
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1189918001, 1189918002, 1189918003, 1189918004, 1189918005, 1189918006, 1189918007

Results by AK101

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	11.0	88	12.5	10.9	87	(60-120)	1.30	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	91.5	92	1.25	91.2	91	(50-150)	0.33	

Batch Information

Analytical Batch: **VFC14551**
 Analytical Method: **AK101**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ST**

Prep Batch: **VXX33480**
 Prep Method: **SW5035A**
 Prep Date/Time: **11/01/2018 08:00**
 Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 11/07/2018 1:28:17PM

Method Blank

Blank ID: MB for HBN 1788664 [VXX/33498]
Blank Lab ID: 1486777

Matrix: Soil/Solid (dry weight)

QC for Samples:

1189918001, 1189918002, 1189918003, 1189918004, 1189918005, 1189918007

Results by SW8260C LL w/MeOH

Parameter	Results	LOQ/CL	DL	Units
1,1,2,2-Tetrachloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,1,2-Trichloroethane	0.000400U	0.000800	0.000250	mg/Kg
1,2,3-Trichloropropane	0.000500U	0.00100	0.000310	mg/Kg
1,2-Dibromoethane	0.000500U	0.00100	0.000310	mg/Kg
1,2-Dichloroethane	0.00100U	0.00200	0.000620	mg/Kg
Bromodichloromethane	0.00100U	0.00200	0.000620	mg/Kg
Bromomethane	0.0100U	0.0200	0.00620	mg/Kg
Chloroform	0.000869J	0.00200	0.000620	mg/Kg
Dibromochloromethane	0.00100U	0.00200	0.000620	mg/Kg
Trichloroethene	0.00250U	0.00500	0.00150	mg/Kg
Vinyl chloride	0.000400U	0.000800	0.000250	mg/Kg

Surrogates

1,2-Dichloroethane-D4 (surr)	102	71-136	%
4-Bromofluorobenzene (surr)	111	55-151	%
Toluene-d8 (surr)	98.7	85-116	%

Batch Information

Analytical Batch: VMS18538
Analytical Method: SW8260C LL w/MeOH
Instrument: VQA 7890/5975 GC/MS
Analyst: NRO
Analytical Date/Time: 11/2/2018 11:19:00PM

Prep Batch: VXX33498
Prep Method: SW5035A
Prep Date/Time: 11/2/2018 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1189918 [VXX33498]

Blank Spike Lab ID: 1486778

Date Analyzed: 11/02/2018 23:35

Matrix: Soil/Solid (dry weight)

QC for Samples: 1189918001, 1189918002, 1189918003, 1189918004, 1189918005, 1189918007

Results by SW8260C LL w/MeOH

Blank Spike (mg/Kg)

Parameter	Spike	Result	Rec (%)	CL
1,1,2,2-Tetrachloroethane	0.750	0.763	102	(70-124)
1,1,2-Trichloroethane	0.750	0.774	103	(78-121)
1,2,3-Trichloropropane	0.750	0.709	95	(73-125)
1,2-Dibromoethane	0.750	0.841	112	(78-122)
1,2-Dichloroethane	0.750	0.736	98	(73-128)
Bromodichloromethane	0.750	0.744	99	(75-127)
Bromomethane	0.750	0.719	96	(53-143)
Chloroform	0.750	0.771	103	(78-123)
Dibromochloromethane	0.750	0.854	114	(74-126)
Trichloroethene	0.750	0.791	105	(77-123)
Vinyl chloride	0.750	0.746	99	(56-135)

Surrogates

1,2-Dichloroethane-D4 (surr)	0.750	96.4	96	(71-136)
4-Bromofluorobenzene (surr)	0.750	104	104	(55-151)
Toluene-d8 (surr)	0.750	102	102	(85-116)

Batch Information

Analytical Batch: VMS18538

Analytical Method: SW8260C LL w/MeOH

Instrument: VQA 7890/5975 GC/MS

Analyst: NRO

Prep Batch: VXX33498

Prep Method: SW5035A

Prep Date/Time: 11/02/2018 06:00

Spike Init Wt./Vol.: 0.750 mg/Kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Matrix Spike Summary

Original Sample ID: 1189911001
MS Sample ID: 1486779 MS
MSD Sample ID: 1486780 MSD

Analysis Date: 11/03/2018 1:30
Analysis Date: 11/02/2018 23:52
Analysis Date: 11/03/2018 0:08
Matrix: Soil/Solid (dry weight)

QC for Samples: 1189918001, 1189918002, 1189918003, 1189918004, 1189918005, 1189918007

Results by SW8260C LL w/MeOH

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,2,2-Tetrachloroethane	0.00123U	0.925	0.922	100	0.925	0.924	100	70-124	0.15	(< 20)
1,1,2-Trichloroethane	0.000493U	0.925	0.944	102	0.925	0.943	102	78-121	0.13	(< 20)
1,2,3-Trichloropropane	0.000615U	0.925	0.856	92	0.925	0.860	93	73-125	0.52	(< 20)
1,2-Dibromoethane	0.000615U	0.925	1.02	110	0.925	1.01	110	78-122	0.09	(< 20)
1,2-Dichloroethane	0.00123U	0.925	0.893	97	0.925	0.883	95	73-128	1.20	(< 20)
Bromodichloromethane	0.00123U	0.925	0.913	99	0.925	0.894	97	75-127	1.90	(< 20)
Bromomethane	0.0123U	0.925	0.865	93	0.925	0.877	95	53-143	1.40	(< 20)
Chloroform	0.00123U	0.925	0.924	100	0.925	0.914	99	78-123	1.10	(< 20)
Dibromochloromethane	0.00123U	0.925	1.03	111	0.925	1.03	112	74-126	0.82	(< 20)
Trichloroethene	0.00308U	0.925	0.943	102	0.925	0.929	100	77-123	1.40	(< 20)
Vinyl chloride	0.000493U	0.925	0.866	94	0.925	0.877	95	56-135	1.30	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		0.925	0.922	100	0.925	0.906	98	71-136	1.70	
4-Bromofluorobenzene (surr)		0.937	0.697	74	0.937	0.697	74	55-151	0.07	
Toluene-d8 (surr)		0.925	0.940	102	0.925	0.948	102	85-116	0.85	

Batch Information

Analytical Batch: VMS18538
Analytical Method: SW8260C LL w/MeOH
Instrument: VQA 7890/5975 GC/MS
Analyst: NRO
Analytical Date/Time: 11/2/2018 11:52:00PM

Prep Batch: VXX33498
Prep Method: Vol. Extraction SW8260 LL w/MeOH
Prep Date/Time: 11/2/2018 6:00:00AM
Prep Initial Wt./Vol.: 165.78g
Prep Extract Vol: 82.25mL

Print Date: 11/07/2018 1:28:20PM

Method Blank

Blank ID: MB for HBN 1788697 [VXX/33502]
Blank Lab ID: 1486941

Matrix: Soil/Solid (dry weight)

QC for Samples:
1189918006

Results by SW8260C LL w/MeOH

Parameter	Results	LOQ/CL	DL	Units
1,1,2,2-Tetrachloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,1,2-Trichloroethane	0.000400U	0.000800	0.000250	mg/Kg
1,2,3-Trichloropropane	0.000500U	0.00100	0.000310	mg/Kg
1,2-Dibromoethane	0.000500U	0.00100	0.000310	mg/Kg
1,2-Dichloroethane	0.00100U	0.00200	0.000620	mg/Kg
Bromodichloromethane	0.00100U	0.00200	0.000620	mg/Kg
Bromomethane	0.0100U	0.0200	0.00620	mg/Kg
Chloroform	0.00100U	0.00200	0.000620	mg/Kg
Dibromochloromethane	0.00100U	0.00200	0.000620	mg/Kg
Trichloroethene	0.00250U	0.00500	0.00150	mg/Kg
Vinyl chloride	0.000400U	0.000800	0.000250	mg/Kg

Surrogates

1,2-Dichloroethane-D4 (surr)	94.7	71-136	%
4-Bromofluorobenzene (surr)	107	55-151	%
Toluene-d8 (surr)	99.2	85-116	%

Batch Information

Analytical Batch: VMS18545
Analytical Method: SW8260C LL w/MeOH
Instrument: VQA 7890/5975 GC/MS
Analyst: NRO
Analytical Date/Time: 11/4/2018 9:42:00AM

Prep Batch: VXX33502
Prep Method: SW5035A
Prep Date/Time: 11/4/2018 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1189918 [VXX33502]

Blank Spike Lab ID: 1486942

Date Analyzed: 11/04/2018 10:07

Matrix: Soil/Solid (dry weight)

QC for Samples: 1189918006

Results by SW8260C LL w/MeOH

Blank Spike (mg/Kg)

Parameter	Spike	Result	Rec (%)	CL
1,1,2,2-Tetrachloroethane	0.750	0.708	94	(70-124)
1,1,2-Trichloroethane	0.750	0.698	93	(78-121)
1,2,3-Trichloropropane	0.750	0.648	86	(73-125)
1,2-Dibromoethane	0.750	0.760	101	(78-122)
1,2-Dichloroethane	0.750	0.713	95	(73-128)
Bromodichloromethane	0.750	0.718	96	(75-127)
Bromomethane	0.750	0.775	103	(53-143)
Chloroform	0.750	0.762	102	(78-123)
Dibromochloromethane	0.750	0.783	104	(74-126)
Trichloroethene	0.750	0.776	104	(77-123)
Vinyl chloride	0.750	0.773	103	(56-135)

Surrogates

1,2-Dichloroethane-D4 (surr)	0.750	97.2	97	(71-136)
4-Bromofluorobenzene (surr)	0.750	104	104	(55-151)
Toluene-d8 (surr)	0.750	99.5	100	(85-116)

Batch Information

Analytical Batch: VMS18545

Analytical Method: SW8260C LL w/MeOH

Instrument: VQA 7890/5975 GC/MS

Analyst: NRO

Prep Batch: VXX33502

Prep Method: SW5035A

Prep Date/Time: 11/04/2018 06:00

Spike Init Wt./Vol.: 0.750 mg/Kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Matrix Spike Summary

Original Sample ID: 1486938
MS Sample ID: 1486943 MS
MSD Sample ID: 1486944 MSD

Analysis Date: 11/04/2018 13:58
Analysis Date: 11/04/2018 10:57
Analysis Date: 11/04/2018 11:13
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1189918006

Results by SW8260C LL w/MeOH

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,2,2-Tetrachloroethane	0.000471U	0.353	0.324	92	0.353	0.331	94	70-124	2.00	(< 20)
1,1,2-Trichloroethane	0.000189U	0.353	0.327	93	0.353	0.348	99	78-121	6.20	(< 20)
1,2,3-Trichloropropane	0.000236U	0.353	0.302	86	0.353	0.309	88	73-125	2.20	(< 20)
1,2-Dibromoethane	0.000236U	0.353	0.355	101	0.353	0.377	107	78-122	5.90	(< 20)
1,2-Dichloroethane	0.000471U	0.353	0.334	95	0.353	0.347	98	73-128	3.80	(< 20)
Bromodichloromethane	0.000471U	0.353	0.334	95	0.353	0.351	100	75-127	4.90	(< 20)
Bromomethane	0.00471U	0.353	0.377	107	0.353	0.380	108	53-143	0.74	(< 20)
Chloroform	0.000366J	0.353	0.358	101	0.353	0.369	104	78-123	3.20	(< 20)
Dibromochloromethane	0.000471U	0.353	0.364	103	0.353	0.388	110	74-126	6.40	(< 20)
Trichloroethene	0.00118U	0.353	0.364	103	0.353	0.380	108	77-123	4.20	(< 20)
Vinyl chloride	0.000189U	0.353	0.377	107	0.353	0.369	105	56-135	1.90	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		0.353	0.347	98	0.353	0.345	98	71-136	0.41	
4-Bromofluorobenzene (surr)		0.589	0.382	65	0.589	0.385	65	55-151	0.78	
Toluene-d8 (surr)		0.353	0.353	100	0.353	0.355	101	85-116	0.54	

Batch Information

Analytical Batch: VMS18545
Analytical Method: SW8260C LL w/MeOH
Instrument: VQA 7890/5975 GC/MS
Analyst: NRO
Analytical Date/Time: 11/4/2018 10:57:00AM

Prep Batch: VXX33502
Prep Method: Vol. Extraction SW8260 LL w/MeOH
Prep Date/Time: 11/4/2018 6:00:00AM
Prep Initial Wt./Vol.: 106.19g
Prep Extract Vol: 25.00mL

Method Blank

Blank ID: MB for HBN 1788675 [XXX/40855]
Blank Lab ID: 1486818

Matrix: Soil/Solid (dry weight)

QC for Samples:

1189918001, 1189918002, 1189918003, 1189918004, 1189918005, 1189918006

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
5a Androstane (surr)	98.4	60-120		%

Batch Information

Analytical Batch: XFC14782
Analytical Method: AK102
Instrument: Agilent 7890B F
Analyst: VDL
Analytical Date/Time: 11/6/2018 9:04:00AM

Prep Batch: XXX40855
Prep Method: SW3550C
Prep Date/Time: 11/5/2018 11:34:38AM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Print Date: 11/07/2018 1:28:24PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1189918 [XXX40855]
 Blank Spike Lab ID: 1486819
 Date Analyzed: 11/06/2018 09:14

Spike Duplicate ID: LCSD for HBN 1189918 [XXX40855]
 Spike Duplicate Lab ID: 1486820
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1189918001, 1189918002, 1189918003, 1189918004, 1189918005, 1189918006

Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	833	884	106	833	878	105	(75-125)	0.60	(< 20)
Surrogates									
5a Androstane (surr)	16.7	108	108	16.7	108	108	(60-120)	0.39	

Batch Information

Analytical Batch: **XFC14782**
 Analytical Method: **AK102**
 Instrument: **Agilent 7890B F**
 Analyst: **VDL**

Prep Batch: **XXX40855**
 Prep Method: **SW3550C**
 Prep Date/Time: **11/05/2018 11:34**
 Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

Print Date: 11/07/2018 1:28:24PM

Method Blank

Blank ID: MB for HBN 1788675 [XXX/40855]
Blank Lab ID: 1486818

Matrix: Soil/Solid (dry weight)

QC for Samples:

1189918001, 1189918002, 1189918003, 1189918004, 1189918005, 1189918006

Results by AK103

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
nA riacontaneAt62 (surr)	104	60A20		%

Batch Information

Fanalytical Batch: XVC14782
Fanalytical Method: FK103
Instrument: Fgilent 7890B V
Fnalyst: TDL
Fanalytical Date/- ime: 11/6/2018 9:04:00FM

Prep Batch: XXX40855
Prep Method: SW3550C
Prep Date/- ime: 11/5/2018 11:34:38FM
Prep Initial Wt./Tol.: 30 g
Prep Extract Tol: 5 mL

Print Date: 11/07/2018 1:28:25PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1189918 [XXX40855]
 Blank Spike Lab ID: 1486819
 Date Analyzed: 11/06/2018 09:14

Spike Duplicate ID: LCSD for HBN 1189918 [XXX40855]
 Spike Duplicate Lab ID: 1486820
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1189918001, 1189918002, 1189918003, 1189918004, 1189918005, 1189918006

Results by AK103

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	833	884	106	833	879	105	(60-120)	0.57	(< 20)
Surrogates									
n-Triacontane-d62 (surr)	16.7	105	105	16.7	104	104	(60-120)	1.60	

Batch Information

Analytical Batch: **XFC14782**
 Analytical Method: **AK103**
 Instrument: **Agilent 7890B F**
 Analyst: **VDL**

Prep Batch: **XXX40855**
 Prep Method: **SW3550C**
 Prep Date/Time: **11/05/2018 11:34**
 Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

Print Date: 11/07/2018 1:28:26PM

REVIEWED S.D.

RUSH

1189918

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
2355 Hill Road
Fairbanks, AK 99709
(907) 479-0600
www.shannonwilson.com

CHAIN-OF-CUSTODY

Page 1 of 1
Laboratory SGS
Attn: Joe Dawkins

Analytical Methods (include preservative if used)

Quote No: _____
J-Flags: ☒ Yes ☐ No

Turn Around Time:
☐ Normal ☒ Rush
7-Day Rush
Please Specify _____

Remarks/Matrix Composition/Grab? Sample Containers

Sample Identity	Lab No.	Time	Date Sampled
18-3025-EL-01	① A-B	1315	10/29/18
18-3025-EL-101	② A-B	1305	10/29/18
18-3025-EL-02	③ A-B	1330	10/29/18
18-3025-EL-03	④ A-B	1336	10/29/18
18-3025-ST-04	⑤ A-B	1345	10/29/18
18-3025-ST-05	⑥ A-B	1350	10/29/18
Trip Blank	⑦ A		10/29/18

GR0 / LT VOCs - Meth	AK101 / EPA 8260 LL	AK102 / AK103	Total Number of Containers
✓	✓	✓	2
✓	✓	✓	2
✓	✓	✓	2
✓	✓	✓	2
✓	✓	✓	2
✓	✓	✓	2
✓	✓	✓	2

Project Information
Number: 100004
Name: B3025 Dispatch Ashcroft
Contact: VEW
Ongoing Project? Yes ☒ No ☐
Sampler: CRW

Sample Receipt
Total No. of Containers: 13
COC Seals/Intact? Y/N/A
Received Good Cond. Good
Temp: Chilled
Delivery Method: _____

Relinquished By: 1. Signature: <u>Chad Wilson</u> Printed Name: <u>Chad Wilson</u> Company: <u>Shannon & Wilson</u>	Relinquished By: 2. Signature: <u>David Warner</u> Printed Name: <u>David Warner</u> Company: <u>SGS</u>	Relinquished By: 3. Signature: _____ Printed Name: _____ Company: _____
Received By: 1. Signature: _____ Printed Name: <u>David Warner</u> Company: <u>SGS</u>	Received By: 2. Signature: _____ Printed Name: _____ Company: _____	Received By: 3. Signature: <u>Shelby Dresdow</u> Printed Name: <u>Shelby Dresdow</u> Company: <u>SGS</u>

Notes:
Trip Blank was with sampler at all times.

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - job file

RUSH

**FAIRBANKS SAMPLE RECEIPT FORM**

Note: This form is to be completed by Fairbanks Receiving Staff for all samples

Review Criteria:	Condition:	Comments/Actions Taken
Were custody seals intact? Note # & location, if applicable. COC accompanied samples?	Yes No N/A <input checked="" type="radio"/> Yes No N/A	<input checked="" type="checkbox"/> Exemption permitted if sampler hand carries/delivers.
Temperature blank compliant* (i.e., 0-6°C) If >6°C, were samples collected <8 hours ago? If <0°C, were all sample containers ice free?	Yes No N/A Yes No N/A Yes No N/A	<input type="checkbox"/> Exemption permitted if chilled & collected <8hrs ago
Cooler ID: _____ @ _____ w/Therm. ID: _____ Cooler ID: _____ @ _____ w/Therm. ID: _____ Cooler ID: _____ @ _____ w/Therm. ID: _____ Cooler ID: _____ @ _____ w/Therm. ID: _____ Cooler ID: _____ @ _____ w/Therm. ID: _____ If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank and "COOLER TEMP" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note ambient () or chilled (<input checked="" type="checkbox"/>). Please check one.		Note: Identify containers received at non-compliant temperature. Use form FS-0029 if more space is needed.
Delivery Method: Client (<input checked="" type="radio"/>) (hand carried) Other: _____	Tracking/AB# : Or see attached Or <input checked="" type="radio"/> N/A	
→For samples received with payment, note amount (\$) and whether cash / check / CC (circle one) was received.		
Were samples in good condition (no leaks/cracks/breakage)? Packing material used (specify all that apply): Bubble Wrap Separate plastic bags Vermiculite Other: _____	<input checked="" type="radio"/> Yes No N/A	Note: some samples are sent to Anchorage without inspection by SGS Fairbanks personnel.
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	<input checked="" type="radio"/> Yes No N/A	
For RUSH/SHORT Hold Time, were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	<input checked="" type="radio"/> Yes No N/A <input checked="" type="radio"/> Yes No N/A	7-Day Rush
Additional notes (if applicable): * Due 11-9-18		
Profile #: 338928		

Note to Client: any "no" circled above indicates non-compliance with standard procedures and may impact data quality.



e-Sample Receipt Form

SGS Workorder #:

1189918



1 1 8 9 9 1 8

Review Criteria		Condition (Yes, No, N/A)	Exceptions Noted below	
Chain of Custody / Temperature Requirements			n/a	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location		yes	1 front, 1 back	
COC accompanied samples?		yes		
n/a		**Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?		yes	Cooler ID: 1	@ 0.9 °C Therm. ID: D12
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?		n/a		
If <0°C, were sample containers ice free?		n/a		
If samples received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled".				
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.				
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.		
Were samples received within holding time?		yes		
Do samples match COC ** (i.e., sample IDs, dates/times collected)?		yes		
**Note: If times differ <1hr, record details & login per COC.				
Were analyses requested unambiguous? (i.e., method is specified for analyses with >1 option for analysis)		yes		
		n/a	***Exemption permitted for metals (e.g. 200.8/6020A).	
Were proper containers (type/mass/volume/preservative***) used?		yes		
Volatile / LL-Hg Requirements				
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?		yes		
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?		n/a		
Were all soil VOAs field extracted with MeOH+BFB?		yes		
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.				
Additional notes (if applicable):				

Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1189918001-A	No Preservative Required	OK			
1189918001-B	Methanol field pres. 4 C	OK			
1189918002-A	No Preservative Required	OK			
1189918002-B	Methanol field pres. 4 C	OK			
1189918003-A	No Preservative Required	OK			
1189918003-B	Methanol field pres. 4 C	OK			
1189918004-A	No Preservative Required	OK			
1189918004-B	Methanol field pres. 4 C	OK			
1189918005-A	No Preservative Required	OK			
1189918005-B	Methanol field pres. 4 C	OK			
1189918006-A	No Preservative Required	OK			
1189918006-B	Methanol field pres. 4 C	OK			
1189918007-A	Methanol field pres. 4 C	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

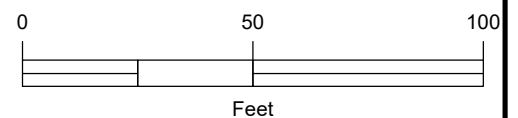
PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.



LEGEND

- Proposed Trenching
- Completed Trenching
- Tower
- Canopy
- Mechanical Equipment
- Gravel Pad
- Proposed Fence
- Pending Analytical Results
- Analytical Results Below ADEC Cleanup Levels



Building 3025
Emergency Dispatch Center Antenna Tower
Fort Wainwright, Alaska

2019 ACTIVITIES

May 2019

100004-003

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure 2

TABLE 1
FORT WAINWRIGHT BUILDING 3025 SOIL RESULTS

SHANNON & WILSON, INC.

Analytical Method	Analyte	ADEC Soil Cleanup Level	Units	B3025-N-01		B3025-NS-01	B3025-S-01	B3025-SS-01	B3025-W-01	B3025-WS-01
				Primary	Duplicate					
AK101	Gasoline Range Organics	300	mg/kg	<2.58	<3.50	<2.78	<3.28	<3.44	<3.44	<4.11
AK102	Diesel Range Organics	250	mg/kg	<20.6	<21.0	<21.2	<21.1	<20.8	<20.8	<22.5
AK103	Residual Range Organics	11,000	mg/kg	<27.1 B*	<21.0	<86.3 B*	<21.1 B*	<29.2 B*	<20.8	<55.5 B*
SW8260C (VOCs)	1,1,1,2-Tetrachloroethane	0.022	mg/kg	<0.0207	<0.0280	<0.0222	<0.0263	<0.0275	<0.0275	<0.0329
	1,1,1-Trichloroethane	32	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	1,1,2,2-Tetrachloroethane	0.003	mg/kg	<0.00207	<0.00280	<0.00222	<0.00263	<0.00275	<0.00275	<0.00329
	1,1,2-Trichloroethane	0.0014	mg/kg	<0.000826	<0.00112	<0.000889	<0.00105	<0.00110	<0.00110	<0.00132
	1,1-Dichloroethane	0.092	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	1,1-Dichloroethene	1.2	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	1,1-Dichloropropene	—	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	1,2,3-Trichlorobenzene	0.15	mg/kg	<0.0516	<0.0700	<0.0555	<0.0656	<0.0688	<0.0687	<0.0823
	1,2,3-Trichloropropane	0.000031	mg/kg	<0.00103	<0.00140	<0.00111	<0.00131	<0.00138	<0.00137	<0.00165
	1,2,4-Trichlorobenzene	0.082	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	1,2,4-Trimethylbenzene	0.61	mg/kg	<0.0516	<0.0700	<0.0555	<0.0656	<0.0688	<0.0687	<0.0823
	1,2-Dibromo-3-chloropropane	—	mg/kg	<0.103	<0.140	<0.111	<0.131	<0.138	<0.137	<0.165
	1,2-Dibromoethane	0.00024	mg/kg	<0.00207	<0.00280	<0.00222	<0.00263	<0.00275	<0.00275	<0.00329
	1,2-Dichlorobenzene	2.4	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	1,2-Dichloroethane	0.0055	mg/kg	<0.00207	<0.00280	<0.00222	<0.00263	<0.00275	<0.00275	<0.00329
	1,2-Dichloropropane	0.03	mg/kg	<0.0103	<0.0140	<0.0111	<0.0131	<0.0138	<0.0137	<0.0165
	1,3,5-Trimethylbenzene	0.66	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	1,3-Dichlorobenzene	2.3	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	1,3-Dichloropropane	—	mg/kg	<0.0103	<0.0140	<0.0111	<0.0131	<0.0138	<0.0137	<0.0165
	1,4-Dichlorobenzene	0.037	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	2,2-Dichloropropane	—	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	2-Butanone (MEK)	15	mg/kg	<0.258	<0.350	<0.278	<0.328	<0.344	<0.344	<0.411
	2-Chlorotoluene	—	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	2-Hexanone	0.11	mg/kg	<0.103	<0.140	<0.111	<0.131	<0.138	<0.137	<0.165
	4-Chlorotoluene	—	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	4-Methyl-2-pentanone (MIBK)	18	mg/kg	<0.258	<0.350	<0.278	<0.328	<0.344	<0.344	<0.411
	Acetone	38	mg/kg	<0.258	<0.350	<0.278	<0.328	<0.344	<0.344	<0.411
	Benzene	0.022	mg/kg	<0.0129	<0.0175	<0.0139	<0.0164	<0.0172	<0.0172	<0.0206
	Bromobenzene	0.36	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	Bromochloromethane	—	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	Bromodichloromethane	0.0043	mg/kg	<0.00207	<0.00280	<0.00222	<0.00263	<0.00275	<0.00275	<0.00329
	Bromoform	0.1	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	Bromomethane	0.024	mg/kg	<0.0207	<0.0280	<0.0222	<0.0263	<0.0275	<0.0275	<0.0329
	Carbon disulfide	2.9	mg/kg	<0.103	<0.140	<0.111	<0.131	<0.138	<0.137	<0.165
	Carbon tetrachloride	0.021	mg/kg	<0.0129	<0.0175	<0.0139	<0.0164	<0.0172	<0.0172	<0.0206
	Chlorobenzene	0.46	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	Chloroethane	72	mg/kg	<0.207	<0.280	<0.222	<0.263	<0.275	<0.275	<0.329
	Chloroform	0.0071	mg/kg	<0.00207	<0.00280	<0.00222	<0.00263	<0.00275	<0.00275	<0.00329
	Chloromethane	0.61	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
	cis-1,2-Dichloroethene	0.12	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411

TABLE 1
FORT WAINWRIGHT BUILDING 3025 SOIL RESULTS

SHANNON & WILSON, INC.

cis-1,3-Dichloropropene	0.018	mg/kg	<0.0129	<0.0175	<0.0139	<0.0164	<0.0172	<0.0172	<0.0206
Dibromochloromethane	0.0027	mg/kg	<0.00207	<0.00280	<0.00222	<0.00263	<0.00275	<0.00275	<0.00329
Dibromomethane	0.025	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
Dichlorodifluoromethane	3.9	mg/kg	<0.0516	<0.0700	<0.0555	<0.0656	<0.0688	<0.0687	<0.0823
Ethylbenzene	0.13	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
Hexachlorobutadiene	0.02	mg/kg	<0.0207	<0.0280	<0.0222	<0.0263	<0.0275	<0.0275	<0.0329
Isopropylbenzene	5.6	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
Methylene chloride	0.33	mg/kg	<0.103	<0.140	<0.111	<0.131	<0.138	<0.137	<0.165
Methyl-t-butyl ether	0.4	mg/kg	<0.103	<0.140	<0.111	<0.131	<0.138	<0.137	<0.165
Naphthalene	0.038	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
n-Butylbenzene	23	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
n-Propylbenzene	9.1	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
o-Xylene	1.5	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
P & M -Xylene	1.5	mg/kg	<0.0516	<0.0700	<0.0555	<0.0656	<0.0688	<0.0687	<0.0823
p-Isopropyltoluene	—	mg/kg	<0.103	<0.140	<0.111	<0.131	<0.138	<0.137	<0.165
sec-Butylbenzene	42	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
Styrene	10	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
tert-Butylbenzene	11	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
Tetrachloroethene	0.19	mg/kg	<0.0129	<0.0175	<0.0139	<0.0164	<0.0172	<0.0172	<0.0206
Toluene	6.7	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
Total Xylenes	1.5	mg/kg	<0.0774	<0.105	<0.0833	<0.0984	<0.103	<0.103	<0.123
trans-1,2-Dichloroethene	1.3	mg/kg	<0.0258	<0.0350	<0.0278	<0.0328	<0.0344	<0.0344	<0.0411
trans-1,3-Dichloropropene	0.018	mg/kg	<0.0129	<0.0175	<0.0139	<0.0164	<0.0172	<0.0172	<0.0206
Trichloroethene	0.011	mg/kg	<0.00516	<0.00700	<0.00555	<0.00656	<0.00688	<0.00687	<0.00823
Trichlorofluoromethane	41	mg/kg	<0.0516	<0.0700	<0.0555	<0.0656	<0.0688	<0.0687	<0.0823
Trichlorotrifluoroethane	310	mg/kg	<0.103	<0.140	<0.111	<0.131	<0.138	<0.137	<0.165
Vinyl acetate	1.1	mg/kg	<0.103	<0.140	<0.111	<0.131	<0.138	<0.137	<0.165
Vinyl chloride	0.0008	mg/kg	<0.000826	<0.00112	<0.000889	<0.00105	<0.00110	<0.00110	<0.00132

- Notes:
- ADEC

Alaska Department of Environmental Conservation
- VOC

volatile organic compounds
- ADEC soil cleanup level not established
- mg/kg

milligrams per kiligram
- <

Analyte not detected; listed as less than the limit of quantitation (LOQ) unless otherwise flagged due to quality-control failures.
- B*

Result is considered not detected due to a laboratory blank detection. Flag applied by Shannon & Wilson, Inc. (*).
- Bold

The reported LOQ exceeds the associated ADEC soil cleanup level.

Laboratory Data Review Checklist

Completed By:

Adam Wyborny

Title:

Environmental Engineering Staff

Date:

May 15, 2019

CS Report Name:

100004-002 FTW Building 3025 Tower

Report Date:

May 9, 2019

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

SGS North America, Inc.

Laboratory Report Number:

1199212

ADEC File Number:

N/A

Hazard Identification Number:

N/A

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and
- perform
- all of the submitted sample analyses?

☒ Yes ☐ No

Comments:

- b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

☒ Yes ☐ No

Comments:

N/A; All analyses were performed by the SGS laboratory in Anchorage, AK. The laboratory is certified by the ADEC CSP for the requested analyses.

2. Chain of Custody (CoC)

- a. CoC information completed, signed, and dated (including released/received by)?

☒ Yes ☐ No

Comments:

- b. Correct Analyses requested?

☒ Yes ☐ No

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

☒ Yes ☐ No

Comments:

The sample cooler was received within the recommended temperature range at the SGS Fairbanks receiving office and Anchorage laboratory.

- b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes ☐ No

Comments:

- c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes ☐ No

Comments:

The laboratory notes that samples were received in good condition.

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☐ Yes ☒ No

Comments:

There were no discrepancies noted by the laboratory in the sample receipt documentation.

- e. Data quality or usability affected?

Comments:

The data quality and/or usability was not affected.

4. Case Narrative

- a. Present and understandable?

☒ Yes ☐ No

Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

☒ Yes ☐ No

Comments:

The case narrative notes that residual range organics (RRO) were detected at a concentration greater than one half of the limit of quantitation (LOQ) but less than the LOQ in the method blank sample associated with preparation batch XXX41377.

- c. Were all corrective actions documented?

☐ Yes ☒ No

Comments:

There are no corrective actions documented in the case narrative. The laboratory did not re-analyze the sample in preparation batch XXX41377 because the detected RRO concentration was below the LOQ.

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The case narrative did not specify any effect on data quality/usability. See Section 6.a for further assessment.

5. Samples Results

- a. Correct analyses performed/reported as requested on COC?

☒ Yes ☐ No

Comments:

b. All applicable holding times met?

☒ Yes ☐ No

Comments:

c. All soils reported on a dry weight basis?

☒ Yes ☐ No

Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

☒ Yes ☐ No

Comments:

The following 8260C analytes had LOQs greater than their associated ADEC Migration to Groundwater Soil Cleanup Levels in one or more samples: 1,1,2,2-tetrachloroethane, 1,2,3-trichloropropane, 1,2-dibromoethane, 1,4-dichlorobenzene, 2-hexanone, bromomethane, cis-1,3-dichloropropene, dibromochloromethane, dibromomethane, hexachlorobutadiene, naphthalene, trans-1,3-dichloropropene, and vinyl chloride.

e. Data quality or usability affected?

☒ Yes ☐ No

Comments:

Reported non-detect sample results with LOQs above the applicable ADEC soil cleanup levels are noted on the analytical results table. We cannot assess if the affected analytes are present in the samples at concentrations greater than the ADEC soil cleanup levels but less than the LOQ.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☒ Yes ☐ No

Comments:

ii. All method blank results less than limit of quantitation (LOQ)?

☒ Yes ☐ No

Comments:

The AK101 method blank sample associated with preparation batch VXX33998 contained an estimated concentration of gasoline range organics (GRO) below the LOQ.

The AK102/103 method blank sample associated with preparation batch XXX41377 contained estimated concentrations of diesel range organics (DRO) and RRO below the LOQ.

iii. If above LOQ, what samples are affected?

Comments:

DRO and GRO were not detected in the field samples. The field samples *B3025-SS-01*, *B3025-S-01*, *B3025-WS-01*, *B3025-N-01*, and *B3025-NS-01* contained RRO concentrations within five times that of the concentration detected in the method blank sample associated with preparation batch XXX41377.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☒ Yes ☐ No

Comments:

The RRO results for samples *B3025-SS-01*, *B3025-S-01*, *B3025-WS-01*, *B3025-N-01*, and *B3025-NS-012* are considered false positives attributed to laboratory contamination. These results are flagged 'UB' for reporting purposes.

v. Data quality or usability affected?

Comments:

Data quality and/or usability was affected; see above.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☒ Yes ☐ No

Comments:

LCS/LCSD samples were reported for methods AK101, AK102, and AK103.

LCS and MS/MSD samples were reported for method SW8260.

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☐ Yes ☒ No

Comments:

N/A; metals/inorganics analyses were not requested for this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No

Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No

Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

No samples are affected. Analytical accuracy and precision were demonstrated to be within acceptance criteria.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No

Comments:

N/A; no samples are affected by method accuracy nor precision failures.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality and/or usability was not affected; see above.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☒ Yes ☐ No

Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☒ Yes ☐ No

Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No

Comments:

N/A; surrogate recoveries associated with this work order were demonstrated to be within acceptable limits.

iv. Data quality or usability affected?

Comments:

The data quality and/or usability was not affected; see above.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

- i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples?

(If not, enter explanation below.)

☒ Yes ☐ No

Comments:

- ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☒ Yes ☐ No

Comments:

- iii. All results less than LOQ?

☒ Yes ☐ No

Comments:

- iv. If above LOQ, what samples are affected?

Comments:

No samples are affected. Target analytes were not detected in the trip blank sample accompanying this sample batch.

- v. Data quality or usability affected?

Comments:

The data quality and/or usability was not affected; see above.

e. Field Duplicate

- i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No

Comments:

- ii. Submitted blind to lab?

☒ Yes ☐ No

Comments:

The field duplicate samples *B3025-N-01* and *B3025-N-101* were submitted with this work order.

- iii. Precision – All relative percent differences (RPD) less than specified DQOs?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
 R_2 = Field Duplicate Concentration

☒ Yes ☐ No

Comments:

With the exception of RRO, target analytes were not detected in the field duplicate samples. The RRO detections were previously qualified due to their association with a comparable method blank detection. Since all results were either not detected above the detection limit (DL) or previously qualified, the relative precision could not be assessed.

- iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

The data quality and/or usability was not affected; see above.

- f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below).

☒ Yes ☐ No ☒ Not Applicable

Samples for this project are collected with individual stainless-steel spoons which were decontaminated prior to use in the field.

- i. All results less than LOQ?

☒ Yes ☐ No

Comments:

N/A; an equipment blank sample was not submitted with this work order.

- ii. If above LOQ, what samples are affected?

Comments:

N/A; an equipment blank sample was not submitted with this work order.

- iii. Data quality or usability affected?

Comments:

The data quality and/or usability was not affected; see above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

- a. Defined and appropriate?

☒ Yes ☐ No

Comments:

Additional data flags/qualifiers are not required.

Laboratory Report of Analysis

To: Shannon & Wilson-Fairbanks
5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
907-479-0600

Report Number: **1199212**

Client Project: **100004-002 B3025**

Dear Valerie Webb,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Jennifer at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.



Alaska Division Technical Director

Stephen Ede
2019.05.09
14:42:31 -08'00'

Jennifer Dawkins
Project Manager
Jennifer.Dawkins@sgs.com

Date

Case Narrative

SGS Client: **Shannon & Wilson-Fairbanks**

SGS Project: **1199212**

Project Name/Site: **100004-002 B3025**

Project Contact: **Valerie Webb**

Refer to sample receipt form for information on sample condition.

MB for HBN 1793282 [XXX/41377] (1505803) MB

AK102/103 - RRO is detect in the MB greater than one half the LOQ, but less than the LOQ.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 05/09/2019 2:35:47PM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
B3025-SS-01	1199212001	04/25/2019	04/30/2019	Soil/Solid (dry weight)
B3025-S-01	1199212002	04/25/2019	04/30/2019	Soil/Solid (dry weight)
B3025-W-01	1199212003	04/25/2019	04/30/2019	Soil/Solid (dry weight)
B3025-WS-01	1199212004	04/25/2019	04/30/2019	Soil/Solid (dry weight)
B3025-N-101	1199212005	04/25/2019	04/30/2019	Soil/Solid (dry weight)
B3025-N-01	1199212006	04/25/2019	04/30/2019	Soil/Solid (dry weight)
B3025-NS-01	1199212007	04/25/2019	04/30/2019	Soil/Solid (dry weight)
Trip Blank	1199212008	04/25/2019	04/30/2019	Soil/Solid (dry weight)

<u>Method</u>	<u>Method Description</u>
AK102	Diesel/Residual Range Organics
AK103	Diesel/Residual Range Organics
AK101	Gasoline Range Organics (S)
SM21 2540G	Percent Solids SM2540G
SW8260C	VOC 8260 (S) Field Extracted

Detectable Results Summary

Client Sample ID: **B3025-SS-01**

Lab Sample ID: 1199212001

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	29.2	mg/Kg

Client Sample ID: **B3025-S-01**

Lab Sample ID: 1199212002

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	21.1	mg/Kg

Client Sample ID: **B3025-WS-01**

Lab Sample ID: 1199212004

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	55.5	mg/Kg

Client Sample ID: **B3025-N-01**

Lab Sample ID: 1199212006

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	27.1	mg/Kg

Client Sample ID: **B3025-NS-01**

Lab Sample ID: 1199212007

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	86.3	mg/Kg

Results of B3025-SS-01

Client Sample ID: **B3025-SS-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212001
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:38
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	20.8 U	20.8	6.46	mg/Kg	1		05/06/19 17:13
Surrogates							
5a Androstane (surr)	85.9	50-150		%	1		05/06/19 17:13

Batch Information

Analytical Batch: XFC14979
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 05/06/19 17:13
 Container ID: 1199212001-A

Prep Batch: XXX41377
 Prep Method: SW3550C
 Prep Date/Time: 05/06/19 09:08
 Prep Initial Wt./Vol.: 30.269 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	29.2	20.8	6.46	mg/Kg	1		05/06/19 17:13
Surrogates							
n-Triacontane-d62 (surr)	99.2	50-150		%	1		05/06/19 17:13

Batch Information

Analytical Batch: XFC14979
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 05/06/19 17:13
 Container ID: 1199212001-A

Prep Batch: XXX41377
 Prep Method: SW3550C
 Prep Date/Time: 05/06/19 09:08
 Prep Initial Wt./Vol.: 30.269 g
 Prep Extract Vol: 5 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-SS-01

Client Sample ID: **B3025-SS-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212001
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:38
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	3.44 U	3.44	1.03	mg/Kg	1		05/02/19 00:26
Surrogates							
4-Bromofluorobenzene (surr)	109	50-150		%	1		05/02/19 00:26

Batch Information

Analytical Batch: VFC14712
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 05/02/19 00:26
 Container ID: 1199212001-B

Prep Batch: VXX33998
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 16:38
 Prep Initial Wt./Vol.: 41.214 g
 Prep Extract Vol: 26.9855 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-SS-01

Client Sample ID: **B3025-SS-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212001
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:38
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0275 U	0.0275	0.00853	mg/Kg	1		05/03/19 14:19
1,1,1-Trichloroethane	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
1,1,2,2-Tetrachloroethane	0.00275 U	0.00275	0.000853	mg/Kg	1		05/03/19 14:19
1,1,2-Trichloroethane	0.00110 U	0.00110	0.000344	mg/Kg	1		05/03/19 14:19
1,1-Dichloroethane	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
1,1-Dichloroethene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
1,1-Dichloropropene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
1,2,3-Trichlorobenzene	0.0688 U	0.0688	0.0206	mg/Kg	1		05/03/19 14:19
1,2,3-Trichloropropane	0.00138 U	0.00138	0.000853	mg/Kg	1		05/03/19 14:19
1,2,4-Trichlorobenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
1,2,4-Trimethylbenzene	0.0688 U	0.0688	0.0206	mg/Kg	1		05/03/19 14:19
1,2-Dibromo-3-chloropropane	0.138 U	0.138	0.0427	mg/Kg	1		05/03/19 14:19
1,2-Dibromoethane	0.00275 U	0.00275	0.000853	mg/Kg	1		05/03/19 14:19
1,2-Dichlorobenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
1,2-Dichloroethane	0.00275 U	0.00275	0.000853	mg/Kg	1		05/03/19 14:19
1,2-Dichloropropane	0.0138 U	0.0138	0.00427	mg/Kg	1		05/03/19 14:19
1,3,5-Trimethylbenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
1,3-Dichlorobenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
1,3-Dichloropropane	0.0138 U	0.0138	0.00427	mg/Kg	1		05/03/19 14:19
1,4-Dichlorobenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
2,2-Dichloropropane	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
2-Butanone (MEK)	0.344 U	0.344	0.107	mg/Kg	1		05/03/19 14:19
2-Chlorotoluene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
2-Hexanone	0.138 U	0.138	0.0427	mg/Kg	1		05/03/19 14:19
4-Chlorotoluene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
4-Isopropyltoluene	0.138 U	0.138	0.0344	mg/Kg	1		05/03/19 14:19
4-Methyl-2-pentanone (MIBK)	0.344 U	0.344	0.107	mg/Kg	1		05/03/19 14:19
Acetone	0.344 U	0.344	0.107	mg/Kg	1		05/03/19 14:19
Benzene	0.0172 U	0.0172	0.00537	mg/Kg	1		05/03/19 14:19
Bromobenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
Bromochloromethane	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
Bromodichloromethane	0.00275 U	0.00275	0.000853	mg/Kg	1		05/03/19 14:19
Bromoform	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
Bromomethane	0.0275 U	0.0275	0.00853	mg/Kg	1		05/03/19 14:19
Carbon disulfide	0.138 U	0.138	0.0427	mg/Kg	1		05/03/19 14:19
Carbon tetrachloride	0.0172 U	0.0172	0.00537	mg/Kg	1		05/03/19 14:19
Chlorobenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19

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Results of B3025-SS-01

Client Sample ID: **B3025-SS-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212001
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:38
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.275 U	0.275	0.0853	mg/Kg	1		05/03/19 14:19
Chloroform	0.00275 U	0.00275	0.000853	mg/Kg	1		05/03/19 14:19
Chloromethane	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
cis-1,2-Dichloroethene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
cis-1,3-Dichloropropene	0.0172 U	0.0172	0.00537	mg/Kg	1		05/03/19 14:19
Dibromochloromethane	0.00275 U	0.00275	0.000853	mg/Kg	1		05/03/19 14:19
Dibromomethane	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
Dichlorodifluoromethane	0.0688 U	0.0688	0.0206	mg/Kg	1		05/03/19 14:19
Ethylbenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
Freon-113	0.138 U	0.138	0.0427	mg/Kg	1		05/03/19 14:19
Hexachlorobutadiene	0.0275 U	0.0275	0.00853	mg/Kg	1		05/03/19 14:19
Isopropylbenzene (Cumene)	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
Methylene chloride	0.138 U	0.138	0.0427	mg/Kg	1		05/03/19 14:19
Methyl-t-butyl ether	0.138 U	0.138	0.0427	mg/Kg	1		05/03/19 14:19
Naphthalene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
n-Butylbenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
n-Propylbenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
o-Xylene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
P & M -Xylene	0.0688 U	0.0688	0.0206	mg/Kg	1		05/03/19 14:19
sec-Butylbenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
Styrene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
tert-Butylbenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
Tetrachloroethene	0.0172 U	0.0172	0.00537	mg/Kg	1		05/03/19 14:19
Toluene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
trans-1,2-Dichloroethene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:19
trans-1,3-Dichloropropene	0.0172 U	0.0172	0.00537	mg/Kg	1		05/03/19 14:19
Trichloroethene	0.00688 U	0.00688	0.00206	mg/Kg	1		05/03/19 14:19
Trichlorofluoromethane	0.0688 U	0.0688	0.0206	mg/Kg	1		05/03/19 14:19
Vinyl acetate	0.138 U	0.138	0.0427	mg/Kg	1		05/03/19 14:19
Vinyl chloride	0.00110 U	0.00110	0.000344	mg/Kg	1		05/03/19 14:19
Xylenes (total)	0.103 U	0.103	0.0314	mg/Kg	1		05/03/19 14:19
Surrogates							
1,2-Dichloroethane-D4 (surr)	106	71-136		%	1		05/03/19 14:19
4-Bromofluorobenzene (surr)	92.9	55-151		%	1		05/03/19 14:19
Toluene-d8 (surr)	99.4	85-116		%	1		05/03/19 14:19

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Results of B3025-SS-01

Client Sample ID: **B3025-SS-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212001
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:38
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18881
 Analytical Method: SW8260C
 Analyst: NRB
 Analytical Date/Time: 05/03/19 14:19
 Container ID: 1199212001-B

Prep Batch: VXX34013
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 16:38
 Prep Initial Wt./Vol.: 41.214 g
 Prep Extract Vol: 26.9855 mL

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Results of B3025-S-01

Client Sample ID: **B3025-S-01**
Client Project ID: **100004-002 B3025**
Lab Sample ID: 1199212002
Lab Project ID: 1199212

Collection Date: 04/25/19 16:41
Received Date: 04/30/19 09:50
Matrix: Soil/Solid (dry weight)
Solids (%):93.9
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	21.1 U	21.1	6.54	mg/Kg	1		05/06/19 17:23
Surrogates							
5a Androstane (surr)	84.3	50-150		%	1		05/06/19 17:23

Batch Information

Analytical Batch: XFC14979
Analytical Method: AK102
Analyst: VDL
Analytical Date/Time: 05/06/19 17:23
Container ID: 1199212002-A

Prep Batch: XXX41377
Prep Method: SW3550C
Prep Date/Time: 05/06/19 09:08
Prep Initial Wt./Vol.: 30.273 g
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	21.1	21.1	6.54	mg/Kg	1		05/06/19 17:23
Surrogates							
n-Triacontane-d62 (surr)	96.5	50-150		%	1		05/06/19 17:23

Batch Information

Analytical Batch: XFC14979
Analytical Method: AK103
Analyst: VDL
Analytical Date/Time: 05/06/19 17:23
Container ID: 1199212002-A

Prep Batch: XXX41377
Prep Method: SW3550C
Prep Date/Time: 05/06/19 09:08
Prep Initial Wt./Vol.: 30.273 g
Prep Extract Vol: 5 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-S-01

Client Sample ID: **B3025-S-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212002
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:41
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.9
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	3.28 U	3.28	0.984	mg/Kg	1		05/02/19 00:43
Surrogates							
4-Bromofluorobenzene (surr)	106	50-150		%	1		05/02/19 00:43

Batch Information

Analytical Batch: VFC14712
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 05/02/19 00:43
 Container ID: 1199212002-B

Prep Batch: VXX33998
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 16:41
 Prep Initial Wt./Vol.: 44.972 g
 Prep Extract Vol: 27.7264 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-S-01

Client Sample ID: **B3025-S-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212002
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:41
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.9
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0263 U	0.0263	0.00814	mg/Kg	1		05/03/19 14:35
1,1,1-Trichloroethane	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
1,1,2,2-Tetrachloroethane	0.00263 U	0.00263	0.000814	mg/Kg	1		05/03/19 14:35
1,1,2-Trichloroethane	0.00105 U	0.00105	0.000328	mg/Kg	1		05/03/19 14:35
1,1-Dichloroethane	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
1,1-Dichloroethene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
1,1-Dichloropropene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
1,2,3-Trichlorobenzene	0.0656 U	0.0656	0.0197	mg/Kg	1		05/03/19 14:35
1,2,3-Trichloropropane	0.00131 U	0.00131	0.000814	mg/Kg	1		05/03/19 14:35
1,2,4-Trichlorobenzene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
1,2,4-Trimethylbenzene	0.0656 U	0.0656	0.0197	mg/Kg	1		05/03/19 14:35
1,2-Dibromo-3-chloropropane	0.131 U	0.131	0.0407	mg/Kg	1		05/03/19 14:35
1,2-Dibromoethane	0.00263 U	0.00263	0.000814	mg/Kg	1		05/03/19 14:35
1,2-Dichlorobenzene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
1,2-Dichloroethane	0.00263 U	0.00263	0.000814	mg/Kg	1		05/03/19 14:35
1,2-Dichloropropane	0.0131 U	0.0131	0.00407	mg/Kg	1		05/03/19 14:35
1,3,5-Trimethylbenzene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
1,3-Dichlorobenzene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
1,3-Dichloropropane	0.0131 U	0.0131	0.00407	mg/Kg	1		05/03/19 14:35
1,4-Dichlorobenzene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
2,2-Dichloropropane	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
2-Butanone (MEK)	0.328 U	0.328	0.102	mg/Kg	1		05/03/19 14:35
2-Chlorotoluene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
2-Hexanone	0.131 U	0.131	0.0407	mg/Kg	1		05/03/19 14:35
4-Chlorotoluene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
4-Isopropyltoluene	0.131 U	0.131	0.0328	mg/Kg	1		05/03/19 14:35
4-Methyl-2-pentanone (MIBK)	0.328 U	0.328	0.102	mg/Kg	1		05/03/19 14:35
Acetone	0.328 U	0.328	0.102	mg/Kg	1		05/03/19 14:35
Benzene	0.0164 U	0.0164	0.00512	mg/Kg	1		05/03/19 14:35
Bromobenzene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
Bromochloromethane	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
Bromodichloromethane	0.00263 U	0.00263	0.000814	mg/Kg	1		05/03/19 14:35
Bromoform	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
Bromomethane	0.0263 U	0.0263	0.00814	mg/Kg	1		05/03/19 14:35
Carbon disulfide	0.131 U	0.131	0.0407	mg/Kg	1		05/03/19 14:35
Carbon tetrachloride	0.0164 U	0.0164	0.00512	mg/Kg	1		05/03/19 14:35
Chlorobenzene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35

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Results of B3025-S-01

Client Sample ID: **B3025-S-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212002
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:41
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.9
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.263 U	0.263	0.0814	mg/Kg	1		05/03/19 14:35
Chloroform	0.00263 U	0.00263	0.000814	mg/Kg	1		05/03/19 14:35
Chloromethane	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
cis-1,2-Dichloroethene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
cis-1,3-Dichloropropene	0.0164 U	0.0164	0.00512	mg/Kg	1		05/03/19 14:35
Dibromochloromethane	0.00263 U	0.00263	0.000814	mg/Kg	1		05/03/19 14:35
Dibromomethane	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
Dichlorodifluoromethane	0.0656 U	0.0656	0.0197	mg/Kg	1		05/03/19 14:35
Ethylbenzene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
Freon-113	0.131 U	0.131	0.0407	mg/Kg	1		05/03/19 14:35
Hexachlorobutadiene	0.0263 U	0.0263	0.00814	mg/Kg	1		05/03/19 14:35
Isopropylbenzene (Cumene)	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
Methylene chloride	0.131 U	0.131	0.0407	mg/Kg	1		05/03/19 14:35
Methyl-t-butyl ether	0.131 U	0.131	0.0407	mg/Kg	1		05/03/19 14:35
Naphthalene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
n-Butylbenzene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
n-Propylbenzene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
o-Xylene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
P & M -Xylene	0.0656 U	0.0656	0.0197	mg/Kg	1		05/03/19 14:35
sec-Butylbenzene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
Styrene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
tert-Butylbenzene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
Tetrachloroethene	0.0164 U	0.0164	0.00512	mg/Kg	1		05/03/19 14:35
Toluene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
trans-1,2-Dichloroethene	0.0328 U	0.0328	0.0102	mg/Kg	1		05/03/19 14:35
trans-1,3-Dichloropropene	0.0164 U	0.0164	0.00512	mg/Kg	1		05/03/19 14:35
Trichloroethene	0.00656 U	0.00656	0.00197	mg/Kg	1		05/03/19 14:35
Trichlorofluoromethane	0.0656 U	0.0656	0.0197	mg/Kg	1		05/03/19 14:35
Vinyl acetate	0.131 U	0.131	0.0407	mg/Kg	1		05/03/19 14:35
Vinyl chloride	0.00105 U	0.00105	0.000328	mg/Kg	1		05/03/19 14:35
Xylenes (total)	0.0984 U	0.0984	0.0299	mg/Kg	1		05/03/19 14:35
Surrogates							
1,2-Dichloroethane-D4 (surr)	106	71-136		%	1		05/03/19 14:35
4-Bromofluorobenzene (surr)	89.5	55-151		%	1		05/03/19 14:35
Toluene-d8 (surr)	100	85-116		%	1		05/03/19 14:35

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Results of **B3025-S-01**

Client Sample ID: **B3025-S-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212002
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:41
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.9
 Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS18881
 Analytical Method: SW8260C
 Analyst: NRB
 Analytical Date/Time: 05/03/19 14:35
 Container ID: 1199212002-B

Prep Batch: VXX34013
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 16:41
 Prep Initial Wt./Vol.: 44.972 g
 Prep Extract Vol: 27.7264 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-W-01

Client Sample ID: **B3025-W-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212003
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:47
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.2
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	20.8 U	20.8	6.44	mg/Kg	1		05/06/19 17:33
Surrogates							
5a Androstane (surr)	86.8	50-150		%	1		05/06/19 17:33

Batch Information

Analytical Batch: XFC14979
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 05/06/19 17:33
 Container ID: 1199212003-A

Prep Batch: XXX41377
 Prep Method: SW3550C
 Prep Date/Time: 05/06/19 09:08
 Prep Initial Wt./Vol.: 30.03 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	20.8 U	20.8	6.44	mg/Kg	1		05/06/19 17:33
Surrogates							
n-Triacontane-d62 (surr)	99.4	50-150		%	1		05/06/19 17:33

Batch Information

Analytical Batch: XFC14979
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 05/06/19 17:33
 Container ID: 1199212003-A

Prep Batch: XXX41377
 Prep Method: SW3550C
 Prep Date/Time: 05/06/19 09:08
 Prep Initial Wt./Vol.: 30.03 g
 Prep Extract Vol: 5 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-W-01

Client Sample ID: **B3025-W-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212003
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:47
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.2
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	3.44 U	3.44	1.03	mg/Kg	1		05/02/19 01:01
Surrogates							
4-Bromofluorobenzene (surr)	101	50-150		%	1		05/02/19 01:01

Batch Information

Analytical Batch: VFC14712
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 05/02/19 01:01
 Container ID: 1199212003-B

Prep Batch: VXX33998
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 16:47
 Prep Initial Wt./Vol.: 40.136 g
 Prep Extract Vol: 26.5345 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-W-01

Client Sample ID: **B3025-W-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212003
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:47
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.2
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0275 U	0.0275	0.00852	mg/Kg	1		05/03/19 14:51
1,1,1-Trichloroethane	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
1,1,2,2-Tetrachloroethane	0.00275 U	0.00275	0.000852	mg/Kg	1		05/03/19 14:51
1,1,2-Trichloroethane	0.00110 U	0.00110	0.000344	mg/Kg	1		05/03/19 14:51
1,1-Dichloroethane	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
1,1-Dichloroethene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
1,1-Dichloropropene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
1,2,3-Trichlorobenzene	0.0687 U	0.0687	0.0206	mg/Kg	1		05/03/19 14:51
1,2,3-Trichloropropane	0.00137 U	0.00137	0.000852	mg/Kg	1		05/03/19 14:51
1,2,4-Trichlorobenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
1,2,4-Trimethylbenzene	0.0687 U	0.0687	0.0206	mg/Kg	1		05/03/19 14:51
1,2-Dibromo-3-chloropropane	0.137 U	0.137	0.0426	mg/Kg	1		05/03/19 14:51
1,2-Dibromoethane	0.00275 U	0.00275	0.000852	mg/Kg	1		05/03/19 14:51
1,2-Dichlorobenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
1,2-Dichloroethane	0.00275 U	0.00275	0.000852	mg/Kg	1		05/03/19 14:51
1,2-Dichloropropane	0.0137 U	0.0137	0.00426	mg/Kg	1		05/03/19 14:51
1,3,5-Trimethylbenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
1,3-Dichlorobenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
1,3-Dichloropropane	0.0137 U	0.0137	0.00426	mg/Kg	1		05/03/19 14:51
1,4-Dichlorobenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
2,2-Dichloropropane	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
2-Butanone (MEK)	0.344 U	0.344	0.107	mg/Kg	1		05/03/19 14:51
2-Chlorotoluene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
2-Hexanone	0.137 U	0.137	0.0426	mg/Kg	1		05/03/19 14:51
4-Chlorotoluene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
4-Isopropyltoluene	0.137 U	0.137	0.0344	mg/Kg	1		05/03/19 14:51
4-Methyl-2-pentanone (MIBK)	0.344 U	0.344	0.107	mg/Kg	1		05/03/19 14:51
Acetone	0.344 U	0.344	0.107	mg/Kg	1		05/03/19 14:51
Benzene	0.0172 U	0.0172	0.00536	mg/Kg	1		05/03/19 14:51
Bromobenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
Bromochloromethane	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
Bromodichloromethane	0.00275 U	0.00275	0.000852	mg/Kg	1		05/03/19 14:51
Bromoform	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
Bromomethane	0.0275 U	0.0275	0.00852	mg/Kg	1		05/03/19 14:51
Carbon disulfide	0.137 U	0.137	0.0426	mg/Kg	1		05/03/19 14:51
Carbon tetrachloride	0.0172 U	0.0172	0.00536	mg/Kg	1		05/03/19 14:51
Chlorobenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51

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Results of B3025-W-01

Client Sample ID: **B3025-W-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212003
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:47
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.2
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.275 U	0.275	0.0852	mg/Kg	1		05/03/19 14:51
Chloroform	0.00275 U	0.00275	0.000852	mg/Kg	1		05/03/19 14:51
Chloromethane	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
cis-1,2-Dichloroethene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
cis-1,3-Dichloropropene	0.0172 U	0.0172	0.00536	mg/Kg	1		05/03/19 14:51
Dibromochloromethane	0.00275 U	0.00275	0.000852	mg/Kg	1		05/03/19 14:51
Dibromomethane	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
Dichlorodifluoromethane	0.0687 U	0.0687	0.0206	mg/Kg	1		05/03/19 14:51
Ethylbenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
Freon-113	0.137 U	0.137	0.0426	mg/Kg	1		05/03/19 14:51
Hexachlorobutadiene	0.0275 U	0.0275	0.00852	mg/Kg	1		05/03/19 14:51
Isopropylbenzene (Cumene)	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
Methylene chloride	0.137 U	0.137	0.0426	mg/Kg	1		05/03/19 14:51
Methyl-t-butyl ether	0.137 U	0.137	0.0426	mg/Kg	1		05/03/19 14:51
Naphthalene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
n-Butylbenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
n-Propylbenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
o-Xylene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
P & M -Xylene	0.0687 U	0.0687	0.0206	mg/Kg	1		05/03/19 14:51
sec-Butylbenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
Styrene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
tert-Butylbenzene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
Tetrachloroethene	0.0172 U	0.0172	0.00536	mg/Kg	1		05/03/19 14:51
Toluene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
trans-1,2-Dichloroethene	0.0344 U	0.0344	0.0107	mg/Kg	1		05/03/19 14:51
trans-1,3-Dichloropropene	0.0172 U	0.0172	0.00536	mg/Kg	1		05/03/19 14:51
Trichloroethene	0.00687 U	0.00687	0.00206	mg/Kg	1		05/03/19 14:51
Trichlorofluoromethane	0.0687 U	0.0687	0.0206	mg/Kg	1		05/03/19 14:51
Vinyl acetate	0.137 U	0.137	0.0426	mg/Kg	1		05/03/19 14:51
Vinyl chloride	0.00110 U	0.00110	0.000344	mg/Kg	1		05/03/19 14:51
Xylenes (total)	0.103 U	0.103	0.0313	mg/Kg	1		05/03/19 14:51
Surrogates							
1,2-Dichloroethane-D4 (surr)	109	71-136		%	1		05/03/19 14:51
4-Bromofluorobenzene (surr)	91.4	55-151		%	1		05/03/19 14:51
Toluene-d8 (surr)	99.6	85-116		%	1		05/03/19 14:51

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Results of B3025-W-01

Client Sample ID: **B3025-W-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212003
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:47
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.2
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18881
 Analytical Method: SW8260C
 Analyst: NRB
 Analytical Date/Time: 05/03/19 14:51
 Container ID: 1199212003-B

Prep Batch: VXX34013
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 16:47
 Prep Initial Wt./Vol.: 40.136 g
 Prep Extract Vol: 26.5345 mL

Print Date: 05/09/2019 2:35:51PM



Results of B3025-WS-01

Client Sample ID: **B3025-WS-01**
Client Project ID: **100004-002 B3025**
Lab Sample ID: 1199212004
Lab Project ID: 1199212

Collection Date: 04/25/19 16:52
Received Date: 04/30/19 09:50
Matrix: Soil/Solid (dry weight)
Solids (%):87.3
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	22.5 U	22.5	6.99	mg/Kg	1		05/06/19 17:43
Surrogates							
5a Androstane (surr)	86.2	50-150		%	1		05/06/19 17:43

Batch Information

Analytical Batch: XFC14979
Analytical Method: AK102
Analyst: VDL
Analytical Date/Time: 05/06/19 17:43
Container ID: 1199212004-A

Prep Batch: XXX41377
Prep Method: SW3550C
Prep Date/Time: 05/06/19 09:08
Prep Initial Wt./Vol.: 30.475 g
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	55.5	22.5	6.99	mg/Kg	1		05/06/19 17:43
Surrogates							
n-Triacontane-d62 (surr)	100	50-150		%	1		05/06/19 17:43

Batch Information

Analytical Batch: XFC14979
Analytical Method: AK103
Analyst: VDL
Analytical Date/Time: 05/06/19 17:43
Container ID: 1199212004-A

Prep Batch: XXX41377
Prep Method: SW3550C
Prep Date/Time: 05/06/19 09:08
Prep Initial Wt./Vol.: 30.475 g
Prep Extract Vol: 5 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-WS-01

Client Sample ID: **B3025-WS-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212004
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:52
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):87.3
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	4.11 U	4.11	1.23	mg/Kg	1		05/02/19 01:18
Surrogates							
4-Bromofluorobenzene (surr)	103	50-150		%	1		05/02/19 01:18

Batch Information

Analytical Batch: VFC14712
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 05/02/19 01:18
 Container ID: 1199212004-B

Prep Batch: VXX33998
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 16:52
 Prep Initial Wt./Vol.: 42.285 g
 Prep Extract Vol: 30.3662 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-WS-01

Client Sample ID: **B3025-WS-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212004
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:52
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):87.3
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0329 U	0.0329	0.0102	mg/Kg	1		05/03/19 15:07
1,1,1-Trichloroethane	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
1,1,2,2-Tetrachloroethane	0.00329 U	0.00329	0.00102	mg/Kg	1		05/03/19 15:07
1,1,2-Trichloroethane	0.00132 U	0.00132	0.000411	mg/Kg	1		05/03/19 15:07
1,1-Dichloroethane	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
1,1-Dichloroethene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
1,1-Dichloropropene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
1,2,3-Trichlorobenzene	0.0823 U	0.0823	0.0247	mg/Kg	1		05/03/19 15:07
1,2,3-Trichloropropane	0.00165 U	0.00165	0.00102	mg/Kg	1		05/03/19 15:07
1,2,4-Trichlorobenzene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
1,2,4-Trimethylbenzene	0.0823 U	0.0823	0.0247	mg/Kg	1		05/03/19 15:07
1,2-Dibromo-3-chloropropane	0.165 U	0.165	0.0510	mg/Kg	1		05/03/19 15:07
1,2-Dibromoethane	0.00329 U	0.00329	0.00102	mg/Kg	1		05/03/19 15:07
1,2-Dichlorobenzene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
1,2-Dichloroethane	0.00329 U	0.00329	0.00102	mg/Kg	1		05/03/19 15:07
1,2-Dichloropropane	0.0165 U	0.0165	0.00510	mg/Kg	1		05/03/19 15:07
1,3,5-Trimethylbenzene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
1,3-Dichlorobenzene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
1,3-Dichloropropane	0.0165 U	0.0165	0.00510	mg/Kg	1		05/03/19 15:07
1,4-Dichlorobenzene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
2,2-Dichloropropane	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
2-Butanone (MEK)	0.411 U	0.411	0.128	mg/Kg	1		05/03/19 15:07
2-Chlorotoluene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
2-Hexanone	0.165 U	0.165	0.0510	mg/Kg	1		05/03/19 15:07
4-Chlorotoluene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
4-Isopropyltoluene	0.165 U	0.165	0.0411	mg/Kg	1		05/03/19 15:07
4-Methyl-2-pentanone (MIBK)	0.411 U	0.411	0.128	mg/Kg	1		05/03/19 15:07
Acetone	0.411 U	0.411	0.128	mg/Kg	1		05/03/19 15:07
Benzene	0.0206 U	0.0206	0.00642	mg/Kg	1		05/03/19 15:07
Bromobenzene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
Bromochloromethane	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
Bromodichloromethane	0.00329 U	0.00329	0.00102	mg/Kg	1		05/03/19 15:07
Bromoform	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
Bromomethane	0.0329 U	0.0329	0.0102	mg/Kg	1		05/03/19 15:07
Carbon disulfide	0.165 U	0.165	0.0510	mg/Kg	1		05/03/19 15:07
Carbon tetrachloride	0.0206 U	0.0206	0.00642	mg/Kg	1		05/03/19 15:07
Chlorobenzene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07

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Results of B3025-WS-01

Client Sample ID: **B3025-WS-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212004
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:52
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):87.3
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.329 U	0.329	0.102	mg/Kg	1		05/03/19 15:07
Chloroform	0.00329 U	0.00329	0.00102	mg/Kg	1		05/03/19 15:07
Chloromethane	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
cis-1,2-Dichloroethene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
cis-1,3-Dichloropropene	0.0206 U	0.0206	0.00642	mg/Kg	1		05/03/19 15:07
Dibromochloromethane	0.00329 U	0.00329	0.00102	mg/Kg	1		05/03/19 15:07
Dibromomethane	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
Dichlorodifluoromethane	0.0823 U	0.0823	0.0247	mg/Kg	1		05/03/19 15:07
Ethylbenzene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
Freon-113	0.165 U	0.165	0.0510	mg/Kg	1		05/03/19 15:07
Hexachlorobutadiene	0.0329 U	0.0329	0.0102	mg/Kg	1		05/03/19 15:07
Isopropylbenzene (Cumene)	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
Methylene chloride	0.165 U	0.165	0.0510	mg/Kg	1		05/03/19 15:07
Methyl-t-butyl ether	0.165 U	0.165	0.0510	mg/Kg	1		05/03/19 15:07
Naphthalene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
n-Butylbenzene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
n-Propylbenzene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
o-Xylene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
P & M -Xylene	0.0823 U	0.0823	0.0247	mg/Kg	1		05/03/19 15:07
sec-Butylbenzene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
Styrene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
tert-Butylbenzene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
Tetrachloroethene	0.0206 U	0.0206	0.00642	mg/Kg	1		05/03/19 15:07
Toluene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
trans-1,2-Dichloroethene	0.0411 U	0.0411	0.0128	mg/Kg	1		05/03/19 15:07
trans-1,3-Dichloropropene	0.0206 U	0.0206	0.00642	mg/Kg	1		05/03/19 15:07
Trichloroethene	0.00823 U	0.00823	0.00247	mg/Kg	1		05/03/19 15:07
Trichlorofluoromethane	0.0823 U	0.0823	0.0247	mg/Kg	1		05/03/19 15:07
Vinyl acetate	0.165 U	0.165	0.0510	mg/Kg	1		05/03/19 15:07
Vinyl chloride	0.00132 U	0.00132	0.000411	mg/Kg	1		05/03/19 15:07
Xylenes (total)	0.123 U	0.123	0.0375	mg/Kg	1		05/03/19 15:07
Surrogates							
1,2-Dichloroethane-D4 (surr)	105	71-136		%	1		05/03/19 15:07
4-Bromofluorobenzene (surr)	89.7	55-151		%	1		05/03/19 15:07
Toluene-d8 (surr)	98.2	85-116		%	1		05/03/19 15:07

Print Date: 05/09/2019 2:35:51PM

Results of B3025-WS-01

Client Sample ID: **B3025-WS-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212004
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:52
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):87.3
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18881
 Analytical Method: SW8260C
 Analyst: NRB
 Analytical Date/Time: 05/03/19 15:07
 Container ID: 1199212004-B

Prep Batch: VXX34013
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 16:52
 Prep Initial Wt./Vol.: 42.285 g
 Prep Extract Vol: 30.3662 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-N-101

Client Sample ID: **B3025-N-101**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212005
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:50
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	21.0 U	21.0	6.51	mg/Kg	1		05/06/19 17:53
Surrogates							
5a Androstane (surr)	85.8	50-150		%	1		05/06/19 17:53

Batch Information

Analytical Batch: XFC14979
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 05/06/19 17:53
 Container ID: 1199212005-A

Prep Batch: XXX41377
 Prep Method: SW3550C
 Prep Date/Time: 05/06/19 09:08
 Prep Initial Wt./Vol.: 30.012 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	21.0 U	21.0	6.51	mg/Kg	1		05/06/19 17:53
Surrogates							
n-Triacontane-d62 (surr)	98.1	50-150		%	1		05/06/19 17:53

Batch Information

Analytical Batch: XFC14979
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 05/06/19 17:53
 Container ID: 1199212005-A

Prep Batch: XXX41377
 Prep Method: SW3550C
 Prep Date/Time: 05/06/19 09:08
 Prep Initial Wt./Vol.: 30.012 g
 Prep Extract Vol: 5 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-N-101

Client Sample ID: **B3025-N-101**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212005
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:50
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	3.50 U	3.50	1.05	mg/Kg	1		05/02/19 01:36
Surrogates							
4-Bromofluorobenzene (surr)	106	50-150		%	1		05/02/19 01:36

Batch Information

Analytical Batch: VFC14712
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 05/02/19 01:36
 Container ID: 1199212005-B

Prep Batch: VXX33998
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 16:50
 Prep Initial Wt./Vol.: 40.428 g
 Prep Extract Vol: 26.9501 mL

Print Date: 05/09/2019 2:35:51PM

Results of **B3025-N-101**

Client Sample ID: **B3025-N-101**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212005
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:50
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	0.0280 U	0.0280	0.00869	mg/Kg	1		05/03/19 15:23
1,1,1-Trichloroethane	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
1,1,2,2-Tetrachloroethane	0.00280 U	0.00280	0.000869	mg/Kg	1		05/03/19 15:23
1,1,2-Trichloroethane	0.00112 U	0.00112	0.000350	mg/Kg	1		05/03/19 15:23
1,1-Dichloroethane	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
1,1-Dichloroethene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
1,1-Dichloropropene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
1,2,3-Trichlorobenzene	0.0700 U	0.0700	0.0210	mg/Kg	1		05/03/19 15:23
1,2,3-Trichloropropane	0.00140 U	0.00140	0.000869	mg/Kg	1		05/03/19 15:23
1,2,4-Trichlorobenzene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
1,2,4-Trimethylbenzene	0.0700 U	0.0700	0.0210	mg/Kg	1		05/03/19 15:23
1,2-Dibromo-3-chloropropane	0.140 U	0.140	0.0434	mg/Kg	1		05/03/19 15:23
1,2-Dibromoethane	0.00280 U	0.00280	0.000869	mg/Kg	1		05/03/19 15:23
1,2-Dichlorobenzene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
1,2-Dichloroethane	0.00280 U	0.00280	0.000869	mg/Kg	1		05/03/19 15:23
1,2-Dichloropropane	0.0140 U	0.0140	0.00434	mg/Kg	1		05/03/19 15:23
1,3,5-Trimethylbenzene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
1,3-Dichlorobenzene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
1,3-Dichloropropane	0.0140 U	0.0140	0.00434	mg/Kg	1		05/03/19 15:23
1,4-Dichlorobenzene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
2,2-Dichloropropane	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
2-Butanone (MEK)	0.350 U	0.350	0.109	mg/Kg	1		05/03/19 15:23
2-Chlorotoluene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
2-Hexanone	0.140 U	0.140	0.0434	mg/Kg	1		05/03/19 15:23
4-Chlorotoluene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
4-Isopropyltoluene	0.140 U	0.140	0.0350	mg/Kg	1		05/03/19 15:23
4-Methyl-2-pentanone (MIBK)	0.350 U	0.350	0.109	mg/Kg	1		05/03/19 15:23
Acetone	0.350 U	0.350	0.109	mg/Kg	1		05/03/19 15:23
Benzene	0.0175 U	0.0175	0.00546	mg/Kg	1		05/03/19 15:23
Bromobenzene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
Bromochloromethane	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
Bromodichloromethane	0.00280 U	0.00280	0.000869	mg/Kg	1		05/03/19 15:23
Bromoform	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
Bromomethane	0.0280 U	0.0280	0.00869	mg/Kg	1		05/03/19 15:23
Carbon disulfide	0.140 U	0.140	0.0434	mg/Kg	1		05/03/19 15:23
Carbon tetrachloride	0.0175 U	0.0175	0.00546	mg/Kg	1		05/03/19 15:23
Chlorobenzene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23

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**Results of B3025-N-101**

Client Sample ID: **B3025-N-101**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212005
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:50
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroethane	0.280 U	0.280	0.0869	mg/Kg	1		05/03/19 15:23
Chloroform	0.00280 U	0.00280	0.000869	mg/Kg	1		05/03/19 15:23
Chloromethane	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
cis-1,2-Dichloroethene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
cis-1,3-Dichloropropene	0.0175 U	0.0175	0.00546	mg/Kg	1		05/03/19 15:23
Dibromochloromethane	0.00280 U	0.00280	0.000869	mg/Kg	1		05/03/19 15:23
Dibromomethane	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
Dichlorodifluoromethane	0.0700 U	0.0700	0.0210	mg/Kg	1		05/03/19 15:23
Ethylbenzene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
Freon-113	0.140 U	0.140	0.0434	mg/Kg	1		05/03/19 15:23
Hexachlorobutadiene	0.0280 U	0.0280	0.00869	mg/Kg	1		05/03/19 15:23
Isopropylbenzene (Cumene)	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
Methylene chloride	0.140 U	0.140	0.0434	mg/Kg	1		05/03/19 15:23
Methyl-t-butyl ether	0.140 U	0.140	0.0434	mg/Kg	1		05/03/19 15:23
Naphthalene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
n-Butylbenzene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
n-Propylbenzene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
o-Xylene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
P & M -Xylene	0.0700 U	0.0700	0.0210	mg/Kg	1		05/03/19 15:23
sec-Butylbenzene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
Styrene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
tert-Butylbenzene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
Tetrachloroethene	0.0175 U	0.0175	0.00546	mg/Kg	1		05/03/19 15:23
Toluene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
trans-1,2-Dichloroethene	0.0350 U	0.0350	0.0109	mg/Kg	1		05/03/19 15:23
trans-1,3-Dichloropropene	0.0175 U	0.0175	0.00546	mg/Kg	1		05/03/19 15:23
Trichloroethene	0.00700 U	0.00700	0.00210	mg/Kg	1		05/03/19 15:23
Trichlorofluoromethane	0.0700 U	0.0700	0.0210	mg/Kg	1		05/03/19 15:23
Vinyl acetate	0.140 U	0.140	0.0434	mg/Kg	1		05/03/19 15:23
Vinyl chloride	0.00112 U	0.00112	0.000350	mg/Kg	1		05/03/19 15:23
Xylenes (total)	0.105 U	0.105	0.0319	mg/Kg	1		05/03/19 15:23
Surrogates							
1,2-Dichloroethane-D4 (surr)	103	71-136		%	1		05/03/19 15:23
4-Bromofluorobenzene (surr)	95.4	55-151		%	1		05/03/19 15:23
Toluene-d8 (surr)	100	85-116		%	1		05/03/19 15:23

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Results of B3025-N-101

Client Sample ID: **B3025-N-101**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212005
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:50
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18881
 Analytical Method: SW8260C
 Analyst: NRB
 Analytical Date/Time: 05/03/19 15:23
 Container ID: 1199212005-B

Prep Batch: VXX34013
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 16:50
 Prep Initial Wt./Vol.: 40.428 g
 Prep Extract Vol: 26.9501 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-N-01

Client Sample ID: **B3025-N-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212006
 Lab Project ID: 1199212

Collection Date: 04/25/19 17:00
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.7
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	20.6 U	20.6	6.38	mg/Kg	1		05/06/19 18:03
Surrogates							
5a Androstane (surr)	87.3	50-150		%	1		05/06/19 18:03

Batch Information

Analytical Batch: XFC14979
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 05/06/19 18:03
 Container ID: 1199212006-A

Prep Batch: XXX41377
 Prep Method: SW3550C
 Prep Date/Time: 05/06/19 09:08
 Prep Initial Wt./Vol.: 30.154 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	27.1	20.6	6.38	mg/Kg	1		05/06/19 18:03
Surrogates							
n-Triacontane-d62 (surr)	100	50-150		%	1		05/06/19 18:03

Batch Information

Analytical Batch: XFC14979
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 05/06/19 18:03
 Container ID: 1199212006-A

Prep Batch: XXX41377
 Prep Method: SW3550C
 Prep Date/Time: 05/06/19 09:08
 Prep Initial Wt./Vol.: 30.154 g
 Prep Extract Vol: 5 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-N-01

Client Sample ID: **B3025-N-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212006
 Lab Project ID: 1199212

Collection Date: 04/25/19 17:00
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.7
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	2.58 U	2.58	0.774	mg/Kg	1		05/02/19 01:54
Surrogates							
4-Bromofluorobenzene (surr)	109	50-150		%	1		05/02/19 01:54

Batch Information

Analytical Batch: VFC14712
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 05/02/19 01:54
 Container ID: 1199212006-B

Prep Batch: VXX33998
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 17:00
 Prep Initial Wt./Vol.: 53.596 g
 Prep Extract Vol: 26.7618 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-N-01

Client Sample ID: **B3025-N-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212006
 Lab Project ID: 1199212

Collection Date: 04/25/19 17:00
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.7
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0207 U	0.0207	0.00640	mg/Kg	1		05/03/19 15:39
1,1,1-Trichloroethane	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
1,1,2,2-Tetrachloroethane	0.00207 U	0.00207	0.000640	mg/Kg	1		05/03/19 15:39
1,1,2-Trichloroethane	0.000826 U	0.000826	0.000258	mg/Kg	1		05/03/19 15:39
1,1-Dichloroethane	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
1,1-Dichloroethene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
1,1-Dichloropropene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
1,2,3-Trichlorobenzene	0.0516 U	0.0516	0.0155	mg/Kg	1		05/03/19 15:39
1,2,3-Trichloropropane	0.00103 U	0.00103	0.000640	mg/Kg	1		05/03/19 15:39
1,2,4-Trichlorobenzene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
1,2,4-Trimethylbenzene	0.0516 U	0.0516	0.0155	mg/Kg	1		05/03/19 15:39
1,2-Dibromo-3-chloropropane	0.103 U	0.103	0.0320	mg/Kg	1		05/03/19 15:39
1,2-Dibromoethane	0.00207 U	0.00207	0.000640	mg/Kg	1		05/03/19 15:39
1,2-Dichlorobenzene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
1,2-Dichloroethane	0.00207 U	0.00207	0.000640	mg/Kg	1		05/03/19 15:39
1,2-Dichloropropane	0.0103 U	0.0103	0.00320	mg/Kg	1		05/03/19 15:39
1,3,5-Trimethylbenzene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
1,3-Dichlorobenzene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
1,3-Dichloropropane	0.0103 U	0.0103	0.00320	mg/Kg	1		05/03/19 15:39
1,4-Dichlorobenzene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
2,2-Dichloropropane	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
2-Butanone (MEK)	0.258 U	0.258	0.0805	mg/Kg	1		05/03/19 15:39
2-Chlorotoluene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
2-Hexanone	0.103 U	0.103	0.0320	mg/Kg	1		05/03/19 15:39
4-Chlorotoluene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
4-Isopropyltoluene	0.103 U	0.103	0.0258	mg/Kg	1		05/03/19 15:39
4-Methyl-2-pentanone (MIBK)	0.258 U	0.258	0.0805	mg/Kg	1		05/03/19 15:39
Acetone	0.258 U	0.258	0.0805	mg/Kg	1		05/03/19 15:39
Benzene	0.0129 U	0.0129	0.00403	mg/Kg	1		05/03/19 15:39
Bromobenzene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
Bromochloromethane	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
Bromodichloromethane	0.00207 U	0.00207	0.000640	mg/Kg	1		05/03/19 15:39
Bromoform	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
Bromomethane	0.0207 U	0.0207	0.00640	mg/Kg	1		05/03/19 15:39
Carbon disulfide	0.103 U	0.103	0.0320	mg/Kg	1		05/03/19 15:39
Carbon tetrachloride	0.0129 U	0.0129	0.00403	mg/Kg	1		05/03/19 15:39
Chlorobenzene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39

Print Date: 05/09/2019 2:35:51PM

Results of B3025-N-01

Client Sample ID: **B3025-N-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212006
 Lab Project ID: 1199212

Collection Date: 04/25/19 17:00
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.7
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.207 U	0.207	0.0640	mg/Kg	1		05/03/19 15:39
Chloroform	0.00207 U	0.00207	0.000640	mg/Kg	1		05/03/19 15:39
Chloromethane	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
cis-1,2-Dichloroethene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
cis-1,3-Dichloropropene	0.0129 U	0.0129	0.00403	mg/Kg	1		05/03/19 15:39
Dibromochloromethane	0.00207 U	0.00207	0.000640	mg/Kg	1		05/03/19 15:39
Dibromomethane	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
Dichlorodifluoromethane	0.0516 U	0.0516	0.0155	mg/Kg	1		05/03/19 15:39
Ethylbenzene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
Freon-113	0.103 U	0.103	0.0320	mg/Kg	1		05/03/19 15:39
Hexachlorobutadiene	0.0207 U	0.0207	0.00640	mg/Kg	1		05/03/19 15:39
Isopropylbenzene (Cumene)	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
Methylene chloride	0.103 U	0.103	0.0320	mg/Kg	1		05/03/19 15:39
Methyl-t-butyl ether	0.103 U	0.103	0.0320	mg/Kg	1		05/03/19 15:39
Naphthalene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
n-Butylbenzene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
n-Propylbenzene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
o-Xylene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
P & M -Xylene	0.0516 U	0.0516	0.0155	mg/Kg	1		05/03/19 15:39
sec-Butylbenzene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
Styrene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
tert-Butylbenzene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
Tetrachloroethene	0.0129 U	0.0129	0.00403	mg/Kg	1		05/03/19 15:39
Toluene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
trans-1,2-Dichloroethene	0.0258 U	0.0258	0.00805	mg/Kg	1		05/03/19 15:39
trans-1,3-Dichloropropene	0.0129 U	0.0129	0.00403	mg/Kg	1		05/03/19 15:39
Trichloroethene	0.00516 U	0.00516	0.00155	mg/Kg	1		05/03/19 15:39
Trichlorofluoromethane	0.0516 U	0.0516	0.0155	mg/Kg	1		05/03/19 15:39
Vinyl acetate	0.103 U	0.103	0.0320	mg/Kg	1		05/03/19 15:39
Vinyl chloride	0.000826 U	0.000826	0.000258	mg/Kg	1		05/03/19 15:39
Xylenes (total)	0.0774 U	0.0774	0.0235	mg/Kg	1		05/03/19 15:39
Surrogates							
1,2-Dichloroethane-D4 (surr)	105	71-136		%	1		05/03/19 15:39
4-Bromofluorobenzene (surr)	88.2	55-151		%	1		05/03/19 15:39
Toluene-d8 (surr)	100	85-116		%	1		05/03/19 15:39

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Results of B3025-N-01

Client Sample ID: **B3025-N-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212006
 Lab Project ID: 1199212

Collection Date: 04/25/19 17:00
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.7
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18881
 Analytical Method: SW8260C
 Analyst: NRB
 Analytical Date/Time: 05/03/19 15:39
 Container ID: 1199212006-B

Prep Batch: VXX34013
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 17:00
 Prep Initial Wt./Vol.: 53.596 g
 Prep Extract Vol: 26.7618 mL

Print Date: 05/09/2019 2:35:51PM

Results of B3025-NS-01

Client Sample ID: **B3025-NS-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212007
 Lab Project ID: 1199212

Collection Date: 04/25/19 17:05
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):94.0
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	21.2 U	21.2	6.57	mg/Kg	1		05/06/19 18:13
Surrogates							
5a Androstane (surr)	92.8	50-150		%	1		05/06/19 18:13

Batch Information

Analytical Batch: XFC14979
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 05/06/19 18:13
 Container ID: 1199212007-A

Prep Batch: XXX41377
 Prep Method: SW3550C
 Prep Date/Time: 05/06/19 09:08
 Prep Initial Wt./Vol.: 30.128 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	86.3	21.2	6.57	mg/Kg	1		05/06/19 18:13
Surrogates							
n-Triacontane-d62 (surr)	109	50-150		%	1		05/06/19 18:13

Batch Information

Analytical Batch: XFC14979
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 05/06/19 18:13
 Container ID: 1199212007-A

Prep Batch: XXX41377
 Prep Method: SW3550C
 Prep Date/Time: 05/06/19 09:08
 Prep Initial Wt./Vol.: 30.128 g
 Prep Extract Vol: 5 mL

Print Date: 05/09/2019 2:35:51PM



Results of B3025-NS-01

Client Sample ID: **B3025-NS-01**
Client Project ID: **100004-002 B3025**
Lab Sample ID: 1199212007
Lab Project ID: 1199212

Collection Date: 04/25/19 17:05
Received Date: 04/30/19 09:50
Matrix: Soil/Solid (dry weight)
Solids (%):94.0
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	2.78 U	2.78	0.833	mg/Kg	1		05/02/19 02:11
Surrogates							
4-Bromofluorobenzene (surr)	100	50-150		%	1		05/02/19 02:11

Batch Information

Analytical Batch: VFC14712
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/02/19 02:11
Container ID: 1199212007-B

Prep Batch: VXX33998
Prep Method: SW5035A
Prep Date/Time: 04/25/19 17:05
Prep Initial Wt./Vol.: 54.115 g
Prep Extract Vol: 28.2485 mL

Print Date: 05/09/2019 2:35:51PM



Results of B3025-NS-01

Client Sample ID: **B3025-NS-01**
Client Project ID: **100004-002 B3025**
Lab Sample ID: 1199212007
Lab Project ID: 1199212

Collection Date: 04/25/19 17:05
Received Date: 04/30/19 09:50
Matrix: Soil/Solid (dry weight)
Solids (%):94.0
Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0222 U	0.0222	0.00689	mg/Kg	1		05/03/19 15:55
1,1,1-Trichloroethane	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
1,1,2,2-Tetrachloroethane	0.00222 U	0.00222	0.000689	mg/Kg	1		05/03/19 15:55
1,1,2-Trichloroethane	0.000889 U	0.000889	0.000278	mg/Kg	1		05/03/19 15:55
1,1-Dichloroethane	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
1,1-Dichloroethene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
1,1-Dichloropropene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
1,2,3-Trichlorobenzene	0.0555 U	0.0555	0.0167	mg/Kg	1		05/03/19 15:55
1,2,3-Trichloropropane	0.00111 U	0.00111	0.000689	mg/Kg	1		05/03/19 15:55
1,2,4-Trichlorobenzene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
1,2,4-Trimethylbenzene	0.0555 U	0.0555	0.0167	mg/Kg	1		05/03/19 15:55
1,2-Dibromo-3-chloropropane	0.111 U	0.111	0.0344	mg/Kg	1		05/03/19 15:55
1,2-Dibromoethane	0.00222 U	0.00222	0.000689	mg/Kg	1		05/03/19 15:55
1,2-Dichlorobenzene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
1,2-Dichloroethane	0.00222 U	0.00222	0.000689	mg/Kg	1		05/03/19 15:55
1,2-Dichloropropane	0.0111 U	0.0111	0.00344	mg/Kg	1		05/03/19 15:55
1,3,5-Trimethylbenzene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
1,3-Dichlorobenzene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
1,3-Dichloropropane	0.0111 U	0.0111	0.00344	mg/Kg	1		05/03/19 15:55
1,4-Dichlorobenzene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
2,2-Dichloropropane	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
2-Butanone (MEK)	0.278 U	0.278	0.0866	mg/Kg	1		05/03/19 15:55
2-Chlorotoluene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
2-Hexanone	0.111 U	0.111	0.0344	mg/Kg	1		05/03/19 15:55
4-Chlorotoluene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
4-Isopropyltoluene	0.111 U	0.111	0.0278	mg/Kg	1		05/03/19 15:55
4-Methyl-2-pentanone (MIBK)	0.278 U	0.278	0.0866	mg/Kg	1		05/03/19 15:55
Acetone	0.278 U	0.278	0.0866	mg/Kg	1		05/03/19 15:55
Benzene	0.0139 U	0.0139	0.00433	mg/Kg	1		05/03/19 15:55
Bromobenzene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
Bromochloromethane	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
Bromodichloromethane	0.00222 U	0.00222	0.000689	mg/Kg	1		05/03/19 15:55
Bromoform	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
Bromomethane	0.0222 U	0.0222	0.00689	mg/Kg	1		05/03/19 15:55
Carbon disulfide	0.111 U	0.111	0.0344	mg/Kg	1		05/03/19 15:55
Carbon tetrachloride	0.0139 U	0.0139	0.00433	mg/Kg	1		05/03/19 15:55
Chlorobenzene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55

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Results of B3025-NS-01

Client Sample ID: **B3025-NS-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212007
 Lab Project ID: 1199212

Collection Date: 04/25/19 17:05
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):94.0
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.222 U	0.222	0.0689	mg/Kg	1		05/03/19 15:55
Chloroform	0.00222 U	0.00222	0.000689	mg/Kg	1		05/03/19 15:55
Chloromethane	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
cis-1,2-Dichloroethene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
cis-1,3-Dichloropropene	0.0139 U	0.0139	0.00433	mg/Kg	1		05/03/19 15:55
Dibromochloromethane	0.00222 U	0.00222	0.000689	mg/Kg	1		05/03/19 15:55
Dibromomethane	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
Dichlorodifluoromethane	0.0555 U	0.0555	0.0167	mg/Kg	1		05/03/19 15:55
Ethylbenzene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
Freon-113	0.111 U	0.111	0.0344	mg/Kg	1		05/03/19 15:55
Hexachlorobutadiene	0.0222 U	0.0222	0.00689	mg/Kg	1		05/03/19 15:55
Isopropylbenzene (Cumene)	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
Methylene chloride	0.111 U	0.111	0.0344	mg/Kg	1		05/03/19 15:55
Methyl-t-butyl ether	0.111 U	0.111	0.0344	mg/Kg	1		05/03/19 15:55
Naphthalene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
n-Butylbenzene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
n-Propylbenzene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
o-Xylene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
P & M -Xylene	0.0555 U	0.0555	0.0167	mg/Kg	1		05/03/19 15:55
sec-Butylbenzene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
Styrene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
tert-Butylbenzene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
Tetrachloroethene	0.0139 U	0.0139	0.00433	mg/Kg	1		05/03/19 15:55
Toluene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
trans-1,2-Dichloroethene	0.0278 U	0.0278	0.00866	mg/Kg	1		05/03/19 15:55
trans-1,3-Dichloropropene	0.0139 U	0.0139	0.00433	mg/Kg	1		05/03/19 15:55
Trichloroethene	0.00555 U	0.00555	0.00167	mg/Kg	1		05/03/19 15:55
Trichlorofluoromethane	0.0555 U	0.0555	0.0167	mg/Kg	1		05/03/19 15:55
Vinyl acetate	0.111 U	0.111	0.0344	mg/Kg	1		05/03/19 15:55
Vinyl chloride	0.000889 U	0.000889	0.000278	mg/Kg	1		05/03/19 15:55
Xylenes (total)	0.0833 U	0.0833	0.0253	mg/Kg	1		05/03/19 15:55
Surrogates							
1,2-Dichloroethane-D4 (surr)	105	71-136		%	1		05/03/19 15:55
4-Bromofluorobenzene (surr)	89.1	55-151		%	1		05/03/19 15:55
Toluene-d8 (surr)	98.8	85-116		%	1		05/03/19 15:55

Print Date: 05/09/2019 2:35:51PM

Results of B3025-NS-01

Client Sample ID: **B3025-NS-01**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212007
 Lab Project ID: 1199212

Collection Date: 04/25/19 17:05
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):94.0
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18881
 Analytical Method: SW8260C
 Analyst: NRB
 Analytical Date/Time: 05/03/19 15:55
 Container ID: 1199212007-B

Prep Batch: VXX34013
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 17:05
 Prep Initial Wt./Vol.: 54.115 g
 Prep Extract Vol: 28.2485 mL

Print Date: 05/09/2019 2:35:51PM

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212008
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:38
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	2.51 U	2.51	0.754	mg/Kg	1		05/02/19 02:46
Surrogates							
4-Bromofluorobenzene (surr)	105	50-150		%	1		05/02/19 02:46

Batch Information

Analytical Batch: VFC14712
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 05/02/19 02:46
 Container ID: 1199212008-A

Prep Batch: VXX33998
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 16:38
 Prep Initial Wt./Vol.: 49.753 g
 Prep Extract Vol: 25 mL

Print Date: 05/09/2019 2:35:51PM



Results of Trip Blank

Client Sample ID: **Trip Blank**
Client Project ID: **100004-002 B3025**
Lab Sample ID: 1199212008
Lab Project ID: 1199212

Collection Date: 04/25/19 16:38
Received Date: 04/30/19 09:50
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0201 U	0.0201	0.00623	mg/Kg	1		05/03/19 12:10
1,1,1-Trichloroethane	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
1,1,2,2-Tetrachloroethane	0.00201 U	0.00201	0.000623	mg/Kg	1		05/03/19 12:10
1,1,2-Trichloroethane	0.000804 U	0.000804	0.000251	mg/Kg	1		05/03/19 12:10
1,1-Dichloroethane	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
1,1-Dichloroethene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
1,1-Dichloropropene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
1,2,3-Trichlorobenzene	0.0502 U	0.0502	0.0151	mg/Kg	1		05/03/19 12:10
1,2,3-Trichloropropane	0.00100 U	0.00100	0.000623	mg/Kg	1		05/03/19 12:10
1,2,4-Trichlorobenzene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
1,2,4-Trimethylbenzene	0.0502 U	0.0502	0.0151	mg/Kg	1		05/03/19 12:10
1,2-Dibromo-3-chloropropane	0.100 U	0.100	0.0312	mg/Kg	1		05/03/19 12:10
1,2-Dibromoethane	0.00201 U	0.00201	0.000623	mg/Kg	1		05/03/19 12:10
1,2-Dichlorobenzene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
1,2-Dichloroethane	0.00201 U	0.00201	0.000623	mg/Kg	1		05/03/19 12:10
1,2-Dichloropropane	0.0100 U	0.0100	0.00312	mg/Kg	1		05/03/19 12:10
1,3,5-Trimethylbenzene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
1,3-Dichlorobenzene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
1,3-Dichloropropane	0.0100 U	0.0100	0.00312	mg/Kg	1		05/03/19 12:10
1,4-Dichlorobenzene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
2,2-Dichloropropane	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
2-Butanone (MEK)	0.251 U	0.251	0.0784	mg/Kg	1		05/03/19 12:10
2-Chlorotoluene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
2-Hexanone	0.100 U	0.100	0.0312	mg/Kg	1		05/03/19 12:10
4-Chlorotoluene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
4-Isopropyltoluene	0.100 U	0.100	0.0251	mg/Kg	1		05/03/19 12:10
4-Methyl-2-pentanone (MIBK)	0.251 U	0.251	0.0784	mg/Kg	1		05/03/19 12:10
Acetone	0.251 U	0.251	0.0784	mg/Kg	1		05/03/19 12:10
Benzene	0.0126 U	0.0126	0.00392	mg/Kg	1		05/03/19 12:10
Bromobenzene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
Bromochloromethane	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
Bromodichloromethane	0.00201 U	0.00201	0.000623	mg/Kg	1		05/03/19 12:10
Bromoform	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
Bromomethane	0.0201 U	0.0201	0.00623	mg/Kg	1		05/03/19 12:10
Carbon disulfide	0.100 U	0.100	0.0312	mg/Kg	1		05/03/19 12:10
Carbon tetrachloride	0.0126 U	0.0126	0.00392	mg/Kg	1		05/03/19 12:10
Chlorobenzene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10

Print Date: 05/09/2019 2:35:51PM

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Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212008
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:38
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.201 U	0.201	0.0623	mg/Kg	1		05/03/19 12:10
Chloroform	0.00201 U	0.00201	0.000623	mg/Kg	1		05/03/19 12:10
Chloromethane	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
cis-1,2-Dichloroethene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
cis-1,3-Dichloropropene	0.0126 U	0.0126	0.00392	mg/Kg	1		05/03/19 12:10
Dibromochloromethane	0.00201 U	0.00201	0.000623	mg/Kg	1		05/03/19 12:10
Dibromomethane	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
Dichlorodifluoromethane	0.0502 U	0.0502	0.0151	mg/Kg	1		05/03/19 12:10
Ethylbenzene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
Freon-113	0.100 U	0.100	0.0312	mg/Kg	1		05/03/19 12:10
Hexachlorobutadiene	0.0201 U	0.0201	0.00623	mg/Kg	1		05/03/19 12:10
Isopropylbenzene (Cumene)	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
Methylene chloride	0.100 U	0.100	0.0312	mg/Kg	1		05/03/19 12:10
Methyl-t-butyl ether	0.100 U	0.100	0.0312	mg/Kg	1		05/03/19 12:10
Naphthalene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
n-Butylbenzene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
n-Propylbenzene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
o-Xylene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
P & M -Xylene	0.0502 U	0.0502	0.0151	mg/Kg	1		05/03/19 12:10
sec-Butylbenzene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
Styrene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
tert-Butylbenzene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
Tetrachloroethene	0.0126 U	0.0126	0.00392	mg/Kg	1		05/03/19 12:10
Toluene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
trans-1,2-Dichloroethene	0.0251 U	0.0251	0.00784	mg/Kg	1		05/03/19 12:10
trans-1,3-Dichloropropene	0.0126 U	0.0126	0.00392	mg/Kg	1		05/03/19 12:10
Trichloroethene	0.00502 U	0.00502	0.00151	mg/Kg	1		05/07/19 20:33
Trichlorofluoromethane	0.0502 U	0.0502	0.0151	mg/Kg	1		05/03/19 12:10
Vinyl acetate	0.100 U	0.100	0.0312	mg/Kg	1		05/03/19 12:10
Vinyl chloride	0.000804 U	0.000804	0.000251	mg/Kg	1		05/07/19 20:33
Xylenes (total)	0.0754 U	0.0754	0.0229	mg/Kg	1		05/03/19 12:10
Surrogates							
1,2-Dichloroethane-D4 (surr)	107	71-136		%	1		05/03/19 12:10
4-Bromofluorobenzene (surr)	88.2	55-151		%	1		05/03/19 12:10
Toluene-d8 (surr)	99.8	85-116		%	1		05/03/19 12:10

Print Date: 05/09/2019 2:35:51PM

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004-002 B3025**
 Lab Sample ID: 1199212008
 Lab Project ID: 1199212

Collection Date: 04/25/19 16:38
 Received Date: 04/30/19 09:50
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18881
 Analytical Method: SW8260C
 Analyst: NRB
 Analytical Date/Time: 05/03/19 12:10
 Container ID: 1199212008-A

Prep Batch: VXX34013
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 16:38
 Prep Initial Wt./Vol.: 49.753 g
 Prep Extract Vol: 25 mL

Analytical Batch: VMS18892
 Analytical Method: SW8260C
 Analyst: FDR
 Analytical Date/Time: 05/07/19 20:33
 Container ID: 1199212008-A

Prep Batch: VXX34026
 Prep Method: SW5035A
 Prep Date/Time: 04/25/19 16:38
 Prep Initial Wt./Vol.: 49.753 g
 Prep Extract Vol: 25 mL

Print Date: 05/09/2019 2:35:51PM

Method Blank

Blank ID: MB for HBN 1793235 [SPT/10757]
Blank Lab ID: 1505588

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007

Results by SM21 2540G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Solids	100			%

Batch Information

Analytical Batch: SPT10757
Analytical Method: SM21 2540G
Instrument:
Analyst: BRP
Analytical Date/Time: 5/2/2019 4:06:00PM

Print Date: 05/09/2019 2:35:53PM

Duplicate Sample Summary

Original Sample ID: 1199212001

Duplicate Sample ID: 1505589

QC for Samples:

1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007

Analysis Date: 05/02/2019 16:06

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	95.2	95.7	%	0.56	(< 15)

Batch Information

Analytical Batch: SPT10757

Analytical Method: SM21 2540G

Instrument:

Analyst: BRP

Print Date: 05/09/2019 2:35:55PM

Duplicate Sample Summary

Original Sample ID: 1199220004

Duplicate Sample ID: 1505590

QC for Samples:

1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007

Analysis Date: 05/02/2019 16:06

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	87.6	88.4	%	0.82	(< 15)

Batch Information

Analytical Batch: SPT10757

Analytical Method: SM21 2540G

Instrument:

Analyst: BRP

Print Date: 05/09/2019 2:35:55PM

Method Blank

Blank ID: MB for HBN 1793196 [VXX/33998]
Blank Lab ID: 1505463

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007, 1199212008

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	0.965J	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	90.9	50-150		%

Batch Information

Analytical Batch: VFC14712
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 5/1/2019 8:20:00PM

Prep Batch: VXX33998
Prep Method: SW5035A
Prep Date/Time: 5/1/2019 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 05/09/2019 2:35:58PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199212 [VXX33998]
 Blank Spike Lab ID: 1505464
 Date Analyzed: 05/01/2019 19:45

Spike Duplicate ID: LCSD for HBN 1199212 [VXX33998]
 Spike Duplicate Lab ID: 1505465
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007, 1199212008

Results by AK101

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	14.1	113	12.5	13.4	107	(60-120)	5.20	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	89.6	90	1.25	88.7	89	(50-150)	1.00	

Batch Information

Analytical Batch: **VFC14712**
 Analytical Method: **AK101**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ST**

Prep Batch: **VXX33998**
 Prep Method: **SW5035A**
 Prep Date/Time: **05/01/2019 08:00**
 Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 05/09/2019 2:35:59PM

Method Blank

Blank ID: MB for HBN 1793346 [VXX/34013]
Blank Lab ID: 1506119

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007, 1199212008

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.0100U	0.0200	0.00620	mg/Kg
1,1,1-Trichloroethane	0.0125U	0.0250	0.00780	mg/Kg
1,1,2,2-Tetrachloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,1,2-Trichloroethane	0.000400U	0.000800	0.000250	mg/Kg
1,1-Dichloroethane	0.0125U	0.0250	0.00780	mg/Kg
1,1-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
1,1-Dichloropropene	0.0125U	0.0250	0.00780	mg/Kg
1,2,3-Trichlorobenzene	0.0250U	0.0500	0.0150	mg/Kg
1,2,3-Trichloropropane	0.000500U	0.00100	0.000620	mg/Kg
1,2,4-Trichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,2,4-Trimethylbenzene	0.0250U	0.0500	0.0150	mg/Kg
1,2-Dibromo-3-chloropropane	0.0500U	0.100	0.0310	mg/Kg
1,2-Dibromoethane	0.00100U	0.00200	0.000620	mg/Kg
1,2-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,2-Dichloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,2-Dichloropropane	0.00500U	0.0100	0.00310	mg/Kg
1,3,5-Trimethylbenzene	0.0125U	0.0250	0.00780	mg/Kg
1,3-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,3-Dichloropropane	0.00500U	0.0100	0.00310	mg/Kg
1,4-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
2,2-Dichloropropane	0.0125U	0.0250	0.00780	mg/Kg
2-Butanone (MEK)	0.125U	0.250	0.0780	mg/Kg
2-Chlorotoluene	0.0125U	0.0250	0.00780	mg/Kg
2-Hexanone	0.0500U	0.100	0.0310	mg/Kg
4-Chlorotoluene	0.0125U	0.0250	0.00780	mg/Kg
4-Isopropyltoluene	0.0500U	0.100	0.0250	mg/Kg
4-Methyl-2-pentanone (MIBK)	0.125U	0.250	0.0780	mg/Kg
Acetone	0.125U	0.250	0.0780	mg/Kg
Benzene	0.00625U	0.0125	0.00390	mg/Kg
Bromobenzene	0.0125U	0.0250	0.00780	mg/Kg
Bromochloromethane	0.0125U	0.0250	0.00780	mg/Kg
Bromodichloromethane	0.00100U	0.00200	0.000620	mg/Kg
Bromoform	0.0125U	0.0250	0.00780	mg/Kg
Bromomethane	0.0100U	0.0200	0.00620	mg/Kg
Carbon disulfide	0.0500U	0.100	0.0310	mg/Kg
Carbon tetrachloride	0.00625U	0.0125	0.00390	mg/Kg
Chlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
Chloroethane	0.100U	0.200	0.0620	mg/Kg

Print Date: 05/09/2019 2:36:00PM

Method Blank

Blank ID: MB for HBN 1793346 [VXX/34013]
Blank Lab ID: 1506119

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007, 1199212008

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
Chloroform	0.00100U	0.00200	0.000620	mg/Kg
Chloromethane	0.0125U	0.0250	0.00780	mg/Kg
cis-1,2-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
cis-1,3-Dichloropropene	0.00625U	0.0125	0.00390	mg/Kg
Dibromochloromethane	0.00100U	0.00200	0.000620	mg/Kg
Dibromomethane	0.0125U	0.0250	0.00780	mg/Kg
Dichlorodifluoromethane	0.0250U	0.0500	0.0150	mg/Kg
Ethylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Freon-113	0.0500U	0.100	0.0310	mg/Kg
Hexachlorobutadiene	0.0100U	0.0200	0.00620	mg/Kg
Isopropylbenzene (Cumene)	0.0125U	0.0250	0.00780	mg/Kg
Methylene chloride	0.0500U	0.100	0.0310	mg/Kg
Methyl-t-butyl ether	0.0500U	0.100	0.0310	mg/Kg
Naphthalene	0.0125U	0.0250	0.00780	mg/Kg
n-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
n-Propylbenzene	0.0125U	0.0250	0.00780	mg/Kg
o-Xylene	0.0125U	0.0250	0.00780	mg/Kg
P & M -Xylene	0.0250U	0.0500	0.0150	mg/Kg
sec-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Styrene	0.0125U	0.0250	0.00780	mg/Kg
tert-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Tetrachloroethene	0.00625U	0.0125	0.00390	mg/Kg
Toluene	0.0125U	0.0250	0.00780	mg/Kg
trans-1,2-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
trans-1,3-Dichloropropene	0.00625U	0.0125	0.00390	mg/Kg
Trichloroethene	0.00250U	0.00500	0.00150	mg/Kg
Trichlorofluoromethane	0.0250U	0.0500	0.0150	mg/Kg
Vinyl acetate	0.0500U	0.100	0.0310	mg/Kg
Vinyl chloride	0.000400U	0.000800	0.000250	mg/Kg
Xylenes (total)	0.0375U	0.0750	0.0228	mg/Kg
Surrogates				
1,2-Dichloroethane-D4 (surr)	96.4	71-136		%
4-Bromofluorobenzene (surr)	97.5	55-151		%
Toluene-d8 (surr)	102	85-116		%

Method Blank

Blank ID: MB for HBN 1793346 [VXX/34013]
Blank Lab ID: 1506119

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007, 1199212008

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
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Batch Information

Analytical Batch: VMS18881
Analytical Method: SW8260C
Instrument: VQA 7890/5975 GC/MS
Analyst: NRB
Analytical Date/Time: 5/3/2019 9:18:00AM

Prep Batch: VXX34013
Prep Method: SW5035A
Prep Date/Time: 5/3/2019 12:30:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 05/09/2019 2:36:00PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199212 [VXX34013]

Blank Spike Lab ID: 1506120

Date Analyzed: 05/03/2019 09:34

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007, 1199212008

Results by SW8260C

Blank Spike (mg/Kg)				
Parameter	Spike	Result	Rec (%)	CL
1,1,1,2-Tetrachloroethane	0.750	0.780	104	(78-125)
1,1,1-Trichloroethane	0.750	0.712	95	(73-130)
1,1,2,2-Tetrachloroethane	0.750	0.736	98	(70-124)
1,1,2-Trichloroethane	0.750	0.736	98	(78-121)
1,1-Dichloroethane	0.750	0.688	92	(76-125)
1,1-Dichloroethene	0.750	0.699	93	(70-131)
1,1-Dichloropropene	0.750	0.764	102	(76-125)
1,2,3-Trichlorobenzene	0.750	0.681	91	(66-130)
1,2,3-Trichloropropane	0.750	0.742	99	(73-125)
1,2,4-Trichlorobenzene	0.750	0.700	93	(67-129)
1,2,4-Trimethylbenzene	0.750	0.675	90	(75-123)
1,2-Dibromo-3-chloropropane	0.750	0.746	100	(61-132)
1,2-Dibromoethane	0.750	0.739	99	(78-122)
1,2-Dichlorobenzene	0.750	0.701	93	(78-121)
1,2-Dichloroethane	0.750	0.706	94	(73-128)
1,2-Dichloropropane	0.750	0.755	101	(76-123)
1,3,5-Trimethylbenzene	0.750	0.699	93	(73-124)
1,3-Dichlorobenzene	0.750	0.710	95	(77-121)
1,3-Dichloropropane	0.750	0.725	97	(77-121)
1,4-Dichlorobenzene	0.750	0.693	92	(75-120)
2,2-Dichloropropane	0.750	0.710	95	(67-133)
2-Butanone (MEK)	2.25	2.26	101	(51-148)
2-Chlorotoluene	0.750	0.708	94	(75-122)
2-Hexanone	2.25	2.27	101	(53-145)
4-Chlorotoluene	0.750	0.719	96	(72-124)
4-Isopropyltoluene	0.750	0.730	97	(73-127)
4-Methyl-2-pentanone (MIBK)	2.25	1.97	88	(65-135)
Acetone	2.25	2.05	91	(36-164)
Benzene	0.750	0.696	93	(77-121)
Bromobenzene	0.750	0.736	98	(78-121)
Bromochloromethane	0.750	0.646	86	(78-125)
Bromodichloromethane	0.750	0.748	100	(75-127)
Bromoform	0.750	0.727	97	(67-132)
Bromomethane	0.750	0.663	88	(53-143)

Print Date: 05/09/2019 2:36:01PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199212 [VXX34013]

Blank Spike Lab ID: 1506120

Date Analyzed: 05/03/2019 09:34

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007, 1199212008

Results by SW8260C

Parameter	Blank Spike (mg/Kg)			CL
	Spike	Result	Rec (%)	
Carbon disulfide	1.13	1.12	100	(63-132)
Carbon tetrachloride	0.750	0.736	98	(70-135)
Chlorobenzene	0.750	0.721	96	(79-120)
Chloroethane	0.750	0.717	96	(59-139)
Chloroform	0.750	0.709	95	(78-123)
Chloromethane	0.750	0.675	90	(50-136)
cis-1,2-Dichloroethene	0.750	0.656	88	(77-123)
cis-1,3-Dichloropropene	0.750	0.781	104	(74-126)
Dibromochloromethane	0.750	0.736	98	(74-126)
Dibromomethane	0.750	0.670	89	(78-125)
Dichlorodifluoromethane	0.750	0.646	86	(29-149)
Ethylbenzene	0.750	0.685	91	(76-122)
Freon-113	1.13	0.997	89	(66-136)
Hexachlorobutadiene	0.750	0.739	99	(61-135)
Isopropylbenzene (Cumene)	0.750	0.717	96	(68-134)
Methylene chloride	0.750	0.701	94	(70-128)
Methyl-t-butyl ether	1.13	1.13	101	(73-125)
Naphthalene	0.750	0.711	95	(62-129)
n-Butylbenzene	0.750	0.748	100	(70-128)
n-Propylbenzene	0.750	0.718	96	(73-125)
o-Xylene	0.750	0.698	93	(77-123)
P & M -Xylene	1.50	1.41	94	(77-124)
sec-Butylbenzene	0.750	0.727	97	(73-126)
Styrene	0.750	0.720	96	(76-124)
tert-Butylbenzene	0.750	0.717	96	(73-125)
Tetrachloroethene	0.750	0.748	100	(73-128)
Toluene	0.750	0.716	96	(77-121)
trans-1,2-Dichloroethene	0.750	0.700	93	(74-125)
trans-1,3-Dichloropropene	0.750	0.741	99	(71-130)
Trichloroethene	0.750	0.746	100	(77-123)
Trichlorofluoromethane	0.750	0.663	88	(62-140)
Vinyl acetate	0.750	0.713	95	(50-151)
Vinyl chloride	0.750	0.729	97	(56-135)
Xylenes (total)	2.25	2.11	94	(78-124)

Print Date: 05/09/2019 2:36:01PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199212 [VXX34013]

Blank Spike Lab ID: 1506120

Date Analyzed: 05/03/2019 09:34

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007, 1199212008

Results by SW8260C

Parameter	Blank Spike (mg/Kg)			CL
	Spike	Result	Rec (%)	
Surrogates				
1,2-Dichloroethane-D4 (surr)	0.750	98.4	98	(71-136)
4-Bromofluorobenzene (surr)	0.750	95.5	96	(55-151)
Toluene-d8 (surr)	0.750	103	103	(85-116)

Batch Information

Analytical Batch: VMS18881

Analytical Method: SW8260C

Instrument: VQA 7890/5975 GC/MS

Analyst: NRB

Prep Batch: VXX34013

Prep Method: SW5035A

Prep Date/Time: 05/03/2019 00:30

Spike Init Wt./Vol.: 0.750 mg/Kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/09/2019 2:36:01PM

Matrix Spike Summary

Original Sample ID: 1506118
MS Sample ID: 1506121 MS
MSD Sample ID: 1506122 MSD

Analysis Date: 05/03/2019 12:42
Analysis Date: 05/03/2019 10:49
Analysis Date: 05/03/2019 11:06
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007, 1199212008

Results by SW8260C

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	0.0145U	1.09	1.11	102	1.09	1.14	105	78-125	2.30	(< 20)
1,1,1-Trichloroethane	0.0181U	1.09	1.02	94	1.09	1.03	95	73-130	0.83	(< 20)
1,1,2,2-Tetrachloroethane	0.00145U	1.09	1.05	96	1.09	1.08	100	70-124	3.60	(< 20)
1,1,2-Trichloroethane	0.000580U	1.09	1.06	97	1.09	1.09	100	78-121	3.10	(< 20)
1,1-Dichloroethane	0.0181U	1.09	0.981	90	1.09	0.984	91	76-125	0.29	(< 20)
1,1-Dichloroethene	0.0181U	1.09	1.02	94	1.09	0.996	92	70-131	2.70	(< 20)
1,1-Dichloropropene	0.0181U	1.09	1.10	101	1.09	1.11	103	76-125	1.20	(< 20)
1,2,3-Trichlorobenzene	0.0362U	1.09	1.03	95	1.09	1.06	97	66-130	2.60	(< 20)
1,2,3-Trichloropropane	0.000725U	1.09	1.07	99	1.09	1.12	103	73-125	4.30	(< 20)
1,2,4-Trichlorobenzene	0.0181U	1.09	1.06	98	1.09	1.10	101	67-129	3.00	(< 20)
1,2,4-Trimethylbenzene	0.0362U	1.09	0.976	90	1.09	1.01	93	75-123	3.30	(< 20)
1,2-Dibromo-3-chloropropane	0.0725U	1.09	1.05	97	1.09	1.08	99	61-132	2.70	(< 20)
1,2-Dibromoethane	0.00145U	1.09	1.06	98	1.09	1.08	100	78-122	2.20	(< 20)
1,2-Dichlorobenzene	0.0181U	1.09	0.991	91	1.09	1.05	97	78-121	5.60	(< 20)
1,2-Dichloroethane	0.00145U	1.09	1.01	93	1.09	1.03	95	73-128	1.80	(< 20)
1,2-Dichloropropane	0.00725U	1.09	1.09	100	1.09	1.11	102	76-123	1.80	(< 20)
1,3,5-Trimethylbenzene	0.0181U	1.09	1.01	93	1.09	1.03	95	73-124	2.70	(< 20)
1,3-Dichlorobenzene	0.0181U	1.09	1.01	93	1.09	1.06	98	77-121	5.00	(< 20)
1,3-Dichloropropane	0.00725U	1.09	1.04	96	1.09	1.06	98	77-121	2.00	(< 20)
1,4-Dichlorobenzene	0.0181U	1.09	1.00	92	1.09	1.04	96	75-120	4.10	(< 20)
2,2-Dichloropropane	0.0181U	1.09	1.03	95	1.09	1.04	96	67-133	0.79	(< 20)
2-Butanone (MEK)	0.181U	3.26	3.09	95	3.26	3.24	99	51-148	4.70	(< 20)
2-Chlorotoluene	0.0181U	1.09	1.01	93	1.09	1.06	97	75-122	4.80	(< 20)
2-Hexanone	0.0725U	3.26	3.16	97	3.26	3.31	102	53-145	4.80	(< 20)
4-Chlorotoluene	0.0181U	1.09	1.03	95	1.09	1.08	99	72-124	4.80	(< 20)
4-Isopropyltoluene	0.0725U	1.09	1.06	98	1.09	1.08	99	73-127	1.70	(< 20)
4-Methyl-2-pentanone (MIBK)	0.181U	3.26	2.78	85	3.26	2.90	89	65-135	4.10	(< 20)
Acetone	0.181U	3.26	2.73	84	3.26	2.81	86	36-164	2.90	(< 20)
Benzene	0.00905U	1.09	0.983	91	1.09	1.01	93	77-121	2.60	(< 20)
Bromobenzene	0.0181U	1.09	1.05	96	1.09	1.08	99	78-121	2.80	(< 20)
Bromochloromethane	0.0181U	1.09	0.934	86	1.09	0.936	86	78-125	0.22	(< 20)
Bromodichloromethane	0.00145U	1.09	1.08	100	1.09	1.09	101	75-127	0.88	(< 20)
Bromoform	0.0181U	1.09	1.05	97	1.09	1.07	98	67-132	1.40	(< 20)
Bromomethane	0.0145U	1.09	1.01	93	1.09	0.975	90	53-143	3.60	(< 20)
Carbon disulfide	0.0725U	1.63	1.70	105	1.63	1.60	98	63-132	6.20	(< 20)
Carbon tetrachloride	0.00905U	1.09	1.07	98	1.09	1.07	98	70-135	0.20	(< 20)
Chlorobenzene	0.0181U	1.09	1.02	94	1.09	1.04	96	79-120	1.80	(< 20)

Print Date: 05/09/2019 2:36:02PM

Matrix Spike Summary

Original Sample ID: 1506118
MS Sample ID: 1506121 MS
MSD Sample ID: 1506122 MSD

Analysis Date: 05/03/2019 12:42
Analysis Date: 05/03/2019 10:49
Analysis Date: 05/03/2019 11:06
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007, 1199212008

Results by SW8260C

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chloroethane	0.145U	1.09	1.05	97	1.09	1.02	94	59-139	3.00	(< 20)
Chloroform	0.00145U	1.09	1.02	94	1.09	1.03	95	78-123	1.30	(< 20)
Chloromethane	0.0181U	1.09	0.990	91	1.09	0.967	89	50-136	2.40	(< 20)
cis-1,2-Dichloroethene	0.0181U	1.09	0.961	88	1.09	0.953	88	77-123	0.85	(< 20)
cis-1,3-Dichloropropene	0.00905U	1.09	1.13	104	1.09	1.15	106	74-126	1.80	(< 20)
Dibromochloromethane	0.00145U	1.09	1.08	99	1.09	1.08	100	74-126	0.65	(< 20)
Dibromomethane	0.0181U	1.09	0.969	89	1.09	0.982	90	78-125	1.40	(< 20)
Dichlorodifluoromethane	0.0362U	1.09	0.964	89	1.09	0.943	87	29-149	2.20	(< 20)
Ethylbenzene	0.0181U	1.09	0.951	88	1.09	0.979	90	76-122	2.90	(< 20)
Freon-113	0.0725U	1.63	1.47	90	1.63	1.45	89	66-136	1.30	(< 20)
Hexachlorobutadiene	0.0145U	1.09	1.36	125	1.09	1.25	115	61-135	8.50	(< 20)
Isopropylbenzene (Cumene)	0.0181U	1.09	0.991	91	1.09	1.03	95	68-134	3.80	(< 20)
Methylene chloride	0.0725U	1.09	1.01	93	1.09	1.01	93	70-128	0.17	(< 20)
Methyl-t-butyl ether	0.0725U	1.63	1.63	100	1.63	1.70	105	73-125	4.60	(< 20)
Naphthalene	0.0181U	1.09	1.01	93	1.09	1.08	99	62-129	6.40	(< 20)
n-Butylbenzene	0.0181U	1.09	1.14	105	1.09	1.14	105	70-128	0.19	(< 20)
n-Propylbenzene	0.0181U	1.09	1.02	94	1.09	1.08	99	73-125	5.00	(< 20)
o-Xylene	0.0181U	1.09	0.998	92	1.09	1.03	95	77-123	3.00	(< 20)
P & M -Xylene	0.0362U	2.17	1.99	92	2.17	2.07	95	77-124	4.10	(< 20)
sec-Butylbenzene	0.0181U	1.09	1.04	96	1.09	1.09	100	73-126	4.60	(< 20)
Styrene	0.0181U	1.09	1.03	95	1.09	1.06	98	76-124	2.50	(< 20)
tert-Butylbenzene	0.0181U	1.09	1.02	94	1.09	1.07	99	73-125	4.80	(< 20)
Tetrachloroethene	0.00905U	1.09	1.05	97	1.09	1.08	100	73-128	3.00	(< 20)
Toluene	0.0181U	1.09	1.02	94	1.09	1.04	96	77-121	2.30	(< 20)
trans-1,2-Dichloroethene	0.0181U	1.09	1.01	93	1.09	1.01	93	74-125	0.46	(< 20)
trans-1,3-Dichloropropene	0.00905U	1.09	1.07	98	1.09	1.09	100	71-130	2.40	(< 20)
Trichloroethene	0.00362U	1.09	1.06	98	1.09	1.09	101	77-123	2.70	(< 20)
Trichlorofluoromethane	0.0362U	1.09	1.00	92	1.09	0.939	86	62-140	6.40	(< 20)
Vinyl acetate	0.0725U	1.09	1.03	95	1.09	1.08	99	50-151	4.60	(< 20)
Vinyl chloride	0.000580U	1.09	1.06	98	1.09	0.984	91	56-135	7.30	(< 20)
Xylenes (total)	0.0545U	3.26	2.99	92	3.26	3.10	95	78-124	3.70	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		1.09	1.08	99	1.09	1.06	98	71-136	1.70	
4-Bromofluorobenzene (surr)		1.81	1.57	87	1.81	1.64	91	55-151	4.60	
Toluene-d8 (surr)		1.09	1.13	104	1.09	1.11	102	85-116	1.30	

Print Date: 05/09/2019 2:36:02PM

Matrix Spike Summary

Original Sample ID: 1506118
MS Sample ID: 1506121 MS
MSD Sample ID: 1506122 MSD

Analysis Date:
Analysis Date: 05/03/2019 10:49
Analysis Date: 05/03/2019 11:06
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007, 1199212008

Results by SW8260C

Parameter	Sample	Matrix Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			

Batch Information

Analytical Batch: VMS18881
Analytical Method: SW8260C
Instrument: VQA 7890/5975 GC/MS
Analyst: NRB
Analytical Date/Time: 5/3/2019 10:49:00AM

Prep Batch: VXX34013
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 5/3/2019 12:30:00AM
Prep Initial Wt./Vol.: 34.52g
Prep Extract Vol: 25.00mL

Print Date: 05/09/2019 2:36:02PM

Method Blank

Blank ID: MB for HBN 1793437 [VXX/34026]
Blank Lab ID: 1506509

Matrix: Soil/Solid (dry weight)

QC for Samples:
1199212008

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
Trichloroethene	0.00250U	0.00500	0.00150	mg/Kg
Vinyl chloride	0.000400U	0.000800	0.000250	mg/Kg
Sf uor ateg				
1,2-Dichloroethane-D4 (surr)	97.2	71-136		%
4-Bromofluorobenzene (surr)	91.5	55-151		%
Toluene-d8 (surr)	100	85-116		%

Batch Information

Analytical Batch: VMS18892
Analytical Method: SW8260C
Instrument: VQA 7890/5975 GC/MS
Analyst: FDR
Analytical Date/Time: 5/7/2019 6:30:00PM

Prep Batch: VXX34026
Prep Method: SW5035A
Prep Date/Time: 5/7/2019 12:30:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199212 [VXX34026]

Blank Spike Lab ID: 1506510

Date Analyzed: 05/07/2019 18:46

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199212008

Results by SW8260C

Blank Spike (mg/Kg)

Parameter	Spike	Result	Rec (%)	CL
Trichloroethene	0.750	0.750	100	(77-123)
Vinyl chloride	0.750	0.719	96	(56-135)

Surrogates

1,2-Dichloroethane-D4 (surr)	0.750	98.1	98	(71-136)
4-Bromofluorobenzene (surr)	0.750	94.5	95	(55-151)
Toluene-d8 (surr)	0.750	104	104	(85-116)

Batch Information

Analytical Batch: VMS18892

Analytical Method: SW8260C

Instrument: VQA 7890/5975 GC/MS

Analyst: FDR

Prep Batch: VXX34026

Prep Method: SW5035A

Prep Date/Time: 05/07/2019 00:30

Spike Init Wt./Vol.: 0.750 mg/Kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Matrix Spike Summary

Original Sample ID: 1506508
MS Sample ID: 1506511 MS
MSD Sample ID: 1506512 MSD

Analysis Date: 05/07/2019 20:50
Analysis Date: 05/07/2019 19:29
Analysis Date: 05/07/2019 19:45
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1199212008

Results by SW8260C

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Trichloroethene	0.00153U	0.460	0.454	99	0.460	0.459	100	77-123	0.93	(< 20)
Vinyl chloride	0.000245U	0.460	0.495	108	0.460	0.445	97	56-135	10.50	(< 20)
Surrf oateg										
1,2-Dichloroethane-D4 (surr)		0.460	0.501	109	0.460	0.486	106	71-136	2.90	
4-Bromofluorobenzene (surr)		0.766	0.481	63	0.766	0.492	64	55-151	2.40	
Toluene-d8 (surr)		0.460	0.475	103	0.460	0.467	102	85-116	1.60	

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Analytical Batch: VMS18892
Analytical Method: SW8260C
Instrument: VQA 7890/5975 GC/MS
Analyst: FDR
Analytical Date/Time: 5/7/2019 7:29:00PM

Prep Batch: VXX34026
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 5/7/2019 12:30:00AM
Prep Initial Wt./Vol.: 81.59g
Prep Extract Vol: 25.00mL

Print Date: 05/09/2019 2:36:05PM

Method Blank

Blank ID: MB for HBN 1793282 [XXX/41377]
Blank Lab ID: 1505803

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	9.46J	20.0	6.20	mg/Kg
Surrogates				
5a Androstane (surr)	87.9	60-120		%

Batch Information

Analytical Batch: XFC14979
Analytical Method: AK102
Instrument: Agilent 7890B F
Analyst: VDL
Analytical Date/Time: 5/6/2019 12:55:00PM

Prep Batch: XXX41377
Prep Method: SW3550C
Prep Date/Time: 5/6/2019 9:08:53AM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Print Date: 05/09/2019 2:36:06PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199212 [XXX41377]
 Blank Spike Lab ID: 1505804
 Date Analyzed: 05/06/2019 13:04

Spike Duplicate ID: LCSD for HBN 1199212 [XXX41377]
 Spike Duplicate Lab ID: 1505805
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007

Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	833	818	98	833	791	95	(75-125)	3.30	(< 20)
Surrogates									
5a Androstane (surr)	16.7	98.3	98	16.7	95.3	95	(60-120)	3.00	

Batch Information

Analytical Batch: **XFC14979**
 Analytical Method: **AK102**
 Instrument: **Agilent 7890B F**
 Analyst: **VDL**

Prep Batch: **XXX41377**
 Prep Method: **SW3550C**
 Prep Date/Time: **05/06/2019 09:08**
 Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

Print Date: 05/09/2019 2:36:07PM

Method Blank

Blank ID: MB for HBN 1793282 [XXX/41377]
Blank Lab ID: 1505803

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007

Results by AK103

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	19.8J	20.0	6.20	mg/Kg
Surrogates				
nA riacontaneAt62 (surr)	99.3	60A20		%

Batch Information

Fanalytical Batch: XVC14979
Fanalytical Method: FK103
Instrument: Fgilent 7890B V
Fnalyst: TDL
Fanalytical Date/- ime: 5/6/2019 12:55:00PM

Prep Batch: XXX41377
Prep Method: SW3550C
Prep Date/- ime: 5/6/2019 9:08:53FM
Prep Initial Wt./Tol.: 30 g
Prep Extract Tol: 5 mL

Print Date: 05/09/2019 2:36:08PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199212 [XXX41377]
 Blank Spike Lab ID: 1505804
 Date Analyzed: 05/06/2019 13:04

Spike Duplicate ID: LCSD for HBN 1199212 [XXX41377]
 Spike Duplicate Lab ID: 1505805
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1199212001, 1199212002, 1199212003, 1199212004, 1199212005, 1199212006, 1199212007

Results by AK103

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	833	843	101	833	812	98	(60-120)	3.70	(< 20)
Surrogates									
n-Triacontane-d62 (surr)	16.7	109	109	16.7	107	107	(60-120)	2.00	

Batch Information

Analytical Batch: **XFC14979**
 Analytical Method: **AK103**
 Instrument: **Agilent 7890B F**
 Analyst: **VDL**

Prep Batch: **XXX41377**
 Prep Method: **SW3550C**
 Prep Date/Time: **05/06/2019 09:08**
 Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

Print Date: 05/09/2019 2:36:09PM

1199212

**FAIRBANKS SAMPLE RECEIPT FORM**

Note: This form is to be completed by Fairbanks Receiving Staff for all samples

[illegible]



e-Sample Receipt Form

SGS Workorder #:

1199212



1 1 9 9 2 1 2

Review Criteria		Condition (Yes, No, N/A)	Exceptions Noted below	
Chain of Custody / Temperature Requirements			Exemption permitted if sampler hand carries/delivers.	
Were Custody Seals intact? Note # & location		Yes	1-F, 1-R	
COC accompanied samples?		Yes		
<input type="checkbox"/> **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		Yes	Cooler ID:	1 @ 1.5 °C Therm. ID: D23
Temperature blank compliant* (i.e., 0-6 °C after CF)?			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?		N/A		
If <0°C, were sample containers ice free?		N/A		
If samples received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled".				
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.				
Holding Time / Documentation / Sample Condition Requirements			Note: Refer to form F-083 "Sample Guide" for specific holding times.	
Were samples received within holding time?		Yes		
Do samples match COC ** (i.e., sample IDs, dates/times collected)?		Yes		
**Note: If times differ <1hr, record details & login per COC.				
Were analyses requested unambiguous? (i.e., method is specified for analyses with >1 option for analysis)		Yes		
<input type="checkbox"/> ***Exemption permitted for metals (e.g. 200.8/6020A).				
Were proper containers (type/mass/volume/preservative***) used?		Yes		
Volatile / LL-Hg Requirements				
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?		Yes		
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?		N/A		
Were all soil VOAs field extracted with MeOH+BFB?		Yes		
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.				
Additional notes (if applicable):				

Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1199212001-A	No Preservative Required	OK			
1199212001-B	Methanol field pres. 4 C	OK			
1199212002-A	No Preservative Required	OK			
1199212002-B	Methanol field pres. 4 C	OK			
1199212003-A	No Preservative Required	OK			
1199212003-B	Methanol field pres. 4 C	OK			
1199212004-A	No Preservative Required	OK			
1199212004-B	Methanol field pres. 4 C	OK			
1199212005-A	No Preservative Required	OK			
1199212005-B	Methanol field pres. 4 C	OK			
1199212006-A	No Preservative Required	OK			
1199212006-B	Methanol field pres. 4 C	OK			
1199212007-A	No Preservative Required	OK			
1199212007-B	Methanol field pres. 4 C	OK			
1199212008-A	Methanol field pres. 4 C	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.









PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.



Map adapted from aerial imagery provided by Google, reproduced by permission granted by Google Mapping Service.

LEGEND

- | | | | |
|---|----------------------|---|--|
|  | Completed Trenching |  | Pending Analytical Results |
|  | Tower |  | Analytical Results Below ADEC Cleanup Levels |
|  | Canopy | | |
|  | Mechanical Equipment | | |
|  | Gravel Pad | | |
|  | Proposed Fence | | |

0 50 100



Feet



Building 3025
Emergency Dispatch Center Antenna Tower
Fort Wainwright, Alaska

MAY 2019 ACTIVITIES

May 2019

100004-003

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure 1

TABLE 1
FORT WAINWRIGHT BUILDING EAST SIDE 3025 SOIL RESULTS

Analytical Method	Analyte	ADEC Soil Cleanup Level	Units	EB-01	EB-02	EB-03	EB-12	EB-33	
								Primary	Duplicate
AK101	Gasoline Range Organics	300	mg/kg	<1.29	<0.805	<0.605	<1.29	<2.26	<2.36
AK102	Diesel Range Organics	250	mg/kg	<10.2	11.5J	<10.2	39.4	<10.3	<10.2
AK103	Residual Range Organics	11,000	mg/kg	<10.2	99.4	18.9J	461	17.8J	18.6J
SW8260C (VOCs)	1,1,1,2-Tetrachloroethane	0.022	mg/kg	<0.0103	<0.00645	<0.00485	<0.0104	<0.0181	<0.0189
	1,1,1-Trichloroethane	32	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	1,1,2,2-Tetrachloroethane	0.003	mg/kg	<0.00103	<0.000645	<0.000485	<0.00103	<0.00181	<0.00189
	1,1,2-Trichloroethane	0.0014	mg/kg	<0.000413	<0.000257	<0.000193	<0.000414	<0.000725	<0.000755
	1,1-Dichloroethane	0.092	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	1,1-Dichloroethene	1.2	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	1,1-Dichloropropene	—	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	1,2,3-Trichlorobenzene	0.15	mg/kg	<0.0258	<0.0160	<0.0121	<0.0259	<0.0452	<0.0472
	1,2,3-Trichloropropane	0.000031	mg/kg	<0.000515	<0.000322	<0.000242	<0.000520	<0.000905	<0.000945
	1,2,4-Trichlorobenzene	0.082	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	1,2,4-Trimethylbenzene	0.61	mg/kg	<0.0258	<0.0160	<0.0121	<0.0259	<0.0452	<0.0472
	1,2-Dibromo-3-chloropropane	—	mg/kg	<0.0515	<0.0321	<0.0242	<0.0520	<0.0905	<0.0945
	1,2-Dibromoethane	0.00024	mg/kg	<0.00103	<0.000645	<0.000485	<0.00103	<0.00181	<0.00189
	1,2-Dichlorobenzene	2.4	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	1,2-Dichloroethane	0.0055	mg/kg	<0.00103	<0.000645	<0.000485	<0.00103	<0.00181	<0.00189
	1,2-Dichloropropane	0.03	mg/kg	<0.00515	<0.00322	<0.00242	<0.00520	<0.00905	<0.00945
	1,3,5-Trimethylbenzene	0.66	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	1,3-Dichlorobenzene	2.3	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	1,3-Dichloropropane	—	mg/kg	<0.00515	<0.00322	<0.00242	<0.00520	<0.00905	<0.00945
	1,4-Dichlorobenzene	0.037	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	2,2-Dichloropropane	—	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	2-Butanone (MEK)	15	mg/kg	<0.129	<0.0805	<0.0605	<0.130	<0.226	<0.236
	2-Chlorotoluene	—	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	2-Hexanone	0.11	mg/kg	<0.0515	<0.0321	<0.0242	<0.0520	<0.0905	<0.0945
	4-Chlorotoluene	—	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	4-Methyl-2-pentanone (MIBK)	18	mg/kg	<0.129	<0.0805	<0.0605	<0.130	<0.226	<0.236
	Acetone	38	mg/kg	<0.129	<0.0805	<0.0605	<0.130	<0.226	<0.236
	Benzene	0.022	mg/kg	<0.00645	<0.00402	<0.00302	<0.00645	<0.0113	<0.0118
	Bromobenzene	0.36	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	Bromochloromethane	—	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	Bromodichloromethane	0.0043	mg/kg	<0.00103	<0.000645	<0.000485	<0.00103	<0.00181	<0.00189
	Bromoform	0.1	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	Bromomethane	0.024	mg/kg	<0.0103	<0.00645	<0.00485	<0.0104	<0.0181	<0.0189
	Carbon disulfide	2.9	mg/kg	<0.0515	<0.0321	<0.0242	<0.0520	<0.0905	<0.0945
	Carbon tetrachloride	0.021	mg/kg	<0.00645	<0.00402	<0.00302	<0.00645	<0.0113	<0.0118
	Chlorobenzene	0.46	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	Chloroethane	72	mg/kg	<0.103	<0.0645	<0.0485	<0.103	<0.181	<0.189
	Chloroform	0.0071	mg/kg	<0.00103	<0.000645	<0.000485	<0.00103	<0.00181	<0.00189
	Chloromethane	0.61	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	cis-1,2-Dichloroethene	0.12	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	cis-1,3-Dichloropropene	0.018	mg/kg	<0.00645	<0.00402	<0.00302	<0.00645	<0.0113	<0.0118
	Dibromochloromethane	0.0027	mg/kg	<0.00103	<0.000645	<0.000485	<0.00103	<0.00181	<0.00189

TABLE 1
FORT WAINWRIGHT BUILDING EAST SIDE 3025 SOIL RESULTS

Analytical Method	Analyte	ADEC Soil Cleanup Level	Units	EB-01	EB-02	EB-03	EB-12	EB-33	
								Primary	Duplicate
SW8260C (VOCs)	Dibromomethane	0.025	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	Dichlorodifluoromethane	3.9	mg/kg	<0.0258	<0.0160	<0.0121	<0.0259	<0.0452	<0.0472
	Ethylbenzene	0.13	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	Hexachlorobutadiene	0.02	mg/kg	<0.0103	<0.00645	<0.00485	<0.0104	<0.0181	<0.0189
	Isopropylbenzene	5.6	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	Methylene chloride	0.33	mg/kg	<0.0515	<0.0321	<0.0242	<0.0520	<0.0905	<0.0945
	Methyl-t-butyl ether	0.4	mg/kg	<0.0515	<0.0321	<0.0242	<0.0520	<0.0905	<0.0945
	Naphthalene	0.038	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	n-Butylbenzene	23	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	n-Propylbenzene	9.1	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	o-Xylene	1.5	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	P & M -Xylene	1.5	mg/kg	<0.0258	<0.0160	<0.0121	<0.0259	<0.0452	<0.0472
	p-Isopropyltoluene	—	mg/kg	<0.0515	<0.0321	<0.0242	<0.0520	<0.0905	<0.0945
	sec-Butylbenzene	42	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	Styrene	10	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	tert-Butylbenzene	11	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	Tetrachloroethene	0.19	mg/kg	0.0570	<0.00402	<0.00302	0.00959J	<0.0113	<0.0118
	Toluene	6.7	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	Total Xylenes	1.5	mg/kg	<0.0387	<0.0241	<0.0181	<0.0389	<0.0680	<0.0710
	trans-1,2-Dichloroethene	1.3	mg/kg	<0.0129	<0.00805	<0.00605	<0.0130	<0.0226	<0.0236
	trans-1,3-Dichloropropene	0.018	mg/kg	<0.00645	<0.00402	<0.00302	<0.00645	<0.0113	<0.0118
	Trichloroethene	0.011	mg/kg	<0.00258	<0.00161	<0.00121	<0.00259	<0.00452	<0.00472
	Trichlorofluoromethane	41	mg/kg	<0.0258	<0.0160	<0.0121	<0.0259	<0.0452	<0.0472
	Trichlorotrifluoroethane	310	mg/kg	<0.0515	<0.0321	<0.0242	<0.0520	<0.0905	<0.0945
	Vinyl acetate	1.1	mg/kg	<0.0515	<0.0321	<0.0242	<0.0520	<0.0905	<0.0945
	Vinyl chloride	0.0008	mg/kg	<0.000413	<0.000257	<0.000193	<0.000414	<0.000725	<0.000755

- Notes:** ADEC Soil-Cleanup Levels from 18 AAC 75.341 Table B1. Method Two - Migration to Groundwater and Table B2. Method Two - Under 40 Inch Zone - Migration to Groundwater
- ADEC Alaska Department of Environmental Conservation
- VOC volatile organic compounds
- ADEC soil cleanup level not established
- mg/kg milligrams per kilogram
- < Analyte not detected; listed as less than the limit of detection (LOD) unless otherwise flagged due to quality-control failures.
- J Estimated concentration, detected greater than the detection limit (DL) and less than the limit of quantitation (LOQ). Flag applied by the laboratory.
- Bold** The reported Limit of Detection (LOD) exceeds the associated ADEC soil cleanup level.

Laboratory Data Review Checklist

Completed By:

Cacy Wilfer

Title:

Environmental Engineering Staff

Date:

May 23, 2019

CS Report Name:

100004 B3025 Dispatch Antenna

Report Date:

May 21, 2019

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

SGS North America, Inc.

Laboratory Report Number:

1199274

ADEC File Number:

N/A

Hazard Identification Number:

N/A

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and
- perform
- all of the submitted sample analyses?

☒ Yes ☐ No

Comments:

- b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

☒ Yes ☐ No

Comments:

Analyses were performed by the SGS laboratory in Anchorage, AK. The laboratory is certified by the ADEC CSP for the requested analyses.

2. Chain of Custody (CoC)

- a. CoC information completed, signed, and dated (including released/received by)?

☒ Yes ☐ No

Comments:

- b. Correct Analyses requested?

☒ Yes ☐ No

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

☒ Yes ☐ No

Comments:

The sample receipt form notes the cooler temperature within the appropriate range.

- b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes ☐ No

Comments:

- c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes ☐ No

Comments:

The laboratory noted that samples were received in good condition.

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☒ Yes ☐ No

Comments:

There were no discrepancies.

- e. Data quality or usability affected?

Comments:

The data quality and usability were not affected.

4. Case Narrative

- a. Present and understandable?

☒ Yes ☐ No

Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

☒ Yes ☐ No

Comments:

Laboratory control sample (LCS) 1507482 and LCS 1507805 had recoveries for chloroethane, trichlorofluoromethane, and/or methylene chloride that did not meet QC criteria.

Matrix spike (MS) 1507806 and matrix spike duplicate (MSD) 1507807 had recoveries for numerous analytes did not meet QC criteria. The analytes were not detected above the LOQ in the parent sample.

- c. Were all corrective actions documented?

☒ Yes ☐ No

Comments:

The case narrative does not note any corrective actions were necessary.

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The case narrative did not note any effect on data quality/usability.

5. Samples Results

- a. Correct analyses performed/reported as requested on COC?

☒ Yes ☐ No

Comments:

b. All applicable holding times met?

☒ Yes ☐ No

Comments:

c. All soils reported on a dry weight basis?

☒ Yes ☐ No

Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

☐ Yes ☒ No

Comments:

The limits of detection (LODs) for non-detect results were less than the ADEC Migration to Groundwater Cleanup Levels, except for 1,2,3-trichloropropane and 1,2-dibromoethane.

e. Data quality or usability affected?

☐ Yes ☒ No

Comments:

Reported not-detected sample results with LODs above the applicable ADEC soil cleanup levels are noted on the analytical data table. We cannot assess if the analytes listed in 5.d. are present in the samples at concentrations greater than the ADEC soil cleanup levels but less than the reporting limit.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☒ Yes ☐ No

Comments:

ii. All method blank results less than limit of quantitation (LOQ)?

☒ Yes ☐ No

Comments:

iii. If above LOQ, what samples are affected?

Comments:

Project analytes were not detected in the method blanks.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No

Comments:

N/A; see above.

v. Data quality or usability affected?

Comments:

Data quality or usability was not affected; see above.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☒ Yes ☐ No

Comments:

LCS/LCSD samples were reported for GRO, DRO, and RRO analyses.

LCS and MS/MSD samples were reported for LL VOC analyses.

- ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☒ Yes ☐ No

Comments:

Metals analyses were not included with this work order.

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No

Comments:

The LCS 1507482 and LCS 1507805 had high recoveries for chloroethane, trichlorofluoromethane, and/or methylene chloride.

The MS 1507483, MSD 14507484, MS 507806, and MSD 1507807 had high recovery failures for 1,1-dichloroethene, chloroethane, carbon disulfide, and/or trichlorofluoromethane. The analytes were not detected above the LOQ in the parent sample.

- iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No

Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

The project samples did not have detections for the analytes associated with the high LCS, MS, and MSD recovery failures. The project samples are not affected by these high QC failures.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No

Comments:

N/A; see above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

No; see above.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☒ Yes ☐ No

Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☒ Yes ☐ No

Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☒ Yes ☐ No

Comments:

N/A, surrogate recoveries were within laboratory acceptance criteria.

iv. Data quality or usability affected?

Comments:

No; see above.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples?

(If not, enter explanation below.)

☒ Yes ☐ No

Comments:

Trip Blank results were reported for GRO / LL VOC analysis

- ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☒ Yes ☐ No

Comments:

- iii. All results less than LOQ?

☒ Yes ☐ No

Comments:

- iv. If above LOQ, what samples are affected?

Comments:

None; see above.

- v. Data quality or usability affected?

Comments:

No; project analytes were not detected in the trip blank.

e. Field Duplicate

- i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No

Comments:

- ii. Submitted blind to lab?

☒ Yes ☐ No

Comments:

The field duplicate pair ES-33 / ES-133 was submitted with this work order.

- iii. Precision – All relative percent differences (RPD) less than specified DQOs?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
 R_2 = Field Duplicate Concentration

☒ Yes ☐ No

Comments:

The field-duplicate RPDs were within the project-specific DQO of 50%, where calculable for detected results.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

No; data quality is unaffected.

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below).

☐ Yes ☐ No ☒ Not Applicable

Project samples were collected with non-reusable sampling equipment.

i. All results less than LOQ?

☐ Yes ☒ No

Comments:

N/A; see above.

ii. If above LOQ, what samples are affected?

Comments:

N/A; see above.

iii. Data quality or usability affected?

Comments:

No; see above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☐ Yes ☒ No

Comments:

Additional data flags or qualifiers are not required.

Laboratory Report of Analysis

To: Shannon & Wilson-Fairbanks
5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
907-479-0600

Report Number: **1199274**

Client Project: **100004-005 B3025**

Dear Valerie Webb,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Jennifer at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.



Alaska Division Technical Director

Stephen Ede
2019.05.21
14:44:21 -08'00'

Jennifer Dawkins
Project Manager
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Date



Case Narrative

SGS Client: Shannon & Wilson-Fairbanks

SGS Project: 1199274

Project Name/Site: 100004-005 B3025

Refer to sample receipt form for information on sample condition.

VXX/34067

1507482 LCS

8260C - LCS recoveries for chloroethane, trichlorofluoromethane, and methylene chloride do not meet QC criteria.

VXX/34077

1507805 LCS

8260C - LCS recoveries for chloroethane, and trichlorofluoromethane do not meet QC criteria.

1199274002MS

1507806 MS

8260C - MS recoveries for several analytes do not meet QC criteria. These analytes were not detected above the LOQ in the parent sample.

1199274002MSD

1507807 MSD

8260C - MSD recoveries for chloroethane, trichlorofluoromethane, and 1,1-dichloroethene do not meet QC criteria. These analytes were not detected above the LOQ in the parent sample.

* QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to the associated field samples.

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
Trip Blank	1199274001	05/08/2019	05/10/2019	Soil/Solid (dry weight)
EB-01	1199274002	05/08/2019	05/10/2019	Soil/Solid (dry weight)
EB-02	1199274003	05/08/2019	05/10/2019	Soil/Solid (dry weight)
EB-03	1199274004	05/08/2019	05/10/2019	Soil/Solid (dry weight)
ES-12	1199274005	05/08/2019	05/10/2019	Soil/Solid (dry weight)
ES-33	1199274006	05/08/2019	05/10/2019	Soil/Solid (dry weight)
ES-133	1199274007	05/08/2019	05/10/2019	Soil/Solid (dry weight)

<u>Method</u>	<u>Method Description</u>
AK102	Diesel/Residual Range Organics
AK103	Diesel/Residual Range Organics
AK101	Gasoline Range Organics (S)
SM21 2540G	Percent Solids SM2540G
SW8260C	VOC 8260 (S) Field Extracted

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Detectable Results Summary

Client Sample ID: **EB-01**
Lab Sample ID: 1199274002

Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Tetrachloroethene	0.0570	mg/Kg

Client Sample ID: **EB-02**
Lab Sample ID: 1199274003

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	11.5J	mg/Kg
Residual Range Organics	99.4	mg/Kg

Client Sample ID: **EB-03**
Lab Sample ID: 1199274004

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	18.9J	mg/Kg

Client Sample ID: **ES-12**
Lab Sample ID: 1199274005

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	39.4	mg/Kg
Residual Range Organics	461	mg/Kg
Tetrachloroethene	0.00959J	mg/Kg

Volatile GC/MS

Client Sample ID: **ES-33**
Lab Sample ID: 1199274006

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	17.8J	mg/Kg

Client Sample ID: **ES-133**
Lab Sample ID: 1199274007

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	18.6J	mg/Kg

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274001
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:06
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	1.27 U	2.54	0.762	mg/Kg	1		05/13/19 20:26
Surrogates							
4-Bromofluorobenzene (surr)	96.8	50-150		%	1		05/13/19 20:26

Batch Information

Analytical Batch: VFC14730
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 05/13/19 20:26
 Container ID: 1199274001-A

Prep Batch: VXX34068
 Prep Method: SW5035A
 Prep Date/Time: 05/08/19 14:06
 Prep Initial Wt./Vol.: 49.203 g
 Prep Extract Vol: 25 mL

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274001
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:06
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0101 U	0.0203	0.00630	mg/Kg	1		05/13/19 17:47
1,1,1-Trichloroethane	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
1,1,2,2-Tetrachloroethane	0.00102 U	0.00203	0.000630	mg/Kg	1		05/13/19 17:47
1,1,2-Trichloroethane	0.000407 U	0.000813	0.000254	mg/Kg	1		05/13/19 17:47
1,1-Dichloroethane	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
1,1-Dichloroethene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
1,1-Dichloropropene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
1,2,3-Trichlorobenzene	0.0254 U	0.0508	0.0152	mg/Kg	1		05/13/19 17:47
1,2,3-Trichloropropane	0.000510 U	0.00102	0.000630	mg/Kg	1		05/13/19 17:47
1,2,4-Trichlorobenzene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
1,2,4-Trimethylbenzene	0.0254 U	0.0508	0.0152	mg/Kg	1		05/13/19 17:47
1,2-Dibromo-3-chloropropane	0.0510 U	0.102	0.0315	mg/Kg	1		05/13/19 17:47
1,2-Dibromoethane	0.00102 U	0.00203	0.000630	mg/Kg	1		05/13/19 17:47
1,2-Dichlorobenzene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
1,2-Dichloroethane	0.00102 U	0.00203	0.000630	mg/Kg	1		05/13/19 17:47
1,2-Dichloropropane	0.00510 U	0.0102	0.00315	mg/Kg	1		05/13/19 17:47
1,3,5-Trimethylbenzene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
1,3-Dichlorobenzene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
1,3-Dichloropropane	0.00510 U	0.0102	0.00315	mg/Kg	1		05/13/19 17:47
1,4-Dichlorobenzene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
2,2-Dichloropropane	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
2-Butanone (MEK)	0.127 U	0.254	0.0793	mg/Kg	1		05/13/19 17:47
2-Chlorotoluene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
2-Hexanone	0.0510 U	0.102	0.0315	mg/Kg	1		05/13/19 17:47
4-Chlorotoluene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
4-Isopropyltoluene	0.0510 U	0.102	0.0254	mg/Kg	1		05/13/19 17:47
4-Methyl-2-pentanone (MIBK)	0.127 U	0.254	0.0793	mg/Kg	1		05/13/19 17:47
Acetone	0.127 U	0.254	0.0793	mg/Kg	1		05/13/19 17:47
Benzene	0.00635 U	0.0127	0.00396	mg/Kg	1		05/13/19 17:47
Bromobenzene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
Bromochloromethane	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
Bromodichloromethane	0.00102 U	0.00203	0.000630	mg/Kg	1		05/13/19 17:47
Bromoform	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
Bromomethane	0.0101 U	0.0203	0.00630	mg/Kg	1		05/13/19 17:47
Carbon disulfide	0.0510 U	0.102	0.0315	mg/Kg	1		05/13/19 17:47
Carbon tetrachloride	0.00635 U	0.0127	0.00396	mg/Kg	1		05/13/19 17:47
Chlorobenzene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47

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J flagging is activated

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274001
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:06
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.102 U	0.203	0.0630	mg/Kg	1		05/13/19 17:47
Chloroform	0.00102 U	0.00203	0.000630	mg/Kg	1		05/13/19 17:47
Chloromethane	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
cis-1,2-Dichloroethene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
cis-1,3-Dichloropropene	0.00635 U	0.0127	0.00396	mg/Kg	1		05/13/19 17:47
Dibromochloromethane	0.00102 U	0.00203	0.000630	mg/Kg	1		05/13/19 17:47
Dibromomethane	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
Dichlorodifluoromethane	0.0254 U	0.0508	0.0152	mg/Kg	1		05/13/19 17:47
Ethylbenzene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
Freon-113	0.0510 U	0.102	0.0315	mg/Kg	1		05/13/19 17:47
Hexachlorobutadiene	0.0101 U	0.0203	0.00630	mg/Kg	1		05/13/19 17:47
Isopropylbenzene (Cumene)	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
Methylene chloride	0.0510 U	0.102	0.0315	mg/Kg	1		05/13/19 17:47
Methyl-t-butyl ether	0.0510 U	0.102	0.0315	mg/Kg	1		05/13/19 17:47
Naphthalene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
n-Butylbenzene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
n-Propylbenzene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
o-Xylene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
P & M -Xylene	0.0254 U	0.0508	0.0152	mg/Kg	1		05/13/19 17:47
sec-Butylbenzene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
Styrene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
tert-Butylbenzene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
Tetrachloroethene	0.00635 U	0.0127	0.00396	mg/Kg	1		05/13/19 17:47
Toluene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
trans-1,2-Dichloroethene	0.0127 U	0.0254	0.00793	mg/Kg	1		05/13/19 17:47
trans-1,3-Dichloropropene	0.00635 U	0.0127	0.00396	mg/Kg	1		05/13/19 17:47
Trichloroethene	0.00254 U	0.00508	0.00152	mg/Kg	1		05/13/19 17:47
Trichlorofluoromethane	0.0254 U	0.0508	0.0152	mg/Kg	1		05/13/19 17:47
Vinyl acetate	0.0510 U	0.102	0.0315	mg/Kg	1		05/13/19 17:47
Vinyl chloride	0.000407 U	0.000813	0.000254	mg/Kg	1		05/13/19 17:47
Xylenes (total)	0.0381 U	0.0762	0.0232	mg/Kg	1		05/13/19 17:47

Surrogates

1,2-Dichloroethane-D4 (surr)	104	71-136	%	1		05/13/19 17:47
4-Bromofluorobenzene (surr)	91.5	55-151	%	1		05/13/19 17:47
Toluene-d8 (surr)	96.3	85-116	%	1		05/13/19 17:47

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274001
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:06
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18916
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/13/19 17:47
 Container ID: 1199274001-A

Prep Batch: VXX34067
 Prep Method: SW5035A
 Prep Date/Time: 05/08/19 14:06
 Prep Initial Wt./Vol.: 49.203 g
 Prep Extract Vol: 25 mL

Results of EB-01

Client Sample ID: **EB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274002
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:06
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.8
 Location:

Results by Semivolatile Organic Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	10.2 U	20.4	6.32	mg/Kg	1		05/17/19 14:00
Surrogates							
5a Androstane (surr)	69.3	50-150		%	1		05/17/19 14:00

Batch Information

Analytical Batch: XFC14998
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 05/17/19 14:00
 Container ID: 1199274002-A

Prep Batch: XXX41432
 Prep Method: SW3550C
 Prep Date/Time: 05/16/19 07:57
 Prep Initial Wt./Vol.: 30.392 g
 Prep Extract Vol: 5 mL

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	10.2 U	20.4	6.32	mg/Kg	1		05/17/19 14:00
Surrogates							
n-Triacontane-d62 (surr)	83.3	50-150		%	1		05/17/19 14:00

Batch Information

Analytical Batch: XFC14998
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 05/17/19 14:00
 Container ID: 1199274002-A

Prep Batch: XXX41432
 Prep Method: SW3550C
 Prep Date/Time: 05/16/19 07:57
 Prep Initial Wt./Vol.: 30.392 g
 Prep Extract Vol: 5 mL

Results of EB-01

Client Sample ID: **EB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274002
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:06
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.8
 Location:

Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	1.29 U	2.58	0.774	mg/Kg	1		05/16/19 00:14
Surrogates							
4-Bromofluorobenzene (surr)	89.6	50-150		%	1		05/16/19 00:14

Batch Information

Analytical Batch: VFC14732
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 05/16/19 00:14
 Container ID: 1199274002-B

Prep Batch: VXX34082
 Prep Method: SW5035A
 Prep Date/Time: 05/08/19 14:06
 Prep Initial Wt./Vol.: 53.436 g
 Prep Extract Vol: 26.6945 mL

Results of EB-01

Client Sample ID: **EB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274002
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:06
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.8
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0103 U	0.0206	0.00640	mg/Kg	1		05/15/19 13:57
1,1,1-Trichloroethane	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
1,1,2,2-Tetrachloroethane	0.00103 U	0.00206	0.000640	mg/Kg	1		05/15/19 13:57
1,1,2-Trichloroethane	0.000413 U	0.000825	0.000258	mg/Kg	1		05/15/19 13:57
1,1-Dichloroethane	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
1,1-Dichloroethene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
1,1-Dichloropropene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
1,2,3-Trichlorobenzene	0.0258 U	0.0516	0.0155	mg/Kg	1		05/15/19 13:57
1,2,3-Trichloropropane	0.000515 U	0.00103	0.000640	mg/Kg	1		05/15/19 13:57
1,2,4-Trichlorobenzene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
1,2,4-Trimethylbenzene	0.0258 U	0.0516	0.0155	mg/Kg	1		05/15/19 13:57
1,2-Dibromo-3-chloropropane	0.0515 U	0.103	0.0320	mg/Kg	1		05/15/19 13:57
1,2-Dibromoethane	0.00103 U	0.00206	0.000640	mg/Kg	1		05/15/19 13:57
1,2-Dichlorobenzene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
1,2-Dichloroethane	0.00103 U	0.00206	0.000640	mg/Kg	1		05/15/19 13:57
1,2-Dichloropropane	0.00515 U	0.0103	0.00320	mg/Kg	1		05/15/19 13:57
1,3,5-Trimethylbenzene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
1,3-Dichlorobenzene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
1,3-Dichloropropane	0.00515 U	0.0103	0.00320	mg/Kg	1		05/15/19 13:57
1,4-Dichlorobenzene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
2,2-Dichloropropane	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
2-Butanone (MEK)	0.129 U	0.258	0.0805	mg/Kg	1		05/15/19 13:57
2-Chlorotoluene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
2-Hexanone	0.0515 U	0.103	0.0320	mg/Kg	1		05/15/19 13:57
4-Chlorotoluene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
4-Isopropyltoluene	0.0515 U	0.103	0.0258	mg/Kg	1		05/15/19 13:57
4-Methyl-2-pentanone (MIBK)	0.129 U	0.258	0.0805	mg/Kg	1		05/15/19 13:57
Acetone	0.129 U	0.258	0.0805	mg/Kg	1		05/15/19 13:57
Benzene	0.00645 U	0.0129	0.00402	mg/Kg	1		05/15/19 13:57
Bromobenzene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
Bromochloromethane	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
Bromodichloromethane	0.00103 U	0.00206	0.000640	mg/Kg	1		05/15/19 13:57
Bromoform	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
Bromomethane	0.0103 U	0.0206	0.00640	mg/Kg	1		05/15/19 13:57
Carbon disulfide	0.0515 U	0.103	0.0320	mg/Kg	1		05/15/19 13:57
Carbon tetrachloride	0.00645 U	0.0129	0.00402	mg/Kg	1		05/15/19 13:57
Chlorobenzene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57

Print Date: 05/21/2019 2:38:52PM

J flagging is activated

Results of EB-01

Client Sample ID: **EB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274002
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:06
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.8
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.103 U	0.206	0.0640	mg/Kg	1		05/15/19 13:57
Chloroform	0.00103 U	0.00206	0.000640	mg/Kg	1		05/15/19 13:57
Chloromethane	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
cis-1,2-Dichloroethene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
cis-1,3-Dichloropropene	0.00645 U	0.0129	0.00402	mg/Kg	1		05/15/19 13:57
Dibromochloromethane	0.00103 U	0.00206	0.000640	mg/Kg	1		05/15/19 13:57
Dibromomethane	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
Dichlorodifluoromethane	0.0258 U	0.0516	0.0155	mg/Kg	1		05/15/19 13:57
Ethylbenzene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
Freon-113	0.0515 U	0.103	0.0320	mg/Kg	1		05/15/19 13:57
Hexachlorobutadiene	0.0103 U	0.0206	0.00640	mg/Kg	1		05/15/19 13:57
Isopropylbenzene (Cumene)	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
Methylene chloride	0.0515 U	0.103	0.0320	mg/Kg	1		05/15/19 13:57
Methyl-t-butyl ether	0.0515 U	0.103	0.0320	mg/Kg	1		05/15/19 13:57
Naphthalene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
n-Butylbenzene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
n-Propylbenzene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
o-Xylene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
P & M -Xylene	0.0258 U	0.0516	0.0155	mg/Kg	1		05/15/19 13:57
sec-Butylbenzene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
Styrene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
tert-Butylbenzene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
Tetrachloroethene	0.0570	0.0129	0.00402	mg/Kg	1		05/15/19 13:57
Toluene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
trans-1,2-Dichloroethene	0.0129 U	0.0258	0.00805	mg/Kg	1		05/15/19 13:57
trans-1,3-Dichloropropene	0.00645 U	0.0129	0.00402	mg/Kg	1		05/15/19 13:57
Trichloroethene	0.00258 U	0.00516	0.00155	mg/Kg	1		05/15/19 13:57
Trichlorofluoromethane	0.0258 U	0.0516	0.0155	mg/Kg	1		05/15/19 13:57
Vinyl acetate	0.0515 U	0.103	0.0320	mg/Kg	1		05/15/19 13:57
Vinyl chloride	0.000413 U	0.000825	0.000258	mg/Kg	1		05/15/19 13:57
Xylenes (total)	0.0387 U	0.0774	0.0235	mg/Kg	1		05/15/19 13:57

Surrogates

1,2-Dichloroethane-D4 (surr)	102	71-136	%	1		05/15/19 13:57
4-Bromofluorobenzene (surr)	93.5	55-151	%	1		05/15/19 13:57
Toluene-d8 (surr)	96.6	85-116	%	1		05/15/19 13:57

Results of EB-01

Client Sample ID: **EB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274002
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:06
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.8
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18926
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/15/19 13:57
 Container ID: 1199274002-B

Prep Batch: VXX34077
 Prep Method: SW5035A
 Prep Date/Time: 05/08/19 14:06
 Prep Initial Wt./Vol.: 53.436 g
 Prep Extract Vol: 26.6945 mL

Results of EB-02

Client Sample ID: **EB-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274003
 Lab Project ID: 1199274

Collection Date: 05/08/19 18:15
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.6
 Location:

Results by Semivolatile Organic Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	11.5 J	21.3	6.61	mg/Kg	1		05/17/19 14:11

Surrogates

5a Androstane (surr)	81	50-150		%	1		05/17/19 14:11
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Batch Information

Analytical Batch: XFC14998
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 05/17/19 14:11
 Container ID: 1199274003-A

Prep Batch: XXX41432
 Prep Method: SW3550C
 Prep Date/Time: 05/16/19 07:57
 Prep Initial Wt./Vol.: 30.043 g
 Prep Extract Vol: 5 mL

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	99.4	21.3	6.61	mg/Kg	1		05/17/19 14:11

Surrogates

n-Triacontane-d62 (surr)	97.5	50-150		%	1		05/17/19 14:11
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Batch Information

Analytical Batch: XFC14998
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 05/17/19 14:11
 Container ID: 1199274003-A

Prep Batch: XXX41432
 Prep Method: SW3550C
 Prep Date/Time: 05/16/19 07:57
 Prep Initial Wt./Vol.: 30.043 g
 Prep Extract Vol: 5 mL



Results of EB-02

Client Sample ID: **EB-02**
Client Project ID: **100004-005 B3025**
Lab Sample ID: 1199274003
Lab Project ID: 1199274

Collection Date: 05/08/19 18:15
Received Date: 05/10/19 10:22
Matrix: Soil/Solid (dry weight)
Solids (%):93.6
Location:

Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.805 U	1.61	0.482	mg/Kg	1		05/16/19 00:31

Surrogates

4-Bromofluorobenzene (surr)	89	50-150		%	1		05/16/19 00:31
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Batch Information

Analytical Batch: VFC14732
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/16/19 00:31
Container ID: 1199274003-B

Prep Batch: VXX34082
Prep Method: SW5035A
Prep Date/Time: 05/08/19 18:15
Prep Initial Wt./Vol.: 105.571 g
Prep Extract Vol: 31.7594 mL

Results of EB-02

Client Sample ID: **EB-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274003
 Lab Project ID: 1199274

Collection Date: 05/08/19 18:15
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.6
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.00645 U	0.0129	0.00399	mg/Kg	1		05/15/19 14:28
1,1,1-Trichloroethane	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
1,1,2,2-Tetrachloroethane	0.000645 U	0.00129	0.000399	mg/Kg	1		05/15/19 14:28
1,1,2-Trichloroethane	0.000257 U	0.000514	0.000161	mg/Kg	1		05/15/19 14:28
1,1-Dichloroethane	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
1,1-Dichloroethene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
1,1-Dichloropropene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
1,2,3-Trichlorobenzene	0.0160 U	0.0321	0.00964	mg/Kg	1		05/15/19 14:28
1,2,3-Trichloropropane	0.000322 U	0.000643	0.000399	mg/Kg	1		05/15/19 14:28
1,2,4-Trichlorobenzene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
1,2,4-Trimethylbenzene	0.0160 U	0.0321	0.00964	mg/Kg	1		05/15/19 14:28
1,2-Dibromo-3-chloropropane	0.0321 U	0.0643	0.0199	mg/Kg	1		05/15/19 14:28
1,2-Dibromoethane	0.000645 U	0.00129	0.000399	mg/Kg	1		05/15/19 14:28
1,2-Dichlorobenzene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
1,2-Dichloroethane	0.000645 U	0.00129	0.000399	mg/Kg	1		05/15/19 14:28
1,2-Dichloropropane	0.00322 U	0.00643	0.00199	mg/Kg	1		05/15/19 14:28
1,3,5-Trimethylbenzene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
1,3-Dichlorobenzene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
1,3-Dichloropropane	0.00322 U	0.00643	0.00199	mg/Kg	1		05/15/19 14:28
1,4-Dichlorobenzene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
2,2-Dichloropropane	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
2-Butanone (MEK)	0.0805 U	0.161	0.0501	mg/Kg	1		05/15/19 14:28
2-Chlorotoluene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
2-Hexanone	0.0321 U	0.0643	0.0199	mg/Kg	1		05/15/19 14:28
4-Chlorotoluene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
4-Isopropyltoluene	0.0321 U	0.0643	0.0161	mg/Kg	1		05/15/19 14:28
4-Methyl-2-pentanone (MIBK)	0.0805 U	0.161	0.0501	mg/Kg	1		05/15/19 14:28
Acetone	0.0805 U	0.161	0.0501	mg/Kg	1		05/15/19 14:28
Benzene	0.00402 U	0.00804	0.00251	mg/Kg	1		05/15/19 14:28
Bromobenzene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
Bromochloromethane	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
Bromodichloromethane	0.000645 U	0.00129	0.000399	mg/Kg	1		05/15/19 14:28
Bromoform	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
Bromomethane	0.00645 U	0.0129	0.00399	mg/Kg	1		05/15/19 14:28
Carbon disulfide	0.0321 U	0.0643	0.0199	mg/Kg	1		05/15/19 14:28
Carbon tetrachloride	0.00402 U	0.00804	0.00251	mg/Kg	1		05/15/19 14:28
Chlorobenzene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28

Print Date: 05/21/2019 2:38:52PM

J flagging is activated

Results of EB-02

Client Sample ID: **EB-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274003
 Lab Project ID: 1199274

Collection Date: 05/08/19 18:15
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.6
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.0645 U	0.129	0.0399	mg/Kg	1		05/15/19 14:28
Chloroform	0.000645 U	0.00129	0.000399	mg/Kg	1		05/15/19 14:28
Chloromethane	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
cis-1,2-Dichloroethene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
cis-1,3-Dichloropropene	0.00402 U	0.00804	0.00251	mg/Kg	1		05/15/19 14:28
Dibromochloromethane	0.000645 U	0.00129	0.000399	mg/Kg	1		05/15/19 14:28
Dibromomethane	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
Dichlorodifluoromethane	0.0160 U	0.0321	0.00964	mg/Kg	1		05/15/19 14:28
Ethylbenzene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
Freon-113	0.0321 U	0.0643	0.0199	mg/Kg	1		05/15/19 14:28
Hexachlorobutadiene	0.00645 U	0.0129	0.00399	mg/Kg	1		05/15/19 14:28
Isopropylbenzene (Cumene)	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
Methylene chloride	0.0321 U	0.0643	0.0199	mg/Kg	1		05/15/19 14:28
Methyl-t-butyl ether	0.0321 U	0.0643	0.0199	mg/Kg	1		05/15/19 14:28
Naphthalene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
n-Butylbenzene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
n-Propylbenzene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
o-Xylene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
P & M -Xylene	0.0160 U	0.0321	0.00964	mg/Kg	1		05/15/19 14:28
sec-Butylbenzene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
Styrene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
tert-Butylbenzene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
Tetrachloroethene	0.00402 U	0.00804	0.00251	mg/Kg	1		05/15/19 14:28
Toluene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
trans-1,2-Dichloroethene	0.00805 U	0.0161	0.00501	mg/Kg	1		05/15/19 14:28
trans-1,3-Dichloropropene	0.00402 U	0.00804	0.00251	mg/Kg	1		05/15/19 14:28
Trichloroethene	0.00161 U	0.00321	0.000964	mg/Kg	1		05/15/19 14:28
Trichlorofluoromethane	0.0160 U	0.0321	0.00964	mg/Kg	1		05/15/19 14:28
Vinyl acetate	0.0321 U	0.0643	0.0199	mg/Kg	1		05/15/19 14:28
Vinyl chloride	0.000257 U	0.000514	0.000161	mg/Kg	1		05/15/19 14:28
Xylenes (total)	0.0241 U	0.0482	0.0147	mg/Kg	1		05/15/19 14:28

Surrogates

1,2-Dichloroethane-D4 (surr)	103	71-136	%	1		05/15/19 14:28
4-Bromofluorobenzene (surr)	101	55-151	%	1		05/15/19 14:28
Toluene-d8 (surr)	97.1	85-116	%	1		05/15/19 14:28

Results of EB-02

Client Sample ID: **EB-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274003
 Lab Project ID: 1199274

Collection Date: 05/08/19 18:15
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.6
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18926
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/15/19 14:28
 Container ID: 1199274003-B

Prep Batch: VXX34077
 Prep Method: SW5035A
 Prep Date/Time: 05/08/19 18:15
 Prep Initial Wt./Vol.: 105.571 g
 Prep Extract Vol: 31.7594 mL

Results of EB-03

Client Sample ID: **EB-03**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274004
 Lab Project ID: 1199274

Collection Date: 05/08/19 18:25
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.7
 Location:

Results by Semivolatile Organic Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	10.2 U	20.4	6.34	mg/Kg	1		05/17/19 14:21
Surrogates							
5a Androstane (surr)	79.7	50-150		%	1		05/17/19 14:21

Batch Information

Analytical Batch: XFC14998
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 05/17/19 14:21
 Container ID: 1199274004-A

Prep Batch: XXX41432
 Prep Method: SW3550C
 Prep Date/Time: 05/16/19 07:57
 Prep Initial Wt./Vol.: 30.333 g
 Prep Extract Vol: 5 mL

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	18.9 J	20.4	6.34	mg/Kg	1		05/17/19 14:21
Surrogates							
n-Triacontane-d62 (surr)	95.7	50-150		%	1		05/17/19 14:21

Batch Information

Analytical Batch: XFC14998
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 05/17/19 14:21
 Container ID: 1199274004-A

Prep Batch: XXX41432
 Prep Method: SW3550C
 Prep Date/Time: 05/16/19 07:57
 Prep Initial Wt./Vol.: 30.333 g
 Prep Extract Vol: 5 mL



Results of EB-03

Client Sample ID: **EB-03**
Client Project ID: **100004-005 B3025**
Lab Sample ID: 1199274004
Lab Project ID: 1199274

Collection Date: 05/08/19 18:25
Received Date: 05/10/19 10:22
Matrix: Soil/Solid (dry weight)
Solids (%):96.7
Location:

Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.605 U	1.21	0.363	mg/Kg	1		05/16/19 00:49
Surrogates							
4-Bromofluorobenzene (surr)	99.8	50-150		%	1		05/16/19 00:49

Batch Information

Analytical Batch: VFC14732
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/16/19 00:49
Container ID: 1199274004-B

Prep Batch: VXX34082
Prep Method: SW5035A
Prep Date/Time: 05/08/19 18:25
Prep Initial Wt./Vol.: 124.067 g
Prep Extract Vol: 29.0608 mL

Results of EB-03

Client Sample ID: **EB-03**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274004
 Lab Project ID: 1199274

Collection Date: 05/08/19 18:25
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.7
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.00485 U	0.00969	0.00300	mg/Kg	1		05/15/19 14:44
1,1,1-Trichloroethane	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
1,1,2,2-Tetrachloroethane	0.000485 U	0.000969	0.000300	mg/Kg	1		05/15/19 14:44
1,1,2-Trichloroethane	0.000193 U	0.000387	0.000121	mg/Kg	1		05/15/19 14:44
1,1-Dichloroethane	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
1,1-Dichloroethene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
1,1-Dichloropropene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
1,2,3-Trichlorobenzene	0.0121 U	0.0242	0.00726	mg/Kg	1		05/15/19 14:44
1,2,3-Trichloropropane	0.000242 U	0.000484	0.000300	mg/Kg	1		05/15/19 14:44
1,2,4-Trichlorobenzene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
1,2,4-Trimethylbenzene	0.0121 U	0.0242	0.00726	mg/Kg	1		05/15/19 14:44
1,2-Dibromo-3-chloropropane	0.0242 U	0.0484	0.0150	mg/Kg	1		05/15/19 14:44
1,2-Dibromoethane	0.000485 U	0.000969	0.000300	mg/Kg	1		05/15/19 14:44
1,2-Dichlorobenzene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
1,2-Dichloroethane	0.000485 U	0.000969	0.000300	mg/Kg	1		05/15/19 14:44
1,2-Dichloropropane	0.00242 U	0.00484	0.00150	mg/Kg	1		05/15/19 14:44
1,3,5-Trimethylbenzene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
1,3-Dichlorobenzene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
1,3-Dichloropropane	0.00242 U	0.00484	0.00150	mg/Kg	1		05/15/19 14:44
1,4-Dichlorobenzene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
2,2-Dichloropropane	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
2-Butanone (MEK)	0.0605 U	0.121	0.0378	mg/Kg	1		05/15/19 14:44
2-Chlorotoluene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
2-Hexanone	0.0242 U	0.0484	0.0150	mg/Kg	1		05/15/19 14:44
4-Chlorotoluene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
4-Isopropyltoluene	0.0242 U	0.0484	0.0121	mg/Kg	1		05/15/19 14:44
4-Methyl-2-pentanone (MIBK)	0.0605 U	0.121	0.0378	mg/Kg	1		05/15/19 14:44
Acetone	0.0605 U	0.121	0.0378	mg/Kg	1		05/15/19 14:44
Benzene	0.00302 U	0.00605	0.00189	mg/Kg	1		05/15/19 14:44
Bromobenzene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
Bromochloromethane	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
Bromodichloromethane	0.000485 U	0.000969	0.000300	mg/Kg	1		05/15/19 14:44
Bromoform	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
Bromomethane	0.00485 U	0.00969	0.00300	mg/Kg	1		05/15/19 14:44
Carbon disulfide	0.0242 U	0.0484	0.0150	mg/Kg	1		05/15/19 14:44
Carbon tetrachloride	0.00302 U	0.00605	0.00189	mg/Kg	1		05/15/19 14:44
Chlorobenzene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44

Print Date: 05/21/2019 2:38:52PM

J flagging is activated

Results of EB-03

Client Sample ID: **EB-03**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274004
 Lab Project ID: 1199274

Collection Date: 05/08/19 18:25
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.7
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.0485 U	0.0969	0.0300	mg/Kg	1		05/15/19 14:44
Chloroform	0.000485 U	0.000969	0.000300	mg/Kg	1		05/15/19 14:44
Chloromethane	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
cis-1,2-Dichloroethene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
cis-1,3-Dichloropropene	0.00302 U	0.00605	0.00189	mg/Kg	1		05/15/19 14:44
Dibromochloromethane	0.000485 U	0.000969	0.000300	mg/Kg	1		05/15/19 14:44
Dibromomethane	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
Dichlorodifluoromethane	0.0121 U	0.0242	0.00726	mg/Kg	1		05/15/19 14:44
Ethylbenzene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
Freon-113	0.0242 U	0.0484	0.0150	mg/Kg	1		05/15/19 14:44
Hexachlorobutadiene	0.00485 U	0.00969	0.00300	mg/Kg	1		05/15/19 14:44
Isopropylbenzene (Cumene)	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
Methylene chloride	0.0242 U	0.0484	0.0150	mg/Kg	1		05/15/19 14:44
Methyl-t-butyl ether	0.0242 U	0.0484	0.0150	mg/Kg	1		05/15/19 14:44
Naphthalene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
n-Butylbenzene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
n-Propylbenzene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
o-Xylene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
P & M -Xylene	0.0121 U	0.0242	0.00726	mg/Kg	1		05/15/19 14:44
sec-Butylbenzene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
Styrene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
tert-Butylbenzene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
Tetrachloroethene	0.00302 U	0.00605	0.00189	mg/Kg	1		05/15/19 14:44
Toluene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
trans-1,2-Dichloroethene	0.00605 U	0.0121	0.00378	mg/Kg	1		05/15/19 14:44
trans-1,3-Dichloropropene	0.00302 U	0.00605	0.00189	mg/Kg	1		05/15/19 14:44
Trichloroethene	0.00121 U	0.00242	0.000726	mg/Kg	1		05/15/19 14:44
Trichlorofluoromethane	0.0121 U	0.0242	0.00726	mg/Kg	1		05/15/19 14:44
Vinyl acetate	0.0242 U	0.0484	0.0150	mg/Kg	1		05/15/19 14:44
Vinyl chloride	0.000193 U	0.000387	0.000121	mg/Kg	1		05/15/19 14:44
Xylenes (total)	0.0181 U	0.0363	0.0110	mg/Kg	1		05/15/19 14:44

Surrogates

1,2-Dichloroethane-D4 (surr)	103	71-136	%	1	05/15/19 14:44
4-Bromofluorobenzene (surr)	102	55-151	%	1	05/15/19 14:44
Toluene-d8 (surr)	96.3	85-116	%	1	05/15/19 14:44

Results of **EB-03**

Client Sample ID: **EB-03**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274004
 Lab Project ID: 1199274

Collection Date: 05/08/19 18:25
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.7
 Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS18926
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/15/19 14:44
 Container ID: 1199274004-B

Prep Batch: VXX34077
 Prep Method: SW5035A
 Prep Date/Time: 05/08/19 18:25
 Prep Initial Wt./Vol.: 124.067 g
 Prep Extract Vol: 29.0608 mL

Results of ES-12

Client Sample ID: **ES-12**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274005
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:09
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.5
 Location:

Results by Semivolatile Organic Fuels

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	39.4		20.9	6.48	mg/Kg	1		05/17/19 14:31
Surrogates								
5a Androstane (surr)	82.2		50-150		%	1		05/17/19 14:31

Batch Information

Analytical Batch: XFC14998
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 05/17/19 14:31
 Container ID: 1199274005-A

Prep Batch: XXX41432
 Prep Method: SW3550C
 Prep Date/Time: 05/16/19 07:57
 Prep Initial Wt./Vol.: 30.025 g
 Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	461		20.9	6.48	mg/Kg	1		05/17/19 14:31
Surrogates								
n-Triacontane-d62 (surr)	104		50-150		%	1		05/17/19 14:31

Batch Information

Analytical Batch: XFC14998
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 05/17/19 14:31
 Container ID: 1199274005-A

Prep Batch: XXX41432
 Prep Method: SW3550C
 Prep Date/Time: 05/16/19 07:57
 Prep Initial Wt./Vol.: 30.025 g
 Prep Extract Vol: 5 mL

Results of ES-12

Client Sample ID: **ES-12**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274005
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:09
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.5
 Location:

Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	1.29 U	2.59	0.777	mg/Kg	1		05/16/19 01:07
Surrogates							
4-Bromofluorobenzene (surr)	85.4	50-150		%	1		05/16/19 01:07

Batch Information

Analytical Batch: VFC14732
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 05/16/19 01:07
 Container ID: 1199274005-B

Prep Batch: VXX34082
 Prep Method: SW5035A
 Prep Date/Time: 05/08/19 14:09
 Prep Initial Wt./Vol.: 55.552 g
 Prep Extract Vol: 27.4781 mL

Results of ES-12

Client Sample ID: **ES-12**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274005
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:09
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.5
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0104 U	0.0207	0.00642	mg/Kg	1		05/15/19 14:59
1,1,1-Trichloroethane	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
1,1,2,2-Tetrachloroethane	0.00103 U	0.00207	0.000642	mg/Kg	1		05/15/19 14:59
1,1,2-Trichloroethane	0.000414 U	0.000828	0.000259	mg/Kg	1		05/15/19 14:59
1,1-Dichloroethane	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
1,1-Dichloroethene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
1,1-Dichloropropene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
1,2,3-Trichlorobenzene	0.0259 U	0.0518	0.0155	mg/Kg	1		05/15/19 14:59
1,2,3-Trichloropropane	0.000520 U	0.00104	0.000642	mg/Kg	1		05/15/19 14:59
1,2,4-Trichlorobenzene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
1,2,4-Trimethylbenzene	0.0259 U	0.0518	0.0155	mg/Kg	1		05/15/19 14:59
1,2-Dibromo-3-chloropropane	0.0520 U	0.104	0.0321	mg/Kg	1		05/15/19 14:59
1,2-Dibromoethane	0.00103 U	0.00207	0.000642	mg/Kg	1		05/15/19 14:59
1,2-Dichlorobenzene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
1,2-Dichloroethane	0.00103 U	0.00207	0.000642	mg/Kg	1		05/15/19 14:59
1,2-Dichloropropane	0.00520 U	0.0104	0.00321	mg/Kg	1		05/15/19 14:59
1,3,5-Trimethylbenzene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
1,3-Dichlorobenzene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
1,3-Dichloropropane	0.00520 U	0.0104	0.00321	mg/Kg	1		05/15/19 14:59
1,4-Dichlorobenzene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
2,2-Dichloropropane	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
2-Butanone (MEK)	0.130 U	0.259	0.0808	mg/Kg	1		05/15/19 14:59
2-Chlorotoluene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
2-Hexanone	0.0520 U	0.104	0.0321	mg/Kg	1		05/15/19 14:59
4-Chlorotoluene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
4-Isopropyltoluene	0.0520 U	0.104	0.0259	mg/Kg	1		05/15/19 14:59
4-Methyl-2-pentanone (MIBK)	0.130 U	0.259	0.0808	mg/Kg	1		05/15/19 14:59
Acetone	0.130 U	0.259	0.0808	mg/Kg	1		05/15/19 14:59
Benzene	0.00645 U	0.0129	0.00404	mg/Kg	1		05/15/19 14:59
Bromobenzene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
Bromochloromethane	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
Bromodichloromethane	0.00103 U	0.00207	0.000642	mg/Kg	1		05/15/19 14:59
Bromoform	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
Bromomethane	0.0104 U	0.0207	0.00642	mg/Kg	1		05/15/19 14:59
Carbon disulfide	0.0520 U	0.104	0.0321	mg/Kg	1		05/15/19 14:59
Carbon tetrachloride	0.00645 U	0.0129	0.00404	mg/Kg	1		05/15/19 14:59
Chlorobenzene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59

Print Date: 05/21/2019 2:38:52PM

J flagging is activated

Results of ES-12

Client Sample ID: **ES-12**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274005
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:09
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.5
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.103 U	0.207	0.0642	mg/Kg	1		05/15/19 14:59
Chloroform	0.00103 U	0.00207	0.000642	mg/Kg	1		05/15/19 14:59
Chloromethane	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
cis-1,2-Dichloroethene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
cis-1,3-Dichloropropene	0.00645 U	0.0129	0.00404	mg/Kg	1		05/15/19 14:59
Dibromochloromethane	0.00103 U	0.00207	0.000642	mg/Kg	1		05/15/19 14:59
Dibromomethane	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
Dichlorodifluoromethane	0.0259 U	0.0518	0.0155	mg/Kg	1		05/15/19 14:59
Ethylbenzene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
Freon-113	0.0520 U	0.104	0.0321	mg/Kg	1		05/15/19 14:59
Hexachlorobutadiene	0.0104 U	0.0207	0.00642	mg/Kg	1		05/15/19 14:59
Isopropylbenzene (Cumene)	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
Methylene chloride	0.0520 U	0.104	0.0321	mg/Kg	1		05/15/19 14:59
Methyl-t-butyl ether	0.0520 U	0.104	0.0321	mg/Kg	1		05/15/19 14:59
Naphthalene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
n-Butylbenzene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
n-Propylbenzene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
o-Xylene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
P & M -Xylene	0.0259 U	0.0518	0.0155	mg/Kg	1		05/15/19 14:59
sec-Butylbenzene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
Styrene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
tert-Butylbenzene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
Tetrachloroethene	0.00959 J	0.0129	0.00404	mg/Kg	1		05/15/19 14:59
Toluene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
trans-1,2-Dichloroethene	0.0130 U	0.0259	0.00808	mg/Kg	1		05/15/19 14:59
trans-1,3-Dichloropropene	0.00645 U	0.0129	0.00404	mg/Kg	1		05/15/19 14:59
Trichloroethene	0.00259 U	0.00518	0.00155	mg/Kg	1		05/15/19 14:59
Trichlorofluoromethane	0.0259 U	0.0518	0.0155	mg/Kg	1		05/15/19 14:59
Vinyl acetate	0.0520 U	0.104	0.0321	mg/Kg	1		05/15/19 14:59
Vinyl chloride	0.000414 U	0.000828	0.000259	mg/Kg	1		05/15/19 14:59
Xylenes (total)	0.0389 U	0.0777	0.0236	mg/Kg	1		05/15/19 14:59

Surrogates

1,2-Dichloroethane-D4 (surr)	103	71-136	%	1	05/15/19 14:59
4-Bromofluorobenzene (surr)	94.3	55-151	%	1	05/15/19 14:59
Toluene-d8 (surr)	97.7	85-116	%	1	05/15/19 14:59

Results of ES-12

Client Sample ID: **ES-12**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274005
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:09
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.5
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18926
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/15/19 14:59
 Container ID: 1199274005-B

Prep Batch: VXX34077
 Prep Method: SW5035A
 Prep Date/Time: 05/08/19 14:09
 Prep Initial Wt./Vol.: 55.552 g
 Prep Extract Vol: 27.4781 mL

Results of ES-33

Client Sample ID: **ES-33**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274006
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:35
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.5
 Location:

Results by Semivolatile Organic Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	10.3 U	20.6	6.38	mg/Kg	1		05/17/19 14:41
Surrogates							
5a Androstane (surr)	79.4	50-150		%	1		05/17/19 14:41

Batch Information

Analytical Batch: XFC14998
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 05/17/19 14:41
 Container ID: 1199274006-A

Prep Batch: XXX41432
 Prep Method: SW3550C
 Prep Date/Time: 05/16/19 07:57
 Prep Initial Wt./Vol.: 30.211 g
 Prep Extract Vol: 5 mL

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	17.8 J	20.6	6.38	mg/Kg	1		05/17/19 14:41
Surrogates							
n-Triacontane-d62 (surr)	95.1	50-150		%	1		05/17/19 14:41

Batch Information

Analytical Batch: XFC14998
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 05/17/19 14:41
 Container ID: 1199274006-A

Prep Batch: XXX41432
 Prep Method: SW3550C
 Prep Date/Time: 05/16/19 07:57
 Prep Initial Wt./Vol.: 30.211 g
 Prep Extract Vol: 5 mL

Results of ES-33

Client Sample ID: **ES-33**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274006
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:35
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.5
 Location:

Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	2.26 U	4.52	1.36	mg/Kg	1		05/16/19 01:25
Surrogates							
4-Bromofluorobenzene (surr)	81.6	50-150		%	1		05/16/19 01:25

Batch Information

Analytical Batch: VFC14732
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 05/16/19 01:25
 Container ID: 1199274006-B

Prep Batch: VXX34082
 Prep Method: SW5035A
 Prep Date/Time: 05/08/19 14:35
 Prep Initial Wt./Vol.: 29.88 g
 Prep Extract Vol: 26.057 mL

Results of ES-33

Client Sample ID: **ES-33**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274006
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:35
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.5
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0181 U	0.0362	0.0112	mg/Kg	1		05/15/19 15:15
1,1,1-Trichloroethane	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
1,1,2,2-Tetrachloroethane	0.00181 U	0.00362	0.00112	mg/Kg	1		05/15/19 15:15
1,1,2-Trichloroethane	0.000725 U	0.00145	0.000452	mg/Kg	1		05/15/19 15:15
1,1-Dichloroethane	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
1,1-Dichloroethene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
1,1-Dichloropropene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
1,2,3-Trichlorobenzene	0.0452 U	0.0904	0.0271	mg/Kg	1		05/15/19 15:15
1,2,3-Trichloropropane	0.000905 U	0.00181	0.00112	mg/Kg	1		05/15/19 15:15
1,2,4-Trichlorobenzene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
1,2,4-Trimethylbenzene	0.0452 U	0.0904	0.0271	mg/Kg	1		05/15/19 15:15
1,2-Dibromo-3-chloropropane	0.0905 U	0.181	0.0560	mg/Kg	1		05/15/19 15:15
1,2-Dibromoethane	0.00181 U	0.00362	0.00112	mg/Kg	1		05/15/19 15:15
1,2-Dichlorobenzene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
1,2-Dichloroethane	0.00181 U	0.00362	0.00112	mg/Kg	1		05/15/19 15:15
1,2-Dichloropropane	0.00905 U	0.0181	0.00560	mg/Kg	1		05/15/19 15:15
1,3,5-Trimethylbenzene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
1,3-Dichlorobenzene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
1,3-Dichloropropane	0.00905 U	0.0181	0.00560	mg/Kg	1		05/15/19 15:15
1,4-Dichlorobenzene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
2,2-Dichloropropane	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
2-Butanone (MEK)	0.226 U	0.452	0.141	mg/Kg	1		05/15/19 15:15
2-Chlorotoluene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
2-Hexanone	0.0905 U	0.181	0.0560	mg/Kg	1		05/15/19 15:15
4-Chlorotoluene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
4-Isopropyltoluene	0.0905 U	0.181	0.0452	mg/Kg	1		05/15/19 15:15
4-Methyl-2-pentanone (MIBK)	0.226 U	0.452	0.141	mg/Kg	1		05/15/19 15:15
Acetone	0.226 U	0.452	0.141	mg/Kg	1		05/15/19 15:15
Benzene	0.0113 U	0.0226	0.00705	mg/Kg	1		05/15/19 15:15
Bromobenzene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
Bromochloromethane	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
Bromodichloromethane	0.00181 U	0.00362	0.00112	mg/Kg	1		05/15/19 15:15
Bromoform	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
Bromomethane	0.0181 U	0.0362	0.0112	mg/Kg	1		05/15/19 15:15
Carbon disulfide	0.0905 U	0.181	0.0560	mg/Kg	1		05/15/19 15:15
Carbon tetrachloride	0.0113 U	0.0226	0.00705	mg/Kg	1		05/15/19 15:15
Chlorobenzene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15

Print Date: 05/21/2019 2:38:52PM

J flagging is activated

**Results of ES-33**

Client Sample ID: **ES-33**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274006
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:35
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.5
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.181 U	0.362	0.112	mg/Kg	1		05/15/19 15:15
Chloroform	0.00181 U	0.00362	0.00112	mg/Kg	1		05/15/19 15:15
Chloromethane	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
cis-1,2-Dichloroethene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
cis-1,3-Dichloropropene	0.0113 U	0.0226	0.00705	mg/Kg	1		05/15/19 15:15
Dibromochloromethane	0.00181 U	0.00362	0.00112	mg/Kg	1		05/15/19 15:15
Dibromomethane	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
Dichlorodifluoromethane	0.0452 U	0.0904	0.0271	mg/Kg	1		05/15/19 15:15
Ethylbenzene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
Freon-113	0.0905 U	0.181	0.0560	mg/Kg	1		05/15/19 15:15
Hexachlorobutadiene	0.0181 U	0.0362	0.0112	mg/Kg	1		05/15/19 15:15
Isopropylbenzene (Cumene)	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
Methylene chloride	0.0905 U	0.181	0.0560	mg/Kg	1		05/15/19 15:15
Methyl-t-butyl ether	0.0905 U	0.181	0.0560	mg/Kg	1		05/15/19 15:15
Naphthalene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
n-Butylbenzene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
n-Propylbenzene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
o-Xylene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
P & M -Xylene	0.0452 U	0.0904	0.0271	mg/Kg	1		05/15/19 15:15
sec-Butylbenzene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
Styrene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
tert-Butylbenzene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
Tetrachloroethene	0.0113 U	0.0226	0.00705	mg/Kg	1		05/15/19 15:15
Toluene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
trans-1,2-Dichloroethene	0.0226 U	0.0452	0.0141	mg/Kg	1		05/15/19 15:15
trans-1,3-Dichloropropene	0.0113 U	0.0226	0.00705	mg/Kg	1		05/15/19 15:15
Trichloroethene	0.00452 U	0.00904	0.00271	mg/Kg	1		05/15/19 15:15
Trichlorofluoromethane	0.0452 U	0.0904	0.0271	mg/Kg	1		05/15/19 15:15
Vinyl acetate	0.0905 U	0.181	0.0560	mg/Kg	1		05/15/19 15:15
Vinyl chloride	0.000725 U	0.00145	0.000452	mg/Kg	1		05/15/19 15:15
Xylenes (total)	0.0680 U	0.136	0.0412	mg/Kg	1		05/15/19 15:15

Surrogates

1,2-Dichloroethane-D4 (surr)	103	71-136	%	1		05/15/19 15:15
4-Bromofluorobenzene (surr)	91.7	55-151	%	1		05/15/19 15:15
Toluene-d8 (surr)	96.5	85-116	%	1		05/15/19 15:15

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J flagging is activated

Results of ES-33

Client Sample ID: **ES-33**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274006
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:35
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.5
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18926
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/15/19 15:15
 Container ID: 1199274006-B

Prep Batch: VXX34077
 Prep Method: SW5035A
 Prep Date/Time: 05/08/19 14:35
 Prep Initial Wt./Vol.: 29.88 g
 Prep Extract Vol: 26.057 mL

Results of ES-133

Client Sample ID: **ES-133**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274007
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:37
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.4
 Location:

Results by Semivolatile Organic Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	10.2 U	20.4	6.34	mg/Kg	1		05/17/19 14:52
Surrogates							
5a Androstane (surr)	77.6	50-150		%	1		05/17/19 14:52

Batch Information

Analytical Batch: XFC14998
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 05/17/19 14:52
 Container ID: 1199274007-A

Prep Batch: XXX41432
 Prep Method: SW3550C
 Prep Date/Time: 05/16/19 07:57
 Prep Initial Wt./Vol.: 30.421 g
 Prep Extract Vol: 5 mL

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	18.6 J	20.4	6.34	mg/Kg	1		05/17/19 14:52
Surrogates							
n-Triacontane-d62 (surr)	93.5	50-150		%	1		05/17/19 14:52

Batch Information

Analytical Batch: XFC14998
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 05/17/19 14:52
 Container ID: 1199274007-A

Prep Batch: XXX41432
 Prep Method: SW3550C
 Prep Date/Time: 05/16/19 07:57
 Prep Initial Wt./Vol.: 30.421 g
 Prep Extract Vol: 5 mL

Results of ES-133

Client Sample ID: **ES-133**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274007
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:37
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.4
 Location:

Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	2.36 U	4.72	1.42	mg/Kg	1		05/16/19 01:43
Surrogates							
4-Bromofluorobenzene (surr)	87.2	50-150		%	1		05/16/19 01:43

Batch Information

Analytical Batch: VFC14732
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 05/16/19 01:43
 Container ID: 1199274007-B

Prep Batch: VXX34082
 Prep Method: SW5035A
 Prep Date/Time: 05/08/19 14:37
 Prep Initial Wt./Vol.: 28.558 g
 Prep Extract Vol: 26.0141 mL

Results of ES-133

Client Sample ID: **ES-133**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274007
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:37
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.4
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0189 U	0.0378	0.0117	mg/Kg	1		05/15/19 15:30
1,1,1-Trichloroethane	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
1,1,2,2-Tetrachloroethane	0.00189 U	0.00378	0.00117	mg/Kg	1		05/15/19 15:30
1,1,2-Trichloroethane	0.000755 U	0.00151	0.000472	mg/Kg	1		05/15/19 15:30
1,1-Dichloroethane	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
1,1-Dichloroethene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
1,1-Dichloropropene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
1,2,3-Trichlorobenzene	0.0472 U	0.0944	0.0283	mg/Kg	1		05/15/19 15:30
1,2,3-Trichloropropane	0.000945 U	0.00189	0.00117	mg/Kg	1		05/15/19 15:30
1,2,4-Trichlorobenzene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
1,2,4-Trimethylbenzene	0.0472 U	0.0944	0.0283	mg/Kg	1		05/15/19 15:30
1,2-Dibromo-3-chloropropane	0.0945 U	0.189	0.0586	mg/Kg	1		05/15/19 15:30
1,2-Dibromoethane	0.00189 U	0.00378	0.00117	mg/Kg	1		05/15/19 15:30
1,2-Dichlorobenzene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
1,2-Dichloroethane	0.00189 U	0.00378	0.00117	mg/Kg	1		05/15/19 15:30
1,2-Dichloropropane	0.00945 U	0.0189	0.00586	mg/Kg	1		05/15/19 15:30
1,3,5-Trimethylbenzene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
1,3-Dichlorobenzene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
1,3-Dichloropropane	0.00945 U	0.0189	0.00586	mg/Kg	1		05/15/19 15:30
1,4-Dichlorobenzene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
2,2-Dichloropropane	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
2-Butanone (MEK)	0.236 U	0.472	0.147	mg/Kg	1		05/15/19 15:30
2-Chlorotoluene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
2-Hexanone	0.0945 U	0.189	0.0586	mg/Kg	1		05/15/19 15:30
4-Chlorotoluene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
4-Isopropyltoluene	0.0945 U	0.189	0.0472	mg/Kg	1		05/15/19 15:30
4-Methyl-2-pentanone (MIBK)	0.236 U	0.472	0.147	mg/Kg	1		05/15/19 15:30
Acetone	0.236 U	0.472	0.147	mg/Kg	1		05/15/19 15:30
Benzene	0.0118 U	0.0236	0.00737	mg/Kg	1		05/15/19 15:30
Bromobenzene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
Bromochloromethane	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
Bromodichloromethane	0.00189 U	0.00378	0.00117	mg/Kg	1		05/15/19 15:30
Bromoform	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
Bromomethane	0.0189 U	0.0378	0.0117	mg/Kg	1		05/15/19 15:30
Carbon disulfide	0.0945 U	0.189	0.0586	mg/Kg	1		05/15/19 15:30
Carbon tetrachloride	0.0118 U	0.0236	0.00737	mg/Kg	1		05/15/19 15:30
Chlorobenzene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30

Print Date: 05/21/2019 2:38:52PM

J flagging is activated

Results of ES-133

Client Sample ID: **ES-133**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274007
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:37
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.4
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.189 U	0.378	0.117	mg/Kg	1		05/15/19 15:30
Chloroform	0.00189 U	0.00378	0.00117	mg/Kg	1		05/15/19 15:30
Chloromethane	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
cis-1,2-Dichloroethene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
cis-1,3-Dichloropropene	0.0118 U	0.0236	0.00737	mg/Kg	1		05/15/19 15:30
Dibromochloromethane	0.00189 U	0.00378	0.00117	mg/Kg	1		05/15/19 15:30
Dibromomethane	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
Dichlorodifluoromethane	0.0472 U	0.0944	0.0283	mg/Kg	1		05/15/19 15:30
Ethylbenzene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
Freon-113	0.0945 U	0.189	0.0586	mg/Kg	1		05/15/19 15:30
Hexachlorobutadiene	0.0189 U	0.0378	0.0117	mg/Kg	1		05/15/19 15:30
Isopropylbenzene (Cumene)	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
Methylene chloride	0.0945 U	0.189	0.0586	mg/Kg	1		05/15/19 15:30
Methyl-t-butyl ether	0.0945 U	0.189	0.0586	mg/Kg	1		05/15/19 15:30
Naphthalene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
n-Butylbenzene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
n-Propylbenzene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
o-Xylene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
P & M -Xylene	0.0472 U	0.0944	0.0283	mg/Kg	1		05/15/19 15:30
sec-Butylbenzene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
Styrene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
tert-Butylbenzene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
Tetrachloroethene	0.0118 U	0.0236	0.00737	mg/Kg	1		05/15/19 15:30
Toluene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
trans-1,2-Dichloroethene	0.0236 U	0.0472	0.0147	mg/Kg	1		05/15/19 15:30
trans-1,3-Dichloropropene	0.0118 U	0.0236	0.00737	mg/Kg	1		05/15/19 15:30
Trichloroethene	0.00472 U	0.00944	0.00283	mg/Kg	1		05/15/19 15:30
Trichlorofluoromethane	0.0472 U	0.0944	0.0283	mg/Kg	1		05/15/19 15:30
Vinyl acetate	0.0945 U	0.189	0.0586	mg/Kg	1		05/15/19 15:30
Vinyl chloride	0.000755 U	0.00151	0.000472	mg/Kg	1		05/15/19 15:30
Xylenes (total)	0.0710 U	0.142	0.0431	mg/Kg	1		05/15/19 15:30

Surrogates

1,2-Dichloroethane-D4 (surr)	103	71-136	%	1		05/15/19 15:30
4-Bromofluorobenzene (surr)	92.4	55-151	%	1		05/15/19 15:30
Toluene-d8 (surr)	96.2	85-116	%	1		05/15/19 15:30

Results of ES-133

Client Sample ID: **ES-133**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199274007
 Lab Project ID: 1199274

Collection Date: 05/08/19 14:37
 Received Date: 05/10/19 10:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.4
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18926
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/15/19 15:30
 Container ID: 1199274007-B

Prep Batch: VXX34077
 Prep Method: SW5035A
 Prep Date/Time: 05/08/19 14:37
 Prep Initial Wt./Vol.: 28.558 g
 Prep Extract Vol: 26.0141 mL

Method Blank

Blank ID: MB for HBN 1793636 [SPT/10765]
Blank Lab ID: 1507360

Matrix: Soil/Solid (dry weight)

QC for Samples:
1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by SM21 2540G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Solids	100			%

Batch Information

Analytical Batch: SPT10765
Analytical Method: SM21 2540G
Instrument:
Analyst: BRP
Analytical Date/Time: 5/13/2019 6:08:00PM

Print Date: 05/21/2019 2:38:56PM

Duplicate Sample Summary

Original Sample ID: 1192297003

Duplicate Sample ID: 1507363

QC for Samples:

Analysis Date: 05/13/2019 18:08

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	75.2	70.6	%	6.40	(< 15)

Batch Information

Analytical Batch: SPT10765

Analytical Method: SM21 2540G

Instrument:

Analyst: BRP

Print Date: 05/21/2019 2:38:57PM

Duplicate Sample Summary

Original Sample ID: 1192315017

Duplicate Sample ID: 1507364

QC for Samples:

1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Analysis Date: 05/13/2019 18:08

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	43.1	44.5	%	3.20	(< 15)

Batch Information

Analytical Batch: SPT10765

Analytical Method: SM21 2540G

Instrument:

Analyst: BRP

Print Date: 05/21/2019 2:38:57PM

Method Blank

Blank ID: MB for HBN 1793666 [VXX/34067]
Blank Lab ID: 1507481

Matrix: Soil/Solid (dry weight)

QC for Samples:
1199274001

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.0100U	0.0200	0.00620	mg/Kg
1,1,1-Trichloroethane	0.0125U	0.0250	0.00780	mg/Kg
1,1,2,2-Tetrachloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,1,2-Trichloroethane	0.000400U	0.000800	0.000250	mg/Kg
1,1-Dichloroethane	0.0125U	0.0250	0.00780	mg/Kg
1,1-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
1,1-Dichloropropene	0.0125U	0.0250	0.00780	mg/Kg
1,2,3-Trichlorobenzene	0.0250U	0.0500	0.0150	mg/Kg
1,2,3-Trichloropropane	0.000500U	0.00100	0.000620	mg/Kg
1,2,4-Trichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,2,4-Trimethylbenzene	0.0250U	0.0500	0.0150	mg/Kg
1,2-Dibromo-3-chloropropane	0.0500U	0.100	0.0310	mg/Kg
1,2-Dibromoethane	0.00100U	0.00200	0.000620	mg/Kg
1,2-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,2-Dichloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,2-Dichloropropane	0.00500U	0.0100	0.00310	mg/Kg
1,3,5-Trimethylbenzene	0.0125U	0.0250	0.00780	mg/Kg
1,3-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,3-Dichloropropane	0.00500U	0.0100	0.00310	mg/Kg
1,4-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
2,2-Dichloropropane	0.0125U	0.0250	0.00780	mg/Kg
2-Butanone (MEK)	0.125U	0.250	0.0780	mg/Kg
2-Chlorotoluene	0.0125U	0.0250	0.00780	mg/Kg
2-Hexanone	0.0500U	0.100	0.0310	mg/Kg
4-Chlorotoluene	0.0125U	0.0250	0.00780	mg/Kg
4-Isopropyltoluene	0.0500U	0.100	0.0250	mg/Kg
4-Methyl-2-pentanone (MIBK)	0.125U	0.250	0.0780	mg/Kg
Acetone	0.125U	0.250	0.0780	mg/Kg
Benzene	0.00625U	0.0125	0.00390	mg/Kg
Bromobenzene	0.0125U	0.0250	0.00780	mg/Kg
Bromochloromethane	0.0125U	0.0250	0.00780	mg/Kg
Bromodichloromethane	0.00100U	0.00200	0.000620	mg/Kg
Bromoform	0.0125U	0.0250	0.00780	mg/Kg
Bromomethane	0.0100U	0.0200	0.00620	mg/Kg
Carbon disulfide	0.0500U	0.100	0.0310	mg/Kg
Carbon tetrachloride	0.00625U	0.0125	0.00390	mg/Kg
Chlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
Chloroethane	0.100U	0.200	0.0620	mg/Kg

Print Date: 05/21/2019 2:38:59PM

Method Blank

Blank ID: MB for HBN 1793666 [VXX/34067]
Blank Lab ID: 1507481

Matrix: Soil/Solid (dry weight)

QC for Samples:
1199274001

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
Chloroform	0.00100U	0.00200	0.000620	mg/Kg
Chloromethane	0.0125U	0.0250	0.00780	mg/Kg
cis-1,2-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
cis-1,3-Dichloropropene	0.00625U	0.0125	0.00390	mg/Kg
Dibromochloromethane	0.00100U	0.00200	0.000620	mg/Kg
Dibromomethane	0.0125U	0.0250	0.00780	mg/Kg
Dichlorodifluoromethane	0.0250U	0.0500	0.0150	mg/Kg
Ethylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Freon-113	0.0500U	0.100	0.0310	mg/Kg
Hexachlorobutadiene	0.0100U	0.0200	0.00620	mg/Kg
Isopropylbenzene (Cumene)	0.0125U	0.0250	0.00780	mg/Kg
Methylene chloride	0.0500U	0.100	0.0310	mg/Kg
Methyl-t-butyl ether	0.0500U	0.100	0.0310	mg/Kg
Naphthalene	0.0125U	0.0250	0.00780	mg/Kg
n-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
n-Propylbenzene	0.0125U	0.0250	0.00780	mg/Kg
o-Xylene	0.0125U	0.0250	0.00780	mg/Kg
P & M -Xylene	0.0250U	0.0500	0.0150	mg/Kg
sec-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Styrene	0.0125U	0.0250	0.00780	mg/Kg
tert-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Tetrachloroethene	0.00625U	0.0125	0.00390	mg/Kg
Toluene	0.0125U	0.0250	0.00780	mg/Kg
trans-1,2-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
trans-1,3-Dichloropropene	0.00625U	0.0125	0.00390	mg/Kg
Trichloroethene	0.00250U	0.00500	0.00150	mg/Kg
Trichlorofluoromethane	0.0250U	0.0500	0.0150	mg/Kg
Vinyl acetate	0.0500U	0.100	0.0310	mg/Kg
Vinyl chloride	0.000400U	0.000800	0.000250	mg/Kg
Xylenes (total)	0.0375U	0.0750	0.0228	mg/Kg
Surrogates				
1,2-Dichloroethane-D4 (surr)	102	71-136		%
4-Bromofluorobenzene (surr)	96.2	55-151		%
Toluene-d8 (surr)	97.8	85-116		%

Method Blank

Blank ID: MB for HBN 1793666 [VXX/34067]
Blank Lab ID: 1507481

Matrix: Soil/Solid (dry weight)

QC for Samples:
1199274001

Results by SW8260C

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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Batch Information

Analytical Batch: VMS18916
Analytical Method: SW8260C
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: NRO
Analytical Date/Time: 5/13/2019 2:05:00PM

Prep Batch: VXX34067
Prep Method: SW5035A
Prep Date/Time: 5/13/2019 12:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 05/21/2019 2:38:59PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199274 [VXX34067]

Blank Spike Lab ID: 1507482

Date Analyzed: 05/13/2019 14:21

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274001

Results by SW8260C

Parameter	Blank Spike (mg/Kg)			CL
	Spike	Result	Rec (%)	
1,1,1,2-Tetrachloroethane	0.750	0.791	106	(78-125)
1,1,1-Trichloroethane	0.750	0.817	109	(73-130)
1,1,2,2-Tetrachloroethane	0.750	0.743	99	(70-124)
1,1,2-Trichloroethane	0.750	0.797	106	(78-121)
1,1-Dichloroethane	0.750	0.808	108	(76-125)
1,1-Dichloroethene	0.750	0.975	130	(70-131)
1,1-Dichloropropene	0.750	0.808	108	(76-125)
1,2,3-Trichlorobenzene	0.750	0.705	94	(66-130)
1,2,3-Trichloropropane	0.750	0.763	102	(73-125)
1,2,4-Trichlorobenzene	0.750	0.732	98	(67-129)
1,2,4-Trimethylbenzene	0.750	0.763	102	(75-123)
1,2-Dibromo-3-chloropropane	0.750	0.671	90	(61-132)
1,2-Dibromoethane	0.750	0.768	102	(78-122)
1,2-Dichlorobenzene	0.750	0.784	105	(78-121)
1,2-Dichloroethane	0.750	0.799	107	(73-128)
1,2-Dichloropropane	0.750	0.832	111	(76-123)
1,3,5-Trimethylbenzene	0.750	0.759	101	(73-124)
1,3-Dichlorobenzene	0.750	0.808	108	(77-121)
1,3-Dichloropropane	0.750	0.784	104	(77-121)
1,4-Dichlorobenzene	0.750	0.783	104	(75-120)
2,2-Dichloropropane	0.750	0.791	105	(67-133)
2-Butanone (MEK)	2.25	2.51	111	(51-148)
2-Chlorotoluene	0.750	0.764	102	(75-122)
2-Hexanone	2.25	2.31	103	(53-145)
4-Chlorotoluene	0.750	0.749	100	(72-124)
4-Isopropyltoluene	0.750	0.725	97	(73-127)
4-Methyl-2-pentanone (MIBK)	2.25	2.45	109	(65-135)
Acetone	2.25	3.13	139	(36-164)
Benzene	0.750	0.809	108	(77-121)
Bromobenzene	0.750	0.817	109	(78-121)
Bromochloromethane	0.750	0.869	116	(78-125)
Bromodichloromethane	0.750	0.803	107	(75-127)
Bromoform	0.750	0.771	103	(67-132)
Bromomethane	0.750	0.983	131	(53-143)

Print Date: 05/21/2019 2:39:01PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199274 [VXX34067]

Blank Spike Lab ID: 1507482

Date Analyzed: 05/13/2019 14:21

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274001

Results by SW8260C

Parameter	Blank Spike (mg/Kg)			CL
	Spike	Result	Rec (%)	
Carbon disulfide	1.13	1.37	122	(63-132)
Carbon tetrachloride	0.750	0.815	109	(70-135)
Chlorobenzene	0.750	0.791	105	(79-120)
Chloroethane	0.750	1.09	145	(59-139)
Chloroform	0.750	0.796	106	(78-123)
Chloromethane	0.750	0.773	103	(50-136)
cis-1,2-Dichloroethene	0.750	0.842	112	(77-123)
cis-1,3-Dichloropropene	0.750	0.812	108	(74-126)
Dibromochloromethane	0.750	0.784	105	(74-126)
Dibromomethane	0.750	0.856	114	(78-125)
Dichlorodifluoromethane	0.750	0.787	105	(29-149)
Ethylbenzene	0.750	0.764	102	(76-122)
Freon-113	1.13	1.47	131	(66-136)
Hexachlorobutadiene	0.750	0.626	83	(61-135)
Isopropylbenzene (Cumene)	0.750	0.783	104	(68-134)
Methylene chloride	0.750	0.976	130	(70-128)
Methyl-t-butyl ether	1.13	1.22	109	(73-125)
Naphthalene	0.750	0.747	100	(62-129)
n-Butylbenzene	0.750	0.680	91	(70-128)
n-Propylbenzene	0.750	0.741	99	(73-125)
o-Xylene	0.750	0.760	101	(77-123)
P & M -Xylene	1.50	1.53	102	(77-124)
sec-Butylbenzene	0.750	0.726	97	(73-126)
Styrene	0.750	0.812	108	(76-124)
tert-Butylbenzene	0.750	0.748	100	(73-125)
Tetrachloroethene	0.750	0.829	111	(73-128)
Toluene	0.750	0.769	103	(77-121)
trans-1,2-Dichloroethene	0.750	0.893	119	(74-125)
trans-1,3-Dichloropropene	0.750	0.752	100	(71-130)
Trichloroethene	0.750	0.831	111	(77-123)
Trichlorofluoromethane	0.750	1.60	213	(62-140)
Vinyl acetate	0.750	0.781	104	(50-151)
Vinyl chloride	0.750	0.930	124	(56-135)
Xylenes (total)	2.25	2.29	102	(78-124)

Print Date: 05/21/2019 2:39:01PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199274 [VXX34067]

Blank Spike Lab ID: 1507482

Date Analyzed: 05/13/2019 14:21

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274001

Results by SW8260C

Parameter	Blank Spike (mg/Kg)			CL
	Spike	Result	Rec (%)	
Surrogates				
1,2-Dichloroethane-D4 (surr)	0.750	99.3	99	(71-136)
4-Bromofluorobenzene (surr)	0.750	91.7	92	(55-151)
Toluene-d8 (surr)	0.750	98.2	98	(85-116)

Batch Information

Analytical Batch: VMS18916

Analytical Method: SW8260C

Instrument: VRA Agilent GC/MS 7890B/5977A

Analyst: NRO

Prep Batch: VXX34067

Prep Method: SW5035A

Prep Date/Time: 05/13/2019 00:00

Spike Init Wt./Vol.: 0.750 mg/Kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/21/2019 2:39:01PM

Matrix Spike Summary

Original Sample ID: 1507509
MS Sample ID: 1507483 MS
MSD Sample ID: 1507484 MSD

Analysis Date: 05/13/2019 18:03
Analysis Date: 05/13/2019 14:57
Analysis Date: 05/13/2019 15:13
Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274001

Results by SW8260C

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	0.00358U	0.268	0.272	101	0.268	0.274	102	78-125	1.00	(< 20)
1,1,1-Trichloroethane	0.00447U	0.268	0.293	109	0.268	0.293	109	73-130	0.17	(< 20)
1,1,2,2-Tetrachloroethane	0.000358U	0.268	0.268	100	0.268	0.256	95	70-124	4.60	(< 20)
1,1,2-Trichloroethane	0.000143U	0.268	0.276	103	0.268	0.280	104	78-121	1.50	(< 20)
1,1-Dichloroethane	0.00447U	0.268	0.284	106	0.268	0.286	106	76-125	0.44	(< 20)
1,1-Dichloroethene	0.00447U	0.268	0.362	135 *	0.268	0.352	131	70-131	2.60	(< 20)
1,1-Dichloropropene	0.00447U	0.268	0.291	109	0.268	0.291	108	76-125	0.07	(< 20)
1,2,3-Trichlorobenzene	0.00895U	0.268	0.239	89	0.268	0.250	93	66-130	4.40	(< 20)
1,2,3-Trichloropropane	0.000179U	0.268	0.274	102	0.268	0.266	99	73-125	3.00	(< 20)
1,2,4-Trichlorobenzene	0.00447U	0.268	0.247	92	0.268	0.252	94	67-129	2.10	(< 20)
1,2,4-Trimethylbenzene	0.00895U	0.268	0.254	95	0.268	0.254	95	75-123	0.03	(< 20)
1,2-Dibromo-3-chloropropane	0.0179U	0.268	0.246	92	0.268	0.242	90	61-132	1.50	(< 20)
1,2-Dibromoethane	0.000358U	0.268	0.270	100	0.268	0.271	101	78-122	0.44	(< 20)
1,2-Dichlorobenzene	0.00447U	0.268	0.264	98	0.268	0.268	100	78-121	1.60	(< 20)
1,2-Dichloroethane	0.000358U	0.268	0.277	103	0.268	0.279	104	73-128	0.83	(< 20)
1,2-Dichloropropane	0.00179U	0.268	0.284	106	0.268	0.289	108	76-123	1.70	(< 20)
1,3,5-Trimethylbenzene	0.00447U	0.268	0.248	92	0.268	0.259	97	73-124	4.40	(< 20)
1,3-Dichlorobenzene	0.00447U	0.268	0.263	98	0.268	0.271	101	77-121	2.80	(< 20)
1,3-Dichloropropane	0.00179U	0.268	0.273	102	0.268	0.273	102	77-121	0.16	(< 20)
1,4-Dichlorobenzene	0.00447U	0.268	0.270	100	0.268	0.269	100	75-120	0.13	(< 20)
2,2-Dichloropropane	0.00447U	0.268	0.291	108	0.268	0.289	108	67-133	0.64	(< 20)
2-Butanone (MEK)	0.0447U	0.805	0.880	109	0.805	0.906	112	51-148	2.90	(< 20)
2-Chlorotoluene	0.00447U	0.268	0.251	94	0.268	0.257	96	75-122	2.40	(< 20)
2-Hexanone	0.0179U	0.805	0.827	103	0.805	0.842	105	53-145	1.80	(< 20)
4-Chlorotoluene	0.00447U	0.268	0.259	96	0.268	0.253	94	72-124	2.00	(< 20)
4-Isopropyltoluene	0.0179U	0.268	0.247	92	0.268	0.252	94	73-127	2.10	(< 20)
4-Methyl-2-pentanone (MIBK)	0.0447U	0.805	0.857	106	0.805	0.871	108	65-135	1.60	(< 20)
Acetone	0.0447U	0.805	1.10	136	0.805	1.13	140	36-164	2.50	(< 20)
Benzene	0.00151J	0.268	0.283	105	0.268	0.283	105	77-121	0.11	(< 20)
Bromobenzene	0.00447U	0.268	0.285	106	0.268	0.280	104	78-121	2.00	(< 20)
Bromochloromethane	0.00447U	0.268	0.308	115	0.268	0.307	114	78-125	0.53	(< 20)
Bromodichloromethane	0.000358U	0.268	0.276	103	0.268	0.278	104	75-127	0.83	(< 20)
Bromoform	0.00447U	0.268	0.272	101	0.268	0.280	104	67-132	2.60	(< 20)
Bromomethane	0.00358U	0.268	0.369	137	0.268	0.356	133	53-143	3.60	(< 20)
Carbon disulfide	0.0179U	0.403	0.526	130	0.403	0.497	124	63-132	5.50	(< 20)
Carbon tetrachloride	0.00224U	0.268	0.293	109	0.268	0.293	109	70-135	0.04	(< 20)
Chlorobenzene	0.00447U	0.268	0.271	101	0.268	0.275	102	79-120	1.60	(< 20)

Print Date: 05/21/2019 2:39:02PM

Matrix Spike Summary

Original Sample ID: 1507509
MS Sample ID: 1507483 MS
MSD Sample ID: 1507484 MSD

Analysis Date: 05/13/2019 18:03
Analysis Date: 05/13/2019 14:57
Analysis Date: 05/13/2019 15:13
Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274001

Results by SW8260C

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chloroethane	0.0358U	0.268	0.409	152 *	0.268	0.394	147 *	59-139	3.90	(< 20)
Chloroform	0.000358U	0.268	0.275	102	0.268	0.277	103	78-123	0.90	(< 20)
Chloromethane	0.00447U	0.268	0.300	112	0.268	0.281	105	50-136	6.40	(< 20)
cis-1,2-Dichloroethene	0.00447U	0.268	0.291	109	0.268	0.295	110	77-123	1.20	(< 20)
cis-1,3-Dichloropropene	0.00224U	0.268	0.283	105	0.268	0.285	106	74-126	0.55	(< 20)
Dibromochloromethane	0.000358U	0.268	0.271	101	0.268	0.273	102	74-126	0.69	(< 20)
Dibromomethane	0.00447U	0.268	0.296	110	0.268	0.299	111	78-125	0.81	(< 20)
Dichlorodifluoromethane	0.00895U	0.268	0.324	121	0.268	0.314	117	29-149	3.20	(< 20)
Ethylbenzene	0.00447U	0.268	0.253	94	0.268	0.264	99	76-122	4.40	(< 20)
Freon-113	0.0179U	0.403	0.538	134	0.403	0.538	134	66-136	0.01	(< 20)
Hexachlorobutadiene	0.00358U	0.268	0.304	113	0.268	0.262	97	61-135	14.90	(< 20)
Isopropylbenzene (Cumene)	0.00447U	0.268	0.246	92	0.268	0.271	101	68-134	9.60	(< 20)
Methylene chloride	0.0179U	0.268	0.343	128	0.268	0.339	126	70-128	1.00	(< 20)
Methyl-t-butyl ether	0.0179U	0.403	0.431	107	0.403	0.472	117	73-125	9.20	(< 20)
Naphthalene	0.00660J	0.268	0.262	95	0.268	0.272	101	62-129	3.80	(< 20)
n-Butylbenzene	0.00447U	0.268	0.233	87	0.268	0.238	89	70-128	2.00	(< 20)
n-Propylbenzene	0.00447U	0.268	0.238	89	0.268	0.252	94	73-125	5.80	(< 20)
o-Xylene	0.00447U	0.268	0.253	94	0.268	0.261	97	77-123	3.10	(< 20)
P & M -Xylene	0.00895U	0.537	0.517	96	0.537	0.532	99	77-124	2.80	(< 20)
sec-Butylbenzene	0.00447U	0.268	0.235	87	0.268	0.248	93	73-126	5.70	(< 20)
Styrene	0.00447U	0.268	0.267	99	0.268	0.278	103	76-124	4.10	(< 20)
tert-Butylbenzene	0.00447U	0.268	0.243	91	0.268	0.254	95	73-125	4.60	(< 20)
Tetrachloroethene	0.00224U	0.268	0.277	103	0.268	0.289	108	73-128	4.50	(< 20)
Toluene	0.00447U	0.268	0.266	99	0.268	0.270	101	77-121	1.60	(< 20)
trans-1,2-Dichloroethene	0.00447U	0.268	0.322	120	0.268	0.322	120	74-125	0.03	(< 20)
trans-1,3-Dichloropropene	0.00224U	0.268	0.264	99	0.268	0.264	98	71-130	0.24	(< 20)
Trichloroethene	0.000993J	0.268	0.291	108	0.268	0.294	109	77-123	1.00	(< 20)
Trichlorofluoromethane	0.00895U	0.268	0.679	253 *	0.268	0.606	226 *	62-140	11.30	(< 20)
Vinyl acetate	0.0179U	0.268	0.286	107	0.268	0.292	109	50-151	2.20	(< 20)
Vinyl chloride	0.000952	0.268	0.328	122				56-135		
Xylenes (total)	0.0134U	0.805	0.771	96	0.805	0.793	99	78-124	2.90	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		0.268	0.264	98	0.268	0.271	101	71-136	2.40	
4-Bromofluorobenzene (surr)		0.447	0.332	74	0.447	0.326	73	55-151	2.00	
Toluene-d8 (surr)		0.268	0.261	97	0.268	0.263	98	85-116	0.82	

Print Date: 05/21/2019 2:39:02PM

Matrix Spike Summary

Original Sample ID: 1507509
MS Sample ID: 1507483 MS
MSD Sample ID: 1507484 MSD

QC for Samples: 1199274001

Analysis Date:
Analysis Date: 05/13/2019 14:57
Analysis Date: 05/13/2019 15:13
Matrix: Soil/Solid (dry weight)

Results by SW8260C

Parameter	Sample	Matrix Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			

Batch Information

Analytical Batch: VMS18916
Analytical Method: SW8260C
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: NRO
Analytical Date/Time: 5/13/2019 2:57:01PM

Prep Batch: VXX34067
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 5/13/2019 12:00:00AM
Prep Initial Wt./Vol.: 139.68g
Prep Extract Vol: 25.00mL

Print Date: 05/21/2019 2:39:02PM

Method Blank

Blank ID: MB for HBN 1793668 [VXX/34068]
Blank Lab ID: 1507486

Matrix: Soil/Solid (dry weight)

QC for Samples:
1199274001

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.25U	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	80.6	50-150		%

Batch Information

Analytical Batch: VFC14730
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 5/13/2019 7:15:00PM

Prep Batch: VXX34068
Prep Method: SW5035A
Prep Date/Time: 5/13/2019 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 05/21/2019 2:39:03PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199274 [VXX34068]
 Blank Spike Lab ID: 1507487
 Date Analyzed: 05/14/2019 08:41

Spike Duplicate ID: LCSD for HBN 1199274 [VXX34068]
 Spike Duplicate Lab ID: 1507488
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274001

Results by AK101

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	14.7	117	12.5	14.2	113	(60-120)	3.40	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	71.5	72	1.25	82.9	83	(50-150)	14.70	

Batch Information

Analytical Batch: **VFC14730**
 Analytical Method: **AK101**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ST**

Prep Batch: **VXX34068**
 Prep Method: **SW5035A**
 Prep Date/Time: **05/13/2019 08:00**
 Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 05/21/2019 2:39:05PM

Method Blank

Blank ID: MB for HBN 1793736 [VXX/34077]
Blank Lab ID: 1507804

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.0100U	0.0200	0.00620	mg/Kg
1,1,1-Trichloroethane	0.0125U	0.0250	0.00780	mg/Kg
1,1,2,2-Tetrachloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,1,2-Trichloroethane	0.000400U	0.000800	0.000250	mg/Kg
1,1-Dichloroethane	0.0125U	0.0250	0.00780	mg/Kg
1,1-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
1,1-Dichloropropene	0.0125U	0.0250	0.00780	mg/Kg
1,2,3-Trichlorobenzene	0.0250U	0.0500	0.0150	mg/Kg
1,2,3-Trichloropropane	0.000500U	0.00100	0.000620	mg/Kg
1,2,4-Trichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,2,4-Trimethylbenzene	0.0250U	0.0500	0.0150	mg/Kg
1,2-Dibromo-3-chloropropane	0.0500U	0.100	0.0310	mg/Kg
1,2-Dibromoethane	0.00100U	0.00200	0.000620	mg/Kg
1,2-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,2-Dichloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,2-Dichloropropane	0.00500U	0.0100	0.00310	mg/Kg
1,3,5-Trimethylbenzene	0.0125U	0.0250	0.00780	mg/Kg
1,3-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,3-Dichloropropane	0.00500U	0.0100	0.00310	mg/Kg
1,4-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
2,2-Dichloropropane	0.0125U	0.0250	0.00780	mg/Kg
2-Butanone (MEK)	0.125U	0.250	0.0780	mg/Kg
2-Chlorotoluene	0.0125U	0.0250	0.00780	mg/Kg
2-Hexanone	0.0500U	0.100	0.0310	mg/Kg
4-Chlorotoluene	0.0125U	0.0250	0.00780	mg/Kg
4-Isopropyltoluene	0.0500U	0.100	0.0250	mg/Kg
4-Methyl-2-pentanone (MIBK)	0.125U	0.250	0.0780	mg/Kg
Acetone	0.125U	0.250	0.0780	mg/Kg
Benzene	0.00625U	0.0125	0.00390	mg/Kg
Bromobenzene	0.0125U	0.0250	0.00780	mg/Kg
Bromochloromethane	0.0125U	0.0250	0.00780	mg/Kg
Bromodichloromethane	0.00100U	0.00200	0.000620	mg/Kg
Bromoform	0.0125U	0.0250	0.00780	mg/Kg
Bromomethane	0.0100U	0.0200	0.00620	mg/Kg
Carbon disulfide	0.0500U	0.100	0.0310	mg/Kg
Carbon tetrachloride	0.00625U	0.0125	0.00390	mg/Kg
Chlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
Chloroethane	0.100U	0.200	0.0620	mg/Kg

Print Date: 05/21/2019 2:39:07PM

Method Blank

Blank ID: MB for HBN 1793736 [VXX/34077]
Blank Lab ID: 1507804

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
Chloroform	0.00100U	0.00200	0.000620	mg/Kg
Chloromethane	0.0125U	0.0250	0.00780	mg/Kg
cis-1,2-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
cis-1,3-Dichloropropene	0.00625U	0.0125	0.00390	mg/Kg
Dibromochloromethane	0.00100U	0.00200	0.000620	mg/Kg
Dibromomethane	0.0125U	0.0250	0.00780	mg/Kg
Dichlorodifluoromethane	0.0250U	0.0500	0.0150	mg/Kg
Ethylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Freon-113	0.0500U	0.100	0.0310	mg/Kg
Hexachlorobutadiene	0.0100U	0.0200	0.00620	mg/Kg
Isopropylbenzene (Cumene)	0.0125U	0.0250	0.00780	mg/Kg
Methylene chloride	0.0500U	0.100	0.0310	mg/Kg
Methyl-t-butyl ether	0.0500U	0.100	0.0310	mg/Kg
Naphthalene	0.0125U	0.0250	0.00780	mg/Kg
n-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
n-Propylbenzene	0.0125U	0.0250	0.00780	mg/Kg
o-Xylene	0.0125U	0.0250	0.00780	mg/Kg
P & M -Xylene	0.0250U	0.0500	0.0150	mg/Kg
sec-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Styrene	0.0125U	0.0250	0.00780	mg/Kg
tert-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Tetrachloroethene	0.00625U	0.0125	0.00390	mg/Kg
Toluene	0.0125U	0.0250	0.00780	mg/Kg
trans-1,2-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
trans-1,3-Dichloropropene	0.00625U	0.0125	0.00390	mg/Kg
Trichloroethene	0.00250U	0.00500	0.00150	mg/Kg
Trichlorofluoromethane	0.0250U	0.0500	0.0150	mg/Kg
Vinyl acetate	0.0500U	0.100	0.0310	mg/Kg
Vinyl chloride	0.000400U	0.000800	0.000250	mg/Kg
Xylenes (total)	0.0375U	0.0750	0.0228	mg/Kg
Surrogates				
1,2-Dichloroethane-D4 (surr)	102	71-136		%
4-Bromofluorobenzene (surr)	93.7	55-151		%
Toluene-d8 (surr)	96.7	85-116		%

Method Blank

Blank ID: MB for HBN 1793736 [VXX/34077]
Blank Lab ID: 1507804

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by SW8260C

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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Batch Information

Analytical Batch: VMS18926
Analytical Method: SW8260C
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: NRO
Analytical Date/Time: 5/15/2019 9:52:00AM

Prep Batch: VXX34077
Prep Method: SW5035A
Prep Date/Time: 5/15/2019 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 05/21/2019 2:39:07PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199274 [VXX34077]

Blank Spike Lab ID: 1507805

Date Analyzed: 05/15/2019 10:08

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by SW8260C

Parameter	Blank Spike (mg/Kg)			CL
	Spike	Result	Rec (%)	
1,1,1,2-Tetrachloroethane	0.750	0.769	103	(78-125)
1,1,1-Trichloroethane	0.750	0.794	106	(73-130)
1,1,2,2-Tetrachloroethane	0.750	0.734	98	(70-124)
1,1,2-Trichloroethane	0.750	0.770	103	(78-121)
1,1-Dichloroethane	0.750	0.781	104	(76-125)
1,1-Dichloroethene	0.750	0.949	127	(70-131)
1,1-Dichloropropene	0.750	0.789	105	(76-125)
1,2,3-Trichlorobenzene	0.750	0.705	94	(66-130)
1,2,3-Trichloropropane	0.750	0.750	100	(73-125)
1,2,4-Trichlorobenzene	0.750	0.716	95	(67-129)
1,2,4-Trimethylbenzene	0.750	0.734	98	(75-123)
1,2-Dibromo-3-chloropropane	0.750	0.677	90	(61-132)
1,2-Dibromoethane	0.750	0.752	100	(78-122)
1,2-Dichlorobenzene	0.750	0.762	102	(78-121)
1,2-Dichloroethane	0.750	0.779	104	(73-128)
1,2-Dichloropropane	0.750	0.806	107	(76-123)
1,3,5-Trimethylbenzene	0.750	0.726	97	(73-124)
1,3-Dichlorobenzene	0.750	0.765	102	(77-121)
1,3-Dichloropropane	0.750	0.757	101	(77-121)
1,4-Dichlorobenzene	0.750	0.769	102	(75-120)
2,2-Dichloropropane	0.750	0.782	104	(67-133)
2-Butanone (MEK)	2.25	2.52	112	(51-148)
2-Chlorotoluene	0.750	0.734	98	(75-122)
2-Hexanone	2.25	2.29	102	(53-145)
4-Chlorotoluene	0.750	0.732	98	(72-124)
4-Isopropyltoluene	0.750	0.727	97	(73-127)
4-Methyl-2-pentanone (MIBK)	2.25	2.43	108	(65-135)
Acetone	2.25	3.19	142	(36-164)
Benzene	0.750	0.774	103	(77-121)
Bromobenzene	0.750	0.787	105	(78-121)
Bromochloromethane	0.750	0.843	112	(78-125)
Bromodichloromethane	0.750	0.789	105	(75-127)
Bromoform	0.750	0.783	104	(67-132)
Bromomethane	0.750	0.930	124	(53-143)

Print Date: 05/21/2019 2:39:09PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199274 [VXX34077]

Blank Spike Lab ID: 1507805

Date Analyzed: 05/15/2019 10:08

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by SW8260C

Parameter	Blank Spike (mg/Kg)			CL
	Spike	Result	Rec (%)	
Carbon disulfide	1.13	1.35	120	(63-132)
Carbon tetrachloride	0.750	0.792	106	(70-135)
Chlorobenzene	0.750	0.764	102	(79-120)
Chloroethane	0.750	1.08	145	(59-139)
Chloroform	0.750	0.767	102	(78-123)
Chloromethane	0.750	0.771	103	(50-136)
cis-1,2-Dichloroethene	0.750	0.809	108	(77-123)
cis-1,3-Dichloropropene	0.750	0.807	108	(74-126)
Dibromochloromethane	0.750	0.770	103	(74-126)
Dibromomethane	0.750	0.840	112	(78-125)
Dichlorodifluoromethane	0.750	0.814	109	(29-149)
Ethylbenzene	0.750	0.730	97	(76-122)
Freon-113	1.13	1.44	128	(66-136)
Hexachlorobutadiene	0.750	0.661	88	(61-135)
Isopropylbenzene (Cumene)	0.750	0.743	99	(68-134)
Methylene chloride	0.750	0.931	124	(70-128)
Methyl-t-butyl ether	1.13	1.20	107	(73-125)
Naphthalene	0.750	0.722	96	(62-129)
n-Butylbenzene	0.750	0.673	90	(70-128)
n-Propylbenzene	0.750	0.713	95	(73-125)
o-Xylene	0.750	0.730	97	(77-123)
P & M -Xylene	1.50	1.49	99	(77-124)
sec-Butylbenzene	0.750	0.711	95	(73-126)
Styrene	0.750	0.767	102	(76-124)
tert-Butylbenzene	0.750	0.724	97	(73-125)
Tetrachloroethene	0.750	0.779	104	(73-128)
Toluene	0.750	0.732	98	(77-121)
trans-1,2-Dichloroethene	0.750	0.868	116	(74-125)
trans-1,3-Dichloropropene	0.750	0.741	99	(71-130)
Trichloroethene	0.750	0.801	107	(77-123)
Trichlorofluoromethane	0.750	1.17	156	(62-140)
Vinyl acetate	0.750	0.805	107	(50-151)
Vinyl chloride	0.750	0.894	119	(56-135)
Xylenes (total)	2.25	2.22	99	(78-124)

Print Date: 05/21/2019 2:39:09PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199274 [VXX34077]

Blank Spike Lab ID: 1507805

Date Analyzed: 05/15/2019 10:08

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by SW8260C

Parameter	Blank Spike (mg/Kg)			CL
	Spike	Result	Rec (%)	
Surrogates				
1,2-Dichloroethane-D4 (surr)	0.750	99.6	100	(71-136)
4-Bromofluorobenzene (surr)	0.750	91.7	92	(55-151)
Toluene-d8 (surr)	0.750	96.8	97	(85-116)

Batch Information

Analytical Batch: VMS18926

Analytical Method: SW8260C

Instrument: VRA Agilent GC/MS 7890B/5977A

Analyst: NRO

Prep Batch: VXX34077

Prep Method: SW5035A

Prep Date/Time: 05/15/2019 06:00

Spike Init Wt./Vol.: 0.750 mg/Kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/21/2019 2:39:09PM

Matrix Spike Summary

Original Sample ID: 1199274002
MS Sample ID: 1507806 MS
MSD Sample ID: 1507807 MSD

Analysis Date: 05/15/2019 13:57
Analysis Date: 05/15/2019 12:24
Analysis Date: 05/15/2019 12:40
Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by SW8260C

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	0.0103U	0.725	0.728	101	0.725	0.755	104	78-125	3.60	(< 20)
1,1,1-Trichloroethane	0.0129U	0.725	0.786	108	0.725	0.792	109	73-130	0.71	(< 20)
1,1,2,2-Tetrachloroethane	0.00103U	0.725	0.706	97	0.725	0.716	99	70-124	1.50	(< 20)
1,1,2-Trichloroethane	0.000413U	0.725	0.722	100	0.725	0.760	105	78-121	5.20	(< 20)
1,1-Dichloroethane	0.0129U	0.725	0.755	104	0.725	0.774	107	76-125	2.40	(< 20)
1,1-Dichloroethene	0.0129U	0.725	0.988	136 *	0.725	0.960	132 *	70-131	3.00	(< 20)
1,1-Dichloropropene	0.0129U	0.725	0.783	108	0.725	0.791	109	76-125	1.00	(< 20)
1,2,3-Trichlorobenzene	0.0258U	0.725	0.660	91	0.725	0.706	97	66-130	6.60	(< 20)
1,2,3-Trichloropropane	0.000515U	0.725	0.726	100	0.725	0.733	101	73-125	0.95	(< 20)
1,2,4-Trichlorobenzene	0.0129U	0.725	0.701	97	0.725	0.719	99	67-129	2.50	(< 20)
1,2,4-Trimethylbenzene	0.0258U	0.725	0.698	96	0.725	0.730	101	75-123	4.40	(< 20)
1,2-Dibromo-3-chloropropane	0.0515U	0.725	0.666	92	0.725	0.683	94	61-132	2.40	(< 20)
1,2-Dibromoethane	0.00103U	0.725	0.708	98	0.725	0.741	102	78-122	4.60	(< 20)
1,2-Dichlorobenzene	0.0129U	0.725	0.710	98	0.725	0.747	103	78-121	5.10	(< 20)
1,2-Dichloroethane	0.00103U	0.725	0.741	102	0.725	0.759	105	73-128	2.40	(< 20)
1,2-Dichloropropane	0.00515U	0.725	0.771	106	0.725	0.787	109	76-123	2.20	(< 20)
1,3,5-Trimethylbenzene	0.0129U	0.725	0.692	96	0.725	0.728	101	73-124	5.20	(< 20)
1,3-Dichlorobenzene	0.0129U	0.725	0.728	101	0.725	0.768	106	77-121	5.10	(< 20)
1,3-Dichloropropane	0.00515U	0.725	0.712	98	0.725	0.747	103	77-121	4.80	(< 20)
1,4-Dichlorobenzene	0.0129U	0.725	0.733	101	0.725	0.760	105	75-120	3.50	(< 20)
2,2-Dichloropropane	0.0129U	0.725	0.784	108	0.725	0.786	108	67-133	0.17	(< 20)
2-Butanone (MEK)	0.129U	2.18	2.39	110	2.18	2.47	114	51-148	3.60	(< 20)
2-Chlorotoluene	0.0129U	0.725	0.697	96	0.725	0.722	100	75-122	3.40	(< 20)
2-Hexanone	0.0515U	2.18	2.16	99	2.18	2.27	104	53-145	5.00	(< 20)
4-Chlorotoluene	0.0129U	0.725	0.695	96	0.725	0.709	98	72-124	1.90	(< 20)
4-Isopropyltoluene	0.0515U	0.725	0.689	95	0.725	0.716	99	73-127	3.80	(< 20)
4-Methyl-2-pentanone (MIBK)	0.129U	2.18	2.29	105	2.18	2.40	110	65-135	4.60	(< 20)
Acetone	0.129U	2.18	2.83	130	2.18	2.96	136	36-164	4.50	(< 20)
Benzene	0.00645U	0.725	0.745	103	0.725	0.769	106	77-121	3.10	(< 20)
Bromobenzene	0.0129U	0.725	0.762	105	0.725	0.775	107	78-121	1.60	(< 20)
Bromochloromethane	0.0129U	0.725	0.798	110	0.725	0.802	111	78-125	0.61	(< 20)
Bromodichloromethane	0.00103U	0.725	0.756	104	0.725	0.770	106	75-127	1.80	(< 20)
Bromoform	0.0129U	0.725	0.764	105	0.725	0.794	110	67-132	3.80	(< 20)
Bromomethane	0.0103U	0.725	0.941	130	0.725	0.974	134	53-143	3.40	(< 20)
Carbon disulfide	0.0515U	1.08	1.46	134 *	1.08	1.36	125	63-132	6.70	(< 20)
Carbon tetrachloride	0.00645U	0.725	0.790	109	0.725	0.800	110	70-135	1.30	(< 20)
Chlorobenzene	0.0129U	0.725	0.723	100	0.725	0.753	104	79-120	3.90	(< 20)

Print Date: 05/21/2019 2:39:11PM

Matrix Spike Summary

Original Sample ID: 1199274002
MS Sample ID: 1507806 MS
MSD Sample ID: 1507807 MSD

Analysis Date: 05/15/2019 13:57
Analysis Date: 05/15/2019 12:24
Analysis Date: 05/15/2019 12:40
Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by SW8260C

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chloroethane	0.103U	0.725	1.11	153 *	0.725	1.05	145 *	59-139	5.20	(< 20)
Chloroform	0.00103U	0.725	0.738	102	0.725	0.754	104	78-123	2.20	(< 20)
Chloromethane	0.0129U	0.725	0.825	114	0.725	0.836	115	50-136	1.20	(< 20)
cis-1,2-Dichloroethene	0.0129U	0.725	0.785	108	0.725	0.796	110	77-123	1.40	(< 20)
cis-1,3-Dichloropropene	0.00645U	0.725	0.780	108	0.725	0.788	109	74-126	1.10	(< 20)
Dibromochloromethane	0.00103U	0.725	0.728	100	0.725	0.764	105	74-126	4.90	(< 20)
Dibromomethane	0.0129U	0.725	0.801	110	0.725	0.816	113	78-125	2.00	(< 20)
Dichlorodifluoromethane	0.0258U	0.725	0.809	112	0.725	0.792	109	29-149	2.10	(< 20)
Ethylbenzene	0.0129U	0.725	0.677	93	0.725	0.718	99	76-122	6.00	(< 20)
Freon-113	0.0515U	1.08	1.46	134	1.08	1.45	133	66-136	0.63	(< 20)
Hexachlorobutadiene	0.0103U	0.725	0.906	125	0.725	0.787	109	61-135	14.00	(< 20)
Isopropylbenzene (Cumene)	0.0129U	0.725	0.686	95	0.725	0.752	104	68-134	9.20	(< 20)
Methylene chloride	0.0515U	0.725	0.908	125	0.725	0.911	126	70-128	0.36	(< 20)
Methyl-t-butyl ether	0.0515U	1.08	1.15	105	1.08	1.18	108	73-125	2.90	(< 20)
Naphthalene	0.0129U	0.725	0.661	91	0.725	0.727	100	62-129	9.50	(< 20)
n-Butylbenzene	0.0129U	0.725	0.670	92	0.725	0.680	94	70-128	1.40	(< 20)
n-Propylbenzene	0.0129U	0.725	0.673	93	0.725	0.709	98	73-125	5.30	(< 20)
o-Xylene	0.0129U	0.725	0.680	94	0.725	0.719	99	77-123	5.60	(< 20)
P & M -Xylene	0.0258U	1.45	1.38	96	1.45	1.48	102	77-124	6.70	(< 20)
sec-Butylbenzene	0.0129U	0.725	0.677	93	0.725	0.715	99	73-126	5.50	(< 20)
Styrene	0.0129U	0.725	0.725	100	0.725	0.763	105	76-124	5.10	(< 20)
tert-Butylbenzene	0.0129U	0.725	0.687	95	0.725	0.718	99	73-125	4.30	(< 20)
Tetrachloroethene	0.0570	0.725	0.758	97	0.725	0.873	113	73-128	14.00	(< 20)
Toluene	0.0129U	0.725	0.700	97	0.725	0.726	100	77-121	3.60	(< 20)
trans-1,2-Dichloroethene	0.0129U	0.725	0.855	118	0.725	0.854	118	74-125	0.09	(< 20)
trans-1,3-Dichloropropene	0.00645U	0.725	0.701	97	0.725	0.736	101	71-130	4.60	(< 20)
Trichloroethene	0.00258U	0.725	0.785	108	0.725	0.800	110	77-123	1.90	(< 20)
Trichlorofluoromethane	0.0258U	0.725	1.20	166 *	0.725	1.13	155 *	62-140	6.50	(< 20)
Vinyl acetate	0.0515U	0.725	0.785	108	0.725	0.810	112	50-151	3.10	(< 20)
Vinyl chloride	0.000413U	0.725	0.884	122	0.725	0.839	116	56-135	5.30	(< 20)
Xylenes (total)	0.0387U	2.18	2.07	95	2.18	2.20	101	78-124	6.30	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		0.725	0.714	99	0.725	0.722	100	71-136	1.20	
4-Bromofluorobenzene (surr)		1.21	1.08	90	1.21	1.08	90	55-151	0.29	
Toluene-d8 (surr)		0.725	0.696	96	0.725	0.708	98	85-116	1.60	

Print Date: 05/21/2019 2:39:11PM

Matrix Spike Summary

Original Sample ID: 1199274002
MS Sample ID: 1507806 MS
MSD Sample ID: 1507807 MSD

Analysis Date:
Analysis Date: 05/15/2019 12:24
Analysis Date: 05/15/2019 12:40
Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by SW8260C

Parameter	Sample	Matrix Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			

Batch Information

Analytical Batch: VMS18926
Analytical Method: SW8260C
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: NRO
Analytical Date/Time: 5/15/2019 12:24:00PM

Prep Batch: VXX34077
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 5/15/2019 6:00:00AM
Prep Initial Wt./Vol.: 53.44g
Prep Extract Vol: 25.00mL

Print Date: 05/21/2019 2:39:11PM

Method Blank

Blank ID: MB for HBN 1793839 [VXX/34082]
Blank Lab ID: 1508019

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.25U	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	99.7	50-150		%

Batch Information

Analytical Batch: VFC14732
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 5/15/2019 10:45:00PM

Prep Batch: VXX34082
Prep Method: SW5035A
Prep Date/Time: 5/15/2019 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 05/21/2019 2:39:15PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199274 [VXX34082]
 Blank Spike Lab ID: 1508020
 Date Analyzed: 05/15/2019 22:09

Spike Duplicate ID: LCSD for HBN 1199274 [VXX34082]
 Spike Duplicate Lab ID: 1508021
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by AK101

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	11.8	94	12.5	11.9	95	(60-120)	0.58	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	92.8	93	1.25	119	119	(50-150)	24.70	

Batch Information

Analytical Batch: **VFC14732**
 Analytical Method: **AK101**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ST**

Prep Batch: **VXX34082**
 Prep Method: **SW5035A**
 Prep Date/Time: **05/15/2019 08:00**
 Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 05/21/2019 2:39:18PM

Method Blank

Blank ID: MB for HBN 1793720 [XXX/41432]
Blank Lab ID: 1507736

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
5a Androstane (surr)	81.2	60-120		%

Batch Information

Analytical Batch: XFC14998
Analytical Method: AK102
Instrument: Agilent 7890B F
Analyst: VDL
Analytical Date/Time: 5/17/2019 10:42:00AM

Prep Batch: XXX41432
Prep Method: SW3550C
Prep Date/Time: 5/16/2019 7:57:39AM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Print Date: 05/21/2019 2:39:22PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199274 [XXX41432]
 Blank Spike Lab ID: 1507737
 Date Analyzed: 05/17/2019 10:53

Spike Duplicate ID: LCSD for HBN 1199274
 [XXX41432]
 Spike Duplicate Lab ID: 1507738
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	833	769	92	833	778	93	(75-125)	1.20	(< 20)
Surrogates									
5a Androstane (surr)	16.7	92.2	92	16.7	93.5	94	(60-120)	1.40	

Batch Information

Analytical Batch: **XFC14998**
 Analytical Method: **AK102**
 Instrument: **Agilent 7890B F**
 Analyst: **VDL**

Prep Batch: **XXX41432**
 Prep Method: **SW3550C**
 Prep Date/Time: **05/16/2019 07:57**
 Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

Print Date: 05/21/2019 2:39:24PM

Method Blank

Blank ID: MB for HBN 1793720 [XXX/41432]
Blank Lab ID: 1507736

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by AK103

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
nA riacontaneAt62 (surr)	98	60A20		%

Batch Information

Fanalytical Batch: XVC14998
Fanalytical Method: FK103
Instrument: Fgilent 7890B V
Fnalyst: TDL
Fanalytical Date/- ime: 5/17/2019 10:42:00FM

Prep Batch: XXX41432
Prep Method: SW3550C
Prep Date/- ime: 5/16/2019 7:57:39FM
Prep Initial Wt./Tol.: 30 g
Prep Extract Tol: 5 mL

Print Date: 05/21/2019 2:39:27PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199274 [XXX41432]
 Blank Spike Lab ID: 1507737
 Date Analyzed: 05/17/2019 10:53

Spike Duplicate ID: LCSD for HBN 1199274
 [XXX41432]
 Spike Duplicate Lab ID: 1507738
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1199274002, 1199274003, 1199274004, 1199274005, 1199274006, 1199274007

Results by AK103

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	833	845	101	833	853	102	(60-120)	0.86	(< 20)
Surrogates									
n-Triacontane-d62 (surr)	16.7	109	109	16.7	107	107	(60-120)	1.50	

Batch Information

Analytical Batch: **XFC14998**
 Analytical Method: **AK103**
 Instrument: **Agilent 7890B F**
 Analyst: **VDL**

Prep Batch: **XXX41432**
 Prep Method: **SW3550C**
 Prep Date/Time: **05/16/2019 07:57**
 Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

Print Date: 05/21/2019 2:39:29PM

1199274



CHAIN-O

SHANNON & WILSON, INC.
 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

 2355 Hill Road
 Fairbanks, AK 99709
 (907) 479-0600
 www.shannonwilson.com

ECORD

 Laboratory S&S Page 1 of 1
 Attn: Den Dawkins

Analytical Methods (include preservative if used)

Turn Around Time:	
<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Rush
Please Specify	

Quote No:
J-Flags: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Sample Identity	Lab No.	Time	Date Sampled
TRIP BLANK	①A	14:06	5/8/19
EB-01	②A-B	18:15	5/8/19
EB-02	③A-B	18:25	5/8/19
EB-03	④A-B	14:07	5/8/19
ES-12	⑤A-B	14:35	5/8/19
ES-33	⑥A-B	14:37	5/8/19
ES-133	⑦A-B		

Geo AK101	Geo AK102	Geo AK103	Total Number of Containers	Remarks/Matrix Composition/Grab? Sample Containers
X	X	X	1	Soil grab
X	X	X	2	
X	X	X	2	
X	X	X	2	
X	X	X	2	
X	X	X	2	

Project Information		Sample Receipt	
Number: 100004-005	Total No. of Containers: 13	COC Seals/Intact? Y/N/A	Received Good Cont./Cold
Name: B3025	Temp: 5.5	Delivery Method: Hand	
Contact: VSLW	Ongoing Project? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Sampler: VSLW			

Notes:
TRIP BLANK w/ SAMPLES @ ALL TIMES

 Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
 Yellow - w/shipment - for consignee files
 Pink - Shannon & Wilson - job file

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: <u>[Signature]</u> Time: <u>1350</u>	Signature: <u>[Signature]</u> Time: <u>1400</u>	Signature: <u>[Signature]</u> Time: <u>1430</u>
Printed Name: <u>VALERIE WEBB</u> Date: <u>5/9/19</u>	Printed Name: <u>Sheila Hinckley</u> Date: <u>5-9-19</u>	Printed Name: <u>Den Dawkins</u> Date: <u>5-9-19</u>
Company: <u>SHANNON + WILSON</u>	Company: <u>Shannon, Wilson, Inc.</u>	Company: <u>S&S</u>
Received By: 1.	Received By: 2.	Received By: 3.
Signature: <u>[Signature]</u> Time: <u>1350</u>	Signature: <u>[Signature]</u> Time: <u>1400</u>	Signature: <u>[Signature]</u> Time: <u>1430</u>
Printed Name: <u>Sheila Hinckley</u> Date: <u>5-9-19</u>	Printed Name: <u>Den Dawkins</u> Date: <u>5-9-19</u>	Printed Name: <u>Victoria Legner</u> Date: <u>5/10/19</u>
Company: <u>Shannon, Wilson, Inc.</u>	Company: <u>S&S</u>	Company: <u>S&S</u>

ARC 14 113 2.0/030

No. 35902





e-Sample Receipt Form

SGS Workorder #:

1199274



1 1 9 9 2 7 4

Review Criteria		Condition (Yes, No, N/A)	Exceptions Noted below	
Chain of Custody / Temperature Requirements			N/A	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	Yes	1-F, 1-B		
COC accompanied samples?	Yes			
DOD: Were samples received in COC corresponding coolers?	N/A			
N/A **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required				
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Yes	Cooler ID:	1	@ 2.0 °C Therm. ID: D30
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.		Cooler ID:		@ °C Therm. ID:
		Cooler ID:		@ °C Therm. ID:
		Cooler ID:		@ °C Therm. ID:
		Cooler ID:		@ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?		N/A		
If <0°C, were sample containers ice free?		N/A		
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.				
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.		
Were samples received within holding time?	Yes			
Do samples match COC** (i.e., sample IDs, dates/times collected)?	Yes			
**Note: If times differ <1hr, record details & login per COC.				
***Note: If sample information on containers differs from COC, SGS will default to COC information				
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals))	Yes			
		N/A	***Exemption permitted for metals (e.g. 200.8/6020A).	
Were proper containers (type/mass/volume/preservative***) used?	Yes			
Volatile / LL-Hg Requirements				
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	Yes			
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A			
Were all soil VOAs field extracted with MeOH+BFB?	Yes			
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.				
Additional notes (if applicable):				

Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1199274001-A	Methanol field pres. 4 C	OK			
1199274002-A	No Preservative Required	OK			
1199274002-B	Methanol field pres. 4 C	OK			
1199274003-A	No Preservative Required	OK			
1199274003-B	Methanol field pres. 4 C	OK			
1199274004-A	No Preservative Required	OK			
1199274004-B	Methanol field pres. 4 C	OK			
1199274005-A	No Preservative Required	OK			
1199274005-B	Methanol field pres. 4 C	OK			
1199274006-A	No Preservative Required	OK			
1199274006-B	Methanol field pres. 4 C	OK			
1199274007-A	No Preservative Required	OK			
1199274007-B	Methanol field pres. 4 C	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

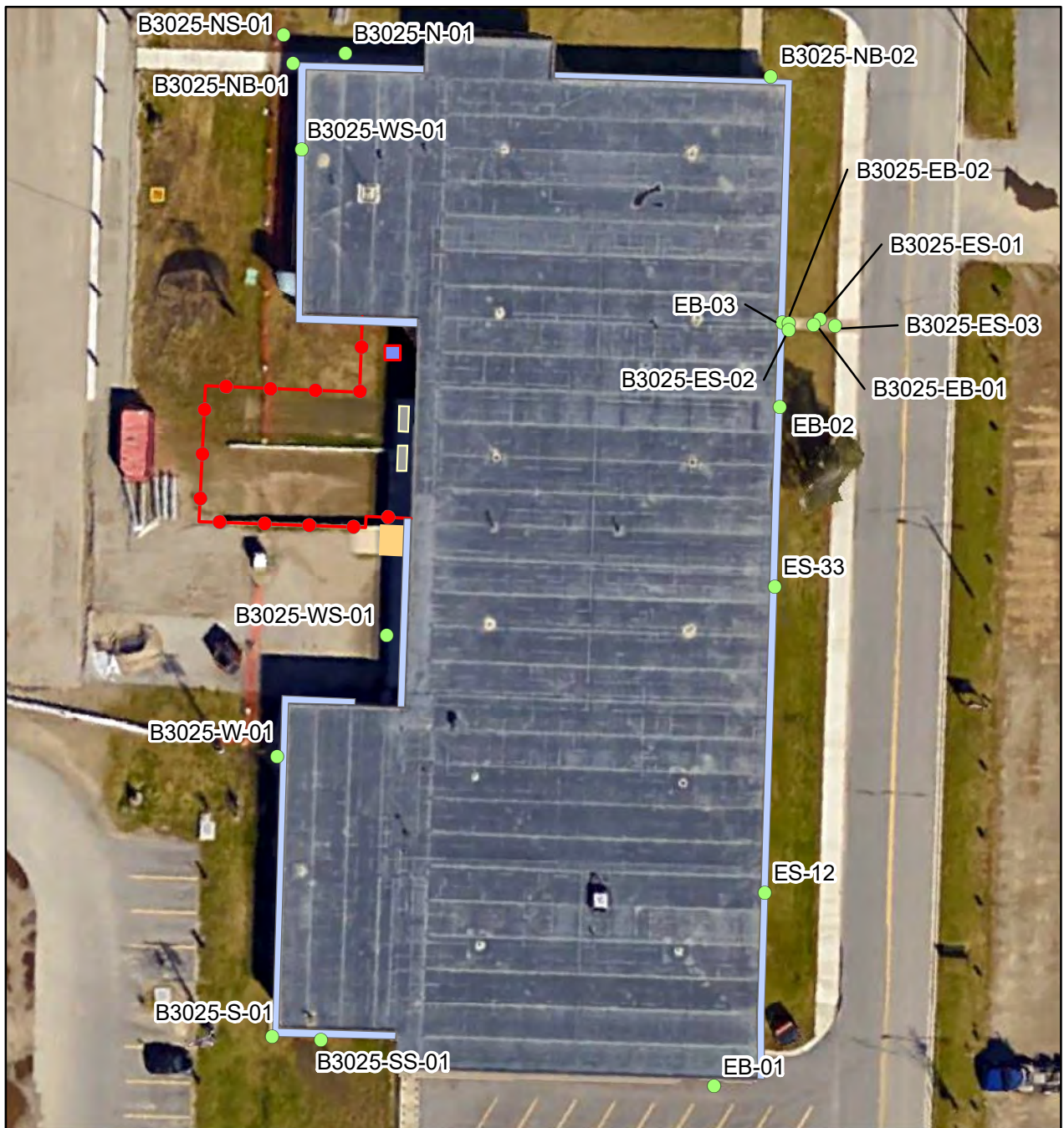
DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

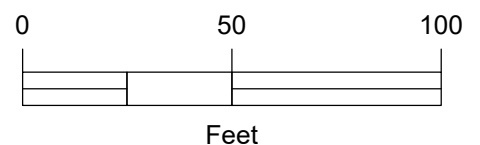


Map adapted from aerial imagery provided by Google, reproduced by permission granted by Google Mapping Service.

LEGEND

- Completed Trenching
- Tower
- Canopy
- Mechanical Equipment
- Gravel Pad
- Proposed Fence

- Analytical Results Below ADEC Cleanup Levels



Building 3025
Emergency Dispatch Center Antenna Tower
Fort Wainwright, Alaska

LIMITS OF EXCAVATION ANALYTICAL RESULTS

June 2019

100004-003

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure 1

TABLE 1
FORT WAINWRIGHT BUILDING 3025 - May 2019 SOIL RESULTS

SHANNON & WILSON, INC.

Analytical Method	Analyte	ADEC Cleanup Level	Units	B3025-EB-01	B3025-EB-02	B3025-ES-01	B3025-ES-02	B3025-ES-03	B3025-NB-01	B3025-NB-02	B3025-NS-01	B3025-WS-01	B3025-WS-101
												Primary	Duplicate
AK102	Diesel Range Organics	250	mg/kg	<10.3	<10.2	<10.4	<10.3	<10.3	12.6J	<10.6	<10.3	<10.1	<10.2
AK103	Residual Range Organics	11,000	mg/kg	8.34J	12.1J	6.76J	6.40J	6.92J	96.0	53.8	8.99J	20.9	17.7J
SW8260C (VOCs)	1,1,1,2-Tetrachloroethane	0.022	mg/kg	<0.00855	<0.00845	<0.0103	<0.00860	<0.00915	<0.0117	<0.0101	<0.0117	<0.00930	<0.0102
	1,1,1-Trichloroethane	32	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	1,1,2,2-Tetrachloroethane	0.003	mg/kg	<0.000855	<0.000845	<0.00103	<0.000860	<0.000915	<0.00117	<0.00102	<0.00117	<0.000930	<0.00102
	1,1,2-Trichloroethane	0.0014	mg/kg	<0.000342	<0.000339	<0.000411	<0.000345	<0.000367	<0.000466	<0.000405	<0.000466	<0.000372	<0.000409
	1,1-Dichloroethane	0.092	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	1,1-Dichloroethene	1.2	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	1,1-Dichloropropene	—	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	1,2,3-Trichlorobenzene	0.15	mg/kg	<0.0214	<0.0211	<0.0257	<0.0216	<0.0229	<0.0291	<0.0254	<0.0291	<0.0233	<0.0255
	1,2,3-Trichloropropane	0.000031	mg/kg	<0.000427	<0.000423	<0.000515	<0.000431	<0.000458	<0.000580	<0.000505	<0.000585	<0.000465	<0.000510
	1,2,4-Trichlorobenzene	0.082	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	1,2,4-Trimethylbenzene	0.61	mg/kg	<0.0214	<0.0211	<0.0257	<0.0216	<0.0229	<0.0291	<0.0254	<0.0291	<0.0233	<0.0255
	1,2-Dibromo-3-chloropropane	—	mg/kg	<0.0427	<0.0423	<0.0515	<0.0431	<0.0458	<0.0580	<0.0505	<0.0585	<0.0464	<0.0510
	1,2-Dibromoethane	0.00024	mg/kg	<0.000855	<0.000845	<0.00103	<0.000860	<0.000915	<0.00117	<0.00102	<0.00117	<0.000930	<0.00102
	1,2-Dichlorobenzene	2.4	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	1,2-Dichloroethane	0.0055	mg/kg	<0.000855	<0.000845	<0.00103	<0.000860	<0.000915	<0.00117	<0.00102	<0.00117	<0.000930	<0.00102
	1,2-Dichloropropane	0.03	mg/kg	<0.00427	<0.00424	<0.00515	<0.00431	<0.00458	<0.00580	<0.00505	<0.00585	<0.00464	<0.00510
	1,3,5-Trimethylbenzene	0.66	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	1,3-Dichlorobenzene	2.3	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	1,3-Dichloropropane	—	mg/kg	<0.00427	<0.00424	<0.00515	<0.00431	<0.00458	<0.00580	<0.00505	<0.00585	<0.00464	<0.00510
	1,4-Dichlorobenzene	0.037	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	2,2-Dichloropropane	—	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	2-Butanone (MEK)	15	mg/kg	<0.107	<0.106	<0.129	<0.108	<0.115	<0.145	<0.127	<0.145	<0.116	<0.128
	2-Chlorotoluene	—	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	2-Hexanone	0.11	mg/kg	<0.0427	<0.0423	<0.0515	<0.0431	<0.0458	<0.0580	<0.0505	<0.0585	<0.0464	<0.0510
	4-Chlorotoluene	—	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	4-Methyl-2-pentanone (MIBK)	18	mg/kg	<0.107	<0.106	<0.129	<0.108	<0.115	<0.145	<0.127	<0.145	<0.116	<0.128
	Acetone	38	mg/kg	<0.107	<0.106	<0.129	<0.108	<0.115	<0.145	<0.127	<0.145	<0.116	<0.128
	Benzene	0.022	mg/kg	<0.00535	<0.00530	<0.00645	<0.00540	<0.00575	<0.00730	<0.00635	<0.00730	<0.00580	<0.00640
	Bromobenzene	0.36	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	Bromochloromethane	—	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	Bromodichloromethane	0.0043	mg/kg	<0.000855	<0.000845	<0.00103	<0.000860	<0.000915	<0.00117	<0.00102	<0.00117	<0.000930	<0.00102
	Bromoform	0.1	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	Bromomethane	0.024	mg/kg	<0.00855	<0.00845	<0.0103	<0.00860	<0.00915	<0.0117	<0.0101	<0.0117	<0.00930	<0.0102
	Carbon disulfide	2.9	mg/kg	<0.0427	<0.0423	<0.0515	<0.0431	<0.0458	<0.0580	<0.0505	<0.0585	<0.0464	<0.0510
	Carbon tetrachloride	0.021	mg/kg	<0.00535	<0.00530	<0.00645	<0.00540	<0.00575	<0.00730	<0.00635	<0.00730	<0.00580	<0.00640
	Chlorobenzene	0.46	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	Chloroethane	72	mg/kg	<0.0855	<0.0845	<0.103	<0.0860	<0.0915	<0.117	<0.102	<0.117	<0.0930	<0.102
	Chloroform	0.0071	mg/kg	<0.000855	<0.000845	<0.00103	<0.000860	<0.000915	<0.00117	<0.00102	<0.00117	<0.000930	<0.00102
	Chloromethane	0.61	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	cis-1,2-Dichloroethene	0.12	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	cis-1,3-Dichloropropene	0.018	mg/kg	<0.00535	<0.00530	<0.00645	<0.00540	<0.00575	<0.00730	<0.00635	<0.00730	<0.00580	<0.00640

TABLE 1
FORT WAINWRIGHT BUILDING 3025 - May 2019 SOIL RESULTS

SHANNON & WILSON, INC.

Analytical Method	Analyte	ADEC Cleanup Level	Units	B3025-EB-01	B3025-EB-02	B3025-ES-01	B3025-ES-02	B3025-ES-03	B3025-NB-01	B3025-NB-02	B3025-NS-01	B3025-WS-01	B3025-WS-101
												Primary	Duplicate
SW8260C (VOCs)	Dibromochloromethane	0.0027	mg/kg	<0.000855	<0.000845	<0.00103	<0.000860	<0.000915	<0.00117	<0.00102	<0.00117	<0.000930	<0.00102
	Dibromomethane	0.025	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	Dichlorodifluoromethane	3.9	mg/kg	<0.0214	<0.0211	<0.0257	<0.0216	<0.0229	<0.0291	<0.0254	<0.0291	<0.0233	<0.0255
	Ethylbenzene	0.13	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	Hexachlorobutadiene	0.02	mg/kg	<0.00855	<0.00845	<0.0103	<0.00860	<0.00915	<0.0117	<0.0101	<0.0117	<0.00930	<0.0102
	Isopropylbenzene	5.6	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	Methylene chloride	0.33	mg/kg	<0.0427	<0.0423	<0.0515	<0.0431	<0.0458	<0.0580	<0.0505	<0.0585	<0.0464	<0.0510
	Methyl-t-butyl ether	0.4	mg/kg	<0.0427	<0.0423	<0.0515	<0.0431	<0.0458	<0.0580	<0.0505	<0.0585	<0.0464	<0.0510
	Naphthalene	0.038	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	n-Butylbenzene	23	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	n-Propylbenzene	9.1	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	o-Xylene	1.5	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	P & M -Xylene	1.5	mg/kg	<0.0214	<0.0211	<0.0257	<0.0216	<0.0229	<0.0291	<0.0254	<0.0291	<0.0233	<0.0255
	p-Isopropyltoluene	—	mg/kg	<0.0427	<0.0423	<0.0515	<0.0431	<0.0458	<0.0580	<0.0505	<0.0585	<0.0464	<0.0510
	sec-Butylbenzene	42	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	Styrene	10	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	tert-Butylbenzene	11	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	Tetrachloroethene	0.19	mg/kg	<0.00535	<0.00530	<0.00645	<0.00540	<0.00575	<0.00730	<0.00635	<0.00730	<0.00580	<0.00640
	Toluene	6.7	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	Total Xylenes	1.5	mg/kg	<0.0321	<0.0318	<0.0386	<0.0323	<0.0343	<0.0437	<0.0381	<0.0437	<0.0348	<0.0383
	trans-1,2-Dichloroethene	1.3	mg/kg	<0.0107	<0.0106	<0.0129	<0.0107	<0.0115	<0.0146	<0.0127	<0.0146	<0.0116	<0.0127
	trans-1,3-Dichloropropene	0.018	mg/kg	<0.00535	<0.00530	<0.00645	<0.00540	<0.00575	<0.00730	<0.00635	<0.00730	<0.00580	<0.00640
	Trichloroethene	0.011	mg/kg	<0.00214	<0.00212	<0.00257	<0.00215	<0.00229	<0.00291	<0.00253	<0.00292	<0.00232	<0.00255
	Trichlorofluoromethane	41	mg/kg	<0.0214	<0.0211	<0.0257	<0.0216	<0.0229	0.0206J	<0.0254	<0.0291	<0.0233	<0.0255
	Trichlorotrifluoroethane	310	mg/kg	<0.0427	<0.0423	<0.0515	<0.0431	<0.0458	<0.0580	<0.0505	<0.0585	<0.0464	<0.0510
	Vinyl acetate	1.1	mg/kg	<0.0427	<0.0423	<0.0515	<0.0431	<0.0458	<0.0580	<0.0505	<0.0585	<0.0464	<0.0510
	Vinyl chloride	0.0008	mg/kg	<0.000342	<0.000339	<0.000411	<0.000345	<0.000367	<0.000466	<0.000405	<0.000466	<0.000372	<0.000409

- Notes:
- ADEC

Alaska Department of Environmental Conservation
- VOC

volatile organic compounds
- ADEC soil cleanup level not established
- mg/kg

milligrams per kilogram
- J

Estimated result, detected below the limit of quantitation (LOQ).
- <

Analyte not detected above the listed limit of detection (LOD).
- Bold**

The reported LOD exceeds the associated ADEC soil cleanup level.

Laboratory Data Review Checklist

Completed By:

Andrew Frick

Title:

Environmental Scientist

Date:

June 12, 2019

CS Report Name:

100004-005 B3025

Report Date:

June 7, 2019

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

SGS North America, Inc.

Laboratory Report Number:

1199341

ADEC File Number:

N/A

Hazard Identification Number:

N/A

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and
- perform
- all of the submitted sample analyses?

☒ Yes☐ No

Comments:

- b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

☐ Yes☒ No

Comments:

N/A; All analyses were performed by the SGS laboratory in Anchorage, AK. The laboratory is certified by the ADEC CSP for the requested analyses.

2. Chain of Custody (CoC)

- a. CoC information completed, signed, and dated (including released/received by)?

☒ Yes☐ No

Comments:

- b. Correct Analyses requested?

☒ Yes☐ No

Comments:

Yes, though a clarification on the requested VOC analysis was required.

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

☐ Yes☒ No

Comments:

The sample cooler was received within the recommended temperature range at the SGS Fairbanks receiving office and Anchorage laboratory.

- b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes☐ No

Comments:

- c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes☐ No

Comments:

The laboratory notes that samples were received in good condition.

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☐ Yes ☒ No

Comments:

There were no discrepancies noted by the laboratory in the sample receipt documentation.

- e. Data quality or usability affected?

Comments:

The data quality and/or usability was not affected.

4. Case Narrative

- a. Present and understandable?

☒ Yes ☐ No

Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

☒ Yes ☐ No

Comments:

The case narrative notes the recovery of surrogate n-triacontane for the AK103 analysis did not meet QC criteria in the following laboratory QC samples: method blank (MB) 1510203, laboratory control sample (LCS) 151204, and laboratory control sample duplicate (LCSD) 1510205. The surrogate recoveries in project samples were within QC criteria. See Section 6.c. for discussion.

- c. Were all corrective actions documented?

☐ Yes ☒ No

Comments:

There are no corrective actions documented in the case narrative.

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The case narrative did not specify any effect on data quality/usability.

5. Samples Results

- a. Correct analyses performed/reported as requested on COC?

☒ Yes ☐ No

Comments:

- b. All applicable holding times met?

☒ Yes ☐ No

Comments:

c. All soils reported on a dry weight basis?

☒ Yes ☐ No

Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

☒ Yes ☐ No

Comments:

We compared not-detected results to the limits of detection (LOD) of each requested analyte. The SW8260C analytes 1,2,3-trichloropropane and 1,2-dibromoethane had LODs greater than their associated ADEC Migration to Groundwater Soil Cleanup Levels in all project samples.

e. Data quality or usability affected?

☒ Yes ☐ No

Comments:

Reported non-detect sample results with LODs above the applicable ADEC soil cleanup levels are noted on the analytical results table. We cannot assess if the affected analytes are present in the samples at concentrations greater than the ADEC soil cleanup levels but less than the LOQ.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☒ Yes ☐ No

Comments:

ii. All method blank results less than limit of quantitation (LOQ)?

☒ Yes ☐ No

Comments:

iii. If above LOQ, what samples are affected?

Comments:

N/A; see above.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☒ Yes ☐ No

Comments:

N/A; see above.

v. Data quality or usability affected?

Comments:

Data quality and/or usability was not affected; see above.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☒ Yes ☐ No

Comments:

LCS/LCSD samples were reported for methods AK102 and AK103.

LCS and MS/MSD samples were reported for method SW8260C.

- ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☐ Yes ☒ No

Comments:

N/A; metals/inorganics analyses were not requested for this work order.

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☐ Yes ☒ No

Comments:

The recovery of hexachlorobutadiene was above the upper control limits in MS/MSD 1510440. The parent sample for the MS/MSD was not part of this work order, and samples results were unaffected.

- iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No

Comments:

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

No samples were affected. Analytical accuracy and precision were demonstrated to be within acceptance criteria.

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No

Comments:

N/A; no samples were affected by method accuracy or precision failures.

- vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality and/or usability was not affected; see above.

c. Surrogates – Organics Only

- i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☒ Yes ☐ No

Comments:

- ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☐ Yes ☒ No

Comments:

The recovery of surrogate n-triacontane for the AK103 analysis was above control limits in the following laboratory QC samples: method blank (MB) 1510203, laboratory control sample (LCS) 151204, and laboratory control sample duplicate (LCSD) 1510205.

Recoveries of n-triacontane in project samples were within QC criteria and results were not affected.

- iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No

Comments:

N/A; results were unaffected.

- iv. Data quality or usability affected?

Comments:

No; see above.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

- i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

☒ Yes ☐ No

Comments:

- ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☒ Yes ☐ No

Comments:

- iii. All results less than LOQ?

☒ Yes ☐ No

Comments:

iv. If above LOQ, what samples are affected?

Comments:

No samples are affected. Target analytes were not detected in the trip bank sample.

v. Data quality or usability affected?

Comments:

The data quality and/or usability was not affected; see above.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No

Comments:

ii. Submitted blind to lab?

☒ Yes ☐ No

Comments:

The field duplicate samples *B3025-WS-01* and *B3025-WS-101* were submitted with this work order.

iii. Precision – All relative percent differences (RPD) less than specified DQOs?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

☒ Yes ☐ No

Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

The data quality and/or usability was not affected; see above.

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below).

☐ Yes ☐ No ☒ Not Applicable

Samples for this project are collected with individual stainless-steel spoons which were decontaminated prior to use in the field.

i. All results less than LOQ?

☐ Yes ☒ No

Comments:

N/A; an equipment blank sample was not submitted with this work order.

ii. If above LOQ, what samples are affected?

Comments:

N/A; an equipment blank sample was not submitted with this work order.

iii. Data quality or usability affected?

Comments:

The data quality and/or usability was not affected; see above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☐ Yes ☒ No

Comments:

Additional data flags/qualifiers are not required.

Laboratory Report of Analysis

To: Shannon & Wilson-Fairbanks
5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
907-479-0600

Report Number: **1199341**

Client Project: **100004-005 B3025**

Dear Valerie Webb,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Jennifer at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.



Alaska Division Technical Director

Stephen Ede

2019.06.07

16:33:07 -08'00'

Jennifer Dawkins
Project Manager
Jennifer.Dawkins@sgs.com

Date



Case Narrative

SGS Client: Shannon & Wilson-Fairbanks

SGS Project: 1199341

Project Name/Site: 100004-005 B3025

Refer to sample receipt form for information on sample condition.

XXX/41501]

1510203 MB

AK102/103 - Surrogate recovery in the MB for n-triacontane does not meet QC criteria; however, the surrogate recoveries in the samples are within criteria.

XXX/41501

1510204 LCS

AK102/103 - Surrogate recovery in the LCS for n-triacontane does not meet QC criteria; however, the surrogate recoveries in the samples are within criteria.

XXX/4150

1510205 LCSD

AK102/103 - Surrogate recovery in the LCSD for n-triacontane does not meet QC criteria; however, the surrogate recoveries in the samples are within criteria.

* QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to the associated field samples.

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
B3025-WS-01	1199341001	05/22/2019	05/24/2019	Soil/Solid (dry weight)
B3025-WS-101	1199341002	05/22/2019	05/24/2019	Soil/Solid (dry weight)
B3025-NS-01	1199341003	05/22/2019	05/24/2019	Soil/Solid (dry weight)
B3025-NB-01	1199341004	05/22/2019	05/24/2019	Soil/Solid (dry weight)
B3025-NB-02	1199341005	05/22/2019	05/24/2019	Soil/Solid (dry weight)
B3025-EB-01	1199341006	05/22/2019	05/24/2019	Soil/Solid (dry weight)
B3025-EB-02	1199341007	05/22/2019	05/24/2019	Soil/Solid (dry weight)
B3025-ES-01	1199341008	05/22/2019	05/24/2019	Soil/Solid (dry weight)
B3025-ES-02	1199341009	05/22/2019	05/24/2019	Soil/Solid (dry weight)
B3025-ES-03	1199341010	05/22/2019	05/24/2019	Soil/Solid (dry weight)
Trip Blank	1199341011	05/22/2019	05/24/2019	Soil/Solid (dry weight)

<u>Method</u>	<u>Method Description</u>
AK102	Diesel/Residual Range Organics
AK103	Diesel/Residual Range Organics
SM21 2540G	Percent Solids SM2540G
SW8260C	VOC 8260 (S) Field Extracted

Print Date: 06/07/2019 3:23:25PM

Detectable Results Summary

Client Sample ID: **B3025-WS-01**

Lab Sample ID: 1199341001

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	20.9	mg/Kg

Client Sample ID: **B3025-WS-101**

Lab Sample ID: 1199341002

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	17.7J	mg/Kg

Client Sample ID: **B3025-NS-01**

Lab Sample ID: 1199341003

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	8.99J	mg/Kg

Client Sample ID: **B3025-NB-01**

Lab Sample ID: 1199341004

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	12.6J	mg/Kg
Residual Range Organics	96.0	mg/Kg
Trichlorofluoromethane	0.0206J	mg/Kg

Volatile GC/MS

Client Sample ID: **B3025-NB-02**

Lab Sample ID: 1199341005

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	53.8	mg/Kg

Client Sample ID: **B3025-EB-01**

Lab Sample ID: 1199341006

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	8.34J	mg/Kg

Client Sample ID: **B3025-EB-02**

Lab Sample ID: 1199341007

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	12.1J	mg/Kg

Client Sample ID: **B3025-ES-01**

Lab Sample ID: 1199341008

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	6.76J	mg/Kg

Client Sample ID: **B3025-ES-02**

Lab Sample ID: 1199341009

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	6.40J	mg/Kg

Client Sample ID: **B3025-ES-03**

Lab Sample ID: 1199341010

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	6.92J	mg/Kg

Results of B3025-WS-01

Client Sample ID: **B3025-WS-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341001
 Lab Project ID: 1199341

Collection Date: 05/22/19 13:10
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.6
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.1 U	20.2	6.26	mg/Kg	1		06/06/19 14:58
Surrogates							
5a Androstane (surr)	100	50-150		%	1		06/06/19 14:58

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/06/19 14:58
 Container ID: 1199341001-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.448 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	20.9	20.2	6.26	mg/Kg	1		06/06/19 14:58
Surrogates							
n-Triacontane-d62 (surr)	120	50-150		%	1		06/06/19 14:58

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/06/19 14:58
 Container ID: 1199341001-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.448 g
 Prep Extract Vol: 5 mL

Results of B3025-WS-01

Client Sample ID: **B3025-WS-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341001
 Lab Project ID: 1199341

Collection Date: 05/22/19 13:10
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.6
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.00930 U	0.0186	0.00576	mg/Kg	1		05/28/19 17:41
1,1,1-Trichloroethane	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
1,1,2,2-Tetrachloroethane	0.000930 U	0.00186	0.000576	mg/Kg	1		05/28/19 17:41
1,1,2-Trichloroethane	0.000372 U	0.000744	0.000232	mg/Kg	1		05/28/19 17:41
1,1-Dichloroethane	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
1,1-Dichloroethene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
1,1-Dichloropropene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
1,2,3-Trichlorobenzene	0.0233 U	0.0465	0.0139	mg/Kg	1		05/28/19 17:41
1,2,3-Trichloropropane	0.000465 U	0.000929	0.000576	mg/Kg	1		05/28/19 17:41
1,2,4-Trichlorobenzene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
1,2,4-Trimethylbenzene	0.0233 U	0.0465	0.0139	mg/Kg	1		05/28/19 17:41
1,2-Dibromo-3-chloropropane	0.0464 U	0.0929	0.0288	mg/Kg	1		05/28/19 17:41
1,2-Dibromoethane	0.000930 U	0.00186	0.000576	mg/Kg	1		05/28/19 17:41
1,2-Dichlorobenzene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
1,2-Dichloroethane	0.000930 U	0.00186	0.000576	mg/Kg	1		05/28/19 17:41
1,2-Dichloropropane	0.00464 U	0.00929	0.00288	mg/Kg	1		05/28/19 17:41
1,3,5-Trimethylbenzene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
1,3-Dichlorobenzene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
1,3-Dichloropropane	0.00464 U	0.00929	0.00288	mg/Kg	1		05/28/19 17:41
1,4-Dichlorobenzene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
2,2-Dichloropropane	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
2-Butanone (MEK)	0.116 U	0.232	0.0725	mg/Kg	1		05/28/19 17:41
2-Chlorotoluene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
2-Hexanone	0.0464 U	0.0929	0.0288	mg/Kg	1		05/28/19 17:41
4-Chlorotoluene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
4-Isopropyltoluene	0.0464 U	0.0929	0.0232	mg/Kg	1		05/28/19 17:41
4-Methyl-2-pentanone (MIBK)	0.116 U	0.232	0.0725	mg/Kg	1		05/28/19 17:41
Acetone	0.116 U	0.232	0.0725	mg/Kg	1		05/28/19 17:41
Benzene	0.00580 U	0.0116	0.00362	mg/Kg	1		05/28/19 17:41
Bromobenzene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
Bromochloromethane	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
Bromodichloromethane	0.000930 U	0.00186	0.000576	mg/Kg	1		05/28/19 17:41
Bromoform	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
Bromomethane	0.00930 U	0.0186	0.00576	mg/Kg	1		05/28/19 17:41
Carbon disulfide	0.0464 U	0.0929	0.0288	mg/Kg	1		05/28/19 17:41
Carbon tetrachloride	0.00580 U	0.0116	0.00362	mg/Kg	1		05/28/19 17:41
Chlorobenzene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41

Print Date: 06/07/2019 3:23:27PM

J flagging is activated



Results of B3025-WS-01

Client Sample ID: **B3025-WS-01**
Client Project ID: **100004-005 B3025**
Lab Sample ID: 1199341001
Lab Project ID: 1199341

Collection Date: 05/22/19 13:10
Received Date: 05/24/19 09:42
Matrix: Soil/Solid (dry weight)
Solids (%):97.6
Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.0930 U	0.186	0.0576	mg/Kg	1		05/28/19 17:41
Chloroform	0.000930 U	0.00186	0.000576	mg/Kg	1		05/28/19 17:41
Chloromethane	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
cis-1,2-Dichloroethene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
cis-1,3-Dichloropropene	0.00580 U	0.0116	0.00362	mg/Kg	1		05/28/19 17:41
Dibromochloromethane	0.000930 U	0.00186	0.000576	mg/Kg	1		05/28/19 17:41
Dibromomethane	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
Dichlorodifluoromethane	0.0233 U	0.0465	0.0139	mg/Kg	1		05/28/19 17:41
Ethylbenzene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
Freon-113	0.0464 U	0.0929	0.0288	mg/Kg	1		05/28/19 17:41
Hexachlorobutadiene	0.00930 U	0.0186	0.00576	mg/Kg	1		05/28/19 17:41
Isopropylbenzene (Cumene)	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
Methylene chloride	0.0464 U	0.0929	0.0288	mg/Kg	1		05/28/19 17:41
Methyl-t-butyl ether	0.0464 U	0.0929	0.0288	mg/Kg	1		05/28/19 17:41
Naphthalene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
n-Butylbenzene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
n-Propylbenzene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
o-Xylene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
P & M -Xylene	0.0233 U	0.0465	0.0139	mg/Kg	1		05/28/19 17:41
sec-Butylbenzene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
Styrene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
tert-Butylbenzene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
Tetrachloroethene	0.00580 U	0.0116	0.00362	mg/Kg	1		05/28/19 17:41
Toluene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
trans-1,2-Dichloroethene	0.0116 U	0.0232	0.00725	mg/Kg	1		05/28/19 17:41
trans-1,3-Dichloropropene	0.00580 U	0.0116	0.00362	mg/Kg	1		05/28/19 17:41
Trichloroethene	0.00232 U	0.00465	0.00139	mg/Kg	1		05/28/19 17:41
Trichlorofluoromethane	0.0233 U	0.0465	0.0139	mg/Kg	1		05/28/19 17:41
Vinyl acetate	0.0464 U	0.0929	0.0288	mg/Kg	1		05/28/19 17:41
Vinyl chloride	0.000372 U	0.000744	0.000232	mg/Kg	1		05/28/19 17:41
Xylenes (total)	0.0348 U	0.0697	0.0212	mg/Kg	1		05/28/19 17:41
Surrogates							
1,2-Dichloroethane-D4 (surr)	100	71-136		%	1		05/28/19 17:41
4-Bromofluorobenzene (surr)	93	55-151		%	1		05/28/19 17:41
Toluene-d8 (surr)	100	85-116		%	1		05/28/19 17:41

Print Date: 06/07/2019 3:23:27PM

J flagging is activated

SGS North America Inc.

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Results of B3025-WS-01

Client Sample ID: **B3025-WS-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341001
 Lab Project ID: 1199341

Collection Date: 05/22/19 13:10
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.6
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18980
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/28/19 17:41
 Container ID: 1199341001-B

Prep Batch: VXX34139
 Prep Method: SW5035A
 Prep Date/Time: 05/22/19 13:10
 Prep Initial Wt./Vol.: 58.179 g
 Prep Extract Vol: 26.3915 mL

Results of B3025-WS-101

Client Sample ID: **B3025-WS-101**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341002
 Lab Project ID: 1199341

Collection Date: 05/22/19 13:00
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.7
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.2 U	20.3	6.30	mg/Kg	1		06/06/19 15:09
Surrogates							
5a Androstane (surr)	98	50-150		%	1		06/06/19 15:09

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/06/19 15:09
 Container ID: 1199341002-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.219 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	17.7 J	20.3	6.30	mg/Kg	1		06/06/19 15:09
Surrogates							
n-Triacontane-d62 (surr)	117	50-150		%	1		06/06/19 15:09

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/06/19 15:09
 Container ID: 1199341002-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.219 g
 Prep Extract Vol: 5 mL

Results of **B3025-WS-101**

Client Sample ID: **B3025-WS-101**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341002
 Lab Project ID: 1199341

Collection Date: 05/22/19 13:00
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.7
 Location:

Results by **Volatile GC/MS**

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0102 U	0.0204	0.00633	mg/Kg	1		05/28/19 17:57
1,1,1-Trichloroethane	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
1,1,2,2-Tetrachloroethane	0.00102 U	0.00204	0.000633	mg/Kg	1		05/28/19 17:57
1,1,2-Trichloroethane	0.000409 U	0.000817	0.000255	mg/Kg	1		05/28/19 17:57
1,1-Dichloroethane	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
1,1-Dichloroethene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
1,1-Dichloropropene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
1,2,3-Trichlorobenzene	0.0255 U	0.0510	0.0153	mg/Kg	1		05/28/19 17:57
1,2,3-Trichloropropane	0.000510 U	0.00102	0.000633	mg/Kg	1		05/28/19 17:57
1,2,4-Trichlorobenzene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
1,2,4-Trimethylbenzene	0.0255 U	0.0510	0.0153	mg/Kg	1		05/28/19 17:57
1,2-Dibromo-3-chloropropane	0.0510 U	0.102	0.0316	mg/Kg	1		05/28/19 17:57
1,2-Dibromoethane	0.00102 U	0.00204	0.000633	mg/Kg	1		05/28/19 17:57
1,2-Dichlorobenzene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
1,2-Dichloroethane	0.00102 U	0.00204	0.000633	mg/Kg	1		05/28/19 17:57
1,2-Dichloropropane	0.00510 U	0.0102	0.00316	mg/Kg	1		05/28/19 17:57
1,3,5-Trimethylbenzene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
1,3-Dichlorobenzene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
1,3-Dichloropropane	0.00510 U	0.0102	0.00316	mg/Kg	1		05/28/19 17:57
1,4-Dichlorobenzene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
2,2-Dichloropropane	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
2-Butanone (MEK)	0.128 U	0.255	0.0796	mg/Kg	1		05/28/19 17:57
2-Chlorotoluene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
2-Hexanone	0.0510 U	0.102	0.0316	mg/Kg	1		05/28/19 17:57
4-Chlorotoluene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
4-Isopropyltoluene	0.0510 U	0.102	0.0255	mg/Kg	1		05/28/19 17:57
4-Methyl-2-pentanone (MIBK)	0.128 U	0.255	0.0796	mg/Kg	1		05/28/19 17:57
Acetone	0.128 U	0.255	0.0796	mg/Kg	1		05/28/19 17:57
Benzene	0.00640 U	0.0128	0.00398	mg/Kg	1		05/28/19 17:57
Bromobenzene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
Bromochloromethane	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
Bromodichloromethane	0.00102 U	0.00204	0.000633	mg/Kg	1		05/28/19 17:57
Bromoform	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
Bromomethane	0.0102 U	0.0204	0.00633	mg/Kg	1		05/28/19 17:57
Carbon disulfide	0.0510 U	0.102	0.0316	mg/Kg	1		05/28/19 17:57
Carbon tetrachloride	0.00640 U	0.0128	0.00398	mg/Kg	1		05/28/19 17:57
Chlorobenzene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57

Print Date: 06/07/2019 3:23:27PM

J flagging is activated

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Results of B3025-WS-101

Client Sample ID: **B3025-WS-101**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341002
 Lab Project ID: 1199341

Collection Date: 05/22/19 13:00
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.7
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.102 U	0.204	0.0633	mg/Kg	1		05/28/19 17:57
Chloroform	0.00102 U	0.00204	0.000633	mg/Kg	1		05/28/19 17:57
Chloromethane	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
cis-1,2-Dichloroethene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
cis-1,3-Dichloropropene	0.00640 U	0.0128	0.00398	mg/Kg	1		05/28/19 17:57
Dibromochloromethane	0.00102 U	0.00204	0.000633	mg/Kg	1		05/28/19 17:57
Dibromomethane	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
Dichlorodifluoromethane	0.0255 U	0.0510	0.0153	mg/Kg	1		05/28/19 17:57
Ethylbenzene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
Freon-113	0.0510 U	0.102	0.0316	mg/Kg	1		05/28/19 17:57
Hexachlorobutadiene	0.0102 U	0.0204	0.00633	mg/Kg	1		05/28/19 17:57
Isopropylbenzene (Cumene)	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
Methylene chloride	0.0510 U	0.102	0.0316	mg/Kg	1		05/28/19 17:57
Methyl-t-butyl ether	0.0510 U	0.102	0.0316	mg/Kg	1		05/28/19 17:57
Naphthalene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
n-Butylbenzene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
n-Propylbenzene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
o-Xylene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
P & M -Xylene	0.0255 U	0.0510	0.0153	mg/Kg	1		05/28/19 17:57
sec-Butylbenzene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
Styrene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
tert-Butylbenzene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
Tetrachloroethene	0.00640 U	0.0128	0.00398	mg/Kg	1		05/28/19 17:57
Toluene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
trans-1,2-Dichloroethene	0.0127 U	0.0255	0.00796	mg/Kg	1		05/28/19 17:57
trans-1,3-Dichloropropene	0.00640 U	0.0128	0.00398	mg/Kg	1		05/28/19 17:57
Trichloroethene	0.00255 U	0.00510	0.00153	mg/Kg	1		05/28/19 17:57
Trichlorofluoromethane	0.0255 U	0.0510	0.0153	mg/Kg	1		05/28/19 17:57
Vinyl acetate	0.0510 U	0.102	0.0316	mg/Kg	1		05/28/19 17:57
Vinyl chloride	0.000409 U	0.000817	0.000255	mg/Kg	1		05/28/19 17:57
Xylenes (total)	0.0383 U	0.0766	0.0233	mg/Kg	1		05/28/19 17:57
Surrogates							
1,2-Dichloroethane-D4 (surr)	98.9	71-136		%	1		05/28/19 17:57
4-Bromofluorobenzene (surr)	105	55-151		%	1		05/28/19 17:57
Toluene-d8 (surr)	100	85-116		%	1		05/28/19 17:57

Results of **B3025-WS-101**

Client Sample ID: **B3025-WS-101**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341002
 Lab Project ID: 1199341

Collection Date: 05/22/19 13:00
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.7
 Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS18980
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/28/19 17:57
 Container ID: 1199341002-B

Prep Batch: VXX34139
 Prep Method: SW5035A
 Prep Date/Time: 05/22/19 13:00
 Prep Initial Wt./Vol.: 52.642 g
 Prep Extract Vol: 26.2369 mL

Results of B3025-NS-01

Client Sample ID: **B3025-NS-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341003
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:28
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.3
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.3 U	20.6	6.38	mg/Kg	1		06/06/19 15:19
Surrogates							
5a Androstane (surr)	94.1	50-150		%	1		06/06/19 15:19

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/06/19 15:19
 Container ID: 1199341003-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.245 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	8.99 J	20.6	6.38	mg/Kg	1		06/06/19 15:19
Surrogates							
n-Triacontane-d62 (surr)	115	50-150		%	1		06/06/19 15:19

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/06/19 15:19
 Container ID: 1199341003-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.245 g
 Prep Extract Vol: 5 mL

Results of B3025-NS-01

Client Sample ID: **B3025-NS-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341003
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:28
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.3
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0117 U	0.0233	0.00723	mg/Kg	1		05/28/19 18:12
1,1,1-Trichloroethane	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
1,1,2,2-Tetrachloroethane	0.00117 U	0.00233	0.000723	mg/Kg	1		05/28/19 18:12
1,1,2-Trichloroethane	0.000466 U	0.000932	0.000291	mg/Kg	1		05/28/19 18:12
1,1-Dichloroethane	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
1,1-Dichloroethene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
1,1-Dichloropropene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
1,2,3-Trichlorobenzene	0.0291 U	0.0583	0.0175	mg/Kg	1		05/28/19 18:12
1,2,3-Trichloropropane	0.000585 U	0.00117	0.000723	mg/Kg	1		05/28/19 18:12
1,2,4-Trichlorobenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
1,2,4-Trimethylbenzene	0.0291 U	0.0583	0.0175	mg/Kg	1		05/28/19 18:12
1,2-Dibromo-3-chloropropane	0.0585 U	0.117	0.0361	mg/Kg	1		05/28/19 18:12
1,2-Dibromoethane	0.00117 U	0.00233	0.000723	mg/Kg	1		05/28/19 18:12
1,2-Dichlorobenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
1,2-Dichloroethane	0.00117 U	0.00233	0.000723	mg/Kg	1		05/28/19 18:12
1,2-Dichloropropane	0.00585 U	0.0117	0.00361	mg/Kg	1		05/28/19 18:12
1,3,5-Trimethylbenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
1,3-Dichlorobenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
1,3-Dichloropropane	0.00585 U	0.0117	0.00361	mg/Kg	1		05/28/19 18:12
1,4-Dichlorobenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
2,2-Dichloropropane	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
2-Butanone (MEK)	0.145 U	0.291	0.0909	mg/Kg	1		05/28/19 18:12
2-Chlorotoluene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
2-Hexanone	0.0585 U	0.117	0.0361	mg/Kg	1		05/28/19 18:12
4-Chlorotoluene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
4-Isopropyltoluene	0.0585 U	0.117	0.0291	mg/Kg	1		05/28/19 18:12
4-Methyl-2-pentanone (MIBK)	0.145 U	0.291	0.0909	mg/Kg	1		05/28/19 18:12
Acetone	0.145 U	0.291	0.0909	mg/Kg	1		05/28/19 18:12
Benzene	0.00730 U	0.0146	0.00455	mg/Kg	1		05/28/19 18:12
Bromobenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
Bromochloromethane	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
Bromodichloromethane	0.00117 U	0.00233	0.000723	mg/Kg	1		05/28/19 18:12
Bromoform	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
Bromomethane	0.0117 U	0.0233	0.00723	mg/Kg	1		05/28/19 18:12
Carbon disulfide	0.0585 U	0.117	0.0361	mg/Kg	1		05/28/19 18:12
Carbon tetrachloride	0.00730 U	0.0146	0.00455	mg/Kg	1		05/28/19 18:12
Chlorobenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12

Print Date: 06/07/2019 3:23:27PM

J flagging is activated

Results of B3025-NS-01

Client Sample ID: **B3025-NS-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341003
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:28
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.3
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.117 U	0.233	0.0723	mg/Kg	1		05/28/19 18:12
Chloroform	0.00117 U	0.00233	0.000723	mg/Kg	1		05/28/19 18:12
Chloromethane	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
cis-1,2-Dichloroethene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
cis-1,3-Dichloropropene	0.00730 U	0.0146	0.00455	mg/Kg	1		05/28/19 18:12
Dibromochloromethane	0.00117 U	0.00233	0.000723	mg/Kg	1		05/28/19 18:12
Dibromomethane	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
Dichlorodifluoromethane	0.0291 U	0.0583	0.0175	mg/Kg	1		05/28/19 18:12
Ethylbenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
Freon-113	0.0585 U	0.117	0.0361	mg/Kg	1		05/28/19 18:12
Hexachlorobutadiene	0.0117 U	0.0233	0.00723	mg/Kg	1		05/28/19 18:12
Isopropylbenzene (Cumene)	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
Methylene chloride	0.0585 U	0.117	0.0361	mg/Kg	1		05/28/19 18:12
Methyl-t-butyl ether	0.0585 U	0.117	0.0361	mg/Kg	1		05/28/19 18:12
Naphthalene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
n-Butylbenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
n-Propylbenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
o-Xylene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
P & M -Xylene	0.0291 U	0.0583	0.0175	mg/Kg	1		05/28/19 18:12
sec-Butylbenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
Styrene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
tert-Butylbenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
Tetrachloroethene	0.00730 U	0.0146	0.00455	mg/Kg	1		05/28/19 18:12
Toluene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
trans-1,2-Dichloroethene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:12
trans-1,3-Dichloropropene	0.00730 U	0.0146	0.00455	mg/Kg	1		05/28/19 18:12
Trichloroethene	0.00292 U	0.00583	0.00175	mg/Kg	1		05/28/19 18:12
Trichlorofluoromethane	0.0291 U	0.0583	0.0175	mg/Kg	1		05/28/19 18:12
Vinyl acetate	0.0585 U	0.117	0.0361	mg/Kg	1		05/28/19 18:12
Vinyl chloride	0.000466 U	0.000932	0.000291	mg/Kg	1		05/28/19 18:12
Xylenes (total)	0.0437 U	0.0874	0.0266	mg/Kg	1		05/28/19 18:12
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	71-136		%	1		05/28/19 18:12
4-Bromofluorobenzene (surr)	92.4	55-151		%	1		05/28/19 18:12
Toluene-d8 (surr)	99.4	85-116		%	1		05/28/19 18:12

Results of B3025-NS-01

Client Sample ID: **B3025-NS-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341003
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:28
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.3
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18980
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/28/19 18:12
 Container ID: 1199341003-B

Prep Batch: VXX34139
 Prep Method: SW5035A
 Prep Date/Time: 05/22/19 14:28
 Prep Initial Wt./Vol.: 47.631 g
 Prep Extract Vol: 26.7435 mL

Results of B3025-NB-01

Client Sample ID: **B3025-NB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341004
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:35
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.3
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	12.6 J	20.5	6.36	mg/Kg	1		06/06/19 15:30
Surrogates							
5a Androstane (surr)	99.4	50-150		%	1		06/06/19 15:30

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/06/19 15:30
 Container ID: 1199341004-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.407 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	96.0	20.5	6.36	mg/Kg	1		06/06/19 15:30
Surrogates							
n-Triacontane-d62 (surr)	121	50-150		%	1		06/06/19 15:30

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/06/19 15:30
 Container ID: 1199341004-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.407 g
 Prep Extract Vol: 5 mL

Results of B3025-NB-01

Client Sample ID: **B3025-NB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341004
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:35
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.3
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0117 U	0.0233	0.00722	mg/Kg	1		05/28/19 18:27
1,1,1-Trichloroethane	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
1,1,2,2-Tetrachloroethane	0.00117 U	0.00233	0.000722	mg/Kg	1		05/28/19 18:27
1,1,2-Trichloroethane	0.000466 U	0.000932	0.000291	mg/Kg	1		05/28/19 18:27
1,1-Dichloroethane	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
1,1-Dichloroethene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
1,1-Dichloropropene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
1,2,3-Trichlorobenzene	0.0291 U	0.0582	0.0175	mg/Kg	1		05/28/19 18:27
1,2,3-Trichloropropane	0.000580 U	0.00116	0.000722	mg/Kg	1		05/28/19 18:27
1,2,4-Trichlorobenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
1,2,4-Trimethylbenzene	0.0291 U	0.0582	0.0175	mg/Kg	1		05/28/19 18:27
1,2-Dibromo-3-chloropropane	0.0580 U	0.116	0.0361	mg/Kg	1		05/28/19 18:27
1,2-Dibromoethane	0.00117 U	0.00233	0.000722	mg/Kg	1		05/28/19 18:27
1,2-Dichlorobenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
1,2-Dichloroethane	0.00117 U	0.00233	0.000722	mg/Kg	1		05/28/19 18:27
1,2-Dichloropropane	0.00580 U	0.0116	0.00361	mg/Kg	1		05/28/19 18:27
1,3,5-Trimethylbenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
1,3-Dichlorobenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
1,3-Dichloropropane	0.00580 U	0.0116	0.00361	mg/Kg	1		05/28/19 18:27
1,4-Dichlorobenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
2,2-Dichloropropane	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
2-Butanone (MEK)	0.145 U	0.291	0.0909	mg/Kg	1		05/28/19 18:27
2-Chlorotoluene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
2-Hexanone	0.0580 U	0.116	0.0361	mg/Kg	1		05/28/19 18:27
4-Chlorotoluene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
4-Isopropyltoluene	0.0580 U	0.116	0.0291	mg/Kg	1		05/28/19 18:27
4-Methyl-2-pentanone (MIBK)	0.145 U	0.291	0.0909	mg/Kg	1		05/28/19 18:27
Acetone	0.145 U	0.291	0.0909	mg/Kg	1		05/28/19 18:27
Benzene	0.00730 U	0.0146	0.00454	mg/Kg	1		05/28/19 18:27
Bromobenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
Bromochloromethane	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
Bromodichloromethane	0.00117 U	0.00233	0.000722	mg/Kg	1		05/28/19 18:27
Bromoform	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
Bromomethane	0.0117 U	0.0233	0.00722	mg/Kg	1		05/28/19 18:27
Carbon disulfide	0.0580 U	0.116	0.0361	mg/Kg	1		05/28/19 18:27
Carbon tetrachloride	0.00730 U	0.0146	0.00454	mg/Kg	1		05/28/19 18:27
Chlorobenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27

Results of B3025-NB-01

Client Sample ID: **B3025-NB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341004
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:35
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.3
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.117 U	0.233	0.0722	mg/Kg	1		05/28/19 18:27
Chloroform	0.00117 U	0.00233	0.000722	mg/Kg	1		05/28/19 18:27
Chloromethane	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
cis-1,2-Dichloroethene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
cis-1,3-Dichloropropene	0.00730 U	0.0146	0.00454	mg/Kg	1		05/28/19 18:27
Dibromochloromethane	0.00117 U	0.00233	0.000722	mg/Kg	1		05/28/19 18:27
Dibromomethane	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
Dichlorodifluoromethane	0.0291 U	0.0582	0.0175	mg/Kg	1		05/28/19 18:27
Ethylbenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
Freon-113	0.0580 U	0.116	0.0361	mg/Kg	1		05/28/19 18:27
Hexachlorobutadiene	0.0117 U	0.0233	0.00722	mg/Kg	1		05/28/19 18:27
Isopropylbenzene (Cumene)	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
Methylene chloride	0.0580 U	0.116	0.0361	mg/Kg	1		05/28/19 18:27
Methyl-t-butyl ether	0.0580 U	0.116	0.0361	mg/Kg	1		05/28/19 18:27
Naphthalene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
n-Butylbenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
n-Propylbenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
o-Xylene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
P & M -Xylene	0.0291 U	0.0582	0.0175	mg/Kg	1		05/28/19 18:27
sec-Butylbenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
Styrene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
tert-Butylbenzene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
Tetrachloroethene	0.00730 U	0.0146	0.00454	mg/Kg	1		05/28/19 18:27
Toluene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
trans-1,2-Dichloroethene	0.0146 U	0.0291	0.00909	mg/Kg	1		05/28/19 18:27
trans-1,3-Dichloropropene	0.00730 U	0.0146	0.00454	mg/Kg	1		05/28/19 18:27
Trichloroethene	0.00291 U	0.00582	0.00175	mg/Kg	1		05/28/19 18:27
Trichlorofluoromethane	0.0206 J	0.0582	0.0175	mg/Kg	1		05/28/19 18:27
Vinyl acetate	0.0580 U	0.116	0.0361	mg/Kg	1		05/28/19 18:27
Vinyl chloride	0.000466 U	0.000932	0.000291	mg/Kg	1		05/28/19 18:27
Xylenes (total)	0.0437 U	0.0874	0.0266	mg/Kg	1		05/28/19 18:27
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	71-136		%	1		05/28/19 18:27
4-Bromofluorobenzene (surr)	93.4	55-151		%	1		05/28/19 18:27
Toluene-d8 (surr)	99.3	85-116		%	1		05/28/19 18:27

Results of B3025-NB-01

Client Sample ID: **B3025-NB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341004
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:35
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.3
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18980
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/28/19 18:27
 Container ID: 1199341004-B

Prep Batch: VXX34139
 Prep Method: SW5035A
 Prep Date/Time: 05/22/19 14:35
 Prep Initial Wt./Vol.: 47.783 g
 Prep Extract Vol: 26.7899 mL

Results of B3025-NB-02

Client Sample ID: **B3025-NB-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341005
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:42
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):94.9
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.6 U	21.1	6.53	mg/Kg	1		06/06/19 15:40
Surrogates							
5a Androstane (surr)	100	50-150		%	1		06/06/19 15:40

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/06/19 15:40
 Container ID: 1199341005-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.007 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	53.8	21.1	6.53	mg/Kg	1		06/06/19 15:40
Surrogates							
n-Triacontane-d62 (surr)	124	50-150		%	1		06/06/19 15:40

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/06/19 15:40
 Container ID: 1199341005-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.007 g
 Prep Extract Vol: 5 mL

Results of B3025-NB-02

Client Sample ID: **B3025-NB-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341005
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:42
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):94.9
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0101 U	0.0203	0.00629	mg/Kg	1		05/28/19 18:43
1,1,1-Trichloroethane	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
1,1,2,2-Tetrachloroethane	0.00102 U	0.00203	0.000629	mg/Kg	1		05/28/19 18:43
1,1,2-Trichloroethane	0.000405 U	0.000811	0.000254	mg/Kg	1		05/28/19 18:43
1,1-Dichloroethane	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
1,1-Dichloroethene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
1,1-Dichloropropene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
1,2,3-Trichlorobenzene	0.0254 U	0.0507	0.0152	mg/Kg	1		05/28/19 18:43
1,2,3-Trichloropropane	0.000505 U	0.00101	0.000629	mg/Kg	1		05/28/19 18:43
1,2,4-Trichlorobenzene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
1,2,4-Trimethylbenzene	0.0254 U	0.0507	0.0152	mg/Kg	1		05/28/19 18:43
1,2-Dibromo-3-chloropropane	0.0505 U	0.101	0.0314	mg/Kg	1		05/28/19 18:43
1,2-Dibromoethane	0.00102 U	0.00203	0.000629	mg/Kg	1		05/28/19 18:43
1,2-Dichlorobenzene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
1,2-Dichloroethane	0.00102 U	0.00203	0.000629	mg/Kg	1		05/28/19 18:43
1,2-Dichloropropane	0.00505 U	0.0101	0.00314	mg/Kg	1		05/28/19 18:43
1,3,5-Trimethylbenzene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
1,3-Dichlorobenzene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
1,3-Dichloropropane	0.00505 U	0.0101	0.00314	mg/Kg	1		05/28/19 18:43
1,4-Dichlorobenzene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
2,2-Dichloropropane	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
2-Butanone (MEK)	0.127 U	0.254	0.0791	mg/Kg	1		05/28/19 18:43
2-Chlorotoluene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
2-Hexanone	0.0505 U	0.101	0.0314	mg/Kg	1		05/28/19 18:43
4-Chlorotoluene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
4-Isopropyltoluene	0.0505 U	0.101	0.0254	mg/Kg	1		05/28/19 18:43
4-Methyl-2-pentanone (MIBK)	0.127 U	0.254	0.0791	mg/Kg	1		05/28/19 18:43
Acetone	0.127 U	0.254	0.0791	mg/Kg	1		05/28/19 18:43
Benzene	0.00635 U	0.0127	0.00396	mg/Kg	1		05/28/19 18:43
Bromobenzene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
Bromochloromethane	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
Bromodichloromethane	0.00102 U	0.00203	0.000629	mg/Kg	1		05/28/19 18:43
Bromoform	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
Bromomethane	0.0101 U	0.0203	0.00629	mg/Kg	1		05/28/19 18:43
Carbon disulfide	0.0505 U	0.101	0.0314	mg/Kg	1		05/28/19 18:43
Carbon tetrachloride	0.00635 U	0.0127	0.00396	mg/Kg	1		05/28/19 18:43
Chlorobenzene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43

Print Date: 06/07/2019 3:23:27PM

J flagging is activated

Results of B3025-NB-02

Client Sample ID: **B3025-NB-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341005
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:42
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):94.9
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.102 U	0.203	0.0629	mg/Kg	1		05/28/19 18:43
Chloroform	0.00102 U	0.00203	0.000629	mg/Kg	1		05/28/19 18:43
Chloromethane	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
cis-1,2-Dichloroethene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
cis-1,3-Dichloropropene	0.00635 U	0.0127	0.00396	mg/Kg	1		05/28/19 18:43
Dibromochloromethane	0.00102 U	0.00203	0.000629	mg/Kg	1		05/28/19 18:43
Dibromomethane	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
Dichlorodifluoromethane	0.0254 U	0.0507	0.0152	mg/Kg	1		05/28/19 18:43
Ethylbenzene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
Freon-113	0.0505 U	0.101	0.0314	mg/Kg	1		05/28/19 18:43
Hexachlorobutadiene	0.0101 U	0.0203	0.00629	mg/Kg	1		05/28/19 18:43
Isopropylbenzene (Cumene)	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
Methylene chloride	0.0505 U	0.101	0.0314	mg/Kg	1		05/28/19 18:43
Methyl-t-butyl ether	0.0505 U	0.101	0.0314	mg/Kg	1		05/28/19 18:43
Naphthalene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
n-Butylbenzene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
n-Propylbenzene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
o-Xylene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
P & M -Xylene	0.0254 U	0.0507	0.0152	mg/Kg	1		05/28/19 18:43
sec-Butylbenzene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
Styrene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
tert-Butylbenzene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
Tetrachloroethene	0.00635 U	0.0127	0.00396	mg/Kg	1		05/28/19 18:43
Toluene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
trans-1,2-Dichloroethene	0.0127 U	0.0254	0.00791	mg/Kg	1		05/28/19 18:43
trans-1,3-Dichloropropene	0.00635 U	0.0127	0.00396	mg/Kg	1		05/28/19 18:43
Trichloroethene	0.00253 U	0.00507	0.00152	mg/Kg	1		05/28/19 18:43
Trichlorofluoromethane	0.0254 U	0.0507	0.0152	mg/Kg	1		05/28/19 18:43
Vinyl acetate	0.0505 U	0.101	0.0314	mg/Kg	1		05/28/19 18:43
Vinyl chloride	0.000405 U	0.000811	0.000254	mg/Kg	1		05/28/19 18:43
Xylenes (total)	0.0381 U	0.0761	0.0231	mg/Kg	1		05/28/19 18:43
Surrogates							
1,2-Dichloroethane-D4 (surr)	98.1	71-136		%	1		05/28/19 18:43
4-Bromofluorobenzene (surr)	96.2	55-151		%	1		05/28/19 18:43
Toluene-d8 (surr)	99.8	85-116		%	1		05/28/19 18:43

Results of B3025-NB-02

Client Sample ID: **B3025-NB-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341005
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:42
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):94.9
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18980
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/28/19 18:43
 Container ID: 1199341005-B

Prep Batch: VXX34139
 Prep Method: SW5035A
 Prep Date/Time: 05/22/19 14:42
 Prep Initial Wt./Vol.: 58.129 g
 Prep Extract Vol: 27.9732 mL

Results of B3025-EB-01

Client Sample ID: **B3025-EB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341006
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:50
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.5
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.3 U	20.5	6.36	mg/Kg	1		06/06/19 15:51
Surrogates							
5a Androstane (surr)	102	50-150		%	1		06/06/19 15:51

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/06/19 15:51
 Container ID: 1199341006-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.023 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	8.34 J	20.5	6.36	mg/Kg	1		06/06/19 15:51
Surrogates							
n-Triacontane-d62 (surr)	125	50-150		%	1		06/06/19 15:51

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/06/19 15:51
 Container ID: 1199341006-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.023 g
 Prep Extract Vol: 5 mL

Results of B3025-EB-01

Client Sample ID: **B3025-EB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341006
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:50
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.5
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.00855 U	0.0171	0.00530	mg/Kg	1		05/28/19 18:58
1,1,1-Trichloroethane	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
1,1,2,2-Tetrachloroethane	0.000855 U	0.00171	0.000530	mg/Kg	1		05/28/19 18:58
1,1,2-Trichloroethane	0.000342 U	0.000683	0.000214	mg/Kg	1		05/28/19 18:58
1,1-Dichloroethane	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
1,1-Dichloroethene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
1,1-Dichloropropene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
1,2,3-Trichlorobenzene	0.0214 U	0.0427	0.0128	mg/Kg	1		05/28/19 18:58
1,2,3-Trichloropropane	0.000427 U	0.000854	0.000530	mg/Kg	1		05/28/19 18:58
1,2,4-Trichlorobenzene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
1,2,4-Trimethylbenzene	0.0214 U	0.0427	0.0128	mg/Kg	1		05/28/19 18:58
1,2-Dibromo-3-chloropropane	0.0427 U	0.0854	0.0265	mg/Kg	1		05/28/19 18:58
1,2-Dibromoethane	0.000855 U	0.00171	0.000530	mg/Kg	1		05/28/19 18:58
1,2-Dichlorobenzene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
1,2-Dichloroethane	0.000855 U	0.00171	0.000530	mg/Kg	1		05/28/19 18:58
1,2-Dichloropropane	0.00427 U	0.00854	0.00265	mg/Kg	1		05/28/19 18:58
1,3,5-Trimethylbenzene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
1,3-Dichlorobenzene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
1,3-Dichloropropane	0.00427 U	0.00854	0.00265	mg/Kg	1		05/28/19 18:58
1,4-Dichlorobenzene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
2,2-Dichloropropane	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
2-Butanone (MEK)	0.107 U	0.214	0.0666	mg/Kg	1		05/28/19 18:58
2-Chlorotoluene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
2-Hexanone	0.0427 U	0.0854	0.0265	mg/Kg	1		05/28/19 18:58
4-Chlorotoluene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
4-Isopropyltoluene	0.0427 U	0.0854	0.0214	mg/Kg	1		05/28/19 18:58
4-Methyl-2-pentanone (MIBK)	0.107 U	0.214	0.0666	mg/Kg	1		05/28/19 18:58
Acetone	0.107 U	0.214	0.0666	mg/Kg	1		05/28/19 18:58
Benzene	0.00535 U	0.0107	0.00333	mg/Kg	1		05/28/19 18:58
Bromobenzene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
Bromochloromethane	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
Bromodichloromethane	0.000855 U	0.00171	0.000530	mg/Kg	1		05/28/19 18:58
Bromoform	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
Bromomethane	0.00855 U	0.0171	0.00530	mg/Kg	1		05/28/19 18:58
Carbon disulfide	0.0427 U	0.0854	0.0265	mg/Kg	1		05/28/19 18:58
Carbon tetrachloride	0.00535 U	0.0107	0.00333	mg/Kg	1		05/28/19 18:58
Chlorobenzene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58

Print Date: 06/07/2019 3:23:27PM

J flagging is activated

Results of B3025-EB-01

Client Sample ID: **B3025-EB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341006
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:50
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.5
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.0855 U	0.171	0.0530	mg/Kg	1		05/28/19 18:58
Chloroform	0.000855 U	0.00171	0.000530	mg/Kg	1		05/28/19 18:58
Chloromethane	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
cis-1,2-Dichloroethene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
cis-1,3-Dichloropropene	0.00535 U	0.0107	0.00333	mg/Kg	1		05/28/19 18:58
Dibromochloromethane	0.000855 U	0.00171	0.000530	mg/Kg	1		05/28/19 18:58
Dibromomethane	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
Dichlorodifluoromethane	0.0214 U	0.0427	0.0128	mg/Kg	1		05/28/19 18:58
Ethylbenzene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
Freon-113	0.0427 U	0.0854	0.0265	mg/Kg	1		05/28/19 18:58
Hexachlorobutadiene	0.00855 U	0.0171	0.00530	mg/Kg	1		05/28/19 18:58
Isopropylbenzene (Cumene)	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
Methylene chloride	0.0427 U	0.0854	0.0265	mg/Kg	1		05/28/19 18:58
Methyl-t-butyl ether	0.0427 U	0.0854	0.0265	mg/Kg	1		05/28/19 18:58
Naphthalene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
n-Butylbenzene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
n-Propylbenzene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
o-Xylene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
P & M -Xylene	0.0214 U	0.0427	0.0128	mg/Kg	1		05/28/19 18:58
sec-Butylbenzene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
Styrene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
tert-Butylbenzene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
Tetrachloroethene	0.00535 U	0.0107	0.00333	mg/Kg	1		05/28/19 18:58
Toluene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
trans-1,2-Dichloroethene	0.0107 U	0.0214	0.00666	mg/Kg	1		05/28/19 18:58
trans-1,3-Dichloropropene	0.00535 U	0.0107	0.00333	mg/Kg	1		05/28/19 18:58
Trichloroethene	0.00214 U	0.00427	0.00128	mg/Kg	1		05/28/19 18:58
Trichlorofluoromethane	0.0214 U	0.0427	0.0128	mg/Kg	1		05/28/19 18:58
Vinyl acetate	0.0427 U	0.0854	0.0265	mg/Kg	1		05/28/19 18:58
Vinyl chloride	0.000342 U	0.000683	0.000214	mg/Kg	1		05/28/19 18:58
Xylenes (total)	0.0321 U	0.0641	0.0195	mg/Kg	1		05/28/19 18:58
Surrogates							
1,2-Dichloroethane-D4 (surr)	99.9	71-136		%	1		05/28/19 18:58
4-Bromofluorobenzene (surr)	93	55-151		%	1		05/28/19 18:58
Toluene-d8 (surr)	98.8	85-116		%	1		05/28/19 18:58

Results of B3025-EB-01

Client Sample ID: **B3025-EB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341006
 Lab Project ID: 1199341

Collection Date: 05/22/19 14:50
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.5
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18980
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/28/19 18:58
 Container ID: 1199341006-B

Prep Batch: VXX34139
 Prep Method: SW5035A
 Prep Date/Time: 05/22/19 14:50
 Prep Initial Wt./Vol.: 63.917 g
 Prep Extract Vol: 26.6102 mL

Results of B3025-EB-02

Client Sample ID: **B3025-EB-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341007
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:00
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.2
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.2 U	20.4	6.33	mg/Kg	1		06/06/19 16:01
Surrogates							
5a Androstane (surr)	101	50-150		%	1		06/06/19 16:01

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/06/19 16:01
 Container ID: 1199341007-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.239 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	12.1 J	20.4	6.33	mg/Kg	1		06/06/19 16:01
Surrogates							
n-Triacontane-d62 (surr)	124	50-150		%	1		06/06/19 16:01

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/06/19 16:01
 Container ID: 1199341007-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.239 g
 Prep Extract Vol: 5 mL

Results of B3025-EB-02

Client Sample ID: **B3025-EB-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341007
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:00
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.2
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.00845 U	0.0169	0.00525	mg/Kg	1		05/28/19 19:14
1,1,1-Trichloroethane	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
1,1,2,2-Tetrachloroethane	0.000845 U	0.00169	0.000525	mg/Kg	1		05/28/19 19:14
1,1,2-Trichloroethane	0.000339 U	0.000678	0.000212	mg/Kg	1		05/28/19 19:14
1,1-Dichloroethane	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
1,1-Dichloroethene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
1,1-Dichloropropene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
1,2,3-Trichlorobenzene	0.0211 U	0.0423	0.0127	mg/Kg	1		05/28/19 19:14
1,2,3-Trichloropropane	0.000423 U	0.000847	0.000525	mg/Kg	1		05/28/19 19:14
1,2,4-Trichlorobenzene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
1,2,4-Trimethylbenzene	0.0211 U	0.0423	0.0127	mg/Kg	1		05/28/19 19:14
1,2-Dibromo-3-chloropropane	0.0423 U	0.0847	0.0263	mg/Kg	1		05/28/19 19:14
1,2-Dibromoethane	0.000845 U	0.00169	0.000525	mg/Kg	1		05/28/19 19:14
1,2-Dichlorobenzene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
1,2-Dichloroethane	0.000845 U	0.00169	0.000525	mg/Kg	1		05/28/19 19:14
1,2-Dichloropropane	0.00424 U	0.00847	0.00263	mg/Kg	1		05/28/19 19:14
1,3,5-Trimethylbenzene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
1,3-Dichlorobenzene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
1,3-Dichloropropane	0.00424 U	0.00847	0.00263	mg/Kg	1		05/28/19 19:14
1,4-Dichlorobenzene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
2,2-Dichloropropane	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
2-Butanone (MEK)	0.106 U	0.212	0.0661	mg/Kg	1		05/28/19 19:14
2-Chlorotoluene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
2-Hexanone	0.0423 U	0.0847	0.0263	mg/Kg	1		05/28/19 19:14
4-Chlorotoluene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
4-Isopropyltoluene	0.0423 U	0.0847	0.0212	mg/Kg	1		05/28/19 19:14
4-Methyl-2-pentanone (MIBK)	0.106 U	0.212	0.0661	mg/Kg	1		05/28/19 19:14
Acetone	0.106 U	0.212	0.0661	mg/Kg	1		05/28/19 19:14
Benzene	0.00530 U	0.0106	0.00330	mg/Kg	1		05/28/19 19:14
Bromobenzene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
Bromochloromethane	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
Bromodichloromethane	0.000845 U	0.00169	0.000525	mg/Kg	1		05/28/19 19:14
Bromoform	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
Bromomethane	0.00845 U	0.0169	0.00525	mg/Kg	1		05/28/19 19:14
Carbon disulfide	0.0423 U	0.0847	0.0263	mg/Kg	1		05/28/19 19:14
Carbon tetrachloride	0.00530 U	0.0106	0.00330	mg/Kg	1		05/28/19 19:14
Chlorobenzene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14

Print Date: 06/07/2019 3:23:27PM

J flagging is activated

Results of B3025-EB-02

Client Sample ID: **B3025-EB-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341007
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:00
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.2
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.0845 U	0.169	0.0525	mg/Kg	1		05/28/19 19:14
Chloroform	0.000845 U	0.00169	0.000525	mg/Kg	1		05/28/19 19:14
Chloromethane	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
cis-1,2-Dichloroethene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
cis-1,3-Dichloropropene	0.00530 U	0.0106	0.00330	mg/Kg	1		05/28/19 19:14
Dibromochloromethane	0.000845 U	0.00169	0.000525	mg/Kg	1		05/28/19 19:14
Dibromomethane	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
Dichlorodifluoromethane	0.0211 U	0.0423	0.0127	mg/Kg	1		05/28/19 19:14
Ethylbenzene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
Freon-113	0.0423 U	0.0847	0.0263	mg/Kg	1		05/28/19 19:14
Hexachlorobutadiene	0.00845 U	0.0169	0.00525	mg/Kg	1		05/28/19 19:14
Isopropylbenzene (Cumene)	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
Methylene chloride	0.0423 U	0.0847	0.0263	mg/Kg	1		05/28/19 19:14
Methyl-t-butyl ether	0.0423 U	0.0847	0.0263	mg/Kg	1		05/28/19 19:14
Naphthalene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
n-Butylbenzene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
n-Propylbenzene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
o-Xylene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
P & M -Xylene	0.0211 U	0.0423	0.0127	mg/Kg	1		05/28/19 19:14
sec-Butylbenzene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
Styrene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
tert-Butylbenzene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
Tetrachloroethene	0.00530 U	0.0106	0.00330	mg/Kg	1		05/28/19 19:14
Toluene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
trans-1,2-Dichloroethene	0.0106 U	0.0212	0.00661	mg/Kg	1		05/28/19 19:14
trans-1,3-Dichloropropene	0.00530 U	0.0106	0.00330	mg/Kg	1		05/28/19 19:14
Trichloroethene	0.00212 U	0.00423	0.00127	mg/Kg	1		05/28/19 19:14
Trichlorofluoromethane	0.0211 U	0.0423	0.0127	mg/Kg	1		05/28/19 19:14
Vinyl acetate	0.0423 U	0.0847	0.0263	mg/Kg	1		05/28/19 19:14
Vinyl chloride	0.000339 U	0.000678	0.000212	mg/Kg	1		05/28/19 19:14
Xylenes (total)	0.0318 U	0.0635	0.0193	mg/Kg	1		05/28/19 19:14
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	71-136		%	1		05/28/19 19:14
4-Bromofluorobenzene (surr)	94.6	55-151		%	1		05/28/19 19:14
Toluene-d8 (surr)	99.8	85-116		%	1		05/28/19 19:14

Results of B3025-EB-02

Client Sample ID: **B3025-EB-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341007
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:00
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):97.2
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18980
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/28/19 19:14
 Container ID: 1199341007-B

Prep Batch: VXX34139
 Prep Method: SW5035A
 Prep Date/Time: 05/22/19 15:00
 Prep Initial Wt./Vol.: 65.058 g
 Prep Extract Vol: 26.7913 mL

Results of B3025-ES-01

Client Sample ID: **B3025-ES-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341008
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:06
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.8
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.4 U	20.8	6.44	mg/Kg	1		06/06/19 16:12
Surrogates							
5a Androstane (surr)	98.6	50-150		%	1		06/06/19 16:12

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/06/19 16:12
 Container ID: 1199341008-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.142 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	6.76 J	20.8	6.44	mg/Kg	1		06/06/19 16:12
Surrogates							
n-Triacontane-d62 (surr)	121	50-150		%	1		06/06/19 16:12

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/06/19 16:12
 Container ID: 1199341008-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.142 g
 Prep Extract Vol: 5 mL



Results of B3025-ES-01

Client Sample ID: B3025-ES-01
 Client Project ID: 100004-005 B3025
 Lab Sample ID: 1199341008
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:06
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.8
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0103 U	0.0206	0.00638	mg/Kg	1		05/28/19 19:29
1,1,1-Trichloroethane	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
1,1,2,2-Tetrachloroethane	0.00103 U	0.00206	0.000638	mg/Kg	1		05/28/19 19:29
1,1,2-Trichloroethane	0.000411 U	0.000823	0.000257	mg/Kg	1		05/28/19 19:29
1,1-Dichloroethane	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
1,1-Dichloroethene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
1,1-Dichloropropene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
1,2,3-Trichlorobenzene	0.0257 U	0.0514	0.0154	mg/Kg	1		05/28/19 19:29
1,2,3-Trichloropropane	0.000515 U	0.00103	0.000638	mg/Kg	1		05/28/19 19:29
1,2,4-Trichlorobenzene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
1,2,4-Trimethylbenzene	0.0257 U	0.0514	0.0154	mg/Kg	1		05/28/19 19:29
1,2-Dibromo-3-chloropropane	0.0515 U	0.103	0.0319	mg/Kg	1		05/28/19 19:29
1,2-Dibromoethane	0.00103 U	0.00206	0.000638	mg/Kg	1		05/28/19 19:29
1,2-Dichlorobenzene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
1,2-Dichloroethane	0.00103 U	0.00206	0.000638	mg/Kg	1		05/28/19 19:29
1,2-Dichloropropane	0.00515 U	0.0103	0.00319	mg/Kg	1		05/28/19 19:29
1,3,5-Trimethylbenzene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
1,3-Dichlorobenzene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
1,3-Dichloropropane	0.00515 U	0.0103	0.00319	mg/Kg	1		05/28/19 19:29
1,4-Dichlorobenzene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
2,2-Dichloropropane	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
2-Butanone (MEK)	0.129 U	0.257	0.0802	mg/Kg	1		05/28/19 19:29
2-Chlorotoluene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
2-Hexanone	0.0515 U	0.103	0.0319	mg/Kg	1		05/28/19 19:29
4-Chlorotoluene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
4-Isopropyltoluene	0.0515 U	0.103	0.0257	mg/Kg	1		05/28/19 19:29
4-Methyl-2-pentanone (MIBK)	0.129 U	0.257	0.0802	mg/Kg	1		05/28/19 19:29
Acetone	0.129 U	0.257	0.0802	mg/Kg	1		05/28/19 19:29
Benzene	0.00645 U	0.0129	0.00401	mg/Kg	1		05/28/19 19:29
Bromobenzene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
Bromochloromethane	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
Bromodichloromethane	0.00103 U	0.00206	0.000638	mg/Kg	1		05/28/19 19:29
Bromoform	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
Bromomethane	0.0103 U	0.0206	0.00638	mg/Kg	1		05/28/19 19:29
Carbon disulfide	0.0515 U	0.103	0.0319	mg/Kg	1		05/28/19 19:29
Carbon tetrachloride	0.00645 U	0.0129	0.00401	mg/Kg	1		05/28/19 19:29
Chlorobenzene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29

Print Date: 06/07/2019 3:23:27PM

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Results of B3025-ES-01

Client Sample ID: **B3025-ES-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341008
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:06
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.8
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.103 U	0.206	0.0638	mg/Kg	1		05/28/19 19:29
Chloroform	0.00103 U	0.00206	0.000638	mg/Kg	1		05/28/19 19:29
Chloromethane	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
cis-1,2-Dichloroethene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
cis-1,3-Dichloropropene	0.00645 U	0.0129	0.00401	mg/Kg	1		05/28/19 19:29
Dibromochloromethane	0.00103 U	0.00206	0.000638	mg/Kg	1		05/28/19 19:29
Dibromomethane	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
Dichlorodifluoromethane	0.0257 U	0.0514	0.0154	mg/Kg	1		05/28/19 19:29
Ethylbenzene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
Freon-113	0.0515 U	0.103	0.0319	mg/Kg	1		05/28/19 19:29
Hexachlorobutadiene	0.0103 U	0.0206	0.00638	mg/Kg	1		05/28/19 19:29
Isopropylbenzene (Cumene)	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
Methylene chloride	0.0515 U	0.103	0.0319	mg/Kg	1		05/28/19 19:29
Methyl-t-butyl ether	0.0515 U	0.103	0.0319	mg/Kg	1		05/28/19 19:29
Naphthalene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
n-Butylbenzene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
n-Propylbenzene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
o-Xylene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
P & M -Xylene	0.0257 U	0.0514	0.0154	mg/Kg	1		05/28/19 19:29
sec-Butylbenzene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
Styrene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
tert-Butylbenzene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
Tetrachloroethene	0.00645 U	0.0129	0.00401	mg/Kg	1		05/28/19 19:29
Toluene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
trans-1,2-Dichloroethene	0.0129 U	0.0257	0.00802	mg/Kg	1		05/28/19 19:29
trans-1,3-Dichloropropene	0.00645 U	0.0129	0.00401	mg/Kg	1		05/28/19 19:29
Trichloroethene	0.00257 U	0.00514	0.00154	mg/Kg	1		05/28/19 19:29
Trichlorofluoromethane	0.0257 U	0.0514	0.0154	mg/Kg	1		05/28/19 19:29
Vinyl acetate	0.0515 U	0.103	0.0319	mg/Kg	1		05/28/19 19:29
Vinyl chloride	0.000411 U	0.000823	0.000257	mg/Kg	1		05/28/19 19:29
Xylenes (total)	0.0386 U	0.0771	0.0234	mg/Kg	1		05/28/19 19:29
Surrogates							
1,2-Dichloroethane-D4 (surr)	99.3	71-136		%	1		05/28/19 19:29
4-Bromofluorobenzene (surr)	94.6	55-151		%	1		05/28/19 19:29
Toluene-d8 (surr)	98.9	85-116		%	1		05/28/19 19:29

Results of B3025-ES-01

Client Sample ID: **B3025-ES-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341008
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:06
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.8
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18980
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/28/19 19:29
 Container ID: 1199341008-B

Prep Batch: VXX34139
 Prep Method: SW5035A
 Prep Date/Time: 05/22/19 15:06
 Prep Initial Wt./Vol.: 55.415 g
 Prep Extract Vol: 27.3071 mL

Results of B3025-ES-02

Client Sample ID: **B3025-ES-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341009
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:13
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.8
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.3 U	20.5	6.36	mg/Kg	1		06/06/19 16:22
Surrogates							
5a Androstane (surr)	103	50-150		%	1		06/06/19 16:22

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/06/19 16:22
 Container ID: 1199341009-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.207 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	6.40 J	20.5	6.36	mg/Kg	1		06/06/19 16:22
Surrogates							
n-Triacontane-d62 (surr)	127	50-150		%	1		06/06/19 16:22

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/06/19 16:22
 Container ID: 1199341009-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.207 g
 Prep Extract Vol: 5 mL



Results of B3025-ES-02

Client Sample ID: B3025-ES-02
 Client Project ID: 100004-005 B3025
 Lab Sample ID: 1199341009
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:13
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.8
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.00860 U	0.0172	0.00534	mg/Kg	1		05/28/19 19:45
1,1,1-Trichloroethane	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
1,1,2,2-Tetrachloroethane	0.000860 U	0.00172	0.000534	mg/Kg	1		05/28/19 19:45
1,1,2-Trichloroethane	0.000345 U	0.000689	0.000215	mg/Kg	1		05/28/19 19:45
1,1-Dichloroethane	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
1,1-Dichloroethene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
1,1-Dichloropropene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
1,2,3-Trichlorobenzene	0.0216 U	0.0431	0.0129	mg/Kg	1		05/28/19 19:45
1,2,3-Trichloropropane	0.000431 U	0.000862	0.000534	mg/Kg	1		05/28/19 19:45
1,2,4-Trichlorobenzene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
1,2,4-Trimethylbenzene	0.0216 U	0.0431	0.0129	mg/Kg	1		05/28/19 19:45
1,2-Dibromo-3-chloropropane	0.0431 U	0.0862	0.0267	mg/Kg	1		05/28/19 19:45
1,2-Dibromoethane	0.000860 U	0.00172	0.000534	mg/Kg	1		05/28/19 19:45
1,2-Dichlorobenzene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
1,2-Dichloroethane	0.000860 U	0.00172	0.000534	mg/Kg	1		05/28/19 19:45
1,2-Dichloropropane	0.00431 U	0.00862	0.00267	mg/Kg	1		05/28/19 19:45
1,3,5-Trimethylbenzene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
1,3-Dichlorobenzene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
1,3-Dichloropropane	0.00431 U	0.00862	0.00267	mg/Kg	1		05/28/19 19:45
1,4-Dichlorobenzene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
2,2-Dichloropropane	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
2-Butanone (MEK)	0.108 U	0.215	0.0672	mg/Kg	1		05/28/19 19:45
2-Chlorotoluene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
2-Hexanone	0.0431 U	0.0862	0.0267	mg/Kg	1		05/28/19 19:45
4-Chlorotoluene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
4-Isopropyltoluene	0.0431 U	0.0862	0.0215	mg/Kg	1		05/28/19 19:45
4-Methyl-2-pentanone (MIBK)	0.108 U	0.215	0.0672	mg/Kg	1		05/28/19 19:45
Acetone	0.108 U	0.215	0.0672	mg/Kg	1		05/28/19 19:45
Benzene	0.00540 U	0.0108	0.00336	mg/Kg	1		05/28/19 19:45
Bromobenzene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
Bromochloromethane	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
Bromodichloromethane	0.000860 U	0.00172	0.000534	mg/Kg	1		05/28/19 19:45
Bromoform	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
Bromomethane	0.00860 U	0.0172	0.00534	mg/Kg	1		05/28/19 19:45
Carbon disulfide	0.0431 U	0.0862	0.0267	mg/Kg	1		05/28/19 19:45
Carbon tetrachloride	0.00540 U	0.0108	0.00336	mg/Kg	1		05/28/19 19:45
Chlorobenzene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45

Print Date: 06/07/2019 3:23:27PM

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Results of B3025-ES-02

Client Sample ID: **B3025-ES-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341009
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:13
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.8
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.0860 U	0.172	0.0534	mg/Kg	1		05/28/19 19:45
Chloroform	0.000860 U	0.00172	0.000534	mg/Kg	1		05/28/19 19:45
Chloromethane	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
cis-1,2-Dichloroethene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
cis-1,3-Dichloropropene	0.00540 U	0.0108	0.00336	mg/Kg	1		05/28/19 19:45
Dibromochloromethane	0.000860 U	0.00172	0.000534	mg/Kg	1		05/28/19 19:45
Dibromomethane	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
Dichlorodifluoromethane	0.0216 U	0.0431	0.0129	mg/Kg	1		05/28/19 19:45
Ethylbenzene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
Freon-113	0.0431 U	0.0862	0.0267	mg/Kg	1		05/28/19 19:45
Hexachlorobutadiene	0.00860 U	0.0172	0.00534	mg/Kg	1		05/28/19 19:45
Isopropylbenzene (Cumene)	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
Methylene chloride	0.0431 U	0.0862	0.0267	mg/Kg	1		05/28/19 19:45
Methyl-t-butyl ether	0.0431 U	0.0862	0.0267	mg/Kg	1		05/28/19 19:45
Naphthalene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
n-Butylbenzene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
n-Propylbenzene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
o-Xylene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
P & M -Xylene	0.0216 U	0.0431	0.0129	mg/Kg	1		05/28/19 19:45
sec-Butylbenzene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
Styrene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
tert-Butylbenzene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
Tetrachloroethene	0.00540 U	0.0108	0.00336	mg/Kg	1		05/28/19 19:45
Toluene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
trans-1,2-Dichloroethene	0.0107 U	0.0215	0.00672	mg/Kg	1		05/28/19 19:45
trans-1,3-Dichloropropene	0.00540 U	0.0108	0.00336	mg/Kg	1		05/28/19 19:45
Trichloroethene	0.00215 U	0.00431	0.00129	mg/Kg	1		05/28/19 19:45
Trichlorofluoromethane	0.0216 U	0.0431	0.0129	mg/Kg	1		05/28/19 19:45
Vinyl acetate	0.0431 U	0.0862	0.0267	mg/Kg	1		05/28/19 19:45
Vinyl chloride	0.000345 U	0.000689	0.000215	mg/Kg	1		05/28/19 19:45
Xylenes (total)	0.0323 U	0.0646	0.0196	mg/Kg	1		05/28/19 19:45
Surrogates							
1,2-Dichloroethane-D4 (surr)	100	71-136		%	1		05/28/19 19:45
4-Bromofluorobenzene (surr)	95	55-151		%	1		05/28/19 19:45
Toluene-d8 (surr)	101	85-116		%	1		05/28/19 19:45

Results of B3025-ES-02

Client Sample ID: **B3025-ES-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341009
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:13
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.8
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18980
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/28/19 19:45
 Container ID: 1199341009-B

Prep Batch: VXX34139
 Prep Method: SW5035A
 Prep Date/Time: 05/22/19 15:13
 Prep Initial Wt./Vol.: 65.011 g
 Prep Extract Vol: 27.1064 mL

Results of B3025-ES-03

Client Sample ID: **B3025-ES-03**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341010
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:20
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.9
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.3 U	20.6	6.37	mg/Kg	1		06/06/19 16:32
Surrogates							
5a Androstane (surr)	92.5	50-150		%	1		06/06/19 16:32

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/06/19 16:32
 Container ID: 1199341010-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.117 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	6.92 J	20.6	6.37	mg/Kg	1		06/06/19 16:32
Surrogates							
n-Triacontane-d62 (surr)	113	50-150		%	1		06/06/19 16:32

Batch Information

Analytical Batch: XFC15032
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/06/19 16:32
 Container ID: 1199341010-A

Prep Batch: XXX41501
 Prep Method: SW3550C
 Prep Date/Time: 05/31/19 09:27
 Prep Initial Wt./Vol.: 30.117 g
 Prep Extract Vol: 5 mL

Results of B3025-ES-03

Client Sample ID: **B3025-ES-03**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341010
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:20
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.9
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.00915 U	0.0183	0.00568	mg/Kg	1		05/28/19 20:00
1,1,1-Trichloroethane	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
1,1,2,2-Tetrachloroethane	0.000915 U	0.00183	0.000568	mg/Kg	1		05/28/19 20:00
1,1,2-Trichloroethane	0.000367 U	0.000733	0.000229	mg/Kg	1		05/28/19 20:00
1,1-Dichloroethane	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
1,1-Dichloroethene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
1,1-Dichloropropene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
1,2,3-Trichlorobenzene	0.0229 U	0.0458	0.0137	mg/Kg	1		05/28/19 20:00
1,2,3-Trichloropropane	0.000458 U	0.000916	0.000568	mg/Kg	1		05/28/19 20:00
1,2,4-Trichlorobenzene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
1,2,4-Trimethylbenzene	0.0229 U	0.0458	0.0137	mg/Kg	1		05/28/19 20:00
1,2-Dibromo-3-chloropropane	0.0458 U	0.0916	0.0284	mg/Kg	1		05/28/19 20:00
1,2-Dibromoethane	0.000915 U	0.00183	0.000568	mg/Kg	1		05/28/19 20:00
1,2-Dichlorobenzene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
1,2-Dichloroethane	0.000915 U	0.00183	0.000568	mg/Kg	1		05/28/19 20:00
1,2-Dichloropropane	0.00458 U	0.00916	0.00284	mg/Kg	1		05/28/19 20:00
1,3,5-Trimethylbenzene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
1,3-Dichlorobenzene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
1,3-Dichloropropane	0.00458 U	0.00916	0.00284	mg/Kg	1		05/28/19 20:00
1,4-Dichlorobenzene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
2,2-Dichloropropane	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
2-Butanone (MEK)	0.115 U	0.229	0.0715	mg/Kg	1		05/28/19 20:00
2-Chlorotoluene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
2-Hexanone	0.0458 U	0.0916	0.0284	mg/Kg	1		05/28/19 20:00
4-Chlorotoluene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
4-Isopropyltoluene	0.0458 U	0.0916	0.0229	mg/Kg	1		05/28/19 20:00
4-Methyl-2-pentanone (MIBK)	0.115 U	0.229	0.0715	mg/Kg	1		05/28/19 20:00
Acetone	0.115 U	0.229	0.0715	mg/Kg	1		05/28/19 20:00
Benzene	0.00575 U	0.0115	0.00357	mg/Kg	1		05/28/19 20:00
Bromobenzene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
Bromochloromethane	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
Bromodichloromethane	0.000915 U	0.00183	0.000568	mg/Kg	1		05/28/19 20:00
Bromoform	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
Bromomethane	0.00915 U	0.0183	0.00568	mg/Kg	1		05/28/19 20:00
Carbon disulfide	0.0458 U	0.0916	0.0284	mg/Kg	1		05/28/19 20:00
Carbon tetrachloride	0.00575 U	0.0115	0.00357	mg/Kg	1		05/28/19 20:00
Chlorobenzene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00

Print Date: 06/07/2019 3:23:27PM

J flagging is activated

Results of B3025-ES-03

Client Sample ID: **B3025-ES-03**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341010
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:20
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.9
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.0915 U	0.183	0.0568	mg/Kg	1		05/28/19 20:00
Chloroform	0.000915 U	0.00183	0.000568	mg/Kg	1		05/28/19 20:00
Chloromethane	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
cis-1,2-Dichloroethene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
cis-1,3-Dichloropropene	0.00575 U	0.0115	0.00357	mg/Kg	1		05/28/19 20:00
Dibromochloromethane	0.000915 U	0.00183	0.000568	mg/Kg	1		05/28/19 20:00
Dibromomethane	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
Dichlorodifluoromethane	0.0229 U	0.0458	0.0137	mg/Kg	1		05/28/19 20:00
Ethylbenzene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
Freon-113	0.0458 U	0.0916	0.0284	mg/Kg	1		05/28/19 20:00
Hexachlorobutadiene	0.00915 U	0.0183	0.00568	mg/Kg	1		05/28/19 20:00
Isopropylbenzene (Cumene)	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
Methylene chloride	0.0458 U	0.0916	0.0284	mg/Kg	1		05/28/19 20:00
Methyl-t-butyl ether	0.0458 U	0.0916	0.0284	mg/Kg	1		05/28/19 20:00
Naphthalene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
n-Butylbenzene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
n-Propylbenzene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
o-Xylene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
P & M -Xylene	0.0229 U	0.0458	0.0137	mg/Kg	1		05/28/19 20:00
sec-Butylbenzene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
Styrene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
tert-Butylbenzene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
Tetrachloroethene	0.00575 U	0.0115	0.00357	mg/Kg	1		05/28/19 20:00
Toluene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
trans-1,2-Dichloroethene	0.0115 U	0.0229	0.00715	mg/Kg	1		05/28/19 20:00
trans-1,3-Dichloropropene	0.00575 U	0.0115	0.00357	mg/Kg	1		05/28/19 20:00
Trichloroethene	0.00229 U	0.00458	0.00137	mg/Kg	1		05/28/19 20:00
Trichlorofluoromethane	0.0229 U	0.0458	0.0137	mg/Kg	1		05/28/19 20:00
Vinyl acetate	0.0458 U	0.0916	0.0284	mg/Kg	1		05/28/19 20:00
Vinyl chloride	0.000367 U	0.000733	0.000229	mg/Kg	1		05/28/19 20:00
Xylenes (total)	0.0343 U	0.0687	0.0209	mg/Kg	1		05/28/19 20:00
Surrogates							
1,2-Dichloroethane-D4 (surr)	98.6	71-136		%	1		05/28/19 20:00
4-Bromofluorobenzene (surr)	92.2	55-151		%	1		05/28/19 20:00
Toluene-d8 (surr)	100	85-116		%	1		05/28/19 20:00

Results of B3025-ES-03

Client Sample ID: **B3025-ES-03**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341010
 Lab Project ID: 1199341

Collection Date: 05/22/19 15:20
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.9
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18980
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/28/19 20:00
 Container ID: 1199341010-B

Prep Batch: VXX34139
 Prep Method: SW5035A
 Prep Date/Time: 05/22/19 15:20
 Prep Initial Wt./Vol.: 60.601 g
 Prep Extract Vol: 26.8906 mL



Results of Trip Blank

Client Sample ID: **Trip Blank**
Client Project ID: **100004-005 B3025**
Lab Sample ID: 1199341011
Lab Project ID: 1199341

Collection Date: 05/22/19 13:00
Received Date: 05/24/19 09:42
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0101 U	0.0203	0.00631	mg/Kg	1		05/28/19 15:07
1,1,1-Trichloroethane	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
1,1,2,2-Tetrachloroethane	0.00102 U	0.00203	0.000631	mg/Kg	1		05/28/19 15:07
1,1,2-Trichloroethane	0.000407 U	0.000814	0.000254	mg/Kg	1		05/28/19 15:07
1,1-Dichloroethane	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
1,1-Dichloroethene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
1,1-Dichloropropene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
1,2,3-Trichlorobenzene	0.0255 U	0.0509	0.0153	mg/Kg	1		05/28/19 15:07
1,2,3-Trichloropropane	0.000510 U	0.00102	0.000631	mg/Kg	1		05/28/19 15:07
1,2,4-Trichlorobenzene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
1,2,4-Trimethylbenzene	0.0255 U	0.0509	0.0153	mg/Kg	1		05/28/19 15:07
1,2-Dibromo-3-chloropropane	0.0510 U	0.102	0.0315	mg/Kg	1		05/28/19 15:07
1,2-Dibromoethane	0.00102 U	0.00203	0.000631	mg/Kg	1		05/28/19 15:07
1,2-Dichlorobenzene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
1,2-Dichloroethane	0.00102 U	0.00203	0.000631	mg/Kg	1		05/28/19 15:07
1,2-Dichloropropane	0.00510 U	0.0102	0.00315	mg/Kg	1		05/28/19 15:07
1,3,5-Trimethylbenzene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
1,3-Dichlorobenzene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
1,3-Dichloropropane	0.00510 U	0.0102	0.00315	mg/Kg	1		05/28/19 15:07
1,4-Dichlorobenzene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
2,2-Dichloropropane	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
2-Butanone (MEK)	0.127 U	0.254	0.0794	mg/Kg	1		05/28/19 15:07
2-Chlorotoluene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
2-Hexanone	0.0510 U	0.102	0.0315	mg/Kg	1		05/28/19 15:07
4-Chlorotoluene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
4-Isopropyltoluene	0.0510 U	0.102	0.0254	mg/Kg	1		05/28/19 15:07
4-Methyl-2-pentanone (MIBK)	0.127 U	0.254	0.0794	mg/Kg	1		05/28/19 15:07
Acetone	0.127 U	0.254	0.0794	mg/Kg	1		05/28/19 15:07
Benzene	0.00635 U	0.0127	0.00397	mg/Kg	1		05/28/19 15:07
Bromobenzene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
Bromochloromethane	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
Bromodichloromethane	0.00102 U	0.00203	0.000631	mg/Kg	1		05/28/19 15:07
Bromoform	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
Bromomethane	0.0101 U	0.0203	0.00631	mg/Kg	1		05/28/19 15:07
Carbon disulfide	0.0510 U	0.102	0.0315	mg/Kg	1		05/28/19 15:07
Carbon tetrachloride	0.00635 U	0.0127	0.00397	mg/Kg	1		05/28/19 15:07
Chlorobenzene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07

Print Date: 06/07/2019 3:23:27PM

J flagging is activated

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Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341011
 Lab Project ID: 1199341

Collection Date: 05/22/19 13:00
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.102 U	0.203	0.0631	mg/Kg	1		05/28/19 15:07
Chloroform	0.00102 U	0.00203	0.000631	mg/Kg	1		05/28/19 15:07
Chloromethane	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
cis-1,2-Dichloroethene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
cis-1,3-Dichloropropene	0.00635 U	0.0127	0.00397	mg/Kg	1		05/28/19 15:07
Dibromochloromethane	0.00102 U	0.00203	0.000631	mg/Kg	1		05/28/19 15:07
Dibromomethane	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
Dichlorodifluoromethane	0.0255 U	0.0509	0.0153	mg/Kg	1		05/28/19 15:07
Ethylbenzene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
Freon-113	0.0510 U	0.102	0.0315	mg/Kg	1		05/28/19 15:07
Hexachlorobutadiene	0.0101 U	0.0203	0.00631	mg/Kg	1		05/28/19 15:07
Isopropylbenzene (Cumene)	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
Methylene chloride	0.0510 U	0.102	0.0315	mg/Kg	1		05/28/19 15:07
Methyl-t-butyl ether	0.0510 U	0.102	0.0315	mg/Kg	1		05/28/19 15:07
Naphthalene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
n-Butylbenzene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
n-Propylbenzene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
o-Xylene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
P & M -Xylene	0.0255 U	0.0509	0.0153	mg/Kg	1		05/28/19 15:07
sec-Butylbenzene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
Styrene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
tert-Butylbenzene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
Tetrachloroethene	0.00635 U	0.0127	0.00397	mg/Kg	1		05/28/19 15:07
Toluene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
trans-1,2-Dichloroethene	0.0127 U	0.0254	0.00794	mg/Kg	1		05/28/19 15:07
trans-1,3-Dichloropropene	0.00635 U	0.0127	0.00397	mg/Kg	1		05/28/19 15:07
Trichloroethene	0.00255 U	0.00509	0.00153	mg/Kg	1		05/28/19 15:07
Trichlorofluoromethane	0.0255 U	0.0509	0.0153	mg/Kg	1		05/28/19 15:07
Vinyl acetate	0.0510 U	0.102	0.0315	mg/Kg	1		05/28/19 15:07
Vinyl chloride	0.000407 U	0.000814	0.000254	mg/Kg	1		05/28/19 15:07
Xylenes (total)	0.0382 U	0.0763	0.0232	mg/Kg	1		05/28/19 15:07
Surrogates							
1,2-Dichloroethane-D4 (surr)	100	71-136		%	1		05/28/19 15:07
4-Bromofluorobenzene (surr)	93	55-151		%	1		05/28/19 15:07
Toluene-d8 (surr)	99.3	85-116		%	1		05/28/19 15:07

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199341011
 Lab Project ID: 1199341

Collection Date: 05/22/19 13:00
 Received Date: 05/24/19 09:42
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS18980
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 05/28/19 15:07
 Container ID: 1199341011-A

Prep Batch: VXX34139
 Prep Method: SW5035A
 Prep Date/Time: 05/22/19 13:00
 Prep Initial Wt./Vol.: 49.146 g
 Prep Extract Vol: 25 mL

Method Blank

Blank ID: MB for HBN 1794368 [SPT/10780]
Blank Lab ID: 1510176

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010

Results by SM21 2540G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Solids	100			%

Batch Information

Analytical Batch: SPT10780
Analytical Method: SM21 2540G
Instrument:
Analyst: M.M
Analytical Date/Time: 5/30/2019 4:56:00PM

Duplicate Sample Summary

Original Sample ID: 1192547001

Duplicate Sample ID: 1510177

QC for Samples:

Analysis Date: 05/30/2019 16:56

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	74.6	74.6	%	0.06	(< 15)

Batch Information

Analytical Batch: SPT10780

Analytical Method: SM21 2540G

Instrument:

Analyst: M.M

Print Date: 06/07/2019 3:23:30PM

Duplicate Sample Summary

Original Sample ID: 1192622011

Duplicate Sample ID: 1510178

QC for Samples:

1199341001, 1199341002, 1199341003, 1199341004

Analysis Date: 05/30/2019 16:56

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	59.1	58.3	%	1.40	(< 15)

Batch Information

Analytical Batch: SPT10780

Analytical Method: SM21 2540G

Instrument:

Analyst: M.M

Print Date: 06/07/2019 3:23:30PM

Duplicate Sample Summary

Original Sample ID: 1199341004

Duplicate Sample ID: 1510179

QC for Samples:

1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010

Analysis Date: 05/30/2019 16:56

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	96.3	96.0	%	0.24	(< 15)

Batch Information

Analytical Batch: SPT10780

Analytical Method: SM21 2540G

Instrument:

Analyst: M.M

Print Date: 06/07/2019 3:23:30PM

Method Blank

Blank ID: MB for HBN 1794291 [VXX/34139]
Blank Lab ID: 1509776

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010, 1199341011

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.0100U	0.0200	0.00620	mg/Kg
1,1,1-Trichloroethane	0.0125U	0.0250	0.00780	mg/Kg
1,1,2,2-Tetrachloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,1,2-Trichloroethane	0.000400U	0.000800	0.000250	mg/Kg
1,1-Dichloroethane	0.0125U	0.0250	0.00780	mg/Kg
1,1-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
1,1-Dichloropropene	0.0125U	0.0250	0.00780	mg/Kg
1,2,3-Trichlorobenzene	0.0250U	0.0500	0.0150	mg/Kg
1,2,3-Trichloropropane	0.000500U	0.00100	0.000620	mg/Kg
1,2,4-Trichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,2,4-Trimethylbenzene	0.0250U	0.0500	0.0150	mg/Kg
1,2-Dibromo-3-chloropropane	0.0500U	0.100	0.0310	mg/Kg
1,2-Dibromoethane	0.00100U	0.00200	0.000620	mg/Kg
1,2-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,2-Dichloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,2-Dichloropropane	0.00500U	0.0100	0.00310	mg/Kg
1,3,5-Trimethylbenzene	0.0125U	0.0250	0.00780	mg/Kg
1,3-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,3-Dichloropropane	0.00500U	0.0100	0.00310	mg/Kg
1,4-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
2,2-Dichloropropane	0.0125U	0.0250	0.00780	mg/Kg
2-Butanone (MEK)	0.125U	0.250	0.0780	mg/Kg
2-Chlorotoluene	0.0125U	0.0250	0.00780	mg/Kg
2-Hexanone	0.0500U	0.100	0.0310	mg/Kg
4-Chlorotoluene	0.0125U	0.0250	0.00780	mg/Kg
4-Isopropyltoluene	0.0500U	0.100	0.0250	mg/Kg
4-Methyl-2-pentanone (MIBK)	0.125U	0.250	0.0780	mg/Kg
Acetone	0.125U	0.250	0.0780	mg/Kg
Benzene	0.00625U	0.0125	0.00390	mg/Kg
Bromobenzene	0.0125U	0.0250	0.00780	mg/Kg
Bromochloromethane	0.0125U	0.0250	0.00780	mg/Kg
Bromodichloromethane	0.00100U	0.00200	0.000620	mg/Kg
Bromoform	0.0125U	0.0250	0.00780	mg/Kg
Bromomethane	0.0100U	0.0200	0.00620	mg/Kg
Carbon disulfide	0.0500U	0.100	0.0310	mg/Kg
Carbon tetrachloride	0.00625U	0.0125	0.00390	mg/Kg
Chlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
Chloroethane	0.100U	0.200	0.0620	mg/Kg

Print Date: 06/07/2019 3:23:32PM

Method Blank

Blank ID: MB for HBN 1794291 [VXX/34139]
Blank Lab ID: 1509776

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010, 1199341011

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
Chloroform	0.00100U	0.00200	0.000620	mg/Kg
Chloromethane	0.0125U	0.0250	0.00780	mg/Kg
cis-1,2-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
cis-1,3-Dichloropropene	0.00625U	0.0125	0.00390	mg/Kg
Dibromochloromethane	0.00100U	0.00200	0.000620	mg/Kg
Dibromomethane	0.0125U	0.0250	0.00780	mg/Kg
Dichlorodifluoromethane	0.0250U	0.0500	0.0150	mg/Kg
Ethylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Freon-113	0.0500U	0.100	0.0310	mg/Kg
Hexachlorobutadiene	0.0100U	0.0200	0.00620	mg/Kg
Isopropylbenzene (Cumene)	0.0125U	0.0250	0.00780	mg/Kg
Methylene chloride	0.0500U	0.100	0.0310	mg/Kg
Methyl-t-butyl ether	0.0500U	0.100	0.0310	mg/Kg
Naphthalene	0.0125U	0.0250	0.00780	mg/Kg
n-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
n-Propylbenzene	0.0125U	0.0250	0.00780	mg/Kg
o-Xylene	0.0125U	0.0250	0.00780	mg/Kg
P & M -Xylene	0.0250U	0.0500	0.0150	mg/Kg
sec-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Styrene	0.0125U	0.0250	0.00780	mg/Kg
tert-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Tetrachloroethene	0.00625U	0.0125	0.00390	mg/Kg
Toluene	0.0125U	0.0250	0.00780	mg/Kg
trans-1,2-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
trans-1,3-Dichloropropene	0.00625U	0.0125	0.00390	mg/Kg
Trichloroethene	0.00250U	0.00500	0.00150	mg/Kg
Trichlorofluoromethane	0.0250U	0.0500	0.0150	mg/Kg
Vinyl acetate	0.0500U	0.100	0.0310	mg/Kg
Vinyl chloride	0.000400U	0.000800	0.000250	mg/Kg
Xylenes (total)	0.0375U	0.0750	0.0228	mg/Kg
Surrogates				
1,2-Dichloroethane-D4 (surr)	101	71-136		%
4-Bromofluorobenzene (surr)	97	55-151		%
Toluene-d8 (surr)	99.1	85-116		%

Method Blank

Blank ID: MB for HBN 1794291 [VXX/34139]
Blank Lab ID: 1509776

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010, 1199341011

Results by SW8260C

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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Batch Information

Analytical Batch: VMS18980
Analytical Method: SW8260C
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: NRO
Analytical Date/Time: 5/28/2019 11:57:00AM

Prep Batch: VXX34139
Prep Method: SW5035A
Prep Date/Time: 5/28/2019 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 06/07/2019 3:23:32PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199341 [VXX34139]

Blank Spike Lab ID: 1509777

Date Analyzed: 05/28/2019 12:13

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010, 1199341011

Results by SW8260C

Blank Spike (mg/Kg)				
Parameter	Spike	Result	Rec (%)	CL
1,1,1,2-Tetrachloroethane	0.750	0.840	112	(78-125)
1,1,1-Trichloroethane	0.750	0.818	109	(73-130)
1,1,2,2-Tetrachloroethane	0.750	0.761	101	(70-124)
1,1,2-Trichloroethane	0.750	0.800	107	(78-121)
1,1-Dichloroethane	0.750	0.777	104	(76-125)
1,1-Dichloroethene	0.750	0.774	103	(70-131)
1,1-Dichloropropene	0.750	0.805	107	(76-125)
1,2,3-Trichlorobenzene	0.750	0.797	106	(66-130)
1,2,3-Trichloropropane	0.750	0.767	102	(73-125)
1,2,4-Trichlorobenzene	0.750	0.816	109	(67-129)
1,2,4-Trimethylbenzene	0.750	0.819	109	(75-123)
1,2-Dibromo-3-chloropropane	0.750	0.865	115	(61-132)
1,2-Dibromoethane	0.750	0.761	101	(78-122)
1,2-Dichlorobenzene	0.750	0.786	105	(78-121)
1,2-Dichloroethane	0.750	0.759	101	(73-128)
1,2-Dichloropropane	0.750	0.787	105	(76-123)
1,3,5-Trimethylbenzene	0.750	0.824	110	(73-124)
1,3-Dichlorobenzene	0.750	0.793	106	(77-121)
1,3-Dichloropropane	0.750	0.773	103	(77-121)
1,4-Dichlorobenzene	0.750	0.802	107	(75-120)
2,2-Dichloropropane	0.750	0.840	112	(67-133)
2-Butanone (MEK)	2.25	2.33	103	(51-148)
2-Chlorotoluene	0.750	0.804	107	(75-122)
2-Hexanone	2.25	2.40	107	(53-145)
4-Chlorotoluene	0.750	0.795	106	(72-124)
4-Isopropyltoluene	0.750	0.858	114	(73-127)
4-Methyl-2-pentanone (MIBK)	2.25	2.29	102	(65-135)
Acetone	2.25	2.04	91	(36-164)
Benzene	0.750	0.765	102	(77-121)
Bromobenzene	0.750	0.767	102	(78-121)
Bromochloromethane	0.750	0.736	98	(78-125)
Bromodichloromethane	0.750	0.772	103	(75-127)
Bromoform	0.750	0.795	106	(67-132)
Bromomethane	0.750	0.698	93	(53-143)

Print Date: 06/07/2019 3:23:33PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199341 [VXX34139]

Blank Spike Lab ID: 1509777

Date Analyzed: 05/28/2019 12:13

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010, 1199341011

Results by SW8260C

Parameter	Blank Spike (mg/Kg)			CL
	Spike	Result	Rec (%)	
Carbon disulfide	1.13	1.21	108	(63-132)
Carbon tetrachloride	0.750	0.757	101	(70-135)
Chlorobenzene	0.750	0.773	103	(79-120)
Chloroethane	0.750	0.670	89	(59-139)
Chloroform	0.750	0.776	104	(78-123)
Chloromethane	0.750	0.740	99	(50-136)
cis-1,2-Dichloroethene	0.750	0.774	103	(77-123)
cis-1,3-Dichloropropene	0.750	0.860	115	(74-126)
Dibromochloromethane	0.750	0.776	104	(74-126)
Dibromomethane	0.750	0.781	104	(78-125)
Dichlorodifluoromethane	0.750	0.844	113	(29-149)
Ethylbenzene	0.750	0.768	102	(76-122)
Freon-113	1.13	1.17	104	(66-136)
Hexachlorobutadiene	0.750	0.796	106	(61-135)
Isopropylbenzene (Cumene)	0.750	0.826	110	(68-134)
Methylene chloride	0.750	0.724	97	(70-128)
Methyl-t-butyl ether	1.13	1.12	99	(73-125)
Naphthalene	0.750	0.812	108	(62-129)
n-Butylbenzene	0.750	0.870	116	(70-128)
n-Propylbenzene	0.750	0.833	111	(73-125)
o-Xylene	0.750	0.759	101	(77-123)
P & M -Xylene	1.50	1.54	102	(77-124)
sec-Butylbenzene	0.750	0.856	114	(73-126)
Styrene	0.750	0.811	108	(76-124)
tert-Butylbenzene	0.750	0.837	112	(73-125)
Tetrachloroethene	0.750	0.829	111	(73-128)
Toluene	0.750	0.740	99	(77-121)
trans-1,2-Dichloroethene	0.750	0.741	99	(74-125)
trans-1,3-Dichloropropene	0.750	0.885	118	(71-130)
Trichloroethene	0.750	0.750	100	(77-123)
Trichlorofluoromethane	0.750	0.654	87	(62-140)
Vinyl acetate	0.750	0.800	107	(50-151)
Vinyl chloride	0.750	0.743	99	(56-135)
Xylenes (total)	2.25	2.30	102	(78-124)

Print Date: 06/07/2019 3:23:33PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199341 [VXX34139]

Blank Spike Lab ID: 1509777

Date Analyzed: 05/28/2019 12:13

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010, 1199341011

Results by SW8260C

	Blank Spike (mg/Kg)			
<u>Parameter</u>	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>CL</u>
Surrogates				
1,2-Dichloroethane-D4 (surr)	0.750	97.7	98	(71-136)
4-Bromofluorobenzene (surr)	0.750	97	97	(55-151)
Toluene-d8 (surr)	0.750	100	100	(85-116)

Batch Information

Analytical Batch: VMS18980

Analytical Method: SW8260C

Instrument: VRA Agilent GC/MS 7890B/5977A

Analyst: NRO

Prep Batch: VXX34139

Prep Method: SW5035A

Prep Date/Time: 05/28/2019 06:00

Spike Init Wt./Vol.: 0.750 mg/Kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Matrix Spike Summary

Original Sample ID: 1510440
MS Sample ID: 1509778 MS
MSD Sample ID: 1509779 MSD

Analysis Date: 05/28/2019 16:24
Analysis Date: 05/28/2019 13:49
Analysis Date: 05/28/2019 14:05
Matrix: Soil/Solid (dry weight)

QC for Samples: 1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010, 1199341011

Results by SW8260C

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	0.00535U	0.400	0.429	107	0.400	0.445	111	78-125	3.60	(< 20)
1,1,1-Trichloroethane	0.00665U	0.400	0.443	111	0.400	0.457	114	73-130	3.10	(< 20)
1,1,2,2-Tetrachloroethane	0.000535U	0.400	0.388	97	0.400	0.408	102	70-124	4.90	(< 20)
1,1,2-Trichloroethane	0.000213U	0.400	0.405	101	0.400	0.424	106	78-121	4.70	(< 20)
1,1-Dichloroethane	0.00665U	0.400	0.410	103	0.400	0.427	107	76-125	4.00	(< 20)
1,1-Dichloroethene	0.00665U	0.400	0.439	110	0.400	0.435	109	70-131	0.80	(< 20)
1,1-Dichloropropene	0.00665U	0.400	0.435	109	0.400	0.449	112	76-125	3.20	(< 20)
1,2,3-Trichlorobenzene	0.0134U	0.400	0.377	94	0.400	0.427	107	66-130	12.40	(< 20)
1,2,3-Trichloropropane	0.000267U	0.400	0.392	98	0.400	0.411	103	73-125	4.70	(< 20)
1,2,4-Trichlorobenzene	0.00665U	0.400	0.407	102	0.400	0.431	108	67-129	5.90	(< 20)
1,2,4-Trimethylbenzene	0.0134U	0.400	0.396	99	0.400	0.431	108	75-123	8.40	(< 20)
1,2-Dibromo-3-chloropropane	0.0267U	0.400	0.442	110	0.400	0.474	119	61-132	7.10	(< 20)
1,2-Dibromoethane	0.000535U	0.400	0.384	96	0.400	0.405	101	78-122	5.30	(< 20)
1,2-Dichlorobenzene	0.00665U	0.400	0.379	95	0.400	0.405	101	78-121	6.70	(< 20)
1,2-Dichloroethane	0.000535U	0.400	0.390	98	0.400	0.411	103	73-128	5.10	(< 20)
1,2-Dichloropropane	0.00266U	0.400	0.405	101	0.400	0.423	106	76-123	4.30	(< 20)
1,3,5-Trimethylbenzene	0.00665U	0.400	0.400	100	0.400	0.441	110	73-124	9.80	(< 20)
1,3-Dichlorobenzene	0.00665U	0.400	0.379	95	0.400	0.422	105	77-121	10.60	(< 20)
1,3-Dichloropropane	0.00266U	0.400	0.391	98	0.400	0.413	103	77-121	5.70	(< 20)
1,4-Dichlorobenzene	0.00665U	0.400	0.391	98	0.400	0.412	103	75-120	5.20	(< 20)
2,2-Dichloropropane	0.00665U	0.400	0.458	114	0.400	0.471	118	67-133	2.90	(< 20)
2-Butanone (MEK)	0.0665U	1.20	1.17	97	1.20	1.25	104	51-148	7.10	(< 20)
2-Chlorotoluene	0.00665U	0.400	0.394	99	0.400	0.424	106	75-122	7.30	(< 20)
2-Hexanone	0.0267U	1.20	1.20	100	1.20	1.27	106	53-145	6.10	(< 20)
4-Chlorotoluene	0.00665U	0.400	0.395	99	0.400	0.429	107	72-124	8.30	(< 20)
4-Isopropyltoluene	0.0267U	0.400	0.425	106	0.400	0.458	115	73-127	7.60	(< 20)
4-Methyl-2-pentanone (MIBK)	0.0665U	1.20	1.15	96	1.20	1.23	103	65-135	6.60	(< 20)
Acetone	0.0665U	1.20	1.01	84	1.20	1.11	92	36-164	9.40	(< 20)
Benzene	0.00333U	0.400	0.401	100	0.400	0.416	104	77-121	3.70	(< 20)
Bromobenzene	0.00665U	0.400	0.392	98	0.400	0.413	103	78-121	5.40	(< 20)
Bromochloromethane	0.00665U	0.400	0.392	98	0.400	0.402	101	78-125	2.50	(< 20)
Bromodichloromethane	0.000535U	0.400	0.402	101	0.400	0.420	105	75-127	4.40	(< 20)
Bromoform	0.00665U	0.400	0.404	101	0.400	0.424	106	67-132	5.00	(< 20)
Bromomethane	0.00535U	0.400	0.422	106	0.400	0.421	105	53-143	0.33	(< 20)
Carbon disulfide	0.0267U	0.600	0.717	120	0.600	0.687	115	63-132	4.30	(< 20)
Carbon tetrachloride	0.00333U	0.400	0.414	104	0.400	0.426	106	70-135	2.80	(< 20)
Chlorobenzene	0.00665U	0.400	0.395	99	0.400	0.411	103	79-120	3.80	(< 20)

Print Date: 06/07/2019 3:23:34PM

Matrix Spike Summary

Original Sample ID: 1510440
MS Sample ID: 1509778 MS
MSD Sample ID: 1509779 MSD

Analysis Date: 05/28/2019 16:24
Analysis Date: 05/28/2019 13:49
Analysis Date: 05/28/2019 14:05
Matrix: Soil/Solid (dry weight)

QC for Samples: 1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010, 1199341011

Results by SW8260C

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chloroethane	0.0535U	0.400	0.369	92	0.400	0.368	92	59-139	0.28	(< 20)
Chloroform	0.000535U	0.400	0.406	101	0.400	0.423	106	78-123	4.30	(< 20)
Chloromethane	0.00665U	0.400	0.446	111	0.400	0.429	107	50-136	3.80	(< 20)
cis-1,2-Dichloroethene	0.00665U	0.400	0.405	101	0.400	0.421	105	77-123	4.00	(< 20)
cis-1,3-Dichloropropene	0.00333U	0.400	0.447	112	0.400	0.465	116	74-126	3.80	(< 20)
Dibromochloromethane	0.000535U	0.400	0.398	100	0.400	0.410	103	74-126	2.80	(< 20)
Dibromomethane	0.00665U	0.400	0.402	101	0.400	0.423	106	78-125	5.10	(< 20)
Dichlorodifluoromethane	0.0134U	0.400	0.460	115	0.400	0.481	120	29-149	4.60	(< 20)
Ethylbenzene	0.00665U	0.400	0.382	96	0.400	0.408	102	76-122	6.50	(< 20)
Freon-113	0.0267U	0.600	0.640	107	0.600	0.651	109	66-136	1.70	(< 20)
Hexachlorobutadiene	0.00535U	0.400	0.648	162 *	0.400	0.563	141 *	61-135	14.00	(< 20)
Isopropylbenzene (Cumene)	0.00665U	0.400	0.392	98	0.400	0.434	109	68-134	10.20	(< 20)
Methylene chloride	0.0267U	0.400	0.374	94	0.400	0.385	96	70-128	2.90	(< 20)
Methyl-t-butyl ether	0.0267U	0.600	0.570	95	0.600	0.607	101	73-125	6.30	(< 20)
Naphthalene	0.00665U	0.400	0.378	95	0.400	0.437	109	62-129	14.40	(< 20)
n-Butylbenzene	0.00665U	0.400	0.458	115	0.400	0.473	118	70-128	3.30	(< 20)
n-Propylbenzene	0.00665U	0.400	0.402	101	0.400	0.443	111	73-125	9.70	(< 20)
o-Xylene	0.00665U	0.400	0.380	95	0.400	0.403	101	77-123	5.80	(< 20)
P & M -Xylene	0.0134U	0.800	0.758	95	0.800	0.816	102	77-124	7.30	(< 20)
sec-Butylbenzene	0.00665U	0.400	0.419	105	0.400	0.450	112	73-126	7.10	(< 20)
Styrene	0.00665U	0.400	0.408	102	0.400	0.433	108	76-124	5.90	(< 20)
tert-Butylbenzene	0.00665U	0.400	0.408	102	0.400	0.438	110	73-125	7.30	(< 20)
Tetrachloroethene	0.00333U	0.400	0.416	104	0.400	0.434	108	73-128	4.20	(< 20)
Toluene	0.00665U	0.400	0.381	95	0.400	0.400	100	77-121	4.80	(< 20)
trans-1,2-Dichloroethene	0.00665U	0.400	0.420	105	0.400	0.420	105	74-125	0.05	(< 20)
trans-1,3-Dichloropropene	0.00333U	0.400	0.453	113	0.400	0.470	117	71-130	3.70	(< 20)
Trichloroethene	0.00134U	0.400	0.397	99	0.400	0.414	104	77-123	4.20	(< 20)
Trichlorofluoromethane	0.0134U	0.400	0.376	94	0.400	0.363	91	62-140	3.50	(< 20)
Vinyl acetate	0.0267U	0.400	0.408	102	0.400	0.439	110	50-151	7.50	(< 20)
Vinyl chloride	0.000213U	0.400	0.415	104	0.400	0.419	105	56-135	0.79	(< 20)
Xylenes (total)	0.0200U	1.20	1.14	95	1.20	1.22	102	78-124	6.80	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		0.400	0.388	97	0.400	0.393	98	71-136	1.40	
4-Bromofluorobenzene (surr)		0.666	0.515	77	0.666	0.540	81	55-151	4.80	
Toluene-d8 (surr)		0.400	0.398	100	0.400	0.397	99	85-116	0.33	

Print Date: 06/07/2019 3:23:34PM

Matrix Spike Summary

Original Sample ID: 1510440
MS Sample ID: 1509778 MS
MSD Sample ID: 1509779 MSD

Analysis Date:
Analysis Date: 05/28/2019 13:49
Analysis Date: 05/28/2019 14:05
Matrix: Soil/Solid (dry weight)

QC for Samples: 1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010, 1199341011

Results by SW8260C

Parameter	Sample	Matrix Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			

Batch Information

Analytical Batch: VMS18980
Analytical Method: SW8260C
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: NRO
Analytical Date/Time: 5/28/2019 1:49:00PM

Prep Batch: VXX34139
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 5/28/2019 6:00:00AM
Prep Initial Wt./Vol.: 93.79g
Prep Extract Vol: 25.00mL

Print Date: 06/07/2019 3:23:34PM

Method Blank

Blank ID: MB for HBN 1794375 [XXX/41501]
Blank Lab ID: 1510203

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
5a Androstane (surr)	103	60-120		%

Batch Information

Analytical Batch: XFC15029
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: VDL
Analytical Date/Time: 6/5/2019 4:26:00PM

Prep Batch: XXX41501
Prep Method: SW3550C
Prep Date/Time: 5/31/2019 9:27:22AM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Print Date: 06/07/2019 3:23:35PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199341 [XXX41501]
 Blank Spike Lab ID: 1510204
 Date Analyzed: 06/05/2019 16:36

Spike Duplicate ID: LCSD for HBN 1199341 [XXX41501]
 Spike Duplicate Lab ID: 1510205
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010

Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	833	990	119	833	969	116	(75-125)	2.20	(< 20)
Surrogates									
5a Androstane (surr)	16.7	112	112	16.7	112	112	(60-120)	0.08	

Batch Information

Analytical Batch: **XFC15029**
 Analytical Method: **AK102**
 Instrument: **Agilent 7890B R**
 Analyst: **VDL**

Prep Batch: **XXX41501**
 Prep Method: **SW3550C**
 Prep Date/Time: **05/31/2019 09:27**
 Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

Print Date: 06/07/2019 3:23:36PM

Method Blank

Blank ID: MB for HBN 1794375 [XXX/41501]
Blank Lab ID: 1510203

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010

Results by AK103

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
n-Triacontane-d62 (surr)	122*	60-120		%

Batch Information

Analytical Batch: XFC15029
Analytical Method: AK103
Instrument: Agilent 7890B R
Analyst: VDL
Analytical Date/Time: 6/5/2019 4:26:00PM

Prep Batch: XXX41501
Prep Method: SW3550C
Prep Date/Time: 5/31/2019 9:27:22AM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Print Date: 06/07/2019 3:23:37PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199341 [XXX41501]
 Blank Spike Lab ID: 1510204
 Date Analyzed: 06/05/2019 16:36

Spike Duplicate ID: LCSD for HBN 1199341 [XXX41501]
 Spike Duplicate Lab ID: 1510205
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1199341001, 1199341002, 1199341003, 1199341004, 1199341005, 1199341006, 1199341007, 1199341008, 1199341009, 1199341010

Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	833	872	105	833	863	104	(60-120)	1.00	(< 20)
Surrogates									
n-Triacontane-d62 (surr)	16.7	128	128	* 16.7	130	130	* (60-120)	1.70	

Batch Information

Analytical Batch: **XFC15097**
 Analytical Method: **AK102**
 Instrument: **Agilent 8R70B V**
 Analyst: **DL4**

Prep Batch: **XXXW501**
 Prep Method: **S3 2550C**
 Prep Date/Time: **05/21/2017 07:98**
 Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

Print Date: 06/07/2019 3:23:38PM

1199341



SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
2355 Hill Road
Fairbanks, AK 99709
(907) 479-0600
www.shannonwilson.com

CHAIN-O

E-CORD

Laboratory SGS Page 1 of 2
Attn: Jen Dawkins

Analytical Methods (include preservative if used)

Turn Around Time: ☒ Normal ☐ Rush

Quote No: _____

J-Flags: ☒ Yes ☐ No

Please Specify _____

Sample Identity	Lab No.	Time	Date Sampled	Total Number of Containers	Remarks/Matrix Composition/Grab? Sample Containers
B3025-WS-01	1 AB	1310	5/22/14	X	Soil
B3025-WS-101	2 AB	1300		X	
B3025-NS-01	3 AB	1428		X	
B3025-NB-01	4 AB	1435		X	
B3025-NB-02	5 AB	1442		X	
B3025-EB-01	6 AB	1450		X	
B3025-EB-02	7 AB	1500		X	
B3025-ES-01	8 AB	1506		X	
B3025-ES-02	9 AB	1513		X	
B3025-ES-03	10 AB	1520		X	

Project Information

Number: 10004-005

Name: B3025

Contact: VEW

Ongoing Project? Yes ☒ No ☐

Sampler: DHE

Sample Receipt

Total No. of Containers: 20

COC Seals/Intact? Y/N/NA

Received Good Cond./Cold

Temp: 4.5

Delivery Method: hand

Notes:

trip blank in cooler with samples at all times

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - job file

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: <u>Dana Fjare</u>	Signature: <u>Jen Dawkins</u>	Signature: <u>SGS</u>
Printed Name: <u>Dana Fjare</u>	Printed Name: <u>Jen Dawkins</u>	Printed Name: <u>SGS</u>
Company: <u>Shannon & Wilson Inc.</u>	Company: <u>SGS</u>	Company: <u>SGS</u>
Time: <u>9:15</u>	Time: <u>1400</u>	Time: <u>9:42</u>
Date: <u>5/23</u>	Date: <u>5/23/14</u>	Date: <u>5/24/14</u>
Received By: 1.	Received By: 2.	Received By: 3.
Signature: <u>Jen Dawkins</u>	Signature: <u>SGS</u>	Signature: <u>SGS</u>
Printed Name: <u>Jen Dawkins</u>	Printed Name: <u>SGS</u>	Printed Name: <u>SGS</u>
Company: <u>SGS</u>	Company: <u>SGS</u>	Company: <u>SGS</u>
Time: <u>0915</u>	Time: <u>9:42</u>	Time: <u>9:42</u>
Date: <u>5/23/14</u>	Date: <u>5/23/14</u>	Date: <u>5/24/14</u>

No. 35936





Returned Bottles Inventory

Name of
individual
returning
bottles:

Date
Received:

5/24/19

Client Name:

Shannon Wilson

Received by:

WIL

Project Name:

100004-005 B3025

SGS PM:

HDPE/Nalgene:	1-L					
	500-ml					
	250-ml or 8-oz					
	125-ml or 4-oz					
	60-ml or 2-oz					
	other					
amber glass:	1-L					
	500-ml					
	250-ml or 8-oz					
	125-ml or 4-oz with or without septa	4 - 2 containing melt - Bth w/sample				
	40-ml VOA vial					
	other					
Subtotal:						

Note: Returned bottles (regardless of size/pres.) are billed back at \$4/bottle unless otherwise quoted.

Amount to Invoice Client \$:

WO#:

9341



e-Sample Receipt Form

SGS Workorder #:

1199341



1 1 9 9 3 4 1

Review Criteria		Condition (Yes, No, N/A)	Exceptions Noted below	
Chain of Custody / Temperature Requirements			N/A	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	Yes	1F 1B		
COC accompanied samples?	Yes			
DOD: Were samples received in COC corresponding coolers?	N/A			
N/A **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required				
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Yes	Cooler ID:	1	@ 4.2 °C Therm. ID: D23
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.	N/A	Cooler ID:		@ °C Therm. ID:
	N/A	Cooler ID:		@ °C Therm. ID:
	N/A	Cooler ID:		@ °C Therm. ID:
	N/A	Cooler ID:		@ °C Therm. ID:
	N/A			
*If >6°C, were samples collected <8 hours ago?		N/A		
If <0°C, were sample containers ice free?		N/A		
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.				
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.		
Were samples received within holding time?	Yes			
Do samples match COC** (i.e., sample IDs, dates/times collected)?	Yes			
**Note: If times differ <1hr, record details & login per COC.				
***Note: If sample information on containers differs from COC, SGS will default to COC information				
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals))	No	VOC LL 8260 requested on COC - Logging in VOC 8260 per PM.		
		N/A	***Exemption permitted for metals (e.g. 200.8/6020A).	
Were proper containers (type/mass/volume/preservative***) used?	Yes			
Volatile / LL-Hg Requirements				
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	Yes			
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A			
Were all soil VOAs field extracted with MeOH+BFB?	Yes			
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.				
Additional notes (if applicable):				

Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1199341001-A	No Preservative Required	OK			
1199341001-B	Methanol field pres. 4 C	OK			
1199341002-A	No Preservative Required	OK			
1199341002-B	Methanol field pres. 4 C	OK			
1199341003-A	No Preservative Required	OK			
1199341003-B	Methanol field pres. 4 C	OK			
1199341004-A	No Preservative Required	OK			
1199341004-B	Methanol field pres. 4 C	OK			
1199341005-A	No Preservative Required	OK			
1199341005-B	Methanol field pres. 4 C	OK			
1199341006-A	No Preservative Required	OK			
1199341006-B	Methanol field pres. 4 C	OK			
1199341007-A	No Preservative Required	OK			
1199341007-B	Methanol field pres. 4 C	OK			
1199341008-A	No Preservative Required	OK			
1199341008-B	Methanol field pres. 4 C	OK			
1199341009-A	No Preservative Required	OK			
1199341009-B	Methanol field pres. 4 C	OK			
1199341010-A	No Preservative Required	OK			
1199341010-B	Methanol field pres. 4 C	OK			
1199341011-A	Methanol field pres. 4 C	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.








PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

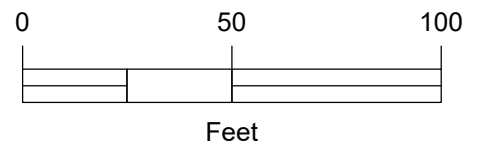
PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.



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LEGEND

- | | | | |
|---|----------------------|---|--|
|  | Completed Trenching |  | Analytical Results Below ADEC Cleanup Levels |
|  | Tower | | |
|  | Canopy | | |
|  | Mechanical Equipment | | |
|  | Gravel Pad | | |
|  | Fence | | |



Building 3025
Emergency Dispatch Center Antenna Tower
Fort Wainwright, Alaska

LIMITS OF EXCAVATION ANALYTICAL RESULTS

July 2019

100004-003

 SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure 1

TABLE 1
FORT WAINWRIGHT BUILDING 3025 - JUNE 2019 SOIL RESULTS

SHANNON & WILSON, INC.

Analytical Method	Analyte	ADEC Soil Cleanup Level	Units	B3025-SP-01	B3025-SP-02	B3025-SP-03	B3025-SP-04	B3025-SP-05	B3025-SP-06 Primary	B3025-SP-07 Duplicate	B3025-WB-01
AK101	Gasoline Range Organics	300	mg/kg	<1.94	<1.58	<1.50	<1.31	<1.55	<1.54	<1.44	<1.30
AK102	Diesel Range Organics	250	mg/kg	<10.7	10.6 J	22.7	9.86 J	7.08 J	32.2 J*	8.54 J*	8.85 J
AK103	Residual Range Organics	11,000	mg/kg	80.0	54.2	118	40.7	39.2	322 J*	55.9 J*	41.6
SW8260C (VOC)	1,1,1,2-Tetrachloroethane	0.022	mg/kg	<0.0155	<0.0127	<0.0120	<0.0104	<0.0124	<0.0124	<0.0115	<0.0104
	1,1,1-Trichloroethane	32	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	1,1,2,2-Tetrachloroethane	0.003	mg/kg	<0.00155	<0.00127	<0.00120	<0.00104	<0.00125	<0.00124	<0.00115	<0.00104
	1,1,2-Trichloroethane	0.0014	mg/kg	<0.000620	<0.000505	<0.000479	<0.000418	<0.000498	<0.000495	<0.000460	<0.000418
	1,1-Dichloroethane	0.092	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	1,1-Dichloroethene	1.2	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	1,1-Dichloropropene	—	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	1,2,3-Trichlorobenzene	0.15	mg/kg	<0.0388	<0.0316	<0.0300	<0.0262	<0.0311	<0.0309	<0.0288	<0.0261
	1,2,3-Trichloropropane	0.000031	mg/kg	<0.000775	<0.000630	<0.000600	<0.000525	<0.000620	<0.000620	<0.000575	<0.000520
	1,2,4-Trichlorobenzene	0.082	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	1,2,4-Trimethylbenzene	0.61	mg/kg	<0.0388	<0.0316	<0.0300	<0.0262	<0.0311	<0.0309	<0.0288	<0.0261
	1,2-Dibromo-3-chloropropane	—	mg/kg	<0.0775	<0.0630	<0.0600	<0.0525	<0.0620	<0.0620	<0.0575	<0.0520
	1,2-Dibromoethane	0.00024	mg/kg	<0.000775	<0.000630	<0.000600	<0.000525	<0.000620	<0.000620	<0.000575	<0.000520
	1,2-Dichlorobenzene	2.4	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	1,2-Dichloroethane	0.0055	mg/kg	<0.00155	<0.00127	<0.00120	<0.00104	<0.00125	<0.00124	<0.00115	<0.00104
	1,2-Dichloropropane	0.03	mg/kg	<0.00775	<0.00630	<0.00600	<0.00525	<0.00620	<0.00620	<0.00575	<0.00520
	1,3,5-Trimethylbenzene	0.66	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	1,3-Dichlorobenzene	2.3	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	1,3-Dichloropropane	—	mg/kg	<0.00775	<0.00630	<0.00600	<0.00525	<0.00620	<0.00620	<0.00575	<0.00520
	1,4-Dichlorobenzene	0.037	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	2,2-Dichloropropane	—	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	2-Butanone (MEK)	15	mg/kg	<0.194	<0.158	<0.149	<0.131	<0.156	<0.155	<0.143	<0.131
	2-Chlorotoluene	—	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	2-Hexanone	0.11	mg/kg	<0.0775	<0.0630	<0.0600	<0.0525	<0.0620	<0.0620	<0.0575	<0.0520
	4-Chlorotoluene	—	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	4-Methyl-2-pentanone (MIBK)	18	mg/kg	<0.194	<0.158	<0.149	<0.131	<0.156	<0.155	<0.143	<0.131
	Acetone	38	mg/kg	<0.194	<0.158	<0.149	<0.131	<0.156	<0.155	<0.143	<0.131
	Benzene	0.022	mg/kg	<0.00970	<0.00790	<0.00750	<0.00655	<0.00780	<0.00775	<0.00720	<0.00650
	Bromobenzene	0.36	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	Bromochloromethane	—	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	Bromodichloromethane	0.0043	mg/kg	<0.00155	<0.00127	<0.00120	<0.00104	<0.00125	<0.00124	<0.00115	<0.00104
	Bromoform	0.1	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	Bromomethane	0.024	mg/kg	<0.0155	<0.0127	<0.0120	<0.0104	<0.0124	<0.0124	<0.0115	<0.0104
	Carbon disulfide	2.9	mg/kg	<0.0775	<0.0630	<0.0600	<0.0525	<0.0620	<0.0620	<0.0575	<0.0520
	Carbon tetrachloride	0.021	mg/kg	<0.00970	<0.00790	<0.00750	<0.00655	<0.00780	<0.00775	<0.00720	<0.00650
	Chlorobenzene	0.46	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	Chloroethane	72	mg/kg	<0.155	<0.127	<0.120	<0.105	<0.125	<0.124	<0.115	<0.105
	Chloroform	0.0071	mg/kg	<0.00155	<0.00127	<0.00120	<0.00104	<0.00125	<0.00124	<0.00115	<0.00104
	Chloromethane	0.61	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	cis-1,2-Dichloroethene	0.12	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131

TABLE 1
FORT WAINWRIGHT BUILDING 3025 - JUNE 2019 SOIL RESULTS

SHANNON & WILSON, INC.

Analytical Method	Analyte	ADEC Soil Cleanup Level	Units	B3025-SP-01	B3025-SP-02	B3025-SP-03	B3025-SP-04	B3025-SP-05	B3025-SP-06 Primary	B3025-SP-07 Duplicate	B3025-WB-01
SW8260C (VOC)	cis-1,3-Dichloropropene	0.018	mg/kg	<0.00970	<0.00790	<0.00750	<0.00655	<0.00780	<0.00775	<0.00720	<0.00650
	Dibromochloromethane	0.0027	mg/kg	<0.00155	<0.00127	<0.00120	<0.00104	<0.00125	<0.00124	<0.00115	<0.00104
	Dibromomethane	0.025	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	Dichlorodifluoromethane	3.9	mg/kg	<0.0388	<0.0316	<0.0300	<0.0262	<0.0311	<0.0309	<0.0288	<0.0261
	Ethylbenzene	0.13	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	Hexachlorobutadiene	0.02	mg/kg	<0.0155	<0.0127	<0.0120	<0.0104	<0.0124	<0.0124	<0.0115	<0.0104
	Isopropylbenzene	5.6	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	Methylene chloride	0.33	mg/kg	<0.0775	<0.0630	<0.0600	<0.0525	<0.0620	<0.0620	<0.0575	<0.0520
	Methyl-t-butyl ether	0.4	mg/kg	<0.0775	<0.0630	<0.0600	<0.0525	<0.0620	<0.0620	<0.0575	<0.0520
	Naphthalene	0.038	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	n-Butylbenzene	23	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	n-Propylbenzene	9.1	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	o-Xylene	1.5	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	P & M -Xylene	1.5	mg/kg	<0.0388	<0.0316	<0.0300	<0.0262	<0.0311	<0.0309	<0.0288	<0.0261
	p-Isopropyltoluene	—	mg/kg	<0.0775	<0.0630	<0.0600	<0.0525	<0.0620	<0.0620	<0.0575	<0.0520
	sec-Butylbenzene	42	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	Styrene	10	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	tert-Butylbenzene	11	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	Tetrachloroethene	0.19	mg/kg	<0.00970	<0.00790	<0.00750	0.0329	<0.00780	<0.00775	<0.00720	<0.00650
	Toluene	6.7	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	Total Xylenes	1.5	mg/kg	<0.0580	<0.0474	<0.0449	<0.0393	<0.0466	<0.0464	<0.0431	<0.0391
	trans-1,2-Dichloroethene	1.3	mg/kg	<0.0194	<0.0158	<0.0150	<0.0131	<0.0156	<0.0155	<0.0144	<0.0131
	trans-1,3-Dichloropropene	0.018	mg/kg	<0.00970	<0.00790	<0.00750	<0.00655	<0.00780	<0.00775	<0.00720	<0.00650
	Trichloroethene	0.011	mg/kg	<0.00388	<0.00315	<0.00299	<0.00262	<0.00311	<0.00309	<0.00288	<0.00261
	Trichlorofluoromethane	41	mg/kg	<0.0388	<0.0316	<0.0300	<0.0262	<0.0311	<0.0309	<0.0288	<0.0261
	Trichlorotrifluoroethane	310	mg/kg	<0.0775	<0.0630	<0.0600	<0.0525	<0.0620	<0.0620	<0.0575	<0.0520
	Vinyl acetate	1.1	mg/kg	<0.0775	<0.0630	<0.0600	<0.0525	<0.0620	<0.0620	<0.0575	<0.0520
	Vinyl chloride	0.0008	mg/kg	<0.000620	<0.000505	<0.000479	<0.000418	<0.000498	<0.000495	<0.000460	<0.000418

Notes: ADEC Soil-Cleanup Levels from 18 AAC 75.341 Table B1. Method Two - Migration to Groundwater and Table B2. Method Two - Under 40 Inch Zone - Migration to Groundwater

ADEC Alaska Department of Environmental Conservation

VOC volatile organic compounds

— ADEC soil cleanup level not established

mg/kg milligrams per kilogram

J Estimated result, detected below the limit of quantitation (LOQ).

J* Result is considered estimated due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)

< Analyte not detected above the listed limit of detection (LOD).

Bold The reported LOD exceeds the associated ADEC soil cleanup level.

Laboratory Data Review Checklist

Completed By:

Adam Wyborny

Title:

Environmental Engineering Staff

Date:

July 9, 2019

CS Report Name:

100004-002 FTW Building 3025

Report Date:

July 9, 2019

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

SGS North America, Inc.

Laboratory Report Number:

1199428

ADEC File Number:

N/A

Hazard Identification Number:

N/A

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and
- perform
- all of the submitted sample analyses?

☒ Yes ☐ No

Comments:

- b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

☒ Yes ☐ No

Comments:

N/A; All analyses were performed by the SGS laboratory in Anchorage, AK. The laboratory is certified by the ADEC CSP for the requested analyses.

2. Chain of Custody (CoC)

- a. CoC information completed, signed, and dated (including released/received by)?

☒ Yes ☐ No

Comments:

- b. Correct Analyses requested?

☒ Yes ☐ No

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

☒ Yes ☐ No

Comments:

The sample cooler was received within the recommended temperature range at the SGS Fairbanks receiving office and Anchorage laboratory.

- b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes ☐ No

Comments:

- c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes ☐ No

Comments:

The laboratory notes that samples were received in good condition.

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☒ Yes ☐ No

Comments:

The sample receipt form notes that the methanol preservative was not noted on the COC.

- e. Data quality or usability affected?

Comments:

The data quality and/or usability was not affected. The sample volume marked for gasoline range organics (GRO) and volatile organic compounds (VOC) analyses were preserved with a sufficient quantity of methanol despite not being specifically identified on the COC.

4. Case Narrative

- a. Present and understandable?

☒ Yes ☐ No

Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

☐ Yes ☒ No

Comments:

There were no discrepancies, errors, or QC failures documented in the case narrative.

- c. Were all corrective actions documented?

☐ Yes ☒ No

Comments:

There are no corrective actions documented in the case narrative.

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The case narrative did not specify any effect on data quality/usability.

5. Samples Results

- a. Correct analyses performed/reported as requested on COC?

☒ Yes ☐ No

Comments:

- b. All applicable holding times met?

☒ Yes ☐ No

Comments:

c. All soils reported on a dry weight basis?

☒ Yes ☐ No

Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

☒ Yes ☐ No

Comments:

The following 8260C analytes had LOQs greater than their associated ADEC Migration to Groundwater Soil Cleanup Levels in one or more samples: 1,2,3-trichloropropane and 1,2-dibromoethane.

e. Data quality or usability affected?

☒ Yes ☐ No

Comments:

Reported non-detect sample results with LOQs above the applicable ADEC soil cleanup levels are noted on the analytical results table. We cannot assess if the affected analytes are present in the samples at concentrations greater than the ADEC soil cleanup levels but less than the LOQ.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☒ Yes ☐ No

Comments:

ii. All method blank results less than limit of quantitation (LOQ)?

☒ Yes ☐ No

Comments:

iii. If above LOQ, what samples are affected?

Comments:

No samples are affected. Target analytes were not detected in the method blank samples.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☒ Yes ☐ No

Comments:

N/A; no samples are affected by method blank detections.

v. Data quality or usability affected?

Comments:

Data quality and/or usability was not affected; see above.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☒ Yes ☐ No

Comments:

LCS/LCSD samples were reported for methods AK101, AK102, and AK103.

LCS and MS/MSD samples were reported for method SW8260C.

- ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☒ Yes ☐ No

Comments:

N/A; metals/inorganics analyses were not requested for this work order.

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No

Comments:

The recoveries of the SW8260C analytes 1,2,3-trichlorobenzene, 4-isopropyltoluene, hexachlorobutadiene, n-butylbenzene, and sec-butylbenzene were above their respective upper control limits in the MS and/or MSD samples associated with preparation batch VXX34302.

- iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No

Comments:

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

No samples are affected. The field sample upon which the MS/MSD samples associated with preparation batch VXX34302 were performed was not included with this work order.

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☒ Yes ☐ No

Comments:

N/A; no samples are affected by method accuracy nor precision failures.

- vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality and/or usability was not affected; see above.

c. Surrogates – Organics Only

- i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☒ Yes ☐ No

Comments:

- ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☒ Yes ☐ No

Comments:

- iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No

Comments:

N/A; surrogate recoveries associated with this work order were demonstrated to be within acceptable limits.

- iv. Data quality or usability affected?

Comments:

The data quality and/or usability are not affected; see above.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

- i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples?
-
- (If not, enter explanation below.)

☒ Yes ☐ No

Comments:

- ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☒ Yes ☐ No

Comments:

- iii. All results less than LOQ?

☒ Yes ☐ No

Comments:

iv. If above LOQ, what samples are affected?

Comments:

No samples are affected. Target analytes were not detected in the trip bank sample accompanying this sample batch.

v. Data quality or usability affected?

Comments:

The data quality and/or usability are not affected; see above.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No

Comments:

ii. Submitted blind to lab?

☒ Yes ☐ No

Comments:

The field duplicate samples *B3025-SP-06* and *B3025-SP-07* were submitted with this work order.

iii. Precision – All relative percent differences (RPD) less than specified DQOs?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

☐ Yes ☒ No

Comments:

The detected diesel range organics (DRO) and residual range organics (RRO) results of the field-duplicate samples did not meet the DQO of 50%.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

The DRO and RRO results of the field-duplicate samples *B3025-SP-06* and *B3025-SP-07* are considered estimated and flagged 'J' to identify the imprecision.

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below).

☐ Yes ☐ No ☒ Not Applicable

Samples for this project are collected with individual stainless-steel spoons which were decontaminated prior to use in the field.

i. All results less than LOQ?

☒ Yes ☐ No

Comments:

N/A; an equipment blank sample was not submitted with this work order.

ii. If above LOQ, what samples are affected?

Comments:

N/A; an equipment blank sample was not submitted with this work order.

iii. Data quality or usability affected?

Comments:

The data quality and/or usability was not affected; see above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☒ Yes ☐ No

Comments:

Additional data flags/qualifiers are not required.

Laboratory Report of Analysis

To: Shannon & Wilson-Fairbanks
5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
907-479-0600

Report Number: **1199428**

Client Project: **100004-005 B3025**

Dear Valerie Webb,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Jennifer at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.



Alaska Division Technical Director

Stephen Ede

2019.07.09

10:13:32 -08'00'

Jennifer Dawkins
Project Manager
Jennifer.Dawkins@sgs.com

Date



Case Narrative

SGS Client: Shannon & Wilson-Fairbanks

SGS Project: 1199428

Project Name/Site: 100004-005 B3025

Refer to sample receipt form for information on sample condition.

* QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to the associated field samples.

Report of Manual Integrations

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analytical Batch</u>	<u>Analyte</u>	<u>Reason</u>
SW8260C				
1193122005	LABREFQC	VMS19077	Naphthalene	SP
1193122005	LABREFQC	VMS19077	Styrene	RP

Manual Integration Reason Code Descriptions

Code	Description
O	Original Chromatogram
M	Modified Chromatogram
SS	Skimmed surrogate
BLG	Closed baseline gap
RP	Reassign peak name
PIR	Pattern integration required
IT	Included tail
SP	Split peak
RSP	Removed split peak
FPS	Forced peak start/stop
BLC	Baseline correction
PNF	Peak not found by software

All DRO/RRO analysis are integrated per SOP.

Print Date: 07/09/2019 9:45:26AM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry (DW Chemistry (Provisionally Certified as of 6/20/19 for Turbidity by SM 2130B, and Copper by EPA 200.8) & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
B3025-WB-01	1199428001	06/17/2019	06/18/2019	Soil/Solid (dry weight)
B3025-SP-01	1199428002	06/17/2019	06/18/2019	Soil/Solid (dry weight)
B3025-SP-02	1199428003	06/17/2019	06/18/2019	Soil/Solid (dry weight)
B3025-SP-03	1199428004	06/17/2019	06/18/2019	Soil/Solid (dry weight)
B3025-SP-04	1199428005	06/17/2019	06/18/2019	Soil/Solid (dry weight)
B3025-SP-05	1199428006	06/17/2019	06/18/2019	Soil/Solid (dry weight)
B3025-SP-06	1199428007	06/17/2019	06/18/2019	Soil/Solid (dry weight)
B3025-SP-07	1199428008	06/17/2019	06/18/2019	Soil/Solid (dry weight)
Trip Blank	1199428009	06/17/2019	06/18/2019	Soil/Solid (dry weight)

<u>Method</u>	<u>Method Description</u>
AK102	Diesel/Residual Range Organics
AK103	Diesel/Residual Range Organics
AK101	Gasoline Range Organics (S)
SM21 2540G	Percent Solids SM2540G
SW8260C	VOC 8260 (S) Field Extracted

Print Date: 07/09/2019 9:45:28AM

Detectable Results Summary

Client Sample ID: **B3025-WB-01**

Lab Sample ID: 1199428001

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	8.85J	mg/Kg
Residual Range Organics	41.6	mg/Kg

Client Sample ID: **B3025-SP-01**

Lab Sample ID: 1199428002

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Residual Range Organics	80.0	mg/Kg

Client Sample ID: **B3025-SP-02**

Lab Sample ID: 1199428003

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	10.6J	mg/Kg
Residual Range Organics	54.2	mg/Kg

Client Sample ID: **B3025-SP-03**

Lab Sample ID: 1199428004

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	22.7	mg/Kg
Residual Range Organics	118	mg/Kg

Client Sample ID: **B3025-SP-04**

Lab Sample ID: 1199428005

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	9.86J	mg/Kg
Residual Range Organics	40.7	mg/Kg
Tetrachloroethene	0.0329	mg/Kg

Volatile GC/MS

Client Sample ID: **B3025-SP-05**

Lab Sample ID: 1199428006

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	7.08J	mg/Kg
Residual Range Organics	39.2	mg/Kg

Client Sample ID: **B3025-SP-06**

Lab Sample ID: 1199428007

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	32.2	mg/Kg
Residual Range Organics	322	mg/Kg

Client Sample ID: **B3025-SP-07**

Lab Sample ID: 1199428008

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	8.54J	mg/Kg
Residual Range Organics	55.9	mg/Kg

Results of B3025-WB-01

Client Sample ID: **B3025-WB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428001
 Lab Project ID: 1199428

Collection Date: 06/17/19 09:50
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	8.85 J	20.8	6.46	mg/Kg	1		06/27/19 23:38
Surrogates							
5a Androstane (surr)	85.9	50-150		%	1		06/27/19 23:38

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/27/19 23:38
 Container ID: 1199428001-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.261 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	41.6	20.8	6.46	mg/Kg	1		06/27/19 23:38
Surrogates							
n-Triacontane-d62 (surr)	98.9	50-150		%	1		06/27/19 23:38

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/27/19 23:38
 Container ID: 1199428001-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.261 g
 Prep Extract Vol: 5 mL



Results of B3025-WB-01

Client Sample ID: **B3025-WB-01**
Client Project ID: **100004-005 B3025**
Lab Sample ID: 1199428001
Lab Project ID: 1199428

Collection Date: 06/17/19 09:50
Received Date: 06/18/19 09:51
Matrix: Soil/Solid (dry weight)
Solids (%):95.2
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.30 U	2.61	0.783	mg/Kg	1		06/19/19 23:23
Surrogates							
4-Bromofluorobenzene (surr)	94.6	50-150		%	1		06/19/19 23:23

Batch Information

Analytical Batch: VFC14793
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/19/19 23:23
Container ID: 1199428001-B

Prep Batch: VXX34298
Prep Method: SW5035A
Prep Date/Time: 06/17/19 09:50
Prep Initial Wt./Vol.: 55.734 g
Prep Extract Vol: 27.6837 mL

Results of B3025-WB-01

Client Sample ID: **B3025-WB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428001
 Lab Project ID: 1199428

Collection Date: 06/17/19 09:50
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0104 U	0.0209	0.00647	mg/Kg	1		06/20/19 20:43
1,1,1-Trichloroethane	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
1,1,2,2-Tetrachloroethane	0.00104 U	0.00209	0.000647	mg/Kg	1		06/20/19 20:43
1,1,2-Trichloroethane	0.000418 U	0.000835	0.000261	mg/Kg	1		06/20/19 20:43
1,1-Dichloroethane	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
1,1-Dichloroethene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
1,1-Dichloropropene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
1,2,3-Trichlorobenzene	0.0261 U	0.0522	0.0157	mg/Kg	1		06/20/19 20:43
1,2,3-Trichloropropane	0.000520 U	0.00104	0.000324	mg/Kg	1		06/20/19 20:43
1,2,4-Trichlorobenzene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
1,2,4-Trimethylbenzene	0.0261 U	0.0522	0.0157	mg/Kg	1		06/20/19 20:43
1,2-Dibromo-3-chloropropane	0.0520 U	0.104	0.0324	mg/Kg	1		06/20/19 20:43
1,2-Dibromoethane	0.000520 U	0.00104	0.000324	mg/Kg	1		06/20/19 20:43
1,2-Dichlorobenzene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
1,2-Dichloroethane	0.00104 U	0.00209	0.000647	mg/Kg	1		06/20/19 20:43
1,2-Dichloropropane	0.00520 U	0.0104	0.00324	mg/Kg	1		06/20/19 20:43
1,3,5-Trimethylbenzene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
1,3-Dichlorobenzene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
1,3-Dichloropropane	0.00520 U	0.0104	0.00324	mg/Kg	1		06/20/19 20:43
1,4-Dichlorobenzene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
2,2-Dichloropropane	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
2-Butanone (MEK)	0.131 U	0.261	0.0814	mg/Kg	1		06/20/19 20:43
2-Chlorotoluene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
2-Hexanone	0.0520 U	0.104	0.0324	mg/Kg	1		06/20/19 20:43
4-Chlorotoluene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
4-Isopropyltoluene	0.0520 U	0.104	0.0261	mg/Kg	1		06/20/19 20:43
4-Methyl-2-pentanone (MIBK)	0.131 U	0.261	0.0814	mg/Kg	1		06/20/19 20:43
Acetone	0.131 U	0.261	0.0814	mg/Kg	1		06/20/19 20:43
Benzene	0.00650 U	0.0130	0.00407	mg/Kg	1		06/20/19 20:43
Bromobenzene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
Bromochloromethane	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
Bromodichloromethane	0.00104 U	0.00209	0.000647	mg/Kg	1		06/20/19 20:43
Bromoform	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
Bromomethane	0.0104 U	0.0209	0.00647	mg/Kg	1		06/20/19 20:43
Carbon disulfide	0.0520 U	0.104	0.0324	mg/Kg	1		06/20/19 20:43
Carbon tetrachloride	0.00650 U	0.0130	0.00407	mg/Kg	1		06/20/19 20:43
Chlorobenzene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43

Print Date: 07/09/2019 9:45:30AM

J flagging is activated

Results of B3025-WB-01

Client Sample ID: **B3025-WB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428001
 Lab Project ID: 1199428

Collection Date: 06/17/19 09:50
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.105 U	0.209	0.0647	mg/Kg	1		06/20/19 20:43
Chloroform	0.00104 U	0.00209	0.000647	mg/Kg	1		06/20/19 20:43
Chloromethane	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
cis-1,2-Dichloroethene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
cis-1,3-Dichloropropene	0.00650 U	0.0130	0.00407	mg/Kg	1		06/20/19 20:43
Dibromochloromethane	0.00104 U	0.00209	0.000647	mg/Kg	1		06/20/19 20:43
Dibromomethane	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
Dichlorodifluoromethane	0.0261 U	0.0522	0.0157	mg/Kg	1		06/20/19 20:43
Ethylbenzene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
Freon-113	0.0520 U	0.104	0.0324	mg/Kg	1		06/20/19 20:43
Hexachlorobutadiene	0.0104 U	0.0209	0.00647	mg/Kg	1		06/20/19 20:43
Isopropylbenzene (Cumene)	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
Methylene chloride	0.0520 U	0.104	0.0324	mg/Kg	1		06/20/19 20:43
Methyl-t-butyl ether	0.0520 U	0.104	0.0324	mg/Kg	1		06/20/19 20:43
Naphthalene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
n-Butylbenzene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
n-Propylbenzene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
o-Xylene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
P & M -Xylene	0.0261 U	0.0522	0.0157	mg/Kg	1		06/20/19 20:43
sec-Butylbenzene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
Styrene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
tert-Butylbenzene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
Tetrachloroethene	0.00650 U	0.0130	0.00407	mg/Kg	1		06/20/19 20:43
Toluene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
trans-1,2-Dichloroethene	0.0131 U	0.0261	0.00814	mg/Kg	1		06/20/19 20:43
trans-1,3-Dichloropropene	0.00650 U	0.0130	0.00407	mg/Kg	1		06/20/19 20:43
Trichloroethene	0.00261 U	0.00522	0.00157	mg/Kg	1		06/20/19 20:43
Trichlorofluoromethane	0.0261 U	0.0522	0.0157	mg/Kg	1		06/20/19 20:43
Vinyl acetate	0.0520 U	0.104	0.0324	mg/Kg	1		06/20/19 20:43
Vinyl chloride	0.000418 U	0.000835	0.000261	mg/Kg	1		06/20/19 20:43
Xylenes (total)	0.0391 U	0.0783	0.0238	mg/Kg	1		06/20/19 20:43
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	71-136		%	1		06/20/19 20:43
4-Bromofluorobenzene (surr)	92.5	55-151		%	1		06/20/19 20:43
Toluene-d8 (surr)	97.6	85-116		%	1		06/20/19 20:43

Results of B3025-WB-01

Client Sample ID: **B3025-WB-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428001
 Lab Project ID: 1199428

Collection Date: 06/17/19 09:50
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.2
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19083
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 06/20/19 20:43
 Container ID: 1199428001-B

Prep Batch: VXX34306
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 09:50
 Prep Initial Wt./Vol.: 55.734 g
 Prep Extract Vol: 27.6837 mL

Results of B3025-SP-01

Client Sample ID: **B3025-SP-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428002
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:25
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.1
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.7 U	21.4	6.63	mg/Kg	1		06/27/19 23:48
Surrogates							
5a Androstane (surr)	89.5	50-150		%	1		06/27/19 23:48

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/27/19 23:48
 Container ID: 1199428002-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.117 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	80.0	21.4	6.63	mg/Kg	1		06/27/19 23:48
Surrogates							
n-Triacontane-d62 (surr)	105	50-150		%	1		06/27/19 23:48

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/27/19 23:48
 Container ID: 1199428002-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.117 g
 Prep Extract Vol: 5 mL

Results of B3025-SP-01

Client Sample ID: **B3025-SP-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428002
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:25
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.1
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.94 U	3.88	1.16	mg/Kg	1		06/19/19 23:40
Surrogates							
4-Bromofluorobenzene (surr)	88.7	50-150		%	1		06/19/19 23:40

Batch Information

Analytical Batch: VFC14793
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 06/19/19 23:40
 Container ID: 1199428002-B

Prep Batch: VXX34298
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 11:25
 Prep Initial Wt./Vol.: 38.257 g
 Prep Extract Vol: 27.6436 mL

Results of B3025-SP-01

Client Sample ID: **B3025-SP-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428002
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:25
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.1
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0155 U	0.0310	0.00963	mg/Kg	1		06/20/19 20:58
1,1,1-Trichloroethane	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
1,1,2,2-Tetrachloroethane	0.00155 U	0.00310	0.000963	mg/Kg	1		06/20/19 20:58
1,1,2-Trichloroethane	0.000620 U	0.00124	0.000388	mg/Kg	1		06/20/19 20:58
1,1-Dichloroethane	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
1,1-Dichloroethene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
1,1-Dichloropropene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
1,2,3-Trichlorobenzene	0.0388 U	0.0776	0.0233	mg/Kg	1		06/20/19 20:58
1,2,3-Trichloropropane	0.000775 U	0.00155	0.000481	mg/Kg	1		06/20/19 20:58
1,2,4-Trichlorobenzene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
1,2,4-Trimethylbenzene	0.0388 U	0.0776	0.0233	mg/Kg	1		06/20/19 20:58
1,2-Dibromo-3-chloropropane	0.0775 U	0.155	0.0481	mg/Kg	1		06/20/19 20:58
1,2-Dibromoethane	0.000775 U	0.00155	0.000481	mg/Kg	1		06/20/19 20:58
1,2-Dichlorobenzene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
1,2-Dichloroethane	0.00155 U	0.00310	0.000963	mg/Kg	1		06/20/19 20:58
1,2-Dichloropropane	0.00775 U	0.0155	0.00481	mg/Kg	1		06/20/19 20:58
1,3,5-Trimethylbenzene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
1,3-Dichlorobenzene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
1,3-Dichloropropane	0.00775 U	0.0155	0.00481	mg/Kg	1		06/20/19 20:58
1,4-Dichlorobenzene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
2,2-Dichloropropane	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
2-Butanone (MEK)	0.194 U	0.388	0.121	mg/Kg	1		06/20/19 20:58
2-Chlorotoluene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
2-Hexanone	0.0775 U	0.155	0.0481	mg/Kg	1		06/20/19 20:58
4-Chlorotoluene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
4-Isopropyltoluene	0.0775 U	0.155	0.0388	mg/Kg	1		06/20/19 20:58
4-Methyl-2-pentanone (MIBK)	0.194 U	0.388	0.121	mg/Kg	1		06/20/19 20:58
Acetone	0.194 U	0.388	0.121	mg/Kg	1		06/20/19 20:58
Benzene	0.00970 U	0.0194	0.00605	mg/Kg	1		06/20/19 20:58
Bromobenzene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
Bromochloromethane	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
Bromodichloromethane	0.00155 U	0.00310	0.000963	mg/Kg	1		06/20/19 20:58
Bromoform	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
Bromomethane	0.0155 U	0.0310	0.00963	mg/Kg	1		06/20/19 20:58
Carbon disulfide	0.0775 U	0.155	0.0481	mg/Kg	1		06/20/19 20:58
Carbon tetrachloride	0.00970 U	0.0194	0.00605	mg/Kg	1		06/20/19 20:58
Chlorobenzene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58

Results of B3025-SP-01

Client Sample ID: **B3025-SP-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428002
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:25
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.1
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.155 U	0.310	0.0963	mg/Kg	1		06/20/19 20:58
Chloroform	0.00155 U	0.00310	0.000963	mg/Kg	1		06/20/19 20:58
Chloromethane	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
cis-1,2-Dichloroethene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
cis-1,3-Dichloropropene	0.00970 U	0.0194	0.00605	mg/Kg	1		06/20/19 20:58
Dibromochloromethane	0.00155 U	0.00310	0.000963	mg/Kg	1		06/20/19 20:58
Dibromomethane	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
Dichlorodifluoromethane	0.0388 U	0.0776	0.0233	mg/Kg	1		06/20/19 20:58
Ethylbenzene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
Freon-113	0.0775 U	0.155	0.0481	mg/Kg	1		06/20/19 20:58
Hexachlorobutadiene	0.0155 U	0.0310	0.00963	mg/Kg	1		06/20/19 20:58
Isopropylbenzene (Cumene)	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
Methylene chloride	0.0775 U	0.155	0.0481	mg/Kg	1		06/20/19 20:58
Methyl-t-butyl ether	0.0775 U	0.155	0.0481	mg/Kg	1		06/20/19 20:58
Naphthalene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
n-Butylbenzene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
n-Propylbenzene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
o-Xylene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
P & M -Xylene	0.0388 U	0.0776	0.0233	mg/Kg	1		06/20/19 20:58
sec-Butylbenzene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
Styrene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
tert-Butylbenzene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
Tetrachloroethene	0.00970 U	0.0194	0.00605	mg/Kg	1		06/20/19 20:58
Toluene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
trans-1,2-Dichloroethene	0.0194 U	0.0388	0.0121	mg/Kg	1		06/20/19 20:58
trans-1,3-Dichloropropene	0.00970 U	0.0194	0.00605	mg/Kg	1		06/20/19 20:58
Trichloroethene	0.00388 U	0.00776	0.00233	mg/Kg	1		06/20/19 20:58
Trichlorofluoromethane	0.0388 U	0.0776	0.0233	mg/Kg	1		06/20/19 20:58
Vinyl acetate	0.0775 U	0.155	0.0481	mg/Kg	1		06/20/19 20:58
Vinyl chloride	0.000620 U	0.00124	0.000388	mg/Kg	1		06/20/19 20:58
Xylenes (total)	0.0580 U	0.116	0.0354	mg/Kg	1		06/20/19 20:58
Surrogates							
1,2-Dichloroethane-D4 (surr)	102	71-136		%	1		06/20/19 20:58
4-Bromofluorobenzene (surr)	91.4	55-151		%	1		06/20/19 20:58
Toluene-d8 (surr)	98.1	85-116		%	1		06/20/19 20:58

Results of B3025-SP-01

Client Sample ID: **B3025-SP-01**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428002
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:25
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.1
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19083
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 06/20/19 20:58
 Container ID: 1199428002-B

Prep Batch: VXX34306
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 11:25
 Prep Initial Wt./Vol.: 38.257 g
 Prep Extract Vol: 27.6436 mL

Results of B3025-SP-02

Client Sample ID: **B3025-SP-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428003
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:33
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.6
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.6 J	20.6	6.40	mg/Kg	1		06/27/19 23:58
Surrogates							
5a Androstane (surr)	83.9	50-150		%	1		06/27/19 23:58

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/27/19 23:58
 Container ID: 1199428003-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.42 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	54.2	20.6	6.40	mg/Kg	1		06/27/19 23:58
Surrogates							
n-Triacontane-d62 (surr)	97.4	50-150		%	1		06/27/19 23:58

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/27/19 23:58
 Container ID: 1199428003-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.42 g
 Prep Extract Vol: 5 mL

Results of B3025-SP-02

Client Sample ID: **B3025-SP-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428003
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:33
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.6
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.58 U	3.16	0.947	mg/Kg	1		06/19/19 23:58
Surrogates							
4-Bromofluorobenzene (surr)	89.9	50-150		%	1		06/19/19 23:58

Batch Information

Analytical Batch: VFC14793
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 06/19/19 23:58
 Container ID: 1199428003-B

Prep Batch: VXX34298
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 11:33
 Prep Initial Wt./Vol.: 44.666 g
 Prep Extract Vol: 26.963 mL

Results of B3025-SP-02

Client Sample ID: **B3025-SP-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428003
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:33
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.6
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0127 U	0.0253	0.00783	mg/Kg	1		06/20/19 21:14
1,1,1-Trichloroethane	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
1,1,2,2-Tetrachloroethane	0.00127 U	0.00253	0.000783	mg/Kg	1		06/20/19 21:14
1,1,2-Trichloroethane	0.000505 U	0.00101	0.000316	mg/Kg	1		06/20/19 21:14
1,1-Dichloroethane	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
1,1-Dichloroethene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
1,1-Dichloropropene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
1,2,3-Trichlorobenzene	0.0316 U	0.0631	0.0189	mg/Kg	1		06/20/19 21:14
1,2,3-Trichloropropane	0.000630 U	0.00126	0.000391	mg/Kg	1		06/20/19 21:14
1,2,4-Trichlorobenzene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
1,2,4-Trimethylbenzene	0.0316 U	0.0631	0.0189	mg/Kg	1		06/20/19 21:14
1,2-Dibromo-3-chloropropane	0.0630 U	0.126	0.0391	mg/Kg	1		06/20/19 21:14
1,2-Dibromoethane	0.000630 U	0.00126	0.000391	mg/Kg	1		06/20/19 21:14
1,2-Dichlorobenzene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
1,2-Dichloroethane	0.00127 U	0.00253	0.000783	mg/Kg	1		06/20/19 21:14
1,2-Dichloropropane	0.00630 U	0.0126	0.00391	mg/Kg	1		06/20/19 21:14
1,3,5-Trimethylbenzene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
1,3-Dichlorobenzene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
1,3-Dichloropropane	0.00630 U	0.0126	0.00391	mg/Kg	1		06/20/19 21:14
1,4-Dichlorobenzene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
2,2-Dichloropropane	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
2-Butanone (MEK)	0.158 U	0.316	0.0985	mg/Kg	1		06/20/19 21:14
2-Chlorotoluene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
2-Hexanone	0.0630 U	0.126	0.0391	mg/Kg	1		06/20/19 21:14
4-Chlorotoluene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
4-Isopropyltoluene	0.0630 U	0.126	0.0316	mg/Kg	1		06/20/19 21:14
4-Methyl-2-pentanone (MIBK)	0.158 U	0.316	0.0985	mg/Kg	1		06/20/19 21:14
Acetone	0.158 U	0.316	0.0985	mg/Kg	1		06/20/19 21:14
Benzene	0.00790 U	0.0158	0.00492	mg/Kg	1		06/20/19 21:14
Bromobenzene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
Bromochloromethane	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
Bromodichloromethane	0.00127 U	0.00253	0.000783	mg/Kg	1		06/20/19 21:14
Bromoform	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
Bromomethane	0.0127 U	0.0253	0.00783	mg/Kg	1		06/20/19 21:14
Carbon disulfide	0.0630 U	0.126	0.0391	mg/Kg	1		06/20/19 21:14
Carbon tetrachloride	0.00790 U	0.0158	0.00492	mg/Kg	1		06/20/19 21:14
Chlorobenzene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14

Print Date: 07/09/2019 9:45:30AM

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Results of **B3025-SP-02**

Client Sample ID: **B3025-SP-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428003
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:33
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.6
 Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroethane	0.127 U	0.253	0.0783	mg/Kg	1		06/20/19 21:14
Chloroform	0.00127 U	0.00253	0.000783	mg/Kg	1		06/20/19 21:14
Chloromethane	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
cis-1,2-Dichloroethene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
cis-1,3-Dichloropropene	0.00790 U	0.0158	0.00492	mg/Kg	1		06/20/19 21:14
Dibromochloromethane	0.00127 U	0.00253	0.000783	mg/Kg	1		06/20/19 21:14
Dibromomethane	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
Dichlorodifluoromethane	0.0316 U	0.0631	0.0189	mg/Kg	1		06/20/19 21:14
Ethylbenzene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
Freon-113	0.0630 U	0.126	0.0391	mg/Kg	1		06/20/19 21:14
Hexachlorobutadiene	0.0127 U	0.0253	0.00783	mg/Kg	1		06/20/19 21:14
Isopropylbenzene (Cumene)	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
Methylene chloride	0.0630 U	0.126	0.0391	mg/Kg	1		06/20/19 21:14
Methyl-t-butyl ether	0.0630 U	0.126	0.0391	mg/Kg	1		06/20/19 21:14
Naphthalene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
n-Butylbenzene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
n-Propylbenzene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
o-Xylene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
P & M -Xylene	0.0316 U	0.0631	0.0189	mg/Kg	1		06/20/19 21:14
sec-Butylbenzene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
Styrene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
tert-Butylbenzene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
Tetrachloroethene	0.00790 U	0.0158	0.00492	mg/Kg	1		06/20/19 21:14
Toluene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
trans-1,2-Dichloroethene	0.0158 U	0.0316	0.00985	mg/Kg	1		06/20/19 21:14
trans-1,3-Dichloropropene	0.00790 U	0.0158	0.00492	mg/Kg	1		06/20/19 21:14
Trichloroethene	0.00315 U	0.00631	0.00189	mg/Kg	1		06/20/19 21:14
Trichlorofluoromethane	0.0316 U	0.0631	0.0189	mg/Kg	1		06/20/19 21:14
Vinyl acetate	0.0630 U	0.126	0.0391	mg/Kg	1		06/20/19 21:14
Vinyl chloride	0.000505 U	0.00101	0.000316	mg/Kg	1		06/20/19 21:14
Xylenes (total)	0.0474 U	0.0947	0.0288	mg/Kg	1		06/20/19 21:14
Surrogates							
1,2-Dichloroethane-D4 (surr)	102	71-136		%	1		06/20/19 21:14
4-Bromofluorobenzene (surr)	87.7	55-151		%	1		06/20/19 21:14
Toluene-d8 (surr)	98.2	85-116		%	1		06/20/19 21:14

Print Date: 07/09/2019 9:45:30AM

J flagging is activated

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Results of B3025-SP-02

Client Sample ID: **B3025-SP-02**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428003
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:33
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.6
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19083
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 06/20/19 21:14
 Container ID: 1199428003-B

Prep Batch: VXX34306
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 11:33
 Prep Initial Wt./Vol.: 44.666 g
 Prep Extract Vol: 26.963 mL

Results of B3025-SP-03

Client Sample ID: **B3025-SP-03**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428004
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:40
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.8
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	22.7	21.2	6.56	mg/Kg	1		06/28/19 00:08
Surrogates							
5a Androstane (surr)	84.9	50-150		%	1		06/28/19 00:08

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/28/19 00:08
 Container ID: 1199428004-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.252 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	118	21.2	6.56	mg/Kg	1		06/28/19 00:08
Surrogates							
n-Triacontane-d62 (surr)	98.4	50-150		%	1		06/28/19 00:08

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/28/19 00:08
 Container ID: 1199428004-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.252 g
 Prep Extract Vol: 5 mL

Results of B3025-SP-03

Client Sample ID: **B3025-SP-03**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428004
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:40
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.8
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.50 U	2.99	0.898	mg/Kg	1		06/20/19 00:15
Surrogates							
4-Bromofluorobenzene (surr)	87.8	50-150		%	1		06/20/19 00:15

Batch Information

Analytical Batch: VFC14793
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 06/20/19 00:15
 Container ID: 1199428004-B

Prep Batch: VXX34298
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 11:40
 Prep Initial Wt./Vol.: 50.086 g
 Prep Extract Vol: 28.1239 mL

Results of B3025-SP-03

Client Sample ID: **B3025-SP-03**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428004
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:40
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.8
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0120 U	0.0240	0.00743	mg/Kg	1		06/20/19 21:29
1,1,1-Trichloroethane	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
1,1,2,2-Tetrachloroethane	0.00120 U	0.00240	0.000743	mg/Kg	1		06/20/19 21:29
1,1,2-Trichloroethane	0.000479 U	0.000958	0.000299	mg/Kg	1		06/20/19 21:29
1,1-Dichloroethane	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
1,1-Dichloroethene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
1,1-Dichloropropene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
1,2,3-Trichlorobenzene	0.0300 U	0.0599	0.0180	mg/Kg	1		06/20/19 21:29
1,2,3-Trichloropropane	0.000600 U	0.00120	0.000371	mg/Kg	1		06/20/19 21:29
1,2,4-Trichlorobenzene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
1,2,4-Trimethylbenzene	0.0300 U	0.0599	0.0180	mg/Kg	1		06/20/19 21:29
1,2-Dibromo-3-chloropropane	0.0600 U	0.120	0.0371	mg/Kg	1		06/20/19 21:29
1,2-Dibromoethane	0.000600 U	0.00120	0.000371	mg/Kg	1		06/20/19 21:29
1,2-Dichlorobenzene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
1,2-Dichloroethane	0.00120 U	0.00240	0.000743	mg/Kg	1		06/20/19 21:29
1,2-Dichloropropane	0.00600 U	0.0120	0.00371	mg/Kg	1		06/20/19 21:29
1,3,5-Trimethylbenzene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
1,3-Dichlorobenzene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
1,3-Dichloropropane	0.00600 U	0.0120	0.00371	mg/Kg	1		06/20/19 21:29
1,4-Dichlorobenzene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
2,2-Dichloropropane	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
2-Butanone (MEK)	0.149 U	0.299	0.0934	mg/Kg	1		06/20/19 21:29
2-Chlorotoluene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
2-Hexanone	0.0600 U	0.120	0.0371	mg/Kg	1		06/20/19 21:29
4-Chlorotoluene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
4-Isopropyltoluene	0.0600 U	0.120	0.0299	mg/Kg	1		06/20/19 21:29
4-Methyl-2-pentanone (MIBK)	0.149 U	0.299	0.0934	mg/Kg	1		06/20/19 21:29
Acetone	0.149 U	0.299	0.0934	mg/Kg	1		06/20/19 21:29
Benzene	0.00750 U	0.0150	0.00467	mg/Kg	1		06/20/19 21:29
Bromobenzene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
Bromochloromethane	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
Bromodichloromethane	0.00120 U	0.00240	0.000743	mg/Kg	1		06/20/19 21:29
Bromoform	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
Bromomethane	0.0120 U	0.0240	0.00743	mg/Kg	1		06/20/19 21:29
Carbon disulfide	0.0600 U	0.120	0.0371	mg/Kg	1		06/20/19 21:29
Carbon tetrachloride	0.00750 U	0.0150	0.00467	mg/Kg	1		06/20/19 21:29
Chlorobenzene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29

Print Date: 07/09/2019 9:45:30AM

J flagging is activated

Results of B3025-SP-03

Client Sample ID: **B3025-SP-03**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428004
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:40
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.8
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.120 U	0.240	0.0743	mg/Kg	1		06/20/19 21:29
Chloroform	0.00120 U	0.00240	0.000743	mg/Kg	1		06/20/19 21:29
Chloromethane	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
cis-1,2-Dichloroethene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
cis-1,3-Dichloropropene	0.00750 U	0.0150	0.00467	mg/Kg	1		06/20/19 21:29
Dibromochloromethane	0.00120 U	0.00240	0.000743	mg/Kg	1		06/20/19 21:29
Dibromomethane	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
Dichlorodifluoromethane	0.0300 U	0.0599	0.0180	mg/Kg	1		06/20/19 21:29
Ethylbenzene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
Freon-113	0.0600 U	0.120	0.0371	mg/Kg	1		06/20/19 21:29
Hexachlorobutadiene	0.0120 U	0.0240	0.00743	mg/Kg	1		06/20/19 21:29
Isopropylbenzene (Cumene)	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
Methylene chloride	0.0600 U	0.120	0.0371	mg/Kg	1		06/20/19 21:29
Methyl-t-butyl ether	0.0600 U	0.120	0.0371	mg/Kg	1		06/20/19 21:29
Naphthalene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
n-Butylbenzene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
n-Propylbenzene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
o-Xylene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
P & M -Xylene	0.0300 U	0.0599	0.0180	mg/Kg	1		06/20/19 21:29
sec-Butylbenzene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
Styrene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
tert-Butylbenzene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
Tetrachloroethene	0.00750 U	0.0150	0.00467	mg/Kg	1		06/20/19 21:29
Toluene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
trans-1,2-Dichloroethene	0.0150 U	0.0299	0.00934	mg/Kg	1		06/20/19 21:29
trans-1,3-Dichloropropene	0.00750 U	0.0150	0.00467	mg/Kg	1		06/20/19 21:29
Trichloroethene	0.00299 U	0.00599	0.00180	mg/Kg	1		06/20/19 21:29
Trichlorofluoromethane	0.0300 U	0.0599	0.0180	mg/Kg	1		06/20/19 21:29
Vinyl acetate	0.0600 U	0.120	0.0371	mg/Kg	1		06/20/19 21:29
Vinyl chloride	0.000479 U	0.000958	0.000299	mg/Kg	1		06/20/19 21:29
Xylenes (total)	0.0449 U	0.0898	0.0273	mg/Kg	1		06/20/19 21:29
Surrogates							
1,2-Dichloroethane-D4 (surr)	102	71-136		%	1		06/20/19 21:29
4-Bromofluorobenzene (surr)	90.1	55-151		%	1		06/20/19 21:29
Toluene-d8 (surr)	99.1	85-116		%	1		06/20/19 21:29

Results of B3025-SP-03

Client Sample ID: **B3025-SP-03**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428004
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:40
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.8
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19083
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 06/20/19 21:29
 Container ID: 1199428004-B

Prep Batch: VXX34306
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 11:40
 Prep Initial Wt./Vol.: 50.086 g
 Prep Extract Vol: 28.1239 mL

Results of B3025-SP-04

Client Sample ID: **B3025-SP-04**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428005
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:44
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.2
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	9.86 J	20.5	6.36	mg/Kg	1		06/28/19 00:18
Surrogates							
5a Androstane (surr)	94.2	50-150		%	1		06/28/19 00:18

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/28/19 00:18
 Container ID: 1199428005-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.389 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	40.7	20.5	6.36	mg/Kg	1		06/28/19 00:18
Surrogates							
n-Triacontane-d62 (surr)	110	50-150		%	1		06/28/19 00:18

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/28/19 00:18
 Container ID: 1199428005-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.389 g
 Prep Extract Vol: 5 mL

Results of B3025-SP-04

Client Sample ID: **B3025-SP-04**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428005
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:44
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.2
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.31 U	2.62	0.785	mg/Kg	1		06/20/19 00:33
Surrogates							
4-Bromofluorobenzene (surr)	95	50-150		%	1		06/20/19 00:33

Batch Information

Analytical Batch: VFC14793
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 06/20/19 00:33
 Container ID: 1199428005-B

Prep Batch: VXX34298
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 11:44
 Prep Initial Wt./Vol.: 53.747 g
 Prep Extract Vol: 27.0494 mL



Results of B3025-SP-04

Client Sample ID: **B3025-SP-04**
Client Project ID: **100004-005 B3025**
Lab Sample ID: 1199428005
Lab Project ID: 1199428

Collection Date: 06/17/19 11:44
Received Date: 06/18/19 09:51
Matrix: Soil/Solid (dry weight)
Solids (%):96.2
Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0104 U	0.0209	0.00649	mg/Kg	1		06/20/19 21:45
1,1,1-Trichloroethane	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
1,1,2,2-Tetrachloroethane	0.00104 U	0.00209	0.000649	mg/Kg	1		06/20/19 21:45
1,1,2-Trichloroethane	0.000418 U	0.000837	0.000262	mg/Kg	1		06/20/19 21:45
1,1-Dichloroethane	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
1,1-Dichloroethene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
1,1-Dichloropropene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
1,2,3-Trichlorobenzene	0.0262 U	0.0523	0.0157	mg/Kg	1		06/20/19 21:45
1,2,3-Trichloropropane	0.000525 U	0.00105	0.000324	mg/Kg	1		06/20/19 21:45
1,2,4-Trichlorobenzene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
1,2,4-Trimethylbenzene	0.0262 U	0.0523	0.0157	mg/Kg	1		06/20/19 21:45
1,2-Dibromo-3-chloropropane	0.0525 U	0.105	0.0324	mg/Kg	1		06/20/19 21:45
1,2-Dibromoethane	0.000525 U	0.00105	0.000324	mg/Kg	1		06/20/19 21:45
1,2-Dichlorobenzene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
1,2-Dichloroethane	0.00104 U	0.00209	0.000649	mg/Kg	1		06/20/19 21:45
1,2-Dichloropropane	0.00525 U	0.0105	0.00324	mg/Kg	1		06/20/19 21:45
1,3,5-Trimethylbenzene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
1,3-Dichlorobenzene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
1,3-Dichloropropane	0.00525 U	0.0105	0.00324	mg/Kg	1		06/20/19 21:45
1,4-Dichlorobenzene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
2,2-Dichloropropane	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
2-Butanone (MEK)	0.131 U	0.262	0.0816	mg/Kg	1		06/20/19 21:45
2-Chlorotoluene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
2-Hexanone	0.0525 U	0.105	0.0324	mg/Kg	1		06/20/19 21:45
4-Chlorotoluene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
4-Isopropyltoluene	0.0525 U	0.105	0.0262	mg/Kg	1		06/20/19 21:45
4-Methyl-2-pentanone (MIBK)	0.131 U	0.262	0.0816	mg/Kg	1		06/20/19 21:45
Acetone	0.131 U	0.262	0.0816	mg/Kg	1		06/20/19 21:45
Benzene	0.00655 U	0.0131	0.00408	mg/Kg	1		06/20/19 21:45
Bromobenzene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
Bromochloromethane	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
Bromodichloromethane	0.00104 U	0.00209	0.000649	mg/Kg	1		06/20/19 21:45
Bromoform	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
Bromomethane	0.0104 U	0.0209	0.00649	mg/Kg	1		06/20/19 21:45
Carbon disulfide	0.0525 U	0.105	0.0324	mg/Kg	1		06/20/19 21:45
Carbon tetrachloride	0.00655 U	0.0131	0.00408	mg/Kg	1		06/20/19 21:45
Chlorobenzene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45

Print Date: 07/09/2019 9:45:30AM

J flagging is activated

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Member of SGS Group

Results of B3025-SP-04

Client Sample ID: **B3025-SP-04**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428005
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:44
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.2
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.105 U	0.209	0.0649	mg/Kg	1		06/20/19 21:45
Chloroform	0.00104 U	0.00209	0.000649	mg/Kg	1		06/20/19 21:45
Chloromethane	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
cis-1,2-Dichloroethene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
cis-1,3-Dichloropropene	0.00655 U	0.0131	0.00408	mg/Kg	1		06/20/19 21:45
Dibromochloromethane	0.00104 U	0.00209	0.000649	mg/Kg	1		06/20/19 21:45
Dibromomethane	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
Dichlorodifluoromethane	0.0262 U	0.0523	0.0157	mg/Kg	1		06/20/19 21:45
Ethylbenzene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
Freon-113	0.0525 U	0.105	0.0324	mg/Kg	1		06/20/19 21:45
Hexachlorobutadiene	0.0104 U	0.0209	0.00649	mg/Kg	1		06/20/19 21:45
Isopropylbenzene (Cumene)	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
Methylene chloride	0.0525 U	0.105	0.0324	mg/Kg	1		06/20/19 21:45
Methyl-t-butyl ether	0.0525 U	0.105	0.0324	mg/Kg	1		06/20/19 21:45
Naphthalene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
n-Butylbenzene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
n-Propylbenzene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
o-Xylene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
P & M -Xylene	0.0262 U	0.0523	0.0157	mg/Kg	1		06/20/19 21:45
sec-Butylbenzene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
Styrene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
tert-Butylbenzene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
Tetrachloroethene	0.0329	0.0131	0.00408	mg/Kg	1		06/20/19 21:45
Toluene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
trans-1,2-Dichloroethene	0.0131 U	0.0262	0.00816	mg/Kg	1		06/20/19 21:45
trans-1,3-Dichloropropene	0.00655 U	0.0131	0.00408	mg/Kg	1		06/20/19 21:45
Trichloroethene	0.00262 U	0.00523	0.00157	mg/Kg	1		06/20/19 21:45
Trichlorofluoromethane	0.0262 U	0.0523	0.0157	mg/Kg	1		06/20/19 21:45
Vinyl acetate	0.0525 U	0.105	0.0324	mg/Kg	1		06/20/19 21:45
Vinyl chloride	0.000418 U	0.000837	0.000262	mg/Kg	1		06/20/19 21:45
Xylenes (total)	0.0393 U	0.0785	0.0239	mg/Kg	1		06/20/19 21:45
Surrogates							
1,2-Dichloroethane-D4 (surr)	103	71-136		%	1		06/20/19 21:45
4-Bromofluorobenzene (surr)	98.7	55-151		%	1		06/20/19 21:45
Toluene-d8 (surr)	98.3	85-116		%	1		06/20/19 21:45

Results of B3025-SP-04

Client Sample ID: **B3025-SP-04**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428005
 Lab Project ID: 1199428

Collection Date: 06/17/19 11:44
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.2
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19083
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 06/20/19 21:45
 Container ID: 1199428005-B

Prep Batch: VXX34306
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 11:44
 Prep Initial Wt./Vol.: 53.747 g
 Prep Extract Vol: 27.0494 mL

Results of B3025-SP-05

Client Sample ID: **B3025-SP-05**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428006
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:13
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.3
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	7.08 J	20.7	6.41	mg/Kg	1		06/28/19 00:28
Surrogates							
5a Androstane (surr)	86.3	50-150		%	1		06/28/19 00:28

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/28/19 00:28
 Container ID: 1199428006-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.123 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	39.2	20.7	6.41	mg/Kg	1		06/28/19 00:28
Surrogates							
n-Triacontane-d62 (surr)	99.7	50-150		%	1		06/28/19 00:28

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/28/19 00:28
 Container ID: 1199428006-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.123 g
 Prep Extract Vol: 5 mL

Results of B3025-SP-05

Client Sample ID: **B3025-SP-05**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428006
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:13
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.3
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.55 U	3.11	0.933	mg/Kg	1		06/20/19 00:50
Surrogates							
4-Bromofluorobenzene (surr)	85.1	50-150		%	1		06/20/19 00:50

Batch Information

Analytical Batch: VFC14793
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 06/20/19 00:50
 Container ID: 1199428006-B

Prep Batch: VXX34298
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 12:13
 Prep Initial Wt./Vol.: 44.452 g
 Prep Extract Vol: 26.6408 mL

Results of B3025-SP-05

Client Sample ID: **B3025-SP-05**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428006
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:13
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.3
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0124 U	0.0249	0.00772	mg/Kg	1		06/20/19 22:00
1,1,1-Trichloroethane	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
1,1,2,2-Tetrachloroethane	0.00125 U	0.00249	0.000772	mg/Kg	1		06/20/19 22:00
1,1,2-Trichloroethane	0.000498 U	0.000996	0.000311	mg/Kg	1		06/20/19 22:00
1,1-Dichloroethane	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
1,1-Dichloroethene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
1,1-Dichloropropene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
1,2,3-Trichlorobenzene	0.0311 U	0.0622	0.0187	mg/Kg	1		06/20/19 22:00
1,2,3-Trichloropropane	0.000620 U	0.00124	0.000386	mg/Kg	1		06/20/19 22:00
1,2,4-Trichlorobenzene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
1,2,4-Trimethylbenzene	0.0311 U	0.0622	0.0187	mg/Kg	1		06/20/19 22:00
1,2-Dibromo-3-chloropropane	0.0620 U	0.124	0.0386	mg/Kg	1		06/20/19 22:00
1,2-Dibromoethane	0.000620 U	0.00124	0.000386	mg/Kg	1		06/20/19 22:00
1,2-Dichlorobenzene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
1,2-Dichloroethane	0.00125 U	0.00249	0.000772	mg/Kg	1		06/20/19 22:00
1,2-Dichloropropane	0.00620 U	0.0124	0.00386	mg/Kg	1		06/20/19 22:00
1,3,5-Trimethylbenzene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
1,3-Dichlorobenzene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
1,3-Dichloropropane	0.00620 U	0.0124	0.00386	mg/Kg	1		06/20/19 22:00
1,4-Dichlorobenzene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
2,2-Dichloropropane	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
2-Butanone (MEK)	0.156 U	0.311	0.0971	mg/Kg	1		06/20/19 22:00
2-Chlorotoluene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
2-Hexanone	0.0620 U	0.124	0.0386	mg/Kg	1		06/20/19 22:00
4-Chlorotoluene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
4-Isopropyltoluene	0.0620 U	0.124	0.0311	mg/Kg	1		06/20/19 22:00
4-Methyl-2-pentanone (MIBK)	0.156 U	0.311	0.0971	mg/Kg	1		06/20/19 22:00
Acetone	0.156 U	0.311	0.0971	mg/Kg	1		06/20/19 22:00
Benzene	0.00780 U	0.0156	0.00485	mg/Kg	1		06/20/19 22:00
Bromobenzene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
Bromochloromethane	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
Bromodichloromethane	0.00125 U	0.00249	0.000772	mg/Kg	1		06/20/19 22:00
Bromoform	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
Bromomethane	0.0124 U	0.0249	0.00772	mg/Kg	1		06/20/19 22:00
Carbon disulfide	0.0620 U	0.124	0.0386	mg/Kg	1		06/20/19 22:00
Carbon tetrachloride	0.00780 U	0.0156	0.00485	mg/Kg	1		06/20/19 22:00
Chlorobenzene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00

Print Date: 07/09/2019 9:45:30AM

J flagging is activated

Results of B3025-SP-05

Client Sample ID: **B3025-SP-05**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428006
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:13
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.3
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.125 U	0.249	0.0772	mg/Kg	1		06/20/19 22:00
Chloroform	0.00125 U	0.00249	0.000772	mg/Kg	1		06/20/19 22:00
Chloromethane	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
cis-1,2-Dichloroethene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
cis-1,3-Dichloropropene	0.00780 U	0.0156	0.00485	mg/Kg	1		06/20/19 22:00
Dibromochloromethane	0.00125 U	0.00249	0.000772	mg/Kg	1		06/20/19 22:00
Dibromomethane	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
Dichlorodifluoromethane	0.0311 U	0.0622	0.0187	mg/Kg	1		06/20/19 22:00
Ethylbenzene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
Freon-113	0.0620 U	0.124	0.0386	mg/Kg	1		06/20/19 22:00
Hexachlorobutadiene	0.0124 U	0.0249	0.00772	mg/Kg	1		06/20/19 22:00
Isopropylbenzene (Cumene)	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
Methylene chloride	0.0620 U	0.124	0.0386	mg/Kg	1		06/20/19 22:00
Methyl-t-butyl ether	0.0620 U	0.124	0.0386	mg/Kg	1		06/20/19 22:00
Naphthalene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
n-Butylbenzene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
n-Propylbenzene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
o-Xylene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
P & M -Xylene	0.0311 U	0.0622	0.0187	mg/Kg	1		06/20/19 22:00
sec-Butylbenzene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
Styrene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
tert-Butylbenzene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
Tetrachloroethene	0.00780 U	0.0156	0.00485	mg/Kg	1		06/20/19 22:00
Toluene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
trans-1,2-Dichloroethene	0.0156 U	0.0311	0.00971	mg/Kg	1		06/20/19 22:00
trans-1,3-Dichloropropene	0.00780 U	0.0156	0.00485	mg/Kg	1		06/20/19 22:00
Trichloroethene	0.00311 U	0.00622	0.00187	mg/Kg	1		06/20/19 22:00
Trichlorofluoromethane	0.0311 U	0.0622	0.0187	mg/Kg	1		06/20/19 22:00
Vinyl acetate	0.0620 U	0.124	0.0386	mg/Kg	1		06/20/19 22:00
Vinyl chloride	0.000498 U	0.000996	0.000311	mg/Kg	1		06/20/19 22:00
Xylenes (total)	0.0466 U	0.0933	0.0284	mg/Kg	1		06/20/19 22:00
Surrogates							
1,2-Dichloroethane-D4 (surr)	102	71-136		%	1		06/20/19 22:00
4-Bromofluorobenzene (surr)	89.1	55-151		%	1		06/20/19 22:00
Toluene-d8 (surr)	98.8	85-116		%	1		06/20/19 22:00

Results of B3025-SP-05

Client Sample ID: **B3025-SP-05**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428006
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:13
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):96.3
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19083
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 06/20/19 22:00
 Container ID: 1199428006-B

Prep Batch: VXX34306
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 12:13
 Prep Initial Wt./Vol.: 44.452 g
 Prep Extract Vol: 26.6408 mL

Results of B3025-SP-06

Client Sample ID: **B3025-SP-06**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428007
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:18
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.8
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	32.2	21.0	6.52	mg/Kg	1		06/28/19 00:38
Surrogates							
5a Androstane (surr)	90.9	50-150		%	1		06/28/19 00:38

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 06/28/19 00:38
 Container ID: 1199428007-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.4 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	322	21.0	6.52	mg/Kg	1		06/28/19 00:38
Surrogates							
n-Triacontane-d62 (surr)	111	50-150		%	1		06/28/19 00:38

Batch Information

Analytical Batch: XFC15083
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 06/28/19 00:38
 Container ID: 1199428007-A

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.4 g
 Prep Extract Vol: 5 mL

Results of B3025-SP-06

Client Sample ID: **B3025-SP-06**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428007
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:18
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.8
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.54 U	3.09	0.927	mg/Kg	1		06/20/19 13:48
Surrogates							
4-Bromofluorobenzene (surr)	86.9	50-150		%	1		06/20/19 13:48

Batch Information

Analytical Batch: VFC14794
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 06/20/19 13:48
 Container ID: 1199428007-B

Prep Batch: VXX34307
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 12:18
 Prep Initial Wt./Vol.: 48.292 g
 Prep Extract Vol: 27.9956 mL

Results of B3025-SP-06

Client Sample ID: **B3025-SP-06**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428007
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:18
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.8
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0124 U	0.0247	0.00766	mg/Kg	1		06/20/19 22:15
1,1,1-Trichloroethane	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
1,1,2,2-Tetrachloroethane	0.00124 U	0.00247	0.000766	mg/Kg	1		06/20/19 22:15
1,1,2-Trichloroethane	0.000495 U	0.000989	0.000309	mg/Kg	1		06/20/19 22:15
1,1-Dichloroethane	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
1,1-Dichloroethene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
1,1-Dichloropropene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
1,2,3-Trichlorobenzene	0.0309 U	0.0618	0.0185	mg/Kg	1		06/20/19 22:15
1,2,3-Trichloropropane	0.000620 U	0.00124	0.000383	mg/Kg	1		06/20/19 22:15
1,2,4-Trichlorobenzene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
1,2,4-Trimethylbenzene	0.0309 U	0.0618	0.0185	mg/Kg	1		06/20/19 22:15
1,2-Dibromo-3-chloropropane	0.0620 U	0.124	0.0383	mg/Kg	1		06/20/19 22:15
1,2-Dibromoethane	0.000620 U	0.00124	0.000383	mg/Kg	1		06/20/19 22:15
1,2-Dichlorobenzene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
1,2-Dichloroethane	0.00124 U	0.00247	0.000766	mg/Kg	1		06/20/19 22:15
1,2-Dichloropropane	0.00620 U	0.0124	0.00383	mg/Kg	1		06/20/19 22:15
1,3,5-Trimethylbenzene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
1,3-Dichlorobenzene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
1,3-Dichloropropane	0.00620 U	0.0124	0.00383	mg/Kg	1		06/20/19 22:15
1,4-Dichlorobenzene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
2,2-Dichloropropane	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
2-Butanone (MEK)	0.155 U	0.309	0.0964	mg/Kg	1		06/20/19 22:15
2-Chlorotoluene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
2-Hexanone	0.0620 U	0.124	0.0383	mg/Kg	1		06/20/19 22:15
4-Chlorotoluene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
4-Isopropyltoluene	0.0620 U	0.124	0.0309	mg/Kg	1		06/20/19 22:15
4-Methyl-2-pentanone (MIBK)	0.155 U	0.309	0.0964	mg/Kg	1		06/20/19 22:15
Acetone	0.155 U	0.309	0.0964	mg/Kg	1		06/20/19 22:15
Benzene	0.00775 U	0.0155	0.00482	mg/Kg	1		06/20/19 22:15
Bromobenzene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
Bromochloromethane	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
Bromodichloromethane	0.00124 U	0.00247	0.000766	mg/Kg	1		06/20/19 22:15
Bromoform	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
Bromomethane	0.0124 U	0.0247	0.00766	mg/Kg	1		06/20/19 22:15
Carbon disulfide	0.0620 U	0.124	0.0383	mg/Kg	1		06/20/19 22:15
Carbon tetrachloride	0.00775 U	0.0155	0.00482	mg/Kg	1		06/20/19 22:15
Chlorobenzene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15

Print Date: 07/09/2019 9:45:30AM

J flagging is activated

Results of B3025-SP-06

Client Sample ID: **B3025-SP-06**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428007
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:18
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.8
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.124 U	0.247	0.0766	mg/Kg	1		06/20/19 22:15
Chloroform	0.00124 U	0.00247	0.000766	mg/Kg	1		06/20/19 22:15
Chloromethane	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
cis-1,2-Dichloroethene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
cis-1,3-Dichloropropene	0.00775 U	0.0155	0.00482	mg/Kg	1		06/20/19 22:15
Dibromochloromethane	0.00124 U	0.00247	0.000766	mg/Kg	1		06/20/19 22:15
Dibromomethane	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
Dichlorodifluoromethane	0.0309 U	0.0618	0.0185	mg/Kg	1		06/20/19 22:15
Ethylbenzene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
Freon-113	0.0620 U	0.124	0.0383	mg/Kg	1		06/20/19 22:15
Hexachlorobutadiene	0.0124 U	0.0247	0.00766	mg/Kg	1		06/20/19 22:15
Isopropylbenzene (Cumene)	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
Methylene chloride	0.0620 U	0.124	0.0383	mg/Kg	1		06/20/19 22:15
Methyl-t-butyl ether	0.0620 U	0.124	0.0383	mg/Kg	1		06/20/19 22:15
Naphthalene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
n-Butylbenzene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
n-Propylbenzene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
o-Xylene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
P & M -Xylene	0.0309 U	0.0618	0.0185	mg/Kg	1		06/20/19 22:15
sec-Butylbenzene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
Styrene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
tert-Butylbenzene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
Tetrachloroethene	0.00775 U	0.0155	0.00482	mg/Kg	1		06/20/19 22:15
Toluene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
trans-1,2-Dichloroethene	0.0155 U	0.0309	0.00964	mg/Kg	1		06/20/19 22:15
trans-1,3-Dichloropropene	0.00775 U	0.0155	0.00482	mg/Kg	1		06/20/19 22:15
Trichloroethene	0.00309 U	0.00618	0.00185	mg/Kg	1		06/20/19 22:15
Trichlorofluoromethane	0.0309 U	0.0618	0.0185	mg/Kg	1		06/20/19 22:15
Vinyl acetate	0.0620 U	0.124	0.0383	mg/Kg	1		06/20/19 22:15
Vinyl chloride	0.000495 U	0.000989	0.000309	mg/Kg	1		06/20/19 22:15
Xylenes (total)	0.0464 U	0.0927	0.0282	mg/Kg	1		06/20/19 22:15
Surrogates							
1,2-Dichloroethane-D4 (surr)	102	71-136		%	1		06/20/19 22:15
4-Bromofluorobenzene (surr)	91.8	55-151		%	1		06/20/19 22:15
Toluene-d8 (surr)	98.6	85-116		%	1		06/20/19 22:15

Results of B3025-SP-06

Client Sample ID: **B3025-SP-06**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428007
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:18
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):93.8
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19083
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 06/20/19 22:15
 Container ID: 1199428007-B

Prep Batch: VXX34306
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 12:18
 Prep Initial Wt./Vol.: 48.292 g
 Prep Extract Vol: 27.9956 mL

Results of B3025-SP-07

Client Sample ID: **B3025-SP-07**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428008
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:08
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.3
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	8.54 J	20.8	6.45	mg/Kg	1		07/04/19 16:22
Surrogates							
5a Androstane (surr)	130	50-150		%	1		07/04/19 16:22

Batch Information

Analytical Batch: XFC15104
 Analytical Method: AK102
 Analyst: VDL
 Analytical Date/Time: 07/04/19 16:22
 Container ID: 1199428008-B

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.256 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	55.9	20.8	6.45	mg/Kg	1		07/04/19 16:22
Surrogates							
n-Triacontane-d62 (surr)	148	50-150		%	1		07/04/19 16:22

Batch Information

Analytical Batch: XFC15104
 Analytical Method: AK103
 Analyst: VDL
 Analytical Date/Time: 07/04/19 16:22
 Container ID: 1199428008-B

Prep Batch: XXX41647
 Prep Method: SW3550C
 Prep Date/Time: 06/24/19 14:07
 Prep Initial Wt./Vol.: 30.256 g
 Prep Extract Vol: 5 mL

Results of B3025-SP-07

Client Sample ID: **B3025-SP-07**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428008
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:08
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.3
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.44 U	2.87	0.862	mg/Kg	1		06/20/19 14:06
Surrogates							
4-Bromofluorobenzene (surr)	83.7	50-150		%	1		06/20/19 14:06

Batch Information

Analytical Batch: VFC14794
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 06/20/19 14:06
 Container ID: 1199428008-B

Prep Batch: VXX34307
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 12:08
 Prep Initial Wt./Vol.: 49.988 g
 Prep Extract Vol: 27.3672 mL

Results of B3025-SP-07

Client Sample ID: **B3025-SP-07**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428008
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:08
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.3
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0115 U	0.0230	0.00713	mg/Kg	1		06/20/19 22:31
1,1,1-Trichloroethane	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
1,1,2,2-Tetrachloroethane	0.00115 U	0.00230	0.000713	mg/Kg	1		06/20/19 22:31
1,1,2-Trichloroethane	0.000460 U	0.000920	0.000287	mg/Kg	1		06/20/19 22:31
1,1-Dichloroethane	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
1,1-Dichloroethene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
1,1-Dichloropropene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
1,2,3-Trichlorobenzene	0.0288 U	0.0575	0.0172	mg/Kg	1		06/20/19 22:31
1,2,3-Trichloropropane	0.000575 U	0.00115	0.000356	mg/Kg	1		06/20/19 22:31
1,2,4-Trichlorobenzene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
1,2,4-Trimethylbenzene	0.0288 U	0.0575	0.0172	mg/Kg	1		06/20/19 22:31
1,2-Dibromo-3-chloropropane	0.0575 U	0.115	0.0356	mg/Kg	1		06/20/19 22:31
1,2-Dibromoethane	0.000575 U	0.00115	0.000356	mg/Kg	1		06/20/19 22:31
1,2-Dichlorobenzene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
1,2-Dichloroethane	0.00115 U	0.00230	0.000713	mg/Kg	1		06/20/19 22:31
1,2-Dichloropropane	0.00575 U	0.0115	0.00356	mg/Kg	1		06/20/19 22:31
1,3,5-Trimethylbenzene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
1,3-Dichlorobenzene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
1,3-Dichloropropane	0.00575 U	0.0115	0.00356	mg/Kg	1		06/20/19 22:31
1,4-Dichlorobenzene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
2,2-Dichloropropane	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
2-Butanone (MEK)	0.143 U	0.287	0.0897	mg/Kg	1		06/20/19 22:31
2-Chlorotoluene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
2-Hexanone	0.0575 U	0.115	0.0356	mg/Kg	1		06/20/19 22:31
4-Chlorotoluene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
4-Isopropyltoluene	0.0575 U	0.115	0.0287	mg/Kg	1		06/20/19 22:31
4-Methyl-2-pentanone (MIBK)	0.143 U	0.287	0.0897	mg/Kg	1		06/20/19 22:31
Acetone	0.143 U	0.287	0.0897	mg/Kg	1		06/20/19 22:31
Benzene	0.00720 U	0.0144	0.00448	mg/Kg	1		06/20/19 22:31
Bromobenzene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
Bromochloromethane	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
Bromodichloromethane	0.00115 U	0.00230	0.000713	mg/Kg	1		06/20/19 22:31
Bromoform	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
Bromomethane	0.0115 U	0.0230	0.00713	mg/Kg	1		06/20/19 22:31
Carbon disulfide	0.0575 U	0.115	0.0356	mg/Kg	1		06/20/19 22:31
Carbon tetrachloride	0.00720 U	0.0144	0.00448	mg/Kg	1		06/20/19 22:31
Chlorobenzene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31

Print Date: 07/09/2019 9:45:30AM

J flagging is activated

Results of B3025-SP-07

Client Sample ID: **B3025-SP-07**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428008
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:08
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.3
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.115 U	0.230	0.0713	mg/Kg	1		06/20/19 22:31
Chloroform	0.00115 U	0.00230	0.000713	mg/Kg	1		06/20/19 22:31
Chloromethane	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
cis-1,2-Dichloroethene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
cis-1,3-Dichloropropene	0.00720 U	0.0144	0.00448	mg/Kg	1		06/20/19 22:31
Dibromochloromethane	0.00115 U	0.00230	0.000713	mg/Kg	1		06/20/19 22:31
Dibromomethane	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
Dichlorodifluoromethane	0.0288 U	0.0575	0.0172	mg/Kg	1		06/20/19 22:31
Ethylbenzene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
Freon-113	0.0575 U	0.115	0.0356	mg/Kg	1		06/20/19 22:31
Hexachlorobutadiene	0.0115 U	0.0230	0.00713	mg/Kg	1		06/20/19 22:31
Isopropylbenzene (Cumene)	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
Methylene chloride	0.0575 U	0.115	0.0356	mg/Kg	1		06/20/19 22:31
Methyl-t-butyl ether	0.0575 U	0.115	0.0356	mg/Kg	1		06/20/19 22:31
Naphthalene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
n-Butylbenzene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
n-Propylbenzene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
o-Xylene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
P & M -Xylene	0.0288 U	0.0575	0.0172	mg/Kg	1		06/20/19 22:31
sec-Butylbenzene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
Styrene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
tert-Butylbenzene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
Tetrachloroethene	0.00720 U	0.0144	0.00448	mg/Kg	1		06/20/19 22:31
Toluene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
trans-1,2-Dichloroethene	0.0144 U	0.0287	0.00897	mg/Kg	1		06/20/19 22:31
trans-1,3-Dichloropropene	0.00720 U	0.0144	0.00448	mg/Kg	1		06/20/19 22:31
Trichloroethene	0.00288 U	0.00575	0.00172	mg/Kg	1		06/20/19 22:31
Trichlorofluoromethane	0.0288 U	0.0575	0.0172	mg/Kg	1		06/20/19 22:31
Vinyl acetate	0.0575 U	0.115	0.0356	mg/Kg	1		06/20/19 22:31
Vinyl chloride	0.000460 U	0.000920	0.000287	mg/Kg	1		06/20/19 22:31
Xylenes (total)	0.0431 U	0.0862	0.0262	mg/Kg	1		06/20/19 22:31
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	71-136		%	1		06/20/19 22:31
4-Bromofluorobenzene (surr)	89.6	55-151		%	1		06/20/19 22:31
Toluene-d8 (surr)	97.7	85-116		%	1		06/20/19 22:31

Results of B3025-SP-07

Client Sample ID: **B3025-SP-07**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428008
 Lab Project ID: 1199428

Collection Date: 06/17/19 12:08
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):95.3
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19083
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 06/20/19 22:31
 Container ID: 1199428008-B

Prep Batch: VXX34306
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 12:08
 Prep Initial Wt./Vol.: 49.988 g
 Prep Extract Vol: 27.3672 mL

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428009
 Lab Project ID: 1199428

Collection Date: 06/17/19 09:50
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.26 U	2.52	0.756	mg/Kg	1		06/20/19 01:25
Surrogates							
4-Bromofluorobenzene (surr)	82.8	50-150		%	1		06/20/19 01:25

Batch Information

Analytical Batch: VFC14793
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 06/20/19 01:25
 Container ID: 1199428009-A

Prep Batch: VXX34298
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 09:50
 Prep Initial Wt./Vol.: 49.572 g
 Prep Extract Vol: 25 mL

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428009
 Lab Project ID: 1199428

Collection Date: 06/17/19 09:50
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.0101 U	0.0202	0.00625	mg/Kg	1		06/19/19 22:24
1,1,1-Trichloroethane	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
1,1,2,2-Tetrachloroethane	0.00101 U	0.00202	0.000625	mg/Kg	1		06/19/19 22:24
1,1,2-Trichloroethane	0.000404 U	0.000807	0.000252	mg/Kg	1		06/19/19 22:24
1,1-Dichloroethane	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
1,1-Dichloroethene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
1,1-Dichloropropene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
1,2,3-Trichlorobenzene	0.0252 U	0.0504	0.0151	mg/Kg	1		06/19/19 22:24
1,2,3-Trichloropropane	0.000505 U	0.00101	0.000313	mg/Kg	1		06/19/19 22:24
1,2,4-Trichlorobenzene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
1,2,4-Trimethylbenzene	0.0252 U	0.0504	0.0151	mg/Kg	1		06/19/19 22:24
1,2-Dibromo-3-chloropropane	0.0505 U	0.101	0.0313	mg/Kg	1		06/19/19 22:24
1,2-Dibromoethane	0.000505 U	0.00101	0.000313	mg/Kg	1		06/19/19 22:24
1,2-Dichlorobenzene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
1,2-Dichloroethane	0.00101 U	0.00202	0.000625	mg/Kg	1		06/19/19 22:24
1,2-Dichloropropane	0.00505 U	0.0101	0.00313	mg/Kg	1		06/19/19 22:24
1,3,5-Trimethylbenzene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
1,3-Dichlorobenzene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
1,3-Dichloropropane	0.00505 U	0.0101	0.00313	mg/Kg	1		06/19/19 22:24
1,4-Dichlorobenzene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
2,2-Dichloropropane	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
2-Butanone (MEK)	0.126 U	0.252	0.0787	mg/Kg	1		06/19/19 22:24
2-Chlorotoluene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
2-Hexanone	0.0505 U	0.101	0.0313	mg/Kg	1		06/19/19 22:24
4-Chlorotoluene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
4-Isopropyltoluene	0.0505 U	0.101	0.0252	mg/Kg	1		06/19/19 22:24
4-Methyl-2-pentanone (MIBK)	0.126 U	0.252	0.0787	mg/Kg	1		06/19/19 22:24
Acetone	0.126 U	0.252	0.0787	mg/Kg	1		06/19/19 22:24
Benzene	0.00630 U	0.0126	0.00393	mg/Kg	1		06/19/19 22:24
Bromobenzene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
Bromochloromethane	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
Bromodichloromethane	0.00101 U	0.00202	0.000625	mg/Kg	1		06/19/19 22:24
Bromoform	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
Bromomethane	0.0101 U	0.0202	0.00625	mg/Kg	1		06/19/19 22:24
Carbon disulfide	0.0505 U	0.101	0.0313	mg/Kg	1		06/19/19 22:24
Carbon tetrachloride	0.00630 U	0.0126	0.00393	mg/Kg	1		06/19/19 22:24
Chlorobenzene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24

Print Date: 07/09/2019 9:45:30AM

J flagging is activated

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428009
 Lab Project ID: 1199428

Collection Date: 06/17/19 09:50
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.101 U	0.202	0.0625	mg/Kg	1		06/19/19 22:24
Chloroform	0.00101 U	0.00202	0.000625	mg/Kg	1		06/19/19 22:24
Chloromethane	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
cis-1,2-Dichloroethene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
cis-1,3-Dichloropropene	0.00630 U	0.0126	0.00393	mg/Kg	1		06/19/19 22:24
Dibromochloromethane	0.00101 U	0.00202	0.000625	mg/Kg	1		06/19/19 22:24
Dibromomethane	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
Dichlorodifluoromethane	0.0252 U	0.0504	0.0151	mg/Kg	1		06/19/19 22:24
Ethylbenzene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
Freon-113	0.0505 U	0.101	0.0313	mg/Kg	1		06/19/19 22:24
Hexachlorobutadiene	0.0101 U	0.0202	0.00625	mg/Kg	1		06/19/19 22:24
Isopropylbenzene (Cumene)	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
Methylene chloride	0.0505 U	0.101	0.0313	mg/Kg	1		06/19/19 22:24
Methyl-t-butyl ether	0.0505 U	0.101	0.0313	mg/Kg	1		06/19/19 22:24
Naphthalene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
n-Butylbenzene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
n-Propylbenzene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
o-Xylene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
P & M -Xylene	0.0252 U	0.0504	0.0151	mg/Kg	1		06/19/19 22:24
sec-Butylbenzene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
Styrene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
tert-Butylbenzene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
Tetrachloroethene	0.00630 U	0.0126	0.00393	mg/Kg	1		06/19/19 22:24
Toluene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
trans-1,2-Dichloroethene	0.0126 U	0.0252	0.00787	mg/Kg	1		06/19/19 22:24
trans-1,3-Dichloropropene	0.00630 U	0.0126	0.00393	mg/Kg	1		06/19/19 22:24
Trichloroethene	0.00252 U	0.00504	0.00151	mg/Kg	1		06/19/19 22:24
Trichlorofluoromethane	0.0252 U	0.0504	0.0151	mg/Kg	1		06/19/19 22:24
Vinyl acetate	0.0505 U	0.101	0.0313	mg/Kg	1		06/19/19 22:24
Vinyl chloride	0.000404 U	0.000807	0.000252	mg/Kg	1		06/19/19 22:24
Xylenes (total)	0.0378 U	0.0756	0.0230	mg/Kg	1		06/19/19 22:24
Surrogates							
1,2-Dichloroethane-D4 (surr)	102	71-136		%	1		06/19/19 22:24
4-Bromofluorobenzene (surr)	88.2	55-151		%	1		06/19/19 22:24
Toluene-d8 (surr)	99.8	85-116		%	1		06/19/19 22:24

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **100004-005 B3025**
 Lab Sample ID: 1199428009
 Lab Project ID: 1199428

Collection Date: 06/17/19 09:50
 Received Date: 06/18/19 09:51
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19077
 Analytical Method: SW8260C
 Analyst: NRO
 Analytical Date/Time: 06/19/19 22:24
 Container ID: 1199428009-A

Prep Batch: VXX34302
 Prep Method: SW5035A
 Prep Date/Time: 06/17/19 09:50
 Prep Initial Wt./Vol.: 49.572 g
 Prep Extract Vol: 25 mL

Method Blank

Blank ID: MB for HBN 1795379 [SPT/10801]
Blank Lab ID: 1514551

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007, 1199428008

Results by SM21 2540G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Solids	100			%

Batch Information

Analytical Batch: SPT10801
Analytical Method: SM21 2540G
Instrument:
Analyst: MER
Analytical Date/Time: 6/21/2019 4:14:00PM

Print Date: 07/09/2019 9:45:33AM

Duplicate Sample Summary

Original Sample ID: 1193222002

Duplicate Sample ID: 1514552

QC for Samples:

1199428001, 1199428002, 1199428003, 1199428004, 1199428005

Analysis Date: 06/21/2019 16:14

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	82.2	81.9	%	0.28	(< 15)

Batch Information

Analytical Batch: SPT10801

Analytical Method: SM21 2540G

Instrument:

Analyst: MER

Print Date: 07/09/2019 9:45:34AM

Duplicate Sample Summary

Original Sample ID: 1199428005

Duplicate Sample ID: 1514554

QC for Samples:

1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007, 1199428008

Analysis Date: 06/21/2019 16:14

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	96.2	96.6	%	0.47	(< 15)

Batch Information

Analytical Batch: SPT10801

Analytical Method: SM21 2540G

Instrument:

Analyst: MER

Print Date: 07/09/2019 9:45:34AM

Method Blank

Blank ID: MB for HBN 1795265 [VXX/34298]
Blank Lab ID: 1514010

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428009

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.25U	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	86.3	50-150		%

Batch Information

Analytical Batch: VFC14793
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 6/19/2019 6:42:00PM

Prep Batch: VXX34298
Prep Method: SW5035A
Prep Date/Time: 6/19/2019 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199428 [VXX34298]
 Blank Spike Lab ID: 1514011
 Date Analyzed: 06/19/2019 18:07

Spike Duplicate ID: LCSD for HBN 1199428 [VXX34298]
 Spike Duplicate Lab ID: 1514012
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428009

Results by AK101

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	11.2	90	12.5	12.5	100	(60-120)	11.00	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	87.4	87	1.25	89.5	90	(50-150)	2.30	

Batch Information

Analytical Batch: **VFC14793**
 Analytical Method: **AK101**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ST**

Prep Batch: **VXX34298**
 Prep Method: **SW5035A**
 Prep Date/Time: **06/19/2019 08:00**
 Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 07/09/2019 9:45:37AM

Method Blank

Blank ID: MB for HBN 1795308 [VXX/34302]
Blank Lab ID: 1514253

Matrix: Soil/Solid (dry weight)

QC for Samples:
1199428009

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.0100U	0.0200	0.00620	mg/Kg
1,1,1-Trichloroethane	0.0125U	0.0250	0.00780	mg/Kg
1,1,2,2-Tetrachloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,1,2-Trichloroethane	0.000400U	0.000800	0.000250	mg/Kg
1,1-Dichloroethane	0.0125U	0.0250	0.00780	mg/Kg
1,1-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
1,1-Dichloropropene	0.0125U	0.0250	0.00780	mg/Kg
1,2,3-Trichlorobenzene	0.0250U	0.0500	0.0150	mg/Kg
1,2,3-Trichloropropane	0.000500U	0.00100	0.000310	mg/Kg
1,2,4-Trichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,2,4-Trimethylbenzene	0.0250U	0.0500	0.0150	mg/Kg
1,2-Dibromo-3-chloropropane	0.0500U	0.100	0.0310	mg/Kg
1,2-Dibromoethane	0.000500U	0.00100	0.000310	mg/Kg
1,2-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,2-Dichloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,2-Dichloropropane	0.00500U	0.0100	0.00310	mg/Kg
1,3,5-Trimethylbenzene	0.0125U	0.0250	0.00780	mg/Kg
1,3-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,3-Dichloropropane	0.00500U	0.0100	0.00310	mg/Kg
1,4-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
2,2-Dichloropropane	0.0125U	0.0250	0.00780	mg/Kg
2-Butanone (MEK)	0.125U	0.250	0.0780	mg/Kg
2-Chlorotoluene	0.0125U	0.0250	0.00780	mg/Kg
2-Hexanone	0.0500U	0.100	0.0310	mg/Kg
4-Chlorotoluene	0.0125U	0.0250	0.00780	mg/Kg
4-Isopropyltoluene	0.0500U	0.100	0.0250	mg/Kg
4-Methyl-2-pentanone (MIBK)	0.125U	0.250	0.0780	mg/Kg
Acetone	0.125U	0.250	0.0780	mg/Kg
Benzene	0.00625U	0.0125	0.00390	mg/Kg
Bromobenzene	0.0125U	0.0250	0.00780	mg/Kg
Bromochloromethane	0.0125U	0.0250	0.00780	mg/Kg
Bromodichloromethane	0.00100U	0.00200	0.000620	mg/Kg
Bromoform	0.0125U	0.0250	0.00780	mg/Kg
Bromomethane	0.0100U	0.0200	0.00620	mg/Kg
Carbon disulfide	0.0500U	0.100	0.0310	mg/Kg
Carbon tetrachloride	0.00625U	0.0125	0.00390	mg/Kg
Chlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
Chloroethane	0.100U	0.200	0.0620	mg/Kg

Print Date: 07/09/2019 9:45:38AM

Method Blank

Blank ID: MB for HBN 1795308 [VXX/34302]
Blank Lab ID: 1514253

Matrix: Soil/Solid (dry weight)

QC for Samples:
1199428009

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
Chloroform	0.00100U	0.00200	0.000620	mg/Kg
Chloromethane	0.0125U	0.0250	0.00780	mg/Kg
cis-1,2-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
cis-1,3-Dichloropropene	0.00625U	0.0125	0.00390	mg/Kg
Dibromochloromethane	0.00100U	0.00200	0.000620	mg/Kg
Dibromomethane	0.0125U	0.0250	0.00780	mg/Kg
Dichlorodifluoromethane	0.0250U	0.0500	0.0150	mg/Kg
Ethylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Freon-113	0.0500U	0.100	0.0310	mg/Kg
Hexachlorobutadiene	0.0100U	0.0200	0.00620	mg/Kg
Isopropylbenzene (Cumene)	0.0125U	0.0250	0.00780	mg/Kg
Methylene chloride	0.0500U	0.100	0.0310	mg/Kg
Methyl-t-butyl ether	0.0500U	0.100	0.0310	mg/Kg
Naphthalene	0.0125U	0.0250	0.00780	mg/Kg
n-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
n-Propylbenzene	0.0125U	0.0250	0.00780	mg/Kg
o-Xylene	0.0125U	0.0250	0.00780	mg/Kg
P & M -Xylene	0.0250U	0.0500	0.0150	mg/Kg
sec-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Styrene	0.0125U	0.0250	0.00780	mg/Kg
tert-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Tetrachloroethene	0.00625U	0.0125	0.00390	mg/Kg
Toluene	0.0125U	0.0250	0.00780	mg/Kg
trans-1,2-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
trans-1,3-Dichloropropene	0.00625U	0.0125	0.00390	mg/Kg
Trichloroethene	0.00250U	0.00500	0.00150	mg/Kg
Trichlorofluoromethane	0.0250U	0.0500	0.0150	mg/Kg
Vinyl acetate	0.0500U	0.100	0.0310	mg/Kg
Vinyl chloride	0.000400U	0.000800	0.000250	mg/Kg
Xylenes (total)	0.0375U	0.0750	0.0228	mg/Kg
Surrogates				
1,2-Dichloroethane-D4 (surr)	102	71-136		%
4-Bromofluorobenzene (surr)	96.2	55-151		%
Toluene-d8 (surr)	98.7	85-116		%

Method Blank

Blank ID: MB for HBN 1795308 [VXX/34302]
Blank Lab ID: 1514253

Matrix: Soil/Solid (dry weight)

QC for Samples:
1199428009

Results by SW8260C

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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Batch Information

Analytical Batch: VMS19077
Analytical Method: SW8260C
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: NRO
Analytical Date/Time: 6/19/2019 8:21:00PM

Prep Batch: VXX34302
Prep Method: SW5035A
Prep Date/Time: 6/19/2019 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 07/09/2019 9:45:38AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199428 [VXX34302]

Blank Spike Lab ID: 1514254

Date Analyzed: 06/19/2019 20:36

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428009

Results by SW8260C

Blank Spike (mg/Kg)				
Parameter	Spike	Result	Rec (%)	CL
1,1,1,2-Tetrachloroethane	0.750	0.817	109	(78-125)
1,1,1-Trichloroethane	0.750	0.837	112	(73-130)
1,1,2,2-Tetrachloroethane	0.750	0.784	105	(70-124)
1,1,2-Trichloroethane	0.750	0.798	106	(78-121)
1,1-Dichloroethane	0.750	0.803	107	(76-125)
1,1-Dichloroethene	0.750	0.795	106	(70-131)
1,1-Dichloropropene	0.750	0.846	113	(76-125)
1,2,3-Trichlorobenzene	0.750	0.816	109	(66-130)
1,2,3-Trichloropropane	0.750	0.769	103	(73-125)
1,2,4-Trichlorobenzene	0.750	0.810	108	(67-129)
1,2,4-Trimethylbenzene	0.750	0.779	104	(75-123)
1,2-Dibromo-3-chloropropane	0.750	0.800	107	(61-132)
1,2-Dibromoethane	0.750	0.750	100	(78-122)
1,2-Dichlorobenzene	0.750	0.754	101	(78-121)
1,2-Dichloroethane	0.750	0.797	106	(73-128)
1,2-Dichloropropane	0.750	0.807	108	(76-123)
1,3,5-Trimethylbenzene	0.750	0.794	106	(73-124)
1,3-Dichlorobenzene	0.750	0.757	101	(77-121)
1,3-Dichloropropane	0.750	0.764	102	(77-121)
1,4-Dichlorobenzene	0.750	0.758	101	(75-120)
2,2-Dichloropropane	0.750	0.844	113	(67-133)
2-Butanone (MEK)	2.25	2.46	109	(51-148)
2-Chlorotoluene	0.750	0.792	106	(75-122)
2-Hexanone	2.25	2.45	109	(53-145)
4-Chlorotoluene	0.750	0.804	107	(72-124)
4-Isopropyltoluene	0.750	0.816	109	(73-127)
4-Methyl-2-pentanone (MIBK)	2.25	2.44	108	(65-135)
Acetone	2.25	2.26	100	(36-164)
Benzene	0.750	0.788	105	(77-121)
Bromobenzene	0.750	0.776	103	(78-121)
Bromochloromethane	0.750	0.760	101	(78-125)
Bromodichloromethane	0.750	0.756	101	(75-127)
Bromoform	0.750	0.714	95	(67-132)
Bromomethane	0.750	0.692	92	(53-143)

Print Date: 07/09/2019 9:45:40AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199428 [VXX34302]

Blank Spike Lab ID: 1514254

Date Analyzed: 06/19/2019 20:36

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428009

Results by SW8260C

Blank Spike (mg/Kg)				
Parameter	Spike	Result	Rec (%)	CL
Carbon disulfide	1.13	1.05	94	(63-132)
Carbon tetrachloride	0.750	0.746	99	(70-135)
Chlorobenzene	0.750	0.748	100	(79-120)
Chloroethane	0.750	0.682	91	(59-139)
Chloroform	0.750	0.759	101	(78-123)
Chloromethane	0.750	0.748	100	(50-136)
cis-1,2-Dichloroethene	0.750	0.800	107	(77-123)
cis-1,3-Dichloropropene	0.750	0.758	101	(74-126)
Dibromochloromethane	0.750	0.726	97	(74-126)
Dibromomethane	0.750	0.804	107	(78-125)
Dichlorodifluoromethane	0.750	0.681	91	(29-149)
Ethylbenzene	0.750	0.728	97	(76-122)
Freon-113	1.13	1.20	107	(66-136)
Hexachlorobutadiene	0.750	0.749	100	(61-135)
Isopropylbenzene (Cumene)	0.750	0.793	106	(68-134)
Methylene chloride	0.750	0.704	94	(70-128)
Methyl-t-butyl ether	1.13	1.15	102	(73-125)
Naphthalene	0.750	0.878	117	(62-129)
n-Butylbenzene	0.750	0.824	110	(70-128)
n-Propylbenzene	0.750	0.803	107	(73-125)
o-Xylene	0.750	0.722	96	(77-123)
P & M -Xylene	1.50	1.40	93	(77-124)
sec-Butylbenzene	0.750	0.803	107	(73-126)
Styrene	0.750	0.778	104	(76-124)
tert-Butylbenzene	0.750	0.788	105	(73-125)
Tetrachloroethene	0.750	0.795	106	(73-128)
Toluene	0.750	0.733	98	(77-121)
trans-1,2-Dichloroethene	0.750	0.761	101	(74-125)
trans-1,3-Dichloropropene	0.750	0.743	99	(71-130)
Trichloroethene	0.750	0.767	102	(77-123)
Trichlorofluoromethane	0.750	0.640	85	(62-140)
Vinyl acetate	0.750	0.800	107	(50-151)
Vinyl chloride	0.750	0.683	91	(56-135)
Xylenes (total)	2.25	2.12	94	(78-124)

Print Date: 07/09/2019 9:45:40AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199428 [VXX34302]

Blank Spike Lab ID: 1514254

Date Analyzed: 06/19/2019 20:36

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428009

Results by SW8260C

	Blank Spike (mg/Kg)			
<u>Parameter</u>	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>CL</u>
Surrogates				
1,2-Dichloroethane-D4 (surr)	0.750	101	101	(71-136)
4-Bromofluorobenzene (surr)	0.750	100	100	(55-151)
Toluene-d8 (surr)	0.750	96.7	97	(85-116)

Batch Information

Analytical Batch: VMS19077

Analytical Method: SW8260C

Instrument: VRA Agilent GC/MS 7890B/5977A

Analyst: NRO

Prep Batch: VXX34302

Prep Method: SW5035A

Prep Date/Time: 06/19/2019 06:00

Spike Init Wt./Vol.: 0.750 mg/Kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 07/09/2019 9:45:40AM

Matrix Spike Summary

Original Sample ID: 1193122005
MS Sample ID: 1514255 MS
MSD Sample ID: 1514256 MSD

Analysis Date: 06/19/2019 22:40
Analysis Date: 06/19/2019 20:51
Analysis Date: 06/19/2019 21:07
Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428009

Results by SW8260C

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	0.0241U	0.823	0.889	108	0.823	0.904	110	78-125	1.70	(< 20)
1,1,1-Trichloroethane	0.0301U	0.823	0.913	111	0.823	0.934	113	73-130	2.30	(< 20)
1,1,2,2-Tetrachloroethane	0.00241U	0.823	0.945	115	0.823	0.978	119	70-124	3.40	(< 20)
1,1,2-Trichloroethane	0.000964U	0.823	0.886	108	0.823	0.914	111	78-121	3.00	(< 20)
1,1-Dichloroethane	0.0301U	0.823	0.874	106	0.823	0.890	108	76-125	2.00	(< 20)
1,1-Dichloroethene	0.0301U	0.823	0.849	103	0.823	0.855	104	70-131	0.61	(< 20)
1,1-Dichloropropene	0.0301U	0.823	0.916	111	0.823	0.933	113	76-125	1.90	(< 20)
1,2,3-Trichlorobenzene	0.0602U	0.823	1.05	128	0.823	1.10	133 *	66-130	3.90	(< 20)
1,2,3-Trichloropropane	0.00120U	0.823	0.886	108	0.823	0.911	111	73-125	2.80	(< 20)
1,2,4-Trichlorobenzene	0.0301U	0.823	1.02	124	0.823	1.04	127	67-129	2.40	(< 20)
1,2,4-Trimethylbenzene	0.163	0.823	1.05	108	0.823	1.09	112	75-123	3.00	(< 20)
1,2-Dibromo-3-chloropropane	0.120U	0.823	0.897	109	0.823	0.918	111	61-132	2.30	(< 20)
1,2-Dibromoethane	0.00120U	0.823	0.825	100	0.823	0.846	103	78-122	2.40	(< 20)
1,2-Dichlorobenzene	0.0301U	0.823	0.826	100	0.823	0.851	103	78-121	3.10	(< 20)
1,2-Dichloroethane	0.00241U	0.823	0.860	104	0.823	0.870	106	73-128	1.30	(< 20)
1,2-Dichloropropane	0.0120U	0.823	0.867	105	0.823	0.877	107	76-123	1.10	(< 20)
1,3,5-Trimethylbenzene	0.551	0.823	1.42	106	0.823	1.46	111	73-124	2.80	(< 20)
1,3-Dichlorobenzene	0.0301U	0.823	0.837	102	0.823	0.856	104	77-121	2.20	(< 20)
1,3-Dichloropropane	0.0120U	0.823	0.836	102	0.823	0.855	104	77-121	2.20	(< 20)
1,4-Dichlorobenzene	0.0301U	0.823	0.824	100	0.823	0.862	105	75-120	4.50	(< 20)
2,2-Dichloropropane	0.0301U	0.823	0.920	112	0.823	0.941	114	67-133	2.20	(< 20)
2-Butanone (MEK)	0.301U	2.47	2.71	110	2.47	2.76	112	51-148	1.70	(< 20)
2-Chlorotoluene	0.0301U	0.823	0.879	107	0.823	0.902	110	75-122	2.60	(< 20)
2-Hexanone	0.120U	2.47	2.83	115	2.47	2.92	118	53-145	2.90	(< 20)
4-Chlorotoluene	0.0301U	0.823	0.852	104	0.823	0.885	107	72-124	3.70	(< 20)
4-Isopropyltoluene	0.120U	0.823	1.05	129 *	0.823	1.10	134 *	73-127	3.90	(< 20)
4-Methyl-2-pentanone (MIBK)	0.301U	2.47	2.68	108	2.47	2.66	107	65-135	1.00	(< 20)
Acetone	0.301U	2.47	2.19	89	2.47	2.21	90	36-164	0.97	(< 20)
Benzene	0.0151U	0.823	0.859	103	0.823	0.869	104	77-121	1.30	(< 20)
Bromobenzene	0.0301U	0.823	0.834	101	0.823	0.845	103	78-121	1.40	(< 20)
Bromochloromethane	0.0301U	0.823	0.821	100	0.823	0.824	100	78-125	0.40	(< 20)
Bromodichloromethane	0.00241U	0.823	0.817	99	0.823	0.829	101	75-127	1.50	(< 20)
Bromoform	0.0301U	0.823	0.787	96	0.823	0.798	97	67-132	1.30	(< 20)
Bromomethane	0.0241U	0.823	0.773	94	0.823	0.810	99	53-143	4.70	(< 20)
Carbon disulfide	0.120U	1.23	1.15	93	1.23	1.16	94	63-132	0.98	(< 20)
Carbon tetrachloride	0.0151U	0.823	0.819	100	0.823	0.841	102	70-135	2.60	(< 20)
Chlorobenzene	0.0301U	0.823	0.818	99	0.823	0.834	101	79-120	2.00	(< 20)

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Matrix Spike Summary

Original Sample ID: 1193122005
MS Sample ID: 1514255 MS
MSD Sample ID: 1514256 MSD

Analysis Date: 06/19/2019 22:40
Analysis Date: 06/19/2019 20:51
Analysis Date: 06/19/2019 21:07
Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428009

Results by SW8260C

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chloroethane	0.241U	0.823	0.731	89	0.823	0.719	87	59-139	1.80	(< 20)
Chloroform	0.00241U	0.823	0.822	100	0.823	0.838	102	78-123	1.80	(< 20)
Chloromethane	0.0301U	0.823	0.844	102	0.823	0.918	112	50-136	8.50	(< 20)
cis-1,2-Dichloroethene	0.0301U	0.823	0.866	105	0.823	0.875	106	77-123	1.10	(< 20)
cis-1,3-Dichloropropene	0.0151U	0.823	0.823	100	0.823	0.836	101	74-126	1.50	(< 20)
Dibromochloromethane	0.00241U	0.823	0.804	98	0.823	0.826	100	74-126	2.70	(< 20)
Dibromomethane	0.0301U	0.823	0.864	105	0.823	0.871	106	78-125	0.81	(< 20)
Dichlorodifluoromethane	0.0602U	0.823	0.767	93	0.823	0.783	95	29-149	2.00	(< 20)
Ethylbenzene	0.0301U	0.823	0.811	96	0.823	0.835	99	76-122	2.90	(< 20)
Freon-113	0.120U	1.23	1.26	102	1.23	1.26	103	66-136	0.12	(< 20)
Hexachlorobutadiene	0.0241U	0.823	2.57	312 *	0.823	2.60	316 *	61-135	1.40	(< 20)
Isopropylbenzene (Cumene)	0.0301U	0.823	0.884	107	0.823	0.907	110	68-134	2.60	(< 20)
Methylene chloride	0.120U	0.823	0.761	92	0.823	0.757	92	70-128	0.62	(< 20)
Methyl-t-butyl ether	0.120U	1.23	1.26	102	1.23	1.28	104	73-125	1.10	(< 20)
Naphthalene	0.0301U	0.823	1.03	122	0.823	1.07	126	62-129	3.90	(< 20)
n-Butylbenzene	0.0301U	0.823	1.30	158 *	0.823	1.35	163 *	70-128	3.40	(< 20)
n-Propylbenzene	0.0301U	0.823	0.920	112	0.823	0.926	112	73-125	0.67	(< 20)
o-Xylene	0.151	0.823	0.920	93	0.823	0.946	97	77-123	2.80	(< 20)
P & M -Xylene	0.271	1.64	1.77	91	1.64	1.81	93	77-124	2.20	(< 20)
sec-Butylbenzene	0.0301U	0.823	1.03	125	0.823	1.06	129 *	73-126	2.80	(< 20)
Styrene	0.0301U	0.823	0.865	103	0.823	0.872	104	76-124	0.78	(< 20)
tert-Butylbenzene	0.0301U	0.823	0.952	116	0.823	0.994	121	73-125	4.40	(< 20)
Tetrachloroethene	0.0151U	0.823	0.874	106	0.823	0.909	110	73-128	4.00	(< 20)
Toluene	0.128	0.823	0.921	96	0.823	0.944	99	77-121	2.50	(< 20)
trans-1,2-Dichloroethene	0.0301U	0.823	0.821	100	0.823	0.822	100	74-125	0.08	(< 20)
trans-1,3-Dichloropropene	0.0151U	0.823	0.813	99	0.823	0.841	102	71-130	3.30	(< 20)
Trichloroethene	0.00602U	0.823	0.828	101	0.823	0.839	102	77-123	1.40	(< 20)
Trichlorofluoromethane	0.0602U	0.823	0.689	84	0.823	0.687	83	62-140	0.33	(< 20)
Vinyl acetate	0.120U	0.823	0.907	110	0.823	0.916	111	50-151	0.96	(< 20)
Vinyl chloride	0.000964U	0.823	0.762	93	0.823	0.738	90	56-135	3.30	(< 20)
Xylenes (total)	0.422	2.47	2.69	92	2.47	2.75	94	78-124	2.40	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		0.823	0.829	101	0.823	0.825	100	71-136	0.57	
4-Bromofluorobenzene (surr)		1.37	1.20	87	1.37	1.25	91	55-151	4.20	
Toluene-d8 (surr)		0.823	0.798	97	0.823	0.803	98	85-116	0.66	

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Matrix Spike Summary

Original Sample ID: 1193122005
MS Sample ID: 1514255 MS
MSD Sample ID: 1514256 MSD

QC for Samples: 1199428009

Analysis Date:
Analysis Date: 06/19/2019 20:51
Analysis Date: 06/19/2019 21:07
Matrix: Soil/Solid (dry weight)

Results by SW8260C

Parameter	Sample	Matrix Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			

Batch Information

Analytical Batch: VMS19077
Analytical Method: SW8260C
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: NRO
Analytical Date/Time: 6/19/2019 8:51:00PM

Prep Batch: VXX34302
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 6/19/2019 6:00:00AM
Prep Initial Wt./Vol.: 47.99g
Prep Extract Vol: 25.00mL

Print Date: 07/09/2019 9:45:41AM

Method Blank

Blank ID: MB for HBN 1795339 [VXX/34306]
Blank Lab ID: 1514391

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007, 1199428008

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.0100U	0.0200	0.00620	mg/Kg
1,1,1-Trichloroethane	0.0125U	0.0250	0.00780	mg/Kg
1,1,2,2-Tetrachloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,1,2-Trichloroethane	0.000400U	0.000800	0.000250	mg/Kg
1,1-Dichloroethane	0.0125U	0.0250	0.00780	mg/Kg
1,1-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
1,1-Dichloropropene	0.0125U	0.0250	0.00780	mg/Kg
1,2,3-Trichlorobenzene	0.0250U	0.0500	0.0150	mg/Kg
1,2,3-Trichloropropane	0.000500U	0.00100	0.000310	mg/Kg
1,2,4-Trichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,2,4-Trimethylbenzene	0.0250U	0.0500	0.0150	mg/Kg
1,2-Dibromo-3-chloropropane	0.0500U	0.100	0.0310	mg/Kg
1,2-Dibromoethane	0.000500U	0.00100	0.000310	mg/Kg
1,2-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,2-Dichloroethane	0.00100U	0.00200	0.000620	mg/Kg
1,2-Dichloropropane	0.00500U	0.0100	0.00310	mg/Kg
1,3,5-Trimethylbenzene	0.0125U	0.0250	0.00780	mg/Kg
1,3-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
1,3-Dichloropropane	0.00500U	0.0100	0.00310	mg/Kg
1,4-Dichlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
2,2-Dichloropropane	0.0125U	0.0250	0.00780	mg/Kg
2-Butanone (MEK)	0.125U	0.250	0.0780	mg/Kg
2-Chlorotoluene	0.0125U	0.0250	0.00780	mg/Kg
2-Hexanone	0.0500U	0.100	0.0310	mg/Kg
4-Chlorotoluene	0.0125U	0.0250	0.00780	mg/Kg
4-Isopropyltoluene	0.0500U	0.100	0.0250	mg/Kg
4-Methyl-2-pentanone (MIBK)	0.125U	0.250	0.0780	mg/Kg
Acetone	0.125U	0.250	0.0780	mg/Kg
Benzene	0.00625U	0.0125	0.00390	mg/Kg
Bromobenzene	0.0125U	0.0250	0.00780	mg/Kg
Bromochloromethane	0.0125U	0.0250	0.00780	mg/Kg
Bromodichloromethane	0.00100U	0.00200	0.000620	mg/Kg
Bromoform	0.0125U	0.0250	0.00780	mg/Kg
Bromomethane	0.0100U	0.0200	0.00620	mg/Kg
Carbon disulfide	0.0500U	0.100	0.0310	mg/Kg
Carbon tetrachloride	0.00625U	0.0125	0.00390	mg/Kg
Chlorobenzene	0.0125U	0.0250	0.00780	mg/Kg
Chloroethane	0.100U	0.200	0.0620	mg/Kg

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Method Blank

Blank ID: MB for HBN 1795339 [VXX/34306]
Blank Lab ID: 1514391

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007, 1199428008

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
Chloroform	0.00100U	0.00200	0.000620	mg/Kg
Chloromethane	0.0125U	0.0250	0.00780	mg/Kg
cis-1,2-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
cis-1,3-Dichloropropene	0.00625U	0.0125	0.00390	mg/Kg
Dibromochloromethane	0.00100U	0.00200	0.000620	mg/Kg
Dibromomethane	0.0125U	0.0250	0.00780	mg/Kg
Dichlorodifluoromethane	0.0250U	0.0500	0.0150	mg/Kg
Ethylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Freon-113	0.0500U	0.100	0.0310	mg/Kg
Hexachlorobutadiene	0.0100U	0.0200	0.00620	mg/Kg
Isopropylbenzene (Cumene)	0.0125U	0.0250	0.00780	mg/Kg
Methylene chloride	0.0500U	0.100	0.0310	mg/Kg
Methyl-t-butyl ether	0.0500U	0.100	0.0310	mg/Kg
Naphthalene	0.0125U	0.0250	0.00780	mg/Kg
n-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
n-Propylbenzene	0.0125U	0.0250	0.00780	mg/Kg
o-Xylene	0.0125U	0.0250	0.00780	mg/Kg
P & M -Xylene	0.0250U	0.0500	0.0150	mg/Kg
sec-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Styrene	0.0125U	0.0250	0.00780	mg/Kg
tert-Butylbenzene	0.0125U	0.0250	0.00780	mg/Kg
Tetrachloroethene	0.00625U	0.0125	0.00390	mg/Kg
Toluene	0.0125U	0.0250	0.00780	mg/Kg
trans-1,2-Dichloroethene	0.0125U	0.0250	0.00780	mg/Kg
trans-1,3-Dichloropropene	0.00625U	0.0125	0.00390	mg/Kg
Trichloroethene	0.00250U	0.00500	0.00150	mg/Kg
Trichlorofluoromethane	0.0250U	0.0500	0.0150	mg/Kg
Vinyl acetate	0.0500U	0.100	0.0310	mg/Kg
Vinyl chloride	0.000400U	0.000800	0.000250	mg/Kg
Xylenes (total)	0.0375U	0.0750	0.0228	mg/Kg
Surrogates				
1,2-Dichloroethane-D4 (surr)	102	71-136		%
4-Bromofluorobenzene (surr)	97.6	55-151		%
Toluene-d8 (surr)	97.9	85-116		%

Method Blank

Blank ID: MB for HBN 1795339 [VXX/34306]
Blank Lab ID: 1514391

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007, 1199428008

Results by SW8260C

Parameter	Results	LOQ/CL	DL	Units
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Batch Information

Analytical Batch: VMS19083
Analytical Method: SW8260C
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: NRO
Analytical Date/Time: 6/20/2019 4:15:00PM

Prep Batch: VXX34306
Prep Method: SW5035A
Prep Date/Time: 6/20/2019 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 07/09/2019 9:45:42AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199428 [VXX34306]

Blank Spike Lab ID: 1514392

Date Analyzed: 06/20/2019 16:30

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007, 1199428008

Results by SW8260C

Blank Spike (mg/Kg)				
Parameter	Spike	Result	Rec (%)	CL
1,1,1,2-Tetrachloroethane	0.750	0.839	112	(78-125)
1,1,1-Trichloroethane	0.750	0.836	112	(73-130)
1,1,2,2-Tetrachloroethane	0.750	0.760	101	(70-124)
1,1,2-Trichloroethane	0.750	0.793	106	(78-121)
1,1-Dichloroethane	0.750	0.797	106	(76-125)
1,1-Dichloroethene	0.750	0.789	105	(70-131)
1,1-Dichloropropene	0.750	0.836	111	(76-125)
1,2,3-Trichlorobenzene	0.750	0.792	106	(66-130)
1,2,3-Trichloropropane	0.750	0.753	100	(73-125)
1,2,4-Trichlorobenzene	0.750	0.786	105	(67-129)
1,2,4-Trimethylbenzene	0.750	0.769	102	(75-123)
1,2-Dibromo-3-chloropropane	0.750	0.787	105	(61-132)
1,2-Dibromoethane	0.750	0.742	99	(78-122)
1,2-Dichlorobenzene	0.750	0.747	100	(78-121)
1,2-Dichloroethane	0.750	0.774	103	(73-128)
1,2-Dichloropropane	0.750	0.798	106	(76-123)
1,3,5-Trimethylbenzene	0.750	0.790	105	(73-124)
1,3-Dichlorobenzene	0.750	0.758	101	(77-121)
1,3-Dichloropropane	0.750	0.753	100	(77-121)
1,4-Dichlorobenzene	0.750	0.755	101	(75-120)
2,2-Dichloropropane	0.750	0.872	116	(67-133)
2-Butanone (MEK)	2.25	2.36	105	(51-148)
2-Chlorotoluene	0.750	0.773	103	(75-122)
2-Hexanone	2.25	2.40	107	(53-145)
4-Chlorotoluene	0.750	0.787	105	(72-124)
4-Isopropyltoluene	0.750	0.798	106	(73-127)
4-Methyl-2-pentanone (MIBK)	2.25	2.33	103	(65-135)
Acetone	2.25	2.18	97	(36-164)
Benzene	0.750	0.781	104	(77-121)
Bromobenzene	0.750	0.760	101	(78-121)
Bromochloromethane	0.750	0.774	103	(78-125)
Bromodichloromethane	0.750	0.760	101	(75-127)
Bromoform	0.750	0.723	96	(67-132)
Bromomethane	0.750	0.741	99	(53-143)

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1199428 [VXX34306]

Blank Spike Lab ID: 1514392

Date Analyzed: 06/20/2019 16:30

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007, 1199428008

Results by SW8260C

Parameter	Blank Spike (mg/Kg)			CL
	Spike	Result	Rec (%)	
Carbon disulfide	1.13	1.08	96	(63-132)
Carbon tetrachloride	0.750	0.759	101	(70-135)
Chlorobenzene	0.750	0.765	102	(79-120)
Chloroethane	0.750	0.703	94	(59-139)
Chloroform	0.750	0.750	100	(78-123)
Chloromethane	0.750	0.752	100	(50-136)
cis-1,2-Dichloroethene	0.750	0.793	106	(77-123)
cis-1,3-Dichloropropene	0.750	0.764	102	(74-126)
Dibromochloromethane	0.750	0.738	98	(74-126)
Dibromomethane	0.750	0.787	105	(78-125)
Dichlorodifluoromethane	0.750	0.673	90	(29-149)
Ethylbenzene	0.750	0.742	99	(76-122)
Freon-113	1.13	1.20	107	(66-136)
Hexachlorobutadiene	0.750	0.758	101	(61-135)
Isopropylbenzene (Cumene)	0.750	0.800	107	(68-134)
Methylene chloride	0.750	0.709	95	(70-128)
Methyl-t-butyl ether	1.13	1.12	99	(73-125)
Naphthalene	0.750	0.847	113	(62-129)
n-Butylbenzene	0.750	0.794	106	(70-128)
n-Propylbenzene	0.750	0.787	105	(73-125)
o-Xylene	0.750	0.728	97	(77-123)
P & M -Xylene	1.50	1.42	95	(77-124)
sec-Butylbenzene	0.750	0.795	106	(73-126)
Styrene	0.750	0.781	104	(76-124)
tert-Butylbenzene	0.750	0.777	104	(73-125)
Tetrachloroethene	0.750	0.810	108	(73-128)
Toluene	0.750	0.738	98	(77-121)
trans-1,2-Dichloroethene	0.750	0.759	101	(74-125)
trans-1,3-Dichloropropene	0.750	0.744	99	(71-130)
Trichloroethene	0.750	0.762	102	(77-123)
Trichlorofluoromethane	0.750	0.951	127	(62-140)
Vinyl acetate	0.750	0.812	108	(50-151)
Vinyl chloride	0.750	0.671	89	(56-135)
Xylenes (total)	2.25	2.15	96	(78-124)

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1199428 [VXX34306]

Blank Spike Lab ID: 1514392

Date Analyzed: 06/20/2019 16:30

Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007, 1199428008

Results by SW8260C

	Blank Spike (mg/Kg)			
<u>Parameter</u>	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>CL</u>
Surrogates				
1,2-Dichloroethane-D4 (surr)	0.750	99.2	99	(71-136)
4-Bromofluorobenzene (surr)	0.750	97	97	(55-151)
Toluene-d8 (surr)	0.750	98.2	98	(85-116)

Batch Information

Analytical Batch: VMS19083

Analytical Method: SW8260C

Instrument: VRA Agilent GC/MS 7890B/5977A

Analyst: NRO

Prep Batch: VXX34306

Prep Method: SW5035A

Prep Date/Time: 06/20/2019 06:00

Spike Init Wt./Vol.: 0.750 mg/Kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Matrix Spike Summary

Original Sample ID: 1193188005
MS Sample ID: 1514393 MS
MSD Sample ID: 1514394 MSD

Analysis Date: 06/20/2019 19:26
Analysis Date: 06/20/2019 17:07
Analysis Date: 06/20/2019 17:22
Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007, 1199428008

Results by SW8260C

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	0.0129U	0.741	0.795	107	0.741	0.827	112	78-125	4.00	(< 20)
1,1,1-Trichloroethane	0.0161U	0.741	0.808	109	0.741	0.837	113	73-130	3.50	(< 20)
1,1,2,2-Tetrachloroethane	0.00129U	0.741	0.734	99	0.741	0.766	103	70-124	4.30	(< 20)
1,1,2-Trichloroethane	0.000515U	0.741	0.770	104	0.741	0.806	109	78-121	4.50	(< 20)
1,1-Dichloroethane	0.0161U	0.741	0.759	102	0.741	0.793	107	76-125	4.30	(< 20)
1,1-Dichloroethene	0.0161U	0.741	0.773	104	0.741	0.779	105	70-131	0.76	(< 20)
1,1-Dichloropropene	0.0161U	0.741	0.804	109	0.741	0.835	113	76-125	3.80	(< 20)
1,2,3-Trichlorobenzene	0.0323U	0.741	0.719	97	0.741	0.777	105	66-130	7.80	(< 20)
1,2,3-Trichloropropane	0.000645U	0.741	0.725	98	0.741	0.759	102	73-125	4.70	(< 20)
1,2,4-Trichlorobenzene	0.0161U	0.741	0.712	96	0.741	0.762	103	67-129	6.80	(< 20)
1,2,4-Trimethylbenzene	0.0323U	0.741	0.700	95	0.741	0.751	101	75-123	7.00	(< 20)
1,2-Dibromo-3-chloropropane	0.0645U	0.741	0.773	104	0.741	0.826	111	61-132	6.50	(< 20)
1,2-Dibromoethane	0.000645U	0.741	0.724	98	0.741	0.751	101	78-122	3.70	(< 20)
1,2-Dichlorobenzene	0.0161U	0.741	0.682	92	0.741	0.728	98	78-121	6.50	(< 20)
1,2-Dichloroethane	0.00129U	0.741	0.743	100	0.741	0.777	105	73-128	4.50	(< 20)
1,2-Dichloropropane	0.00645U	0.741	0.756	102	0.741	0.786	106	76-123	3.90	(< 20)
1,3,5-Trimethylbenzene	0.0161U	0.741	0.682	92	0.741	0.754	102	73-124	9.90	(< 20)
1,3-Dichlorobenzene	0.0161U	0.741	0.665	90	0.741	0.738	100	77-121	10.20	(< 20)
1,3-Dichloropropane	0.00645U	0.741	0.723	98	0.741	0.768	104	77-121	6.00	(< 20)
1,4-Dichlorobenzene	0.0161U	0.741	0.673	91	0.741	0.720	97	75-120	6.70	(< 20)
2,2-Dichloropropane	0.0161U	0.741	0.829	112	0.741	0.857	116	67-133	3.40	(< 20)
2-Butanone (MEK)	0.161U	2.22	2.36	106	2.22	2.44	110	51-148	3.20	(< 20)
2-Chlorotoluene	0.0161U	0.741	0.697	94	0.741	0.750	101	75-122	7.30	(< 20)
2-Hexanone	0.0645U	2.22	2.39	108	2.22	2.47	111	53-145	3.10	(< 20)
4-Chlorotoluene	0.0161U	0.741	0.716	97	0.741	0.758	102	72-124	5.80	(< 20)
4-Isopropyltoluene	0.0645U	0.741	0.711	96	0.741	0.756	102	73-127	6.00	(< 20)
4-Methyl-2-pentanone (MIBK)	0.161U	2.22	2.27	102	2.22	2.39	108	65-135	5.60	(< 20)
Acetone	0.161U	2.22	2.28	103	2.22	2.22	100	36-164	2.80	(< 20)
Benzene	0.00805U	0.741	0.740	100	0.741	0.766	103	77-121	3.50	(< 20)
Bromobenzene	0.0161U	0.741	0.709	96	0.741	0.745	100	78-121	4.90	(< 20)
Bromochloromethane	0.0161U	0.741	0.745	100	0.741	0.771	104	78-125	3.50	(< 20)
Bromodichloromethane	0.00129U	0.741	0.727	98	0.741	0.754	102	75-127	3.60	(< 20)
Bromoform	0.0161U	0.741	0.710	96	0.741	0.747	101	67-132	4.90	(< 20)
Bromomethane	0.0129U	0.741	0.701	95	0.741	0.753	102	53-143	7.10	(< 20)
Carbon disulfide	0.0645U	1.11	1.10	99	1.11	1.08	97	63-132	2.20	(< 20)
Carbon tetrachloride	0.00805U	0.741	0.735	99	0.741	0.762	103	70-135	3.40	(< 20)
Chlorobenzene	0.0161U	0.741	0.712	96	0.741	0.746	101	79-120	4.50	(< 20)

Print Date: 07/09/2019 9:45:43AM

Matrix Spike Summary

Original Sample ID: 1193188005
MS Sample ID: 1514393 MS
MSD Sample ID: 1514394 MSD

Analysis Date: 06/20/2019 19:26
Analysis Date: 06/20/2019 17:07
Analysis Date: 06/20/2019 17:22
Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007, 1199428008

Results by SW8260C

Parameter	Sample	Matrix Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chloroethane	0.129U	0.741	0.672	91	0.741	0.686	93	59-139	2.00	(< 20)
Chloroform	0.000991J	0.741	0.712	96	0.741	0.748	101	78-123	4.80	(< 20)
Chloromethane	0.0161U	0.741	0.740	100	0.741	0.797	108	50-136	7.50	(< 20)
cis-1,2-Dichloroethene	0.0161U	0.741	0.756	102	0.741	0.786	106	77-123	3.90	(< 20)
cis-1,3-Dichloropropene	0.00805U	0.741	0.727	98	0.741	0.754	102	74-126	3.60	(< 20)
Dibromochloromethane	0.00129U	0.741	0.718	97	0.741	0.748	101	74-126	4.20	(< 20)
Dibromomethane	0.0161U	0.741	0.758	102	0.741	0.788	106	78-125	3.90	(< 20)
Dichlorodifluoromethane	0.0323U	0.741	0.679	92	0.741	0.712	96	29-149	4.70	(< 20)
Ethylbenzene	0.0161U	0.741	0.678	92	0.741	0.713	96	76-122	5.10	(< 20)
Freon-113	0.0645U	1.11	1.14	102	1.11	1.17	105	66-136	2.60	(< 20)
Hexachlorobutadiene	0.0129U	0.741	0.985	133	0.741	0.883	119	61-135	11.00	(< 20)
Isopropylbenzene (Cumene)	0.0161U	0.741	0.694	94	0.741	0.773	104	68-134	10.90	(< 20)
Methylene chloride	0.0645U	0.741	0.667	90	0.741	0.689	93	70-128	3.30	(< 20)
Methyl-t-butyl ether	0.0645U	1.11	1.06	96	1.11	1.17	106	73-125	10.40	(< 20)
Naphthalene	0.0161U	0.741	0.763	103	0.741	0.835	113	62-129	9.00	(< 20)
n-Butylbenzene	0.0161U	0.741	0.734	99	0.741	0.762	103	70-128	3.70	(< 20)
n-Propylbenzene	0.0161U	0.741	0.687	93	0.741	0.749	101	73-125	8.60	(< 20)
o-Xylene	0.0161U	0.741	0.672	91	0.741	0.701	95	77-123	4.20	(< 20)
P & M -Xylene	0.0323U	1.48	1.30	88	1.48	1.37	92	77-124	5.10	(< 20)
sec-Butylbenzene	0.0161U	0.741	0.699	94	0.741	0.759	102	73-126	8.40	(< 20)
Styrene	0.0161U	0.741	0.730	99	0.741	0.773	104	76-124	5.70	(< 20)
tert-Butylbenzene	0.0161U	0.741	0.688	93	0.741	0.758	102	73-125	9.70	(< 20)
Tetrachloroethene	0.00805U	0.741	0.727	98	0.741	0.799	108	73-128	9.40	(< 20)
Toluene	0.0161U	0.741	0.700	94	0.741	0.734	99	77-121	4.80	(< 20)
trans-1,2-Dichloroethene	0.0161U	0.741	0.740	100	0.741	0.751	101	74-125	1.60	(< 20)
trans-1,3-Dichloropropene	0.00805U	0.741	0.727	98	0.741	0.762	103	71-130	4.70	(< 20)
Trichloroethene	0.00323U	0.741	0.725	98	0.741	0.750	101	77-123	3.40	(< 20)
Trichlorofluoromethane	0.0323U	0.741	0.928	125	0.741	0.928	125	62-140	0.10	(< 20)
Vinyl acetate	0.0645U	0.741	0.707	95	0.741	0.776	105	50-151	9.40	(< 20)
Vinyl chloride	0.000515U	0.741	0.713	96	0.741	0.712	96	56-135	0.19	(< 20)
Xylenes (total)	0.0483U	2.22	1.97	89	2.22	2.07	93	78-124	4.80	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		0.741	0.728	98	0.741	0.742	100	71-136	1.80	
4-Bromofluorobenzene (surr)		1.23	0.877	71	1.23	0.929	75	55-151	5.80	
Toluene-d8 (surr)		0.741	0.725	98	0.741	0.725	98	85-116	0.04	

Print Date: 07/09/2019 9:45:43AM

Matrix Spike Summary

Original Sample ID: 1193188005
MS Sample ID: 1514393 MS
MSD Sample ID: 1514394 MSD

Analysis Date:
Analysis Date: 06/20/2019 17:07
Analysis Date: 06/20/2019 17:22
Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007, 1199428008

Results by SW8260C

Parameter	Sample	Matrix Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			

Batch Information

Analytical Batch: VMS19083
Analytical Method: SW8260C
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: NRO
Analytical Date/Time: 6/20/2019 5:07:00PM

Prep Batch: VXX34306
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 6/20/2019 6:00:00AM
Prep Initial Wt./Vol.: 58.23g
Prep Extract Vol: 25.00mL

Print Date: 07/09/2019 9:45:43AM

Method Blank

Blank ID: MB for HBN 1795353 [VXX/34307]
Blank Lab ID: 1514438

Matrix: Soil/Solid (dry weight)

QC for Samples:
1199428007, 1199428008

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.25U	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	77.2	50-150		%

Batch Information

Analytical Batch: VFC14794
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 6/20/2019 11:10:00AM

Prep Batch: VXX34307
Prep Method: SW5035A
Prep Date/Time: 6/20/2019 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 07/09/2019 9:45:44AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199428 [VXX34307]
 Blank Spike Lab ID: 1514439
 Date Analyzed: 06/20/2019 10:35

Spike Duplicate ID: LCSD for HBN 1199428 [VXX34307]
 Spike Duplicate Lab ID: 1514440
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428007, 1199428008

Results by AK101

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	12.0	96	12.5	11.3	90	(60-120)	6.30	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	84.8	85	1.25	79.2	79	(50-150)	6.80	

Batch Information

Analytical Batch: **VFC14794**
 Analytical Method: **AK101**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ST**

Prep Batch: **VXX34307**
 Prep Method: **SW5035A**
 Prep Date/Time: **06/20/2019 08:00**
 Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 07/09/2019 9:45:45AM

Method Blank

Blank ID: MB for HBN 1795417 [XXX/41647]
Blank Lab ID: 1514696

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007, 1199428008

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
5a Androstane (surr)	86.3	60-120		%

Batch Information

Analytical Batch: XFC15083
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: VDL
Analytical Date/Time: 6/27/2019 11:09:00PM

Prep Batch: XXX41647
Prep Method: SW3550C
Prep Date/Time: 6/24/2019 2:07:46PM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Print Date: 07/09/2019 9:45:47AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199428 [XXX41647]
 Blank Spike Lab ID: 1514697
 Date Analyzed: 06/27/2019 23:19

Spike Duplicate ID: LCSD for HBN 1199428
 [XXX41647]
 Spike Duplicate Lab ID: 1514698
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007,
 1199428008

Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	833	795	95	833	876	105	(75-125)	9.60	(< 20)
Surrogates									
5a Androstane (surr)	16.7	94.2	94	16.7	104	104	(60-120)	9.80	

Batch Information

Analytical Batch: **XFC15083**
 Analytical Method: **AK102**
 Instrument: **Agilent 7890B R**
 Analyst: **VDL**

Prep Batch: **XXX41647**
 Prep Method: **SW3550C**
 Prep Date/Time: **06/24/2019 14:07**
 Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

Print Date: 07/09/2019 9:45:48AM

Method Blank

Blank ID: MB for HBN 1795417 [XXX/41647]
Blank Lab ID: 1514696

Matrix: Soil/Solid (dry weight)

QC for Samples:

1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007, 1199428008

Results by AK103

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
nA riacontaneAt62 (surr)	100	60A20		%

Batch Information

Fanalytical Batch: XVC15083
Fanalytical Method: FK103
Instrument: Fgilent 7890B R
Fnalyst: TDL
Fanalytical Date/- ime: 6/27/2019 11:09:00PM

Prep Batch: XXX41647
Prep Method: SW3550C
Prep Date/- ime: 6/24/2019 2:07:46PM
Prep Initial Wt./Tol.: 30 g
Prep Extract Tol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199428 [XXX41647]
 Blank Spike Lab ID: 1514697
 Date Analyzed: 06/27/2019 23:19

Spike Duplicate ID: LCSD for HBN 1199428
 [XXX41647]
 Spike Duplicate Lab ID: 1514698
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1199428001, 1199428002, 1199428003, 1199428004, 1199428005, 1199428006, 1199428007,
 1199428008

Results by AK103

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	833	831	100	833	928	111	(60-120)	11.00	(< 20)
Surrogates									
n-Triacontane-d62 (surr)	16.7	105	105	16.7	117	117	(60-120)	11.30	

Batch Information

Analytical Batch: **XFC15083**
 Analytical Method: **AK103**
 Instrument: **Agilent 7890B R**
 Analyst: **VDL**

Prep Batch: **XXX41647**
 Prep Method: **SW3550C**
 Prep Date/Time: **06/24/2019 14:07**
 Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

Print Date: 07/09/2019 9:45:50AM

1199428



2355 Hill Road
Fairbanks, AK 99709
(907) 479-0600
www.shannonwilson.com

CHAIN-

RECORD

Laboratory SGS Page 1 of 1
Attn: Ken Dawkins

Analytical Methods (include preservative if used)

Turn-Around Time:	
<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Rush
Please Specify	

Quote No:
J-Flags: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Sample Identity	Lab No.	Time	Date Sampled	DPG AK003	GRD AK003	PRD AK003	Total Number of Containers	Remarks/Matrix Composition/Grab? Sample Containers
B3025-WB-01	1AB	0950	6/17/19	X	X	X	2	Soil
B3025-SP-01	2AB	1125		X	X	X	2	
B3025-SP-02	3AB	1133		X	X	X	2	
B3025-SP-03	4AB	1140		X	X	X	2	
B3025-SP-04	5AB	1144		X	X	X	2	
B3025-SP-05	6AB	1213		X	X	X	2	
B3025-SP-06	7AB	1218		X	X	X	2	
B3025-SP-07	8AB	1208		X	X	X	2	
TRIP BLANK	9AB	0619/19		X	X	X	1	

Project Information	
Number: 100004-005	
Name: B3025	
Contact: VEW	
Ongoing Project? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Sampler: DHE	

Sample Receipt	
Total No. of Containers:	16
COC Seals/Intact? Y/N/NA	
Received Good Cond./Cold	
Temp: 3.5	
Delivery Method: hand	

Relinquished By: 1.	
Signature: <u>Dawkins</u>	Time: 1440
Printed Name: <u>Dana Fivore</u>	Date: 6/17/19
Company: <u>Shannon & Wilson, Inc.</u>	

Relinquished By: 2.	
Signature: <u>Ken Dawkins</u>	Time: 1500
Printed Name: <u>Ken Dawkins</u>	Date: 6/17/19
Company: <u>SGS</u>	

Relinquished By: 3.	
Signature: _____	Time: _____
Printed Name: _____	Date: _____
Company: _____	

Notes:	
trip blank remained in cooler w/samples at all times.	

Received By: 1.	
Signature: <u>Ken Dawkins</u>	Time: 1440
Printed Name: <u>Ken Dawkins</u>	Date: 6/17/19
Company: <u>SGS</u>	

Received By: 2.	
Signature: _____	Time: _____
Printed Name: _____	Date: _____
Company: _____	

Received By: 3.	
Signature: <u>Alexander Galas</u>	Time: 06151
Printed Name: <u>Alexander Galas</u>	Date: 06/17/19
Company: <u>SGS</u>	

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - job file

3.20 D35 1E, AB

No. 36005



FAIRBANKS SAMPLE RECEIPT FORM

Note: This form is to be completed by Fairbanks Receiving Staff for all samples

Review Criteria:	Condition:	Comments/Actions Taken
Were custody seals intact? Note # & location, if applicable. COC accompanied samples?	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Exemption permitted if sampler hand carries/delivers.
Temperature blank compliant* (i.e., 0-6°C) If >6°C, were samples collected <8 hours ago? If <0°C, were all sample containers ice free?	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/>	<input type="checkbox"/> Exemption permitted if chilled & collected <8hrs ago
Cooler ID: <u>1</u> @ <u>3.5</u> w/Therm. ID: <u>1054</u> Cooler ID: _____ @ _____ w/Therm. ID: _____ Cooler ID: _____ @ _____ w/Therm. ID: _____ Cooler ID: _____ @ _____ w/Therm. ID: _____ Cooler ID: _____ @ _____ w/Therm. ID: _____ If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank and "COOLER TEMP" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note ambient () or chilled (). Please check one.	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/>	Note: Identify containers received at non-compliant temperature. Use form FS-0029 if more space is needed.
Delivery Method: <u>Client</u> (hand carried) Other: _____	Tracking/AB# : Or see attached <u>Or N/A</u>	
→ For samples received with payment, note amount (\$) and whether cash / check / CC (circle one) was received.		
Were samples in good condition (no leaks/cracks/breakage)? Packing material used (specify all that apply): Bubble Wrap Separate plastic bags Vermiculite Other: _____	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/>	Note: some samples are sent to Anchorage without inspection by SGS Fairbanks personnel.
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/>	
For RUSH/SHORT Hold Time , were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Additional notes (if applicable):		
<div>Profile #: <u>338928</u></div>		

Note to Client: any "no" circled above indicates non-compliance with standard procedures and may impact data quality.



e-Sample Receipt Form

SGS Workorder #:

1199428



1 1 9 9 4 2 8

1193049

Condition (Yes, No, N/A)

Exceptions Noted below

Chain of Custody / Temperature Requirements

Yes

Exemption permitted if sampler hand carries/delivers.

Were Custody Seals intact? Note # & location

Yes

1F,1B

COC accompanied samples?

Yes

DOD: Were samples received in COC corresponding coolers?

N/A

N/A

**Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required

Temperature blank compliant* (i.e., 0-6 °C after CF)?

Yes

Cooler ID:

@

3.2

°C

Therm. ID:

D35

If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.

N/A

Cooler ID:

@

°C

Therm. ID:

N/A

Cooler ID:

@

°C

Therm. ID:

N/A

Cooler ID:

@

°C

Therm. ID:

N/A

*If >6°C, were samples collected <8 hours ago?

N/A

Trip blank remained in cooler w/ samples at all times.

If <0°C, were sample containers ice free?

N/A

Note: Identify containers received at non-compliant temperature .
Use form FS-0029 if more space is needed.

Holding Time / Documentation / Sample Condition Requirements

Note: Refer to form F-083 "Sample Guide" for specific holding times.

Were samples received within holding time?

Yes

Do samples match COC** (i.e., sample IDs, dates/times collected)?

No

**Note: If times differ <1hr, record details & login per COC.

***Note: If sample information on containers differs from COC, SGS will default to COC information

For the GRO/VOC samples COC, MeOH was not stated in the COC.
MeOH is present on the VOC/GRO samples.

Were analytical requests clear? (i.e., method is specified for analyses
with multiple option for analysis (Ex: BTEX, Metals)

Yes

N/A

***Exemption permitted for metals (e.g., 200.8/6020A).

Were proper containers (type/mass/volume/preservative***) used?

Yes

Volatile / LL-Hg Requirements

Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?

Yes

Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?

N/A

Were all soil VOAs field extracted with MeOH+BFB?

Yes

Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

Additional notes (if applicable):

Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1199428001-A	No Preservative Required	OK			
1199428001-B	Methanol field pres. 4 C	OK			
1199428002-A	No Preservative Required	OK			
1199428002-B	Methanol field pres. 4 C	OK			
1199428003-A	No Preservative Required	OK			
1199428003-B	Methanol field pres. 4 C	OK			
1199428004-A	No Preservative Required	OK			
1199428004-B	Methanol field pres. 4 C	OK			
1199428005-A	No Preservative Required	OK			
1199428005-B	Methanol field pres. 4 C	OK			
1199428006-A	No Preservative Required	OK			
1199428006-B	Methanol field pres. 4 C	OK			
1199428007-A	No Preservative Required	OK			
1199428007-B	Methanol field pres. 4 C	OK			
1199428008-A	No Preservative Required	OK			
1199428008-B	Methanol field pres. 4 C	OK			
1199428009-A	Methanol field pres. 4 C	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

IMPORTANT INFORMATION

Important Information

About Your Environmental Report

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors that were considered in the development of the report have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events and should be consulted to determine if additional tests are necessary.

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining

your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary, because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims

being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland