



Minnesota Pollution Control Agency

General Excavation Report Worksheet

Guidance Document 3-02

Complete the worksheet below to document excavation and treatment of petroleum contaminated soil removed **prior to** a Site Investigation and/or during tank removals and/or upgrades. If soil is excavated as an MPCA-approved corrective action **after** a Site Investigation is conducted, complete Guidance Document 3-02a *Corrective Action Excavation Report Worksheet*. Conduct excavations in accordance with Guidance Document 3-01 *Excavation of Petroleum Contaminated Soil*. Please type or print clearly. Do not revise or delete text or questions from this report form.

The excavation worksheet 3-02 deadline is 10 months from the date of receipt of the MPCA “Petroleum Storage Tank Release Investigation and Corrective Action” letter. MPCA staff may establish a shorter deadline for high priority sites.

PART I: BACKGROUND

A. Site: Kwik Trip #571

MPCA Site ID#: Not Yet Assigned

Duty Officer Report # 165082

Street: *1711 Highway 210*

City, Zip: *Carlton*

County: *St. Louis*

B. Tank Owner/Operator: *Kwik Trip, Inc.*

Mailing Address:

Street/Box: *1626 Oak Street*

City, Zip: *La Crosse, 54602*

Telephone:

C. Excavating Contractor: *Twin Ports Excavating*

Contact: *Kevin Lund*

Telephone: *218-343-3312*

Tank Contractor Certification Number: *695*

D. Consultant: *Braun Intertec*

Contact: *Nikki Kampen*

Street/Box: *2309 Palace Street*

City, Zip: *La Crosse, 54603*

Telephone: *608-781-7277*

E. Others on-site during site work (e.g., fire marshal, local officials, MPCA staff, etc.): *Samantha Schmidt (Braun Representative) & Kevin Lund*

F. Site Location Information: Attach Guidance Document 1-03a *Spatial Data Reporting Form* if it has not already been submitted or will not be submitted as part of Guidance Document 4-06 *Investigation Report Form*.

Note: If person other than tank owner and/or operator is conducting the cleanup, provide name, address, and relationship to site on a separate attached sheet.

PART II: DATES

A. Date release reported to MPCA: *March 29, 2017*

B. Dates site work performed (tanks removed, piping removed, soil excavation, soil borings, etc.):

Work Performed	Date
<i>Removal of one fuel oil UST</i>	<i>March 29, 2017</i>

PART III: SITE AND RELEASE INFORMATION

A. Describe the land use and pertinent geographic features within 1,000 feet of the site.
(i.e. residential property, industrial, wetlands, etc.)

Mixture of commercial and greenspace

B. Provide the following information for all tanks removed and any remaining at the site:

Table 1.

Tank #	Tank ** Material	UST or AST	Capacity (gallons)	Contents (product type)	Year installed	Tank Status*	Condition of Tank
<i>1</i>	<i>Steel</i>	<i>UST</i>	<i>1,000</i>	<i>Fuel Oil</i>	<i>Unknown</i>	<i>Removed 2017</i>	<i>Good</i>
<i>2</i>	<i>Steel</i>	<i>UST</i>	<i>12,000</i>	<i>Diesel</i>	<i>Unknown</i>	<i>Removed 2016</i>	<i>Good</i>
<i>3</i>	<i>Steel</i>	<i>UST</i>	<i>20,000</i>	<i>Diesel</i>	<i>Unknown</i>	<i>Removed 2016</i>	<i>Good</i>
<i>4</i>	<i>Steel</i>	<i>UST</i>	<i>10,000</i>	<i>Gasoline</i>	<i>Unknown</i>	<i>Removed 2016</i>	<i>Good</i>
<i>5</i>	<i>Steel</i>	<i>UST</i>	<i>10,000</i>	<i>Gasoline</i>	<i>Unknown</i>	<i>Removed 2016</i>	<i>Good</i>
<i>6</i>	<i>Steel</i>	<i>UST</i>	<i>10,000</i>	<i>Gasoline</i>	<i>Unknown</i>	<i>Removed 2016</i>	<i>Good</i>

*Indicate: *removed (date), abandoned in place (date), or currently used, upgraded tank, installation of new tank.* ** *F for fiberglass or S for Steel*

Notes:

Piping Material (check all that apply): Steel, Fiberglass, Flexible Plastic, Copper, Other

C. Describe the location and status of the other components of the tank system(s) (i.e., transfer locations, valves, piping and dispensers) for those tanks listed above.

Tanks 2 through 6 were previously removed from the site and were not present at the time of the 1,000 gallon fuel oil tank removal. The fuel oil tank was located to the northwest of the previous site building and piping had been disconnected from the building, but was observed on the south side of the UST.

- D. Identify the source(s) of the release or contamination encountered. Only check those options that were verified, if source is unknown check Other and describe:
 Piping, Tank, Dispenser, Pump/Turbine, Delivery Problem, Other (unknown)
- E. Identify the cause of the release (tank and/or piping).
Check all that apply: Corrosion, Install Problem, Spill, Unknown,
 Mechanical or Physical Damage, Other
- F. Identify the method the release was detected.
Check all that apply: Removal, Line Leak Detection, Tank Leak Detection,
 Visual/Olfactory, Site Assessment, Other
- G. Identify any surface soil contamination. *None was identified*
- H. What was the volume of the release? (if known): *unknown*
- I. Historic contamination present (unknown origin?). Yes, No
- J. When did the release occur? (if known): *unknown*
- K. Describe source of on-site drinking water. *None. Was previously a domestic well, but was sealed February 24, 2017*
- L. Has the site ever, at any point had an E-85 tank? Yes, No

PART IV: EXCAVATION INFORMATION

- A. Dimensions of excavation(s): Length *17'* Width *13'* Depth *8'*
- B. Original tank backfill material (sand, gravel, etc.), if applicable: *Fine to medium sand*
- C. Native soil type (clay, sand, etc.): *Silty Sand*
- D. Quantity of contaminated soil removed for treatment (cubic yards): *65.48*
(Indicate on the site map where the petroleum contaminated soil was excavated)

How many cubic yards of the removed soil was petroleum saturated? *0*
(Indicate on the site map where the petroleum saturated soil was excavated)

[**Note:** If the volume removed is more than allowed in Guidance Document 3-01 *Excavation of Petroleum Contaminated Soil*, please document MPCA staff approval.]

E. Were new tanks and/or piping and dispensers installed? (yes/no) If yes, what volume of contaminated soil was excavated to accommodate the installation of the new tanks and piping?

No

F. If contaminated soil was removed to accommodate the installation of new tanks and/or piping, show your calculations for the amount of soil removal allowed using Table 3 in Guidance Document 3-01 *Excavation of Petroleum Contaminated Soil*.

N/A

G. Was ground water encountered or a suspected perched water layer or was there evidence of a seasonally high ground water table (i.e. mottling)? no At what depth? N/A

H. If ground water was not encountered during the excavation, what is the expected depth of ground water? ~ 20 bgs

I. Additional investigation to determine the need for a Limited Site Investigation is necessary at sites with sandy or silty sandy soil, a water table within 25 feet of the ground surface, and visual or other evidence of soil remaining contamination. See Table 2 in Guidance Document 3-01 *Excavation of Petroleum Contaminated Soil*. If a soil boring is necessary, describe the soil screening and analytical results. Attach the boring logs and laboratory results to this report.

J. If no soil boring was performed, explain. *Soils were excavated surrounding the removed UST until we encountered "clean" (no elevated PID) soils. We then took conformation base and sidewall samples to confirm removal of the contaminated soils.*

K. If ground water was encountered or if a soil boring was conducted, was there evidence of ground water contamination? *Groundwater not encountered* Describe this evidence of contamination, e.g., free product (specify thickness), product sheen, ground water in contact with petroleum contaminated soil, water analytical results, etc. **Note:** If you observe free product, contact MPCA staff immediately, as outlined in Guidance Document 2-02 *Free Product: Evaluation and Recovery*.

N/A

L. Was bedrock encountered in the excavation? (yes/ no) At what depth?

M. Were other unique conditions associated with this site? (yes/ no) If so, explain.

This site was recently purchased by Kwik Trip, Inc. and this tank removal was part of the site demolition and re-development plans. There will be additional excavations for new tanks and piping, utilities, and building footings. We understand that any petroleum contaminated soils

that are encountered will be handled and disposed of properly as outlined in the MPCA approved RAP/CCP.

PART V: SAMPLING INFORMATION

A. Briefly describe the field screening methods used to distinguish contaminated from uncontaminated soil:

Soil samples retrieved were examined by an environmental technician, for unusual staining, odors, and other apparent signs of contamination. In addition, the soil samples were screened for the presence of organic vapors using a PID. The PID was equipped with a 10.6-electron-volt lamp and calibrated to an isobutylene standard. The PID was used to perform a headspace method of field analyses.

B. List soil vapor headspace analysis results collected during excavation of tanks, lines and dispensers, valves, and transfer locations. (i.e., soils left in place when excavation is complete). Code the samples with sampling depths in parentheses as follows: sidewall samples S-1 (8 feet), S-2 (4 feet), etc.; bottom samples B-1 (13 feet), B-2 (14 feet), removed soil R-1 (4 feet), R-1 (8 feet), etc.; stockpile samples SP-1, etc; line samples L-1, L2, etc.; transfer locations T-1 (4 feet), T-1 (8 feet), etc.; dispensers D-1 (4 feet), etc. **Be sure the sample codes correspond with the site map in part VI, below.**

Sample Code	Soil Type	Reading ppm	Sample Code	Soil Type	Reading ppm
<i>B-1 (6.5')</i>	<i>Silty Sand</i>	<i>312.6</i>	<i>B-1a (8.5')</i>	<i>Silty Sand</i>	<i>0.2</i>
<i>B-2 (6.5')</i>	<i>Silty Sand</i>	<i>341.7</i>	<i>B-2a (8.5')</i>	<i>Silty Sand</i>	<i>2.1</i>
<i>SW- 1-North (4'-6')</i>	<i>Silty Sand</i>	<i>58.1</i>	<i>SW-2-North (5'-6.5')</i>	<i>Silty Sand</i>	<i>0.5</i>
<i>SW-1-West (5'-6.5')</i>	<i>Silty Sand</i>	<i>50.5</i>	<i>SW-2-West (5'-6.5')</i>	<i>Silty Sand</i>	<i>25.4</i>
<i>SW-1-South (5'-6.5)</i>	<i>Silty Sand</i>	<i>172.3</i>	<i>SW-2-South (5'-6.5')</i>	<i>Silty Sand</i>	<i>2.9</i>
<i>SW-1-East (5'-6.5)</i>	<i>Silty Sand</i>	<i>4.0</i>	<i>SW-3-West (5'-6.5')</i>	<i>Silty Sand</i>	<i>0.1</i>

C. Was the “removed soil” placed back into the excavation basin? (yes/ no)
If no, please complete Part VIII: Soil Treatment Information section. If yes, a Limited Site Investigation is necessary (see Guidance Document 4-01 *Soil and Ground Water Assessments Performed during Site Investigations*).

D. Briefly describe the soil analytical sampling and handling procedures used:

See attached standard operating procedures.

E. List below all soil sample analytical results from bottom and side wall samples collected after excavation of tanks, lines and dispensers, valves, and transfer locations (i.e., soils left in place when excavation is complete). Code the samples with sampling depths in parentheses as follows: sidewall samples S-1 (8 feet), S-2 (4 feet), etc.; bottom samples B-1 (13 feet), B-2 (14 feet), removed soil R-1 (4 feet), R-1 (8 feet), etc.; stockpile samples SP-1, etc; line samples L-1, L2, etc.; transfer locations T-1 (4 feet), T-1 (8 feet), etc.; dispensers D-1 (4 feet), etc.; **Be sure the sample codes correspond to the site map required in part VI.**

Sample Code	DRO	Benzene mg/kg	Ethyl-benzene mg/kg	Toluene Mg/kg	Xylene mg/kg	MTBE mg/kg	Lead mg/kg
B-1 (6.5')	109	<0.010	<0.014	<0.012	<0.053	<0.014	N/A
B-2 (6.5')	233	<0.011	<0.014	<0.013	<0.056	<0.015	N/A
B-1a (8.5')	4.0	<0.0097	<0.013	<0.012	<0.051	<0.013	N/A
B-2a (8.5')	1.2	<0.011	<0.015	<0.013	<0.057	<0.015	N/A
SW-N (5'-6.5')	1.1	<0.0096	<0.013	<0.012	<0.050	<0.013	N/A
SW-E (4'-6')	1.3	<0.010	<0.014	<0.012	<0.053	<0.014	N/A
SW-S (5'-6.5')	<0.67	<0.0099	<0.013	<0.012	<0.052	<0.014	N/A
SW-W (5'-6.5')	0.83	<0.010	<0.014	<0.012	<0.054	<0.014	N/A

Note: Attach copies of laboratory reports and chain of custody forms.

PART VI: FIGURES

Attach the following figures to this report:

1. Site location map.
2. Site map(s) drawn to scale illustrating the following:
 - a. Location of all present and former tanks, piping, and dispensers;
 - b. Location of surface soil contamination
 - c. Location of other structures (buildings, canopies, etc.);
 - d. Adjacent city, township, or county roadways;
 - e. Dimensions of excavation(s), including contour lines (maximum 2-foot contour intervals) to represent the depths of the final excavation(s);
 - f. Location of soil screening samples (e.g. R-1), soil analytical samples (e.g., S-1 or B-1), and any soil borings (e.g., SB-1). Also, attach all boring logs.
 - g. North arrow, bar scale and map legend.
 - h. Provide location of any on-site water wells. If on-site water wells exist, please provide well logs and/or construction diagrams.
 - i. Locations of new tanks, piping and dispensers, if installed.

PART VII: CONCLUSIONS AND RECOMMENDATIONS

Recommendation for site:

- site closure
 additional investigation

Justify the recommendations for the site. If no further action is necessary, the MPCA staff will review this report following notification of soil treatment.

One 1,000-gallon fuel oil UST was removed on March 29, 2017. The UST was removed in association with building demolition activities related to development by Kwik Trip. The tank was empty at the time of discovery and was present on the northeast corner of the form site building. Observations during UST removal revealed petroleum odors and elevated PID headspace readings directly below and to the south, north, and west of the tank. The UST was constructed from steel and appeared to be in good condition at the time of the removal. Due to field observations indicating a release, the Minnesota Duty Officer was notified on March 29, 2017.

Based on the results of the UST removal site assessment and concurrent soil excavation, we conclude the following:

- *No petroleum impacted soil above the MPCA Screening SLV were identified as part of this UST removal Site assessment.*
- *DRO was detected at a concentrations ranging from 0.83 mg/kg to 233 mg/kg.*
- *An excavation conducted concurrently with the UST removal addressed petroleum-impacted soil identified directly beneath the tank base and to the north, west, and south. The area surrounding the former UST was excavated to an extent of 17'x13'x8'. Impacted soil was temporarily stockpiled on-site pending landfill approval.*

Based on the results of this UST removal site assessment and concurrent soil excavation, residual petroleum impacts are likely minimal and no further action is warranted. Braun Intertec, on behalf of Kwik Trip, is requesting site closure for this site.

PART VIII: SOIL TREATMENT INFORMATION

- A. Soil treatment method used (thermal, land application, composting, other). If you choose "other" specify treatment method: *Landfill*
- B. Location of treatment site/facility: *SKB Shamrock Landfill, 761 MN-45, Cloquet, MN 55720*
- C. Date MPCA approved soil treatment (if thermal treatment was used, indicate date that the MPCA-permitted thermal treatment facility agreed to accept soil): *N/A*
- D. Identify the location of stockpiled contaminated soil:

To the west of the former UST placed on bituminous and covered by 10-mil polyethylene sheeting

PART IX: CONSULTANT (OR OTHER) PREPARING THIS REPORT

By signing this document, I/we acknowledge that we are submitting this document on behalf of and as agents of the responsible person or volunteer for this leak site. I/we acknowledge that if information in this document is inaccurate or incomplete, it will delay the completion of remediation and may harm the environment and may result in reduction of reimbursement awards. In addition, I/we acknowledge on behalf of the responsible person or volunteer for this leak site that if this document is determined to contain a false material statement, representation, or certification, or if it omits material information, the responsible person or volunteer may be found to be in violation of Minn. Stat. § 115.075 (1994) or Minn. 7000.0300 (Duty of Candor), and that the responsible person or volunteer may be liable for civil penalties.

MPCA staff are instructed to reject unsigned excavation reports or if the report form has been altered.

Name and Title:	Signature:	Date signed:
Samantha J. Schmidt		May 22, 2017

Company and mailing address: Braun Intertec
4511 West 1st Street
Duluth, MN 55807

Telephone 218.624.4967 Fax: 218.624.0196

If additional investigation is not necessary, please mail this form and all necessary attachments to the MPCA project manager. If additional investigation is necessary, include this form as an appendix to Guidance Document 4-06 *Investigation Report Form*. **MPCA staff will not review excavation reports indicating a limited site investigation is necessary unless the limited site investigation has been completed.**

<i>Web pages and phone numbers</i>	
MPCA staff	http://pca.state.mn.us/pca/staff/index.cfm
MPCA toll free	1-800-657-3864
Petroleum Remediation Program web page	http://www.pca.state.mn.us/programs/lust_p.html
MPCA Infor. Request	http://www.pca.state.mn.us/about/inforequest.html
MPCA Petroleum Brownfields Program	http://www.pca.state.mn.us/programs/vpic_p.html
PetroFund Web Page	http://www.state.mn.us/cgi-bin/portal/mn/jsp/content.do?id=-536881377&agency=Commerce
PetroFund Phone	651-297-1119, or 1-800-638-0418
State Duty Officer	651-649-5451 or 1-800-422-0798

Upon request, this document can be made available in other formats, including Braille, large print and audio tape. TTY users call 651/282-5332 or 1-800-657-3864 (voice/TTY).

Printed on recycled paper containing at least 10 percent fibers from paper recycled by consumers.

Spatial Data Form



Petroleum Remediation Program

Minnesota Pollution Control Agency

http://www.pca.state.mn.us/programs/lust_p.html

Spatial Data Reporting Form

Guidance Document 1-03a

(For complete instructions, see Guidance Document 1-03.)

Part 1. Background

Has a site location data point been submitted for this site (circle/highlight)? YES or NO
If yes, you do not need to complete Part 2 of this form but should complete Part 3 if there are additional site features to report. This form can be submitted electronically if desired (e.g., as an e-mail attachment to the project manager).

MPCA Site ID: 20063

Site Name: Kwik Trip #571

Data Collection Date: 03/29/17

Name of Person Who Collected Data: Samantha Schmidt

Organization Name: Braun Intertec

Organization Type: Consultant

Part 2. Site Location (use one of the three spatial data reporting formats provided)

Point Description: Site: Approximate Tank Location

Collection Method: Google Earth

Datum (circle/highlight): WGS84 NAD83

1) Longitude (dd mm ss.ss):

Latitude (dd mm ss.ss):

2) Longitude (dd.dddddd): -92.471951

Latitude (dd.dddddd): 46.664140

3) UTM - X (Easting):

UTM - Y (Northing):

UTM Zone:

Part 3. Other Site Features

Point Description:

Collection Method:

Datum (circle/highlight): WGS84 NAD83

1) Longitude (dd mm ss.ss):

Latitude (dd mm ss.ss):

2) Longitude (dd.ddddddd):

Latitude (dd.ddddddd):

3) UTM - X (Easting):

UTM - Y (Northing):

UTM Zone:

Point Description:

Collection Method:

Datum (circle/highlight): WGS84 NAD83

1) Longitude (dd mm ss.ss):

Latitude (dd mm ss.ss):

2) Longitude (dd.ddddddd):

Latitude (dd.ddddddd):

3) UTM - X (Easting):

UTM - Y (Northing):

UTM Zone:

Point Description:

Collection Method:

Datum (circle/highlight): WGS84 NAD83

1) Longitude (dd mm ss.ss):

Latitude (dd mm ss.ss):

2) Longitude (dd.ddddddd):

Latitude (dd.ddddddd):

3) UTM - X (Easting):

UTM - Y (Northing):

UTM Zone:

Point Description:

Collection Method:

Datum (circle/highlight): WGS84 NAD83

1) Longitude (dd mm ss.ss):

Latitude (dd mm ss.ss):

2) Longitude (dd.ddddddd):

Latitude (dd.ddddddd):

3) UTM - X (Easting):

UTM - Y (Northing):

UTM Zone:

Point Description:

Collection Method:

Datum (circle/highlight): WGS84 NAD83

1) Longitude (dd mm ss.ss):

Latitude (dd mm ss.ss):

2) Longitude (dd.ddddddd):

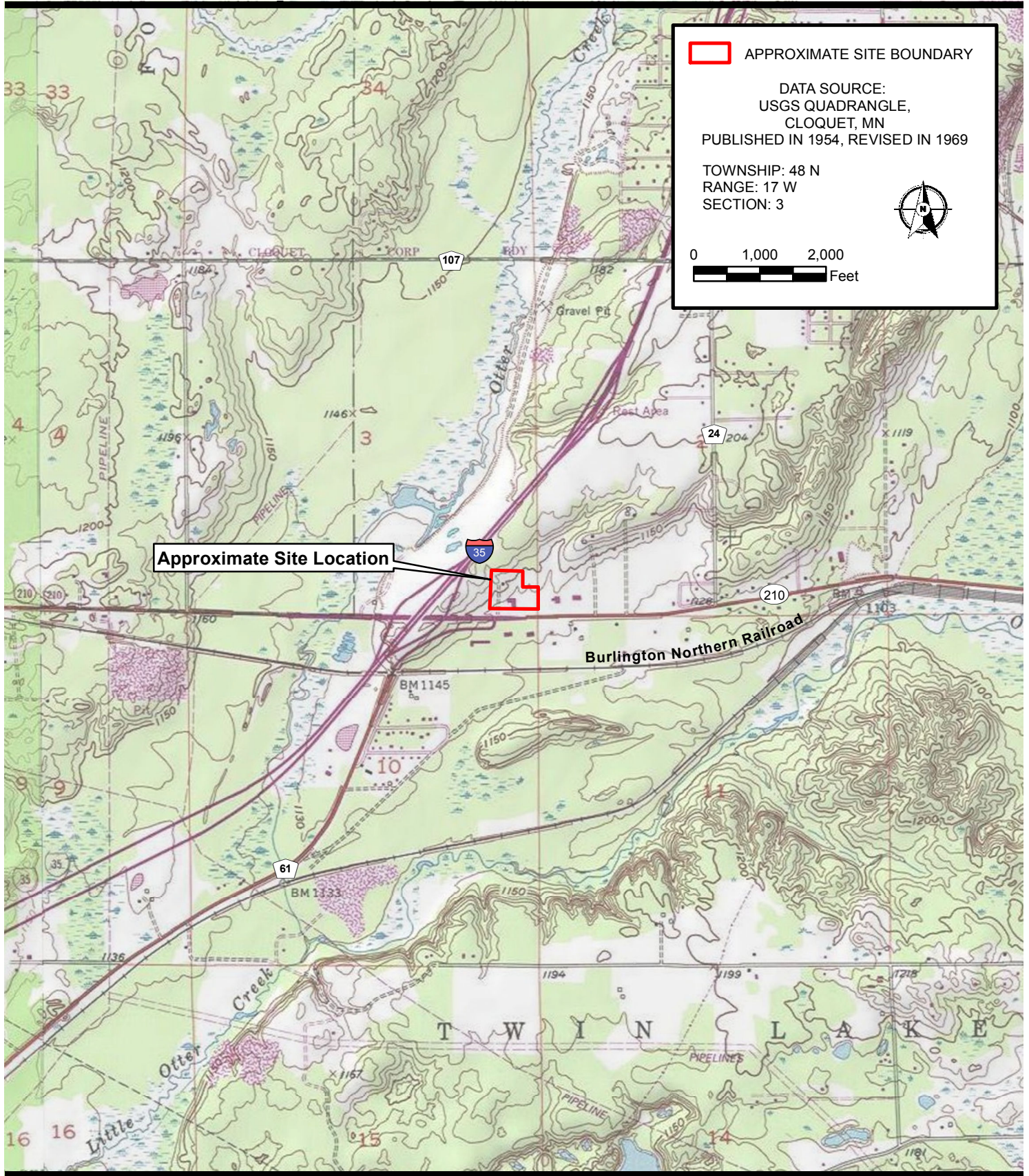
Latitude (dd.ddddddd):

3) UTM - X (Easting):

UTM - Y (Northing):

UTM Zone:

Figures



Sheet: 1 of 1 Fig: 1	Project No:	B1605018
	Drawing No.	B1605018_SiteLoc
	Scale:	1 in = 2,000 ft
	Drawn By:	FER
	Date Drawn:	8/9/16
	Checked By:	NMK
	Last Modified:	8/9/16

SITE LOCATION MAP
 PROPOSED KWIK TRIP #571
 1709 MINNESOTA HIGHWAY 210
 CARLTON, MINNESOTA

BRAUN
INTERTEC

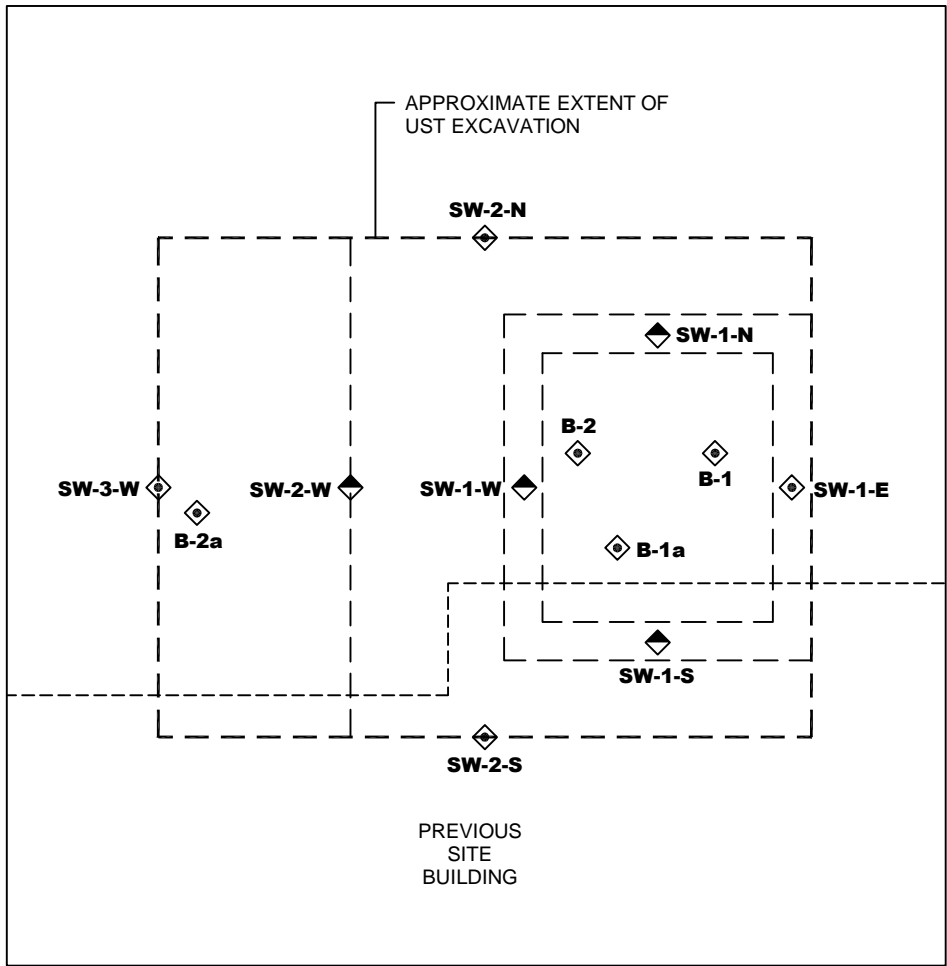
1101 Hampshire Avenue So.
 Minneapolis, MN 55438
 PH. (952) 995-2000
 FAX (952) 995-2020



SEE EXCAVATION INSET

NOTE:
ALL SITE BUILDINGS
HAVE BEEN REMOVED

HIGHWAY 210



APPROXIMATE EXTENT OF
UST EXCAVATION

SW-2-N

SW-1-N

B-2

B-1

SW-3-W

B-2a

SW-2-W

SW-1-W

B-1a

SW-1-E

SW-1-S

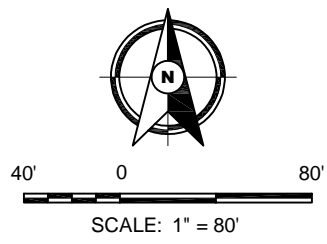
SW-2-S

PREVIOUS
SITE
BUILDING

EXCAVATION INSET

SCALE: 1" = 5'±
NOTE: SCALE IS APPROXIMATE

- ◆ SOIL SCREENING SAMPLE LOCATION
- ◆ SOIL SCREENING AND ANALYTICAL SAMPLE LOCATION



F:\2016\B1605018.dwg, UST Removal, 4/27/2017 1:12:52 PM

Base Dwg Provided By:

SITE DIAGRAM
MN DUTY OFFICER REPORT NO. 165082
1711 HIGHWAY 210
CARLTON, MINNESOTA

Project No:	B1605018.06
Drawing No:	B1605018
Scale:	AS SHOWN
Drawn By:	REJ
Date Drawn:	7/11/16
Checked By:	NMK
Last Modified:	4/27/17
Sheet:	Fig:
of	

Analytical Report

April 06, 2017

Nikki Kampen
Braun Intertec Corporation
2309 Palace Street
La Crosse, WI 54603

RE: Project: KT# 571-UST REMOVAL
Pace Project No.: 40147485

Dear Nikki Kampen:

Enclosed are the analytical results for sample(s) received by the laboratory on March 30, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40147485001	B-1 (6.5)	Solid	03/29/17 10:00	03/30/17 09:35
40147485002	B-2 (6.5)	Solid	03/29/17 10:10	03/30/17 09:35
40147485003	B-19 (8.5)	Solid	03/29/17 11:00	03/30/17 09:35
40147485004	B-29 (8.5)	Solid	03/29/17 11:10	03/30/17 09:35
40147485005	SW-E (4)	Solid	03/29/17 10:30	03/30/17 09:35
40147485006	SW-N (5)	Solid	03/29/17 10:40	03/30/17 09:35
40147485007	SW-S (5)	Solid	03/29/17 10:50	03/30/17 09:35
40147485008	SW-W (5)	Solid	03/29/17 11:30	03/30/17 09:35
40147485009	SP-1	Solid	03/29/17 11:45	03/30/17 09:35
40147485010	SOIL TRIP BLANK	Water	03/29/17 00:00	03/30/17 09:35

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: KT# 571-UST REMOVAL
Pace Project No.: 40147485

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40147485001	B-1 (6.5)	WI MOD DRO	ABF	1
		EPA 8260	SMT	72
		ASTM D2974-87	SKW	1
40147485002	B-2 (6.5)	WI MOD DRO	ABF	1
		EPA 8260	SMT	72
		ASTM D2974-87	SKW	1
40147485003	B-19 (8.5)	WI MOD DRO	ABF	1
		EPA 8260	SMT	72
		ASTM D2974-87	SKW	1
40147485004	B-29 (8.5)	WI MOD DRO	ABF	1
		EPA 8260	SMT	72
		ASTM D2974-87	SKW	1
40147485005	SW-E (4)	WI MOD DRO	ABF	1
		EPA 8260	SMT	72
		ASTM D2974-87	SKW	1
40147485006	SW-N (5)	WI MOD DRO	ABF	1
		EPA 8260	SMT	72
		ASTM D2974-87	SKW	1
40147485007	SW-S (5)	WI MOD DRO	ABF	1
		EPA 8260	SMT	72
		ASTM D2974-87	SKW	1
40147485008	SW-W (5)	WI MOD DRO	ABF	1
		EPA 8260	SMT	72
		ASTM D2974-87	SKW	1
40147485009	SP-1	WI MOD DRO	ABF	1
		EPA 8260	SMT	72
		ASTM D2974-87	SKW	1
40147485010	SOIL TRIP BLANK	EPA 8260	HNW	72

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40147485001	B-1 (6.5)					
WI MOD DRO	Diesel Range Organics	109	mg/kg	4.8	04/06/17 14:45	
EPA 8260	sec-Butylbenzene	0.051J	mg/kg	0.054	03/31/17 19:02	
EPA 8260	p-Isopropyltoluene	0.042J	mg/kg	0.054	03/31/17 19:02	
EPA 8260	n-Propylbenzene	0.024J	mg/kg	0.054	03/31/17 19:02	
EPA 8260	1,2,4-Trimethylbenzene	0.13	mg/kg	0.054	03/31/17 19:02	
EPA 8260	1,3,5-Trimethylbenzene	0.067	mg/kg	0.054	03/31/17 19:02	
EPA 8260	o-Xylene	0.017J	mg/kg	0.054	03/31/17 19:02	
ASTM D2974-87	Percent Moisture	8.1	%	0.10	04/03/17 11:03	
40147485002	B-2 (6.5)					
WI MOD DRO	Diesel Range Organics	233	mg/kg	12.0	04/06/17 14:51	
EPA 8260	sec-Butylbenzene	0.034J	mg/kg	0.058	04/03/17 09:26	
EPA 8260	p-Isopropyltoluene	0.031J	mg/kg	0.058	04/03/17 09:26	
EPA 8260	1,2,4-Trimethylbenzene	0.079	mg/kg	0.058	04/03/17 09:26	
EPA 8260	1,3,5-Trimethylbenzene	0.037J	mg/kg	0.058	04/03/17 09:26	
ASTM D2974-87	Percent Moisture	11.4	%	0.10	04/03/17 11:03	
40147485003	B-19 (8.5)					
WI MOD DRO	Diesel Range Organics	4.0	mg/kg	2.0	04/06/17 12:13	
ASTM D2974-87	Percent Moisture	4.9	%	0.10	04/03/17 11:03	
40147485004	B-29 (8.5)					
WI MOD DRO	Diesel Range Organics	1.2J	mg/kg	1.8	04/06/17 12:22	
ASTM D2974-87	Percent Moisture	9.4	%	0.10	04/03/17 11:03	
40147485005	SW-E (4)					
WI MOD DRO	Diesel Range Organics	1.3J	mg/kg	1.8	04/06/17 12:31	
EPA 8260	1,3-Dichlorobenzene	0.016J	mg/kg	0.055	04/04/17 19:23	B
EPA 8260	1,4-Dichlorobenzene	0.018J	mg/kg	0.055	04/04/17 19:23	B
ASTM D2974-87	Percent Moisture	8.8	%	0.10	04/03/17 12:41	
40147485006	SW-N (5)					
WI MOD DRO	Diesel Range Organics	1.1J	mg/kg	1.8	04/06/17 12:40	
EPA 8260	Styrene	0.0096J	mg/kg	0.052	04/04/17 19:46	
ASTM D2974-87	Percent Moisture	3.9	%	0.10	04/03/17 12:41	
40147485007	SW-S (5)					
EPA 8260	1,4-Dichlorobenzene	0.018J	mg/kg	0.054	04/04/17 20:09	B
ASTM D2974-87	Percent Moisture	6.8	%	0.10	04/03/17 12:41	
40147485008	SW-W (5)					
WI MOD DRO	Diesel Range Organics	0.83J	mg/kg	2.1	04/06/17 12:58	
ASTM D2974-87	Percent Moisture	10.1	%	0.10	04/03/17 12:41	
40147485009	SP-1					
WI MOD DRO	Diesel Range Organics	73.9	mg/kg	3.5	04/06/17 15:01	
EPA 8260	Styrene	0.011J	mg/kg	0.057	04/04/17 20:55	B
EPA 8260	1,2,4-Trimethylbenzene	0.016J	mg/kg	0.057	04/04/17 20:55	B
ASTM D2974-87	Percent Moisture	9.3	%	0.10	04/03/17 12:41	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40147485010	SOIL TRIP BLANK					
EPA 8260	Acetone	5.0J	ug/L	20.0	04/04/17 01:04	
EPA 8260	Methylene Chloride	1.3	ug/L	1.0	04/04/17 01:04	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: B-1 (6.5) **Lab ID: 40147485001** Collected: 03/29/17 10:00 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	109	mg/kg	4.8	1.9	3	04/05/17 09:47	04/06/17 14:45		
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	<0.11	mg/kg	0.27	0.11	1	03/31/17 08:00	03/31/17 19:02	67-64-1	
Allyl chloride	<0.057	mg/kg	0.27	0.057	1	03/31/17 08:00	03/31/17 19:02	107-05-1	
Benzene	<0.010	mg/kg	0.022	0.010	1	03/31/17 08:00	03/31/17 19:02	71-43-2	
Bromobenzene	<0.022	mg/kg	0.054	0.022	1	03/31/17 08:00	03/31/17 19:02	108-86-1	
Bromochloromethane	<0.023	mg/kg	0.054	0.023	1	03/31/17 08:00	03/31/17 19:02	74-97-5	
Bromodichloromethane	<0.011	mg/kg	0.054	0.011	1	03/31/17 08:00	03/31/17 19:02	75-27-4	
Bromoform	<0.022	mg/kg	0.054	0.022	1	03/31/17 08:00	03/31/17 19:02	75-25-2	
Bromomethane	<0.076	mg/kg	0.27	0.076	1	03/31/17 08:00	03/31/17 19:02	74-83-9	
2-Butanone (MEK)	<0.13	mg/kg	0.27	0.13	1	03/31/17 08:00	03/31/17 19:02	78-93-3	
n-Butylbenzene	<0.011	mg/kg	0.054	0.011	1	03/31/17 08:00	03/31/17 19:02	104-51-8	
sec-Butylbenzene	0.051J	mg/kg	0.054	0.013	1	03/31/17 08:00	03/31/17 19:02	135-98-8	
tert-Butylbenzene	<0.010	mg/kg	0.054	0.010	1	03/31/17 08:00	03/31/17 19:02	98-06-6	
Carbon tetrachloride	<0.013	mg/kg	0.054	0.013	1	03/31/17 08:00	03/31/17 19:02	56-23-5	
Chlorobenzene	<0.016	mg/kg	0.054	0.016	1	03/31/17 08:00	03/31/17 19:02	108-90-7	
Chloroethane	<0.073	mg/kg	0.27	0.073	1	03/31/17 08:00	03/31/17 19:02	75-00-3	
Chloroform	<0.051	mg/kg	0.27	0.051	1	03/31/17 08:00	03/31/17 19:02	67-66-3	
Chloromethane	<0.022	mg/kg	0.054	0.022	1	03/31/17 08:00	03/31/17 19:02	74-87-3	
2-Chlorotoluene	<0.017	mg/kg	0.054	0.017	1	03/31/17 08:00	03/31/17 19:02	95-49-8	
4-Chlorotoluene	<0.014	mg/kg	0.054	0.014	1	03/31/17 08:00	03/31/17 19:02	106-43-4	
1,2-Dibromo-3-chloropropane	<0.099	mg/kg	0.27	0.099	1	03/31/17 08:00	03/31/17 19:02	96-12-8	
Dibromochloromethane	<0.019	mg/kg	0.054	0.019	1	03/31/17 08:00	03/31/17 19:02	124-48-1	
1,2-Dibromoethane (EDB)	<0.016	mg/kg	0.054	0.016	1	03/31/17 08:00	03/31/17 19:02	106-93-4	
Dibromomethane	<0.021	mg/kg	0.054	0.021	1	03/31/17 08:00	03/31/17 19:02	74-95-3	
1,2-Dichlorobenzene	<0.018	mg/kg	0.054	0.018	1	03/31/17 08:00	03/31/17 19:02	95-50-1	
1,3-Dichlorobenzene	<0.014	mg/kg	0.054	0.014	1	03/31/17 08:00	03/31/17 19:02	541-73-1	
1,4-Dichlorobenzene	<0.017	mg/kg	0.054	0.017	1	03/31/17 08:00	03/31/17 19:02	106-46-7	
Dichlorodifluoromethane	<0.013	mg/kg	0.054	0.013	1	03/31/17 08:00	03/31/17 19:02	75-71-8	
1,1-Dichloroethane	<0.019	mg/kg	0.054	0.019	1	03/31/17 08:00	03/31/17 19:02	75-34-3	
1,2-Dichloroethane	<0.016	mg/kg	0.054	0.016	1	03/31/17 08:00	03/31/17 19:02	107-06-2	
1,1-Dichloroethene	<0.019	mg/kg	0.054	0.019	1	03/31/17 08:00	03/31/17 19:02	75-35-4	
cis-1,2-Dichloroethene	<0.018	mg/kg	0.054	0.018	1	03/31/17 08:00	03/31/17 19:02	156-59-2	
trans-1,2-Dichloroethene	<0.018	mg/kg	0.054	0.018	1	03/31/17 08:00	03/31/17 19:02	156-60-5	
Dichlorofluoromethane	<0.016	mg/kg	0.054	0.016	1	03/31/17 08:00	03/31/17 19:02	75-43-4	
1,2-Dichloropropane	<0.018	mg/kg	0.054	0.018	1	03/31/17 08:00	03/31/17 19:02	78-87-5	
1,3-Dichloropropane	<0.013	mg/kg	0.054	0.013	1	03/31/17 08:00	03/31/17 19:02	142-28-9	
2,2-Dichloropropane	<0.014	mg/kg	0.054	0.014	1	03/31/17 08:00	03/31/17 19:02	594-20-7	
1,1-Dichloropropene	<0.015	mg/kg	0.054	0.015	1	03/31/17 08:00	03/31/17 19:02	563-58-6	
cis-1,3-Dichloropropene	<0.018	mg/kg	0.054	0.018	1	03/31/17 08:00	03/31/17 19:02	10061-01-5	
trans-1,3-Dichloropropene	<0.016	mg/kg	0.054	0.016	1	03/31/17 08:00	03/31/17 19:02	10061-02-6	
Diethyl ether (Ethyl ether)	<0.020	mg/kg	0.054	0.020	1	03/31/17 08:00	03/31/17 19:02	60-29-7	
Ethylbenzene	<0.014	mg/kg	0.054	0.014	1	03/31/17 08:00	03/31/17 19:02	100-41-4	
Hexachloro-1,3-butadiene	<0.027	mg/kg	0.054	0.027	1	03/31/17 08:00	03/31/17 19:02	87-68-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL
Pace Project No.: 40147485

Sample: B-1 (6.5) Lab ID: 40147485001 Collected: 03/29/17 10:00 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Isopropylbenzene (Cumene)	<0.014	mg/kg	0.054	0.014	1	03/31/17 08:00	03/31/17 19:02	98-82-8	
p-Isopropyltoluene	0.042J	mg/kg	0.054	0.013	1	03/31/17 08:00	03/31/17 19:02	99-87-6	
Methylene Chloride	<0.018	mg/kg	0.054	0.018	1	03/31/17 08:00	03/31/17 19:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.045	mg/kg	0.27	0.045	1	03/31/17 08:00	03/31/17 19:02	108-10-1	
Methyl-tert-butyl ether	<0.014	mg/kg	0.054	0.014	1	03/31/17 08:00	03/31/17 19:02	1634-04-4	
Naphthalene	<0.044	mg/kg	0.27	0.044	1	03/31/17 08:00	03/31/17 19:02	91-20-3	
n-Propylbenzene	0.024J	mg/kg	0.054	0.013	1	03/31/17 08:00	03/31/17 19:02	103-65-1	
Styrene	<0.0098	mg/kg	0.054	0.0098	1	03/31/17 08:00	03/31/17 19:02	100-42-5	
1,1,1,2-Tetrachloroethane	<0.015	mg/kg	0.054	0.015	1	03/31/17 08:00	03/31/17 19:02	630-20-6	
1,1,2,2-Tetrachloroethane	<0.019	mg/kg	0.054	0.019	1	03/31/17 08:00	03/31/17 19:02	79-34-5	
Tetrachloroethene	<0.014	mg/kg	0.054	0.014	1	03/31/17 08:00	03/31/17 19:02	127-18-4	
Tetrahydrofuran	<0.12	mg/kg	0.27	0.12	1	03/31/17 08:00	03/31/17 19:02	109-99-9	
Toluene	<0.012	mg/kg	0.054	0.012	1	03/31/17 08:00	03/31/17 19:02	108-88-3	
1,2,3-Trichlorobenzene	<0.018	mg/kg	0.054	0.018	1	03/31/17 08:00	03/31/17 19:02	87-61-6	
1,2,4-Trichlorobenzene	<0.052	mg/kg	0.27	0.052	1	03/31/17 08:00	03/31/17 19:02	120-82-1	
1,1,1-Trichloroethane	<0.016	mg/kg	0.054	0.016	1	03/31/17 08:00	03/31/17 19:02	71-55-6	
1,1,2-Trichloroethane	<0.022	mg/kg	0.054	0.022	1	03/31/17 08:00	03/31/17 19:02	79-00-5	
Trichloroethene	<0.026	mg/kg	0.054	0.026	1	03/31/17 08:00	03/31/17 19:02	79-01-6	
Trichlorofluoromethane	<0.027	mg/kg	0.054	0.027	1	03/31/17 08:00	03/31/17 19:02	75-69-4	
1,2,3-Trichloropropane	<0.024	mg/kg	0.054	0.024	1	03/31/17 08:00	03/31/17 19:02	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.022	mg/kg	0.054	0.022	1	03/31/17 08:00	03/31/17 19:02	76-13-1	
1,2,4-Trimethylbenzene	0.13	mg/kg	0.054	0.013	1	03/31/17 08:00	03/31/17 19:02	95-63-6	
1,3,5-Trimethylbenzene	0.067	mg/kg	0.054	0.016	1	03/31/17 08:00	03/31/17 19:02	108-67-8	
Vinyl chloride	<0.023	mg/kg	0.054	0.023	1	03/31/17 08:00	03/31/17 19:02	75-01-4	
Xylene (Total)	<0.053	mg/kg	0.16	0.053	1	03/31/17 08:00	03/31/17 19:02	1330-20-7	
m&p-Xylene	<0.037	mg/kg	0.11	0.037	1	03/31/17 08:00	03/31/17 19:02	179601-23-1	
o-Xylene	0.017J	mg/kg	0.054	0.015	1	03/31/17 08:00	03/31/17 19:02	95-47-6	
Surrogates									
Dibromofluoromethane (S)	121	%	53-165		1	03/31/17 08:00	03/31/17 19:02	1868-53-7	
Toluene-d8 (S)	115	%	54-163		1	03/31/17 08:00	03/31/17 19:02	2037-26-5	
4-Bromofluorobenzene (S)	103	%	48-138		1	03/31/17 08:00	03/31/17 19:02	460-00-4	

Percent Moisture Analytical Method: ASTM D2974-87

Percent Moisture 8.1 % 0.10 0.10 1 04/03/17 11:03

Sample: B-2 (6.5) Lab ID: 40147485002 Collected: 03/29/17 10:10 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	233	mg/kg	12.0	4.8	7	04/05/17 09:47	04/06/17 14:51		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: B-2 (6.5) **Lab ID: 40147485002** Collected: 03/29/17 10:10 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Acetone	<0.11	mg/kg	0.29	0.11	1	03/31/17 08:00	04/03/17 09:26	67-64-1	
Allyl chloride	<0.061	mg/kg	0.29	0.061	1	03/31/17 08:00	04/03/17 09:26	107-05-1	
Benzene	<0.011	mg/kg	0.023	0.011	1	03/31/17 08:00	04/03/17 09:26	71-43-2	
Bromobenzene	<0.024	mg/kg	0.058	0.024	1	03/31/17 08:00	04/03/17 09:26	108-86-1	
Bromochloromethane	<0.025	mg/kg	0.058	0.025	1	03/31/17 08:00	04/03/17 09:26	74-97-5	
Bromodichloromethane	<0.011	mg/kg	0.058	0.011	1	03/31/17 08:00	04/03/17 09:26	75-27-4	
Bromoform	<0.023	mg/kg	0.058	0.023	1	03/31/17 08:00	04/03/17 09:26	75-25-2	
Bromomethane	<0.081	mg/kg	0.29	0.081	1	03/31/17 08:00	04/03/17 09:26	74-83-9	
2-Butanone (MEK)	<0.14	mg/kg	0.29	0.14	1	03/31/17 08:00	04/03/17 09:26	78-93-3	
n-Butylbenzene	<0.012	mg/kg	0.058	0.012	1	03/31/17 08:00	04/03/17 09:26	104-51-8	
sec-Butylbenzene	0.034J	mg/kg	0.058	0.014	1	03/31/17 08:00	04/03/17 09:26	135-98-8	
tert-Butylbenzene	<0.011	mg/kg	0.058	0.011	1	03/31/17 08:00	04/03/17 09:26	98-06-6	
Carbon tetrachloride	<0.014	mg/kg	0.058	0.014	1	03/31/17 08:00	04/03/17 09:26	56-23-5	
Chlorobenzene	<0.017	mg/kg	0.058	0.017	1	03/31/17 08:00	04/03/17 09:26	108-90-7	
Chloroethane	<0.078	mg/kg	0.29	0.078	1	03/31/17 08:00	04/03/17 09:26	75-00-3	
Chloroform	<0.054	mg/kg	0.29	0.054	1	03/31/17 08:00	04/03/17 09:26	67-66-3	
Chloromethane	<0.024	mg/kg	0.058	0.024	1	03/31/17 08:00	04/03/17 09:26	74-87-3	
2-Chlorotoluene	<0.018	mg/kg	0.058	0.018	1	03/31/17 08:00	04/03/17 09:26	95-49-8	
4-Chlorotoluene	<0.015	mg/kg	0.058	0.015	1	03/31/17 08:00	04/03/17 09:26	106-43-4	
1,2-Dibromo-3-chloropropane	<0.11	mg/kg	0.29	0.11	1	03/31/17 08:00	04/03/17 09:26	96-12-8	
Dibromochloromethane	<0.021	mg/kg	0.058	0.021	1	03/31/17 08:00	04/03/17 09:26	124-48-1	
1,2-Dibromoethane (EDB)	<0.017	mg/kg	0.058	0.017	1	03/31/17 08:00	04/03/17 09:26	106-93-4	
Dibromomethane	<0.022	mg/kg	0.058	0.022	1	03/31/17 08:00	04/03/17 09:26	74-95-3	
1,2-Dichlorobenzene	<0.019	mg/kg	0.058	0.019	1	03/31/17 08:00	04/03/17 09:26	95-50-1	
1,3-Dichlorobenzene	<0.015	mg/kg	0.058	0.015	1	03/31/17 08:00	04/03/17 09:26	541-73-1	
1,4-Dichlorobenzene	<0.018	mg/kg	0.058	0.018	1	03/31/17 08:00	04/03/17 09:26	106-46-7	
Dichlorodifluoromethane	<0.014	mg/kg	0.058	0.014	1	03/31/17 08:00	04/03/17 09:26	75-71-8	
1,1-Dichloroethane	<0.021	mg/kg	0.058	0.021	1	03/31/17 08:00	04/03/17 09:26	75-34-3	
1,2-Dichloroethane	<0.017	mg/kg	0.058	0.017	1	03/31/17 08:00	04/03/17 09:26	107-06-2	
1,1-Dichloroethene	<0.021	mg/kg	0.058	0.021	1	03/31/17 08:00	04/03/17 09:26	75-35-4	
cis-1,2-Dichloroethene	<0.019	mg/kg	0.058	0.019	1	03/31/17 08:00	04/03/17 09:26	156-59-2	
trans-1,2-Dichloroethene	<0.019	mg/kg	0.058	0.019	1	03/31/17 08:00	04/03/17 09:26	156-60-5	
Dichlorofluoromethane	<0.017	mg/kg	0.058	0.017	1	03/31/17 08:00	04/03/17 09:26	75-43-4	
1,2-Dichloropropane	<0.020	mg/kg	0.058	0.020	1	03/31/17 08:00	04/03/17 09:26	78-87-5	
1,3-Dichloropropane	<0.014	mg/kg	0.058	0.014	1	03/31/17 08:00	04/03/17 09:26	142-28-9	
2,2-Dichloropropane	<0.015	mg/kg	0.058	0.015	1	03/31/17 08:00	04/03/17 09:26	594-20-7	
1,1-Dichloropropene	<0.016	mg/kg	0.058	0.016	1	03/31/17 08:00	04/03/17 09:26	563-58-6	
cis-1,3-Dichloropropene	<0.019	mg/kg	0.058	0.019	1	03/31/17 08:00	04/03/17 09:26	10061-01-5	
trans-1,3-Dichloropropene	<0.017	mg/kg	0.058	0.017	1	03/31/17 08:00	04/03/17 09:26	10061-02-6	
Diethyl ether (Ethyl ether)	<0.022	mg/kg	0.058	0.022	1	03/31/17 08:00	04/03/17 09:26	60-29-7	
Ethylbenzene	<0.014	mg/kg	0.058	0.014	1	03/31/17 08:00	04/03/17 09:26	100-41-4	
Hexachloro-1,3-butadiene	<0.029	mg/kg	0.058	0.029	1	03/31/17 08:00	04/03/17 09:26	87-68-3	
Isopropylbenzene (Cumene)	<0.015	mg/kg	0.058	0.015	1	03/31/17 08:00	04/03/17 09:26	98-82-8	
p-Isopropyltoluene	0.031J	mg/kg	0.058	0.014	1	03/31/17 08:00	04/03/17 09:26	99-87-6	
Methylene Chloride	<0.019	mg/kg	0.058	0.019	1	03/31/17 08:00	04/03/17 09:26	75-09-2	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL
Pace Project No.: 40147485

Sample: B-2 (6.5) **Lab ID: 40147485002** Collected: 03/29/17 10:10 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
4-Methyl-2-pentanone (MIBK)	<0.048	mg/kg	0.29	0.048	1	03/31/17 08:00	04/03/17 09:26	108-10-1	
Methyl-tert-butyl ether	<0.015	mg/kg	0.058	0.015	1	03/31/17 08:00	04/03/17 09:26	1634-04-4	
Naphthalene	<0.047	mg/kg	0.29	0.047	1	03/31/17 08:00	04/03/17 09:26	91-20-3	
n-Propylbenzene	<0.014	mg/kg	0.058	0.014	1	03/31/17 08:00	04/03/17 09:26	103-65-1	
Styrene	<0.010	mg/kg	0.058	0.010	1	03/31/17 08:00	04/03/17 09:26	100-42-5	
1,1,1,2-Tetrachloroethane	<0.016	mg/kg	0.058	0.016	1	03/31/17 08:00	04/03/17 09:26	630-20-6	
1,1,2,2-Tetrachloroethane	<0.020	mg/kg	0.058	0.020	1	03/31/17 08:00	04/03/17 09:26	79-34-5	
Tetrachloroethene	<0.015	mg/kg	0.058	0.015	1	03/31/17 08:00	04/03/17 09:26	127-18-4	
Tetrahydrofuran	<0.13	mg/kg	0.29	0.13	1	03/31/17 08:00	04/03/17 09:26	109-99-9	
Toluene	<0.013	mg/kg	0.058	0.013	1	03/31/17 08:00	04/03/17 09:26	108-88-3	
1,2,3-Trichlorobenzene	<0.020	mg/kg	0.058	0.020	1	03/31/17 08:00	04/03/17 09:26	87-61-6	
1,2,4-Trichlorobenzene	<0.055	mg/kg	0.29	0.055	1	03/31/17 08:00	04/03/17 09:26	120-82-1	
1,1,1-Trichloroethane	<0.017	mg/kg	0.058	0.017	1	03/31/17 08:00	04/03/17 09:26	71-55-6	
1,1,2-Trichloroethane	<0.024	mg/kg	0.058	0.024	1	03/31/17 08:00	04/03/17 09:26	79-00-5	
Trichloroethene	<0.027	mg/kg	0.058	0.027	1	03/31/17 08:00	04/03/17 09:26	79-01-6	
Trichlorofluoromethane	<0.029	mg/kg	0.058	0.029	1	03/31/17 08:00	04/03/17 09:26	75-69-4	
1,2,3-Trichloropropane	<0.026	mg/kg	0.058	0.026	1	03/31/17 08:00	04/03/17 09:26	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.024	mg/kg	0.058	0.024	1	03/31/17 08:00	04/03/17 09:26	76-13-1	
1,2,4-Trimethylbenzene	0.079	mg/kg	0.058	0.014	1	03/31/17 08:00	04/03/17 09:26	95-63-6	
1,3,5-Trimethylbenzene	0.037J	mg/kg	0.058	0.017	1	03/31/17 08:00	04/03/17 09:26	108-67-8	
Vinyl chloride	<0.025	mg/kg	0.058	0.025	1	03/31/17 08:00	04/03/17 09:26	75-01-4	
Xylene (Total)	<0.056	mg/kg	0.17	0.056	1	03/31/17 08:00	04/03/17 09:26	1330-20-7	
m&p-Xylene	<0.040	mg/kg	0.12	0.040	1	03/31/17 08:00	04/03/17 09:26	179601-23-1	
o-Xylene	<0.016	mg/kg	0.058	0.016	1	03/31/17 08:00	04/03/17 09:26	95-47-6	
Surrogates									
Dibromofluoromethane (S)	95	%	53-165		1	03/31/17 08:00	04/03/17 09:26	1868-53-7	
Toluene-d8 (S)	101	%	54-163		1	03/31/17 08:00	04/03/17 09:26	2037-26-5	
4-Bromofluorobenzene (S)	90	%	48-138		1	03/31/17 08:00	04/03/17 09:26	460-00-4	

Percent Moisture Analytical Method: ASTM D2974-87

Percent Moisture **11.4** % 0.10 0.10 1 04/03/17 11:03

Sample: B-19 (8.5) **Lab ID: 40147485003** Collected: 03/29/17 11:00 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	4.0	mg/kg	2.0	0.80	1	04/05/17 09:47	04/06/17 12:13		
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Acetone	<0.10	mg/kg	0.26	0.10	1	03/31/17 08:00	03/31/17 23:57	67-64-1	
Allyl chloride	<0.055	mg/kg	0.26	0.055	1	03/31/17 08:00	03/31/17 23:57	107-05-1	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: B-19 (8.5) **Lab ID: 40147485003** Collected: 03/29/17 11:00 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Benzene	<0.0097	mg/kg	0.021	0.0097	1	03/31/17 08:00	03/31/17 23:57	71-43-2	
Bromobenzene	<0.022	mg/kg	0.053	0.022	1	03/31/17 08:00	03/31/17 23:57	108-86-1	
Bromochloromethane	<0.023	mg/kg	0.053	0.023	1	03/31/17 08:00	03/31/17 23:57	74-97-5	
Bromodichloromethane	<0.010	mg/kg	0.053	0.010	1	03/31/17 08:00	03/31/17 23:57	75-27-4	
Bromoform	<0.021	mg/kg	0.053	0.021	1	03/31/17 08:00	03/31/17 23:57	75-25-2	
Bromomethane	<0.074	mg/kg	0.26	0.074	1	03/31/17 08:00	03/31/17 23:57	74-83-9	
2-Butanone (MEK)	<0.13	mg/kg	0.26	0.13	1	03/31/17 08:00	03/31/17 23:57	78-93-3	
n-Butylbenzene	<0.011	mg/kg	0.053	0.011	1	03/31/17 08:00	03/31/17 23:57	104-51-8	
sec-Butylbenzene	<0.013	mg/kg	0.053	0.013	1	03/31/17 08:00	03/31/17 23:57	135-98-8	
tert-Butylbenzene	<0.010	mg/kg	0.053	0.010	1	03/31/17 08:00	03/31/17 23:57	98-06-6	
Carbon tetrachloride	<0.013	mg/kg	0.053	0.013	1	03/31/17 08:00	03/31/17 23:57	56-23-5	
Chlorobenzene	<0.016	mg/kg	0.053	0.016	1	03/31/17 08:00	03/31/17 23:57	108-90-7	
Chloroethane	<0.070	mg/kg	0.26	0.070	1	03/31/17 08:00	03/31/17 23:57	75-00-3	
Chloroform	<0.049	mg/kg	0.26	0.049	1	03/31/17 08:00	03/31/17 23:57	67-66-3	
Chloromethane	<0.022	mg/kg	0.053	0.022	1	03/31/17 08:00	03/31/17 23:57	74-87-3	
2-Chlorotoluene	<0.017	mg/kg	0.053	0.017	1	03/31/17 08:00	03/31/17 23:57	95-49-8	
4-Chlorotoluene	<0.014	mg/kg	0.053	0.014	1	03/31/17 08:00	03/31/17 23:57	106-43-4	
1,2-Dibromo-3-chloropropane	<0.096	mg/kg	0.26	0.096	1	03/31/17 08:00	03/31/17 23:57	96-12-8	
Dibromochloromethane	<0.019	mg/kg	0.053	0.019	1	03/31/17 08:00	03/31/17 23:57	124-48-1	
1,2-Dibromoethane (EDB)	<0.015	mg/kg	0.053	0.015	1	03/31/17 08:00	03/31/17 23:57	106-93-4	
Dibromomethane	<0.020	mg/kg	0.053	0.020	1	03/31/17 08:00	03/31/17 23:57	74-95-3	
1,2-Dichlorobenzene	<0.017	mg/kg	0.053	0.017	1	03/31/17 08:00	03/31/17 23:57	95-50-1	
1,3-Dichlorobenzene	<0.014	mg/kg	0.053	0.014	1	03/31/17 08:00	03/31/17 23:57	541-73-1	
1,4-Dichlorobenzene	<0.017	mg/kg	0.053	0.017	1	03/31/17 08:00	03/31/17 23:57	106-46-7	
Dichlorodifluoromethane	<0.013	mg/kg	0.053	0.013	1	03/31/17 08:00	03/31/17 23:57	75-71-8	
1,1-Dichloroethane	<0.019	mg/kg	0.053	0.019	1	03/31/17 08:00	03/31/17 23:57	75-34-3	
1,2-Dichloroethane	<0.016	mg/kg	0.053	0.016	1	03/31/17 08:00	03/31/17 23:57	107-06-2	
1,1-Dichloroethene	<0.019	mg/kg	0.053	0.019	1	03/31/17 08:00	03/31/17 23:57	75-35-4	
cis-1,2-Dichloroethene	<0.017	mg/kg	0.053	0.017	1	03/31/17 08:00	03/31/17 23:57	156-59-2	
trans-1,2-Dichloroethene	<0.017	mg/kg	0.053	0.017	1	03/31/17 08:00	03/31/17 23:57	156-60-5	
Dichlorofluoromethane	<0.016	mg/kg	0.053	0.016	1	03/31/17 08:00	03/31/17 23:57	75-43-4	
1,2-Dichloropropane	<0.018	mg/kg	0.053	0.018	1	03/31/17 08:00	03/31/17 23:57	78-87-5	
1,3-Dichloropropane	<0.013	mg/kg	0.053	0.013	1	03/31/17 08:00	03/31/17 23:57	142-28-9	
2,2-Dichloropropane	<0.013	mg/kg	0.053	0.013	1	03/31/17 08:00	03/31/17 23:57	594-20-7	
1,1-Dichloropropene	<0.015	mg/kg	0.053	0.015	1	03/31/17 08:00	03/31/17 23:57	563-58-6	
cis-1,3-Dichloropropene	<0.017	mg/kg	0.053	0.017	1	03/31/17 08:00	03/31/17 23:57	10061-01-5	
trans-1,3-Dichloropropene	<0.015	mg/kg	0.053	0.015	1	03/31/17 08:00	03/31/17 23:57	10061-02-6	
Diethyl ether (Ethyl ether)	<0.020	mg/kg	0.053	0.020	1	03/31/17 08:00	03/31/17 23:57	60-29-7	
Ethylbenzene	<0.013	mg/kg	0.053	0.013	1	03/31/17 08:00	03/31/17 23:57	100-41-4	
Hexachloro-1,3-butadiene	<0.026	mg/kg	0.053	0.026	1	03/31/17 08:00	03/31/17 23:57	87-68-3	
Isopropylbenzene (Cumene)	<0.013	mg/kg	0.053	0.013	1	03/31/17 08:00	03/31/17 23:57	98-82-8	
p-Isopropyltoluene	<0.013	mg/kg	0.053	0.013	1	03/31/17 08:00	03/31/17 23:57	99-87-6	
Methylene Chloride	<0.017	mg/kg	0.053	0.017	1	03/31/17 08:00	03/31/17 23:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.043	mg/kg	0.26	0.043	1	03/31/17 08:00	03/31/17 23:57	108-10-1	
Methyl-tert-butyl ether	<0.013	mg/kg	0.053	0.013	1	03/31/17 08:00	03/31/17 23:57	1634-04-4	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: B-19 (8.5) **Lab ID: 40147485003** Collected: 03/29/17 11:00 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Naphthalene	<0.042	mg/kg	0.26	0.042	1	03/31/17 08:00	03/31/17 23:57	91-20-3	
n-Propylbenzene	<0.012	mg/kg	0.053	0.012	1	03/31/17 08:00	03/31/17 23:57	103-65-1	
Styrene	<0.0095	mg/kg	0.053	0.0095	1	03/31/17 08:00	03/31/17 23:57	100-42-5	
1,1,1,2-Tetrachloroethane	<0.014	mg/kg	0.053	0.014	1	03/31/17 08:00	03/31/17 23:57	630-20-6	
1,1,2,2-Tetrachloroethane	<0.018	mg/kg	0.053	0.018	1	03/31/17 08:00	03/31/17 23:57	79-34-5	
Tetrachloroethene	<0.014	mg/kg	0.053	0.014	1	03/31/17 08:00	03/31/17 23:57	127-18-4	
Tetrahydrofuran	<0.12	mg/kg	0.26	0.12	1	03/31/17 08:00	03/31/17 23:57	109-99-9	
Toluene	<0.012	mg/kg	0.053	0.012	1	03/31/17 08:00	03/31/17 23:57	108-88-3	
1,2,3-Trichlorobenzene	<0.018	mg/kg	0.053	0.018	1	03/31/17 08:00	03/31/17 23:57	87-61-6	
1,2,4-Trichlorobenzene	<0.050	mg/kg	0.26	0.050	1	03/31/17 08:00	03/31/17 23:57	120-82-1	
1,1,1-Trichloroethane	<0.015	mg/kg	0.053	0.015	1	03/31/17 08:00	03/31/17 23:57	71-55-6	
1,1,2-Trichloroethane	<0.021	mg/kg	0.053	0.021	1	03/31/17 08:00	03/31/17 23:57	79-00-5	
Trichloroethene	<0.025	mg/kg	0.053	0.025	1	03/31/17 08:00	03/31/17 23:57	79-01-6	
Trichlorofluoromethane	<0.026	mg/kg	0.053	0.026	1	03/31/17 08:00	03/31/17 23:57	75-69-4	
1,2,3-Trichloropropane	<0.023	mg/kg	0.053	0.023	1	03/31/17 08:00	03/31/17 23:57	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.021	mg/kg	0.053	0.021	1	03/31/17 08:00	03/31/17 23:57	76-13-1	
1,2,4-Trimethylbenzene	<0.013	mg/kg	0.053	0.013	1	03/31/17 08:00	03/31/17 23:57	95-63-6	
1,3,5-Trimethylbenzene	<0.015	mg/kg	0.053	0.015	1	03/31/17 08:00	03/31/17 23:57	108-67-8	
Vinyl chloride	<0.022	mg/kg	0.053	0.022	1	03/31/17 08:00	03/31/17 23:57	75-01-4	
Xylene (Total)	<0.051	mg/kg	0.16	0.051	1	03/31/17 08:00	03/31/17 23:57	1330-20-7	
m&p-Xylene	<0.036	mg/kg	0.11	0.036	1	03/31/17 08:00	03/31/17 23:57	179601-23-1	
o-Xylene	<0.015	mg/kg	0.053	0.015	1	03/31/17 08:00	03/31/17 23:57	95-47-6	
Surrogates									
Dibromofluoromethane (S)	110	%	53-165		1	03/31/17 08:00	03/31/17 23:57	1868-53-7	
Toluene-d8 (S)	107	%	54-163		1	03/31/17 08:00	03/31/17 23:57	2037-26-5	
4-Bromofluorobenzene (S)	91	%	48-138		1	03/31/17 08:00	03/31/17 23:57	460-00-4	

Percent Moisture Analytical Method: ASTM D2974-87

Percent Moisture **4.9** % 0.10 0.10 1 04/03/17 11:03

Sample: B-29 (8.5) **Lab ID: 40147485004** Collected: 03/29/17 11:10 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	1.2J	mg/kg	1.8	0.73	1	04/05/17 09:47	04/06/17 12:22		
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	<0.12	mg/kg	0.29	0.12	1	03/31/17 08:00	04/01/17 00:19	67-64-1	
Allyl chloride	<0.061	mg/kg	0.29	0.061	1	03/31/17 08:00	04/01/17 00:19	107-05-1	
Benzene	<0.011	mg/kg	0.023	0.011	1	03/31/17 08:00	04/01/17 00:19	71-43-2	
Bromobenzene	<0.024	mg/kg	0.059	0.024	1	03/31/17 08:00	04/01/17 00:19	108-86-1	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: B-29 (8.5) **Lab ID: 40147485004** Collected: 03/29/17 11:10 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Bromochloromethane	<0.025	mg/kg	0.059	0.025	1	03/31/17 08:00	04/01/17 00:19	74-97-5	
Bromodichloromethane	<0.011	mg/kg	0.059	0.011	1	03/31/17 08:00	04/01/17 00:19	75-27-4	
Bromoform	<0.023	mg/kg	0.059	0.023	1	03/31/17 08:00	04/01/17 00:19	75-25-2	
Bromomethane	<0.082	mg/kg	0.29	0.082	1	03/31/17 08:00	04/01/17 00:19	74-83-9	
2-Butanone (MEK)	<0.15	mg/kg	0.29	0.15	1	03/31/17 08:00	04/01/17 00:19	78-93-3	
n-Butylbenzene	<0.012	mg/kg	0.059	0.012	1	03/31/17 08:00	04/01/17 00:19	104-51-8	
sec-Butylbenzene	<0.014	mg/kg	0.059	0.014	1	03/31/17 08:00	04/01/17 00:19	135-98-8	
tert-Butylbenzene	<0.011	mg/kg	0.059	0.011	1	03/31/17 08:00	04/01/17 00:19	98-06-6	
Carbon tetrachloride	<0.014	mg/kg	0.059	0.014	1	03/31/17 08:00	04/01/17 00:19	56-23-5	
Chlorobenzene	<0.017	mg/kg	0.059	0.017	1	03/31/17 08:00	04/01/17 00:19	108-90-7	
Chloroethane	<0.079	mg/kg	0.29	0.079	1	03/31/17 08:00	04/01/17 00:19	75-00-3	
Chloroform	<0.055	mg/kg	0.29	0.055	1	03/31/17 08:00	04/01/17 00:19	67-66-3	
Chloromethane	<0.024	mg/kg	0.059	0.024	1	03/31/17 08:00	04/01/17 00:19	74-87-3	
2-Chlorotoluene	<0.018	mg/kg	0.059	0.018	1	03/31/17 08:00	04/01/17 00:19	95-49-8	
4-Chlorotoluene	<0.015	mg/kg	0.059	0.015	1	03/31/17 08:00	04/01/17 00:19	106-43-4	
1,2-Dibromo-3-chloropropane	<0.11	mg/kg	0.29	0.11	1	03/31/17 08:00	04/01/17 00:19	96-12-8	
Dibromochloromethane	<0.021	mg/kg	0.059	0.021	1	03/31/17 08:00	04/01/17 00:19	124-48-1	
1,2-Dibromoethane (EDB)	<0.017	mg/kg	0.059	0.017	1	03/31/17 08:00	04/01/17 00:19	106-93-4	
Dibromomethane	<0.023	mg/kg	0.059	0.023	1	03/31/17 08:00	04/01/17 00:19	74-95-3	
1,2-Dichlorobenzene	<0.019	mg/kg	0.059	0.019	1	03/31/17 08:00	04/01/17 00:19	95-50-1	
1,3-Dichlorobenzene	<0.015	mg/kg	0.059	0.015	1	03/31/17 08:00	04/01/17 00:19	541-73-1	
1,4-Dichlorobenzene	<0.019	mg/kg	0.059	0.019	1	03/31/17 08:00	04/01/17 00:19	106-46-7	
Dichlorodifluoromethane	<0.014	mg/kg	0.059	0.014	1	03/31/17 08:00	04/01/17 00:19	75-71-8	
1,1-Dichloroethane	<0.021	mg/kg	0.059	0.021	1	03/31/17 08:00	04/01/17 00:19	75-34-3	
1,2-Dichloroethane	<0.018	mg/kg	0.059	0.018	1	03/31/17 08:00	04/01/17 00:19	107-06-2	
1,1-Dichloroethene	<0.021	mg/kg	0.059	0.021	1	03/31/17 08:00	04/01/17 00:19	75-35-4	
cis-1,2-Dichloroethene	<0.019	mg/kg	0.059	0.019	1	03/31/17 08:00	04/01/17 00:19	156-59-2	
trans-1,2-Dichloroethene	<0.019	mg/kg	0.059	0.019	1	03/31/17 08:00	04/01/17 00:19	156-60-5	
Dichlorofluoromethane	<0.017	mg/kg	0.059	0.017	1	03/31/17 08:00	04/01/17 00:19	75-43-4	
1,2-Dichloropropane	<0.020	mg/kg	0.059	0.020	1	03/31/17 08:00	04/01/17 00:19	78-87-5	
1,3-Dichloropropane	<0.014	mg/kg	0.059	0.014	1	03/31/17 08:00	04/01/17 00:19	142-28-9	
2,2-Dichloropropane	<0.015	mg/kg	0.059	0.015	1	03/31/17 08:00	04/01/17 00:19	594-20-7	
1,1-Dichloropropene	<0.016	mg/kg	0.059	0.016	1	03/31/17 08:00	04/01/17 00:19	563-58-6	
cis-1,3-Dichloropropene	<0.019	mg/kg	0.059	0.019	1	03/31/17 08:00	04/01/17 00:19	10061-01-5	
trans-1,3-Dichloropropene	<0.017	mg/kg	0.059	0.017	1	03/31/17 08:00	04/01/17 00:19	10061-02-6	
Diethyl ether (Ethyl ether)	<0.022	mg/kg	0.059	0.022	1	03/31/17 08:00	04/01/17 00:19	60-29-7	
Ethylbenzene	<0.015	mg/kg	0.059	0.015	1	03/31/17 08:00	04/01/17 00:19	100-41-4	
Hexachloro-1,3-butadiene	<0.029	mg/kg	0.059	0.029	1	03/31/17 08:00	04/01/17 00:19	87-68-3	
Isopropylbenzene (Cumene)	<0.015	mg/kg	0.059	0.015	1	03/31/17 08:00	04/01/17 00:19	98-82-8	
p-Isopropyltoluene	<0.014	mg/kg	0.059	0.014	1	03/31/17 08:00	04/01/17 00:19	99-87-6	
Methylene Chloride	<0.019	mg/kg	0.059	0.019	1	03/31/17 08:00	04/01/17 00:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.048	mg/kg	0.29	0.048	1	03/31/17 08:00	04/01/17 00:19	108-10-1	
Methyl-tert-butyl ether	<0.015	mg/kg	0.059	0.015	1	03/31/17 08:00	04/01/17 00:19	1634-04-4	
Naphthalene	<0.047	mg/kg	0.29	0.047	1	03/31/17 08:00	04/01/17 00:19	91-20-3	
n-Propylbenzene	<0.014	mg/kg	0.059	0.014	1	03/31/17 08:00	04/01/17 00:19	103-65-1	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: B-29 (8.5) **Lab ID: 40147485004** Collected: 03/29/17 11:10 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Styrene	<0.011	mg/kg	0.059	0.011	1	03/31/17 08:00	04/01/17 00:19	100-42-5	
1,1,1,2-Tetrachloroethane	<0.016	mg/kg	0.059	0.016	1	03/31/17 08:00	04/01/17 00:19	630-20-6	
1,1,2,2-Tetrachloroethane	<0.021	mg/kg	0.059	0.021	1	03/31/17 08:00	04/01/17 00:19	79-34-5	
Tetrachloroethene	<0.015	mg/kg	0.059	0.015	1	03/31/17 08:00	04/01/17 00:19	127-18-4	
Tetrahydrofuran	<0.13	mg/kg	0.29	0.13	1	03/31/17 08:00	04/01/17 00:19	109-99-9	
Toluene	<0.013	mg/kg	0.059	0.013	1	03/31/17 08:00	04/01/17 00:19	108-88-3	
1,2,3-Trichlorobenzene	<0.020	mg/kg	0.059	0.020	1	03/31/17 08:00	04/01/17 00:19	87-61-6	
1,2,4-Trichlorobenzene	<0.056	mg/kg	0.29	0.056	1	03/31/17 08:00	04/01/17 00:19	120-82-1	
1,1,1-Trichloroethane	<0.017	mg/kg	0.059	0.017	1	03/31/17 08:00	04/01/17 00:19	71-55-6	
1,1,2-Trichloroethane	<0.024	mg/kg	0.059	0.024	1	03/31/17 08:00	04/01/17 00:19	79-00-5	
Trichloroethene	<0.028	mg/kg	0.059	0.028	1	03/31/17 08:00	04/01/17 00:19	79-01-6	
Trichlorofluoromethane	<0.029	mg/kg	0.059	0.029	1	03/31/17 08:00	04/01/17 00:19	75-69-4	
1,2,3-Trichloropropane	<0.026	mg/kg	0.059	0.026	1	03/31/17 08:00	04/01/17 00:19	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.024	mg/kg	0.059	0.024	1	03/31/17 08:00	04/01/17 00:19	76-13-1	
1,2,4-Trimethylbenzene	<0.014	mg/kg	0.059	0.014	1	03/31/17 08:00	04/01/17 00:19	95-63-6	
1,3,5-Trimethylbenzene	<0.017	mg/kg	0.059	0.017	1	03/31/17 08:00	04/01/17 00:19	108-67-8	
Vinyl chloride	<0.025	mg/kg	0.059	0.025	1	03/31/17 08:00	04/01/17 00:19	75-01-4	
Xylene (Total)	<0.057	mg/kg	0.18	0.057	1	03/31/17 08:00	04/01/17 00:19	1330-20-7	
m&p-Xylene	<0.040	mg/kg	0.12	0.040	1	03/31/17 08:00	04/01/17 00:19	179601-23-1	
o-Xylene	<0.016	mg/kg	0.059	0.016	1	03/31/17 08:00	04/01/17 00:19	95-47-6	
Surrogates									
Dibromofluoromethane (S)	94	%	53-165		1	03/31/17 08:00	04/01/17 00:19	1868-53-7	
Toluene-d8 (S)	91	%	54-163		1	03/31/17 08:00	04/01/17 00:19	2037-26-5	
4-Bromofluorobenzene (S)	77	%	48-138		1	03/31/17 08:00	04/01/17 00:19	460-00-4	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	9.4	%	0.10	0.10	1		04/03/17 11:03		
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Sample: SW-E (4) **Lab ID: 40147485005** Collected: 03/29/17 10:30 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	1.3J	mg/kg	1.8	0.73	1	04/05/17 09:47	04/06/17 12:31		
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Acetone	<0.11	mg/kg	0.27	0.11	1	04/03/17 10:15	04/04/17 19:23	67-64-1	
Allyl chloride	<0.057	mg/kg	0.27	0.057	1	04/03/17 10:15	04/04/17 19:23	107-05-1	
Benzene	<0.010	mg/kg	0.022	0.010	1	04/03/17 10:15	04/04/17 19:23	71-43-2	
Bromobenzene	<0.023	mg/kg	0.055	0.023	1	04/03/17 10:15	04/04/17 19:23	108-86-1	
Bromochloromethane	<0.023	mg/kg	0.055	0.023	1	04/03/17 10:15	04/04/17 19:23	74-97-5	
Bromodichloromethane	<0.011	mg/kg	0.055	0.011	1	04/03/17 10:15	04/04/17 19:23	75-27-4	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: SW-E (4) Lab ID: 40147485005 Collected: 03/29/17 10:30 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Bromoform	<0.022	mg/kg	0.055	0.022	1	04/03/17 10:15	04/04/17 19:23	75-25-2	
Bromomethane	<0.077	mg/kg	0.27	0.077	1	04/03/17 10:15	04/04/17 19:23	74-83-9	
2-Butanone (MEK)	<0.14	mg/kg	0.27	0.14	1	04/03/17 10:15	04/04/17 19:23	78-93-3	
n-Butylbenzene	<0.012	mg/kg	0.055	0.012	1	04/03/17 10:15	04/04/17 19:23	104-51-8	
sec-Butylbenzene	<0.013	mg/kg	0.055	0.013	1	04/03/17 10:15	04/04/17 19:23	135-98-8	
tert-Butylbenzene	<0.010	mg/kg	0.055	0.010	1	04/03/17 10:15	04/04/17 19:23	98-06-6	
Carbon tetrachloride	<0.013	mg/kg	0.055	0.013	1	04/03/17 10:15	04/04/17 19:23	56-23-5	
Chlorobenzene	<0.016	mg/kg	0.055	0.016	1	04/03/17 10:15	04/04/17 19:23	108-90-7	
Chloroethane	<0.074	mg/kg	0.27	0.074	1	04/03/17 10:15	04/04/17 19:23	75-00-3	
Chloroform	<0.051	mg/kg	0.27	0.051	1	04/03/17 10:15	04/04/17 19:23	67-66-3	
Chloromethane	<0.022	mg/kg	0.055	0.022	1	04/03/17 10:15	04/04/17 19:23	74-87-3	
2-Chlorotoluene	<0.017	mg/kg	0.055	0.017	1	04/03/17 10:15	04/04/17 19:23	95-49-8	
4-Chlorotoluene	<0.014	mg/kg	0.055	0.014	1	04/03/17 10:15	04/04/17 19:23	106-43-4	
1,2-Dibromo-3-chloropropane	<0.10	mg/kg	0.27	0.10	1	04/03/17 10:15	04/04/17 19:23	96-12-8	
Dibromochloromethane	<0.020	mg/kg	0.055	0.020	1	04/03/17 10:15	04/04/17 19:23	124-48-1	
1,2-Dibromoethane (EDB)	<0.016	mg/kg	0.055	0.016	1	04/03/17 10:15	04/04/17 19:23	106-93-4	
Dibromomethane	<0.021	mg/kg	0.055	0.021	1	04/03/17 10:15	04/04/17 19:23	74-95-3	
1,2-Dichlorobenzene	<0.018	mg/kg	0.055	0.018	1	04/03/17 10:15	04/04/17 19:23	95-50-1	
1,3-Dichlorobenzene	0.016J	mg/kg	0.055	0.014	1	04/03/17 10:15	04/04/17 19:23	541-73-1	B
1,4-Dichlorobenzene	0.018J	mg/kg	0.055	0.017	1	04/03/17 10:15	04/04/17 19:23	106-46-7	B
Dichlorodifluoromethane	<0.013	mg/kg	0.055	0.013	1	04/03/17 10:15	04/04/17 19:23	75-71-8	
1,1-Dichloroethane	<0.019	mg/kg	0.055	0.019	1	04/03/17 10:15	04/04/17 19:23	75-34-3	
1,2-Dichloroethane	<0.016	mg/kg	0.055	0.016	1	04/03/17 10:15	04/04/17 19:23	107-06-2	
1,1-Dichloroethene	<0.019	mg/kg	0.055	0.019	1	04/03/17 10:15	04/04/17 19:23	75-35-4	
cis-1,2-Dichloroethene	<0.018	mg/kg	0.055	0.018	1	04/03/17 10:15	04/04/17 19:23	156-59-2	
trans-1,2-Dichloroethene	<0.018	mg/kg	0.055	0.018	1	04/03/17 10:15	04/04/17 19:23	156-60-5	
Dichlorofluoromethane	<0.016	mg/kg	0.055	0.016	1	04/03/17 10:15	04/04/17 19:23	75-43-4	
1,2-Dichloropropane	<0.018	mg/kg	0.055	0.018	1	04/03/17 10:15	04/04/17 19:23	78-87-5	
1,3-Dichloropropane	<0.013	mg/kg	0.055	0.013	1	04/03/17 10:15	04/04/17 19:23	142-28-9	
2,2-Dichloropropane	<0.014	mg/kg	0.055	0.014	1	04/03/17 10:15	04/04/17 19:23	594-20-7	
1,1-Dichloropropene	<0.015	mg/kg	0.055	0.015	1	04/03/17 10:15	04/04/17 19:23	563-58-6	
cis-1,3-Dichloropropene	<0.018	mg/kg	0.055	0.018	1	04/03/17 10:15	04/04/17 19:23	10061-01-5	
trans-1,3-Dichloropropene	<0.016	mg/kg	0.055	0.016	1	04/03/17 10:15	04/04/17 19:23	10061-02-6	
Diethyl ether (Ethyl ether)	<0.021	mg/kg	0.055	0.021	1	04/03/17 10:15	04/04/17 19:23	60-29-7	
Ethylbenzene	<0.014	mg/kg	0.055	0.014	1	04/03/17 10:15	04/04/17 19:23	100-41-4	
Hexachloro-1,3-butadiene	<0.027	mg/kg	0.055	0.027	1	04/03/17 10:15	04/04/17 19:23	87-68-3	
Isopropylbenzene (Cumene)	<0.014	mg/kg	0.055	0.014	1	04/03/17 10:15	04/04/17 19:23	98-82-8	
p-Isopropyltoluene	<0.013	mg/kg	0.055	0.013	1	04/03/17 10:15	04/04/17 19:23	99-87-6	
Methylene Chloride	<0.018	mg/kg	0.055	0.018	1	04/03/17 10:15	04/04/17 19:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.045	mg/kg	0.27	0.045	1	04/03/17 10:15	04/04/17 19:23	108-10-1	
Methyl-tert-butyl ether	<0.014	mg/kg	0.055	0.014	1	04/03/17 10:15	04/04/17 19:23	1634-04-4	
Naphthalene	<0.044	mg/kg	0.27	0.044	1	04/03/17 10:15	04/04/17 19:23	91-20-3	
n-Propylbenzene	<0.013	mg/kg	0.055	0.013	1	04/03/17 10:15	04/04/17 19:23	103-65-1	
Styrene	<0.0099	mg/kg	0.055	0.0099	1	04/03/17 10:15	04/04/17 19:23	100-42-5	
1,1,1,2-Tetrachloroethane	<0.015	mg/kg	0.055	0.015	1	04/03/17 10:15	04/04/17 19:23	630-20-6	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL
Pace Project No.: 40147485

Sample: SW-E (4) **Lab ID: 40147485005** Collected: 03/29/17 10:30 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,2,2-Tetrachloroethane	<0.019	mg/kg	0.055	0.019	1	04/03/17 10:15	04/04/17 19:23	79-34-5	
Tetrachloroethene	<0.014	mg/kg	0.055	0.014	1	04/03/17 10:15	04/04/17 19:23	127-18-4	
Tetrahydrofuran	<0.12	mg/kg	0.27	0.12	1	04/03/17 10:15	04/04/17 19:23	109-99-9	
Toluene	<0.012	mg/kg	0.055	0.012	1	04/03/17 10:15	04/04/17 19:23	108-88-3	
1,2,3-Trichlorobenzene	<0.019	mg/kg	0.055	0.019	1	04/03/17 10:15	04/04/17 19:23	87-61-6	
1,2,4-Trichlorobenzene	<0.052	mg/kg	0.27	0.052	1	04/03/17 10:15	04/04/17 19:23	120-82-1	
1,1,1-Trichloroethane	<0.016	mg/kg	0.055	0.016	1	04/03/17 10:15	04/04/17 19:23	71-55-6	
1,1,2-Trichloroethane	<0.022	mg/kg	0.055	0.022	1	04/03/17 10:15	04/04/17 19:23	79-00-5	
Trichloroethene	<0.026	mg/kg	0.055	0.026	1	04/03/17 10:15	04/04/17 19:23	79-01-6	
Trichlorofluoromethane	<0.027	mg/kg	0.055	0.027	1	04/03/17 10:15	04/04/17 19:23	75-69-4	
1,2,3-Trichloropropane	<0.024	mg/kg	0.055	0.024	1	04/03/17 10:15	04/04/17 19:23	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.022	mg/kg	0.055	0.022	1	04/03/17 10:15	04/04/17 19:23	76-13-1	
1,2,4-Trimethylbenzene	<0.013	mg/kg	0.055	0.013	1	04/03/17 10:15	04/04/17 19:23	95-63-6	
1,3,5-Trimethylbenzene	<0.016	mg/kg	0.055	0.016	1	04/03/17 10:15	04/04/17 19:23	108-67-8	
Vinyl chloride	<0.023	mg/kg	0.055	0.023	1	04/03/17 10:15	04/04/17 19:23	75-01-4	
Xylene (Total)	<0.053	mg/kg	0.16	0.053	1	04/03/17 10:15	04/04/17 19:23	1330-20-7	
m&p-Xylene	<0.038	mg/kg	0.11	0.038	1	04/03/17 10:15	04/04/17 19:23	179601-23-1	
o-Xylene	<0.015	mg/kg	0.055	0.015	1	04/03/17 10:15	04/04/17 19:23	95-47-6	
Surrogates									
Dibromofluoromethane (S)	95	%	53-165		1	04/03/17 10:15	04/04/17 19:23	1868-53-7	
Toluene-d8 (S)	109	%	54-163		1	04/03/17 10:15	04/04/17 19:23	2037-26-5	
4-Bromofluorobenzene (S)	95	%	48-138		1	04/03/17 10:15	04/04/17 19:23	460-00-4	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	8.8	%	0.10	0.10	1		04/03/17 12:41		

Sample: SW-N (5) **Lab ID: 40147485006** Collected: 03/29/17 10:40 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	1.1J	mg/kg	1.8	0.74	1	04/05/17 09:47	04/06/17 12:40		
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Acetone	<0.10	mg/kg	0.26	0.10	1	04/03/17 10:15	04/04/17 19:46	67-64-1	
Allyl chloride	<0.055	mg/kg	0.26	0.055	1	04/03/17 10:15	04/04/17 19:46	107-05-1	
Benzene	<0.0096	mg/kg	0.021	0.0096	1	04/03/17 10:15	04/04/17 19:46	71-43-2	
Bromobenzene	<0.021	mg/kg	0.052	0.021	1	04/03/17 10:15	04/04/17 19:46	108-86-1	
Bromochloromethane	<0.022	mg/kg	0.052	0.022	1	04/03/17 10:15	04/04/17 19:46	74-97-5	
Bromodichloromethane	<0.010	mg/kg	0.052	0.010	1	04/03/17 10:15	04/04/17 19:46	75-27-4	
Bromoform	<0.021	mg/kg	0.052	0.021	1	04/03/17 10:15	04/04/17 19:46	75-25-2	
Bromomethane	<0.073	mg/kg	0.26	0.073	1	04/03/17 10:15	04/04/17 19:46	74-83-9	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: SW-N (5) Lab ID: 40147485006 Collected: 03/29/17 10:40 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
2-Butanone (MEK)	<0.13	mg/kg	0.26	0.13	1	04/03/17 10:15	04/04/17 19:46	78-93-3	
n-Butylbenzene	<0.011	mg/kg	0.052	0.011	1	04/03/17 10:15	04/04/17 19:46	104-51-8	
sec-Butylbenzene	<0.012	mg/kg	0.052	0.012	1	04/03/17 10:15	04/04/17 19:46	135-98-8	
tert-Butylbenzene	<0.0099	mg/kg	0.052	0.0099	1	04/03/17 10:15	04/04/17 19:46	98-06-6	
Carbon tetrachloride	<0.013	mg/kg	0.052	0.013	1	04/03/17 10:15	04/04/17 19:46	56-23-5	
Chlorobenzene	<0.015	mg/kg	0.052	0.015	1	04/03/17 10:15	04/04/17 19:46	108-90-7	
Chloroethane	<0.070	mg/kg	0.26	0.070	1	04/03/17 10:15	04/04/17 19:46	75-00-3	
Chloroform	<0.048	mg/kg	0.26	0.048	1	04/03/17 10:15	04/04/17 19:46	67-66-3	
Chloromethane	<0.021	mg/kg	0.052	0.021	1	04/03/17 10:15	04/04/17 19:46	74-87-3	
2-Chlorotoluene	<0.016	mg/kg	0.052	0.016	1	04/03/17 10:15	04/04/17 19:46	95-49-8	
4-Chlorotoluene	<0.014	mg/kg	0.052	0.014	1	04/03/17 10:15	04/04/17 19:46	106-43-4	
1,2-Dibromo-3-chloropropane	<0.095	mg/kg	0.26	0.095	1	04/03/17 10:15	04/04/17 19:46	96-12-8	
Dibromochloromethane	<0.019	mg/kg	0.052	0.019	1	04/03/17 10:15	04/04/17 19:46	124-48-1	
1,2-Dibromoethane (EDB)	<0.015	mg/kg	0.052	0.015	1	04/03/17 10:15	04/04/17 19:46	106-93-4	
Dibromomethane	<0.020	mg/kg	0.052	0.020	1	04/03/17 10:15	04/04/17 19:46	74-95-3	
1,2-Dichlorobenzene	<0.017	mg/kg	0.052	0.017	1	04/03/17 10:15	04/04/17 19:46	95-50-1	
1,3-Dichlorobenzene	<0.014	mg/kg	0.052	0.014	1	04/03/17 10:15	04/04/17 19:46	541-73-1	
1,4-Dichlorobenzene	<0.017	mg/kg	0.052	0.017	1	04/03/17 10:15	04/04/17 19:46	106-46-7	
Dichlorodifluoromethane	<0.013	mg/kg	0.052	0.013	1	04/03/17 10:15	04/04/17 19:46	75-71-8	
1,1-Dichloroethane	<0.018	mg/kg	0.052	0.018	1	04/03/17 10:15	04/04/17 19:46	75-34-3	
1,2-Dichloroethane	<0.016	mg/kg	0.052	0.016	1	04/03/17 10:15	04/04/17 19:46	107-06-2	
1,1-Dichloroethene	<0.018	mg/kg	0.052	0.018	1	04/03/17 10:15	04/04/17 19:46	75-35-4	
cis-1,2-Dichloroethene	<0.017	mg/kg	0.052	0.017	1	04/03/17 10:15	04/04/17 19:46	156-59-2	
trans-1,2-Dichloroethene	<0.017	mg/kg	0.052	0.017	1	04/03/17 10:15	04/04/17 19:46	156-60-5	
Dichlorofluoromethane	<0.015	mg/kg	0.052	0.015	1	04/03/17 10:15	04/04/17 19:46	75-43-4	
1,2-Dichloropropane	<0.017	mg/kg	0.052	0.017	1	04/03/17 10:15	04/04/17 19:46	78-87-5	
1,3-Dichloropropane	<0.013	mg/kg	0.052	0.013	1	04/03/17 10:15	04/04/17 19:46	142-28-9	
2,2-Dichloropropane	<0.013	mg/kg	0.052	0.013	1	04/03/17 10:15	04/04/17 19:46	594-20-7	
1,1-Dichloropropene	<0.015	mg/kg	0.052	0.015	1	04/03/17 10:15	04/04/17 19:46	563-58-6	
cis-1,3-Dichloropropene	<0.017	mg/kg	0.052	0.017	1	04/03/17 10:15	04/04/17 19:46	10061-01-5	
trans-1,3-Dichloropropene	<0.015	mg/kg	0.052	0.015	1	04/03/17 10:15	04/04/17 19:46	10061-02-6	
Diethyl ether (Ethyl ether)	<0.020	mg/kg	0.052	0.020	1	04/03/17 10:15	04/04/17 19:46	60-29-7	
Ethylbenzene	<0.013	mg/kg	0.052	0.013	1	04/03/17 10:15	04/04/17 19:46	100-41-4	
Hexachloro-1,3-butadiene	<0.025	mg/kg	0.052	0.025	1	04/03/17 10:15	04/04/17 19:46	87-68-3	
Isopropylbenzene (Cumene)	<0.013	mg/kg	0.052	0.013	1	04/03/17 10:15	04/04/17 19:46	98-82-8	
p-Isopropyltoluene	<0.012	mg/kg	0.052	0.012	1	04/03/17 10:15	04/04/17 19:46	99-87-6	
Methylene Chloride	<0.017	mg/kg	0.052	0.017	1	04/03/17 10:15	04/04/17 19:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.043	mg/kg	0.26	0.043	1	04/03/17 10:15	04/04/17 19:46	108-10-1	
Methyl-tert-butyl ether	<0.013	mg/kg	0.052	0.013	1	04/03/17 10:15	04/04/17 19:46	1634-04-4	
Naphthalene	<0.042	mg/kg	0.26	0.042	1	04/03/17 10:15	04/04/17 19:46	91-20-3	
n-Propylbenzene	<0.012	mg/kg	0.052	0.012	1	04/03/17 10:15	04/04/17 19:46	103-65-1	
Styrene	0.0096J	mg/kg	0.052	0.0094	1	04/03/17 10:15	04/04/17 19:46	100-42-5	
1,1,1,2-Tetrachloroethane	<0.014	mg/kg	0.052	0.014	1	04/03/17 10:15	04/04/17 19:46	630-20-6	
1,1,2,2-Tetrachloroethane	<0.018	mg/kg	0.052	0.018	1	04/03/17 10:15	04/04/17 19:46	79-34-5	
Tetrachloroethene	<0.013	mg/kg	0.052	0.013	1	04/03/17 10:15	04/04/17 19:46	127-18-4	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: SW-N (5) **Lab ID: 40147485006** Collected: 03/29/17 10:40 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Tetrahydrofuran	<0.11	mg/kg	0.26	0.11	1	04/03/17 10:15	04/04/17 19:46	109-99-9	
Toluene	<0.012	mg/kg	0.052	0.012	1	04/03/17 10:15	04/04/17 19:46	108-88-3	
1,2,3-Trichlorobenzene	<0.018	mg/kg	0.052	0.018	1	04/03/17 10:15	04/04/17 19:46	87-61-6	
1,2,4-Trichlorobenzene	<0.049	mg/kg	0.26	0.049	1	04/03/17 10:15	04/04/17 19:46	120-82-1	
1,1,1-Trichloroethane	<0.015	mg/kg	0.052	0.015	1	04/03/17 10:15	04/04/17 19:46	71-55-6	
1,1,2-Trichloroethane	<0.021	mg/kg	0.052	0.021	1	04/03/17 10:15	04/04/17 19:46	79-00-5	
Trichloroethene	<0.025	mg/kg	0.052	0.025	1	04/03/17 10:15	04/04/17 19:46	79-01-6	
Trichlorofluoromethane	<0.026	mg/kg	0.052	0.026	1	04/03/17 10:15	04/04/17 19:46	75-69-4	
1,2,3-Trichloropropane	<0.023	mg/kg	0.052	0.023	1	04/03/17 10:15	04/04/17 19:46	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.021	mg/kg	0.052	0.021	1	04/03/17 10:15	04/04/17 19:46	76-13-1	
1,2,4-Trimethylbenzene	<0.013	mg/kg	0.052	0.013	1	04/03/17 10:15	04/04/17 19:46	95-63-6	
1,3,5-Trimethylbenzene	<0.015	mg/kg	0.052	0.015	1	04/03/17 10:15	04/04/17 19:46	108-67-8	
Vinyl chloride	<0.022	mg/kg	0.052	0.022	1	04/03/17 10:15	04/04/17 19:46	75-01-4	
Xylene (Total)	<0.050	mg/kg	0.16	0.050	1	04/03/17 10:15	04/04/17 19:46	1330-20-7	
m&p-Xylene	<0.036	mg/kg	0.10	0.036	1	04/03/17 10:15	04/04/17 19:46	179601-23-1	
o-Xylene	<0.015	mg/kg	0.052	0.015	1	04/03/17 10:15	04/04/17 19:46	95-47-6	
Surrogates									
Dibromofluoromethane (S)	98	%	53-165		1	04/03/17 10:15	04/04/17 19:46	1868-53-7	
Toluene-d8 (S)	107	%	54-163		1	04/03/17 10:15	04/04/17 19:46	2037-26-5	
4-Bromofluorobenzene (S)	94	%	48-138		1	04/03/17 10:15	04/04/17 19:46	460-00-4	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	3.9	%	0.10	0.10	1		04/03/17 12:41		
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Sample: SW-S (5) **Lab ID: 40147485007** Collected: 03/29/17 10:50 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	<0.67	mg/kg	1.7	0.67	1	04/05/17 09:47	04/06/17 12:49		
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Acetone	<0.11	mg/kg	0.27	0.11	1	04/03/17 10:15	04/04/17 20:09	67-64-1	
Allyl chloride	<0.056	mg/kg	0.27	0.056	1	04/03/17 10:15	04/04/17 20:09	107-05-1	
Benzene	<0.0099	mg/kg	0.021	0.0099	1	04/03/17 10:15	04/04/17 20:09	71-43-2	
Bromobenzene	<0.022	mg/kg	0.054	0.022	1	04/03/17 10:15	04/04/17 20:09	108-86-1	
Bromochloromethane	<0.023	mg/kg	0.054	0.023	1	04/03/17 10:15	04/04/17 20:09	74-97-5	
Bromodichloromethane	<0.010	mg/kg	0.054	0.010	1	04/03/17 10:15	04/04/17 20:09	75-27-4	
Bromoform	<0.021	mg/kg	0.054	0.021	1	04/03/17 10:15	04/04/17 20:09	75-25-2	
Bromomethane	<0.075	mg/kg	0.27	0.075	1	04/03/17 10:15	04/04/17 20:09	74-83-9	
2-Butanone (MEK)	<0.13	mg/kg	0.27	0.13	1	04/03/17 10:15	04/04/17 20:09	78-93-3	
n-Butylbenzene	<0.011	mg/kg	0.054	0.011	1	04/03/17 10:15	04/04/17 20:09	104-51-8	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL
Pace Project No.: 40147485

Sample: SW-S (5) Lab ID: 40147485007 Collected: 03/29/17 10:50 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
sec-Butylbenzene	<0.013	mg/kg	0.054	0.013	1	04/03/17 10:15	04/04/17 20:09	135-98-8	
tert-Butylbenzene	<0.010	mg/kg	0.054	0.010	1	04/03/17 10:15	04/04/17 20:09	98-06-6	
Carbon tetrachloride	<0.013	mg/kg	0.054	0.013	1	04/03/17 10:15	04/04/17 20:09	56-23-5	
Chlorobenzene	<0.016	mg/kg	0.054	0.016	1	04/03/17 10:15	04/04/17 20:09	108-90-7	
Chloroethane	<0.072	mg/kg	0.27	0.072	1	04/03/17 10:15	04/04/17 20:09	75-00-3	
Chloroform	<0.050	mg/kg	0.27	0.050	1	04/03/17 10:15	04/04/17 20:09	67-66-3	
Chloromethane	<0.022	mg/kg	0.054	0.022	1	04/03/17 10:15	04/04/17 20:09	74-87-3	
2-Chlorotoluene	<0.017	mg/kg	0.054	0.017	1	04/03/17 10:15	04/04/17 20:09	95-49-8	
4-Chlorotoluene	<0.014	mg/kg	0.054	0.014	1	04/03/17 10:15	04/04/17 20:09	106-43-4	
1,2-Dibromo-3-chloropropane	<0.098	mg/kg	0.27	0.098	1	04/03/17 10:15	04/04/17 20:09	96-12-8	
Dibromochloromethane	<0.019	mg/kg	0.054	0.019	1	04/03/17 10:15	04/04/17 20:09	124-48-1	
1,2-Dibromoethane (EDB)	<0.016	mg/kg	0.054	0.016	1	04/03/17 10:15	04/04/17 20:09	106-93-4	
Dibromomethane	<0.021	mg/kg	0.054	0.021	1	04/03/17 10:15	04/04/17 20:09	74-95-3	
1,2-Dichlorobenzene	<0.017	mg/kg	0.054	0.017	1	04/03/17 10:15	04/04/17 20:09	95-50-1	
1,3-Dichlorobenzene	<0.014	mg/kg	0.054	0.014	1	04/03/17 10:15	04/04/17 20:09	541-73-1	
1,4-Dichlorobenzene	0.018J	mg/kg	0.054	0.017	1	04/03/17 10:15	04/04/17 20:09	106-46-7	B
Dichlorodifluoromethane	<0.013	mg/kg	0.054	0.013	1	04/03/17 10:15	04/04/17 20:09	75-71-8	
1,1-Dichloroethane	<0.019	mg/kg	0.054	0.019	1	04/03/17 10:15	04/04/17 20:09	75-34-3	
1,2-Dichloroethane	<0.016	mg/kg	0.054	0.016	1	04/03/17 10:15	04/04/17 20:09	107-06-2	
1,1-Dichloroethene	<0.019	mg/kg	0.054	0.019	1	04/03/17 10:15	04/04/17 20:09	75-35-4	
cis-1,2-Dichloroethene	<0.018	mg/kg	0.054	0.018	1	04/03/17 10:15	04/04/17 20:09	156-59-2	
trans-1,2-Dichloroethene	<0.018	mg/kg	0.054	0.018	1	04/03/17 10:15	04/04/17 20:09	156-60-5	
Dichlorofluoromethane	<0.016	mg/kg	0.054	0.016	1	04/03/17 10:15	04/04/17 20:09	75-43-4	
1,2-Dichloropropane	<0.018	mg/kg	0.054	0.018	1	04/03/17 10:15	04/04/17 20:09	78-87-5	
1,3-Dichloropropane	<0.013	mg/kg	0.054	0.013	1	04/03/17 10:15	04/04/17 20:09	142-28-9	
2,2-Dichloropropane	<0.014	mg/kg	0.054	0.014	1	04/03/17 10:15	04/04/17 20:09	594-20-7	
1,1-Dichloropropene	<0.015	mg/kg	0.054	0.015	1	04/03/17 10:15	04/04/17 20:09	563-58-6	
cis-1,3-Dichloropropene	<0.018	mg/kg	0.054	0.018	1	04/03/17 10:15	04/04/17 20:09	10061-01-5	
trans-1,3-Dichloropropene	<0.015	mg/kg	0.054	0.015	1	04/03/17 10:15	04/04/17 20:09	10061-02-6	
Diethyl ether (Ethyl ether)	<0.020	mg/kg	0.054	0.020	1	04/03/17 10:15	04/04/17 20:09	60-29-7	
Ethylbenzene	<0.013	mg/kg	0.054	0.013	1	04/03/17 10:15	04/04/17 20:09	100-41-4	
Hexachloro-1,3-butadiene	<0.026	mg/kg	0.054	0.026	1	04/03/17 10:15	04/04/17 20:09	87-68-3	
Isopropylbenzene (Cumene)	<0.014	mg/kg	0.054	0.014	1	04/03/17 10:15	04/04/17 20:09	98-82-8	
p-Isopropyltoluene	<0.013	mg/kg	0.054	0.013	1	04/03/17 10:15	04/04/17 20:09	99-87-6	
Methylene Chloride	<0.017	mg/kg	0.054	0.017	1	04/03/17 10:15	04/04/17 20:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.044	mg/kg	0.27	0.044	1	04/03/17 10:15	04/04/17 20:09	108-10-1	
Methyl-tert-butyl ether	<0.014	mg/kg	0.054	0.014	1	04/03/17 10:15	04/04/17 20:09	1634-04-4	
Naphthalene	<0.043	mg/kg	0.27	0.043	1	04/03/17 10:15	04/04/17 20:09	91-20-3	
n-Propylbenzene	<0.012	mg/kg	0.054	0.012	1	04/03/17 10:15	04/04/17 20:09	103-65-1	
Styrene	<0.0097	mg/kg	0.054	0.0097	1	04/03/17 10:15	04/04/17 20:09	100-42-5	
1,1,1,2-Tetrachloroethane	<0.015	mg/kg	0.054	0.015	1	04/03/17 10:15	04/04/17 20:09	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.019	mg/kg	0.054	0.019	1	04/03/17 10:15	04/04/17 20:09	79-34-5	
Tetrachloroethene	<0.014	mg/kg	0.054	0.014	1	04/03/17 10:15	04/04/17 20:09	127-18-4	
Tetrahydrofuran	<0.12	mg/kg	0.27	0.12	1	04/03/17 10:15	04/04/17 20:09	109-99-9	
Toluene	<0.012	mg/kg	0.054	0.012	1	04/03/17 10:15	04/04/17 20:09	108-88-3	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: SW-S (5) **Lab ID: 40147485007** Collected: 03/29/17 10:50 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,3-Trichlorobenzene	<0.018	mg/kg	0.054	0.018	1	04/03/17 10:15	04/04/17 20:09	87-61-6	
1,2,4-Trichlorobenzene	<0.051	mg/kg	0.27	0.051	1	04/03/17 10:15	04/04/17 20:09	120-82-1	
1,1,1-Trichloroethane	<0.015	mg/kg	0.054	0.015	1	04/03/17 10:15	04/04/17 20:09	71-55-6	
1,1,2-Trichloroethane	<0.022	mg/kg	0.054	0.022	1	04/03/17 10:15	04/04/17 20:09	79-00-5	
Trichloroethene	<0.025	mg/kg	0.054	0.025	1	04/03/17 10:15	04/04/17 20:09	79-01-6	
Trichlorofluoromethane	<0.026	mg/kg	0.054	0.026	1	04/03/17 10:15	04/04/17 20:09	75-69-4	
1,2,3-Trichloropropane	<0.024	mg/kg	0.054	0.024	1	04/03/17 10:15	04/04/17 20:09	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.022	mg/kg	0.054	0.022	1	04/03/17 10:15	04/04/17 20:09	76-13-1	
1,2,4-Trimethylbenzene	<0.013	mg/kg	0.054	0.013	1	04/03/17 10:15	04/04/17 20:09	95-63-6	
1,3,5-Trimethylbenzene	<0.016	mg/kg	0.054	0.016	1	04/03/17 10:15	04/04/17 20:09	108-67-8	
Vinyl chloride	<0.023	mg/kg	0.054	0.023	1	04/03/17 10:15	04/04/17 20:09	75-01-4	
Xylene (Total)	<0.052	mg/kg	0.16	0.052	1	04/03/17 10:15	04/04/17 20:09	1330-20-7	
m&p-Xylene	<0.037	mg/kg	0.11	0.037	1	04/03/17 10:15	04/04/17 20:09	179601-23-1	
o-Xylene	<0.015	mg/kg	0.054	0.015	1	04/03/17 10:15	04/04/17 20:09	95-47-6	
Surrogates									
Dibromofluoromethane (S)	100	%	53-165		1	04/03/17 10:15	04/04/17 20:09	1868-53-7	
Toluene-d8 (S)	112	%	54-163		1	04/03/17 10:15	04/04/17 20:09	2037-26-5	
4-Bromofluorobenzene (S)	99	%	48-138		1	04/03/17 10:15	04/04/17 20:09	460-00-4	

Percent Moisture Analytical Method: ASTM D2974-87

Percent Moisture **6.8** % 0.10 0.10 1 04/03/17 12:41

Sample: SW-W (5) **Lab ID: 40147485008** Collected: 03/29/17 11:30 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	0.83J	mg/kg	2.1	0.83	1	04/05/17 09:47	04/06/17 12:58		
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Acetone	<0.11	mg/kg	0.28	0.11	1	04/03/17 10:15	04/04/17 20:32	67-64-1	
Allyl chloride	<0.058	mg/kg	0.28	0.058	1	04/03/17 10:15	04/04/17 20:32	107-05-1	
Benzene	<0.010	mg/kg	0.022	0.010	1	04/03/17 10:15	04/04/17 20:32	71-43-2	
Bromobenzene	<0.023	mg/kg	0.056	0.023	1	04/03/17 10:15	04/04/17 20:32	108-86-1	
Bromochloromethane	<0.024	mg/kg	0.056	0.024	1	04/03/17 10:15	04/04/17 20:32	74-97-5	
Bromodichloromethane	<0.011	mg/kg	0.056	0.011	1	04/03/17 10:15	04/04/17 20:32	75-27-4	
Bromoform	<0.022	mg/kg	0.056	0.022	1	04/03/17 10:15	04/04/17 20:32	75-25-2	
Bromomethane	<0.078	mg/kg	0.28	0.078	1	04/03/17 10:15	04/04/17 20:32	74-83-9	
2-Butanone (MEK)	<0.14	mg/kg	0.28	0.14	1	04/03/17 10:15	04/04/17 20:32	78-93-3	
n-Butylbenzene	<0.012	mg/kg	0.056	0.012	1	04/03/17 10:15	04/04/17 20:32	104-51-8	
sec-Butylbenzene	<0.013	mg/kg	0.056	0.013	1	04/03/17 10:15	04/04/17 20:32	135-98-8	
tert-Butylbenzene	<0.011	mg/kg	0.056	0.011	1	04/03/17 10:15	04/04/17 20:32	98-06-6	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: SW-W (5) **Lab ID: 40147485008** Collected: 03/29/17 11:30 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Carbon tetrachloride	<0.013	mg/kg	0.056	0.013	1	04/03/17 10:15	04/04/17 20:32	56-23-5	
Chlorobenzene	<0.016	mg/kg	0.056	0.016	1	04/03/17 10:15	04/04/17 20:32	108-90-7	
Chloroethane	<0.075	mg/kg	0.28	0.075	1	04/03/17 10:15	04/04/17 20:32	75-00-3	
Chloroform	<0.052	mg/kg	0.28	0.052	1	04/03/17 10:15	04/04/17 20:32	67-66-3	
Chloromethane	<0.023	mg/kg	0.056	0.023	1	04/03/17 10:15	04/04/17 20:32	74-87-3	
2-Chlorotoluene	<0.018	mg/kg	0.056	0.018	1	04/03/17 10:15	04/04/17 20:32	95-49-8	
4-Chlorotoluene	<0.014	mg/kg	0.056	0.014	1	04/03/17 10:15	04/04/17 20:32	106-43-4	
1,2-Dibromo-3-chloropropane	<0.10	mg/kg	0.28	0.10	1	04/03/17 10:15	04/04/17 20:32	96-12-8	
Dibromochloromethane	<0.020	mg/kg	0.056	0.020	1	04/03/17 10:15	04/04/17 20:32	124-48-1	
1,2-Dibromoethane (EDB)	<0.016	mg/kg	0.056	0.016	1	04/03/17 10:15	04/04/17 20:32	106-93-4	
Dibromomethane	<0.021	mg/kg	0.056	0.021	1	04/03/17 10:15	04/04/17 20:32	74-95-3	
1,2-Dichlorobenzene	<0.018	mg/kg	0.056	0.018	1	04/03/17 10:15	04/04/17 20:32	95-50-1	
1,3-Dichlorobenzene	<0.015	mg/kg	0.056	0.015	1	04/03/17 10:15	04/04/17 20:32	541-73-1	
1,4-Dichlorobenzene	<0.018	mg/kg	0.056	0.018	1	04/03/17 10:15	04/04/17 20:32	106-46-7	
Dichlorodifluoromethane	<0.014	mg/kg	0.056	0.014	1	04/03/17 10:15	04/04/17 20:32	75-71-8	
1,1-Dichloroethane	<0.020	mg/kg	0.056	0.020	1	04/03/17 10:15	04/04/17 20:32	75-34-3	
1,2-Dichloroethane	<0.017	mg/kg	0.056	0.017	1	04/03/17 10:15	04/04/17 20:32	107-06-2	
1,1-Dichloroethene	<0.020	mg/kg	0.056	0.020	1	04/03/17 10:15	04/04/17 20:32	75-35-4	
cis-1,2-Dichloroethene	<0.018	mg/kg	0.056	0.018	1	04/03/17 10:15	04/04/17 20:32	156-59-2	
trans-1,2-Dichloroethene	<0.018	mg/kg	0.056	0.018	1	04/03/17 10:15	04/04/17 20:32	156-60-5	
Dichlorofluoromethane	<0.016	mg/kg	0.056	0.016	1	04/03/17 10:15	04/04/17 20:32	75-43-4	
1,2-Dichloropropane	<0.019	mg/kg	0.056	0.019	1	04/03/17 10:15	04/04/17 20:32	78-87-5	
1,3-Dichloropropane	<0.013	mg/kg	0.056	0.013	1	04/03/17 10:15	04/04/17 20:32	142-28-9	
2,2-Dichloropropane	<0.014	mg/kg	0.056	0.014	1	04/03/17 10:15	04/04/17 20:32	594-20-7	
1,1-Dichloropropene	<0.016	mg/kg	0.056	0.016	1	04/03/17 10:15	04/04/17 20:32	563-58-6	
cis-1,3-Dichloropropene	<0.018	mg/kg	0.056	0.018	1	04/03/17 10:15	04/04/17 20:32	10061-01-5	
trans-1,3-Dichloropropene	<0.016	mg/kg	0.056	0.016	1	04/03/17 10:15	04/04/17 20:32	10061-02-6	
Diethyl ether (Ethyl ether)	<0.021	mg/kg	0.056	0.021	1	04/03/17 10:15	04/04/17 20:32	60-29-7	
Ethylbenzene	<0.014	mg/kg	0.056	0.014	1	04/03/17 10:15	04/04/17 20:32	100-41-4	
Hexachloro-1,3-butadiene	<0.027	mg/kg	0.056	0.027	1	04/03/17 10:15	04/04/17 20:32	87-68-3	
Isopropylbenzene (Cumene)	<0.014	mg/kg	0.056	0.014	1	04/03/17 10:15	04/04/17 20:32	98-82-8	
p-Isopropyltoluene	<0.013	mg/kg	0.056	0.013	1	04/03/17 10:15	04/04/17 20:32	99-87-6	
Methylene Chloride	<0.018	mg/kg	0.056	0.018	1	04/03/17 10:15	04/04/17 20:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.046	mg/kg	0.28	0.046	1	04/03/17 10:15	04/04/17 20:32	108-10-1	
Methyl-tert-butyl ether	<0.014	mg/kg	0.056	0.014	1	04/03/17 10:15	04/04/17 20:32	1634-04-4	
Naphthalene	<0.045	mg/kg	0.28	0.045	1	04/03/17 10:15	04/04/17 20:32	91-20-3	
n-Propylbenzene	<0.013	mg/kg	0.056	0.013	1	04/03/17 10:15	04/04/17 20:32	103-65-1	
Styrene	<0.010	mg/kg	0.056	0.010	1	04/03/17 10:15	04/04/17 20:32	100-42-5	
1,1,1,2-Tetrachloroethane	<0.015	mg/kg	0.056	0.015	1	04/03/17 10:15	04/04/17 20:32	630-20-6	
1,1,1,2-Tetrachloroethane	<0.020	mg/kg	0.056	0.020	1	04/03/17 10:15	04/04/17 20:32	79-34-5	
Tetrachloroethene	<0.014	mg/kg	0.056	0.014	1	04/03/17 10:15	04/04/17 20:32	127-18-4	
Tetrahydrofuran	<0.12	mg/kg	0.28	0.12	1	04/03/17 10:15	04/04/17 20:32	109-99-9	
Toluene	<0.012	mg/kg	0.056	0.012	1	04/03/17 10:15	04/04/17 20:32	108-88-3	
1,2,3-Trichlorobenzene	<0.019	mg/kg	0.056	0.019	1	04/03/17 10:15	04/04/17 20:32	87-61-6	
1,2,4-Trichlorobenzene	<0.053	mg/kg	0.28	0.053	1	04/03/17 10:15	04/04/17 20:32	120-82-1	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL
Pace Project No.: 40147485

Sample: SW-W (5) **Lab ID: 40147485008** Collected: 03/29/17 11:30 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,1,1-Trichloroethane	<0.016	mg/kg	0.056	0.016	1	04/03/17 10:15	04/04/17 20:32	71-55-6	
1,1,2-Trichloroethane	<0.023	mg/kg	0.056	0.023	1	04/03/17 10:15	04/04/17 20:32	79-00-5	
Trichloroethene	<0.026	mg/kg	0.056	0.026	1	04/03/17 10:15	04/04/17 20:32	79-01-6	
Trichlorofluoromethane	<0.027	mg/kg	0.056	0.027	1	04/03/17 10:15	04/04/17 20:32	75-69-4	
1,2,3-Trichloropropane	<0.025	mg/kg	0.056	0.025	1	04/03/17 10:15	04/04/17 20:32	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.023	mg/kg	0.056	0.023	1	04/03/17 10:15	04/04/17 20:32	76-13-1	
1,2,4-Trimethylbenzene	<0.014	mg/kg	0.056	0.014	1	04/03/17 10:15	04/04/17 20:32	95-63-6	
1,3,5-Trimethylbenzene	<0.016	mg/kg	0.056	0.016	1	04/03/17 10:15	04/04/17 20:32	108-67-8	
Vinyl chloride	<0.023	mg/kg	0.056	0.023	1	04/03/17 10:15	04/04/17 20:32	75-01-4	
Xylene (Total)	<0.054	mg/kg	0.17	0.054	1	04/03/17 10:15	04/04/17 20:32	1330-20-7	
m&p-Xylene	<0.038	mg/kg	0.11	0.038	1	04/03/17 10:15	04/04/17 20:32	179601-23-1	
o-Xylene	<0.016	mg/kg	0.056	0.016	1	04/03/17 10:15	04/04/17 20:32	95-47-6	
Surrogates									
Dibromofluoromethane (S)	88	%	53-165		1	04/03/17 10:15	04/04/17 20:32	1868-53-7	
Toluene-d8 (S)	96	%	54-163		1	04/03/17 10:15	04/04/17 20:32	2037-26-5	
4-Bromofluorobenzene (S)	88	%	48-138		1	04/03/17 10:15	04/04/17 20:32	460-00-4	

Percent Moisture Analytical Method: ASTM D2974-87

Percent Moisture	10.1	%	0.10	0.10	1		04/03/17 12:41		
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Sample: SP-1 **Lab ID: 40147485009** Collected: 03/29/17 11:45 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	73.9	mg/kg	3.5	1.4	2	04/05/17 09:47	04/06/17 15:01		
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Acetone	<0.11	mg/kg	0.29	0.11	1	04/03/17 10:15	04/04/17 20:55	67-64-1	
Allyl chloride	<0.060	mg/kg	0.29	0.060	1	04/03/17 10:15	04/04/17 20:55	107-05-1	
Benzene	<0.011	mg/kg	0.023	0.011	1	04/03/17 10:15	04/04/17 20:55	71-43-2	
Bromobenzene	<0.024	mg/kg	0.057	0.024	1	04/03/17 10:15	04/04/17 20:55	108-86-1	
Bromochloromethane	<0.025	mg/kg	0.057	0.025	1	04/03/17 10:15	04/04/17 20:55	74-97-5	
Bromodichloromethane	<0.011	mg/kg	0.057	0.011	1	04/03/17 10:15	04/04/17 20:55	75-27-4	
Bromoform	<0.023	mg/kg	0.057	0.023	1	04/03/17 10:15	04/04/17 20:55	75-25-2	
Bromomethane	<0.080	mg/kg	0.29	0.080	1	04/03/17 10:15	04/04/17 20:55	74-83-9	
2-Butanone (MEK)	<0.14	mg/kg	0.29	0.14	1	04/03/17 10:15	04/04/17 20:55	78-93-3	
n-Butylbenzene	<0.012	mg/kg	0.057	0.012	1	04/03/17 10:15	04/04/17 20:55	104-51-8	
sec-Butylbenzene	<0.014	mg/kg	0.057	0.014	1	04/03/17 10:15	04/04/17 20:55	135-98-8	
tert-Butylbenzene	<0.011	mg/kg	0.057	0.011	1	04/03/17 10:15	04/04/17 20:55	98-06-6	
Carbon tetrachloride	<0.014	mg/kg	0.057	0.014	1	04/03/17 10:15	04/04/17 20:55	56-23-5	
Chlorobenzene	<0.017	mg/kg	0.057	0.017	1	04/03/17 10:15	04/04/17 20:55	108-90-7	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: SP-1 Lab ID: 40147485009 Collected: 03/29/17 11:45 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Chloroethane	<0.077	mg/kg	0.29	0.077	1	04/03/17 10:15	04/04/17 20:55	75-00-3	
Chloroform	<0.053	mg/kg	0.29	0.053	1	04/03/17 10:15	04/04/17 20:55	67-66-3	
Chloromethane	<0.023	mg/kg	0.057	0.023	1	04/03/17 10:15	04/04/17 20:55	74-87-3	
2-Chlorotoluene	<0.018	mg/kg	0.057	0.018	1	04/03/17 10:15	04/04/17 20:55	95-49-8	
4-Chlorotoluene	<0.015	mg/kg	0.057	0.015	1	04/03/17 10:15	04/04/17 20:55	106-43-4	
1,2-Dibromo-3-chloropropane	<0.10	mg/kg	0.29	0.10	1	04/03/17 10:15	04/04/17 20:55	96-12-8	
Dibromochloromethane	<0.021	mg/kg	0.057	0.021	1	04/03/17 10:15	04/04/17 20:55	124-48-1	
1,2-Dibromoethane (EDB)	<0.017	mg/kg	0.057	0.017	1	04/03/17 10:15	04/04/17 20:55	106-93-4	
Dibromomethane	<0.022	mg/kg	0.057	0.022	1	04/03/17 10:15	04/04/17 20:55	74-95-3	
1,2-Dichlorobenzene	<0.019	mg/kg	0.057	0.019	1	04/03/17 10:15	04/04/17 20:55	95-50-1	
1,3-Dichlorobenzene	<0.015	mg/kg	0.057	0.015	1	04/03/17 10:15	04/04/17 20:55	541-73-1	
1,4-Dichlorobenzene	<0.018	mg/kg	0.057	0.018	1	04/03/17 10:15	04/04/17 20:55	106-46-7	B
Dichlorodifluoromethane	<0.014	mg/kg	0.057	0.014	1	04/03/17 10:15	04/04/17 20:55	75-71-8	
1,1-Dichloroethane	<0.020	mg/kg	0.057	0.020	1	04/03/17 10:15	04/04/17 20:55	75-34-3	
1,2-Dichloroethane	<0.017	mg/kg	0.057	0.017	1	04/03/17 10:15	04/04/17 20:55	107-06-2	
1,1-Dichloroethene	<0.020	mg/kg	0.057	0.020	1	04/03/17 10:15	04/04/17 20:55	75-35-4	
cis-1,2-Dichloroethene	<0.019	mg/kg	0.057	0.019	1	04/03/17 10:15	04/04/17 20:55	156-59-2	
trans-1,2-Dichloroethene	<0.019	mg/kg	0.057	0.019	1	04/03/17 10:15	04/04/17 20:55	156-60-5	
Dichlorofluoromethane	<0.017	mg/kg	0.057	0.017	1	04/03/17 10:15	04/04/17 20:55	75-43-4	
1,2-Dichloropropane	<0.019	mg/kg	0.057	0.019	1	04/03/17 10:15	04/04/17 20:55	78-87-5	
1,3-Dichloropropane	<0.014	mg/kg	0.057	0.014	1	04/03/17 10:15	04/04/17 20:55	142-28-9	
2,2-Dichloropropane	<0.015	mg/kg	0.057	0.015	1	04/03/17 10:15	04/04/17 20:55	594-20-7	
1,1-Dichloropropene	<0.016	mg/kg	0.057	0.016	1	04/03/17 10:15	04/04/17 20:55	563-58-6	
cis-1,3-Dichloropropene	<0.019	mg/kg	0.057	0.019	1	04/03/17 10:15	04/04/17 20:55	10061-01-5	
trans-1,3-Dichloropropene	<0.017	mg/kg	0.057	0.017	1	04/03/17 10:15	04/04/17 20:55	10061-02-6	
Diethyl ether (Ethyl ether)	<0.022	mg/kg	0.057	0.022	1	04/03/17 10:15	04/04/17 20:55	60-29-7	
Ethylbenzene	<0.014	mg/kg	0.057	0.014	1	04/03/17 10:15	04/04/17 20:55	100-41-4	
Hexachloro-1,3-butadiene	<0.028	mg/kg	0.057	0.028	1	04/03/17 10:15	04/04/17 20:55	87-68-3	
Isopropylbenzene (Cumene)	<0.014	mg/kg	0.057	0.014	1	04/03/17 10:15	04/04/17 20:55	98-82-8	
p-Isopropyltoluene	<0.014	mg/kg	0.057	0.014	1	04/03/17 10:15	04/04/17 20:55	99-87-6	
Methylene Chloride	<0.019	mg/kg	0.057	0.019	1	04/03/17 10:15	04/04/17 20:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.047	mg/kg	0.29	0.047	1	04/03/17 10:15	04/04/17 20:55	108-10-1	
Methyl-tert-butyl ether	<0.015	mg/kg	0.057	0.015	1	04/03/17 10:15	04/04/17 20:55	1634-04-4	
Naphthalene	<0.046	mg/kg	0.29	0.046	1	04/03/17 10:15	04/04/17 20:55	91-20-3	
n-Propylbenzene	<0.013	mg/kg	0.057	0.013	1	04/03/17 10:15	04/04/17 20:55	103-65-1	
Styrene	0.011J	mg/kg	0.057	0.010	1	04/03/17 10:15	04/04/17 20:55	100-42-5	B
1,1,1,2-Tetrachloroethane	<0.016	mg/kg	0.057	0.016	1	04/03/17 10:15	04/04/17 20:55	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.020	mg/kg	0.057	0.020	1	04/03/17 10:15	04/04/17 20:55	79-34-5	
Tetrachloroethene	<0.015	mg/kg	0.057	0.015	1	04/03/17 10:15	04/04/17 20:55	127-18-4	
Tetrahydrofuran	<0.13	mg/kg	0.29	0.13	1	04/03/17 10:15	04/04/17 20:55	109-99-9	
Toluene	<0.013	mg/kg	0.057	0.013	1	04/03/17 10:15	04/04/17 20:55	108-88-3	
1,2,3-Trichlorobenzene	<0.019	mg/kg	0.057	0.019	1	04/03/17 10:15	04/04/17 20:55	87-61-6	
1,2,4-Trichlorobenzene	<0.055	mg/kg	0.29	0.055	1	04/03/17 10:15	04/04/17 20:55	120-82-1	
1,1,1-Trichloroethane	<0.017	mg/kg	0.057	0.017	1	04/03/17 10:15	04/04/17 20:55	71-55-6	
1,1,2-Trichloroethane	<0.023	mg/kg	0.057	0.023	1	04/03/17 10:15	04/04/17 20:55	79-00-5	

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: SP-1 **Lab ID: 40147485009** Collected: 03/29/17 11:45 Received: 03/30/17 09:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Trichloroethene	<0.027	mg/kg	0.057	0.027	1	04/03/17 10:15	04/04/17 20:55	79-01-6	
Trichlorofluoromethane	<0.028	mg/kg	0.057	0.028	1	04/03/17 10:15	04/04/17 20:55	75-69-4	
1,2,3-Trichloropropane	<0.026	mg/kg	0.057	0.026	1	04/03/17 10:15	04/04/17 20:55	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.023	mg/kg	0.057	0.023	1	04/03/17 10:15	04/04/17 20:55	76-13-1	
1,2,4-Trimethylbenzene	0.016J	mg/kg	0.057	0.014	1	04/03/17 10:15	04/04/17 20:55	95-63-6	B
1,3,5-Trimethylbenzene	<0.017	mg/kg	0.057	0.017	1	04/03/17 10:15	04/04/17 20:55	108-67-8	
Vinyl chloride	<0.024	mg/kg	0.057	0.024	1	04/03/17 10:15	04/04/17 20:55	75-01-4	
Xylene (Total)	<0.056	mg/kg	0.17	0.056	1	04/03/17 10:15	04/04/17 20:55	1330-20-7	
m&p-Xylene	<0.040	mg/kg	0.11	0.040	1	04/03/17 10:15	04/04/17 20:55	179601-23-1	
o-Xylene	<0.016	mg/kg	0.057	0.016	1	04/03/17 10:15	04/04/17 20:55	95-47-6	
Surrogates									
Dibromofluoromethane (S)	100	%	53-165		1	04/03/17 10:15	04/04/17 20:55	1868-53-7	
Toluene-d8 (S)	107	%	54-163		1	04/03/17 10:15	04/04/17 20:55	2037-26-5	
4-Bromofluorobenzene (S)	98	%	48-138		1	04/03/17 10:15	04/04/17 20:55	460-00-4	

Percent Moisture Analytical Method: ASTM D2974-87

Percent Moisture **9.3** % 0.10 0.10 1 04/03/17 12:41

Sample: SOIL TRIP BLANK **Lab ID: 40147485010** Collected: 03/29/17 00:00 Received: 03/30/17 09:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Acetone	5.0J	ug/L	20.0	3.0	1		04/04/17 01:04	67-64-1	
Allyl chloride	<2.2	ug/L	5.0	2.2	1		04/04/17 01:04	107-05-1	
Benzene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		04/04/17 01:04	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		04/04/17 01:04	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		04/04/17 01:04	74-83-9	
2-Butanone (MEK)	<3.0	ug/L	20.0	3.0	1		04/04/17 01:04	78-93-3	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		04/04/17 01:04	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		04/04/17 01:04	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		04/04/17 01:04	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		04/04/17 01:04	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		04/04/17 01:04	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		04/04/17 01:04	96-12-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: SOIL TRIP BLANK Lab ID: **40147485010** Collected: 03/29/17 00:00 Received: 03/30/17 09:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		04/04/17 01:04	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		04/04/17 01:04	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		04/04/17 01:04	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		04/04/17 01:04	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		04/04/17 01:04	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		04/04/17 01:04	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		04/04/17 01:04	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		04/04/17 01:04	156-60-5	
Dichlorofluoromethane	<0.21	ug/L	1.0	0.21	1		04/04/17 01:04	75-43-4	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		04/04/17 01:04	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		04/04/17 01:04	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		04/04/17 01:04	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		04/04/17 01:04	10061-02-6	
Diethyl ether (Ethyl ether)	<2.2	ug/L	5.0	2.2	1		04/04/17 01:04	60-29-7	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		04/04/17 01:04	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		04/04/17 01:04	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	99-87-6	
Methylene Chloride	1.3	ug/L	1.0	0.23	1		04/04/17 01:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	<2.1	ug/L	5.0	2.1	1		04/04/17 01:04	108-10-1	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		04/04/17 01:04	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		04/04/17 01:04	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		04/04/17 01:04	630-20-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		04/04/17 01:04	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	127-18-4	
Tetrahydrofuran	<2.0	ug/L	5.0	2.0	1		04/04/17 01:04	109-99-9	
Toluene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		04/04/17 01:04	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		04/04/17 01:04	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		04/04/17 01:04	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		04/04/17 01:04	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		04/04/17 01:04	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.81	ug/L	5.0	0.81	1		04/04/17 01:04	76-13-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		04/04/17 01:04	75-01-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Sample: SOIL TRIP BLANK **Lab ID: 40147485010** Collected: 03/29/17 00:00 Received: 03/30/17 09:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		04/04/17 01:04	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		04/04/17 01:04	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		04/04/17 01:04	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	87	%	70-130		1		04/04/17 01:04	460-00-4	HS
Dibromofluoromethane (S)	102	%	70-130		1		04/04/17 01:04	1868-53-7	
Toluene-d8 (S)	97	%	70-130		1		04/04/17 01:04	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL
Pace Project No.: 40147485

QC Batch: 251532 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40147485001, 40147485002, 40147485003, 40147485004

METHOD BLANK: 1484450 Matrix: Solid
Associated Lab Samples: 40147485001, 40147485002, 40147485003, 40147485004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	<0.014	0.050	0.014	03/31/17 16:24	
1,1,1-Trichloroethane	mg/kg	<0.014	0.050	0.014	03/31/17 16:24	
1,1,2,2-Tetrachloroethane	mg/kg	<0.018	0.050	0.018	03/31/17 16:24	
1,1,2-Trichloroethane	mg/kg	<0.020	0.050	0.020	03/31/17 16:24	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.020	0.050	0.020	03/31/17 16:24	
1,1-Dichloroethane	mg/kg	<0.018	0.050	0.018	03/31/17 16:24	
1,1-Dichloroethene	mg/kg	<0.018	0.050	0.018	03/31/17 16:24	
1,1-Dichloropropene	mg/kg	<0.014	0.050	0.014	03/31/17 16:24	
1,2,3-Trichlorobenzene	mg/kg	<0.017	0.050	0.017	03/31/17 16:24	
1,2,3-Trichloropropane	mg/kg	<0.022	0.050	0.022	03/31/17 16:24	
1,2,4-Trichlorobenzene	mg/kg	<0.048	0.25	0.048	03/31/17 16:24	
1,2,4-Trimethylbenzene	mg/kg	<0.012	0.050	0.012	03/31/17 16:24	
1,2-Dibromo-3-chloropropane	mg/kg	<0.091	0.25	0.091	03/31/17 16:24	
1,2-Dibromoethane (EDB)	mg/kg	<0.015	0.050	0.015	03/31/17 16:24	
1,2-Dichlorobenzene	mg/kg	<0.016	0.050	0.016	03/31/17 16:24	
1,2-Dichloroethane	mg/kg	<0.015	0.050	0.015	03/31/17 16:24	
1,2-Dichloropropane	mg/kg	<0.017	0.050	0.017	03/31/17 16:24	
1,3,5-Trimethylbenzene	mg/kg	<0.014	0.050	0.014	03/31/17 16:24	
1,3-Dichlorobenzene	mg/kg	<0.013	0.050	0.013	03/31/17 16:24	
1,3-Dichloropropane	mg/kg	<0.012	0.050	0.012	03/31/17 16:24	
1,4-Dichlorobenzene	mg/kg	<0.016	0.050	0.016	03/31/17 16:24	
2,2-Dichloropropane	mg/kg	<0.013	0.050	0.013	03/31/17 16:24	
2-Butanone (MEK)	mg/kg	<0.12	0.25	0.12	03/31/17 16:24	
2-Chlorotoluene	mg/kg	<0.016	0.050	0.016	03/31/17 16:24	
4-Chlorotoluene	mg/kg	<0.013	0.050	0.013	03/31/17 16:24	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.041	0.25	0.041	03/31/17 16:24	
Acetone	mg/kg	<0.099	0.25	0.099	03/31/17 16:24	
Allyl chloride	mg/kg	<0.052	0.25	0.052	03/31/17 16:24	
Benzene	mg/kg	<0.0092	0.020	0.0092	03/31/17 16:24	
Bromobenzene	mg/kg	<0.021	0.050	0.021	03/31/17 16:24	
Bromochloromethane	mg/kg	<0.021	0.050	0.021	03/31/17 16:24	
Bromodichloromethane	mg/kg	<0.0098	0.050	0.0098	03/31/17 16:24	
Bromoform	mg/kg	<0.020	0.050	0.020	03/31/17 16:24	
Bromomethane	mg/kg	<0.070	0.25	0.070	03/31/17 16:24	
Carbon tetrachloride	mg/kg	<0.012	0.050	0.012	03/31/17 16:24	
Chlorobenzene	mg/kg	<0.015	0.050	0.015	03/31/17 16:24	
Chloroethane	mg/kg	<0.067	0.25	0.067	03/31/17 16:24	
Chloroform	mg/kg	<0.046	0.25	0.046	03/31/17 16:24	
Chloromethane	mg/kg	<0.020	0.050	0.020	03/31/17 16:24	
cis-1,2-Dichloroethene	mg/kg	<0.017	0.050	0.017	03/31/17 16:24	
cis-1,3-Dichloropropene	mg/kg	<0.017	0.050	0.017	03/31/17 16:24	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

METHOD BLANK: 1484450

Matrix: Solid

Associated Lab Samples: 40147485001, 40147485002, 40147485003, 40147485004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromochloromethane	mg/kg	<0.018	0.050	0.018	03/31/17 16:24	
Dibromomethane	mg/kg	<0.019	0.050	0.019	03/31/17 16:24	
Dichlorodifluoromethane	mg/kg	<0.012	0.050	0.012	03/31/17 16:24	
Dichlorofluoromethane	mg/kg	<0.015	0.050	0.015	03/31/17 16:24	
Diethyl ether (Ethyl ether)	mg/kg	<0.019	0.050	0.019	03/31/17 16:24	
Ethylbenzene	mg/kg	<0.012	0.050	0.012	03/31/17 16:24	
Hexachloro-1,3-butadiene	mg/kg	<0.024	0.050	0.024	03/31/17 16:24	
Isopropylbenzene (Cumene)	mg/kg	<0.013	0.050	0.013	03/31/17 16:24	
m&p-Xylene	mg/kg	<0.034	0.10	0.034	03/31/17 16:24	
Methyl-tert-butyl ether	mg/kg	<0.013	0.050	0.013	03/31/17 16:24	
Methylene Chloride	mg/kg	<0.016	0.050	0.016	03/31/17 16:24	
n-Butylbenzene	mg/kg	<0.011	0.050	0.011	03/31/17 16:24	
n-Propylbenzene	mg/kg	<0.012	0.050	0.012	03/31/17 16:24	
Naphthalene	mg/kg	<0.040	0.25	0.040	03/31/17 16:24	
o-Xylene	mg/kg	<0.014	0.050	0.014	03/31/17 16:24	
p-Isopropyltoluene	mg/kg	<0.012	0.050	0.012	03/31/17 16:24	
sec-Butylbenzene	mg/kg	<0.012	0.050	0.012	03/31/17 16:24	
Styrene	mg/kg	<0.0090	0.050	0.0090	03/31/17 16:24	
tert-Butylbenzene	mg/kg	<0.0095	0.050	0.0095	03/31/17 16:24	
Tetrachloroethene	mg/kg	<0.013	0.050	0.013	03/31/17 16:24	
Tetrahydrofuran	mg/kg	<0.11	0.25	0.11	03/31/17 16:24	
Toluene	mg/kg	<0.011	0.050	0.011	03/31/17 16:24	
trans-1,2-Dichloroethene	mg/kg	<0.016	0.050	0.016	03/31/17 16:24	
trans-1,3-Dichloropropene	mg/kg	<0.014	0.050	0.014	03/31/17 16:24	
Trichloroethene	mg/kg	<0.024	0.050	0.024	03/31/17 16:24	
Trichlorofluoromethane	mg/kg	<0.025	0.050	0.025	03/31/17 16:24	
Vinyl chloride	mg/kg	<0.021	0.050	0.021	03/31/17 16:24	
Xylene (Total)	mg/kg	<0.048	0.15	0.048	03/31/17 16:24	
4-Bromofluorobenzene (S)	%	97	48-138		03/31/17 16:24	
Dibromofluoromethane (S)	%	113	53-165		03/31/17 16:24	
Toluene-d8 (S)	%	107	54-163		03/31/17 16:24	

LABORATORY CONTROL SAMPLE: 1484451

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	2.5	2.6	103	70-130	
1,1,2,2-Tetrachloroethane	mg/kg	2.5	2.4	94	70-130	
1,1,2-Trichloroethane	mg/kg	2.5	2.4	96	70-130	
1,1,2-Trichlorotrifluoroethane	mg/kg	2.5	2.7	106	50-150	
1,1-Dichloroethane	mg/kg	2.5	2.9	114	70-133	
1,1-Dichloroethene	mg/kg	2.5	2.7	109	70-130	
1,2,4-Trichlorobenzene	mg/kg	2.5	2.6	104	70-130	
1,2-Dibromo-3-chloropropane	mg/kg	2.5	2.3	90	50-150	
1,2-Dibromoethane (EDB)	mg/kg	2.5	2.5	102	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

LABORATORY CONTROL SAMPLE: 1484451

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichlorobenzene	mg/kg	2.5	2.5	98	70-130	
1,2-Dichloroethane	mg/kg	2.5	2.6	104	70-138	
1,2-Dichloropropane	mg/kg	2.5	2.6	104	70-130	
1,3-Dichlorobenzene	mg/kg	2.5	2.6	102	70-130	
1,4-Dichlorobenzene	mg/kg	2.5	2.5	98	70-130	
Benzene	mg/kg	2.5	2.8	112	70-130	
Bromodichloromethane	mg/kg	2.5	2.5	100	70-130	
Bromoform	mg/kg	2.5	1.9	75	68-130	
Bromomethane	mg/kg	2.5	2.3	92	25-163	
Carbon tetrachloride	mg/kg	2.5	2.6	106	70-130	
Chlorobenzene	mg/kg	2.5	2.5	100	70-130	
Chloroethane	mg/kg	2.5	2.8	112	34-151	
Chloroform	mg/kg	2.5	2.6	104	70-130	
Chloromethane	mg/kg	2.5	3.1	123	52-130	
cis-1,2-Dichloroethene	mg/kg	2.5	2.7	107	70-130	
cis-1,3-Dichloropropene	mg/kg	2.5	2.2	89	70-130	
Dibromochloromethane	mg/kg	2.5	2.2	87	70-130	
Dichlorodifluoromethane	mg/kg	2.5	2.3	92	27-150	
Ethylbenzene	mg/kg	2.5	2.7	110	70-130	
Isopropylbenzene (Cumene)	mg/kg	2.5	2.7	106	70-130	
m&p-Xylene	mg/kg	5	5.4	108	70-130	
Methyl-tert-butyl ether	mg/kg	2.5	2.5	99	70-130	
Methylene Chloride	mg/kg	2.5	2.6	103	70-131	
o-Xylene	mg/kg	2.5	2.7	109	70-130	
Styrene	mg/kg	2.5	2.8	110	70-130	
Tetrachloroethene	mg/kg	2.5	2.7	109	70-130	
Toluene	mg/kg	2.5	2.7	109	70-130	
trans-1,2-Dichloroethene	mg/kg	2.5	2.8	111	70-130	
trans-1,3-Dichloropropene	mg/kg	2.5	2.2	87	70-130	
Trichloroethene	mg/kg	2.5	2.6	105	70-130	
Trichlorofluoromethane	mg/kg	2.5	2.7	107	50-150	
Vinyl chloride	mg/kg	2.5	3.2	127	57-130	
Xylene (Total)	mg/kg	7.5	8.1	108	70-130	
4-Bromofluorobenzene (S)	%			100	48-138	
Dibromofluoromethane (S)	%			107	53-165	
Toluene-d8 (S)	%			106	54-163	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1484452 1484453

Parameter	Units	40147485001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
1,1,1-Trichloroethane	mg/kg	<0.016	1.3	1.3	1.4	1.4	101	100	70-130	0	20		
1,1,2,2-Tetrachloroethane	mg/kg	<0.019	1.3	1.3	1.2	1.3	87	96	70-130	9	20		
1,1,2-Trichloroethane	mg/kg	<0.022	1.3	1.3	1.3	1.3	95	97	70-130	2	20		
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.022	1.3	1.3	1.3	1.1	95	84	49-150	12	22		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		1484452		1484453								
Parameter	Units	MS		MSD		MS	MSD	MS	MSD	% Rec	Max	Qual
		40147485001	Spike	Spike	MS							
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
1,1-Dichloroethane	mg/kg	<0.019	1.3	1.3	1.5	1.6	114	116	64-133	2	20	
1,1-Dichloroethene	mg/kg	<0.019	1.3	1.3	1.4	1.3	101	96	56-130	4	24	
1,2,4-Trichlorobenzene	mg/kg	<0.052	1.3	1.3	1.6	1.6	118	118	70-130	1	20	
1,2-Dibromo-3-chloropropane	mg/kg	<0.099	1.3	1.3	1.4	1.5	104	113	50-150	9	20	
1,2-Dibromoethane (EDB)	mg/kg	<0.016	1.3	1.3	1.3	1.4	96	100	70-130	4	20	
1,2-Dichlorobenzene	mg/kg	<0.018	1.3	1.3	1.4	1.4	100	105	70-130	4	20	
1,2-Dichloroethane	mg/kg	<0.016	1.3	1.3	1.4	1.5	106	110	70-138	3	20	
1,2-Dichloropropane	mg/kg	<0.018	1.3	1.3	1.5	1.4	112	106	70-130	5	20	
1,3-Dichlorobenzene	mg/kg	<0.014	1.3	1.3	1.4	1.4	100	106	70-130	5	20	
1,4-Dichlorobenzene	mg/kg	<0.017	1.3	1.3	1.3	1.4	97	102	70-130	5	20	
Benzene	mg/kg	<0.010	1.3	1.3	1.5	1.5	111	113	70-130	2	20	
Bromodichloromethane	mg/kg	<0.011	1.3	1.3	1.4	1.4	101	101	70-130	1	20	
Bromoform	mg/kg	<0.022	1.3	1.3	1.1	1.1	84	84	65-130	0	20	
Bromomethane	mg/kg	<0.076	1.3	1.3	1.2	1.2	85	85	11-163	0	21	
Carbon tetrachloride	mg/kg	<0.013	1.3	1.3	1.4	1.3	102	98	70-130	4	20	
Chlorobenzene	mg/kg	<0.016	1.3	1.3	1.4	1.4	103	100	70-130	3	20	
Chloroethane	mg/kg	<0.073	1.3	1.3	1.2	1.1	89	82	17-151	8	20	
Chloroform	mg/kg	<0.051	1.3	1.3	1.4	1.5	105	109	70-130	3	20	
Chloromethane	mg/kg	<0.022	1.3	1.3	1.1	1.0	80	76	13-130	6	20	
cis-1,2-Dichloroethene	mg/kg	<0.018	1.3	1.3	1.4	1.6	104	114	70-130	9	20	
cis-1,3-Dichloropropene	mg/kg	<0.018	1.3	1.3	1.3	1.3	94	94	70-130	0	20	
Dibromochloromethane	mg/kg	<0.019	1.3	1.3	1.2	1.2	90	90	70-130	1	20	
Dichlorodifluoromethane	mg/kg	<0.013	1.3	1.3	0.46	0.41	34	30	10-150	12	21	
Ethylbenzene	mg/kg	<0.014	1.3	1.3	1.5	1.4	109	104	70-130	4	20	
Isopropylbenzene (Cumene)	mg/kg	<0.014	1.3	1.3	1.4	1.4	105	104	70-130	2	20	
m&p-Xylene	mg/kg	<0.037	2.7	2.7	2.8	2.8	104	101	70-130	3	20	
Methyl-tert-butyl ether	mg/kg	<0.014	1.3	1.3	1.3	1.4	98	104	70-130	5	20	
Methylene Chloride	mg/kg	<0.018	1.3	1.3	1.4	1.5	102	108	70-131	6	20	
o-Xylene	mg/kg	0.017J	1.3	1.3	1.5	1.5	108	106	70-130	1	20	
Styrene	mg/kg	<0.0098	1.3	1.3	1.4	1.4	106	101	70-130	5	20	
Tetrachloroethene	mg/kg	<0.014	1.3	1.3	1.3	1.3	97	97	70-130	0	20	
Toluene	mg/kg	<0.012	1.3	1.3	1.4	1.4	104	100	70-130	4	20	
trans-1,2-Dichloroethene	mg/kg	<0.018	1.3	1.3	1.5	1.5	109	107	70-130	2	20	
trans-1,3-Dichloropropene	mg/kg	<0.016	1.3	1.3	1.2	1.2	86	85	70-130	1	20	
Trichloroethene	mg/kg	<0.026	1.3	1.3	1.5	1.4	108	104	70-130	4	20	
Trichlorofluoromethane	mg/kg	<0.027	1.3	1.3	1.2	1.1	92	80	40-150	14	31	
Vinyl chloride	mg/kg	<0.023	1.3	1.3	1.2	1.2	88	85	26-130	4	20	
Xylene (Total)	mg/kg	<0.053	4.1	4.1	4.3	4.2	105	103	70-130	2	20	
4-Bromofluorobenzene (S)	%						110	89	48-138			
Dibromofluoromethane (S)	%						117	102	53-165			
Toluene-d8 (S)	%						111	95	54-163			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL
Pace Project No.: 40147485

QC Batch: 251695 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40147485005, 40147485006, 40147485007, 40147485008, 40147485009

METHOD BLANK: 1485345 Matrix: Solid
Associated Lab Samples: 40147485005, 40147485006, 40147485007, 40147485008, 40147485009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	<0.014	0.050	0.014	04/04/17 08:03	
1,1,1-Trichloroethane	mg/kg	<0.014	0.050	0.014	04/04/17 08:03	
1,1,2,2-Tetrachloroethane	mg/kg	<0.018	0.050	0.018	04/04/17 08:03	
1,1,2-Trichloroethane	mg/kg	<0.020	0.050	0.020	04/04/17 08:03	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.020	0.050	0.020	04/04/17 08:03	
1,1-Dichloroethane	mg/kg	<0.018	0.050	0.018	04/04/17 08:03	
1,1-Dichloroethene	mg/kg	<0.018	0.050	0.018	04/04/17 08:03	
1,1-Dichloropropene	mg/kg	<0.014	0.050	0.014	04/04/17 08:03	
1,2,3-Trichlorobenzene	mg/kg	0.030J	0.050	0.017	04/04/17 08:03	
1,2,3-Trichloropropane	mg/kg	<0.022	0.050	0.022	04/04/17 08:03	
1,2,4-Trichlorobenzene	mg/kg	<0.048	0.25	0.048	04/04/17 08:03	
1,2,4-Trimethylbenzene	mg/kg	0.014J	0.050	0.012	04/04/17 08:03	
1,2-Dibromo-3-chloropropane	mg/kg	<0.091	0.25	0.091	04/04/17 08:03	
1,2-Dibromoethane (EDB)	mg/kg	<0.015	0.050	0.015	04/04/17 08:03	
1,2-Dichlorobenzene	mg/kg	0.018J	0.050	0.016	04/04/17 08:03	
1,2-Dichloroethane	mg/kg	<0.015	0.050	0.015	04/04/17 08:03	
1,2-Dichloropropane	mg/kg	<0.017	0.050	0.017	04/04/17 08:03	
1,3,5-Trimethylbenzene	mg/kg	<0.014	0.050	0.014	04/04/17 08:03	
1,3-Dichlorobenzene	mg/kg	0.016J	0.050	0.013	04/04/17 08:03	
1,3-Dichloropropane	mg/kg	<0.012	0.050	0.012	04/04/17 08:03	
1,4-Dichlorobenzene	mg/kg	0.021J	0.050	0.016	04/04/17 08:03	
2,2-Dichloropropane	mg/kg	<0.013	0.050	0.013	04/04/17 08:03	
2-Butanone (MEK)	mg/kg	<0.12	0.25	0.12	04/04/17 08:03	
2-Chlorotoluene	mg/kg	0.017J	0.050	0.016	04/04/17 08:03	
4-Chlorotoluene	mg/kg	<0.013	0.050	0.013	04/04/17 08:03	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.041	0.25	0.041	04/04/17 08:03	
Acetone	mg/kg	<0.099	0.25	0.099	04/04/17 08:03	
Allyl chloride	mg/kg	<0.052	0.25	0.052	04/04/17 08:03	
Benzene	mg/kg	0.011J	0.020	0.0092	04/04/17 08:03	
Bromobenzene	mg/kg	0.025J	0.050	0.021	04/04/17 08:03	
Bromochloromethane	mg/kg	<0.021	0.050	0.021	04/04/17 08:03	
Bromodichloromethane	mg/kg	<0.0098	0.050	0.0098	04/04/17 08:03	
Bromoform	mg/kg	<0.020	0.050	0.020	04/04/17 08:03	
Bromomethane	mg/kg	<0.070	0.25	0.070	04/04/17 08:03	
Carbon tetrachloride	mg/kg	<0.012	0.050	0.012	04/04/17 08:03	
Chlorobenzene	mg/kg	0.019J	0.050	0.015	04/04/17 08:03	
Chloroethane	mg/kg	<0.067	0.25	0.067	04/04/17 08:03	
Chloroform	mg/kg	<0.046	0.25	0.046	04/04/17 08:03	
Chloromethane	mg/kg	<0.020	0.050	0.020	04/04/17 08:03	
cis-1,2-Dichloroethene	mg/kg	<0.017	0.050	0.017	04/04/17 08:03	
cis-1,3-Dichloropropene	mg/kg	<0.017	0.050	0.017	04/04/17 08:03	

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

METHOD BLANK: 1485345

Matrix: Solid

Associated Lab Samples: 40147485005, 40147485006, 40147485007, 40147485008, 40147485009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromochloromethane	mg/kg	<0.018	0.050	0.018	04/04/17 08:03	
Dibromomethane	mg/kg	<0.019	0.050	0.019	04/04/17 08:03	
Dichlorodifluoromethane	mg/kg	<0.012	0.050	0.012	04/04/17 08:03	
Dichlorofluoromethane	mg/kg	<0.015	0.050	0.015	04/04/17 08:03	
Diethyl ether (Ethyl ether)	mg/kg	<0.019	0.050	0.019	04/04/17 08:03	
Ethylbenzene	mg/kg	0.016J	0.050	0.012	04/04/17 08:03	
Hexachloro-1,3-butadiene	mg/kg	<0.024	0.050	0.024	04/04/17 08:03	
Isopropylbenzene (Cumene)	mg/kg	0.016J	0.050	0.013	04/04/17 08:03	
m&p-Xylene	mg/kg	<0.034	0.10	0.034	04/04/17 08:03	
Methyl-tert-butyl ether	mg/kg	<0.013	0.050	0.013	04/04/17 08:03	
Methylene Chloride	mg/kg	<0.016	0.050	0.016	04/04/17 08:03	
n-Butylbenzene	mg/kg	0.011J	0.050	0.011	04/04/17 08:03	
n-Propylbenzene	mg/kg	0.013J	0.050	0.012	04/04/17 08:03	
Naphthalene	mg/kg	<0.040	0.25	0.040	04/04/17 08:03	
o-Xylene	mg/kg	<0.014	0.050	0.014	04/04/17 08:03	
p-Isopropyltoluene	mg/kg	<0.012	0.050	0.012	04/04/17 08:03	
sec-Butylbenzene	mg/kg	<0.012	0.050	0.012	04/04/17 08:03	
Styrene	mg/kg	<0.0090	0.050	0.0090	04/04/17 08:03	
tert-Butylbenzene	mg/kg	0.014J	0.050	0.0095	04/04/17 08:03	
Tetrachloroethene	mg/kg	0.041J	0.050	0.013	04/04/17 08:03	
Tetrahydrofuran	mg/kg	<0.11	0.25	0.11	04/04/17 08:03	
Toluene	mg/kg	0.017J	0.050	0.011	04/04/17 08:03	
trans-1,2-Dichloroethene	mg/kg	<0.016	0.050	0.016	04/04/17 08:03	
trans-1,3-Dichloropropene	mg/kg	<0.014	0.050	0.014	04/04/17 08:03	
Trichloroethene	mg/kg	<0.024	0.050	0.024	04/04/17 08:03	
Trichlorofluoromethane	mg/kg	<0.025	0.050	0.025	04/04/17 08:03	
Vinyl chloride	mg/kg	<0.021	0.050	0.021	04/04/17 08:03	
Xylene (Total)	mg/kg	<0.048	0.15	0.048	04/04/17 08:03	
4-Bromofluorobenzene (S)	%	94	48-138		04/04/17 08:03	
Dibromofluoromethane (S)	%	114	53-165		04/04/17 08:03	
Toluene-d8 (S)	%	111	54-163		04/04/17 08:03	

LABORATORY CONTROL SAMPLE: 1485346

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	2.5	2.2	90	70-130	
1,1,2,2-Tetrachloroethane	mg/kg	2.5	2.5	102	70-130	
1,1,2-Trichloroethane	mg/kg	2.5	2.7	107	70-130	
1,1,2-Trichlorotrifluoroethane	mg/kg	2.5	2.4	94	50-150	
1,1-Dichloroethane	mg/kg	2.5	2.4	95	70-133	
1,1-Dichloroethene	mg/kg	2.5	2.2	87	70-130	
1,2,4-Trichlorobenzene	mg/kg	2.5	2.4	95	70-130	
1,2-Dibromo-3-chloropropane	mg/kg	2.5	2.0	79	50-150	
1,2-Dibromoethane (EDB)	mg/kg	2.5	2.6	106	70-130	

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

LABORATORY CONTROL SAMPLE: 1485346

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichlorobenzene	mg/kg	2.5	2.4	94	70-130	
1,2-Dichloroethane	mg/kg	2.5	2.3	93	70-138	
1,2-Dichloropropane	mg/kg	2.5	2.2	88	70-130	
1,3-Dichlorobenzene	mg/kg	2.5	2.4	95	70-130	
1,4-Dichlorobenzene	mg/kg	2.5	2.3	91	70-130	
Benzene	mg/kg	2.5	2.4	97	70-130	
Bromodichloromethane	mg/kg	2.5	2.1	83	70-130	
Bromoform	mg/kg	2.5	2.1	85	68-130	
Bromomethane	mg/kg	2.5	2.1	83	25-163	
Carbon tetrachloride	mg/kg	2.5	2.0	80	70-130	
Chlorobenzene	mg/kg	2.5	2.3	93	70-130	
Chloroethane	mg/kg	2.5	2.3	91	34-151	
Chloroform	mg/kg	2.5	2.4	95	70-130	
Chloromethane	mg/kg	2.5	2.2	88	52-130	
cis-1,2-Dichloroethene	mg/kg	2.5	2.5	98	70-130	
cis-1,3-Dichloropropene	mg/kg	2.5	2.1	86	70-130	
Dibromochloromethane	mg/kg	2.5	2.4	97	70-130	
Dichlorodifluoromethane	mg/kg	2.5	1.6	63	27-150	
Ethylbenzene	mg/kg	2.5	2.4	97	70-130	
Isopropylbenzene (Cumene)	mg/kg	2.5	2.5	100	70-130	
m&p-Xylene	mg/kg	5	4.8	97	70-130	
Methyl-tert-butyl ether	mg/kg	2.5	2.5	100	70-130	
Methylene Chloride	mg/kg	2.5	2.4	94	70-131	
o-Xylene	mg/kg	2.5	2.4	98	70-130	
Styrene	mg/kg	2.5	2.2	89	70-130	
Tetrachloroethene	mg/kg	2.5	2.4	97	70-130	
Toluene	mg/kg	2.5	2.6	102	70-130	
trans-1,2-Dichloroethene	mg/kg	2.5	2.2	89	70-130	
trans-1,3-Dichloropropene	mg/kg	2.5	2.4	98	70-130	
Trichloroethene	mg/kg	2.5	2.2	87	70-130	
Trichlorofluoromethane	mg/kg	2.5	2.3	91	50-150	
Vinyl chloride	mg/kg	2.5	2.4	95	57-130	
Xylene (Total)	mg/kg	7.5	7.3	97	70-130	
4-Bromofluorobenzene (S)	%			87	48-138	
Dibromofluoromethane (S)	%			105	53-165	
Toluene-d8 (S)	%			103	54-163	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1485347 1485348

Parameter	Units	40147512006 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Spike Conc.	MSD Result						
1,1,1-Trichloroethane	mg/kg	<25.0 ug/kg	1.3	1.3	1.3	1.3	96	97	70-130	1	20	
1,1,1,2-Tetrachloroethane	mg/kg	<25.0 ug/kg	1.3	1.3	1.6	1.7	124	130	70-130	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Parameter	Units	1485347		1485348		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		40147512006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
1,1,2-Trichloroethane	mg/kg	<25.0 ug/kg	1.3	1.3	1.7	1.6	126	122	70-130	3	20		
1,1,2-Trichlorotrifluoroethane	mg/kg	<25.0 ug/kg	1.3	1.3	1.1	1.1	82	85	49-150	3	22		
1,1-Dichloroethane	mg/kg	<25.0 ug/kg	1.3	1.3	1.3	1.4	102	103	64-133	1	20		
1,1-Dichloroethene	mg/kg	<25.0 ug/kg	1.3	1.3	1.1	1.1	82	85	56-130	4	24		
1,2,4-Trichlorobenzene	mg/kg	<47.6 ug/kg	1.3	1.3	1.5	1.5	115	114	70-130	0	20		
1,2-Dibromo-3-chloropropane	mg/kg	<91.2 ug/kg	1.3	1.3	1.4	1.4	103	106	50-150	3	20		
1,2-Dibromoethane (EDB)	mg/kg	<25.0 ug/kg	1.3	1.3	1.6	1.7	124	126	70-130	1	20		
1,2-Dichlorobenzene	mg/kg	<25.0 ug/kg	1.3	1.3	1.5	1.5	115	113	70-130	2	20		
1,2-Dichloroethane	mg/kg	<25.0 ug/kg	1.3	1.3	1.4	1.4	103	106	70-138	3	20		
1,2-Dichloropropane	mg/kg	<25.0 ug/kg	1.3	1.3	1.4	1.3	108	102	70-130	6	20		
1,3-Dichlorobenzene	mg/kg	<25.0 ug/kg	1.3	1.3	1.5	1.5	115	116	70-130	1	20		
1,4-Dichlorobenzene	mg/kg	<25.0 ug/kg	1.3	1.3	1.6	1.5	118	115	70-130	3	20		
Benzene	mg/kg	<25.0 ug/kg	1.3	1.3	1.4	1.4	107	109	70-130	2	20		
Bromodichloromethane	mg/kg	<25.0 ug/kg	1.3	1.3	1.3	1.2	97	94	70-130	2	20		
Bromoform	mg/kg	<25.0 ug/kg	1.3	1.3	1.3	1.3	96	101	65-130	5	20		
Bromomethane	mg/kg	<69.9 ug/kg	1.3	1.3	0.98	1.0	75	78	11-163	5	21		
Carbon tetrachloride	mg/kg	<25.0 ug/kg	1.3	1.3	1.1	1.1	82	86	70-130	4	20		
Chlorobenzene	mg/kg	<25.0 ug/kg	1.3	1.3	1.5	1.4	110	109	70-130	1	20		
Chloroethane	mg/kg	<67.0 ug/kg	1.3	1.3	0.93	0.95	71	72	17-151	2	20		
Chloroform	mg/kg	<46.4 ug/kg	1.3	1.3	1.4	1.4	106	106	70-130	0	20		
Chloromethane	mg/kg	<25.0 ug/kg	1.3	1.3	0.73	0.76	56	58	13-130	4	20		
cis-1,2-Dichloroethene	mg/kg	<25.0 ug/kg	1.3	1.3	1.4	1.5	106	113	70-130	6	20		
cis-1,3-Dichloropropene	mg/kg	<25.0 ug/kg	1.3	1.3	1.3	1.3	99	101	70-130	2	20		
Dibromochloromethane	mg/kg	<25.0 ug/kg	1.3	1.3	1.5	1.5	113	112	70-130	1	20		
Dichlorodifluoromethane	mg/kg	<25.0 ug/kg	1.3	1.3	0.27	0.31	21	23	10-150	12	21		
Ethylbenzene	mg/kg	<25.0 ug/kg	1.3	1.3	1.5	1.5	111	112	70-130	0	20		
Isopropylbenzene (Cumene)	mg/kg	<25.0 ug/kg	1.3	1.3	1.5	1.5	114	117	70-130	2	20		

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Parameter	Units	40147512006		1485347		1485348		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
m&p-Xylene	mg/kg	<50.0 ug/kg	2.6	2.6	2.9	2.9	111	108	70-130	2	20		
Methyl-tert-butyl ether	mg/kg	<25.0 ug/kg	1.3	1.3	1.5	1.5	114	113	70-130	0	20		
Methylene Chloride	mg/kg	<25.0 ug/kg	1.3	1.3	1.4	1.4	104	107	70-131	2	20		
o-Xylene	mg/kg	<25.0 ug/kg	1.3	1.3	1.5	1.5	114	111	70-130	2	20		
Styrene	mg/kg	<25.0 ug/kg	1.3	1.3	1.4	1.4	104	107	70-130	3	20		
Tetrachloroethene	mg/kg	<25.0 ug/kg	1.3	1.3	1.4	1.5	108	112	70-130	3	20		
Toluene	mg/kg	<25.0 ug/kg	1.3	1.3	1.5	1.6	117	118	70-130	1	20		
trans-1,2-Dichloroethene	mg/kg	<25.0 ug/kg	1.3	1.3	1.3	1.3	95	100	70-130	5	20		
trans-1,3-Dichloropropene	mg/kg	<25.0 ug/kg	1.3	1.3	1.5	1.5	112	110	70-130	2	20		
Trichloroethene	mg/kg	<25.0 ug/kg	1.3	1.3	1.3	1.3	98	97	70-130	1	20		
Trichlorofluoromethane	mg/kg	<25.0 ug/kg	1.3	1.3	1.0	1.0	78	76	40-150	2	31		
Vinyl chloride	mg/kg	<25.0 ug/kg	1.3	1.3	0.87	0.91	66	69	26-130	4	20		
Xylene (Total)	mg/kg	<75.0 ug/kg	4	4	4.4	4.3	112	109	70-130	2	20		
4-Bromofluorobenzene (S)	%						93	95	48-138				
Dibromofluoromethane (S)	%						110	110	53-165				
Toluene-d8 (S)	%						109	112	54-163				

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL
Pace Project No.: 40147485

QC Batch: 251490 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40147485010

METHOD BLANK: 1484279 Matrix: Water
Associated Lab Samples: 40147485010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	0.18	04/03/17 16:46	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	0.25	04/03/17 16:46	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	0.20	04/03/17 16:46	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.81	5.0	0.81	04/03/17 16:46	
1,1-Dichloroethane	ug/L	<0.24	1.0	0.24	04/03/17 16:46	
1,1-Dichloroethene	ug/L	<0.41	1.0	0.41	04/03/17 16:46	
1,1-Dichloropropene	ug/L	<0.44	1.0	0.44	04/03/17 16:46	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	2.1	04/03/17 16:46	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	2.2	04/03/17 16:46	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	2.2	04/03/17 16:46	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	0.18	04/03/17 16:46	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
1,2-Dichloroethane	ug/L	<0.17	1.0	0.17	04/03/17 16:46	
1,2-Dichloropropane	ug/L	<0.23	1.0	0.23	04/03/17 16:46	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
1,3-Dichloropropane	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
2,2-Dichloropropane	ug/L	<0.48	1.0	0.48	04/03/17 16:46	
2-Butanone (MEK)	ug/L	<3.0	20.0	3.0	04/03/17 16:46	
2-Chlorotoluene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
4-Chlorotoluene	ug/L	<0.21	1.0	0.21	04/03/17 16:46	
4-Methyl-2-pentanone (MIBK)	ug/L	<2.1	5.0	2.1	04/03/17 16:46	
Acetone	ug/L	<3.0	20.0	3.0	04/03/17 16:46	
Allyl chloride	ug/L	<2.2	5.0	2.2	04/03/17 16:46	
Benzene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
Bromobenzene	ug/L	<0.23	1.0	0.23	04/03/17 16:46	
Bromochloromethane	ug/L	<0.34	1.0	0.34	04/03/17 16:46	
Bromodichloromethane	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
Bromoform	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
Bromomethane	ug/L	<2.4	5.0	2.4	04/03/17 16:46	
Carbon tetrachloride	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
Chlorobenzene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
Chloroethane	ug/L	<0.37	1.0	0.37	04/03/17 16:46	
Chloroform	ug/L	<2.5	5.0	2.5	04/03/17 16:46	
Chloromethane	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	0.26	04/03/17 16:46	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL
Pace Project No.: 40147485

METHOD BLANK: 1484279

Matrix: Water

Associated Lab Samples: 40147485010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromochloromethane	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
Dibromomethane	ug/L	<0.43	1.0	0.43	04/03/17 16:46	
Dichlorodifluoromethane	ug/L	<0.22	1.0	0.22	04/03/17 16:46	
Dichlorofluoromethane	ug/L	<0.21	1.0	0.21	04/03/17 16:46	
Diethyl ether (Ethyl ether)	ug/L	<2.2	5.0	2.2	04/03/17 16:46	
Ethylbenzene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	2.1	04/03/17 16:46	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	0.14	04/03/17 16:46	
m&p-Xylene	ug/L	<1.0	2.0	1.0	04/03/17 16:46	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	0.17	04/03/17 16:46	
Methylene Chloride	ug/L	<0.23	1.0	0.23	04/03/17 16:46	
n-Butylbenzene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
n-Propylbenzene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
Naphthalene	ug/L	<2.5	5.0	2.5	04/03/17 16:46	
o-Xylene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
p-Isopropyltoluene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
sec-Butylbenzene	ug/L	<2.2	5.0	2.2	04/03/17 16:46	
Styrene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
tert-Butylbenzene	ug/L	<0.18	1.0	0.18	04/03/17 16:46	
Tetrachloroethene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
Tetrahydrofuran	ug/L	<2.0	5.0	2.0	04/03/17 16:46	
Toluene	ug/L	<0.50	1.0	0.50	04/03/17 16:46	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	0.26	04/03/17 16:46	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	0.23	04/03/17 16:46	
Trichloroethene	ug/L	<0.33	1.0	0.33	04/03/17 16:46	
Trichlorofluoromethane	ug/L	<0.18	1.0	0.18	04/03/17 16:46	
Vinyl chloride	ug/L	<0.18	1.0	0.18	04/03/17 16:46	
Xylene (Total)	ug/L	<1.5	3.0	1.5	04/03/17 16:46	
4-Bromofluorobenzene (S)	%	85	70-130		04/03/17 16:46	
Dibromofluoromethane (S)	%	102	70-130		04/03/17 16:46	
Toluene-d8 (S)	%	101	70-130		04/03/17 16:46	

LABORATORY CONTROL SAMPLE: 1484280

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	51.8	104	70-131	
1,1,2,2-Tetrachloroethane	ug/L	50	47.9	96	67-130	
1,1,2-Trichloroethane	ug/L	50	50.3	101	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	53.3	107	50-150	
1,1-Dichloroethane	ug/L	50	45.9	92	70-133	
1,1-Dichloroethene	ug/L	50	47.8	96	70-130	
1,2,4-Trichlorobenzene	ug/L	50	46.3	93	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	44.6	89	50-150	
1,2-Dibromoethane (EDB)	ug/L	50	50.3	101	70-130	

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

LABORATORY CONTROL SAMPLE: 1484280

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichlorobenzene	ug/L	50	50.8	102	70-130	
1,2-Dichloroethane	ug/L	50	48.0	96	70-130	
1,2-Dichloropropane	ug/L	50	47.0	94	70-130	
1,3-Dichlorobenzene	ug/L	50	47.0	94	70-130	
1,4-Dichlorobenzene	ug/L	50	45.1	90	70-130	
Benzene	ug/L	50	51.1	102	60-135	
Bromodichloromethane	ug/L	50	48.6	97	70-130	
Bromoform	ug/L	50	52.0	104	70-130	
Bromomethane	ug/L	50	36.5	73	33-130	
Carbon tetrachloride	ug/L	50	52.1	104	70-138	
Chlorobenzene	ug/L	50	49.2	98	70-130	
Chloroethane	ug/L	50	36.6	73	51-130	
Chloroform	ug/L	50	49.4	99	70-130	
Chloromethane	ug/L	50	34.4	69	25-132	
cis-1,2-Dichloroethene	ug/L	50	50.7	101	69-130	
cis-1,3-Dichloropropene	ug/L	50	45.7	91	70-130	
Dibromochloromethane	ug/L	50	51.6	103	70-130	
Dichlorodifluoromethane	ug/L	50	34.7	69	23-130	
Ethylbenzene	ug/L	50	51.6	103	70-136	
Isopropylbenzene (Cumene)	ug/L	50	53.1	106	70-140	
m&p-Xylene	ug/L	100	108	108	70-138	
Methyl-tert-butyl ether	ug/L	50	48.4	97	66-138	
Methylene Chloride	ug/L	50	42.9	86	70-130	
o-Xylene	ug/L	50	53.3	107	70-134	
Styrene	ug/L	50	53.5	107	70-133	
Tetrachloroethene	ug/L	50	50.7	101	70-138	
Toluene	ug/L	50	52.2	104	70-130	
trans-1,2-Dichloroethene	ug/L	50	46.5	93	70-131	
trans-1,3-Dichloropropene	ug/L	50	46.2	92	69-130	
Trichloroethene	ug/L	50	51.2	102	70-130	
Trichlorofluoromethane	ug/L	50	49.9	100	50-150	
Vinyl chloride	ug/L	50	43.9	88	49-130	
Xylene (Total)	ug/L	150	162	108	70-135	
4-Bromofluorobenzene (S)	%			95	70-130	
Dibromofluoromethane (S)	%			96	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1485395 1485396

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40147491006 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1,1,1-Trichloroethane	ug/L	17.4	50	50	68.4	65.7	102	97	70-134	4	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	47.6	49.8	95	100	67-130	5	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	50.7	50.4	101	101	70-130	1	20	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.81	50	50	53.3	51.7	107	103	50-150	3	20	

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Parameter	Units	40147491006		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec							
MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1485395 1485396																
1,1-Dichloroethane	ug/L	1.2	50	50	47.0	44.6	92	87	70-134	5	20					
1,1-Dichloroethene	ug/L	1.2	50	50	48.5	44.8	95	87	68-136	8	20					
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	46.8	47.1	94	94	62-139	1	20					
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	42.5	48.6	85	97	50-150	13	20					
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	51.2	53.2	102	106	70-130	4	20					
1,2-Dichlorobenzene	ug/L	<0.50	50	50	47.2	50.7	94	101	70-130	7	20					
1,2-Dichloroethane	ug/L	<0.17	50	50	48.3	48.8	97	98	70-130	1	20					
1,2-Dichloropropane	ug/L	<0.23	50	50	45.4	47.9	91	96	70-130	5	20					
1,3-Dichlorobenzene	ug/L	<0.50	50	50	48.4	48.6	97	97	70-131	0	20					
1,4-Dichlorobenzene	ug/L	<0.50	50	50	48.7	49.3	97	99	70-130	1	20					
Benzene	ug/L	<0.50	50	50	50.9	49.9	102	100	57-138	2	20					
Bromodichloromethane	ug/L	<0.50	50	50	48.2	47.7	96	95	70-130	1	20					
Bromoform	ug/L	<0.50	50	50	51.4	56.3	103	113	70-130	9	20					
Bromomethane	ug/L	<2.4	50	50	39.9	39.9	80	80	33-130	0	27					
Carbon tetrachloride	ug/L	<0.50	50	50	51.7	48.9	103	98	70-138	6	20					
Chlorobenzene	ug/L	<0.50	50	50	48.6	49.2	97	98	70-130	1	20					
Chloroethane	ug/L	<0.37	50	50	37.8	37.4	76	75	51-130	1	20					
Chloroform	ug/L	<2.5	50	50	48.9	47.1	98	94	70-130	4	20					
Chloromethane	ug/L	<0.50	50	50	34.3	37.3	69	75	25-132	9	20					
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	50.5	50.2	101	100	61-140	1	20					
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	44.8	46.2	90	92	70-130	3	20					
Dibromochloromethane	ug/L	<0.50	50	50	51.2	51.1	102	102	70-130	0	20					
Dichlorodifluoromethane	ug/L	<0.22	50	50	31.9	32.0	64	64	23-130	0	20					
Ethylbenzene	ug/L	<0.50	50	50	50.6	52.2	101	104	70-138	3	20					
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	52.0	54.7	104	109	70-152	5	20					
m&p-Xylene	ug/L	<1.0	100	100	104	109	104	109	70-140	5	20					
Methyl-tert-butyl ether	ug/L	<0.17	50	50	47.3	48.8	95	98	66-139	3	20					
Methylene Chloride	ug/L	<0.23	50	50	44.8	45.7	90	91	70-130	2	20					
o-Xylene	ug/L	<0.50	50	50	52.1	54.2	104	108	70-134	4	20					
Styrene	ug/L	<0.50	50	50	48.9	50.6	98	101	70-138	3	20					
Tetrachloroethene	ug/L	<0.50	50	50	50.8	48.6	102	97	70-148	4	20					
Toluene	ug/L	<0.50	50	50	51.7	51.0	103	102	70-130	1	20					
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	46.6	44.5	93	89	70-133	4	20					
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	47.7	47.0	95	94	69-130	1	20					
Trichloroethene	ug/L	24.4	50	50	76.5	76.4	104	104	70-131	0	20					
Trichlorofluoromethane	ug/L	<0.18	50	50	50.3	47.1	101	94	50-150	6	20					
Vinyl chloride	ug/L	<0.18	50	50	41.3	42.3	83	85	49-133	2	20					
Xylene (Total)	ug/L	<1.5	150	150	156	164	104	109	70-135	5	20					
4-Bromofluorobenzene (S)	%						93	98	70-130							
Dibromofluoromethane (S)	%						98	94	70-130							
Toluene-d8 (S)	%						95	93	70-130							

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

QC Batch:	251872	Analysis Method:	WI MOD DRO
QC Batch Method:	WI MOD DRO	Analysis Description:	WIDRO GCS
Associated Lab Samples:	40147485001, 40147485002, 40147485003, 40147485004, 40147485005, 40147485006, 40147485007, 40147485008, 40147485009		

METHOD BLANK:	1486216	Matrix:	Solid
Associated Lab Samples:	40147485001, 40147485002, 40147485003, 40147485004, 40147485005, 40147485006, 40147485007, 40147485008, 40147485009		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<0.80	2.0	0.80	04/06/17 11:28	

LABORATORY CONTROL SAMPLE & LCSD: 1486217		1486218								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	31.3	32.9	78	82	70-120	5	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

QC Batch:	251643	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	40147485001, 40147485002, 40147485003, 40147485004		

SAMPLE DUPLICATE: 1485250

Parameter	Units	40147512001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.6	6.7	3	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

QC Batch:	251669	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	40147485005, 40147485006, 40147485007, 40147485008, 40147485009		

SAMPLE DUPLICATE: 1485317

Parameter	Units	40147498002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.3	6.8	7	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: KT# 571-UST REMOVAL

Pace Project No.: 40147485

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40147485001	B-1 (6.5)	WI MOD DRO	251872	WI MOD DRO	251939
40147485002	B-2 (6.5)	WI MOD DRO	251872	WI MOD DRO	251939
40147485003	B-19 (8.5)	WI MOD DRO	251872	WI MOD DRO	251939
40147485004	B-29 (8.5)	WI MOD DRO	251872	WI MOD DRO	251939
40147485005	SW-E (4)	WI MOD DRO	251872	WI MOD DRO	251939
40147485006	SW-N (5)	WI MOD DRO	251872	WI MOD DRO	251939
40147485007	SW-S (5)	WI MOD DRO	251872	WI MOD DRO	251939
40147485008	SW-W (5)	WI MOD DRO	251872	WI MOD DRO	251939
40147485009	SP-1	WI MOD DRO	251872	WI MOD DRO	251939
40147485001	B-1 (6.5)	EPA 5035/5030B	251532	EPA 8260	251539
40147485002	B-2 (6.5)	EPA 5035/5030B	251532	EPA 8260	251539
40147485003	B-19 (8.5)	EPA 5035/5030B	251532	EPA 8260	251539
40147485004	B-29 (8.5)	EPA 5035/5030B	251532	EPA 8260	251539
40147485005	SW-E (4)	EPA 5035/5030B	251695	EPA 8260	251730
40147485006	SW-N (5)	EPA 5035/5030B	251695	EPA 8260	251730
40147485007	SW-S (5)	EPA 5035/5030B	251695	EPA 8260	251730
40147485008	SW-W (5)	EPA 5035/5030B	251695	EPA 8260	251730
40147485009	SP-1	EPA 5035/5030B	251695	EPA 8260	251730
40147485010	SOIL TRIP BLANK	EPA 8260	251490		
40147485001	B-1 (6.5)	ASTM D2974-87	251643		
40147485002	B-2 (6.5)	ASTM D2974-87	251643		
40147485003	B-19 (8.5)	ASTM D2974-87	251643		
40147485004	B-29 (8.5)	ASTM D2974-87	251643		
40147485005	SW-E (4)	ASTM D2974-87	251669		
40147485006	SW-N (5)	ASTM D2974-87	251669		
40147485007	SW-S (5)	ASTM D2974-87	251669		
40147485008	SW-W (5)	ASTM D2974-87	251669		
40147485009	SP-1	ASTM D2974-87	251669		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

MMN

40107485

Section A

Required Client Information:
 Company: BROWN INTERTEC
 Address: 2609 PACE STREET
 Email To: lucas@brownintertec.com
 Phone: 708-781-7277
 Requested Due Date/TAT: 8TD

Section B

Required Project Information:
 Report To: Nyampson@brownintertec.com
 Copy To: Troy Batzel
 Purchase Order No.: NY9109340
 Project Name: KT # 511-UST Removal
 Project Number: 610

Section C

Invoice Information:
 Attention: TROY BATZEL
 Company Name: WILB TRIP
 Address: 1676 OOR STREET
 Reference: LUCAS.WI@VALVOZ
 Pace Quote Manager: MANAGER
 Pace Profile #:

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
 UST RCRA
 Site Location STATE: MMN

Page: 1 of 1

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9 / - /) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX L CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WIP Air AIR Tissue TS Other OT	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
					COMPOSITE START	COMPOSITE END/GRAB							
1	B-1 (U.S)	601	SL	GRAB	DATE	TIME	DATE	TIME	Unpreserved	NO			3-40ml
2	B-2 (U.S)	003	SL	GRAB	DATE	TIME	DATE	TIME	H ₂ SO ₄	NO			2-40ml
3	B-1a (8.5)	003	SL	GRAB	DATE	TIME	DATE	TIME	HNO ₃	NO			2-40ml
4	B-2a (8.5)	004	SL	GRAB	DATE	TIME	DATE	TIME	HCl	NO			2-40ml
5	S-W-E (4)	005	SL	GRAB	DATE	TIME	DATE	TIME	NaOH	NO			2-40ml
6	S-U-N (S)	056	SL	GRAB	DATE	TIME	DATE	TIME	Na ₂ S ₂ O ₃	NO			2-40ml
7	S-U-S (S)	007	SL	GRAB	DATE	TIME	DATE	TIME	Methanol	NO			2-40ml
8	S-U-W (S)	008	SL	GRAB	DATE	TIME	DATE	TIME	Other	NO			2-40ml
9	S-P-1	009	SL	GRAB	DATE	TIME	DATE	TIME	Analysis Test	NO			2-40ml
10	Temp Blank				DATE	TIME	DATE	TIME					
11	SOIL TIP BARK	010			DATE	TIME	DATE	TIME					
12					DATE	TIME	DATE	TIME					

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Samantha Summitt
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed (MM/DD/YY): 3/29/17

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION: Samantha Summitt DATE: 3-30-17 TIME: 09:35
 ACCEPTED BY / AFFILIATION: Fed Ex DATE: 3-30-17 TIME: 09:35
 SAMPLE CONDITIONS: Temp Blank

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #:

WO#: 40147485

Client Name: Braun Inter Tec

Courier: [X] Fed Ex [] UPS [] Client [] Pace Other:

Tracking #: 8107 1414 7308



Custody Seal on Cooler/Box Present: [X] yes [] no Seals intact: [X] yes [] no

Custody Seal on Samples Present: [X] yes [] no Seals intact: [] yes [X] no

Packing Material: [] Bubble Wrap [X] Bubble Bags [] None [] Other

Thermometer Used NA Type of Ice: [X] Wet [] Blue Dry None [X] Samples on ice, cooling process has begun

Cooler Temperature Uncorr: KOI /Corr: Biological Tissue is Frozen: [] yes [] no

Temp Blank Present: [X] yes [] no

Person examining contents:
Date: 3-30-17
Initials: KR

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

Comments:

Table with 15 rows for Chain of Custody Present, Chain of Custody Filled Out, Chain of Custody Relinquished, Sampler Name & Signature on COC, Samples Arrived within Hold Time, Short Hold Time Analysis (<72hr), Rush Turn Around Time Requested, Sufficient Volume, Correct Containers Used, Containers Intact, Filtered volume received for Dissolved tests, Sample Labels match COC, All containers needing preservation have been checked, Headspace in VOA Vials (>6mm), Trip Blank Present, Trip Blank Custody Seals Present, Pace Trip Blank Lot #.

Client Notification/ Resolution:

If checked, see attached form for additional comments []


Person Contacted: Date/Time:

Comments/ Resolution: Client used whiteout on COC. 3-30-17 KR

Project Manager Review:

Date: 3-30-17

Standard Operating Procedures

	Standard Operating Procedure Environmental Consulting	Creation Date:	Issue Date:	Rev.:
		08/21/2015	01/22/2016	1
SOP 202 – Organic Vapor Soil Screening			Page 1 of 5	

A. Purpose

This Standard Operating Procedure (SOP) describes procedure for screening soil potentially contaminated with volatile organic chemicals, such as petroleum, and/or hazardous substances that can be ionized within the energy range of the photoionization detector (PID) lamp being used. The purpose of the bag headspace procedure is to assist with site soil characterization of organic chemical contamination, soil sample selection for laboratory analysis, and soil management during excavation.

A.1. Scope and Applicability

This procedure should be used during field activities where bag headspace procedures are required by regulatory guidance or site-specific work plans. This procedure is used for soil characterization and not for health and safety monitoring.

A.2. Summary of Method

A quart-size polyethylene bag with a tight sealing closure is filled with soil (approximately 1 cup) and immediately closed leaving air in the top portion of the bag (headspace). Organic vapors are allowed to accumulate in the headspace for approximately 10 minutes at room temperature. The bag is opened slightly and the tip of the PID probe is inserted to the middle of the headspace. The highest PID response observed is recorded in the field notes.

A.3. Definitions

Background Readings: The PID measurement of ambient air and bag headspace reading without soil in the bag.

Ionization energy (IE): The energy required to displace an electron and “ionize” a compound. Replaces old term *Ionization Potential* (IP).

Photoionization Detector (PID): The PID is a portable, nonspecific, vapor/gas detector employing the principle of photoionization to detect and measure real-time concentrations of a variety of chemical compounds, both organic and inorganic, in air.

B. Health and Safety


Field work should be performed in accordance with the Braun Intertec Corporate Health and Safety Manual Standard Operating Procedures and the site-specific health and safety plan (HASP).

C. Referenced SOPs

- SOP 101 – Field Notes and Documentation
- SOP 201 – Classification of Soil
- SOP 204 – Calibration of 580B PID
- SOP 205 – Calibration of MiniRAE PID

D. Equipment and Supplies

- Quart-size polyethylene sealable bags
- PID with appropriate lamp (10.6 or 11.7 electron volts [eV])
- Field report form (see SOP 101 – Field Notes and Documentation) or field logbook
- Waterproof and/or indelible ink pens
- Personal Protective Equipment (PPE)

	Standard Operating Procedure Environmental Consulting	Creation Date:	Issue Date:	Rev.:
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SOP 202 – Organic Vapor Soil Screening			Page 2 of 5	

E. Procedure


E.1. Preparation

PID lamps with two different light energy (in eV) are available for use. The 11.7 eV lamp measures the broadest range of compounds, while the 10.6 eV lamp is somewhat more selective. The standard lamp used is 10.6 eV unless otherwise specified by the technical project manager.

Calibrate the PID onsite at least daily to yield total organic vapors in parts per million (ppm) using an isobutylene standard. If field personnel are at multiple project locations in one day, calibrate the PID upon arrival to each project location. See either SOP 204 – Calibration of 580B PID or SOP 205 – Calibration of MiniRAE PID for calibration procedures. Record the lamp IE, standard used, date, time and results of the daily calibration.

E.2. Collection

- Visually examine the soil for staining or sheens. Note observations in field logbook. Describe the type and general amount of debris, if present, in the field logbook (see SOP 201 – Classification of Soil).
- Do not intentionally smell the soil for odors, but note unintentional olfactory indication of contamination in the field logbook.
- Collect soil samples in increments according to instructions established by the project manager or the site-specific work plan.
- **Soil samples for laboratory analysis should not be collected from the sealable bag used for headspace analysis.**
- While wearing proper PPE (Nitrile gloves at a minimum), field personnel should fill approximately one-quarter of a quart-size polyethylene sealable bag with a tight sealing closure (about 1 cup of soil), leaving air in the upper portion of the sealable bag (the volume ratio of soil: headspace should be 1:3). Close the quart-size polyethylene sealable bag immediately, making sure all soil is clear from the path of the bag's seal. Break apart the soil while vigorously shaking the bag for 15 seconds, avoiding puncturing a hole in the bag or tearing apart the zipper.
- Allow the headspace to develop in the sealable bag at room temperature (e.g., approximately 50 °F or greater) for 10 to 20 minutes. If the temperature is below approximately 50 °F, allow the headspace to develop within a heated vehicle or building. Record the ambient temperature during headspace screening.
- Vigorously shake the sealable bag again for 15 seconds. Open the sealable bag slightly, enough for the end of the PID probe tip to enter the bag and insert the tip to the middle of the headspace, avoiding contact with the soil and/or potential moisture from condensation in the sealable bag. Watch the PID screen for the highest reading (ppm). The maximum reading should appear in less than 5 seconds. Record the maximum PID reading reached in the field notes. Record the actual PID reading, do not round the number.
- In addition to screening a soil sample, a background PID headspace reading should be established in the field. Under the same conditions as the screened soil sample (heated vehicle or building, etc.), take an empty quart-size polyethylene sealable bag, puff it up with air, and insert the probe of the PID in the same way as the soil sample. Watch the screen of the PID for the highest PID reading (ppm). Record the maximum PID reading reached in the field notes. Record the actual PID reading, do not round the number.

	Standard Operating Procedure Environmental Consulting	Creation Date:	Issue Date:	Rev.:
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SOP 202 – Organic Vapor Soil Screening			Page 3 of 5	

E.3. Cautions

PIDs provide non-specific measurement of the presence of organic compounds including the following: aromatics, ketones and aldehydes, amines and amides, chlorinated hydrocarbons, sulfur compounds, saturated and unsaturated hydrocarbons, and alcohols. The light energy in eV emitted by the PID lamp must be greater than the IE of the compound(s) of interest. However, 11.7-eV lamps should only be used when compounds with IEs over 10.6 eV are expected and are the primary contaminants. Examples include carbon tetrachloride, methylene chloride, chloroform, and 1,1,1-trichloroethane.

Consult the NIOSH Guide to Chemical Hazards for ionization potentials for most common contaminants. The PID will not measure the following: radiation, air (N₂, O₂, CO₂, H₂O), natural gas (methane, ethane, propane), acid gases (HCl, HF, HNO₃), common toxics (CO, HCN, SO₂), freons, ozone, hydrogen peroxide, polychlorinated biphenyls (PCBs), or greases.


E.4. Interferences

Excessive moisture in the headspace may cause a false positive response on the PID due to condensation in the sensor causing current leakage across the electrodes. The problem is exacerbated by dirty, bent out of shape, or corroded electrodes. This problem tends to manifest itself by a “drift” upward of the measurement, rather than a sharp response to the presence of an organic vapor. Humidity from wet soil also absorbs UV light and may dampen response when vapors are present. The warming of cold, wet samples tends to cause excessive humidity in the headspace, and if the PID is colder than the samples, condensation in the PID can result. Avoid getting condensate or soil in the inlet probe (use a PID dust filter to avoid getting soil in the inlet probe). Avoid getting soil in the grooves of the bag seal, so that it will close securely.

E.5. Data and Records Management

Field data should be recorded and managed in accordance with SOP 101 – Field Notes and Documentation. Documentation should include the following:

- Calibration: date, time, calibration standard, and result
- Maintenance performed, if any
- Background readings: ambient air and quart-size polyethylene sealable bag
- Ambient air temperature at which headspace screened
- Sample identification information per sample method SOP
- General observations: condensed moisture in the bag, unusual odors associated with the soil sample and/or ambient air

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		08/21/2015	01/22/2016	1
SOP 202 – Organic Vapor Soil Screening			Page 4 of 5	

E.6. Quality Assurance/Quality Control

Field personnel should check the PID maintenance log before beginning each new job to make sure that scheduled maintenance is current. Erratic PID responses in the field should be evaluated, and field maintenance performed or the PID should be replaced. The PID should be calibrated daily in the field.

Field personnel should perform a humidity response test prior to PID use. Two quick methods for humidity response tests include exhaling gently into the PID for 10 to 15 seconds or cupping your clean hand over the PID inlet probe, since the moisture from your hand provides a fairly continuous high humidity stream (see Photographs 1 and 2). Do not block the air intake for the PID. The PID should show little to no response from these test. If the PID shows more than 5 ppm, the probe, lamp, and sensor may need cleaning. Record the results of the humidity response test in the field logbook.

Ambient air quality at the work site should be checked and recorded as should a headspace sample of an empty polyethylene sealable bag. All quality assurance (QA) checks should be documented in the field logbook.


Quality assurance/quality control (QA/QC) procedures described in the work plan should be followed.

F. References

Addressing PID Instruments Moisture Sensitivity: Humidity Effect on PID Instruments, Technical Note TN-163, RAE Systems by Honeywell; San Jose, CA, February, 2014.

Minnesota Pollution Control Agency, Soil Sample Collection and Analysis Procedures, Field Screening Procedures. Guidance Document 4-04, c-prp4-04. Petroleum Remediation Program, Minnesota Pollution Control Agency; St. Paul, MN, September, 2008.

NIOSH, Pocket Guide to Chemical Hazards, NIOSH Publications; Cincinnati, OH, September 2007.


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Photograph 1: Humidity Response Test



Photograph 2: Humidity Response Test

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A. Purpose

The following Standard Operating Procedure (SOP) for the collection of grab soil samples is intended to be used by Braun Intertec field personnel for the purposes of soil sample collection. Grab sampling techniques should always be used to collect samples for volatile organic compounds (VOC), gasoline range organics (GRO), diesel range organics (DRO) or other analyses that require collection of a generally undisturbed portion of soil. Grab sampling techniques may also be used to collect other analytes such as semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals. Grab samples should be collected prior to collection of other sample aliquots as soon as possible after the sampling interval is retrieved. Soil samples collected in the field during investigations for characterization and/or documentation of site conditions are integral to the services provided to clients and regulatory agencies.

This SOP is applicable for soil samples collected from soil borings (SOP 203 – Soil Boring Observation and Sampling), test pits and test trenches (SOP 211 – Test Pit and Test Trench Observation and Sampling), stockpiles (SOP 210 – Soil Stockpile Sampling), and/or excavations.

B. Health and Safety


Field work should be performed in accordance with the *Braun Intertec Corporate Health and Safety Manual Standard Operating Procedures* and the site-specific health and safety plan (HASP), if applicable.

C. Referenced SOPs

- SOP 101 – Field Notes and Documentation
- SOP 203 – Soil Boring Observation and Sampling
- SOP 210 – Soil Stockpile Sampling
- SOP 211 – Test Pit and Test Trench Observation and Sampling
- SOP 308 – Trip Blanks
- SOP 602 – Chain-of-Custody Procedures
- SOP 603 – Sample Shipping

D. Equipment and Supplies

- Coring device (one for each soil sample collected)
- Portable digital scale, if necessary
- Appropriate laboratory-supplied container and preservative (when applicable)
- Sample labels
- Sample coolers
- Ice
- Temperature blanks (one per sample cooler)
- Trip blanks, if necessary (see SOP 308 – Trip Blanks)
- Field report form (see SOP 101 – Field Notes and Documentation) or field logbook
- Chain-of-Custody (COC) forms (see SOP 602 – Chain-of-Custody Procedure)
- Custody seals
- Cell phone camera or digital camera
- Personal Protective Equipment (PPE)

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The following table provides details regarding analytical parameters and the type of laboratory-supplied containers and applicable preservative.

Analytical Parameter (holding time)	Bottle Type and Preservation Type
DRO (10 days)*	4-oz. glass jar, pre-weighed and unpreserved
8 RCRA Metals or 13 Priority Pollutant Metals (6 Months, except mercury 28 days)	4-oz. glass jar, unpreserved
GRO (14 days)**	40-milliliter (mL) glass vial, with 10 mL methanol pre-weighed
PCBs (14 days)***	4-oz. glass jar unpreserved
SVOCs (14 days)****	4-oz. glass jar unpreserved
VOCs (14 days)**	40-mL glass vial, with 10 mL methanol, pre-weighed

*DRO soil samples collected in 60-mL pre-weighed containers must be filled with 25 to 35 grams of soil.

**VOC and GRO soil samples collected in 40-mL pre-weighed containers should contain between 8 to 11 grams of soil.

***PCBs – Polychlorinated Biphenyls

****SVOCs – Semi-volatile Organic Compounds

All soil samples must have a single unpreserved sample collected (5-10 gram minimum) for dry weight analysis (i.e., moisture sample).

E. Procedure

E.1. Bottle Order


Several days before field work is scheduled to begin contact the laboratory to order sample containers and soil coring devices by phone or email. It may be a good idea to order extra bottles to allow for breakage, extra samples, etc. If you are unsure of the required sample volumes or proper laboratory sample containers for specific analytical parameters, ask that a written description be included with the bottle order which clarifies sample requirements.

Upon receipt of the sample coolers and before you leave for the field, check the contents of the cooler to be sure that you have the appropriate sample containers and that extra containers are included, if requested. Be sure you are aware of sample volume and container requirements.

E.2. Cooler Preparation

Place ice or a frozen cold pack into each sample cooler before collecting any samples. Double-bag the ice in sealable gallon bags or sealed garbage bags to avoid potential contact of water in the cooler with sample containers.

Place a temperature blank into each cooler and under the sealed bags of ice. If the cooler will contain VOCs samples ensure that a trip blank is placed into the cooler with the samples.

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E.3. Labeling Sample Containers

Prior to collecting soil grab samples, complete the sample label for the laboratory-supplied containers. The sample label must have the following information:

- Project Number (listed under “Client”)
- Sample Name (listed under “Sample ID”)
- Date Sample Collected (listed under “Collection Date”)
- Sampler’s Initials (listed under “Collected by”)
- Time Sample Collected (listed under “Time”)


Additionally, some laboratory-supplied sample containers (e.g., DRO, GRO, and VOCs) have been pre-weighed by the laboratory. It is important to make sure that the pre-weighed sample containers have their weight listed on the sample label and that the weight is visible.

E.4. Soil Sampling

Select sample location/interval per the Work/Sampling Plan. Don new disposable gloves and expose a fresh surface of soil, if necessary. Follow procedures listed below for each specific parameter. If VOCs and GRO samples are to be collected as part of the Work/Sampling Plan, these parameters are to be collected first from undisturbed soil or freshly exposed soil surfaces to minimize volatilization.

E.5. VOCs and GRO Soil Grab Sample Collection

- Place an electronic scale, which has been verified that day prior to use, on a flat surface and turn it on. A weighted standard shall be used to determine acceptable precision.
- Before filling the first jar, verify the accuracy of the scale. Place a pre-weighed sample container on the scale. Compare the reading to the weight on the container. If within 5 grams, the scale can be used for the rest of the day. If not within 5 grams, remove the container, turn the scale off, then on, and repeat the test. If still not within 5 grams, use a different scale.
- Remove cap from pre-weighed, pre-preserved 40-milliliter (mL) sample vial.
- Place 40-mL vial on electronic scale and press “tare” button to zero electronic scale.
- Electronic scale should read 0.0g – leave sample vial on electronic scale.
- Use the lab provided Terra Core® sampler (5- or 10-gram) or 10-mL syringe with the top cut off (approximately 10 grams when full) for collecting a sample. The laboratory may provide a different sampling device than described above; whichever device is provided, the goal is to have **8 to 11 grams** of soil in the sample jar for VOC/GRO analysis.
- Scrape off upper layer of soil to expose underlying soil. Remove the syringe cap and push the syringe into the freshly exposed soil until the soil column entering the syringe has forced the top of the plunger to the stopping point against the top of the syringe cradle.
- Wipe all debris from the outside of the syringe and remove any soil that extends outside the mouth of the syringe, so the soil sample is flush with the mouth of the syringe.
- Carefully place the mouth of the syringe against the top of the open 40-mL vial and gently extrude the sample into the vial. (Note: to prevent the methanol preservative from splashing out of the bottle, hold the syringe against the top of the vial until the sample has fallen into the preservative.) Try to avoid getting soil on the threads of the vial. Clean the threads if necessary and cap the vial immediately.

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- Weigh the sample bottle. Tolerances and field actions required are presented in the table below:

Actual Sample Weight	Volume of Methanol	Field Action
< 8 grams	10 mL	Add soil to reach 10 grams
8 – 11 grams	10 mL	None required
> 11 to < 20 grams	10 mL	None required. Laboratory will add methanol to reach 1:1 ratio
20 or > grams	10 mL	Discard bottle and resample

- Cap the sample container. Gently swirl, do not shake, sample vial to fully immerse soil into methanol.
- Fill out the label on the vial completely, including project number, sample I.D., date, time and sampler's initials. Record the information on the Chain-of-Custody form and in the field notebook.
- Collect at least two vials of soil sample for each analysis (VOCs or GRO). Therefore, if the work plan requires only VOCs then you will fill two vials; if the work plan calls for VOCs and GRO you will fill four vials (two vials for each analyte).
- Manually fill a plastic snap-top tube (or similar unpreserved bottle) with soil from the same sampling interval/matrix as each sample. Remove soil particles from the rim of the snap tube so the cap will close securely and close the cap. This jar is for moisture calculation to be submitted with VOCs/GRO soil sample containers and should be labeled the same as the VOC/GRO sample jars. All soil samples for VOCs or GRO analysis require an accompanying moisture calculation jar. Only one moisture jar is required per soil sample (i.e., one moisture jar is sufficient for both VOCs and GRO analysis).
- Place a trip blank into the cooler with the VOCs/GRO samples; see SOP 308 – Trip Blanks.
- Store, transport, and maintain sample custody per SOP 602 – Chain-of-Custody Procedures.

E.6. DRO Soil Grab Sample Collection

- Place an electronic scale, which has been verified that day prior to use, on a flat surface and turn it on. A weighted standard shall be used to determine acceptable precision.
- Before filling the first jar, verify the accuracy of the scale. Place a pre-weighed sample container on the scale. Compare the reading to the weight on the container. If within 5 grams, the scale can be used for the rest of the day. If not within 5 grams, remove the container, turn the scale off, then on, and repeat the test. If still not within 5 grams, use a different scale.
- Remove cap from pre-weighed, unpreserved sample container.
- Place empty DRO bottle on electronic scale and press "tare" button to zero electronic scale.
- Electronic scale should read 0.0g – leave DRO bottle on electronic scale.
- Use the laboratory provided coring device such as a Terra Core® sampler (5- or 10-gram) or 10-mL syringe with the top cut off (approximately 10 grams when full) for collecting a sample. The laboratory may provide a different coring device than described above; whichever coring device is provided, the goal is to have **25 to 35 grams** of soil in a 4-oz. sample jar for the Wisconsin DRO method and Environmental Protection Agency (EPA) Method 8015, Total Petroleum Hydrocarbon (50 to 70 grams in an 8-oz. jar).
- Scrape off upper layer of soil to expose underlying soil. Push the coring device into the freshly exposed soil until the soil column entering the coring device has filled to the top of the plunger (Terra Core) or the 10-mL line (cut off Syringe).
- Wipe all debris from the outside of the coring device and remove any soil that extends outside the mouth of the coring device, so the soil sample is flush with the mouth of the coring device.
- Extrude soil sample from the coring device into the DRO bottle. Collected soil sample should have a cumulative weight between **25 and 35 grams (4-oz. jar)**. Repeat the steps above as necessary to achieve necessary soil sample weight. If more than 35 grams of soil are collected, discard all the soil in

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sample jar and recollect the sample. Try to avoid getting soil on the threads of the sample jar. Clean the threads if necessary and cap the sample jar immediately after sample collection.

- Repeat the above steps to fill a second DRO sample container. Two soil sample jars may be required for this analytical method.
- Fill one unpreserved sample container (typically a small plastic jar provided by the lab) with soil from the same sampling interval/matrix as each sample. This jar is for moisture calculation to be submitted with DRO soil sample containers and should be labeled the same as the DRO sample jars. All soil samples for DRO analysis require an accompanying moisture calculation jar.

E.7. Metals Soil Grab Sample Collection

- One open-top, 4- or 8-oz. unpreserved jar.
- Using a clean stainless-steel spoon, scoopula, or gloved hand, thoroughly mix or homogenize the interval to be sampled, and fill the unpreserved sample containers with the collected soil sample. Avoid filling the sample containers with gravel or rocks.
- Wipe soil from the container threads. Close the flip-top of the unpreserved sample container.
- Note: if several analyses are being performed for a single soil sample, the collection and submission of one moisture calculation jar is sufficient for all of the analyses for that one soil sample.

E.8. PCBs/SVOCs Soil Grab Sample Collection

- Open 4-oz., unpreserved sample container.
- Using a clean stainless-steel spoon, scoopula, or gloved hand, thoroughly mix or homogenize the interval to be sampled, and fill the unpreserved sample containers with the collected soil sample. Try to fill the sample containers with soil and not gravel or rocks.
- Wipe soil from the container threads. Reseal the 4-oz. sample container with the lid.
- Note: if several analyses are being performed for a single soil sample, the collection and submission of one moisture calculation jar is sufficient for all of the analyses for that one soil sample.

E.9. Sample Delivery

Arrange for pick-up/drop off of soil samples in laboratory-provided coolers to the analytical laboratory. If shipping of soil samples to the analytical laboratory is required, follow SOP 603 – Sample Shipping.


E.10. Data and Records Management

Soil samples collected in the field should be recorded in the field report form or field logbook (see SOP 101 – Field Notes and Documentation), on the field log, soil boring log, test trench log, etc., and on the COC (see SOP 602 – Chain-of-Custody Procedures). Information recorded in the field report form or field logbook and on the COC should be identical to the information listed on the sample container label(s). Additionally, it is useful to note how many soil sample containers were filled for each uniquely identified soil grab sample.

Note the presence of any pieces of bituminous in the samples, no matter how small, particularly in samples to be analyzed for DRO or SVOCs.

E.11. Quality Assurance/Quality Control

Quality assurance/quality control (QA/QC) procedures described in the work plan should be followed.

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A. Purpose

The purpose of the Chain-of-Custody (COC) Standard Operating Procedure (SOP) is to control environmental samples from the time they are collected until custody of the samples is accepted by the laboratory sample custodian. COC documentation serves three main purposes:

- Communicates the analytical instructions from the sampler to the analytical laboratory.
- Provides a permanent record of samples provided to the laboratory.
- Documents that samples were handled only by authorized personnel and were not available for tampering prior to analysis.

A.1. Scope and Applicability

Although few environmental samples will ever be used in criminal or civil litigation cases, most samples are collected in support of government-regulated activities. In addition, it is possible that the results of the sample analyses will be used in future litigation even if none was contemplated at the time the samples were collected. Therefore, it is important that a record of sample possession (i.e., COC) be maintained, so that control of the samples from the time of collection to the time of sample laboratory check-in can be demonstrated.

Laboratory-related sample control is described in laboratory operating and quality-control documents and is not discussed in this standard operating procedure (SOP).


This procedure should be used for control of environmental samples that include, but are not limited to those of groundwater (see SOP 311 – Groundwater Sample Collection), surface water (see SOP 314 – Surface Water Sampling), soil (see SOP 208 – Soil Grab Sample Collection and SOP 209 – Soil Composite Sample Collection), air (see SOP 402 – Indoor Air Sampling), soil vapor (see SOP 403 – Soil Vapor Sampling from a Borehole and with a Hand Probe and SOP 405 – Sub-Slab Soil Vapor Sampling), and waste.

A.2. Summary of Method

Environmental samples are collected using methods specified in the work plan or other SOPs. The samples are collected in sampling containers for the desired analyses, preserved as appropriate, and a label is affixed to each container specifying the project name and number, sample identification, date and time of collection, and sample collector. The information is entered onto the COC Form and the desired analyses are indicated on the form, which also serves as the analytical request. Sample custody (possession) is maintained individually until the samples are delivered to the laboratory sample check-in. Transfer of custody is documented on the COC Form by printed name, signature, date and time.

A.3. Personnel Qualifications and Responsibilities

The sampler is responsible for understanding, implementing and documenting activities related to this SOP during field activities. The sampler is responsible for transmitting a copy of field notes that have not been forwarded to the project manager or designee, as well as a copy of the COC Form(s) immediately after sample check-in. If there is more than one sampler, the lead field sampler assumes these responsibilities.

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A.4. Definitions

Chain-of-Custody Procedure: A procedure whereby a sample or set of samples is maintained under physical possession or control.

Custody: Samples and data are considered to be in your custody when:

- They are in your physical possession,
- They are in your view, after being in your physical possession,
- They are in your physical possession and then locked in a room or vehicle so that tampering cannot occur, or
- They are kept in a secured area, with access restricted to authorized personnel only.

Chain-of-Custody Form: Form used to record sample identification information, test(s) requested, result reporting instructions, and sample custody.

Sample: A portion of an environmental or source matrix that is collected and used to characterize the matrix.

B. Health and Safety

Field work should be performed in accordance with the *Braun Intertec Corporate Health and Safety Manual Standard Operating Procedures* and the site-specific health and safety plan (HASP).


Department of Transportation (DOT), United States Postal Service (USPS), and Federal Aviation Administration (FAA) shipping/labeling regulations must be followed for shipped samples.

C. Referenced SOPs

- SOP 208 – Soil Grab Sample Collection
- SOP 209 – Soil Composite Sample Collection
- SOP 314 – Surface Water Sampling
- SOP 402 – Indoor Air Sampling
- SOP 403 – Soil Vapor Sampling from a Borehole and with a Hand Probe
- SOP 405 – Sub-Slab Soil Vapor Sampling

D. Equipment and Supplies

- Field report form (see SOP 101 – Field Notes and Documentation) or field logbook
- Waterproof or indelible ink pens
- Sample labels
- Custody seals
- Chain-of-Custody (COC) forms (see SOP 602 – Chain-of-Custody Procedure)

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E. Procedure

E.1. General Guidelines

- Keep the number of people involved in collecting and handling samples and data to a minimum.
- Only personnel associated with the project should handle samples and data.
- Always document the transfer of samples and data from one person to another on the COC Form.
- Always accompany samples and data with the COC Form.
- Samples should be uniquely identified, legibly, in permanent ink.
- Fill out the COC Form as completely as possible. The sample identification information on the sample containers must match the COC Form.
- Use a separate COC Form for each cooler.

E.2. Completing CCO Form

The COC Form should be filled out by the sampler or designee as the samples are being collected and containerized.

E.3. Securing Samples

If you cannot maintain personal possession of the samples prior to sample check-in, they may be secured. A locked vehicle is considered controlled access (i.e., secured). A cooler sitting on the tailgate of a pickup truck or under an unlocked topper, out of direct view of the custodian is not secure. An unsecured cooler in a locked hotel room is also not within controlled access as hotel staff have access to the room. In this case, the cooler could be padlocked or custody seals could be used to secure the samples or cooler.


E.4. Data and Records Management

The original COC Form is maintained by the laboratory in accordance with their file retention guidance. A copy of the record should be provided to the project manager or designee with a copy of the sampling field notes by the sampler immediately after sample check-in.

E.5. Quality Assurance Quality Control

Quality assurance/quality control (QA/QC) procedures described in the work plan should be followed.

The project manager or designee should review the COC Form as soon as possible after sample check-in to verify that the information on the COC Form is correct.

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A. Purpose

The purpose of this Standard Operating Procedure (SOP) is to describe the procedure used for proper packaging methods and shipment of samples by overnight carrier via Chain-of-Custody (COC) procedures (see SOP 602 – Chain-of-Custody Procedures).

A.1. Scope and Applicability

If samples cannot be delivered to the laboratory in person and must be shipped, the following procedures should be used.

This procedure should be used for shipping of environmental samples that include, but are not limited to those of groundwater (see SOP 311 – Groundwater Sample Collection), surface water (see SOP 314 – Surface Water Sampling), soil (see SOP 208 – Soil Grab Sample Collection and SOP 209 – Soil Composite Sample Collection), air (see SOP 402 – Indoor Air Sampling), soil vapor (see SOP 403 – Soil Vapor Sampling from a Borehole and with a Hand Probe and SOP 405 – Sub-Slab Soil Vapor Sampling), and waste.

A.2. Summary of Method

Environmental samples are collected using methods specified in the work plan or other SOPs. The samples are collected in sampling containers for the desired analyses, preserved as appropriate, and a label is affixed to each container specifying the project name and number, sample identification, date and time of collection, and sample collector. The information is entered onto the COC Form and the desired analyses are indicated on the record, which also serves as the analytical request. Sample custody (possession) is maintained individually until the samples are delivered to the laboratory sample check-in. Transfer of custody is documented on the COC Form by printed name, signature, date, and time.

A.3. Personnel Qualifications and Responsibilities

The sampler is responsible for understanding, implementing, and documenting activities related to this SOP during field activities. The sampler is responsible for transmitting a copy of field notes that have not been forwarded to the project manager or designee, as well as a copy of the COC Form(s) immediately after samples are shipped. If there is more than one sampler, the lead sampler assumes these responsibilities.


A.4. Definitions

Chain-of-Custody Procedure: A procedure whereby a sample or set of samples is maintained under physical possession or control.

Custody: Samples and data are considered to be in your custody when:

- They are in your physical possession.
- They are in your view, after being in your physical possession.
- They are in your physical possession and then locked up so that tampering cannot occur.
- They are kept in a secured area, with access restricted to authorized personnel only.

Chain-of-Custody Form: Form used to record sample identification information, test(s) requested, result reporting instructions and sample custody.

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B. Health and Safety

Field work should be performed in accordance with the *Braun Intertec Corporate Health and Safety Manual Standard Operating Procedures* and the site-specific health and safety plan (HASP).


Department of Transportation (DOT), United States Postal Service (USPS), and Federal Aviation Administration (FAA) shipping/labeling regulations must be followed for shipped samples.

C. Referenced SOPs

- SOP 208 – Soil Grab Sample Collection
- SOP 209 – Soil Composite Sample Collection
- SOP 308 – Trip Blanks
- SOP 314 – Surface Water Sampling
- SOP 402 – Indoor Air Sampling
- SOP 403 – Soil Vapor Sampling from a Borehole and with a Hand Probe
- SOP 405 – Sub-Slab Soil Vapor Sampling
- SOP 602 – Chain-of-Custody Procedures

D. Equipment and Supplies

- Sample coolers or similar shipping containers (solid or liquid samples)
- Sturdy cardboard boxes (steel air canister)
- Protective wrapping and packaging materials
- Ice
- Appropriate laboratory-supplied containers and preservatives (when applicable)
- Sample labels
- Temperature blanks (one per sample cooler)
- Trip blanks, if necessary (see SOP 308 – Trip Blanks)
- Gallon-size plastic bags
- Waterproof and/or indelible ink pens
- COC Forms (see SOP 602 – Chain-of-Custody Procedure)
- Custody seals
- Clear packing tape
- Shipping labels for the exterior of the shipping container
- Bill of lading for selected carrier

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E. Procedure

E.1. General Guidelines

- Sample containers with solids or liquids should be placed inside of sealable plastic bags to reduce the potential for cross contamination, breakage, and melted ice getting into the samples.
- The drain plug on the cooler, if present, should be taped shut from the inside and outside.
- A layer of protective material such as bubble wrap should be placed in the bottom of the cooler.

E.2. Cooler Guidelines

- If possible, place all contents of the cooler into a large plastic bag that is tied or taped shut to avoid melted ice from leaking out of the cooler during shipping.
- Sample containers should be placed upright in the cooler, and protective material such as bubble wrap should be placed around the sample containers. Do not stack glass containers or lay them on their side, as doing so increases the chance of them breaking.
- Fill the cooler no more than 50 percent with sample containers. Fill all the remaining void space in the cooler with protective material and ice to avoid breakage during transport. At least 1/3 of total cooler space should be taken up by ice. When in doubt, use more ice.
- Ice that is double bagged in sealable plastic bags should be distributed over the top of the samples.
- Additional protective material should then be added to the cooler.
- Ensure that a temperature blank bottle and trip blank (if needed) is in each cooler and included on the COC Form.
- Total weight must be less than 30 pounds.

E.3. Air Canister Guidelines


- If possible, reuse the cardboard box provided by the laboratory. If not possible, use a sturdy cardboard box to contain the air canister and associated regulator.
- Include bubble wrap as necessary to reduce movement of the canister and regulator during shipment.
- Use clear packing tape to secure the box during shipment.

E.4. COC Guidelines

- The sampler should relinquish the samples by signing and indicating the date and time that the samples were relinquished to the shipper. The shipping company agent is not required to sign the COC Form.
- Field personnel should retain a copy of the COC Form and attach it to the field notes.
- The COC Form should be placed in a sealable plastic bag and taped to the inside of the cooler lid or placed inside the cardboard box. At least one COC Form should be placed in each cooler that is sent to the laboratory.

E.5. Custody Seal Guidelines

- Close the top of the cooler and rotate/shake the cooler to verify that the contents are packed so that they do not move. Add additional protective material if needed and reclose.
- Place one custody seal on the front and on the back of the cooler in such a way that the opening of the cooler will destroy the seal. If shipping air canisters, place the custody seal where the cardboard box flaps meet.
- Tape the cooler or the cardboard box shut with clear packing tape, wrapping all the way around each end. Be sure to tape over the custody seals.

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E.6. Shipping Guidelines

- Samples sent by private carrier (UPS, FedEx, etc.) will be accompanied by a bill of lading or other shipping document. Shipping documentation should be saved as part of the permanent record. DOT, USPS, and FAA shipping/labeling regulations must be followed. The contents should be described on the shipping documents as “non-hazardous environmental samples” unless the samples are known to be hazardous such as methane gas samples. If hazardous, contact the laboratory for special shipping instructions. Fill out the correct shipping paperwork with the correct shipping address for the laboratory and tape to the top of the cooler or shipping box. Wrap packing tape around the entire cooler or shipping box. Retain copies of all shipment records as provided by the shipper.
- The cooler or shipping box should be shipped to “Laboratory Sample Receiving” marked “Deliver to addressee only,” and the laboratory should be notified of its approximate delivery date and time.
- Deliver the cooler or have the cooler picked up by an overnight carrier that guarantees 24-hour delivery. Consideration should be given to the expected delivery date and the weather. The preferred carriers are shown below in order of preference.
 - Contract shipper such as Speedee (Minnesota only).
 - UPS through Braun Intertec Document Center or front desk (Minneapolis only).
 - UPS through retail outlet.
 - FedEx – may require an explanation stating the container is non-hazardous or the canister is not a cylinder, contains air, is non-flammable, and is not under pressure.
 - US mail – no special marking required.

E.7. Data and Records Management

The original request for COC Form is maintained by the laboratory in accordance with their file retention guidance. A copy of the record should be provided to the project manager or designee with a copy of the sampling field notes by the field personnel immediately after sample check-in.

E.8. Quality Assurance Quality Control

Quality assurance/quality control (QA/QC) procedures described in the work plan should be followed.

The project manager or designee should review the COC Form as soon as possible after sample check-in to verify that the information on the COC Form is correct.