

Preliminary Site Assessment NC DOT Property - Parcel 7B

Charlotte, Mecklenburg County
North Carolina

H&H Job No. ROW-504
State Project P-3800
WBS Element #32213
March 13, 2015



**Preliminary Site Assessment
NC DOT Property - Parcel 7B
Charlotte, Mecklenburg County, North Carolina
H&H Project ROW-504**

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**Preliminary Site Assessment
NC DOT Property - Parcel 7B
Charlotte, Mecklenburg County, North Carolina
H&H Project ROW-504**

1.0 Introduction and Background

Hart & Hickman, PC (H&H) has prepared this Preliminary Site Assessment (PSA) report documenting assessment activities performed at the North Carolina Department of Transportation (NC DOT) property (Parcel 7B) located at 510 W. 4th Street in Charlotte, Mecklenburg County, North Carolina. This assessment was conducted on behalf of the NC DOT in accordance with H&H's November 21, 2014 proposal.

NC DOT requested that H&H collect samples to evaluate the presence or absence of impacted soil and groundwater on the subject property. This property may be used by NC DOT to facilitate a trade for a separate parcel related to the construction of the Charlotte Multimodal Rail Station (State Project P-3800). Parcel 7B is currently occupied by a parking lot. A site location map is included as Figure 1, and a site map is presented as Figure 2. NC DOT's plan sheet depicting the parcels in this area is included in Appendix A.

H&H reviewed environmental documents for the subject property that were provided by NC DOT. Based on the Limited Phase I Environmental Site Assessment (ESA) Report dated September 2000 prepared by Arcadis Geraghty & Miller, the property was previously occupied by a printing shop and a brass-works facility. A heating oil above ground storage tank (AST) was observed on site during the ESA activities. Heating oil free product was historically observed in a monitoring well near the former AST location. The well was installed as part of groundwater assessment activities associated with a petroleum release on the adjacent property to the southeast. Pertinent information from the Phase I ESA is included in Appendix B.

The PSA activities recently conducted by H&H on Parcel 7B are discussed below.

2.0 Geophysical Survey and Soil Assessment

2.1 Geophysical Survey

Prior to advancing soil borings, H&H reviewed the results of a geophysical survey performed at the site by GEL Geophysics, LLC (GEL) in January 2015. GEL utilized electromagnetic (EM) induction technology and ground penetrating radar (GPR) to identify potential geophysical anomalies and potential USTs at the site. The EM/GPR results did not indicate the suspected presence of USTs on the property. Anomalies identified on the property were attributed to known surface metallic objects that were not characteristic signatures of possible USTs. GEL's report, including a site map depicting the results of the EM and GPR survey, is provided in Appendix C. Please note that GEL's report covers multiple parcels.

2.2 Soil Sampling

On January 24 and 25, 2015, H&H and our subcontracted drilling firm installed 8 soil borings (7B-1 through 7B-8) by hand auger and direct push technology (DPT). Prior to conducting soil borings, underground utilities were marked by the NC 811 public utility locator and by GEL for private underground utilities. Borings were also cleared to a five foot depth by hand auger. H&H utilized Geologic Exploration, Inc. of Statesville, North Carolina to advance the soil borings. The soil borings were advanced to depths of 15 feet below ground surface (ft bgs). To facilitate the selection of soil samples for laboratory analysis, soil from each boring was screened continuously for the presence of volatile organic compounds (VOCs) with an organic vapor analyzer (OVA). Additionally, H&H observed the soil for visual and olfactory indications of impacts. Based on field screening, there were moderate indications of impacts in soil borings 7B-3, 7B-4, and 7B-7. There were no other significant indications of impacts based on field screening. Soil samples were collected at depths ranging from 0 to 2 ft bgs to 14 ft to 15 ft bgs. Soil boring logs are included in Appendix D.

During PSA activities, two monitoring wells were identified near the property boundaries of Parcel 7B. H&H gauged the monitoring wells for free product. No free product was identified in either monitoring well. GPS coordinate data for the soil borings and monitoring wells are summarized in Table 1. Soil boring and monitoring well locations are shown on Figure 2.

H&H submitted a total of eight soil samples from borings 7B-1 through 7B-8 for laboratory analysis. The soil samples were placed into laboratory supplied sample containers using nitrile glove-covered hands. The containers were then labeled as to content, analyses requested, sample date and time, and sampler's name. The samples were placed in an iced cooler upon collection and were subsequently submitted to the laboratory under standard chain-of-custody protocol. Laboratory analytical data sheets and chain-of-custody documentation are provided in Appendix E.

Soil samples were submitted for analysis of total petroleum hydrocarbons (TPH) as gasoline-range organics (GRO) and diesel-range organics (DRO) using UVF technology, VOCs by EPA Method 8260, and Hazardous Substance List (HSL) metals by EPA Method 6010/7471. Soil samples analyzed for TPH using UVF technology were shipped to QROS for analysis, and the soil samples analyzed for VOCs were shipped to Pace Analytical Services, Inc. Soil sample depths and analytical results are summarized in Table 2. The analytical results are discussed below.

2.3 Soil Analytical Results

Detected TPH concentrations were compared to North Carolina Department of Environment and Natural Resources (DENR) Action Levels. Concentrations of TPH DRO (up to 318.3 mg/kg) were detected. TPH-DRO concentrations exceeded the DENR Action Level of 10 mg/kg in four of the eight samples analyzed. Concentrations of TPH DRO below the DENR Action Level were detected in two of the eight samples analyzed. No concentrations of TPH GRO were detected. TPH data are depicted on Figure 2.

Select petroleum like VOCs were detected in one soil sample. The detected VOC concentrations were compared to DENR Inactive Hazardous Sites Branch (IHSB) Preliminary Health-Based Soil Remediation Goals (SRGs) and the IHSB Protection of Groundwater (POG) SRGs. Low level VOCs including benzene, ethylbenzene, and n-propylbenzene were detected in soil sample 7B-4 14 to 15 ft. The detected concentration of benzene (0.0341 mg/kg) exceeded the POG SRG (0.0073 mg/kg). Concentrations did not exceed Health-Based SRGs.

Elevated metal concentrations in the samples included antimony, lead, and/or mercury. Elevated metals are considered to be detections above twice the average background levels. Antimony was detected in two of the eight samples analyzed above the Residential and POG SRGs. Lead was detected in one sample above the Residential and POG SRGs. Mercury was detected in one sample above the Residential/Industrial and POG SRGs. Other than the one mercury detection, metal impacts did not exceed Industrial SRGs. Metal background levels were taken from literature values as noted on Table 2.

The soil sample (7B-5 0 to 2 ft) with an elevated lead concentration of 598 mg/kg was also analyzed for TCLP RCRA metals to determine if the lead impacted soil would be hazardous waste if disturbed. The TCLP lead concentration for soil sample 7B-5 was 3.7 mg/L which is below the hazardous waste threshold of 5 mg/L. The lead impacted soil is depicted on Figure 3.

Based on the above soil sample results, H&H estimates the following amounts of impacted soil are present on Parcel 7B:

- H&H estimates there are roughly 350 cubic yards (525 tons) of soil impacted with TPH DRO between the surface and 4 ft near soil borings 7B-1, 7B-2, 7B-5 and 7B-6 and 200 cubic yards (300 tons) of DRO impacted soil between 10 ft and 15 ft near soil borings 7B-3 and 7B-4. TPH DRO impacted soil near borings 7B-1 and 7B-4 is below the DENR Action Level. Elevated mercury is also present in 7B-1 and elevated antimony is also present in 7B-6.
- There are roughly 30 cubic yards (45 tons) of soil impacted with lead and antimony above the SRGs between the surface and 2 ft near soil boring 7B-5.

The estimated depth of impacted soils is based on field screening results. However, field screening and lab results did not provide information that defines the impacted soil interval or extent in most locations. Therefore, impacts may extend beyond the depths and amounts indicated above. Although the TPH DRO impacts are below the Action Level near borings 7B-1 and 7B-4, these soils should also be managed as impacted if they are disturbed or excavated by site work. The approximate areas of impacted soils are shown on Figures 2 and 3.

3.0 Groundwater Assessment

3.1 Temporary Monitoring Well Sampling

To evaluate the potential for groundwater impacts, one temporary monitoring well (TW-7B) was installed in soil boring 7B-4 where the highest potential for impacts were detected based on field screening during soil sampling activities. The temporary monitoring well location is shown on Figure 2.

Prior to the well installation, a Subsurface Investigation Permit (SIP) was obtained for the temporary well as required by Mecklenburg County. The well was installed by Geologic Exploration using the DPT drill rig. The temporary monitoring well was installed with a 3/4-inch diameter PVC riser with 15 feet of pre-packed 0.010-inch slotted screen (to reduce turbidity) to a depth of 30 ft bgs. The annulus around the well casing above the pre-packed screen was filled with approximately two ft of hydrated bentonite. The temporary well boring log is included in Appendix D. The SIP is included in Appendix F.

Upon completion of the monitoring well installation, H&H developed the well using a bailer to remove sediment from the well to the extent practical. Once development was complete and the water table equilibrated, H&H measured depth to water using an electronic meter. The static depth to water in TW-7B was approximately 22 ft below grade.

The well was purged until field measurements including pH, specific conductivity, and temperature stabilized. A groundwater sample was then collected and placed into laboratory-supplied sample containers for analysis of VOCs using EPA Method 8260. The containers were then labeled as to content, analyses requested, sample date and time, and sampler's name. The sample was placed in an iced cooler upon collection and submitted to Pace Analytical Services, Inc. under standard chain-of-custody protocol. Analytical results are summarized in Table 3. Laboratory analytical data sheets for the groundwater sample and chain-of-custody documentation are provided in Appendix E.

After completion of groundwater sampling activities, temporary monitoring well TW-7B was properly abandoned in accordance with DENR regulations by Geologic Exploration. The well abandonment record was provided to Mecklenburg County to close out the SIP. The well abandonment record is included in Appendix F.

3.2 Groundwater Analytical Results

Low level concentrations of VOCs including benzene, 1,2-dichloroethane, diisopropyl ether, ethylbenzene, methyl-tert-butyl ether, naphthalene, toluene, and xylenes were detected in the groundwater sample collected from temporary monitoring well TW-7B. The concentrations of benzene (0.0179 mg/L), 1,2-dichloroethane (0.0010 mg/L), MTBE (0.394 mg/L), and naphthalene (0.0094 mg/L) exceeded their respective 15A NCAC 2L.0202 Groundwater Quality Standards (2L Standards).

The depth to groundwater is in the range of 22 ft in this area of the property. Therefore, encountering the water table during construction is unlikely. However, if the water table is encountered during construction activities the presence of groundwater impacts should be considered.

4.0 Investigative Derived Waste

Decontamination/purge water and soil cuttings generated during the soil boring and well installation activities were containerized in 55-gallon drums. Composite samples of the purge water and soil cuttings were analyzed for TCLP VOCs and TCLP RCRA metals. No impacts were detected in the water sample. TCLP metals were detected in the soil cuttings; however, the detected levels did not exceed the characteristically hazardous waste thresholds. Laboratory analytical data sheets and chain-of-custody documentation for investigative derived waste are provided in Appendix E. The non-hazardous IDW drums were removed by EVO Corporation of Winston-Salem, NC for proper off-site disposal. The non-hazardous soil and water disposal manifests are included in Appendix G.

5.0 Summary and Regulatory Considerations

H&H has reviewed historical environmental reports for Parcel 7B. This property was previously occupied by a printing shop and a brass-works facility. Heating oil free product was previously observed in a monitoring well near a former AST location on the property. Therefore, H&H conducted an EM/GPR survey and a PSA at the request of NC DOT. Based on the EM/GPR survey, no potential USTs were identified on Parcel 7B. Impacted soil was identified on Parcel 7B during PSA activities. The primary contaminants in soil are TPH DRO and lead. The lead impacts in soil are below the hazardous waste threshold. Most of the property contains impacted soil. Based on rough estimates of the extent of impacted soil, approximately 580 cubic yards (870 tons) of impacted soil appear to be present. Impacted soil that is disturbed or removed during future construction activities should be properly managed.

Analytical results of a groundwater sample collected by H&H indicate that groundwater is impacted with low level petroleum VOCs above 2L Standards beneath Parcel 7B. The depth to groundwater is approximately 22 ft below grade. Therefore, encountering the water table during construction is unlikely. However, if the water table is encountered during construction activities, the presence of groundwater impacts should be considered.



6.0 Signature Page

This report was prepared by:



David Graham
Senior Project Geologist for
Hart and Hickman, PC

This report was reviewed by:



Matt Bramblett, PE
Principal and Project Manager for
Hart and Hickman, PC

Table 1
Soil Boring GPS Coordinate Data
NC DOT Parcel 7B
Charlotte, Mecklenburg County, North Carolina
H&H Job No. ROW-504

Sample ID	Latitude	Longitude
7B-1	35.230114	-80.848415
7B-2	35.230159	-80.848353
7B-3	35.230226	-80.848261
7B-4 / TW-7B	35.230273	-80.848203
7B-5	35.230326	-80.848130
7B-6	35.230202	-80.848343
7B-7	35.230211	-80.848158
7B-8	35.230317	-80.848267
MW-1	35.230142	-80.848314
MW-2	35.230140	-80.848449

Notes:

GPS coordinate data points collected using a Trimble GeoExplorer 6000 series unit with external satellite for increased accuracy.

**Table 2
Soil Analytical Results
NC DOT Parcel 7B
Charlotte, Mecklenburg County, North Carolina
H&H Job No. ROW-504**

Sample ID Sample Depth (ft) Sample Date	7B-1	7B-2	7B-3	7B-4	7B-5	7B-6	7B-7	7B-8	Regulatory Standard					
	0-2 1/24/2015	0-2 1/24/2015	14-15 1/24/2015	14-15 1/24/2015	0-2 1/24/2015	0-2 1/24/2015	14-15 1/25/2015	14-15 1/25/2015	IHSB SRG ¹ (mg/kg)	IHSB POG ² (mg/kg)	IHSB Industrial SRG			
<u>VOCs (8260) (mg/kg)</u>														
Benzene	<0.0045	<0.0050	<0.0055	0.0341	<0.0055	<0.0053	<0.0053	<0.0058	1.2	0.0073	5.1			
Ethylbenzene	<0.0045	<0.0050	<0.0055	0.0245	<0.0055	<0.0053	<0.0053	<0.0058	5.8	8.1	25			
n-Propylbenzene	<0.0045	<0.0050	<0.0055	0.0064	<0.0055	<0.0053	<0.0053	<0.0058	260	1.5	26			
<u>TCLP (mg/L)</u> <u>RCRA Metals (7470/6010)</u>									RCRA Characteristic Level (mg/L)					
Barium	NA	NA	NA	NA	1.3	NA	NA	NA	100.0					
Cadmium	NA	NA	NA	NA	0.026	NA	NA	NA	1.0					
Lead	NA	NA	NA	NA	3.7	NA	NA	NA	5.0					
<u>HSL Metals (6010/7471) (mg/kg)</u>									IHSB SRG ¹ (mg/kg)	IHSB POG ² (mg/kg)	IHSB Industrial SRG	Range ³ (mg/kg)	Mean ³ (mg/kg)	
Antimony	<0.49	1.1	<0.58	<0.51	11.3	11.0	<0.53	<0.45	6.2	0.90	94	<1.0-8.8	0.76	
Arsenic	1.2	4.9	<1.2	<1.0	2.5	1.5	<1.1	1.3	0.67	5.8	3	1.0-18	4.8	
Beryllium	0.19	0.33	0.27	0.33	0.32	0.21	0.17	0.53	32	63	460	ND-2.0	0.11	
Cadmium	0.21	2.6	<0.12	0.16	1.4	0.75	0.17	0.13	14	3	200	1.0-10	4.3	
Chromium	10.3	14.8	7.6	10.2	19.4	22.6	15.0	19.4	24,000	360,000	100,000	7.0-300	65	
Copper	18.8	35.0	20.4	11.9	165	68.4	13.3	35.9	620	700	9,400	3.0-100	34	
Lead	23.0	138	6.7	8.4	598	209	7.1	7.4	400	270	800	ND - 50	16	
Manganese	219	143	144	137	1,090	353	77.0	30.8	360	65	5,200	8.0-3,394	594	
Mercury	0.042	7.1	0.016	0.0079	0.17	0.47	0.023	<0.0050	1.9	1.0	3.1	0.03-0.52	0.121	
Nickel	3.5	4.2	4.3	3.9	8.3	6.8	2.0	3.1	300	130	4,400	ND-150	23	
Selenium	<0.97	<1.0	<1.2	1.1	<0.75	<0.86	1.2	<0.90	78	2.1	1,200	<0.1-0.8	0.42	
Silver	<0.49	<0.50	0.62	0.63	0.38	<0.43	<0.53	<0.45	78	3.4	1,200	ND-5.0	--	
Zinc	23.7	322	40.2	35.4	590	179	20.6	14.6	4,600	1,200	70,000	25-124	56	
<u>TPH-DRO/GRO (8015) (mg/kg)</u>									NCDENR Action Level (mg/kg)					
Diesel-Range Organics (DRO)	7.01	318.3	30.93	0.36	215.6	14.44	<0.09	<0.14	10					
Gasoline-Range Organics (GRO)	<0.7	<17.2	<0.7	<0.7	<8.1	<0.6	<0.4	<0.7	10					

Notes:

1. NC DENR Inactive Hazardous Sites Branch (IHSB) Residential Health-Based Soil Remediation Goals (SRGs) - September 2014
2. NC DENR IHSB Protection of Groundwater (POG) Soil Remediation Goals - September 2014
3. Range and Mean background values for North Carolina or Southeast soils taken from *Elements in North American Soils* by Dragun and Chekiri, 2005

NA = Not Analyzed

EPA Method follows parameter in parenthesis;

Bold indicates above potential target level (and twice the mean background levels in the case of metals).

Table 3
Groundwater Analytical Results
NC DOT Parcel 7B
Charlotte, Mecklenburg County, North Carolina
H&H Job No. ROW-504

Sample ID	TW-7B	Screening Criteria
		NC DENR 2L Standard ¹
Sample Date	1/25/2015	mg/L
Units	mg/L	mg/L
<u>VOCs (8260)</u>		
Benzene	0.0179	0.001
1,2-Dichloroethane	0.0010	0.0004
Diisopropyl Ether	0.0346	0.070
Ethylbenzene	0.0302	0.600
Methyl-tert-butyl ether	0.394	0.020
Naphthalene	0.0094	0.006
Toluene	0.0044	0.600
Total Xylenes	0.108	0.500

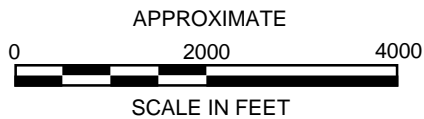
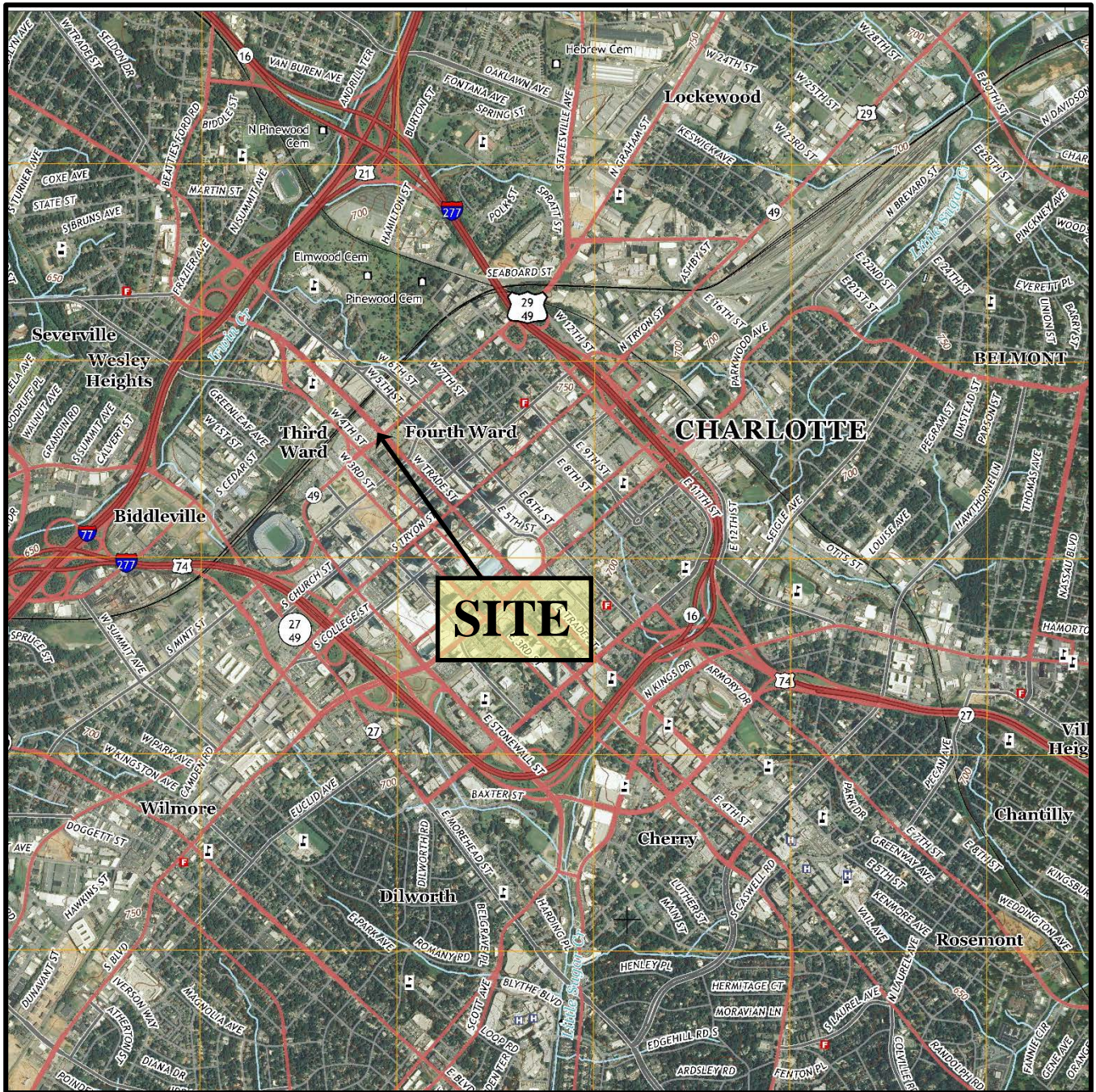
Notes:

1. NC DENR 15A NCAC 2L .0202 Groundwater Quality Standards - April 2013

EPA Method follows parameter in parenthesis

VOCs=volatile organic compounds

Bold indicates above target level.

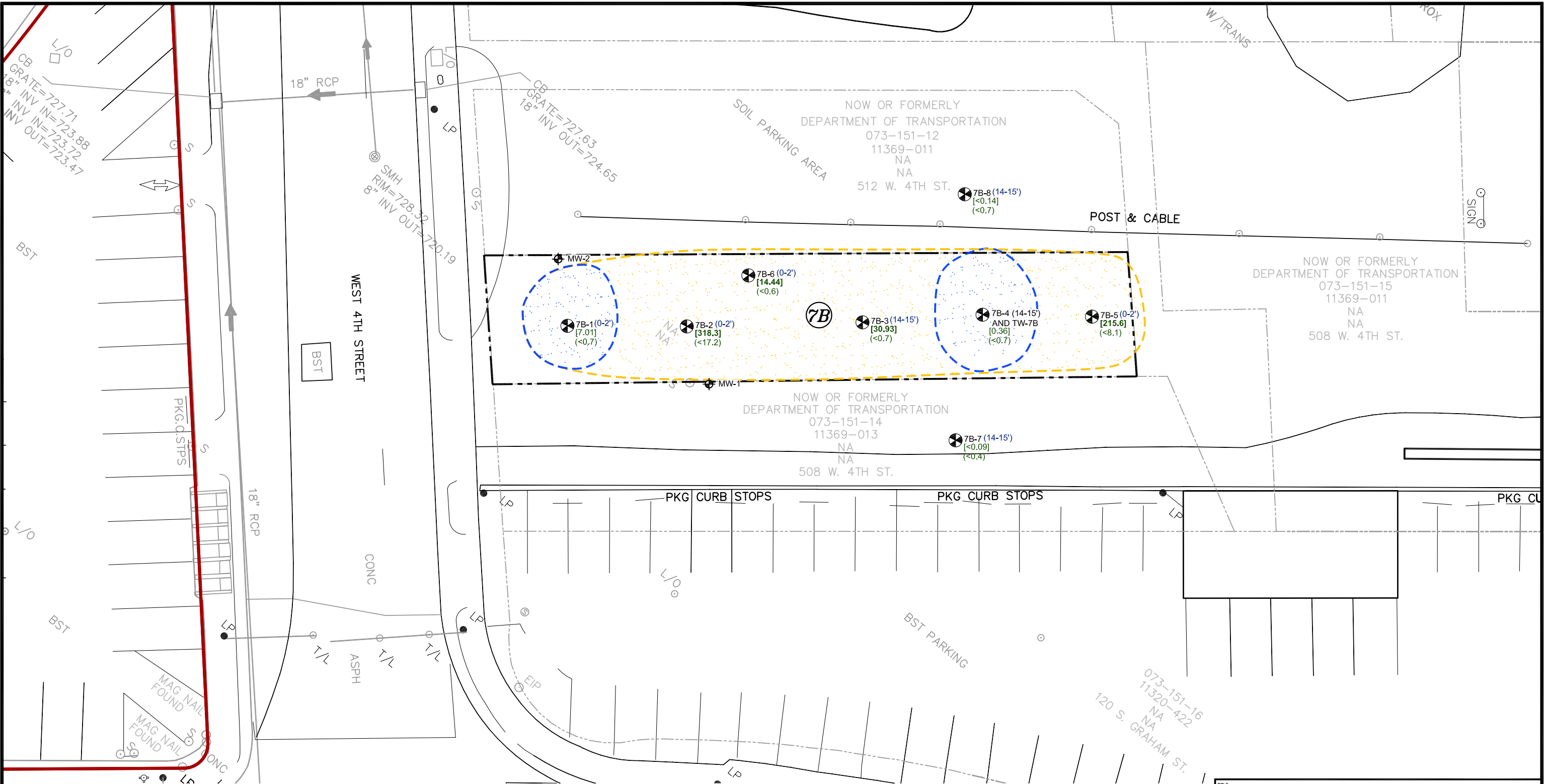


U.S.G.S. QUADRANGLE MAP
CHARLOTTE, NC 2013

QUADRANGLE
 7.5 MINUTE SERIES (TOPOGRAPHIC)

TITLE	SITE LOCATION MAP		
PROJECT	NCDOT PARCEL 7B 510 W. 4TH STREET CHARLOTTE, MECKLENBURG COUNTY, NC		
		2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007 (p) 704-586-0373 (f)	
DATE:	2-10-15	REVISION NO:	0
JOB NO:	ROW-504	FIGURE:	1

S:\AAA-Master Projects\NC DOT Right-of-Way - ROW\ROW-504\ROW-504 P-3800 Charlotte Rail Station\Figures\row-504 site maps.dwg, 7B (2), 3/12/2015 12:23:34 PM.

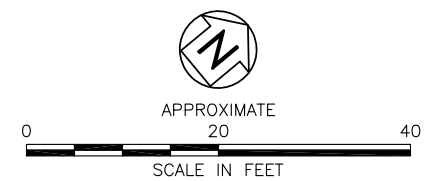


LEGEND

- SITE PROPERTY BOUNDARY
- PARCEL BOUNDARY
- NCDOT PARCEL NUMBER
- SOIL BORING
- MONITORING WELL

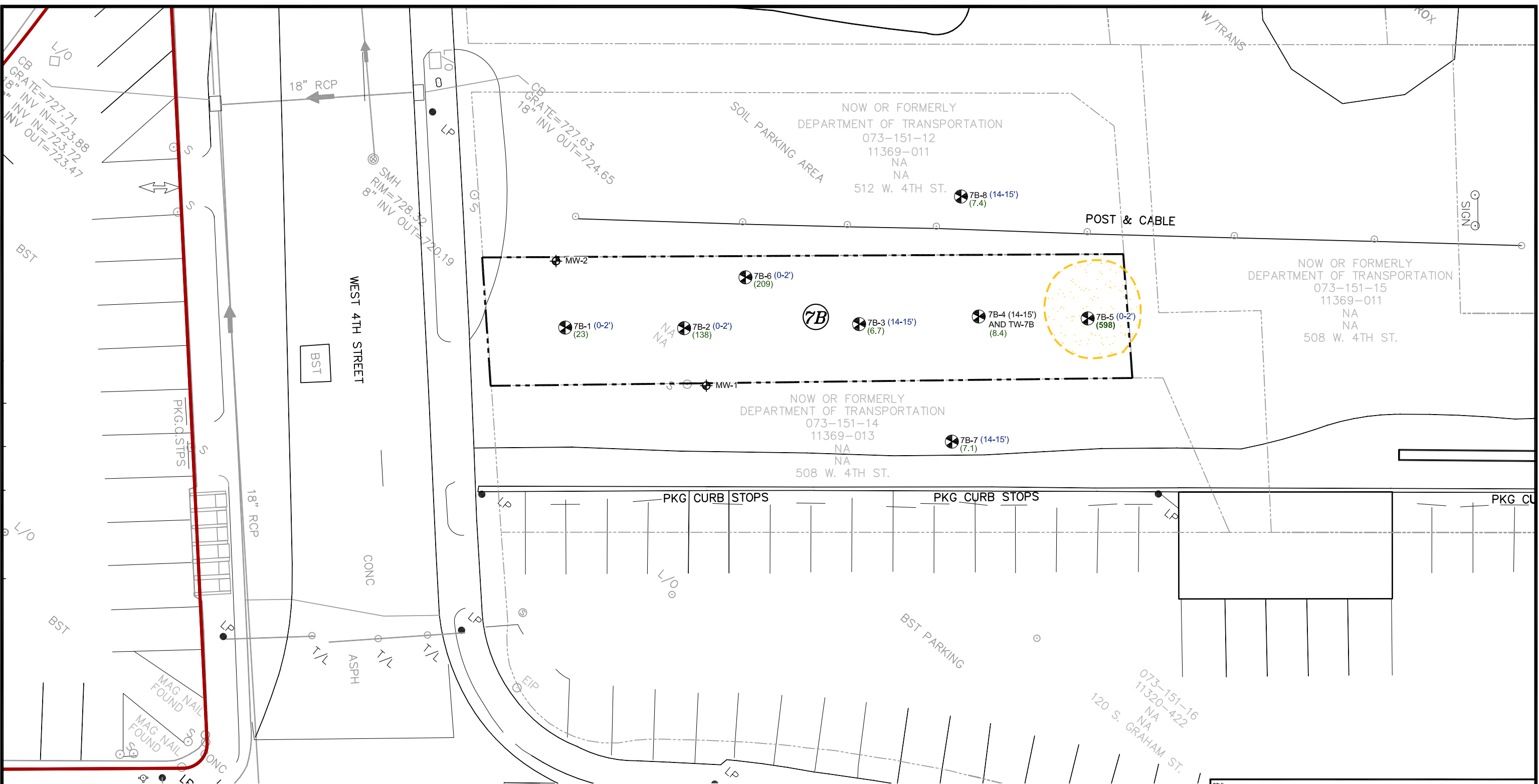
- [7.01]** DIESEL-RANGE TPH (mg/kg)
- (<0.7)** GASOLINE-RANGE TPH (mg/kg)
- AREA OF DRO IMPACTED SOIL ABOVE DENR ACTION LEVEL
- AREA OF DRO IMPACTED SOIL BELOW DENR ACTION LEVEL

NOTE:
BOLD INDICATES ABOVE DENR ACTION LEVEL



TITLE SITE MAP AND TPH ANALYTICAL RESULTS	
PROJECT NCDOT PARCEL 7B 510 W. 4TH STREET CHARLOTTE, MECKLENBURG COUNTY, NC	
 <small>2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f) License # C-1269 / #C-245 Geology</small>	
DATE: 03-04-15	REVISION NO. 0
JOB NO. ROW-504	FIGURE NO. 2

S:\AAA-Master Projects\NC DOT Right-of-Way - ROW\ROW-500s\ROW-504 P-3800 Charlotte Rail Station\Figures\row-504 site maps.dwg, 7B (3), 3/12/2015 12:26:48 PM.

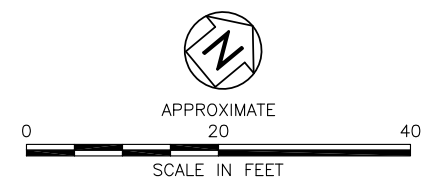


LEGEND

- SITE PROPERTY BOUNDARY
- PARCEL BOUNDARY
- NCDOT PARCEL NUMBER
- SOIL BORING
- MONITORING WELL

- (138) TOTAL LEAD (mg/kg)
- AREA OF LEAD IMPACTED SOIL ABOVE DENR TARGET LEVELS

NOTE:
BOLD INDICATES ABOVE DENR TARGET LEVEL



TITLE LEAD IN SOIL	
PROJECT NCDOT PARCEL 7B 510 W. 4TH STREET CHARLOTTE, MECKLENBURG COUNTY, NC	
hart hickman 2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f) License # C-1269 / #C-245 Geology SMARTER ENVIRONMENTAL SOLUTIONS	
DATE: 03-04-15	REVISION NO. 0
JOB NO. ROW-504	FIGURE NO. 3

Appendix A
NC DOT Preliminary Plan

NCDOT OWNED ACREAGE		COUNTY OWNED ACREAGE		APPROX TOTAL ACREAGE ON MAP
A = 3.75	F = 0.47	3D = 0.74	3E = 0.38	20.61
B = 1.50	G = 1.80	GREYHOUND OWNED ACREAGE		
C = 2.88	H = 2.14	22A = 1.34		
D = 1.56	J = 2.35	CITY OWNED ACREAGE		
E = 1.29		22B = 0.46		
APPROX TOTAL NCDOT ACREAGE = 17.7				

THIS MAP IS PREPARED USING MECKLENBURG COUNTY MAPPING DATA AND MAY NOT REFLECT THE MOST UP-TO-DATE OWNERSHIP AND BOUNDARY INFORMATION. PARCEL AND RIGHT-OF-WAY BOUNDARIES ARE APPROXIMATE.



- (A) NORTH CAROLINA DOT**
 25A DB 13053 PG 755
 TAX PARCEL ID *073-172-11
 *073-161-09
 *073-115-32
 *073-115-32
 *078-067-02
 *078-061-05
 *078-076-02
 25B DB 13053 PG 770
- (B) NORTH CAROLINA DOT**
 3A DB 10605 PG 225
 TRACT *2
 TAX PARCEL ID *073-161-07
 3B DB 10605 PG 225
 TRACT *1
 TAX PARCEL ID *073-161-07
 3C DB 10605 PG 225
 TRACT *3
 TAX PARCEL ID *073-161-07
 3D.1* DB 23210 PG 693
 TAX PARCEL ID *073-161-10
 3E.1* DB 23210 PG 693
 TAX PARCEL ID *073-161-10
 3F.1* DB 23210 PG 693
 TAX PARCEL ID *073-161-10
- (B) MECKLENBURG COUNTY**
 3D DB 12297 PG 274
 TAX PARCEL ID *073-161-01
 DB 12297 PG 274
 TAX PARCEL ID *073-161-03
 DB 12280 PG 012
 TAX PARCEL ID *073-161-06
 DB 12368 PG 870
 TAX PARCEL ID *073-162-02
 * FORMERLY PART OF THE IDENTIFIED TAX PARCEL.
- (C) NORTH CAROLINA DOT**
 4A DB 11343 PG 772
 TAX PARCEL ID *073-151-23
 4B DB 11343 PG 772
 TAX PARCEL ID *073-151-24
 5A DB 11369 PG 001
 TAX PARCEL ID *073-151-20
 5B DB 11369 PG 001
 TAX PARCEL ID *073-151-21
 5C DB 11369 PG 001
 TAX PARCEL ID *073-151-22
 6 DB 11369 PG 003
 TAX PARCEL ID *073-151-10
 7A DB 11369 PG 011
 TAX PARCEL ID *073-151-12
 7B DB 11369 PG 011
 TAX PARCEL ID *073-151-13
 7C DB 11369 PG 011
 TAX PARCEL ID *073-151-15
 8 DB 11350 PG 050 * PG 060
 TAX PARCEL ID *073-151-19
 9 DB 11320 PG 422
 TAX PARCEL ID *073-151-16
 10 DB 11369 PG 013
 TAX PARCEL ID *073-151-14
- (C) OTHER**
 22A GLI REALTY COMPANY
 DB 5459 PG 596
 TAX PARCEL ID *073-151-29
 22B CITY OF CHARLOTTE
 DB 24319 PG 421
 TAX PARCEL ID *073-151-33
- (D) NORTH CAROLINA DOT**
 14 DB 13723 PG 174
 TAX PARCEL ID *078-056-01
 15 DB 13723 PG 184
 TAX PARCEL ID *078-056-02
 16 DB 13713 PG 486
 TAX PARCEL ID *078-056-08
 17 DB 13713 PG 490
 TAX PARCEL ID *078-056-03
 18 DB 14797 PG 69
 TAX PARCEL ID *078-056-07
 19 DB 13723 PG 187
 TAX PARCEL ID *078-056-06
- (E) NORTH CAROLINA DOT**
 11 DB 11301 PG 660
 TAX PARCEL ID *078-051-01
 12 DB 12897 PG 15
 TAX PARCEL ID *078-052-06
 13 DB 13047 PG355-358
 TAX PARCEL ID *078-052-05
- (F) NORTH CAROLINA DOT**
 24A DB 16290 PG 947
 TAX PARCEL ID *078-067-01
- (G) NORTH CAROLINA DOT**
 1A DB 10053 PG 110
 TAX PARCEL ID *078-066-02
 24B DB 16292 PG 944
 TAX PARCEL ID *078-066-01
- (H) NORTH CAROLINA DOT**
 1B DB 10053 PG 110
 TAX PARCEL ID *078-061-04
 1C DB 10053 PG 110
 TAX PARCEL ID *078-061-02
 1D DB 10053 PG 110
 TAX PARCEL ID *078-061-03
- (J) NORTH CAROLINA DOT**
 2A DB 10053 PG 114
 TRACT I
 TAX PARCEL ID *078-076-01
 2B DB 10053 PG 114
 TRACT II
 TAX PARCEL ID *078-076-01
 2C DB 10053 PG 114
 TRACT III
 TAX PARCEL ID *078-076-01

LEGEND

	NCDOT PROPERTY
	NCDOT PLATFORM EASEMENT
	CATS PROPERTY
	COUNTY PROPERTY
	FUTURE PROPERTY



CHARLOTTE GATEWAY STATION
AREA PROPERTY MAP

EXHIBIT A

FILE: K:\49468-4001\PROPERTYMAPS\CHARLOTTEGATEWAYSTATIONAREA_7-13-12-EXHIBIT A.DGN
DATE: 16-JULY-2012 10:40

THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF GANNETT FLEMING INC. ANY REUSE OR PROJECT EXTENSION OR OTHER PROJECT OR ALTERATIONS OR ADDITIONS TO THIS PROJECT SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO GANNETT FLEMING INC.

NO.	DESCRIPTION	DATE	BY
	REVISIONS		

DESIGNED: T HOWARD
 TRACED: T - 150
 SCALE:
 DRAWN: T HOWARD
 CHECKED: T POLLACK
 APPROVED:
Gannett Fleming
 GANNETT FLEMING, INC.
 301 S. McDOWELL STREET, SUITE 1008
 CHARLOTTE, NORTH CAROLINA 28204-2644
 PHONE: 704-376-2438 FAX: 704-532-9361

CLIENT: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
 PROJECT: CHARLOTTE RAILROAD IMPROVEMENT & SAFETY PROGRAM (CRISP)

CRISP
NCDOT RAIL DIVISION
 JOB NO. 4968-000
 SHEET NO.
 DATE July 16, 2012
 DRAWING NO.

Appendix B
Historical Documents

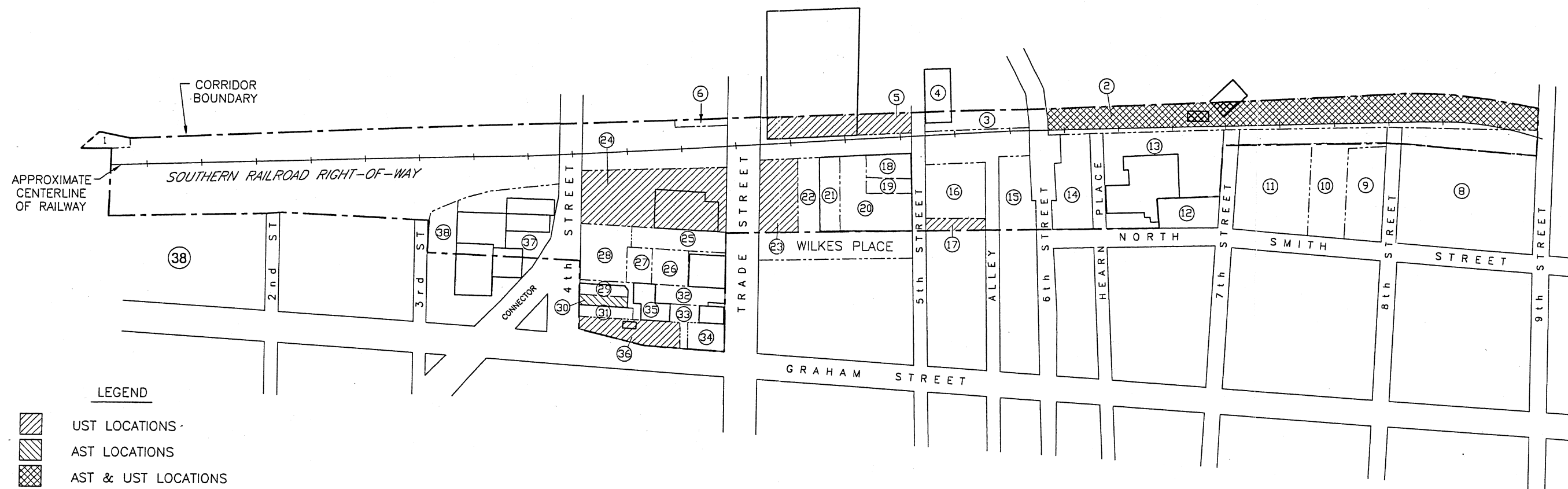
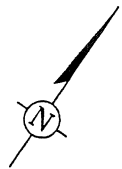
Table 5-1. Properties and Recognized Environmental Conditions, along proposed AMTRAK Railroad Corridor, North Carolina Department of Transportation State Project Number 9.9080178 (AMTRAK), Charlotte, Mecklenburg County, North Carolina.

NCDOT Acquisition Number	Tax Lot ID	Property Owner	Site Address	Petroleum Storage Tanks			Current Site Land Use	Historical Site Land Use of Potential Environmental Concern	Identified Environmental Concerns and Potential Liabilities	Recommend Preliminary Site Assessment
				AST	UST	LUST				
1	073-171-03	Southern Region Industrial Realty Co. Norfolk Southern	604 W. 1st Street				Wooded land	None identified.	None identified.	No.
2	078-131-04	City of Charlotte	W. 6th Street	X		X	Elmwood Cemetery, AST, embalming fluids, lawn care (fertilizers, pesticides)	Elmwood Cemetery, USTs and ASTs, embalming fluids, lawn care (e.g. fertilizers and pesticides)	Yes, petroleum impacted soil and groundwater	No, previous investigations and report document petroleum release.
3	078-121-02	City of Charlotte	725 W. 6th Street				Commercial warehouse storage.	None identified.	None identified.	No.
4	078-121-01	Sinkoe Faith F et al.	700 W 5th Street				Dixie Warehouse Building and associated parking.	None	None identified.	No.
5	078-122-10	Builders Disbursement Services, Inc.	700 W Trade Street		X		Six story office building under construction.	Former Chesapeake Paper Stock Company.	Yes, potential for impacted media related to UST operations.	Yes.
6	073-151-09	Atlanta & Charlotte Airline RWY Co.	713 W. Trade Street				Former Norfolk Southern Office Building. Vacant lot except for a mobile trailer and construction equipment, and parked cars.	Review of 1900 Sanborn maps revealed an oil house on Property #6 and a large junk yard and coal storage bunker on property currently owned by the railroad near 2nd Street.	Yes, related to junk yard waste and coal storage bunker.	Yes.
13	078-066-01	Macclements John et al	301 N. Smith Street				Carolina Rim and Wheel, Inc., distributor of automotive parts, NFPA placard health classification 2.	Automotive service reportedly has been conducted in the past on Property #13. Review of 1929 Sanborn maps revealed an engine room on the property.	Yes, potential for impacted media related to automobile servicing.	Yes, potential for release of petroleum hydrocarbons.
14	078-067-01	Carolina Rim & Wheel Co.	W. 6th Street				Carolina Rim and Wheel, Inc., grass and gravel parking.	Review of 1950 Sanborn maps revealed a coal yard on Property #14.	None identified.	No.
15	078-051-01	Nations Bank N. A. Carolinas	521 W. 6th Street				Four story office building in the final stages of construction and wooded land.	None identified on the portion of the property to be acquired.	None identified.	No, not on the portion of the property to be acquired.
16	078-052-01	Speizman Brothers Partners Robert S. Speizman	532 W. 5th Street				Paid Parking, asphalt lot.	Review of 1890 Sanborn maps revealed a large coal shed, a machine shop, and an engine room on Property #16, the Mecklenburg Iron Works (MIW), which included a large coal storage bunker.	Yes, potential for impacted media related to coal storage and machine shops (metals, petroleum hydrocarbons, solvents).	Yes.
17	078-052-02	Speizman Brothers Partners Robert S. Speizman	516 W. 5th Street		X		Speizman Building, partially vacant warehouse and parking lot, household debris and staining on outside walls.	Household debris and staining on the outside walls of the building were observed on Property #17.	Yes, potential for impacted media related to UST operations.	Yes.
18	078-056-07	Hart Cynthia & Pyon Yong	611 W. 5th Street				Witzens Art Gallery, three story building.	Review of 1890 Sanborn maps revealed the Mecklenburg Iron Works (MIW), which included two machine shops on Property #18; Review of 1929 Sanborn maps revealed a large tire warehouse. Review of the 1934 City Directory revealed tire and rubber companies.	Yes, potential for impacted media related to machine shops (metals, petroleum hydrocarbons, solvents)	Yes.
19	078-056-06	Lowery Robert Jefferson Jr. & Timothy P Blong IV	607 W. 5th Street				Daily Double Sports Bar, three story building.	Review of 1890 Sanborn maps revealed the Mecklenburg Iron Works (MIW), which included a large coal storage bunker, and two machine shops on Properties #18 through #23. Review of 1929 Sanborn maps revealed a large tire warehouse; Review of the 1934 City Directory revealed a tire and rubber company on the property.	Yes, potential for impacted media related to machine shops (metals, petroleum hydrocarbons, solvents)	Yes.
20	078-056-03	Holmes John W & Martha B.	601 W. 5th Street				Business Records Storage, Inc., three story building.	Review of 1890 Sanborn maps revealed the Mecklenburg Iron Works (MIW), which included a large coal storage bunker, and two machine shops on Properties #18 through #23. Review of 1900 Sanborn maps revealed an iron storage building. Review of 1929 Sanborn maps revealed a large tire warehouse. Review of the 1946 City Directory revealed a welding company and a radiator-repair shop on the property. Review of 1963 Sanborn maps revealed an auto-painting shop on the property.	Yes, potential for impacted media related to coal storage and machine shops, radiator shop (metals, petroleum hydrocarbons, solvents)	Yes.
21	078-056-08	Holmes John W & Martha B.	115 W. Smith Street				Business Records Storage, Inc. Addition, two story building.	Review of 1890 Sanborn maps revealed the Mecklenburg Iron Works (MIW), which included a large coal storage bunker, and two machine shops on Properties #18 through #23; Review of 1900 Sanborn maps revealed an oil house on Property #21; Review of 1950 Sanborn revealed a gasoline service station on Properties #21 through #23, however, the three associated USTs appear on Property #23.	Yes, potential for impacted media related to coal storage, machine shops (metals, petroleum hydrocarbons, solvents), and former gas station.	Yes.
22	078-056-02	Shull Carol Hart	109 Wilkes Place				Paid Parking, asphalt lot.	Review of 1890 Sanborn maps revealed the Mecklenburg Iron Works (MIW), which included a large coal storage bunker, and two machine shops on Properties #18 through #23. Review of 1950 Sanborn revealed a gasoline service station on the Properties #21 through #23, however, the three associated USTs appear on Property #23.	Yes, potential for impacted media related to coal storage, machine shops (metals, petroleum hydrocarbons, solvents), and former gas station.	Yes.
23	078-056-01	Malphurs David D	600 W. Trade Street				Paid Parking, asphalt lot.	Review of 1890 Sanborn maps revealed the Mecklenburg Iron Works (MIW), which included a large coal storage bunker, and two machine shops on Properties #18 through #23. Review of 1950 Sanborn revealed a gasoline service station on the Properties #21 through #23, the three associated USTs appear on Property #23.	Yes, potential for impacted media related to coal storage, machine shops (metals, petroleum hydrocarbons, solvents), and former gas station.	Yes.









Table 5-1. Properties and Recognized Environmental Conditions, along proposed AMTRAK Railroad Corridor, North Carolina Department of Transportation State Project Number 9.9080178 (AMTRAK), Charlotte, Mecklenburg County, North Carolina.

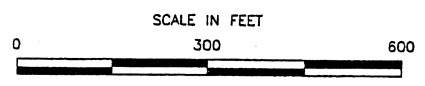
NCDOT Acquisition Number	Tax Lot ID	Property Owner	Site Address	Petroleum Storage Tanks			Current Site Land Use	Historical Site Land Use of Potential Environmental Concern	Identified Environmental Concerns and Potential Liabilities	Recommend Preliminary Site Assessment
				AST	UST	LUST				
24	073-151-29	Greyhound Lines Inc. (by Merger)	601 W. Trade Street		X	X	Greyhound Bus Terminal, visible oil staining on pavement, USTs, SUMP.	Greyhound Bus Terminal, USTs, SUMP.	Yes, petroleum impacted soil and groundwater	No, release is documented and investigations/redediation are ongoing.
25	073-151-24	Marsh Estates Homes, Inc.	537 W. Trade Street				Paid Parking, asphalt lot.	None.	None identified.	No.
26	073-151-22	Nixon Tom & Laura K.	525 W. Trade Street				Travelers hotel, Presto Grill, vacant space, three story building, Kitchen grease containers not maintained well.	None.	None identified.	No.
27	073-151-23	Marsh Estates Homes, Inc	533 W. Trade Street				Paid Parking, asphalt lot.	None.	None identified.	No.
28	073-151-10	Mayfield Linda Leigh H	518 W. 4th Street				Paid Parking, asphalt lot.	None.	None identified.	No.
29	073-151-12	Collias Gus (Estate) % Wachovia B&T (trustee)	512 W. 4th Street				Former Colonial Yarn Products building, vacant one story building.	None.	None identified.	No.
Parcel 7B 30	073-151-13	Collias Gus (Estate) % Wachovia B&T (trustee)	510 W. 4th Street	X			Former Heritage Printers Building, single story building, leaky AST	Review of 1911 Sanborn maps revealed a brass-works facility on Property #30; Review of the 1946 City Directory a printing shop on the property.	Yes, potential for impacted media related to the brass-works facility (metals and solvents), and the print shop (ink and industrial cleaners)	Yes, previous investigations and report document petroleum release from an AST. However, extent of release was not defined and other potential issues were not addressed.
31	073-151-14	Collias Family Limited Liability Co.	508 W. 4th Street				Gravel access road.	None.	None identified.	No.
32	073-151-21	Nixon Tom & Laura K.	517 W. Trade Street				Gravel Parking lot.	None.	None identified.	No.
33	073-151-20	Nixon Tom & Laura K.	511 W. Trade Street				Former Dirty Laundry Cleaners Building, vacant one story building. Household debris outside.	Household debris and staining at Property #33, may have operated as a dry cleaner.	Cleaning operations.	Yes, potential for release of dry chlorinate solvents, if used as a dry cleaner.
34	073-151-19	Theos Helen K. & Sophia L	503 W. Trade Street				Paid Parking, asphalt lot.	None.	None identified.	No.
35	073-151-15	Collias Gus	508 W. 4th Street				Manufacturing building, appeared vacant. Presence of a National Fire Protection Association (NFPA) indicator sign (health ranking of two and a fire ranking of three) was observed on the southwestern side of the building.	None.	Unknown manufacturing with indication of the use of chemicals.	Yes.
36	073-151-16	Service Distributing Co. Inc.	180 S. Graham Street			X	Former Servco service station, one story building, gas/diesel pumps removed, monitor wells present.	Servo Gas Station, USTs, dispenser lines, pumps.	Yes, petroleum impacted soil and groundwater	No, release is documented and investigations/redediation are ongoing.
37	073-161-07	Hargett Zeb E & Betsy H	531 W. 4th Street				Charlotte Florist Supply Company warehouse, split level one two story, appeared vacant of used for storage.	Review of 1900 Sanborn maps revealed an engine room on Property #37; Review of 1929 Sanborn maps revealed an auto repair and painting facility on Properties #3; Review of the 1934 City Directory revealed an iron-works facility on Property #37.	Yes, potential for impacted media related to automobile servicing and painting.	Yes, potential for release of petroleum hydrocarbons.
38	073-161-01	Alexander Rick L & Doris D.	536 W. 3rd Street				Image Plus, Inc. located on property 38, performs ink processes and custom color printing for slides.	Review of 1911 Sanborn maps revealed a machine shop on Property #38; Review of 1929 Sanborn maps revealed an auto repair and painting facility on Properties #38.	Yes, potential for impacted media related to automobile servicing and painting.	Yes.

AST Above Ground Storage Tank
UST Underground Storage Tank
LUST Leaky Underground Storage Tank



LEGEND

-  UST LOCATIONS
-  AST LOCATIONS
-  AST & UST LOCATIONS
-  NCDOT PROPERTY ACQUISITION NUMBER
-  BUILDING
-  PROPERTY BOUNDARY
-  CORRIDOR BOUNDARY
-  PARCEL NUMBER



ARCADIS GERAGHTY & MILLER
 of North Carolina, Inc.
 2301 Rexwoods Drive
 Suite 102 RALEIGH, NC 27607
 Tel: 919/782-5511 Fax: 919/782-5905

PRJT MANAGER:
R. ELLIS

CHECKED BY:
H. BRADY

NOTES: PROPERTIES 8, 9, 10, 11, AND 12 WERE NOT COVERED IN THIS REPORT.

SOURCE: MECKLENBERG COUNTY TAX RECORDS.

DRAFTER:
A. NORTON

DRAWING:
AMTRAK-ST5

DATE:
28SEPT00

PROJECT NUMBER: NC000657.0001

NORTH CAROLINA DEPT. OF TRANSPORTATION
 STATE PROJECT NUMBER 9.9080178 (AMTRAK)
 CHARLOTTE, NORTH CAROLINA

**UST & AST LOCATIONS
 DOWNTOWN CHARLOTTE
 PROPOSED AMTRAK STATION CORRIDOR**

FIGURE:
5-1

Appendix C

GEL Geophysics, LLC Geophysical Survey Report

February 25, 2015

Mr. David Graham
Hart & Hickman, PC
2923 South Tryon Street, Suite 100
Charlotte, NC 28203Re: Report for Geophysical Survey to Identify Underground
Utilities and Potential Underground Storage Tanks
11 DOT Parcels-400 W. Trade Street
Charlotte, North Carolina

Dear Mr. Graham,

GEL Geophysics, LLC appreciates the opportunity to provide Hart & Hickman with this report of our geophysical investigation for the referenced project. This investigation was designed to determine the potential presence of underground storage tanks (USTs) at the site and underground utilities that would obstruct drilling activities at the site. The geophysical field investigation was successfully performed on January 17 through January 18, 2015.

1.0 Summary of Results

Multiple subsurface anomalies were identified in the geophysical data. Figure 1 depicts the approximate location and size of the anomalies as well as the known metallic surface objects present at the time of the investigation. The actual location of 7 GPR anomalies and 6 TDEM anomalies were identified in the field with marking paint. Three anomalies were denoted as a "Possible USTs" while the remaining anomalies were not characteristic of USTs. The anomalies not denoted as USTs in post processed data in Figure 1 are consistent with known metallic surface objects, underground utilities or cultural interference. Although geophysical methods provide a high level of assurance for the location of subsurface objects, the possibility exists that not all features can or will be identified. Therefore, due caution should be used when performing any subsurface excavation, and GEL Geophysics, LLC will not be liable for any damages that may occur. Descriptions of the technologies employed during this geophysical investigation are provided below.

2.0 Overview of Geophysical Investigation

The geophysical evaluation included the deployment of radio-frequency electromagnetic (EM), ground penetrating radar (GPR) and time-domain electromagnetic (TDEM) technologies to the site. These technologies were used in concert with one another in order to identify the presence of potential underground utilities and USTs at the site. A brief description of each technology is presented in the following paragraphs.

Radio-Frequency Electromagnetic

Radio-Frequency Electromagnetic (EM) utility locating equipment consists of a transmitter and a dual-function receiver. The receiver can be operated in a "passive" mode or in an "active" mode. The two modes of operation provide various levels of detection capabilities depending on the specific target or application.

The EM system is operated in the "active" mode by either inducting or conducting a signal into the underground utility to be traced. A transmitter is placed over and in line with a suspected buried utility. The transmitter induces a signal, which propagates along the buried utility. As the receiver is moved back and forth

across the suspected path of the utility, the trace signal induces a signal into the receiver's coil sensor. A visual and audio response indicates when the receiver is directly over the buried utility.

Another means of detecting in the "active" mode utilizes a method to "conduct" a signal within the buried utility. To accomplish this, a cable from the transmitter is clamped onto an exposed section of the buried utility and a signal propagates along the buried line. This technique minimizes any interference caused by parasitic emissions from adjacent cables in congested areas. When the system is utilized in the "passive" mode, the receiver is responding to a 60 Hertz cycle current energized by underground utilities.

Interference can and may occur when buried utilities intersect or are adjacent to each other. This effect referred to as "bleed-off" may provide a false response to the identification of the tracked utility. "Bleed-off" is caused by utilities that may be energized in the "active" or "passive" mode.

Ground Penetrating Radar Methodology

A RAMAC digital radar control system configured with a 250 Megahertz (MHz) antenna array was used in this investigation. GPR is an electromagnetic geophysical method that detects interfaces between subsurface materials with differing dielectric constants. The GPR system consists of an antenna which houses the transmitter and receiver, a digital control unit which both generates and digitally records the GPR data, and a color video monitor to view data as it is collected in the field.

The transmitter radiates repetitive short-duration electromagnetic waves (at radar frequencies) into the earth from an antenna moving across the ground surface. These radar waves are reflected back to the receiver from the interface of materials with different dielectric constants. The intensity of the reflected signal is a function of the contrast in the dielectric constant between the materials, the conductivity of the material through which the wave is traveling, and the frequency of the signal.

Subsurface features that commonly cause such reflections are: 1) natural geologic conditions, such as changes in sediment composition, bedding, and cementation horizons and voids; or 2) unnatural changes to the subsurface such as disturbed soils, soil backfill, buried debris, tanks, pipelines, and utilities. The digital control unit processes the signal from the receiver and produces a continuous cross-section of the subsurface interface reflection events.

GPR data profiles were collected along transects covering the entire rights of ways. Depth of investigation of the GPR signal is highly site-specific and is limited by signal attenuation (absorption) in the subsurface materials. Signal attenuation is dependent upon the electrical conductivity of the subsurface materials. Signal attenuation is greatest in materials with relatively high electrical conductivities such as clays, brackish groundwater, or groundwater with a high dissolved solid content from natural or manmade sources. Signal attenuation is lowest in relatively low conductivity materials such as dry sand or rock. Depth of investigation is also dependent on the antenna's transmitting frequency. Depth of investigation generally increases as transmitting frequency decreases; however, the ability to resolve smaller subsurface features is diminished as frequency is decreased. The average depth of penetration at this site was approximately 2-4 feet below the surface.

The GPR antenna used at this site is internally shielded from aboveground interference sources. Accordingly, the GPR response is not affected by overhead power lines, metallic buildings, or nearby objects.

Time Domain Electromagnetic Methodology

TDEM methods measure the electrical conductivity of subsurface materials. The conductivity is determined by inducing (from a transmitter) a time or frequency-varying magnetic field and measuring (with a receiver) the

amplitude and phase shift of an induced secondary magnetic field. The secondary magnetic field is created by subsurface conductive materials behaving as an inductor as the primary magnetic field is passed through them.

The Geonics EM-61 system used in this investigation operates within these principles. However, the EM-61 TDEM system can discriminate between moderately conductive earth materials and very conductive metallic targets. The EM-61 consists of a portable coincident loop time domain transmitter and receiver with a 1.0-meter by 0.5-meter coil system. The EM-61 generates 150 pulses per second and measures the response from the ground after transmission or between pulses. The secondary EM responses from metallic targets are of longer duration than those created by conductive earth materials. By recording the later time EM arrivals, only the response from metallic targets is measured, rather than the field generated by the earth material.

3.0 Field Procedures and Results

The geophysical field investigation was successfully performed on January 17 through January 18, 2015 at the 11 DOT parcels located in the immediate vicinity of 400 W. Trade Street in Charlotte, NC. Interpretation of the GPR data was conducted in the field and any potential anomalies were marked in the field. GPR data processing typically included band pass filtering, background removal, horizontal smoothing, and gain adjustments. TDEM was also used to scan the project site. Any electromagnetic anomalies detected during field activities that were indicative of buried metallic objects were also marked in the field.

Multiple subsurface anomalies were identified in the geophysical data on Figure 1. Figure 1 depicts the approximate location and size of the anomalies as well as the known metallic surface objects present at the time of the investigation. The UST level of confidence rating system developed by NCDOT in May 2009 ("Known UST," "Probable UST," "Possible UST," or "No Confidence") was used in the interpretation and presentation of this report. The results by parcel are as follows:

DOT Parcel 4A (0.21 acres)- Two geophysical anomalies were detected during the investigation of Parcel 4A as depicted in Figure 1. Neither anomaly was indicative of a "Possible UST" or "Probable" UST.

DOT Parcel 4B (0.3 acres)- Three geophysical anomalies were detected during the investigation of Parcel 4B as depicted in Figure 1. One anomaly was indicated as being a "Possible UST" as indicated on Figure 1.

DOT Parcel 5A (0.19 acres)- There were no subsurface geophysical anomalies detected within Parcel 5A during this investigation. The anomalies represented in the data shown on Figure 1 are indicative of known metallic surface features.

DOT Parcel 5B (0.24 acres)- Multiple geophysical anomalies exist in Parcel 5B as indicated on Figure 1. Two of the anomalies are representative of "Possible USTs" as noted on the Figure. The additional anomalies present within this parcel are interpreted as either buried debris, cultural interference or known metallic surface features.

DOT Parcel 5C (0.38 acres)- There were no geophysical anomalies within Parcel 5C that were representative of a "Possible UST," "Probable UST" or "Known UST." All responses are interpreted to be cultural interference or known metallic surface features present at the time of the investigation.

DOT Parcel 6 (0.51 acres)- One geophysical anomaly was indicated within Parcel 6 on Figure 1. This anomaly was not representative of a "Possible UST," "Probable UST" or "Known UST." Additional responses are visible in Figure 1, but are representative of cultural interference or known metallic surface features.

DOT Parcel 7A (0.11 acres)- Two geophysical anomalies were identified within Parcel 7A on Figure 1. Both anomalies are interpreted to be associated with buried metallic debris based on visual evidence of a debris field on the surface. Additional responses are visible within this parcel but are representative of cultural interference or known metallic surface features.

DOT Parcel 7B (0.08 acres)- There were no geophysical anomalies within Parcel 7B that were representative of a "Possible UST," "Probable UST" or "Known UST." All responses are interpreted to be cultural interference or known metallic surface features present at the time of the investigation.

DOT Parcel 7C (0.16 acres)- There were no geophysical anomalies within Parcel 7C that were representative of a "Possible UST," "Probable UST" or "Known UST." All responses are interpreted to be cultural interference or known metallic surface features present at the time of the investigation.

DOT Parcel 8 (0.17 acres)- Multiple geophysical anomalies exist within Parcel 8 as shown on Figure 1. All of the anomalies are representative of either known metallic surface features, suspected underground utilities, or cultural interference.

DOT Parcel 10 (0.11 acres)- Two geophysical anomalies were identified within Parcel 10 on Figure 1. Neither anomaly was indicative of a "Possible UST," "Probable UST" or "Known UST." These anomalies are interpreted as buried debris based on visual evidence on the surface.

Additional TDEM responses were present in the data, but correlated to surface metallic debris and/or above ground metal structures and are not considered to be representative of "Potential USTs."

The locations of underground utilities were designated using EM and GPR equipment, and their locations were marked with paint on the land surface, and additionally shown in Figure 1.

Locations of data points were obtained using a Trimble R6 GPS antenna, which obtained sub-meter accuracy using corrections provided by the North Carolina RTN network.

4.0 Closing

GEL Geophysics appreciates the opportunity to assist Hart & Hickman with this project. If you have any questions or need further information regarding the project, please do not hesitate to call me at (843) 697-1571.

Yours very truly,



William S. Dovell
Project Manager

enclosures
fc: hahi00115_rpt.doc

Site Photos

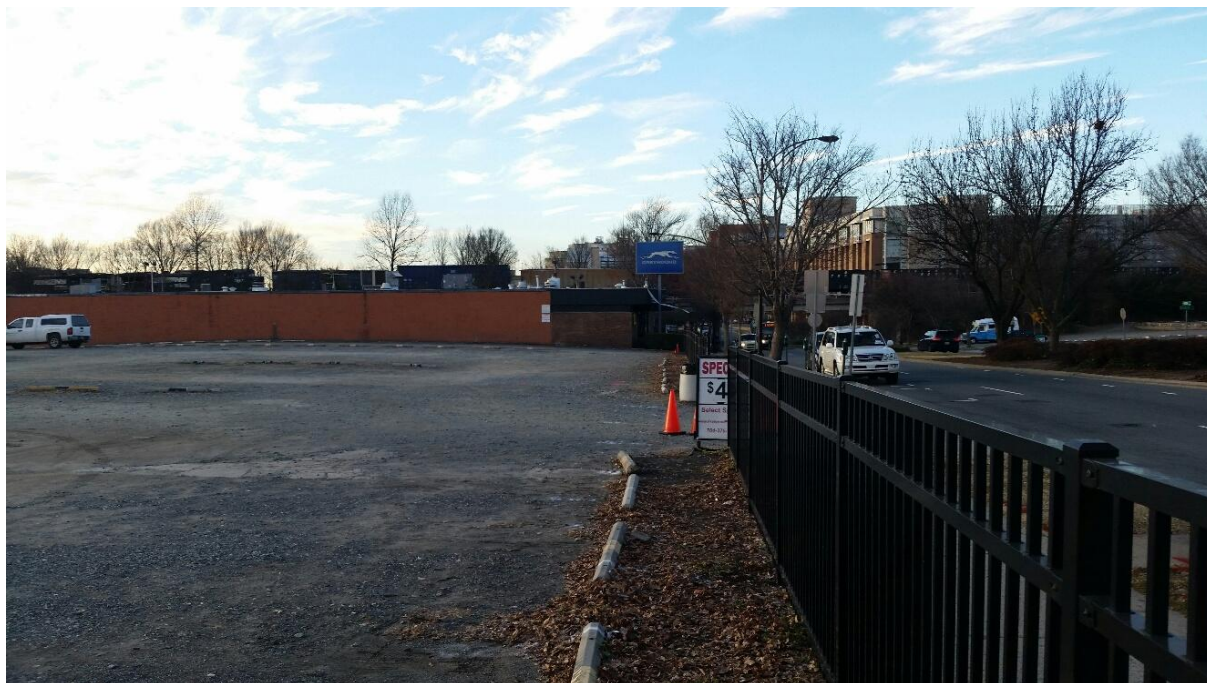


Photo 1: Parcels 5B, 5C, and 4B looking northwest from Parcel 5A.



Photo 2: Looking northwest from Parcel 7C.

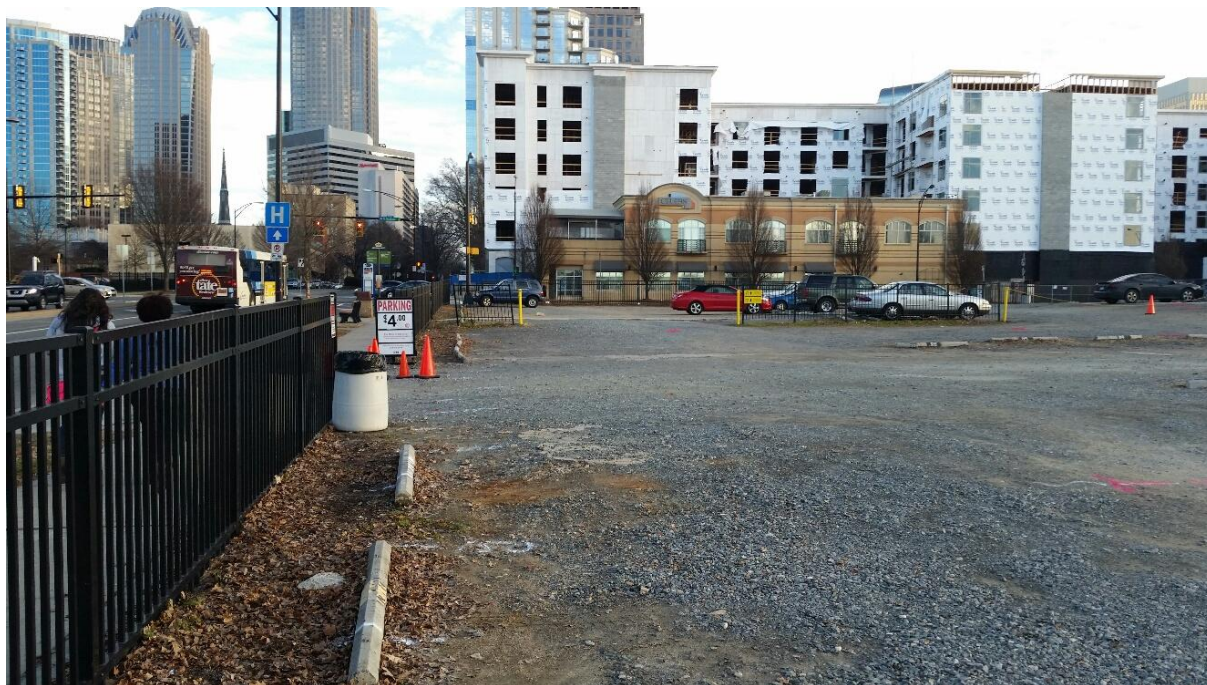


Photo 3: Looking southeast towards Parcel 5A and Parcel 8.



Photo 4: Looking northwest from Parcel 7C.



Photo 5: Looking northeast across Parcel 5C and 5B.



Photo 6: Looking north across Parcels 4A, 4B and 5C.



Photo 7: Looking south towards Parcel 10.



Photo 8: Looking west across Parcel 6.



Photo 9: Showing GPR anomaly and "Possible UST" (upper left) in Parcel 4B.



Photo 10: Showing GPR anomaly and monitoring well in Parcel 6.



Photo 11: Showing GPR anomaly in Parcel 10.



Photo 12: Showing "Possible UST" in Parcel 4B.



Photo 13: Looking west from Parcel 5A.



Photo 14: Showing TDEM anomaly in Parcel 5B.



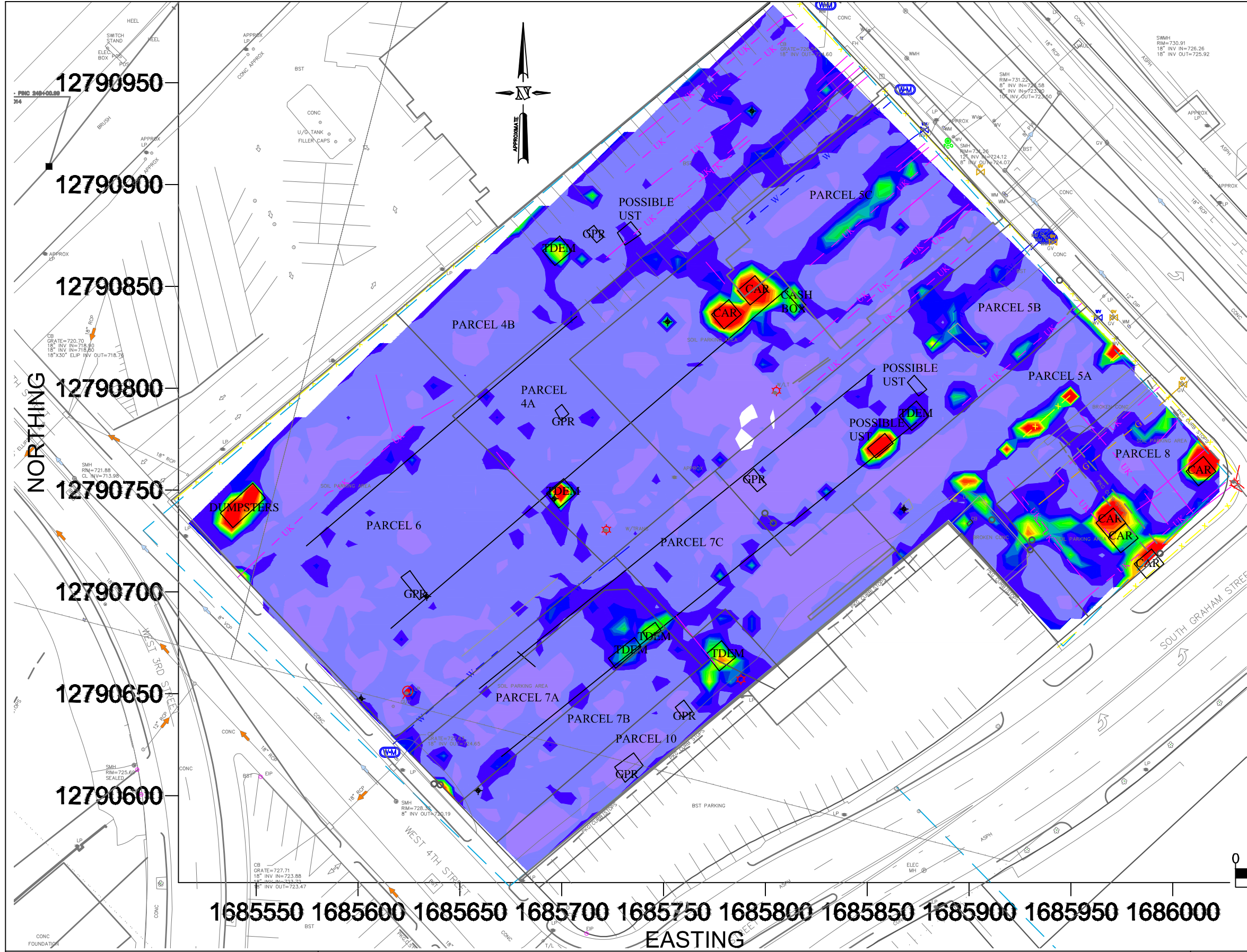
Photo 15: Looking southeast from Parcel 5C.



Photo 16: Showing "Possible UST" in Parcel 5B.

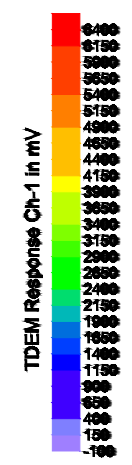


Photo 17: Showing GPR anomaly in Parcel 5B.



LEGEND

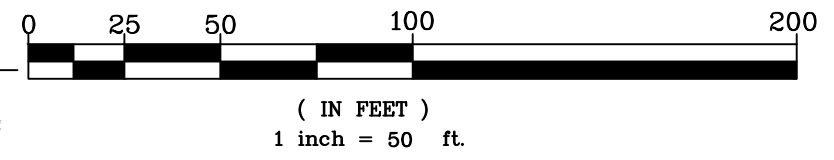
- UK --- APPROXIMATE LOCATION OF SUSPECTED UNDERGROUND UNKNOWN UTILITY LINE
- W --- APPROXIMATE LOCATION OF SUSPECTED UNDERGROUND WATER LINE
- SD --- APPROXIMATE LOCATION OF SUSPECTED STORMWATER DRAIN LINE
- G --- APPROXIMATE LOCATION OF SUSPECTED UNDERGROUND GAS LINE
- E --- APPROXIMATE LOCATION OF SUSPECTED UNDERGROUND ELECTRICAL POWER LINE
- X --- CHAIN LINK FENCE
- END OF DESIGNATION OR UNKNOWN DESIGNATION
- POWER POLE
- METALLIC SURFACE FEATURE
- STORM DRAIN MANHOLE
- STORM DRAIN DROP INLET
- WATER VALVE
- WATER METER
- GAS VALVE
- GAS METER
- + MONITORING WELL



NOTES

- 1) UNDERGROUND FEATURES WERE LOCATED USING VISUAL EVIDENCE, GROUND PENETRATING RADAR (GPR), RADIO-FREQUENCY ELECTROMAGNETIC (EM) AND TIME DOMAIN ELECTROMAGNETIC (TDEM) METHODS. OTHER BURIED UTILITIES AND STRUCTURES MAY EXIST BUT WERE NOT DETECTED DUE TO LIMITATIONS OF THE GEOPHYSICAL METHODS, SITE ACCESS, AND/OR HIGH TARGET CONGESTION. THEREFORE, DUE CAUTION SHOULD BE USED WHEN PERFORMING SUBSURFACE EXCAVATION ACTIVITIES WHERE POTENTIAL CONFLICTS EXIST. GEL GEOPHYSICS, LLC. IS NOT RESPONSIBLE FOR DAMAGES THAT MAY OCCUR. IDENTIFYING THE LOCATION OF SOME UTILITIES AND STRUCTURES MAY ONLY BE POSSIBLE WITH VACUUM OR OTHER EXCAVATION METHODS.
- 2) FIELD SURVEY CONDUCTED ON 1/17/15-1/18/15.
- 3) DATA FROM GEONICS, LTD. EM-61 MKII AND MALA GEOSCIENCE GROUND PENETRATING RADAR.
- 4) GEL GEOPHYSICS, LLC. IS NOT RESPONSIBLE FOR ACCURACY OF BASE MAP PROVIDED BY HART & HICKMAN.

GRAPHIC SCALE



1685550 1685600 1685650 1685700 1685750 1685800 1685850 1685900 1685950 1686000
EASTING

GEL GEOPHYSICS, LLC
a Member of THE GEL GROUP, INC.
 P.O. BOX 30712 CHARLESTON, SC 29417
 2040 SAVAGE ROAD 29407
 (843) 769-7379 FAX (843) 769-7397
 WWW.GELGEOPHYSICS.COM

PROJECT: HAH00115
 UST INVESTIGATION OF
 11 PARCELS W.TRADE ST AND S. GRAHAM ST
 CHARLOTTE, NORTH CAROLINA
 NCDOT RAIL PSA PROJECT

DATE: FEBRUARY 25, 2015

RESULTS OF GEOPHYSICAL INVESTIGATION

FIGURE
1

DRAWN BY: WSD APPRV. BY: EJB

Appendix D

Soil Boring Logs and Temporary Well Boring Log



BORING NUMBER 7B-1

2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

PROJECT: NC DOT Project P-3800 - Parcel 7B

JOB NUMBER: ROW-504

LOCATION: Charlotte, NC

DEPTH (ft)	RECOVERY (%)	SAMPLE TYPE NUMBER	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	BORING DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0						Dry, meduim stiff, red silty SAND with pieces of brick		0
			0	0.8		Moist, stiff, orange silty SAND, no odor		
			0	1.7				
5			0	1.4				5
			0	1.6		Moist, stiff, orange and red clayey SILT, no odor		
			0	2		Moist, stiff, orange and red clayey SILT, no odor, Mn nodules		
10			0	2.4		Moist, soft, brown fine silty SAND, Mn nodules, no odor		10
			0	2.2				
			0	0.1				
15						Bottom of borehole at 15.0 feet.		15

BORING LOG - HART HICKMAN.GDT - 3/5/15 13:07 - S:\AAA-MASTER GINT PROJECTS\ROW-504\PARCEL 7B.GPJ

DRILLING CONTRACTOR: Geologic Exploration
DRILL RIG/ METHOD: 7822 DT / DPT/Hand Auger
SAMPLING METHOD: DPT Sleeves
LOGGED BY: BRK/JCW
DRAWN BY: BRK

BORING STARTED: 1/24/15
BORING COMPLETED: 1/24/15
TOTAL DEPTH: 15 ft.
TOP OF CASING ELEV:
DEPTH TO WATER:

Remarks:
 Soil sample collected from 0-2 ft bgs for laboratory analysis.



BORING NUMBER 7B-2

2923 South Tryon Street-Suite 100
 Charlotte, North Carolina 28203
 704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
 Raleigh, North Carolina 27607
 919-847-4241(p) 919-847-4261(f)

PROJECT: NC DOT Project P-3800 - Parcel 7B

JOB NUMBER: ROW-504

LOCATION: Charlotte, NC

DEPTH (ft)	RECOVERY (%)	SAMPLE TYPE NUMBER	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	BORING DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0						Dry, loose, orange sandy CLAY with gravel, no odor		0
			0	1.6				
			0	1.7				
5			0	1.7		Moist, stiff, orange, sandy CLAY with gravel and brick pieces, no odor		5
			0	2		Moist, stiff, tan, sandy CLAY, Mn nodules		
			0	2		No recovery		
10			0	2				10
			0	0.2		Dry, loose, tan and orange, silty SAND, no odor		
15						Bottom of borehole at 15.0 feet.		15

BORING LOG - HART HICKMAN.GDT - 3/5/15 13:07 - S:\AAA-MASTER GINT PROJECTS\ROW-504\PARCEL 7B.GPJ

DRILLING CONTRACTOR: Geologic Exploration
DRILL RIG/ METHOD: 7822 DT / DPT/Hand Auger
SAMPLING METHOD: DPT Sleeves
LOGGED BY: BRK/JCW
DRAWN BY: BRK

BORING STARTED: 1/24/15
BORING COMPLETED: 1/24/15
TOTAL DEPTH: 15 ft.
TOP OF CASING ELEV:
DEPTH TO WATER:

Remarks:
 Soil sample collected from 0-2 ft bgs for laboratory analysis.



BORING NUMBER 7B-3

2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

PROJECT: NC DOT Project P-3800 - Parcel 7B

JOB NUMBER: ROW-504

LOCATION: Charlotte, NC

DEPTH (ft)	RECOVERY (%)	SAMPLE TYPE NUMBER	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	BORING DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0					Gravel			0
			0	1.4	[Dotted pattern]	Dry, stiff, orange, brown, and white sandy SILT, no odor		
			0	1.5		Dry, stiff, orange, brown, and white sandy SILT, Mn nodules, no odor		
5			0	1.3	[Dotted pattern]	Dry, stiff, orange and brown sandy SILT, no odor		5
			0	1.8		Dry, stiff, tan, orange and white silty CLAY, no odor		
			0	1.8	[Cross-hatched pattern]	Dry, stiff, tan silty CLAY, no odor		
10			0	2		Dry, stiff, tan and white silty CLAY, no odor		10
			0	3.1		Dry, stiff, light brown and grey silty CLAY, strong petroleum odor		
			0	54.8				
15						Bottom of borehole at 15.0 feet.		15

BORING LOG - HART HICKMAN.GDT - 3/5/15 13:07 - S:\AAA-MASTER GINT PROJECTS\ROW-504\PARCEL 7B.GPJ

DRILLING CONTRACTOR: Geologic Exploration
DRILL RIG/ METHOD: 7822 DT / DPT/Hand Auger
SAMPLING METHOD: DPT Sleeves
LOGGED BY: BRK/JCW
DRAWN BY: BRK

BORING STARTED: 1/24/15
BORING COMPLETED: 1/24/15
TOTAL DEPTH: 15 ft.
TOP OF CASING ELEV:
DEPTH TO WATER:

Remarks:
 Soil sample collected from 14-15 ft bgs for laboratory analysis.



BORING NUMBER 7B-4/TW-7B

2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

PROJECT: NC DOT Project P-3800 - Parcel 7B

JOB NUMBER: ROW-504

LOCATION: Charlotte, NC

DEPTH (ft)	RECOVERY (%)	SAMPLE TYPE NUMBER	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	BORING DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0						Gravel and asphalt pieces		0
			0	0.2		Moist, stiff, red SILT, no odor		
			0	1.7		Moist, stiff, orange and yellow silty SAND, Mn nodules, no odor		
5			0	3				5
			0	6				
			0	10.7		Moist, stiff, brown clayey SILT, Mn infilling, no odor	PVC Riser	
10			0	20.5			Bentonite Seal	
			0	39.3		Moist, stiff, brown, white, and black sandy SILT, strong petroleum odor		
			0	106.7				
15								15
20								20
25							0.01-inch Slotted PVC Screen	
							Pre-packed Screen	
30						Bottom of borehole at 30.0 feet.		30

BORING LOG - HART HICKMAN.GDT - 3/5/15 13:07 - S:\AAA-MASTER GINT PROJECTS\ROW-504\PARCEL 7B.GPJ

DRILLING CONTRACTOR: Geologic Exploration
DRILL RIG/ METHOD: 7822 DT / DPT/Hand Auger
SAMPLING METHOD: DPT Sleeves
LOGGED BY: BRK/JCW
DRAWN BY: BRK

BORING STARTED: 1/24/15
BORING COMPLETED: 1/24/15
TOTAL DEPTH: 30 ft.
TOP OF CASING ELEV:
DEPTH TO WATER:

Remarks:
 Soil sample collected from 14-15 ft bgs for laboratory analysis.



BORING NUMBER 7B-5

2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

PROJECT: NC DOT Project P-3800 - Parcel 7B

JOB NUMBER: ROW-504

LOCATION: Charlotte, NC

DEPTH (ft)	RECOVERY (%)	SAMPLE TYPE NUMBER	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	BORING DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0								0
			0	1.1		Gravel Dry, loose, tan-orange sandy GRAVEL, no odor		
						No recovery		
			0	4.4		Dry, loose, tan-orange, sandy GRAVEL, no odor		5
			0	5.3		Dry, soft, orange sandy SILT, no odor		
			0	5.4				
			0	7.5				10
			0	5.6		Dry, loose, orange SAND, no odor		
			0	2.3		Dry, loose, tan-grey and orange sandy GRAVEL, no odor		
15						Bottom of borehole at 15.0 feet.		15

BORING LOG - HART HICKMAN.GDT - 3/5/15 13:07 - S:\AAA-MASTER GINT PROJECTS\ROW-504\PARCEL 7B.GPJ

DRILLING CONTRACTOR: Geologic Exploration
DRILL RIG/ METHOD: 7822 DT / DPT/Hand Auger
SAMPLING METHOD: DPT Sleeves
LOGGED BY: BRK/JCW
DRAWN BY: BRK

BORING STARTED: 1/24/15
BORING COMPLETED: 1/24/15
TOTAL DEPTH: 15 ft.
TOP OF CASING ELEV:
DEPTH TO WATER:

Remarks:
Soil sample collected from 0-2 ft bgs for laboratory analysis.



BORING NUMBER 7B-6

2923 South Tryon Street-Suite 100
 Charlotte, North Carolina 28203
 704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
 Raleigh, North Carolina 27607
 919-847-4241(p) 919-847-4261(f)

PROJECT: NC DOT Project P-3800 - Parcel 7B

JOB NUMBER: ROW-504

LOCATION: Charlotte, NC

DEPTH (ft)	RECOVERY (%)	SAMPLE TYPE NUMBER	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	BORING DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0						Gravel and asphalt pieces		0
			0	0.4		Moist, stiff, red sandy SILT, no odor		
						No recovery		
						Moist, medium, red and brown sandy SILT, Mn nodules, no odor		
5			0	0.6				5
						Moist, stiff, tan clayey SILT, Mn nodules, no odor		
			0	0.4				
			0	0.4				
10						Moist, stiff, brown sandy SILT, Mn nodules, no odor		10
			0	0.6				
						No Recovery		
15						Bottom of borehole at 15.0 feet.		15

BORING LOG - HART HICKMAN.GDT - 3/5/15 13:07 - S:\AAA-MASTER GINT PROJECTS\ROW-504\PARCEL 7B.GPJ

DRILLING CONTRACTOR: Geologic Exploration
DRILL RIG/ METHOD: 7822 DT / DPT/Hand Auger
SAMPLING METHOD: DPT Sleeves
LOGGED BY: BRK/JCW
DRAWN BY: BRK

BORING STARTED: 1/24/15
BORING COMPLETED: 1/24/15
TOTAL DEPTH: 15 ft.
TOP OF CASING ELEV:
DEPTH TO WATER:

Remarks:
 Soil sample collected from 0-2 ft bgs for laboratory analysis.



BORING NUMBER 7B-7

2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

PROJECT: NC DOT Project P-3800 - Parcel 7B

JOB NUMBER: ROW-504

LOCATION: Charlotte, NC

DEPTH (ft)	RECOVERY (%)	SAMPLE TYPE NUMBER	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	BORING DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0						Dry, loose, white and grey sandy GRAVEL, no odor		0
			0	16.4		No recovery		
						Moist, stiff, brown and black sandy SILT, no odor		
5			0	20.3		Moist, stiff, white, black, and orange gravelly CLAY, no odor		5
						Moist, stiff, orange, grey and black sandy SILT, no odor		
			0	28.4		Moist, stiff, orange, grey and black silty CLAY, no odor		
						No recovery		
			0	27.5		Moist, stiff, black and orange sandy SILT, no odor		
						Moist, stiff, grey, white, tan, and orange silty CLAY, no odor		
			0	47.2		Bottom of borehole at 15.0 feet.		15

BORING LOG - HART HICKMAN.GDT - 3/5/15 13:07 - S:\AAA-MASTER GINT PROJECTS\ROW-504\PARCEL 7B.GPJ

DRILLING CONTRACTOR: Geologic Exploration
DRILL RIG/ METHOD: 7822 DT / DPT/Hand Auger
SAMPLING METHOD: DPT Sleeves
LOGGED BY: BRK/JCW
DRAWN BY: BRK

BORING STARTED: 1/25/15
BORING COMPLETED: 1/25/15
TOTAL DEPTH: 15 ft.
TOP OF CASING ELEV:
DEPTH TO WATER:

Remarks:
Soil sample collected from 14-15 ft bgs for laboratory analysis.



BORING NUMBER 7B-8

2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

PROJECT: NC DOT Project P-3800 - Parcel 7B

JOB NUMBER: ROW-504

LOCATION: Charlotte, NC

DEPTH (ft)	RECOVERY (%)	SAMPLE TYPE NUMBER	OVA (ppm)		LITHOLOGY	MATERIAL DESCRIPTION	BORING DIAGRAM	DEPTH (ft)
			BKG.	SAMP.				
0						Dry, stiff, tan-orange sandy SILT with gravel, no odor		0
			0	0.5				
			0	0		Dry, stiff, tan-orange sandy SILT, no odor		
			0	0				
5			0	0.5		Dry, loose, brown and orange, silty SAND		5
						No recovery		
10			0	0.5		Dry, stiff, orange, white, and tan sandy SILT, no odor		10
			0	0.5				
			0	0.8				
15						Bottom of borehole at 15.0 feet.		15

BORING LOG - HART HICKMAN.GDT - 3/5/15 13:07 - S:\AAA-MASTER GINT PROJECTS\ROW-504\PARCEL 7B.GPJ

DRILLING CONTRACTOR: Geologic Exploration
DRILL RIG/ METHOD: 7822 DT / DPT/Hand Auger
SAMPLING METHOD: DPT Sleeves
LOGGED BY: BRK/JCW
DRAWN BY: BRK

BORING STARTED: 1/25/15
BORING COMPLETED: 1/25/15
TOTAL DEPTH: 15 ft.
TOP OF CASING ELEV:
DEPTH TO WATER:

Remarks:
 Soil sample collected from 14-15 ft bgs for laboratory analysis.

Appendix E
Laboratory Analytical Reports



Hydrocarbon Analysis Results

Client: HART HICKMAN
Address:

Samples taken Saturday, January 24, 2015
Samples extracted Saturday, January 24, 2015
Samples analysed Tuesday, January 28, 2014

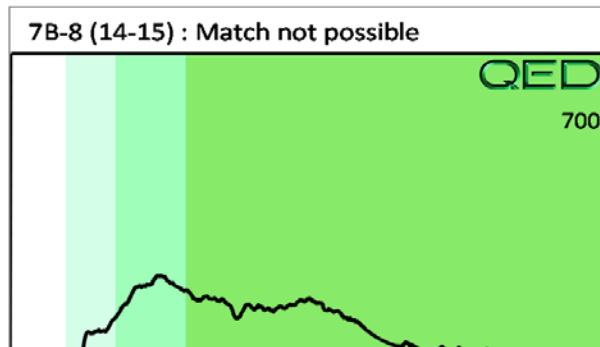
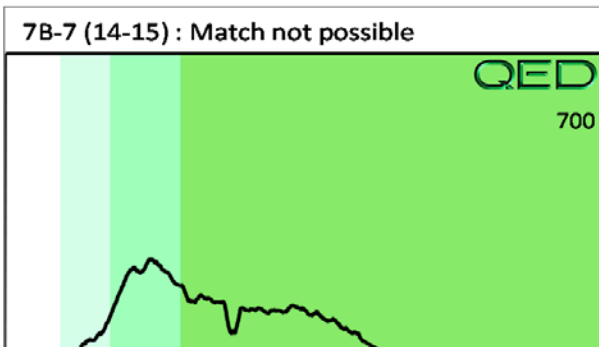
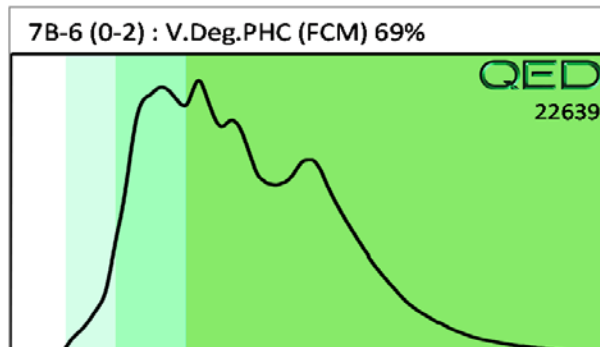
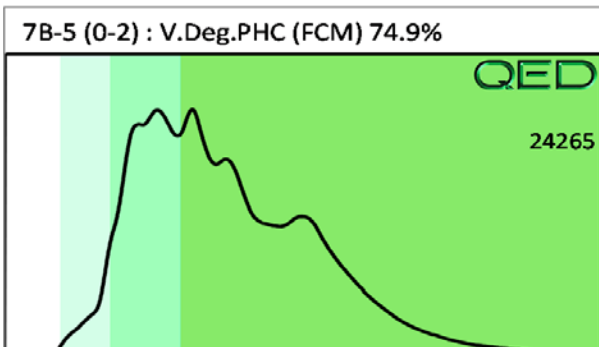
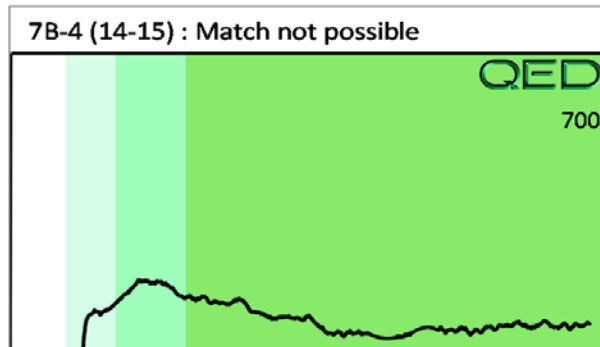
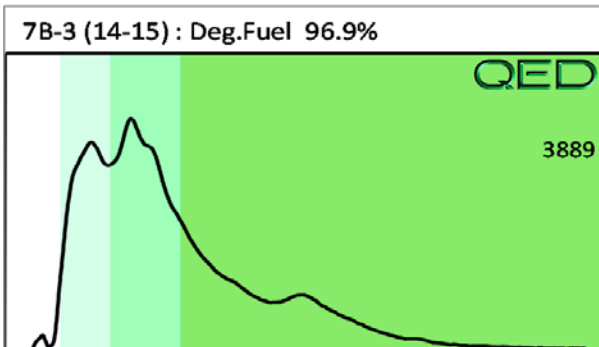
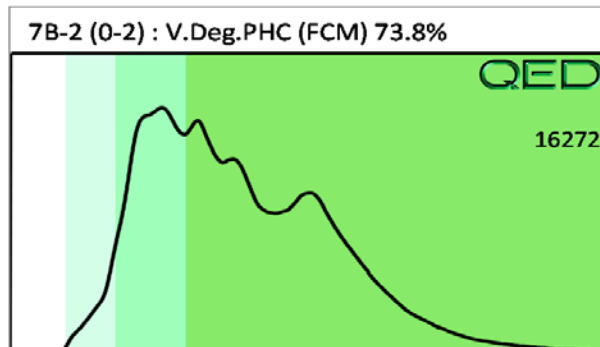
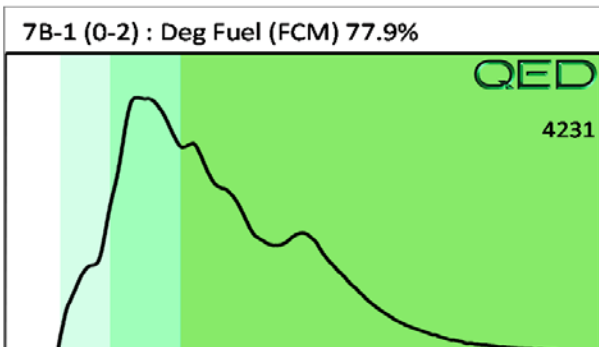
Contact: DAVID GRAHAM

Operator RACHEL MENOHER

Project: ROW-504

Hydrocarbon Analysis Results													
Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	Ratios			HC Fingerprint Match
										% light	% mid	% heavy	
s	7B-1 (0-2)	13.1	<0.7	<0.7	7.01	7.01	3.1	0.11	<0.013	67.4	22.8	9.8	Deg Fuel (FCM) 77.9%
s	7B-2 (0-2)	344.9	<17.2	<17.2	318.3	318.3	243.4	9.52	<0.345	48.5	36.6	14.8	V.Deg.PHC (FCM) 73.8%
s	7B-3 (14-15)	13.6	<0.7	<0.7	30.93	30.93	5.1	0.16	<0.014	87	9.3	3.7	Deg.Fuel 96.9%
s	7B-4 (14-15)	13.5	<0.7	<0.7	0.36	0.36	0.34	0.19	<0.013	70.5	2.1	27.4	Match not possible
s	7B-5 (0-2)	162.5	<8.1	<8.1	215.6	215.6	169.2	7.08	0.356	45	41.2	13.8	V.Deg.PHC (FCM) 74.9%
s	7B-6 (0-2)	12.8	<0.6	<0.6	14.44	14.44	12.49	0.52	<0.013	42.8	39.8	17.4	V.Deg.PHC (FCM) 69%
s	7B-7 (14-15)	8.9	<0.4	<0.4	<0.09	<0.4	<0.09	<0.01	<0.009	0	100	0	Match not possible
s	7B-8 (14-15)	14.1	<0.7	<0.7	<0.14	<0.14	<0.14	<0.01	<0.014	0	10.6	89.4	Match not possible
Initial Calibrator QC check				OK		Final FCM QC Check				OK		99.7%	

Results generated by a QED HC-1 analyser. Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values are not corrected for moisture or stone content
 Fingerprints provide a tentative hydrocarbon identification. The abbreviations are:- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for sample fingerprint match to library
 (SBS) or (LBS) = Site Specific or Library Background Subtraction applied to result : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate present





Chain of Custody Record and Analytical Request Form

Sample ID	Sample Collection		Initials	TAT Requested	
	QED UVF	Date		Time	24 Hour
7B-1 (0-2)		1/24/15	JLW	STANDARD TAT	
7B-2 (0-2)					
7B-3 (14-15)					
7B-4 (14-15)					
7B-5 (0-2)					
7B-6 (0-2)					
7B-7 (14-15)		1/25/15			
7B-8 (14-15)		1/25/15			

Client: HART-LICKMAN
 Contact: David Graham
 Phone: 704.536.0007
 Email: dgraham@hsthigh.com
 Project Reference: ROW 504

Each Sample will be analyzed for total BTEX, ~~GRO~~ DRO, TPH, and PAH
 Each Sample will generate a fingerprint representative of the petroleum product within the sample. Electronic Data will be submitted to the email above.

<u>JL WEAVER</u>	<u>1/26/15 1345</u>	<u>[Signature]</u>	<u>12/27 1600</u>
Relinquished by	Date/time	Accepted by	Date/time
Relinquished by	Date/time	Accepted by	Date/time
Relinquished by	Date/time	Accepted by	Date/time

SHIP TO: QROS
 420 Raleigh Street Suite E
 Wilmington, NC 28412
 Rachel Menoher-
 rachelm@qrosllc.com
 910-520-2902

March 02, 2015

Chemical Testing Engineer
NCDOT
Materials & Tests Unit
1801 Blue Ridge Road
Raleigh, NC 27607

RE: Project: ROW-504 32213
Pace Project No.: 92234867

Dear Chemical Engineer:

Enclosed are the analytical results for sample(s) received by the laboratory on January 26, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,



Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

CERTIFICATIONS

Project: ROW-504 32213

Pace Project No.: 92234867

Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: ROW-504 32213

Pace Project No.: 92234867

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92234867001	7B-1 (0-2)	EPA 6010	JMW	13	PASI-A
		EPA 7471	HVK	1	PASI-A
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	SLJ	1	PASI-C
92234867002	7B-2 (0-2)	EPA 6010	JMW	13	PASI-A
		EPA 7471	HVK	1	PASI-A
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	SLJ	1	PASI-C
92234867003	7B-3 (14-15)	EPA 6010	JMW	13	PASI-A
		EPA 7471	HVK	1	PASI-A
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	SLJ	1	PASI-C
92234867004	7B-4 (14-15)	EPA 6010	JMW	13	PASI-A
		EPA 7471	HVK	1	PASI-A
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	SLJ	1	PASI-C
92234867005	7B-5 (0-2)	EPA 6010	JMW	13	PASI-A
		EPA 6010	JMW	7	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 7471	HVK	1	PASI-A
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	SLJ	1	PASI-C
92234867006	7B-6 (0-2)	EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	SLJ	1	PASI-C
		EPA 6010	JMW	13	PASI-A
92234867007	7B-7 (14-15)	EPA 7471	HVK	1	PASI-A
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	SLJ	1	PASI-C
		EPA 6010	JMW	7	PASI-A
92234867008	7BS-Drum	EPA 7470	HVK	1	PASI-A
		EPA 8260	DLK	14	PASI-C
		EPA 6010	JMW	7	PASI-A
92234867009	7BW-Drum	EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	14	PASI-C
		EPA 6010	JMW	7	PASI-A
92234867010	TW-7B	EPA 8260	GAW	63	PASI-C
92234867011	7B8-(14-15)	EPA 6010	JMW	13	PASI-A
		EPA 7471	HVK	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: ROW-504 32213
Pace Project No.: 92234867

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	SLJ	1	PASI-C

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-1 (0-2) **Lab ID: 92234867001** Collected: 01/24/15 12:00 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Antimony	ND	mg/kg	0.49	1	01/27/15 17:45	01/28/15 06:39	7440-36-0	
Arsenic	1.2	mg/kg	0.97	1	01/27/15 17:45	01/28/15 13:34	7440-38-2	
Beryllium	0.19	mg/kg	0.097	1	01/27/15 17:45	01/28/15 06:39	7440-41-7	
Cadmium	0.21	mg/kg	0.097	1	01/27/15 17:45	01/28/15 06:39	7440-43-9	
Chromium	10.3	mg/kg	0.49	1	01/27/15 17:45	01/28/15 06:39	7440-47-3	
Copper	18.8	mg/kg	0.49	1	01/27/15 17:45	01/28/15 06:39	7440-50-8	
Lead	23.0	mg/kg	0.49	1	01/27/15 17:45	01/28/15 06:39	7439-92-1	
Manganese	219	mg/kg	0.49	1	01/27/15 17:45	01/28/15 06:39	7439-96-5	
Nickel	3.5	mg/kg	0.49	1	01/27/15 17:45	01/28/15 06:39	7440-02-0	
Selenium	ND	mg/kg	0.97	1	01/27/15 17:45	01/28/15 06:39	7782-49-2	
Silver	ND	mg/kg	0.49	1	01/27/15 17:45	01/28/15 06:39	7440-22-4	
Thallium	ND	mg/kg	0.97	1	01/27/15 17:45	01/28/15 06:39	7440-28-0	
Zinc	23.7	mg/kg	0.97	1	01/27/15 17:45	01/28/15 06:39	7440-66-6	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.042	mg/kg	0.0049	1	01/28/15 11:10	01/28/15 14:50	7439-97-6	
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	90.9	1		02/02/15 15:59	67-64-1	
Benzene	ND	ug/kg	4.5	1		02/02/15 15:59	71-43-2	
Bromobenzene	ND	ug/kg	4.5	1		02/02/15 15:59	108-86-1	L2
Bromochloromethane	ND	ug/kg	4.5	1		02/02/15 15:59	74-97-5	
Bromodichloromethane	ND	ug/kg	4.5	1		02/02/15 15:59	75-27-4	
Bromoform	ND	ug/kg	4.5	1		02/02/15 15:59	75-25-2	
Bromomethane	ND	ug/kg	9.1	1		02/02/15 15:59	74-83-9	
2-Butanone (MEK)	ND	ug/kg	90.9	1		02/02/15 15:59	78-93-3	
n-Butylbenzene	ND	ug/kg	4.5	1		02/02/15 15:59	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.5	1		02/02/15 15:59	135-98-8	
tert-Butylbenzene	ND	ug/kg	4.5	1		02/02/15 15:59	98-06-6	
Carbon tetrachloride	ND	ug/kg	4.5	1		02/02/15 15:59	56-23-5	
Chlorobenzene	ND	ug/kg	4.5	1		02/02/15 15:59	108-90-7	
Chloroethane	ND	ug/kg	9.1	1		02/02/15 15:59	75-00-3	
Chloroform	ND	ug/kg	4.5	1		02/02/15 15:59	67-66-3	
Chloromethane	ND	ug/kg	9.1	1		02/02/15 15:59	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.5	1		02/02/15 15:59	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.5	1		02/02/15 15:59	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	4.5	1		02/02/15 15:59	96-12-8	
Dibromochloromethane	ND	ug/kg	4.5	1		02/02/15 15:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.5	1		02/02/15 15:59	106-93-4	
Dibromomethane	ND	ug/kg	4.5	1		02/02/15 15:59	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.5	1		02/02/15 15:59	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.5	1		02/02/15 15:59	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.5	1		02/02/15 15:59	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	9.1	1		02/02/15 15:59	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.5	1		02/02/15 15:59	75-34-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-1 (0-2) **Lab ID: 92234867001** Collected: 01/24/15 12:00 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
1,2-Dichloroethane	ND	ug/kg	4.5	1		02/02/15 15:59	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.5	1		02/02/15 15:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.5	1		02/02/15 15:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.5	1		02/02/15 15:59	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.5	1		02/02/15 15:59	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.5	1		02/02/15 15:59	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.5	1		02/02/15 15:59	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.5	1		02/02/15 15:59	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.5	1		02/02/15 15:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.5	1		02/02/15 15:59	10061-02-6	
Diisopropyl ether	ND	ug/kg	4.5	1		02/02/15 15:59	108-20-3	
Ethylbenzene	ND	ug/kg	4.5	1		02/02/15 15:59	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.5	1		02/02/15 15:59	87-68-3	
2-Hexanone	ND	ug/kg	45.5	1		02/02/15 15:59	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.5	1		02/02/15 15:59	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.5	1		02/02/15 15:59	99-87-6	
Methylene Chloride	ND	ug/kg	18.2	1		02/02/15 15:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	45.5	1		02/02/15 15:59	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.5	1		02/02/15 15:59	1634-04-4	
Naphthalene	ND	ug/kg	4.5	1		02/02/15 15:59	91-20-3	
n-Propylbenzene	ND	ug/kg	4.5	1		02/02/15 15:59	103-65-1	
Styrene	ND	ug/kg	4.5	1		02/02/15 15:59	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.5	1		02/02/15 15:59	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.5	1		02/02/15 15:59	79-34-5	
Tetrachloroethene	ND	ug/kg	4.5	1		02/02/15 15:59	127-18-4	
Toluene	ND	ug/kg	4.5	1		02/02/15 15:59	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.5	1		02/02/15 15:59	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.5	1		02/02/15 15:59	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.5	1		02/02/15 15:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.5	1		02/02/15 15:59	79-00-5	
Trichloroethene	ND	ug/kg	4.5	1		02/02/15 15:59	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.5	1		02/02/15 15:59	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.5	1		02/02/15 15:59	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.5	1		02/02/15 15:59	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.5	1		02/02/15 15:59	108-67-8	
Vinyl acetate	ND	ug/kg	45.5	1		02/02/15 15:59	108-05-4	
Vinyl chloride	ND	ug/kg	9.1	1		02/02/15 15:59	75-01-4	
Xylene (Total)	ND	ug/kg	9.1	1		02/02/15 15:59	1330-20-7	
m&p-Xylene	ND	ug/kg	9.1	1		02/02/15 15:59	179601-23-1	
o-Xylene	ND	ug/kg	4.5	1		02/02/15 15:59	95-47-6	
Surrogates								
Toluene-d8 (S)	98	%	70-130	1		02/02/15 15:59	2037-26-5	
4-Bromofluorobenzene (S)	100	%	70-130	1		02/02/15 15:59	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-132	1		02/02/15 15:59	17060-07-0	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-1 (0-2) **Lab ID: 92234867001** Collected: 01/24/15 12:00 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	19.5	%	0.10	1		01/30/15 15:27		

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ANALYTICAL RESULTS

Project: ROW-504 32213
Pace Project No.: 92234867

Sample: 7B-2 (0-2) **Lab ID: 92234867002** Collected: 01/24/15 13:10 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Antimony	1.1	mg/kg	0.50	1	01/28/15 16:45	01/28/15 19:53	7440-36-0	
Arsenic	4.9	mg/kg	1.0	1	01/28/15 16:45	01/28/15 19:53	7440-38-2	
Beryllium	0.33	mg/kg	0.10	1	01/28/15 16:45	01/28/15 19:53	7440-41-7	
Cadmium	2.6	mg/kg	0.10	1	01/28/15 16:45	01/28/15 19:53	7440-43-9	
Chromium	14.8	mg/kg	0.50	1	01/28/15 16:45	01/28/15 19:53	7440-47-3	
Copper	35.0	mg/kg	0.50	1	01/28/15 16:45	01/28/15 19:53	7440-50-8	
Lead	138	mg/kg	0.50	1	01/28/15 16:45	01/28/15 19:53	7439-92-1	
Manganese	143	mg/kg	0.50	1	01/28/15 16:45	01/28/15 19:53	7439-96-5	
Nickel	4.2	mg/kg	0.50	1	01/28/15 16:45	01/28/15 19:53	7440-02-0	
Selenium	ND	mg/kg	1.0	1	01/28/15 16:45	01/28/15 19:53	7782-49-2	
Silver	ND	mg/kg	0.50	1	01/28/15 16:45	01/28/15 19:53	7440-22-4	
Thallium	ND	mg/kg	1.0	1	01/28/15 16:45	01/28/15 19:53	7440-28-0	
Zinc	322	mg/kg	1.0	1	01/28/15 16:45	01/28/15 19:53	7440-66-6	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	7.1	mg/kg	0.55	125	01/28/15 11:10	01/28/15 17:06	7439-97-6	
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	101	1		02/02/15 16:19	67-64-1	
Benzene	ND	ug/kg	5.0	1		02/02/15 16:19	71-43-2	
Bromobenzene	ND	ug/kg	5.0	1		02/02/15 16:19	108-86-1	L2
Bromochloromethane	ND	ug/kg	5.0	1		02/02/15 16:19	74-97-5	
Bromodichloromethane	ND	ug/kg	5.0	1		02/02/15 16:19	75-27-4	
Bromoform	ND	ug/kg	5.0	1		02/02/15 16:19	75-25-2	
Bromomethane	ND	ug/kg	10.1	1		02/02/15 16:19	74-83-9	
2-Butanone (MEK)	ND	ug/kg	101	1		02/02/15 16:19	78-93-3	
n-Butylbenzene	ND	ug/kg	5.0	1		02/02/15 16:19	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.0	1		02/02/15 16:19	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.0	1		02/02/15 16:19	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.0	1		02/02/15 16:19	56-23-5	
Chlorobenzene	ND	ug/kg	5.0	1		02/02/15 16:19	108-90-7	
Chloroethane	ND	ug/kg	10.1	1		02/02/15 16:19	75-00-3	
Chloroform	ND	ug/kg	5.0	1		02/02/15 16:19	67-66-3	
Chloromethane	ND	ug/kg	10.1	1		02/02/15 16:19	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.0	1		02/02/15 16:19	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.0	1		02/02/15 16:19	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0	1		02/02/15 16:19	96-12-8	
Dibromochloromethane	ND	ug/kg	5.0	1		02/02/15 16:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	1		02/02/15 16:19	106-93-4	
Dibromomethane	ND	ug/kg	5.0	1		02/02/15 16:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.0	1		02/02/15 16:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.0	1		02/02/15 16:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.0	1		02/02/15 16:19	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.1	1		02/02/15 16:19	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.0	1		02/02/15 16:19	75-34-3	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-2 (0-2) **Lab ID: 92234867002** Collected: 01/24/15 13:10 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
1,2-Dichloroethane	ND	ug/kg	5.0	1		02/02/15 16:19	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.0	1		02/02/15 16:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.0	1		02/02/15 16:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1		02/02/15 16:19	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.0	1		02/02/15 16:19	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.0	1		02/02/15 16:19	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.0	1		02/02/15 16:19	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.0	1		02/02/15 16:19	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.0	1		02/02/15 16:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.0	1		02/02/15 16:19	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.0	1		02/02/15 16:19	108-20-3	
Ethylbenzene	ND	ug/kg	5.0	1		02/02/15 16:19	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	1		02/02/15 16:19	87-68-3	
2-Hexanone	ND	ug/kg	50.4	1		02/02/15 16:19	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	1		02/02/15 16:19	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.0	1		02/02/15 16:19	99-87-6	
Methylene Chloride	ND	ug/kg	20.2	1		02/02/15 16:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	50.4	1		02/02/15 16:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.0	1		02/02/15 16:19	1634-04-4	
Naphthalene	ND	ug/kg	5.0	1		02/02/15 16:19	91-20-3	
n-Propylbenzene	ND	ug/kg	5.0	1		02/02/15 16:19	103-65-1	
Styrene	ND	ug/kg	5.0	1		02/02/15 16:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	1		02/02/15 16:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1		02/02/15 16:19	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	1		02/02/15 16:19	127-18-4	
Toluene	ND	ug/kg	5.0	1		02/02/15 16:19	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	1		02/02/15 16:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	1		02/02/15 16:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.0	1		02/02/15 16:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.0	1		02/02/15 16:19	79-00-5	
Trichloroethene	ND	ug/kg	5.0	1		02/02/15 16:19	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	1		02/02/15 16:19	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.0	1		02/02/15 16:19	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	1		02/02/15 16:19	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	1		02/02/15 16:19	108-67-8	
Vinyl acetate	ND	ug/kg	50.4	1		02/02/15 16:19	108-05-4	
Vinyl chloride	ND	ug/kg	10.1	1		02/02/15 16:19	75-01-4	
Xylene (Total)	ND	ug/kg	10.1	1		02/02/15 16:19	1330-20-7	
m&p-Xylene	ND	ug/kg	10.1	1		02/02/15 16:19	179601-23-1	
o-Xylene	ND	ug/kg	5.0	1		02/02/15 16:19	95-47-6	
Surrogates								
Toluene-d8 (S)	97	%	70-130	1		02/02/15 16:19	2037-26-5	2g
4-Bromofluorobenzene (S)	90	%	70-130	1		02/02/15 16:19	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	70-132	1		02/02/15 16:19	17060-07-0	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-2 (0-2) **Lab ID: 92234867002** Collected: 01/24/15 13:10 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	18.6	%	0.10	1		01/30/15 15:28		

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-3 (14-15) **Lab ID: 92234867003** Collected: 01/24/15 12:55 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Antimony	ND	mg/kg	0.58	1	01/28/15 16:45	01/28/15 19:57	7440-36-0	
Arsenic	ND	mg/kg	1.2	1	01/28/15 16:45	01/28/15 19:57	7440-38-2	
Beryllium	0.27	mg/kg	0.12	1	01/28/15 16:45	01/28/15 19:57	7440-41-7	
Cadmium	ND	mg/kg	0.12	1	01/28/15 16:45	01/28/15 19:57	7440-43-9	
Chromium	7.6	mg/kg	0.58	1	01/28/15 16:45	01/28/15 19:57	7440-47-3	
Copper	20.4	mg/kg	0.58	1	01/28/15 16:45	01/28/15 19:57	7440-50-8	
Lead	6.7	mg/kg	0.58	1	01/28/15 16:45	01/28/15 19:57	7439-92-1	
Manganese	144	mg/kg	0.58	1	01/28/15 16:45	01/28/15 19:57	7439-96-5	
Nickel	4.3	mg/kg	0.58	1	01/28/15 16:45	01/28/15 19:57	7440-02-0	
Selenium	ND	mg/kg	1.2	1	01/28/15 16:45	01/28/15 19:57	7782-49-2	
Silver	0.62	mg/kg	0.58	1	01/28/15 16:45	01/28/15 19:57	7440-22-4	
Thallium	ND	mg/kg	1.2	1	01/28/15 16:45	01/28/15 19:57	7440-28-0	
Zinc	40.2	mg/kg	1.2	1	01/28/15 16:45	01/28/15 19:57	7440-66-6	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.016	mg/kg	0.0049	1	01/28/15 11:10	01/28/15 15:01	7439-97-6	
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	111	1		02/02/15 16:39	67-64-1	
Benzene	ND	ug/kg	5.5	1		02/02/15 16:39	71-43-2	
Bromobenzene	ND	ug/kg	5.5	1		02/02/15 16:39	108-86-1	L2
Bromochloromethane	ND	ug/kg	5.5	1		02/02/15 16:39	74-97-5	
Bromodichloromethane	ND	ug/kg	5.5	1		02/02/15 16:39	75-27-4	
Bromoform	ND	ug/kg	5.5	1		02/02/15 16:39	75-25-2	
Bromomethane	ND	ug/kg	11.1	1		02/02/15 16:39	74-83-9	
2-Butanone (MEK)	ND	ug/kg	111	1		02/02/15 16:39	78-93-3	
n-Butylbenzene	ND	ug/kg	5.5	1		02/02/15 16:39	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.5	1		02/02/15 16:39	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.5	1		02/02/15 16:39	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.5	1		02/02/15 16:39	56-23-5	
Chlorobenzene	ND	ug/kg	5.5	1		02/02/15 16:39	108-90-7	
Chloroethane	ND	ug/kg	11.1	1		02/02/15 16:39	75-00-3	
Chloroform	ND	ug/kg	5.5	1		02/02/15 16:39	67-66-3	
Chloromethane	ND	ug/kg	11.1	1		02/02/15 16:39	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.5	1		02/02/15 16:39	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.5	1		02/02/15 16:39	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.5	1		02/02/15 16:39	96-12-8	
Dibromochloromethane	ND	ug/kg	5.5	1		02/02/15 16:39	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.5	1		02/02/15 16:39	106-93-4	
Dibromomethane	ND	ug/kg	5.5	1		02/02/15 16:39	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.5	1		02/02/15 16:39	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.5	1		02/02/15 16:39	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.5	1		02/02/15 16:39	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.1	1		02/02/15 16:39	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.5	1		02/02/15 16:39	75-34-3	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-3 (14-15) **Lab ID: 92234867003** Collected: 01/24/15 12:55 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
1,2-Dichloroethane	ND	ug/kg	5.5	1		02/02/15 16:39	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.5	1		02/02/15 16:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.5	1		02/02/15 16:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.5	1		02/02/15 16:39	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.5	1		02/02/15 16:39	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.5	1		02/02/15 16:39	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.5	1		02/02/15 16:39	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.5	1		02/02/15 16:39	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.5	1		02/02/15 16:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.5	1		02/02/15 16:39	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.5	1		02/02/15 16:39	108-20-3	
Ethylbenzene	ND	ug/kg	5.5	1		02/02/15 16:39	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.5	1		02/02/15 16:39	87-68-3	
2-Hexanone	ND	ug/kg	55.5	1		02/02/15 16:39	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.5	1		02/02/15 16:39	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.5	1		02/02/15 16:39	99-87-6	
Methylene Chloride	ND	ug/kg	22.2	1		02/02/15 16:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	55.5	1		02/02/15 16:39	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.5	1		02/02/15 16:39	1634-04-4	
Naphthalene	ND	ug/kg	5.5	1		02/02/15 16:39	91-20-3	
n-Propylbenzene	ND	ug/kg	5.5	1		02/02/15 16:39	103-65-1	
Styrene	ND	ug/kg	5.5	1		02/02/15 16:39	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.5	1		02/02/15 16:39	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.5	1		02/02/15 16:39	79-34-5	
Tetrachloroethene	ND	ug/kg	5.5	1		02/02/15 16:39	127-18-4	
Toluene	ND	ug/kg	5.5	1		02/02/15 16:39	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.5	1		02/02/15 16:39	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.5	1		02/02/15 16:39	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.5	1		02/02/15 16:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.5	1		02/02/15 16:39	79-00-5	
Trichloroethene	ND	ug/kg	5.5	1		02/02/15 16:39	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.5	1		02/02/15 16:39	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.5	1		02/02/15 16:39	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.5	1		02/02/15 16:39	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.5	1		02/02/15 16:39	108-67-8	
Vinyl acetate	ND	ug/kg	55.5	1		02/02/15 16:39	108-05-4	
Vinyl chloride	ND	ug/kg	11.1	1		02/02/15 16:39	75-01-4	
Xylene (Total)	ND	ug/kg	11.1	1		02/02/15 16:39	1330-20-7	
m&p-Xylene	ND	ug/kg	11.1	1		02/02/15 16:39	179601-23-1	
o-Xylene	ND	ug/kg	5.5	1		02/02/15 16:39	95-47-6	
Surrogates								
Toluene-d8 (S)	100	%	70-130	1		02/02/15 16:39	2037-26-5	
4-Bromofluorobenzene (S)	99	%	70-130	1		02/02/15 16:39	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-132	1		02/02/15 16:39	17060-07-0	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-3 (14-15) **Lab ID: 92234867003** Collected: 01/24/15 12:55 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	23.0	%	0.10	1		01/30/15 15:28		

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-4 (14-15) **Lab ID: 92234867004** Collected: 01/24/15 13:15 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Antimony	ND	mg/kg	0.51	1	01/28/15 16:45	01/28/15 20:00	7440-36-0	
Arsenic	ND	mg/kg	1.0	1	01/28/15 16:45	01/28/15 20:00	7440-38-2	
Beryllium	0.33	mg/kg	0.10	1	01/28/15 16:45	01/28/15 20:00	7440-41-7	
Cadmium	0.16	mg/kg	0.10	1	01/28/15 16:45	01/28/15 20:00	7440-43-9	
Chromium	10.2	mg/kg	0.51	1	01/28/15 16:45	01/28/15 20:00	7440-47-3	
Copper	11.9	mg/kg	0.51	1	01/28/15 16:45	01/28/15 20:00	7440-50-8	
Lead	8.4	mg/kg	0.51	1	01/28/15 16:45	01/28/15 20:00	7439-92-1	
Manganese	137	mg/kg	0.51	1	01/28/15 16:45	01/28/15 20:00	7439-96-5	
Nickel	3.9	mg/kg	0.51	1	01/28/15 16:45	01/28/15 20:00	7440-02-0	
Selenium	1.1	mg/kg	1.0	1	01/28/15 16:45	01/28/15 20:00	7782-49-2	
Silver	0.63	mg/kg	0.51	1	01/28/15 16:45	01/28/15 20:00	7440-22-4	
Thallium	ND	mg/kg	1.0	1	01/28/15 16:45	01/28/15 20:00	7440-28-0	
Zinc	35.4	mg/kg	1.0	1	01/28/15 16:45	01/28/15 20:00	7440-66-6	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.0079	mg/kg	0.0044	1	01/28/15 11:10	01/28/15 15:04	7439-97-6	
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	106	1		02/04/15 16:20	67-64-1	
Benzene	34.1	ug/kg	5.3	1		02/04/15 16:20	71-43-2	
Bromobenzene	ND	ug/kg	5.3	1		02/04/15 16:20	108-86-1	
Bromochloromethane	ND	ug/kg	5.3	1		02/04/15 16:20	74-97-5	
Bromodichloromethane	ND	ug/kg	5.3	1		02/04/15 16:20	75-27-4	
Bromoform	ND	ug/kg	5.3	1		02/04/15 16:20	75-25-2	
Bromomethane	ND	ug/kg	10.6	1		02/04/15 16:20	74-83-9	
2-Butanone (MEK)	ND	ug/kg	106	1		02/04/15 16:20	78-93-3	
n-Butylbenzene	ND	ug/kg	5.3	1		02/04/15 16:20	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.3	1		02/04/15 16:20	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.3	1		02/04/15 16:20	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.3	1		02/04/15 16:20	56-23-5	
Chlorobenzene	ND	ug/kg	5.3	1		02/04/15 16:20	108-90-7	
Chloroethane	ND	ug/kg	10.6	1		02/04/15 16:20	75-00-3	
Chloroform	ND	ug/kg	5.3	1		02/04/15 16:20	67-66-3	
Chloromethane	ND	ug/kg	10.6	1		02/04/15 16:20	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.3	1		02/04/15 16:20	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.3	1		02/04/15 16:20	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.3	1		02/04/15 16:20	96-12-8	
Dibromochloromethane	ND	ug/kg	5.3	1		02/04/15 16:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.3	1		02/04/15 16:20	106-93-4	
Dibromomethane	ND	ug/kg	5.3	1		02/04/15 16:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.3	1		02/04/15 16:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.3	1		02/04/15 16:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.3	1		02/04/15 16:20	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.6	1		02/04/15 16:20	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.3	1		02/04/15 16:20	75-34-3	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-4 (14-15) **Lab ID: 92234867004** Collected: 01/24/15 13:15 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
1,2-Dichloroethane	ND	ug/kg	5.3	1		02/04/15 16:20	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.3	1		02/04/15 16:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.3	1		02/04/15 16:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.3	1		02/04/15 16:20	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.3	1		02/04/15 16:20	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.3	1		02/04/15 16:20	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.3	1		02/04/15 16:20	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.3	1		02/04/15 16:20	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.3	1		02/04/15 16:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.3	1		02/04/15 16:20	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.3	1		02/04/15 16:20	108-20-3	
Ethylbenzene	24.5	ug/kg	5.3	1		02/04/15 16:20	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.3	1		02/04/15 16:20	87-68-3	
2-Hexanone	ND	ug/kg	53.1	1		02/04/15 16:20	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.3	1		02/04/15 16:20	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.3	1		02/04/15 16:20	99-87-6	
Methylene Chloride	ND	ug/kg	21.2	1		02/04/15 16:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	53.1	1		02/04/15 16:20	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.3	1		02/04/15 16:20	1634-04-4	
Naphthalene	ND	ug/kg	5.3	1		02/04/15 16:20	91-20-3	
n-Propylbenzene	6.4	ug/kg	5.3	1		02/04/15 16:20	103-65-1	
Styrene	ND	ug/kg	5.3	1		02/04/15 16:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.3	1		02/04/15 16:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.3	1		02/04/15 16:20	79-34-5	
Tetrachloroethene	ND	ug/kg	5.3	1		02/04/15 16:20	127-18-4	
Toluene	ND	ug/kg	5.3	1		02/04/15 16:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.3	1		02/04/15 16:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.3	1		02/04/15 16:20	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.3	1		02/04/15 16:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.3	1		02/04/15 16:20	79-00-5	
Trichloroethene	ND	ug/kg	5.3	1		02/04/15 16:20	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.3	1		02/04/15 16:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.3	1		02/04/15 16:20	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.3	1		02/04/15 16:20	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.3	1		02/04/15 16:20	108-67-8	
Vinyl acetate	ND	ug/kg	53.1	1		02/04/15 16:20	108-05-4	
Vinyl chloride	ND	ug/kg	10.6	1		02/04/15 16:20	75-01-4	
Xylene (Total)	ND	ug/kg	10.6	1		02/04/15 16:20	1330-20-7	
m&p-Xylene	ND	ug/kg	10.6	1		02/04/15 16:20	179601-23-1	
o-Xylene	ND	ug/kg	5.3	1		02/04/15 16:20	95-47-6	
Surrogates								
Toluene-d8 (S)	103	%	70-130	1		02/04/15 16:20	2037-26-5	
4-Bromofluorobenzene (S)	106	%	70-130	1		02/04/15 16:20	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-132	1		02/04/15 16:20	17060-07-0	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-4 (14-15) **Lab ID: 92234867004** Collected: 01/24/15 13:15 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	22.0	%	0.10	1		01/30/15 15:28		

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-5 (0-2) **Lab ID: 92234867005** Collected: 01/24/15 17:35 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Antimony	11.3	mg/kg	0.38	1	01/28/15 16:45	01/28/15 20:03	7440-36-0	
Arsenic	2.5	mg/kg	0.75	1	01/28/15 16:45	01/28/15 20:03	7440-38-2	
Beryllium	0.32	mg/kg	0.075	1	01/28/15 16:45	01/28/15 20:03	7440-41-7	
Cadmium	1.4	mg/kg	0.075	1	01/28/15 16:45	01/28/15 20:03	7440-43-9	
Chromium	19.4	mg/kg	0.38	1	01/28/15 16:45	01/28/15 20:03	7440-47-3	
Copper	165	mg/kg	0.38	1	01/28/15 16:45	01/28/15 20:03	7440-50-8	
Lead	598	mg/kg	0.38	1	01/28/15 16:45	01/28/15 20:03	7439-92-1	
Manganese	1090	mg/kg	7.5	20	01/28/15 16:45	01/29/15 14:11	7439-96-5	
Nickel	8.3	mg/kg	0.38	1	01/28/15 16:45	01/28/15 20:03	7440-02-0	
Selenium	ND	mg/kg	0.75	1	01/28/15 16:45	01/28/15 20:03	7782-49-2	
Silver	0.38	mg/kg	0.38	1	01/28/15 16:45	01/28/15 20:03	7440-22-4	
Thallium	ND	mg/kg	0.75	1	01/28/15 16:45	01/28/15 20:03	7440-28-0	
Zinc	590	mg/kg	0.75	1	01/28/15 16:45	01/28/15 20:03	7440-66-6	
6010 MET ICP, TCLP		Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 02/26/15 16:32						
Arsenic	ND	mg/L	0.050	1	02/27/15 11:05	02/27/15 18:54	7440-38-2	
Barium	1.3	mg/L	0.25	1	02/27/15 11:05	02/27/15 18:54	7440-39-3	
Cadmium	0.026	mg/L	0.0050	1	02/27/15 11:05	02/27/15 18:54	7440-43-9	
Chromium	ND	mg/L	0.025	1	02/27/15 11:05	02/27/15 18:54	7440-47-3	
Lead	3.7	mg/L	0.025	1	02/27/15 11:05	02/27/15 18:54	7439-92-1	
Selenium	ND	mg/L	0.10	1	02/27/15 11:05	02/27/15 18:54	7782-49-2	
Silver	ND	mg/L	0.025	1	02/27/15 11:05	02/27/15 18:54	7440-22-4	
7470 Mercury, TCLP		Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 02/26/15 16:32						
Mercury	ND	mg/L	0.00020	1	02/27/15 12:10	02/27/15 15:54	7439-97-6	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.17	mg/kg	0.018	5	01/28/15 11:10	01/28/15 17:08	7439-97-6	
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	110	1		02/02/15 17:19	67-64-1	
Benzene	ND	ug/kg	5.5	1		02/02/15 17:19	71-43-2	
Bromobenzene	ND	ug/kg	5.5	1		02/02/15 17:19	108-86-1	L2
Bromochloromethane	ND	ug/kg	5.5	1		02/02/15 17:19	74-97-5	
Bromodichloromethane	ND	ug/kg	5.5	1		02/02/15 17:19	75-27-4	
Bromoform	ND	ug/kg	5.5	1		02/02/15 17:19	75-25-2	
Bromomethane	ND	ug/kg	11.0	1		02/02/15 17:19	74-83-9	
2-Butanone (MEK)	ND	ug/kg	110	1		02/02/15 17:19	78-93-3	
n-Butylbenzene	ND	ug/kg	5.5	1		02/02/15 17:19	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.5	1		02/02/15 17:19	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.5	1		02/02/15 17:19	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.5	1		02/02/15 17:19	56-23-5	
Chlorobenzene	ND	ug/kg	5.5	1		02/02/15 17:19	108-90-7	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-5 (0-2) **Lab ID: 92234867005** Collected: 01/24/15 17:35 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
Chloroethane	ND	ug/kg	11.0	1		02/02/15 17:19	75-00-3	
Chloroform	ND	ug/kg	5.5	1		02/02/15 17:19	67-66-3	
Chloromethane	ND	ug/kg	11.0	1		02/02/15 17:19	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.5	1		02/02/15 17:19	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.5	1		02/02/15 17:19	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.5	1		02/02/15 17:19	96-12-8	
Dibromochloromethane	ND	ug/kg	5.5	1		02/02/15 17:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.5	1		02/02/15 17:19	106-93-4	
Dibromomethane	ND	ug/kg	5.5	1		02/02/15 17:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.5	1		02/02/15 17:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.5	1		02/02/15 17:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.5	1		02/02/15 17:19	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.0	1		02/02/15 17:19	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.5	1		02/02/15 17:19	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.5	1		02/02/15 17:19	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.5	1		02/02/15 17:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.5	1		02/02/15 17:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.5	1		02/02/15 17:19	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.5	1		02/02/15 17:19	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.5	1		02/02/15 17:19	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.5	1		02/02/15 17:19	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.5	1		02/02/15 17:19	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.5	1		02/02/15 17:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.5	1		02/02/15 17:19	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.5	1		02/02/15 17:19	108-20-3	
Ethylbenzene	ND	ug/kg	5.5	1		02/02/15 17:19	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.5	1		02/02/15 17:19	87-68-3	
2-Hexanone	ND	ug/kg	54.8	1		02/02/15 17:19	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.5	1		02/02/15 17:19	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.5	1		02/02/15 17:19	99-87-6	
Methylene Chloride	ND	ug/kg	21.9	1		02/02/15 17:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	54.8	1		02/02/15 17:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.5	1		02/02/15 17:19	1634-04-4	
Naphthalene	ND	ug/kg	5.5	1		02/02/15 17:19	91-20-3	
n-Propylbenzene	ND	ug/kg	5.5	1		02/02/15 17:19	103-65-1	
Styrene	ND	ug/kg	5.5	1		02/02/15 17:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.5	1		02/02/15 17:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.5	1		02/02/15 17:19	79-34-5	
Tetrachloroethene	ND	ug/kg	5.5	1		02/02/15 17:19	127-18-4	
Toluene	ND	ug/kg	5.5	1		02/02/15 17:19	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.5	1		02/02/15 17:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.5	1		02/02/15 17:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.5	1		02/02/15 17:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.5	1		02/02/15 17:19	79-00-5	
Trichloroethene	ND	ug/kg	5.5	1		02/02/15 17:19	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.5	1		02/02/15 17:19	75-69-4	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-5 (0-2) **Lab ID: 92234867005** Collected: 01/24/15 17:35 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
1,2,3-Trichloropropane	ND	ug/kg	5.5	1		02/02/15 17:19	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.5	1		02/02/15 17:19	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.5	1		02/02/15 17:19	108-67-8	
Vinyl acetate	ND	ug/kg	54.8	1		02/02/15 17:19	108-05-4	
Vinyl chloride	ND	ug/kg	11.0	1		02/02/15 17:19	75-01-4	
Xylene (Total)	ND	ug/kg	11.0	1		02/02/15 17:19	1330-20-7	
m&p-Xylene	ND	ug/kg	11.0	1		02/02/15 17:19	179601-23-1	
o-Xylene	ND	ug/kg	5.5	1		02/02/15 17:19	95-47-6	
Surrogates								
Toluene-d8 (S)	96	%	70-130	1		02/02/15 17:19	2037-26-5	
4-Bromofluorobenzene (S)	91	%	70-130	1		02/02/15 17:19	460-00-4	
1,2-Dichloroethane-d4 (S)	87	%	70-132	1		02/02/15 17:19	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	8.8	%	0.10	1		01/30/15 15:28		

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-6 (0-2) **Lab ID: 92234867006** Collected: 01/24/15 17:15 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	107	1		02/02/15 17:38	67-64-1	
Benzene	ND	ug/kg	5.3	1		02/02/15 17:38	71-43-2	
Bromobenzene	ND	ug/kg	5.3	1		02/02/15 17:38	108-86-1	L2
Bromochloromethane	ND	ug/kg	5.3	1		02/02/15 17:38	74-97-5	
Bromodichloromethane	ND	ug/kg	5.3	1		02/02/15 17:38	75-27-4	
Bromoform	ND	ug/kg	5.3	1		02/02/15 17:38	75-25-2	
Bromomethane	ND	ug/kg	10.7	1		02/02/15 17:38	74-83-9	
2-Butanone (MEK)	ND	ug/kg	107	1		02/02/15 17:38	78-93-3	
n-Butylbenzene	ND	ug/kg	5.3	1		02/02/15 17:38	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.3	1		02/02/15 17:38	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.3	1		02/02/15 17:38	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.3	1		02/02/15 17:38	56-23-5	
Chlorobenzene	ND	ug/kg	5.3	1		02/02/15 17:38	108-90-7	
Chloroethane	ND	ug/kg	10.7	1		02/02/15 17:38	75-00-3	
Chloroform	ND	ug/kg	5.3	1		02/02/15 17:38	67-66-3	
Chloromethane	ND	ug/kg	10.7	1		02/02/15 17:38	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.3	1		02/02/15 17:38	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.3	1		02/02/15 17:38	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.3	1		02/02/15 17:38	96-12-8	
Dibromochloromethane	ND	ug/kg	5.3	1		02/02/15 17:38	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.3	1		02/02/15 17:38	106-93-4	
Dibromomethane	ND	ug/kg	5.3	1		02/02/15 17:38	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.3	1		02/02/15 17:38	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.3	1		02/02/15 17:38	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.3	1		02/02/15 17:38	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.7	1		02/02/15 17:38	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.3	1		02/02/15 17:38	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.3	1		02/02/15 17:38	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.3	1		02/02/15 17:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.3	1		02/02/15 17:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.3	1		02/02/15 17:38	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.3	1		02/02/15 17:38	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.3	1		02/02/15 17:38	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.3	1		02/02/15 17:38	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.3	1		02/02/15 17:38	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.3	1		02/02/15 17:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.3	1		02/02/15 17:38	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.3	1		02/02/15 17:38	108-20-3	
Ethylbenzene	ND	ug/kg	5.3	1		02/02/15 17:38	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.3	1		02/02/15 17:38	87-68-3	
2-Hexanone	ND	ug/kg	53.3	1		02/02/15 17:38	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.3	1		02/02/15 17:38	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.3	1		02/02/15 17:38	99-87-6	
Methylene Chloride	ND	ug/kg	21.3	1		02/02/15 17:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	53.3	1		02/02/15 17:38	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.3	1		02/02/15 17:38	1634-04-4	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-6 (0-2) **Lab ID: 92234867006** Collected: 01/24/15 17:15 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
Naphthalene	ND	ug/kg	5.3	1		02/02/15 17:38	91-20-3	
n-Propylbenzene	ND	ug/kg	5.3	1		02/02/15 17:38	103-65-1	
Styrene	ND	ug/kg	5.3	1		02/02/15 17:38	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.3	1		02/02/15 17:38	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.3	1		02/02/15 17:38	79-34-5	
Tetrachloroethene	ND	ug/kg	5.3	1		02/02/15 17:38	127-18-4	
Toluene	ND	ug/kg	5.3	1		02/02/15 17:38	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.3	1		02/02/15 17:38	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.3	1		02/02/15 17:38	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.3	1		02/02/15 17:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.3	1		02/02/15 17:38	79-00-5	
Trichloroethene	ND	ug/kg	5.3	1		02/02/15 17:38	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.3	1		02/02/15 17:38	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.3	1		02/02/15 17:38	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.3	1		02/02/15 17:38	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.3	1		02/02/15 17:38	108-67-8	
Vinyl acetate	ND	ug/kg	53.3	1		02/02/15 17:38	108-05-4	
Vinyl chloride	ND	ug/kg	10.7	1		02/02/15 17:38	75-01-4	
Xylene (Total)	ND	ug/kg	10.7	1		02/02/15 17:38	1330-20-7	
m&p-Xylene	ND	ug/kg	10.7	1		02/02/15 17:38	179601-23-1	
o-Xylene	ND	ug/kg	5.3	1		02/02/15 17:38	95-47-6	
Surrogates								
Toluene-d8 (S)	98	%	70-130	1		02/02/15 17:38	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130	1		02/02/15 17:38	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-132	1		02/02/15 17:38	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	17.8	%	0.10	1		01/30/15 15:28		

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-7 (14-15) **Lab ID: 92234867007** Collected: 01/25/15 09:30 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Antimony	ND	mg/kg	0.53	1	01/28/15 16:45	01/28/15 20:06	7440-36-0	
Arsenic	ND	mg/kg	1.1	1	01/28/15 16:45	01/28/15 20:06	7440-38-2	
Beryllium	0.17	mg/kg	0.11	1	01/28/15 16:45	01/28/15 20:06	7440-41-7	
Cadmium	0.17	mg/kg	0.11	1	01/28/15 16:45	01/28/15 20:06	7440-43-9	
Chromium	15.0	mg/kg	0.53	1	01/28/15 16:45	01/28/15 20:06	7440-47-3	
Copper	13.3	mg/kg	0.53	1	01/28/15 16:45	01/28/15 20:06	7440-50-8	
Lead	7.1	mg/kg	0.53	1	01/28/15 16:45	01/28/15 20:06	7439-92-1	
Manganese	77.0	mg/kg	0.53	1	01/28/15 16:45	01/28/15 20:06	7439-96-5	
Nickel	2.0	mg/kg	0.53	1	01/28/15 16:45	01/28/15 20:06	7440-02-0	
Selenium	1.2	mg/kg	1.1	1	01/28/15 16:45	01/28/15 20:06	7782-49-2	
Silver	ND	mg/kg	0.53	1	01/28/15 16:45	01/28/15 20:06	7440-22-4	
Thallium	ND	mg/kg	1.1	1	01/28/15 16:45	01/28/15 20:06	7440-28-0	
Zinc	20.6	mg/kg	1.1	1	01/28/15 16:45	01/28/15 20:06	7440-66-6	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.023	mg/kg	0.0040	1	01/28/15 11:10	01/28/15 15:15	7439-97-6	
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	107	1		02/02/15 17:58	67-64-1	
Benzene	ND	ug/kg	5.3	1		02/02/15 17:58	71-43-2	
Bromobenzene	ND	ug/kg	5.3	1		02/02/15 17:58	108-86-1	L2
Bromochloromethane	ND	ug/kg	5.3	1		02/02/15 17:58	74-97-5	
Bromodichloromethane	ND	ug/kg	5.3	1		02/02/15 17:58	75-27-4	
Bromoform	ND	ug/kg	5.3	1		02/02/15 17:58	75-25-2	
Bromomethane	ND	ug/kg	10.7	1		02/02/15 17:58	74-83-9	
2-Butanone (MEK)	ND	ug/kg	107	1		02/02/15 17:58	78-93-3	
n-Butylbenzene	ND	ug/kg	5.3	1		02/02/15 17:58	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.3	1		02/02/15 17:58	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.3	1		02/02/15 17:58	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.3	1		02/02/15 17:58	56-23-5	
Chlorobenzene	ND	ug/kg	5.3	1		02/02/15 17:58	108-90-7	
Chloroethane	ND	ug/kg	10.7	1		02/02/15 17:58	75-00-3	
Chloroform	ND	ug/kg	5.3	1		02/02/15 17:58	67-66-3	
Chloromethane	ND	ug/kg	10.7	1		02/02/15 17:58	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.3	1		02/02/15 17:58	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.3	1		02/02/15 17:58	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.3	1		02/02/15 17:58	96-12-8	
Dibromochloromethane	ND	ug/kg	5.3	1		02/02/15 17:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.3	1		02/02/15 17:58	106-93-4	
Dibromomethane	ND	ug/kg	5.3	1		02/02/15 17:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.3	1		02/02/15 17:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.3	1		02/02/15 17:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.3	1		02/02/15 17:58	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.7	1		02/02/15 17:58	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.3	1		02/02/15 17:58	75-34-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-7 (14-15) **Lab ID: 92234867007** Collected: 01/25/15 09:30 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
1,2-Dichloroethane	ND	ug/kg	5.3	1		02/02/15 17:58	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.3	1		02/02/15 17:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.3	1		02/02/15 17:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.3	1		02/02/15 17:58	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.3	1		02/02/15 17:58	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.3	1		02/02/15 17:58	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.3	1		02/02/15 17:58	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.3	1		02/02/15 17:58	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.3	1		02/02/15 17:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.3	1		02/02/15 17:58	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.3	1		02/02/15 17:58	108-20-3	
Ethylbenzene	ND	ug/kg	5.3	1		02/02/15 17:58	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.3	1		02/02/15 17:58	87-68-3	
2-Hexanone	ND	ug/kg	53.3	1		02/02/15 17:58	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.3	1		02/02/15 17:58	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.3	1		02/02/15 17:58	99-87-6	
Methylene Chloride	ND	ug/kg	21.3	1		02/02/15 17:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	53.3	1		02/02/15 17:58	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.3	1		02/02/15 17:58	1634-04-4	
Naphthalene	ND	ug/kg	5.3	1		02/02/15 17:58	91-20-3	
n-Propylbenzene	ND	ug/kg	5.3	1		02/02/15 17:58	103-65-1	
Styrene	ND	ug/kg	5.3	1		02/02/15 17:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.3	1		02/02/15 17:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.3	1		02/02/15 17:58	79-34-5	
Tetrachloroethene	ND	ug/kg	5.3	1		02/02/15 17:58	127-18-4	
Toluene	ND	ug/kg	5.3	1		02/02/15 17:58	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.3	1		02/02/15 17:58	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.3	1		02/02/15 17:58	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.3	1		02/02/15 17:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.3	1		02/02/15 17:58	79-00-5	
Trichloroethene	ND	ug/kg	5.3	1		02/02/15 17:58	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.3	1		02/02/15 17:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.3	1		02/02/15 17:58	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.3	1		02/02/15 17:58	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.3	1		02/02/15 17:58	108-67-8	
Vinyl acetate	ND	ug/kg	53.3	1		02/02/15 17:58	108-05-4	
Vinyl chloride	ND	ug/kg	10.7	1		02/02/15 17:58	75-01-4	
Xylene (Total)	ND	ug/kg	10.7	1		02/02/15 17:58	1330-20-7	
m&p-Xylene	ND	ug/kg	10.7	1		02/02/15 17:58	179601-23-1	
o-Xylene	ND	ug/kg	5.3	1		02/02/15 17:58	95-47-6	
Surrogates								
Toluene-d8 (S)	97	%	70-130	1		02/02/15 17:58	2037-26-5	
4-Bromofluorobenzene (S)	95	%	70-130	1		02/02/15 17:58	460-00-4	
1,2-Dichloroethane-d4 (S)	88	%	70-132	1		02/02/15 17:58	17060-07-0	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B-7 (14-15) **Lab ID: 92234867007** Collected: 01/25/15 09:30 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	22.3	%	0.10	1		01/30/15 15:28		

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7BS-Drum **Lab ID: 92234867008** Collected: 01/25/15 10:15 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP		Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 01/28/15 17:20						
Arsenic	ND	mg/L	0.050	1	01/29/15 17:50	01/30/15 03:20	7440-38-2	
Barium	0.92	mg/L	0.25	1	01/29/15 17:50	01/30/15 03:20	7440-39-3	
Cadmium	0.0078	mg/L	0.0050	1	01/29/15 17:50	01/30/15 03:20	7440-43-9	
Chromium	ND	mg/L	0.025	1	01/29/15 17:50	01/30/15 03:20	7440-47-3	
Lead	1.8	mg/L	0.025	1	01/29/15 17:50	01/30/15 03:20	7439-92-1	
Selenium	ND	mg/L	0.10	1	01/29/15 17:50	01/30/15 03:20	7782-49-2	
Silver	ND	mg/L	0.025	1	01/29/15 17:50	01/30/15 03:20	7440-22-4	
7470 Mercury, TCLP		Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 01/28/15 17:20						
Mercury	ND	ug/L	0.20	1	01/29/15 18:00	01/30/15 16:55	7439-97-6	
8260 MSV TCLP		Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 01/27/15 10:41						
Benzene	ND	ug/L	192	38.5		01/27/15 20:42	71-43-2	
2-Butanone (MEK)	ND	ug/L	385	38.5		01/27/15 20:42	78-93-3	
Carbon tetrachloride	ND	ug/L	192	38.5		01/27/15 20:42	56-23-5	
Chlorobenzene	ND	ug/L	192	38.5		01/27/15 20:42	108-90-7	
Chloroform	ND	ug/L	192	38.5		01/27/15 20:42	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	192	38.5		01/27/15 20:42	106-46-7	
1,2-Dichloroethane	ND	ug/L	192	38.5		01/27/15 20:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	192	38.5		01/27/15 20:42	75-35-4	
Tetrachloroethene	ND	ug/L	192	38.5		01/27/15 20:42	127-18-4	
Trichloroethene	ND	ug/L	192	38.5		01/27/15 20:42	79-01-6	
Vinyl chloride	ND	ug/L	192	38.5		01/27/15 20:42	75-01-4	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	70-130	38.5		01/27/15 20:42	17060-07-0	1g
Toluene-d8 (S)	104	%	67-135	38.5		01/27/15 20:42	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130	38.5		01/27/15 20:42	460-00-4	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7BW-Drum	Lab ID: 92234867009	Collected: 01/25/15 11:00	Received: 01/26/15 08:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Leachate Method/Date: EPA 1311; 02/02/15 17:15								
Arsenic	ND	mg/L	0.050	1	02/03/15 16:30	02/04/15 03:34	7440-38-2	
Barium	ND	mg/L	0.25	1	02/03/15 16:30	02/04/15 03:34	7440-39-3	
Cadmium	ND	mg/L	0.0050	1	02/03/15 16:30	02/04/15 03:34	7440-43-9	
Chromium	ND	mg/L	0.025	1	02/03/15 16:30	02/04/15 03:34	7440-47-3	
Lead	ND	mg/L	0.025	1	02/03/15 16:30	02/04/15 03:34	7439-92-1	
Selenium	ND	mg/L	0.10	1	02/03/15 16:30	02/04/15 03:34	7782-49-2	
Silver	ND	mg/L	0.025	1	02/03/15 16:30	02/04/15 03:34	7440-22-4	
7470 Mercury, TCLP								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Leachate Method/Date: EPA 1311; 02/02/15 17:15								
Mercury	ND	ug/L	0.20	1	02/03/15 17:15	02/04/15 11:20	7439-97-6	
8260 MSV TCLP								
Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 01/27/15 13:51								
Benzene	ND	ug/L	5.0	1		01/28/15 14:57	71-43-2	
2-Butanone (MEK)	ND	ug/L	10.0	1		01/28/15 14:57	78-93-3	
Carbon tetrachloride	ND	ug/L	5.0	1		01/28/15 14:57	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		01/28/15 14:57	108-90-7	
Chloroform	ND	ug/L	5.0	1		01/28/15 14:57	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		01/28/15 14:57	106-46-7	
1,2-Dichloroethane	ND	ug/L	5.0	1		01/28/15 14:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		01/28/15 14:57	75-35-4	
Tetrachloroethene	ND	ug/L	5.0	1		01/28/15 14:57	127-18-4	
Trichloroethene	ND	ug/L	5.0	1		01/28/15 14:57	79-01-6	
Vinyl chloride	ND	ug/L	5.0	1		01/28/15 14:57	75-01-4	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		01/28/15 14:57	17060-07-0	
Toluene-d8 (S)	94	%	67-135	1		01/28/15 14:57	2037-26-5	
4-Bromofluorobenzene (S)	93	%	70-130	1		01/28/15 14:57	460-00-4	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: TW-7B		Lab ID: 92234867010	Collected: 01/25/15 09:35	Received: 01/26/15 08:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	25.0	1		02/04/15 01:02	67-64-1	
Benzene	17.9	ug/L	1.0	1		02/04/15 01:02	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		02/04/15 01:02	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		02/04/15 01:02	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		02/04/15 01:02	75-27-4	
Bromoform	ND	ug/L	1.0	1		02/04/15 01:02	75-25-2	
Bromomethane	ND	ug/L	2.0	1		02/04/15 01:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		02/04/15 01:02	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		02/04/15 01:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		02/04/15 01:02	108-90-7	
Chloroethane	ND	ug/L	1.0	1		02/04/15 01:02	75-00-3	
Chloroform	ND	ug/L	1.0	1		02/04/15 01:02	67-66-3	
Chloromethane	ND	ug/L	1.0	1		02/04/15 01:02	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		02/04/15 01:02	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		02/04/15 01:02	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		02/04/15 01:02	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		02/04/15 01:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		02/04/15 01:02	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		02/04/15 01:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		02/04/15 01:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		02/04/15 01:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		02/04/15 01:02	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		02/04/15 01:02	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		02/04/15 01:02	75-34-3	
1,2-Dichloroethane	1.0	ug/L	1.0	1		02/04/15 01:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		02/04/15 01:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/04/15 01:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/04/15 01:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		02/04/15 01:02	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		02/04/15 01:02	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		02/04/15 01:02	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		02/04/15 01:02	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		02/04/15 01:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		02/04/15 01:02	10061-02-6	
Diisopropyl ether	34.6	ug/L	1.0	1		02/04/15 01:02	108-20-3	
Ethylbenzene	30.2	ug/L	1.0	1		02/04/15 01:02	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		02/04/15 01:02	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		02/04/15 01:02	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		02/04/15 01:02	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		02/04/15 01:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		02/04/15 01:02	108-10-1	
Methyl-tert-butyl ether	394	ug/L	5.0	5		02/06/15 09:03	1634-04-4	
Naphthalene	9.4	ug/L	1.0	1		02/04/15 01:02	91-20-3	
Styrene	ND	ug/L	1.0	1		02/04/15 01:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		02/04/15 01:02	630-20-6	
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		02/04/15 01:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/04/15 01:02	127-18-4	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: TW-7B	Lab ID: 92234867010	Collected: 01/25/15 09:35		Received: 01/26/15 08:00		Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Toluene	4.4	ug/L	1.0	1		02/04/15 01:02	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		02/04/15 01:02	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		02/04/15 01:02	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		02/04/15 01:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		02/04/15 01:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		02/04/15 01:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		02/04/15 01:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		02/04/15 01:02	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		02/04/15 01:02	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		02/04/15 01:02	75-01-4	
Xylene (Total)	108	ug/L	2.0	1		02/04/15 01:02	1330-20-7	
m&p-Xylene	73.2	ug/L	2.0	1		02/04/15 01:02	179601-23-1	
o-Xylene	34.8	ug/L	1.0	1		02/04/15 01:02	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	87	%	70-130	1		02/04/15 01:02	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130	1		02/04/15 01:02	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		02/04/15 01:02	2037-26-5	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B8-(14-15) **Lab ID: 92234867011** Collected: 01/25/15 17:25 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Antimony	ND	mg/kg	0.45	1	01/28/15 16:45	01/28/15 20:18	7440-36-0	
Arsenic	1.3	mg/kg	0.90	1	01/28/15 16:45	01/28/15 20:18	7440-38-2	
Beryllium	0.53	mg/kg	0.090	1	01/28/15 16:45	01/28/15 20:18	7440-41-7	
Cadmium	0.13	mg/kg	0.090	1	01/28/15 16:45	01/28/15 20:18	7440-43-9	
Chromium	19.4	mg/kg	0.45	1	01/28/15 16:45	01/28/15 20:18	7440-47-3	
Copper	35.9	mg/kg	0.45	1	01/28/15 16:45	01/28/15 20:18	7440-50-8	
Lead	7.4	mg/kg	0.45	1	01/28/15 16:45	01/28/15 20:18	7439-92-1	
Manganese	30.8	mg/kg	0.45	1	01/28/15 16:45	01/28/15 20:18	7439-96-5	
Nickel	3.1	mg/kg	0.45	1	01/28/15 16:45	01/28/15 20:18	7440-02-0	
Selenium	ND	mg/kg	0.90	1	01/28/15 16:45	01/28/15 20:18	7782-49-2	
Silver	ND	mg/kg	0.45	1	01/28/15 16:45	01/28/15 20:18	7440-22-4	
Thallium	ND	mg/kg	0.90	1	01/28/15 16:45	01/28/15 20:18	7440-28-0	
Zinc	14.6	mg/kg	0.90	1	01/28/15 16:45	01/28/15 20:18	7440-66-6	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	ND	mg/kg	0.0050	1	01/28/15 11:10	01/28/15 15:17	7439-97-6	
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	115	1		02/02/15 18:18	67-64-1	
Benzene	ND	ug/kg	5.8	1		02/02/15 18:18	71-43-2	
Bromobenzene	ND	ug/kg	5.8	1		02/02/15 18:18	108-86-1	L2
Bromochloromethane	ND	ug/kg	5.8	1		02/02/15 18:18	74-97-5	
Bromodichloromethane	ND	ug/kg	5.8	1		02/02/15 18:18	75-27-4	
Bromoform	ND	ug/kg	5.8	1		02/02/15 18:18	75-25-2	
Bromomethane	ND	ug/kg	11.5	1		02/02/15 18:18	74-83-9	
2-Butanone (MEK)	ND	ug/kg	115	1		02/02/15 18:18	78-93-3	
n-Butylbenzene	ND	ug/kg	5.8	1		02/02/15 18:18	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.8	1		02/02/15 18:18	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.8	1		02/02/15 18:18	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.8	1		02/02/15 18:18	56-23-5	
Chlorobenzene	ND	ug/kg	5.8	1		02/02/15 18:18	108-90-7	
Chloroethane	ND	ug/kg	11.5	1		02/02/15 18:18	75-00-3	
Chloroform	ND	ug/kg	5.8	1		02/02/15 18:18	67-66-3	
Chloromethane	ND	ug/kg	11.5	1		02/02/15 18:18	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.8	1		02/02/15 18:18	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.8	1		02/02/15 18:18	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.8	1		02/02/15 18:18	96-12-8	
Dibromochloromethane	ND	ug/kg	5.8	1		02/02/15 18:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.8	1		02/02/15 18:18	106-93-4	
Dibromomethane	ND	ug/kg	5.8	1		02/02/15 18:18	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.8	1		02/02/15 18:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.8	1		02/02/15 18:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.8	1		02/02/15 18:18	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.5	1		02/02/15 18:18	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.8	1		02/02/15 18:18	75-34-3	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B8-(14-15) **Lab ID: 92234867011** Collected: 01/25/15 17:25 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260						
1,2-Dichloroethane	ND	ug/kg	5.8	1		02/02/15 18:18	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.8	1		02/02/15 18:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.8	1		02/02/15 18:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.8	1		02/02/15 18:18	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.8	1		02/02/15 18:18	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.8	1		02/02/15 18:18	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.8	1		02/02/15 18:18	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.8	1		02/02/15 18:18	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.8	1		02/02/15 18:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.8	1		02/02/15 18:18	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.8	1		02/02/15 18:18	108-20-3	
Ethylbenzene	ND	ug/kg	5.8	1		02/02/15 18:18	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.8	1		02/02/15 18:18	87-68-3	
2-Hexanone	ND	ug/kg	57.5	1		02/02/15 18:18	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.8	1		02/02/15 18:18	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.8	1		02/02/15 18:18	99-87-6	
Methylene Chloride	ND	ug/kg	23.0	1		02/02/15 18:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	57.5	1		02/02/15 18:18	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.8	1		02/02/15 18:18	1634-04-4	
Naphthalene	ND	ug/kg	5.8	1		02/02/15 18:18	91-20-3	
n-Propylbenzene	ND	ug/kg	5.8	1		02/02/15 18:18	103-65-1	
Styrene	ND	ug/kg	5.8	1		02/02/15 18:18	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.8	1		02/02/15 18:18	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.8	1		02/02/15 18:18	79-34-5	
Tetrachloroethene	ND	ug/kg	5.8	1		02/02/15 18:18	127-18-4	
Toluene	ND	ug/kg	5.8	1		02/02/15 18:18	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.8	1		02/02/15 18:18	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.8	1		02/02/15 18:18	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.8	1		02/02/15 18:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.8	1		02/02/15 18:18	79-00-5	
Trichloroethene	ND	ug/kg	5.8	1		02/02/15 18:18	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.8	1		02/02/15 18:18	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.8	1		02/02/15 18:18	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.8	1		02/02/15 18:18	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.8	1		02/02/15 18:18	108-67-8	
Vinyl acetate	ND	ug/kg	57.5	1		02/02/15 18:18	108-05-4	
Vinyl chloride	ND	ug/kg	11.5	1		02/02/15 18:18	75-01-4	
Xylene (Total)	ND	ug/kg	11.5	1		02/02/15 18:18	1330-20-7	
m&p-Xylene	ND	ug/kg	11.5	1		02/02/15 18:18	179601-23-1	
o-Xylene	ND	ug/kg	5.8	1		02/02/15 18:18	95-47-6	
Surrogates								
Toluene-d8 (S)	96	%	70-130	1		02/02/15 18:18	2037-26-5	
4-Bromofluorobenzene (S)	97	%	70-130	1		02/02/15 18:18	460-00-4	
1,2-Dichloroethane-d4 (S)	88	%	70-132	1		02/02/15 18:18	17060-07-0	

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92234867

Sample: 7B8-(14-15) **Lab ID: 92234867011** Collected: 01/25/15 17:25 Received: 01/26/15 08:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	18.5	%	0.10	1		01/30/15 15:29		

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

QC Batch: MERP/7527

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury TCLP

Associated Lab Samples: 92234867008

METHOD BLANK: 1380919

Matrix: Water

Associated Lab Samples: 92234867008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	01/30/15 16:10	

LABORATORY CONTROL SAMPLE: 1380920

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.4	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380921 1380922

Parameter	Units	92234020001		MS		MSD		MS		MSD		% Rec Limits	RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Mercury	ug/L	ND		2.5	2.5	2.3	2.2	92	88	75-125	5			

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

QC Batch: MERP/7544

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury TCLP

Associated Lab Samples: 92234867009

METHOD BLANK: 1383242

Matrix: Water

Associated Lab Samples: 92234867009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	02/04/15 11:02	

LABORATORY CONTROL SAMPLE: 1383243

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1383244 1383245

Parameter	Units	92234856006		MS		MSD		MS		MSD		% Rec Limits	RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Mercury	ug/L	ND	2.5	2.5	2.1	2.1	85	85	75-125	0				

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

QC Batch: MERP/7614

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury TCLP

Associated Lab Samples: 92234867005

METHOD BLANK: 1399097

Matrix: Water

Associated Lab Samples: 92234867005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	02/27/15 15:49	

LABORATORY CONTROL SAMPLE: 1399098

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0024	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1399099 1399100

Parameter	Units	92234867005		MS		MSD		MS		MSD		% Rec		RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits					
Mercury	mg/L	ND	.0025	.0025	.0024	0.0022	96	87	75-125	9					

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QUALITY CONTROL DATA

Project: ROW-504 32213
Pace Project No.: 92234867

QC Batch: MERP/7520 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 92234867001, 92234867002, 92234867003, 92234867004, 92234867005, 92234867007, 92234867011

METHOD BLANK: 1378300 Matrix: Solid
Associated Lab Samples: 92234867001, 92234867002, 92234867003, 92234867004, 92234867005, 92234867007, 92234867011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.0050	01/28/15 14:02	

LABORATORY CONTROL SAMPLE: 1378301

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.067	0.067	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1378302 1378303

Parameter	Units	92234807001 Result	MS		MSD		MS		MSD		% Rec Limits	RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Mercury	mg/kg	0.012	.051	.059	0.061	0.069	97	97	75-125	13			

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QUALITY CONTROL DATA

Project: ROW-504 32213
Pace Project No.: 92234867

QC Batch: MPRP/17790 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 92234867001

METHOD BLANK: 1378752 Matrix: Solid
Associated Lab Samples: 92234867001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/kg	ND	0.50	01/28/15 04:22	
Arsenic	mg/kg	ND	1.0	01/28/15 04:22	
Beryllium	mg/kg	ND	0.10	01/28/15 04:22	
Cadmium	mg/kg	ND	0.10	01/28/15 04:22	
Chromium	mg/kg	ND	0.50	01/28/15 04:22	
Copper	mg/kg	ND	0.50	01/28/15 04:22	
Lead	mg/kg	ND	0.50	01/28/15 04:22	
Manganese	mg/kg	ND	0.50	01/28/15 04:22	
Nickel	mg/kg	ND	0.50	01/28/15 04:22	
Selenium	mg/kg	ND	1.0	01/28/15 04:22	
Silver	mg/kg	ND	0.50	01/28/15 04:22	
Thallium	mg/kg	ND	1.0	01/28/15 04:22	
Zinc	mg/kg	ND	1.0	01/28/15 04:22	

LABORATORY CONTROL SAMPLE: 1378753

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/kg	50	47.1	94	80-120	
Arsenic	mg/kg	50	49.3	99	80-120	
Beryllium	mg/kg	50	47.2	94	80-120	
Cadmium	mg/kg	50	51.6	103	80-120	
Chromium	mg/kg	50	49.6	99	80-120	
Copper	mg/kg	50	46.2	92	80-120	
Lead	mg/kg	50	47.5	95	80-120	
Manganese	mg/kg	50	50.2	100	80-120	
Nickel	mg/kg	50	48.4	97	80-120	
Selenium	mg/kg	50	46.6	93	80-120	
Silver	mg/kg	25	23.2	93	80-120	
Thallium	mg/kg	50	45.4	91	80-120	
Zinc	mg/kg	50	49.6	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1378754 1378755

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result					
Antimony	mg/kg	ND	55.5	54.6	31.1	29.2	56	54	75-125	6 M1
Arsenic	mg/kg	ND	55.5	54.6	41.9	39.7	75	73	75-125	5 M1
Beryllium	mg/kg	1.3	55.5	54.6	41.7	39.1	73	69	75-125	6 M1

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		1378754		1378755								
Parameter	Units	92234807009	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Qual
		Result	Spike	Spike	Result	Result	% Rec	% Rec				
Cadmium	mg/kg	1.8	55.5	54.6	45.4	42.6	79	75	75-125	6		
Chromium	mg/kg	26.0	55.5	54.6	67.1	67.0	74	75	75-125	0	M1	
Copper	mg/kg	23.1	55.5	54.6	66.2	64.0	78	75	75-125	3		
Lead	mg/kg	11.5	55.5	54.6	49.2	47.0	68	65	75-125	5	M1	
Manganese	mg/kg	762	55.5	54.6	776	804	27	78	75-125	4	M1	
Nickel	mg/kg	34.4	55.5	54.6	68.7	65.7	62	57	75-125	4	M1	
Selenium	mg/kg	ND	55.5	54.6	35.3	33.1	64	61	75-125	6	M1	
Silver	mg/kg	ND	27.7	27.2	21.0	19.9	75	73	75-125	5	M1	
Thallium	mg/kg	ND	55.5	54.6	33.2	31.3	60	57	75-125	6	M1	
Zinc	mg/kg	89.0	55.5	54.6	126	124	67	63	75-125	2	M1	

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QUALITY CONTROL DATA

Project: ROW-504 32213
Pace Project No.: 92234867

QC Batch: MPRP/17796 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 92234867002, 92234867003, 92234867004, 92234867005, 92234867007, 92234867011

METHOD BLANK: 1379613 Matrix: Solid
Associated Lab Samples: 92234867002, 92234867003, 92234867004, 92234867005, 92234867007, 92234867011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/kg	ND	0.50	01/28/15 19:38	
Arsenic	mg/kg	ND	1.0	01/28/15 19:38	
Beryllium	mg/kg	ND	0.10	01/28/15 19:38	
Cadmium	mg/kg	ND	0.10	01/28/15 19:38	
Chromium	mg/kg	ND	0.50	01/28/15 19:38	
Copper	mg/kg	ND	0.50	01/28/15 19:38	
Lead	mg/kg	ND	0.50	01/28/15 19:38	
Manganese	mg/kg	ND	0.50	01/28/15 19:38	
Nickel	mg/kg	ND	0.50	01/28/15 19:38	
Selenium	mg/kg	ND	1.0	01/28/15 19:38	
Silver	mg/kg	ND	0.50	01/28/15 19:38	
Thallium	mg/kg	ND	1.0	01/28/15 19:38	
Zinc	mg/kg	ND	1.0	01/28/15 19:38	

LABORATORY CONTROL SAMPLE: 1379614

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/kg	50	48.2	96	80-120	
Arsenic	mg/kg	50	47.2	94	80-120	
Beryllium	mg/kg	50	47.7	95	80-120	
Cadmium	mg/kg	50	48.4	97	80-120	
Chromium	mg/kg	50	48.1	96	80-120	
Copper	mg/kg	50	48.8	98	80-120	
Lead	mg/kg	50	48.4	97	80-120	
Manganese	mg/kg	50	47.2	94	80-120	
Nickel	mg/kg	50	48.3	97	80-120	
Selenium	mg/kg	50	48.4	97	80-120	
Silver	mg/kg	25	24.1	96	80-120	
Thallium	mg/kg	50	45.6	91	80-120	
Zinc	mg/kg	50	47.6	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379615 1379616

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result					
Antimony	mg/kg	0.97	44.1	41.3	32.7	33.5	72	79	75-125	2 M1
Arsenic	mg/kg	1.8	44.1	41.3	39.7	38.4	86	89	75-125	3
Beryllium	mg/kg	0.16	44.1	41.3	39.8	38.2	90	92	75-125	4

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

Parameter	Units	1379615		1379616		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		92234673001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Cadmium	mg/kg	0.78	44.1	41.3	42.0	40.2	93	95	75-125	4		
Chromium	mg/kg	11.7	44.1	41.3	64.4	55.1	120	105	75-125	15		
Copper	mg/kg	57.9	44.1	41.3	119	127	140	167	75-125	6 M1		
Lead	mg/kg	29.9	44.1	41.3	71.1	71.0	93	99	75-125	0		
Manganese	mg/kg	211	44.1	41.3	250	234	88	56	75-125	6 M1		
Nickel	mg/kg	3.8	44.1	41.3	48.0	43.3	100	96	75-125	10		
Selenium	mg/kg	0.91	44.1	41.3	36.8	36.4	81	86	75-125	1		
Silver	mg/kg	ND	22.1	20.6	20.8	19.9	93	95	75-125	5		
Thallium	mg/kg	ND	44.1	41.3	33.3	32.4	76	78	75-125	3		
Zinc	mg/kg	242	44.1	41.3	311	377	155	325	75-125	19 M1		

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

QC Batch: MPRP/17806

Analysis Method: EPA 6010

QC Batch Method: EPA 3010

Analysis Description: 6010 MET TCLP

Associated Lab Samples: 92234867008

METHOD BLANK: 1380969

Matrix: Water

Associated Lab Samples: 92234867008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.050	01/30/15 02:23	
Barium	mg/L	ND	0.25	01/30/15 02:23	
Cadmium	mg/L	ND	0.0050	01/30/15 02:23	
Chromium	mg/L	ND	0.025	01/30/15 02:23	
Lead	mg/L	ND	0.025	01/30/15 02:23	
Selenium	mg/L	ND	0.10	01/30/15 02:23	
Silver	mg/L	ND	0.025	01/30/15 02:23	

LABORATORY CONTROL SAMPLE: 1380970

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	2.5	2.5	98	80-120	
Barium	mg/L	2.5	2.4	96	80-120	
Cadmium	mg/L	2.5	2.4	97	80-120	
Chromium	mg/L	2.5	2.4	96	80-120	
Lead	mg/L	2.5	2.4	94	80-120	
Selenium	mg/L	2.5	2.5	101	80-120	
Silver	mg/L	1.2	1.2	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380971

1380972

Parameter	Units	92234020001		MSD		MS		MSD		% Rec Limits	RPD	Qual
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
Arsenic	mg/L	ND	2.5	2.5	2.5	2.4	101	96	75-125	5		
Barium	mg/L	ND	2.5	2.5	2.4	2.4	98	95	75-125	2		
Cadmium	mg/L	ND	2.5	2.5	2.5	2.4	99	96	75-125	4		
Chromium	mg/L	ND	2.5	2.5	2.5	2.4	98	95	75-125	4		
Lead	mg/L	ND	2.5	2.5	2.4	2.3	96	92	75-125	4		
Selenium	mg/L	ND	2.5	2.5	2.6	2.5	104	99	75-125	4		
Silver	mg/L	ND	1.2	1.2	1.2	1.2	99	96	75-125	3		

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QUALITY CONTROL DATA

Project: ROW-504 32213
Pace Project No.: 92234867

QC Batch: MPRP/17830 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET TCLP
Associated Lab Samples: 92234867009

METHOD BLANK: 1383298 Matrix: Water
Associated Lab Samples: 92234867009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.050	02/04/15 03:12	
Barium	mg/L	ND	0.25	02/04/15 03:12	
Cadmium	mg/L	ND	0.0050	02/04/15 03:12	
Chromium	mg/L	ND	0.025	02/04/15 03:12	
Lead	mg/L	ND	0.025	02/04/15 03:12	
Selenium	mg/L	ND	0.10	02/04/15 03:12	
Silver	mg/L	ND	0.025	02/04/15 03:12	

LABORATORY CONTROL SAMPLE: 1383299

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	2.5	2.5	101	80-120	
Barium	mg/L	2.5	2.4	95	80-120	
Cadmium	mg/L	2.5	2.5	100	80-120	
Chromium	mg/L	2.5	2.5	99	80-120	
Lead	mg/L	2.5	2.3	94	80-120	
Selenium	mg/L	2.5	2.6	105	80-120	
Silver	mg/L	1.2	1.2	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1383300 1383301

Parameter	Units	92234856006		MSD		MS		MSD		% Rec Limits	RPD	Qual
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
Arsenic	mg/L	ND	2.5	2.5	2.2	2.0	87	79	75-125	9		
Barium	mg/L	ND	2.5	2.5	2.9	2.8	90	83	75-125	6		
Cadmium	mg/L	ND	2.5	2.5	2.2	2.1	89	85	75-125	4		
Chromium	mg/L	ND	2.5	2.5	2.2	2.1	89	85	75-125	4		
Lead	mg/L	ND	2.5	2.5	2.2	2.1	87	86	75-125	2		
Selenium	mg/L	ND	2.5	2.5	2.3	2.1	90	86	75-125	5		
Silver	mg/L	ND	1.2	1.2	1.1	1.1	89	85	75-125	4		

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QUALITY CONTROL DATA

Project: ROW-504 32213
Pace Project No.: 92234867

QC Batch: MPRP/17976 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET TCLP
Associated Lab Samples: 92234867005

METHOD BLANK: 1399084 Matrix: Water
Associated Lab Samples: 92234867005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.050	02/27/15 18:38	
Barium	mg/L	ND	0.25	02/27/15 18:38	
Cadmium	mg/L	ND	0.0050	02/27/15 18:38	
Chromium	mg/L	ND	0.025	02/27/15 18:38	
Lead	mg/L	ND	0.025	02/27/15 18:38	
Selenium	mg/L	ND	0.10	02/27/15 18:38	
Silver	mg/L	ND	0.025	02/27/15 18:38	

LABORATORY CONTROL SAMPLE: 1399085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	2.5	2.5	100	80-120	
Barium	mg/L	2.5	2.3	92	80-120	
Cadmium	mg/L	2.5	2.5	98	80-120	
Chromium	mg/L	2.5	2.4	95	80-120	
Lead	mg/L	2.5	2.3	93	80-120	
Selenium	mg/L	2.5	2.5	99	80-120	
Silver	mg/L	1.2	1.2	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1399086 1399087

Parameter	Units	92234867005		MSD		MS		MSD		% Rec Limits	RPD	Qual
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
Arsenic	mg/L	ND	2.5	2.5	2.6	2.6	104	103	75-125	1		
Barium	mg/L	1.3	2.5	2.5	3.6	3.6	94	94	75-125	1		
Cadmium	mg/L	0.026	2.5	2.5	2.6	2.6	101	102	75-125	0		
Chromium	mg/L	ND	2.5	2.5	2.5	2.4	99	97	75-125	1		
Lead	mg/L	3.7	2.5	2.5	5.8	5.8	85	84	75-125	0		
Selenium	mg/L	ND	2.5	2.5	2.6	2.6	102	103	75-125	0		
Silver	mg/L	ND	1.2	1.2	1.3	1.3	103	102	75-125	0		

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

QC Batch: MSV/30139

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV TCLP

Associated Lab Samples: 92234867008

METHOD BLANK: 1378433

Matrix: Water

Associated Lab Samples: 92234867008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	5.0	01/27/15 12:26	
1,2-Dichloroethane	ug/L	ND	5.0	01/27/15 12:26	
1,4-Dichlorobenzene	ug/L	ND	5.0	01/27/15 12:26	
2-Butanone (MEK)	ug/L	ND	10.0	01/27/15 12:26	
Benzene	ug/L	ND	5.0	01/27/15 12:26	
Carbon tetrachloride	ug/L	ND	5.0	01/27/15 12:26	
Chlorobenzene	ug/L	ND	5.0	01/27/15 12:26	
Chloroform	ug/L	ND	5.0	01/27/15 12:26	
Tetrachloroethene	ug/L	ND	5.0	01/27/15 12:26	
Trichloroethene	ug/L	ND	5.0	01/27/15 12:26	
Vinyl chloride	ug/L	ND	5.0	01/27/15 12:26	
1,2-Dichloroethane-d4 (S)	%	109	70-130	01/27/15 12:26	
4-Bromofluorobenzene (S)	%	93	70-130	01/27/15 12:26	
Toluene-d8 (S)	%	101	67-135	01/27/15 12:26	

LABORATORY CONTROL SAMPLE: 1378434

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	50	46.5	93	66-135	
1,2-Dichloroethane	ug/L	50	50.1	100	67-128	
1,4-Dichlorobenzene	ug/L	50	56.4	113	78-130	
2-Butanone (MEK)	ug/L	100	98.9	99	61-144	
Benzene	ug/L	50	54.5	109	80-125	
Carbon tetrachloride	ug/L	50	54.8	110	69-131	
Chlorobenzene	ug/L	50	53.4	107	81-122	
Chloroform	ug/L	50	47.3	95	73-127	
Tetrachloroethene	ug/L	50	47.6	95	78-122	
Trichloroethene	ug/L	50	56.9	114	78-122	
Vinyl chloride	ug/L	50	47.5	95	58-137	
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Toluene-d8 (S)	%			97	67-135	

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

QC Batch: MSV/30152

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV TCLP

Associated Lab Samples: 92234867009

METHOD BLANK: 1379318

Matrix: Water

Associated Lab Samples: 92234867009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	5.0	01/28/15 13:34	
1,2-Dichloroethane	ug/L	ND	5.0	01/28/15 13:34	
1,4-Dichlorobenzene	ug/L	ND	5.0	01/28/15 13:34	
2-Butanone (MEK)	ug/L	ND	10.0	01/28/15 13:34	
Benzene	ug/L	ND	5.0	01/28/15 13:34	
Carbon tetrachloride	ug/L	ND	5.0	01/28/15 13:34	
Chlorobenzene	ug/L	ND	5.0	01/28/15 13:34	
Chloroform	ug/L	ND	5.0	01/28/15 13:34	
Tetrachloroethene	ug/L	ND	5.0	01/28/15 13:34	
Trichloroethene	ug/L	ND	5.0	01/28/15 13:34	
Vinyl chloride	ug/L	ND	5.0	01/28/15 13:34	
1,2-Dichloroethane-d4 (S)	%	99	70-130	01/28/15 13:34	
4-Bromofluorobenzene (S)	%	101	70-130	01/28/15 13:34	
Toluene-d8 (S)	%	94	67-135	01/28/15 13:34	

LABORATORY CONTROL SAMPLE: 1379319

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	50	53.2	106	66-135	
1,2-Dichloroethane	ug/L	50	56.2	112	67-128	
1,4-Dichlorobenzene	ug/L	50	52.6	105	78-130	
2-Butanone (MEK)	ug/L	100	105	105	61-144	
Benzene	ug/L	50	51.7	103	80-125	
Carbon tetrachloride	ug/L	50	60.7	121	69-131	
Chlorobenzene	ug/L	50	51.5	103	81-122	
Chloroform	ug/L	50	49.2	98	73-127	
Tetrachloroethene	ug/L	50	51.1	102	78-122	
Trichloroethene	ug/L	50	52.6	105	78-122	
Vinyl chloride	ug/L	50	48.1	96	58-137	
1,2-Dichloroethane-d4 (S)	%			94	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			99	67-135	

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QUALITY CONTROL DATA

Project: ROW-504 32213
Pace Project No.: 92234867

QC Batch: MSV/30222 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92234867010

METHOD BLANK: 1383462 Matrix: Water
Associated Lab Samples: 92234867010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	02/03/15 22:14	
1,1,1-Trichloroethane	ug/L	ND	1.0	02/03/15 22:14	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	02/03/15 22:14	
1,1,2-Trichloroethane	ug/L	ND	1.0	02/03/15 22:14	
1,1-Dichloroethane	ug/L	ND	1.0	02/03/15 22:14	
1,1-Dichloroethene	ug/L	ND	1.0	02/03/15 22:14	
1,1-Dichloropropene	ug/L	ND	1.0	02/03/15 22:14	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	02/03/15 22:14	
1,2,3-Trichloropropane	ug/L	ND	1.0	02/03/15 22:14	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	02/03/15 22:14	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	02/03/15 22:14	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	02/03/15 22:14	
1,2-Dichlorobenzene	ug/L	ND	1.0	02/03/15 22:14	
1,2-Dichloroethane	ug/L	ND	1.0	02/03/15 22:14	
1,2-Dichloropropane	ug/L	ND	1.0	02/03/15 22:14	
1,3-Dichlorobenzene	ug/L	ND	1.0	02/03/15 22:14	
1,3-Dichloropropane	ug/L	ND	1.0	02/03/15 22:14	
1,4-Dichlorobenzene	ug/L	ND	1.0	02/03/15 22:14	
2,2-Dichloropropane	ug/L	ND	1.0	02/03/15 22:14	
2-Butanone (MEK)	ug/L	ND	5.0	02/03/15 22:14	
2-Chlorotoluene	ug/L	ND	1.0	02/03/15 22:14	
2-Hexanone	ug/L	ND	5.0	02/03/15 22:14	
4-Chlorotoluene	ug/L	ND	1.0	02/03/15 22:14	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	02/03/15 22:14	
Acetone	ug/L	ND	25.0	02/03/15 22:14	
Benzene	ug/L	ND	1.0	02/03/15 22:14	
Bromobenzene	ug/L	ND	1.0	02/03/15 22:14	
Bromochloromethane	ug/L	ND	1.0	02/03/15 22:14	
Bromodichloromethane	ug/L	ND	1.0	02/03/15 22:14	
Bromoform	ug/L	ND	1.0	02/03/15 22:14	
Bromomethane	ug/L	ND	2.0	02/03/15 22:14	
Carbon tetrachloride	ug/L	ND	1.0	02/03/15 22:14	
Chlorobenzene	ug/L	ND	1.0	02/03/15 22:14	
Chloroethane	ug/L	ND	1.0	02/03/15 22:14	
Chloroform	ug/L	ND	1.0	02/03/15 22:14	
Chloromethane	ug/L	ND	1.0	02/03/15 22:14	
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/03/15 22:14	
cis-1,3-Dichloropropene	ug/L	ND	1.0	02/03/15 22:14	
Dibromochloromethane	ug/L	ND	1.0	02/03/15 22:14	
Dibromomethane	ug/L	ND	1.0	02/03/15 22:14	
Dichlorodifluoromethane	ug/L	ND	1.0	02/03/15 22:14	

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QUALITY CONTROL DATA

Project: ROW-504 32213
Pace Project No.: 92234867

METHOD BLANK: 1383462
Associated Lab Samples: 92234867010

Matrix: Water

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	ND	1.0	02/03/15 22:14	
Ethylbenzene	ug/L	ND	1.0	02/03/15 22:14	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	02/03/15 22:14	
m&p-Xylene	ug/L	ND	2.0	02/03/15 22:14	
Methyl-tert-butyl ether	ug/L	ND	1.0	02/03/15 22:14	
Methylene Chloride	ug/L	ND	2.0	02/03/15 22:14	
Naphthalene	ug/L	ND	1.0	02/03/15 22:14	
o-Xylene	ug/L	ND	1.0	02/03/15 22:14	
p-Isopropyltoluene	ug/L	ND	1.0	02/03/15 22:14	
Styrene	ug/L	ND	1.0	02/03/15 22:14	
Tetrachloroethene	ug/L	ND	1.0	02/03/15 22:14	
Toluene	ug/L	ND	1.0	02/03/15 22:14	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/03/15 22:14	
trans-1,3-Dichloropropene	ug/L	ND	1.0	02/03/15 22:14	
Trichloroethene	ug/L	ND	1.0	02/03/15 22:14	
Trichlorofluoromethane	ug/L	ND	1.0	02/03/15 22:14	
Vinyl acetate	ug/L	ND	2.0	02/03/15 22:14	
Vinyl chloride	ug/L	ND	1.0	02/03/15 22:14	
Xylene (Total)	ug/L	ND	2.0	02/03/15 22:14	
1,2-Dichloroethane-d4 (S)	%	98	70-130	02/03/15 22:14	
4-Bromofluorobenzene (S)	%	98	70-130	02/03/15 22:14	
Toluene-d8 (S)	%	97	70-130	02/03/15 22:14	

LABORATORY CONTROL SAMPLE: 1383463

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	53.1	106	70-130	
1,1,1-Trichloroethane	ug/L	50	51.2	102	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	54.1	108	70-130	
1,1,2-Trichloroethane	ug/L	50	53.3	107	70-130	
1,1-Dichloroethane	ug/L	50	53.0	106	70-130	
1,1-Dichloroethene	ug/L	50	51.2	102	70-132	
1,1-Dichloropropene	ug/L	50	56.5	113	70-130	
1,2,3-Trichlorobenzene	ug/L	50	56.5	113	70-135	
1,2,3-Trichloropropane	ug/L	50	54.0	108	70-130	
1,2,4-Trichlorobenzene	ug/L	50	57.1	114	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	58.0	116	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	55.4	111	70-130	
1,2-Dichlorobenzene	ug/L	50	54.5	109	70-130	
1,2-Dichloroethane	ug/L	50	50.8	102	70-130	
1,2-Dichloropropane	ug/L	50	54.1	108	70-130	
1,3-Dichlorobenzene	ug/L	50	52.1	104	70-130	
1,3-Dichloropropane	ug/L	50	54.9	110	70-130	
1,4-Dichlorobenzene	ug/L	50	52.0	104	70-130	

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

LABORATORY CONTROL SAMPLE: 1383463

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2-Dichloropropane	ug/L	50	48.4	97	58-145	
2-Butanone (MEK)	ug/L	100	110	110	70-145	
2-Chlorotoluene	ug/L	50	47.0	94	70-130	
2-Hexanone	ug/L	100	110	110	70-144	
4-Chlorotoluene	ug/L	50	51.3	103	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	108	108	70-140	
Acetone	ug/L	100	97.4	97	50-175	
Benzene	ug/L	50	55.1	110	70-130	
Bromobenzene	ug/L	50	53.0	106	70-130	
Bromochloromethane	ug/L	50	52.9	106	70-130	
Bromodichloromethane	ug/L	50	46.7	93	70-130	
Bromoform	ug/L	50	52.0	104	70-130	
Bromomethane	ug/L	50	51.4	103	54-130	
Carbon tetrachloride	ug/L	50	51.8	104	70-132	
Chlorobenzene	ug/L	50	52.1	104	70-130	
Chloroethane	ug/L	50	56.8	114	64-134	
Chloroform	ug/L	50	48.4	97	70-130	
Chloromethane	ug/L	50	54.5	109	64-130	
cis-1,2-Dichloroethene	ug/L	50	55.5	111	70-131	
cis-1,3-Dichloropropene	ug/L	50	54.7	109	70-130	
Dibromochloromethane	ug/L	50	50.7	101	70-130	
Dibromomethane	ug/L	50	52.9	106	70-131	
Dichlorodifluoromethane	ug/L	50	55.4	111	56-130	
Diisopropyl ether	ug/L	50	51.5	103	70-130	
Ethylbenzene	ug/L	50	51.8	104	70-130	
Hexachloro-1,3-butadiene	ug/L	50	53.0	106	70-130	
m&p-Xylene	ug/L	100	103	103	70-130	
Methyl-tert-butyl ether	ug/L	50	53.3	107	70-130	
Methylene Chloride	ug/L	50	53.7	107	63-130	
Naphthalene	ug/L	50	60.2	120	70-138	
o-Xylene	ug/L	50	51.7	103	70-130	
p-Isopropyltoluene	ug/L	50	52.9	106	70-130	
Styrene	ug/L	50	55.7	111	70-130	
Tetrachloroethene	ug/L	50	50.2	100	70-130	
Toluene	ug/L	50	54.0	108	70-130	
trans-1,2-Dichloroethene	ug/L	50	53.6	107	70-130	
trans-1,3-Dichloropropene	ug/L	50	54.2	108	70-132	
Trichloroethene	ug/L	50	51.2	102	70-130	
Trichlorofluoromethane	ug/L	50	52.1	104	62-133	
Vinyl acetate	ug/L	100	106	106	66-157	
Vinyl chloride	ug/L	50	60.3	121	50-150	
Xylene (Total)	ug/L	150	155	103	70-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			100	70-130	

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

MATRIX SPIKE SAMPLE:	1383466	92234861005	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	21.7	108	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	22.8	114	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	21.8	109	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	21.6	108	70-130	
1,1-Dichloroethane	ug/L	ND	20	24.4	122	70-130	
1,1-Dichloroethene	ug/L	ND	20	23.3	117	70-166	
1,1-Dichloropropene	ug/L	ND	20	25.9	129	70-130	
1,2,3-Trichlorobenzene	ug/L	ND	20	18.4	92	70-130	
1,2,3-Trichloropropane	ug/L	ND	20	20.9	105	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	20.0	100	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20.0	100	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	22.3	112	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	22.0	110	70-130	
1,2-Dichloroethane	ug/L	ND	20	22.9	110	70-130	
1,2-Dichloropropane	ug/L	ND	20	23.6	118	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	21.9	110	70-130	
1,3-Dichloropropane	ug/L	ND	20	23.1	116	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	21.9	109	70-130	
2,2-Dichloropropane	ug/L	ND	20	19.6	98	70-130	
2-Butanone (MEK)	ug/L	ND	40	46.2	116	70-130	
2-Chlorotoluene	ug/L	ND	20	20.8	104	70-130	
2-Hexanone	ug/L	ND	40	45.8	115	70-130	
4-Chlorotoluene	ug/L	ND	20	23.0	115	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	46.0	115	70-130	
Acetone	ug/L	ND	40	47.9	116	70-130	
Benzene	ug/L	ND	20	26.0	125	70-148	
Bromobenzene	ug/L	ND	20	23.0	115	70-130	
Bromochloromethane	ug/L	ND	20	22.5	113	70-130	
Bromodichloromethane	ug/L	ND	20	19.5	98	70-130	
Bromoform	ug/L	ND	20	17.6	88	70-130	
Bromomethane	ug/L	ND	20	16.9	85	70-130	
Carbon tetrachloride	ug/L	ND	20	22.7	114	70-130	
Chlorobenzene	ug/L	ND	20	22.1	110	70-146	
Chloroethane	ug/L	ND	20	28.0	140	70-130	MO
Chloroform	ug/L	ND	20	21.8	109	70-130	
Chloromethane	ug/L	ND	20	26.8	134	70-130	MO
cis-1,2-Dichloroethene	ug/L	ND	20	24.4	122	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	21.4	107	70-130	
Dibromochloromethane	ug/L	ND	20	18.8	94	70-130	
Dibromomethane	ug/L	ND	20	19.6	98	70-130	
Dichlorodifluoromethane	ug/L	ND	20	23.9	119	70-130	
Diisopropyl ether	ug/L	ND	20	24.8	123	70-130	
Ethylbenzene	ug/L	ND	20	23.1	115	70-130	
Hexachloro-1,3-butadiene	ug/L	ND	20	23.6	118	70-130	
m&p-Xylene	ug/L	ND	40	46.7	116	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	22.2	110	70-130	
Methylene Chloride	ug/L	ND	20	26.7	133	70-130	MO

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

MATRIX SPIKE SAMPLE: 1383466		92234861005	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Naphthalene	ug/L	ND	20	21.4	106	70-130	
o-Xylene	ug/L	ND	20	22.2	110	70-130	
p-Isopropyltoluene	ug/L	ND	20	22.1	110	70-130	
Styrene	ug/L	ND	20	22.7	113	70-130	
Tetrachloroethene	ug/L	1.3	20	22.4	106	70-130	
Toluene	ug/L	ND	20	23.5	117	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	24.3	122	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	21.6	108	70-130	
Trichloroethene	ug/L	1.1	20	22.7	108	69-151	
Trichlorofluoromethane	ug/L	ND	20	26.0	130	70-130	
Vinyl acetate	ug/L	ND	40	38.8	97	70-130	
Vinyl chloride	ug/L	ND	20	26.5	132	70-130	MO
1,2-Dichloroethane-d4 (S)	%				104	70-130	
4-Bromofluorobenzene (S)	%				91	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE: 1383465

Parameter	Units	92235771004	Dup	RPD	Qualifiers
		Result	Result		
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		
1,1,1-Trichloroethane	ug/L	ND	ND		
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		
1,1,2-Trichloroethane	ug/L	ND	ND		
1,1-Dichloroethane	ug/L	ND	ND		
1,1-Dichloroethene	ug/L	ND	ND		
1,1-Dichloropropene	ug/L	ND	ND		
1,2,3-Trichlorobenzene	ug/L	ND	ND		
1,2,3-Trichloropropane	ug/L	ND	ND		
1,2,4-Trichlorobenzene	ug/L	ND	ND		
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		
1,2-Dibromoethane (EDB)	ug/L	ND	ND		
1,2-Dichlorobenzene	ug/L	ND	ND		
1,2-Dichloroethane	ug/L	ND	ND		
1,2-Dichloropropane	ug/L	ND	ND		
1,3-Dichlorobenzene	ug/L	ND	ND		
1,3-Dichloropropane	ug/L	ND	ND		
1,4-Dichlorobenzene	ug/L	ND	ND		
2,2-Dichloropropane	ug/L	ND	ND		
2-Butanone (MEK)	ug/L	ND	ND		
2-Chlorotoluene	ug/L	ND	ND		
2-Hexanone	ug/L	ND	ND		
4-Chlorotoluene	ug/L	ND	ND		
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		
Acetone	ug/L	ND	ND		
Benzene	ug/L	ND	ND		

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

SAMPLE DUPLICATE: 1383465

Parameter	Units	92235771004 Result	Dup Result	RPD	Qualifiers
Bromobenzene	ug/L	ND	ND		
Bromochloromethane	ug/L	ND	ND		
Bromodichloromethane	ug/L	ND	ND		
Bromoform	ug/L	ND	ND		
Bromomethane	ug/L	ND	ND		
Carbon tetrachloride	ug/L	ND	ND		
Chlorobenzene	ug/L	ND	ND		
Chloroethane	ug/L	ND	ND		
Chloroform	ug/L	ND	ND		
Chloromethane	ug/L	ND	ND		
cis-1,2-Dichloroethene	ug/L	ND	ND		
cis-1,3-Dichloropropene	ug/L	ND	ND		
Dibromochloromethane	ug/L	ND	ND		
Dibromomethane	ug/L	ND	ND		
Dichlorodifluoromethane	ug/L	ND	ND		
Diisopropyl ether	ug/L	ND	ND		
Ethylbenzene	ug/L	ND	ND		
Hexachloro-1,3-butadiene	ug/L	ND	ND		
m&p-Xylene	ug/L	ND	ND		
Methyl-tert-butyl ether	ug/L	ND	ND		
Methylene Chloride	ug/L	ND	ND		
Naphthalene	ug/L	ND	ND		
o-Xylene	ug/L	ND	ND		
p-Isopropyltoluene	ug/L	ND	ND		
Styrene	ug/L	ND	ND		
Tetrachloroethene	ug/L	ND	ND		
Toluene	ug/L	ND	ND		
trans-1,2-Dichloroethene	ug/L	ND	ND		
trans-1,3-Dichloropropene	ug/L	ND	ND		
Trichloroethene	ug/L	ND	ND		
Trichlorofluoromethane	ug/L	ND	ND		
Vinyl acetate	ug/L	ND	ND		
Vinyl chloride	ug/L	ND	ND		
Xylene (Total)	ug/L	ND	ND		
1,2-Dichloroethane-d4 (S)	%	102	99	4	
4-Bromofluorobenzene (S)	%	89	88	1	
Toluene-d8 (S)	%	97	98	0	

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

QC Batch: MSV/30199

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5035A Volatile Organics

Associated Lab Samples: 92234867001, 92234867002, 92234867003, 92234867005, 92234867006, 92234867007, 92234867011

METHOD BLANK: 1382318

Matrix: Solid

Associated Lab Samples: 92234867001, 92234867002, 92234867003, 92234867005, 92234867006, 92234867007, 92234867011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.9	02/02/15 12:21	
1,1,1-Trichloroethane	ug/kg	ND	5.9	02/02/15 12:21	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.9	02/02/15 12:21	
1,1,2-Trichloroethane	ug/kg	ND	5.9	02/02/15 12:21	
1,1-Dichloroethane	ug/kg	ND	5.9	02/02/15 12:21	
1,1-Dichloroethene	ug/kg	ND	5.9	02/02/15 12:21	
1,1-Dichloropropene	ug/kg	ND	5.9	02/02/15 12:21	
1,2,3-Trichlorobenzene	ug/kg	ND	5.9	02/02/15 12:21	
1,2,3-Trichloropropane	ug/kg	ND	5.9	02/02/15 12:21	
1,2,4-Trichlorobenzene	ug/kg	ND	5.9	02/02/15 12:21	
1,2,4-Trimethylbenzene	ug/kg	ND	5.9	02/02/15 12:21	
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.9	02/02/15 12:21	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.9	02/02/15 12:21	
1,2-Dichlorobenzene	ug/kg	ND	5.9	02/02/15 12:21	
1,2-Dichloroethane	ug/kg	ND	5.9	02/02/15 12:21	
1,2-Dichloropropane	ug/kg	ND	5.9	02/02/15 12:21	
1,3,5-Trimethylbenzene	ug/kg	ND	5.9	02/02/15 12:21	
1,3-Dichlorobenzene	ug/kg	ND	5.9	02/02/15 12:21	
1,3-Dichloropropane	ug/kg	ND	5.9	02/02/15 12:21	
1,4-Dichlorobenzene	ug/kg	ND	5.9	02/02/15 12:21	
2,2-Dichloropropane	ug/kg	ND	5.9	02/02/15 12:21	
2-Butanone (MEK)	ug/kg	ND	118	02/02/15 12:21	
2-Chlorotoluene	ug/kg	ND	5.9	02/02/15 12:21	
2-Hexanone	ug/kg	ND	59.2	02/02/15 12:21	
4-Chlorotoluene	ug/kg	ND	5.9	02/02/15 12:21	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	59.2	02/02/15 12:21	
Acetone	ug/kg	ND	118	02/02/15 12:21	
Benzene	ug/kg	ND	5.9	02/02/15 12:21	
Bromobenzene	ug/kg	ND	5.9	02/02/15 12:21	
Bromochloromethane	ug/kg	ND	5.9	02/02/15 12:21	
Bromodichloromethane	ug/kg	ND	5.9	02/02/15 12:21	
Bromoform	ug/kg	ND	5.9	02/02/15 12:21	
Bromomethane	ug/kg	ND	11.8	02/02/15 12:21	
Carbon tetrachloride	ug/kg	ND	5.9	02/02/15 12:21	
Chlorobenzene	ug/kg	ND	5.9	02/02/15 12:21	
Chloroethane	ug/kg	ND	11.8	02/02/15 12:21	
Chloroform	ug/kg	ND	5.9	02/02/15 12:21	
Chloromethane	ug/kg	ND	11.8	02/02/15 12:21	
cis-1,2-Dichloroethene	ug/kg	ND	5.9	02/02/15 12:21	
cis-1,3-Dichloropropene	ug/kg	ND	5.9	02/02/15 12:21	
Dibromochloromethane	ug/kg	ND	5.9	02/02/15 12:21	

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

METHOD BLANK: 1382318

Matrix: Solid

Associated Lab Samples: 92234867001, 92234867002, 92234867003, 92234867005, 92234867006, 92234867007, 92234867011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/kg	ND	5.9	02/02/15 12:21	
Dichlorodifluoromethane	ug/kg	ND	11.8	02/02/15 12:21	
Diisopropyl ether	ug/kg	ND	5.9	02/02/15 12:21	
Ethylbenzene	ug/kg	ND	5.9	02/02/15 12:21	
Hexachloro-1,3-butadiene	ug/kg	ND	5.9	02/02/15 12:21	
Isopropylbenzene (Cumene)	ug/kg	ND	5.9	02/02/15 12:21	
m&p-Xylene	ug/kg	ND	11.8	02/02/15 12:21	
Methyl-tert-butyl ether	ug/kg	ND	5.9	02/02/15 12:21	
Methylene Chloride	ug/kg	ND	23.7	02/02/15 12:21	
n-Butylbenzene	ug/kg	ND	5.9	02/02/15 12:21	
n-Propylbenzene	ug/kg	ND	5.9	02/02/15 12:21	
Naphthalene	ug/kg	ND	5.9	02/02/15 12:21	
o-Xylene	ug/kg	ND	5.9	02/02/15 12:21	
p-Isopropyltoluene	ug/kg	ND	5.9	02/02/15 12:21	
sec-Butylbenzene	ug/kg	ND	5.9	02/02/15 12:21	
Styrene	ug/kg	ND	5.9	02/02/15 12:21	
tert-Butylbenzene	ug/kg	ND	5.9	02/02/15 12:21	
Tetrachloroethene	ug/kg	ND	5.9	02/02/15 12:21	
Toluene	ug/kg	ND	5.9	02/02/15 12:21	
trans-1,2-Dichloroethene	ug/kg	ND	5.9	02/02/15 12:21	
trans-1,3-Dichloropropene	ug/kg	ND	5.9	02/02/15 12:21	
Trichloroethene	ug/kg	ND	5.9	02/02/15 12:21	
Trichlorofluoromethane	ug/kg	ND	5.9	02/02/15 12:21	
Vinyl acetate	ug/kg	ND	59.2	02/02/15 12:21	
Vinyl chloride	ug/kg	ND	11.8	02/02/15 12:21	
Xylene (Total)	ug/kg	ND	11.8	02/02/15 12:21	
1,2-Dichloroethane-d4 (S)	%	90	70-132	02/02/15 12:21	
4-Bromofluorobenzene (S)	%	97	70-130	02/02/15 12:21	
Toluene-d8 (S)	%	99	70-130	02/02/15 12:21	

LABORATORY CONTROL SAMPLE: 1382319

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	60.1	62.7	104	74-137	
1,1,1-Trichloroethane	ug/kg	60.1	56.8	95	67-140	
1,1,2,2-Tetrachloroethane	ug/kg	60.1	64.4	107	72-141	
1,1,2-Trichloroethane	ug/kg	60.1	57.3	95	78-138	
1,1-Dichloroethane	ug/kg	60.1	71.4	119	69-134	
1,1-Dichloroethene	ug/kg	60.1	66.8	111	67-138	
1,1-Dichloropropene	ug/kg	60.1	61.7	103	69-139	
1,2,3-Trichlorobenzene	ug/kg	60.1	51.3	85	70-146	
1,2,3-Trichloropropane	ug/kg	60.1	80.0	133	69-144	
1,2,4-Trichlorobenzene	ug/kg	60.1	52.5	87	68-148	
1,2,4-Trimethylbenzene	ug/kg	60.1	66.2	110	74-137	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

LABORATORY CONTROL SAMPLE: 1382319

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromo-3-chloropropane	ug/kg	60.1	49.1	82	65-140	
1,2-Dibromoethane (EDB)	ug/kg	60.1	67.7	113	77-135	
1,2-Dichlorobenzene	ug/kg	60.1	62.9	105	77-141	
1,2-Dichloroethane	ug/kg	60.1	52.5	87	65-137	
1,2-Dichloropropane	ug/kg	60.1	56.0	93	72-136	
1,3,5-Trimethylbenzene	ug/kg	60.1	61.5	102	76-133	
1,3-Dichlorobenzene	ug/kg	60.1	64.3	107	74-138	
1,3-Dichloropropane	ug/kg	60.1	63.7	106	71-139	
1,4-Dichlorobenzene	ug/kg	60.1	67.8	113	76-138	
2,2-Dichloropropane	ug/kg	60.1	58.7	98	68-137	
2-Butanone (MEK)	ug/kg	120	107J	89	58-147	
2-Chlorotoluene	ug/kg	60.1	48.5	81	73-139	
2-Hexanone	ug/kg	120	137	114	62-145	
4-Chlorotoluene	ug/kg	60.1	60.4	100	76-141	
4-Methyl-2-pentanone (MIBK)	ug/kg	120	126	105	64-149	
Acetone	ug/kg	120	144	120	53-153	
Benzene	ug/kg	60.1	59.5	99	73-135	
Bromobenzene	ug/kg	60.1	44.0	73	75-133	L0
Bromochloromethane	ug/kg	60.1	57.7	96	73-134	
Bromodichloromethane	ug/kg	60.1	50.5	84	71-135	
Bromoform	ug/kg	60.1	61.8	103	66-141	
Bromomethane	ug/kg	60.1	71.0	118	53-160	
Carbon tetrachloride	ug/kg	60.1	58.8	98	60-145	
Chlorobenzene	ug/kg	60.1	63.8	106	78-130	
Chloroethane	ug/kg	60.1	74.8	125	64-149	
Chloroform	ug/kg	60.1	51.8	86	70-134	
Chloromethane	ug/kg	60.1	57.9	96	52-150	
cis-1,2-Dichloroethene	ug/kg	60.1	54.9	91	70-133	
cis-1,3-Dichloropropene	ug/kg	60.1	58.4	97	68-134	
Dibromochloromethane	ug/kg	60.1	59.8	100	71-138	
Dibromomethane	ug/kg	60.1	54.8	91	74-130	
Dichlorodifluoromethane	ug/kg	60.1	66.0	110	40-160	
Diisopropyl ether	ug/kg	60.1	73.6	122	69-141	
Ethylbenzene	ug/kg	60.1	65.6	109	75-133	
Hexachloro-1,3-butadiene	ug/kg	60.1	51.9	86	68-143	
Isopropylbenzene (Cumene)	ug/kg	60.1	69.5	116	76-143	
m&p-Xylene	ug/kg	120	138	115	75-136	
Methyl-tert-butyl ether	ug/kg	60.1	72.5	121	68-144	
Methylene Chloride	ug/kg	60.1	77.3	129	45-154	
n-Butylbenzene	ug/kg	60.1	69.2	115	72-137	
n-Propylbenzene	ug/kg	60.1	50.1	83	76-136	
Naphthalene	ug/kg	60.1	54.6	91	68-151	
o-Xylene	ug/kg	60.1	63.6	106	76-141	
p-Isopropyltoluene	ug/kg	60.1	68.4	114	76-140	
sec-Butylbenzene	ug/kg	60.1	61.9	103	79-139	
Styrene	ug/kg	60.1	66.8	111	79-137	
tert-Butylbenzene	ug/kg	60.1	55.5	92	74-143	

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

LABORATORY CONTROL SAMPLE: 1382319

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/kg	60.1	57.5	96	71-138	
Toluene	ug/kg	60.1	57.7	96	74-131	
trans-1,2-Dichloroethene	ug/kg	60.1	71.1	118	67-135	
trans-1,3-Dichloropropene	ug/kg	60.1	58.9	98	65-146	
Trichloroethene	ug/kg	60.1	58.6	98	67-135	
Trichlorofluoromethane	ug/kg	60.1	77.2	128	59-144	
Vinyl acetate	ug/kg	120	86.7	72	40-160	F3,IC
Vinyl chloride	ug/kg	60.1	72.9	121	56-141	
Xylene (Total)	ug/kg	180	202	112	76-137	
1,2-Dichloroethane-d4 (S)	%			91	70-132	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE SAMPLE: 1383009

Parameter	Units	92235763004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	24	23.7	98	70-130	
1,1,1-Trichloroethane	ug/kg	ND	24	23.8	99	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	ND	24	22.6	94	70-130	
1,1,2-Trichloroethane	ug/kg	ND	24	22.2	92	70-130	
1,1-Dichloroethane	ug/kg	ND	24	30.7	127	70-130	
1,1-Dichloroethene	ug/kg	ND	24	28.5	118	49-180	
1,1-Dichloropropene	ug/kg	ND	24	24.5	102	70-130	
1,2,3-Trichlorobenzene	ug/kg	ND	24	21.2	88	70-130	
1,2,3-Trichloropropane	ug/kg	ND	24	21.4	89	70-130	
1,2,4-Trichlorobenzene	ug/kg	ND	24	21.0	87	70-130	
1,2,4-Trimethylbenzene	ug/kg	ND	24	27.8	115	70-130	
1,2-Dibromo-3-chloropropane	ug/kg	ND	24	22.9	95	70-130	
1,2-Dibromoethane (EDB)	ug/kg	ND	24	25.3	105	70-130	
1,2-Dichlorobenzene	ug/kg	ND	24	23.9	99	70-130	
1,2-Dichloroethane	ug/kg	ND	24	21.0	87	70-130	
1,2-Dichloropropane	ug/kg	ND	24	22.9	95	70-130	
1,3,5-Trimethylbenzene	ug/kg	ND	24	28.3	118	70-130	
1,3-Dichlorobenzene	ug/kg	ND	24	24.7	103	70-130	
1,3-Dichloropropane	ug/kg	ND	24	24.3	101	70-130	
1,4-Dichlorobenzene	ug/kg	ND	24	24.0	100	70-130	
2,2-Dichloropropane	ug/kg	ND	24	23.6	98	70-130	
2-Butanone (MEK)	ug/kg	ND	48.2	38.3J	79	70-130	
2-Chlorotoluene	ug/kg	ND	24	25.6	106	70-130	
2-Hexanone	ug/kg	ND	48.2	39.9J	83	70-130	
4-Chlorotoluene	ug/kg	ND	24	25.7	106	70-130	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	48.2	41.8J	87	70-130	
Acetone	ug/kg	ND	48.2	59.6J	124	70-130	
Benzene	ug/kg	ND	24	25.2	105	50-166	
Bromobenzene	ug/kg	ND	24	25.6	106	70-130	

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QUALITY CONTROL DATA

Project: ROW-504 32213
Pace Project No.: 92234867

MATRIX SPIKE SAMPLE: 1383009		92235763004	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Bromochloromethane	ug/kg	ND	24	22.9	95	70-130	
Bromodichloromethane	ug/kg	ND	24	19.7	82	70-130	
Bromoform	ug/kg	ND	24	20.8	86	70-130	
Bromomethane	ug/kg	ND	24	29.9	124	70-130	
Carbon tetrachloride	ug/kg	ND	24	25.3	105	70-130	
Chlorobenzene	ug/kg	ND	24	24.1	100	43-169	
Chloroethane	ug/kg	ND	24	32.6	135	70-130	M1
Chloroform	ug/kg	ND	24	21.5	89	70-130	
Chloromethane	ug/kg	ND	24	24.4	101	70-130	
cis-1,2-Dichloroethene	ug/kg	ND	24	22.7	94	70-130	
cis-1,3-Dichloropropene	ug/kg	ND	24	21.4	89	70-130	
Dibromochloromethane	ug/kg	ND	24	22.1	92	70-130	
Dibromomethane	ug/kg	ND	24	22.8	95	70-130	
Dichlorodifluoromethane	ug/kg	ND	24	23.8	99	70-130	
Diisopropyl ether	ug/kg	ND	24	30.0	125	70-130	
Ethylbenzene	ug/kg	ND	24	25.9	108	70-130	
Hexachloro-1,3-butadiene	ug/kg	ND	24	28.3	118	70-130	
Isopropylbenzene (Cumene)	ug/kg	ND	24	26.2	109	70-130	
m&p-Xylene	ug/kg	ND	48.2	52.0	108	70-130	
Methyl-tert-butyl ether	ug/kg	ND	24	29.2	121	70-130	
Methylene Chloride	ug/kg	ND	24	31.4	130	70-130	
n-Butylbenzene	ug/kg	ND	24	28.2	117	70-130	
n-Propylbenzene	ug/kg	ND	24	27.4	114	70-130	
Naphthalene	ug/kg	ND	24	21.3	88	70-130	
o-Xylene	ug/kg	ND	24	24.1	100	70-130	
p-Isopropyltoluene	ug/kg	ND	24	28.6	119	70-130	
sec-Butylbenzene	ug/kg	ND	24	27.9	116	70-130	
Styrene	ug/kg	ND	24	23.1	96	70-130	
tert-Butylbenzene	ug/kg	ND	24	26.2	109	70-130	
Tetrachloroethene	ug/kg	ND	24	23.9	99	70-130	
Toluene	ug/kg	ND	24	24.0	100	52-163	
trans-1,2-Dichloroethene	ug/kg	ND	24	29.9	124	70-130	
trans-1,3-Dichloropropene	ug/kg	ND	24	21.9	91	70-130	
Trichloroethene	ug/kg	ND	24	23.1	96	49-167	
Trichlorofluoromethane	ug/kg	ND	24	33.6	140	70-130	M1
Vinyl acetate	ug/kg	ND	48.2	25.3J	53	70-130	M1
Vinyl chloride	ug/kg	ND	24	27.0	112	70-130	
1,2-Dichloroethane-d4 (S)	%				87	70-132	
4-Bromofluorobenzene (S)	%				97	70-130	
Toluene-d8 (S)	%				96	70-130	

SAMPLE DUPLICATE: 1382816

Parameter	Units	92235576003 Result	Dup Result	RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND		

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

SAMPLE DUPLICATE: 1382816

Parameter	Units	92235576003 Result	Dup Result	RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	ND		
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND		
1,1,2-Trichloroethane	ug/kg	ND	ND		
1,1-Dichloroethane	ug/kg	ND	ND		
1,1-Dichloroethene	ug/kg	ND	ND		
1,1-Dichloropropene	ug/kg	ND	ND		
1,2,3-Trichlorobenzene	ug/kg	ND	ND		
1,2,3-Trichloropropane	ug/kg	ND	ND		
1,2,4-Trichlorobenzene	ug/kg	ND	ND		
1,2,4-Trimethylbenzene	ug/kg	ND	ND		
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND		
1,2-Dibromoethane (EDB)	ug/kg	ND	ND		
1,2-Dichlorobenzene	ug/kg	ND	ND		
1,2-Dichloroethane	ug/kg	ND	ND		
1,2-Dichloropropane	ug/kg	ND	ND		
1,3,5-Trimethylbenzene	ug/kg	ND	ND		
1,3-Dichlorobenzene	ug/kg	ND	ND		
1,3-Dichloropropane	ug/kg	ND	ND		
1,4-Dichlorobenzene	ug/kg	ND	ND		
2,2-Dichloropropane	ug/kg	ND	ND		
2-Butanone (MEK)	ug/kg	ND	ND		
2-Chlorotoluene	ug/kg	ND	ND		
2-Hexanone	ug/kg	ND	ND		
4-Chlorotoluene	ug/kg	ND	ND		
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND		
Acetone	ug/kg	ND	18.1J		
Benzene	ug/kg	ND	ND		
Bromobenzene	ug/kg	ND	ND		
Bromochloromethane	ug/kg	ND	ND		
Bromodichloromethane	ug/kg	ND	ND		
Bromoform	ug/kg	ND	ND		
Bromomethane	ug/kg	ND	ND		
Carbon tetrachloride	ug/kg	ND	ND		
Chlorobenzene	ug/kg	ND	ND		
Chloroethane	ug/kg	ND	ND		
Chloroform	ug/kg	ND	ND		
Chloromethane	ug/kg	ND	ND		
cis-1,2-Dichloroethene	ug/kg	ND	ND		
cis-1,3-Dichloropropene	ug/kg	ND	ND		
Dibromochloromethane	ug/kg	ND	ND		
Dibromomethane	ug/kg	ND	ND		
Dichlorodifluoromethane	ug/kg	ND	ND		
Diisopropyl ether	ug/kg	ND	ND		
Ethylbenzene	ug/kg	ND	ND		
Hexachloro-1,3-butadiene	ug/kg	ND	ND		
Isopropylbenzene (Cumene)	ug/kg	ND	ND		
m&p-Xylene	ug/kg	ND	ND		

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

SAMPLE DUPLICATE: 1382816

Parameter	Units	92235576003 Result	Dup Result	RPD	Qualifiers
Methyl-tert-butyl ether	ug/kg	ND	ND		
Methylene Chloride	ug/kg	ND	ND		
n-Butylbenzene	ug/kg	ND	ND		
n-Propylbenzene	ug/kg	ND	ND		
Naphthalene	ug/kg	ND	2.2J		
o-Xylene	ug/kg	ND	ND		
p-Isopropyltoluene	ug/kg	ND	ND		
sec-Butylbenzene	ug/kg	ND	ND		
Styrene	ug/kg	ND	ND		
tert-Butylbenzene	ug/kg	ND	ND		
Tetrachloroethene	ug/kg	ND	ND		
Toluene	ug/kg	ND	ND		
trans-1,2-Dichloroethene	ug/kg	ND	ND		
trans-1,3-Dichloropropene	ug/kg	ND	ND		
Trichloroethene	ug/kg	ND	ND		
Trichlorofluoromethane	ug/kg	ND	ND		
Vinyl acetate	ug/kg	ND	ND		
Vinyl chloride	ug/kg	ND	ND		
Xylene (Total)	ug/kg	ND	ND		
1,2-Dichloroethane-d4 (S)	%	91	103	10	
4-Bromofluorobenzene (S)	%	100	99	22	
Toluene-d8 (S)	%	98	98	22	

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

QC Batch: MSV/30227

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5035A Volatile Organics

Associated Lab Samples: 92234867004

METHOD BLANK: 1384031

Matrix: Solid

Associated Lab Samples: 92234867004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	6.1	02/04/15 12:40	
1,1,1-Trichloroethane	ug/kg	ND	6.1	02/04/15 12:40	
1,1,2,2-Tetrachloroethane	ug/kg	ND	6.1	02/04/15 12:40	
1,1,2-Trichloroethane	ug/kg	ND	6.1	02/04/15 12:40	
1,1-Dichloroethane	ug/kg	ND	6.1	02/04/15 12:40	
1,1-Dichloroethene	ug/kg	ND	6.1	02/04/15 12:40	
1,1-Dichloropropene	ug/kg	ND	6.1	02/04/15 12:40	
1,2,3-Trichlorobenzene	ug/kg	ND	6.1	02/04/15 12:40	
1,2,3-Trichloropropane	ug/kg	ND	6.1	02/04/15 12:40	
1,2,4-Trichlorobenzene	ug/kg	ND	6.1	02/04/15 12:40	
1,2,4-Trimethylbenzene	ug/kg	ND	6.1	02/04/15 12:40	
1,2-Dibromo-3-chloropropane	ug/kg	ND	6.1	02/04/15 12:40	
1,2-Dibromoethane (EDB)	ug/kg	ND	6.1	02/04/15 12:40	
1,2-Dichlorobenzene	ug/kg	ND	6.1	02/04/15 12:40	
1,2-Dichloroethane	ug/kg	ND	6.1	02/04/15 12:40	
1,2-Dichloropropane	ug/kg	ND	6.1	02/04/15 12:40	
1,3,5-Trimethylbenzene	ug/kg	ND	6.1	02/04/15 12:40	
1,3-Dichlorobenzene	ug/kg	ND	6.1	02/04/15 12:40	
1,3-Dichloropropane	ug/kg	ND	6.1	02/04/15 12:40	
1,4-Dichlorobenzene	ug/kg	ND	6.1	02/04/15 12:40	
2,2-Dichloropropane	ug/kg	ND	6.1	02/04/15 12:40	
2-Butanone (MEK)	ug/kg	ND	121	02/04/15 12:40	
2-Chlorotoluene	ug/kg	ND	6.1	02/04/15 12:40	
2-Hexanone	ug/kg	ND	60.7	02/04/15 12:40	
4-Chlorotoluene	ug/kg	ND	6.1	02/04/15 12:40	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	60.7	02/04/15 12:40	
Acetone	ug/kg	ND	121	02/04/15 12:40	
Benzene	ug/kg	ND	6.1	02/04/15 12:40	
Bromobenzene	ug/kg	ND	6.1	02/04/15 12:40	
Bromochloromethane	ug/kg	ND	6.1	02/04/15 12:40	
Bromodichloromethane	ug/kg	ND	6.1	02/04/15 12:40	
Bromoform	ug/kg	ND	6.1	02/04/15 12:40	
Bromomethane	ug/kg	ND	12.1	02/04/15 12:40	
Carbon tetrachloride	ug/kg	ND	6.1	02/04/15 12:40	
Chlorobenzene	ug/kg	ND	6.1	02/04/15 12:40	
Chloroethane	ug/kg	ND	12.1	02/04/15 12:40	
Chloroform	ug/kg	ND	6.1	02/04/15 12:40	
Chloromethane	ug/kg	ND	12.1	02/04/15 12:40	
cis-1,2-Dichloroethene	ug/kg	ND	6.1	02/04/15 12:40	
cis-1,3-Dichloropropene	ug/kg	ND	6.1	02/04/15 12:40	
Dibromochloromethane	ug/kg	ND	6.1	02/04/15 12:40	

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

METHOD BLANK: 1384031

Matrix: Solid

Associated Lab Samples: 92234867004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/kg	ND	6.1	02/04/15 12:40	
Dichlorodifluoromethane	ug/kg	ND	12.1	02/04/15 12:40	
Diisopropyl ether	ug/kg	ND	6.1	02/04/15 12:40	
Ethylbenzene	ug/kg	ND	6.1	02/04/15 12:40	
Hexachloro-1,3-butadiene	ug/kg	ND	6.1	02/04/15 12:40	
Isopropylbenzene (Cumene)	ug/kg	ND	6.1	02/04/15 12:40	
m&p-Xylene	ug/kg	ND	12.1	02/04/15 12:40	
Methyl-tert-butyl ether	ug/kg	ND	6.1	02/04/15 12:40	
Methylene Chloride	ug/kg	ND	24.3	02/04/15 12:40	
n-Butylbenzene	ug/kg	ND	6.1	02/04/15 12:40	
n-Propylbenzene	ug/kg	ND	6.1	02/04/15 12:40	
Naphthalene	ug/kg	ND	6.1	02/04/15 12:40	
o-Xylene	ug/kg	ND	6.1	02/04/15 12:40	
p-Isopropyltoluene	ug/kg	ND	6.1	02/04/15 12:40	
sec-Butylbenzene	ug/kg	ND	6.1	02/04/15 12:40	
Styrene	ug/kg	ND	6.1	02/04/15 12:40	
tert-Butylbenzene	ug/kg	ND	6.1	02/04/15 12:40	
Tetrachloroethene	ug/kg	ND	6.1	02/04/15 12:40	
Toluene	ug/kg	ND	6.1	02/04/15 12:40	
trans-1,2-Dichloroethene	ug/kg	ND	6.1	02/04/15 12:40	
trans-1,3-Dichloropropene	ug/kg	ND	6.1	02/04/15 12:40	
Trichloroethene	ug/kg	ND	6.1	02/04/15 12:40	
Trichlorofluoromethane	ug/kg	ND	6.1	02/04/15 12:40	
Vinyl acetate	ug/kg	ND	60.7	02/04/15 12:40	
Vinyl chloride	ug/kg	ND	12.1	02/04/15 12:40	
Xylene (Total)	ug/kg	ND	12.1	02/04/15 12:40	
1,2-Dichloroethane-d4 (S)	%	87	70-132	02/04/15 12:40	
4-Bromofluorobenzene (S)	%	100	70-130	02/04/15 12:40	
Toluene-d8 (S)	%	118	70-130	02/04/15 12:40	

LABORATORY CONTROL SAMPLE: 1384032

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	55.4	56.5	102	74-137	
1,1,1-Trichloroethane	ug/kg	55.4	59.3	107	67-140	
1,1,2,2-Tetrachloroethane	ug/kg	55.4	48.4	87	72-141	
1,1,2-Trichloroethane	ug/kg	55.4	52.1	94	78-138	
1,1-Dichloroethane	ug/kg	55.4	52.9	95	69-134	
1,1-Dichloroethene	ug/kg	55.4	56.8	102	67-138	
1,1-Dichloropropene	ug/kg	55.4	64.5	116	69-139	
1,2,3-Trichlorobenzene	ug/kg	55.4	60.9	110	70-146	
1,2,3-Trichloropropane	ug/kg	55.4	50.4	91	69-144	
1,2,4-Trichlorobenzene	ug/kg	55.4	65.0	117	68-148	
1,2,4-Trimethylbenzene	ug/kg	55.4	67.8	122	74-137	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

LABORATORY CONTROL SAMPLE: 1384032

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromo-3-chloropropane	ug/kg	55.4	52.7	95	65-140	
1,2-Dibromoethane (EDB)	ug/kg	55.4	56.4	102	77-135	
1,2-Dichlorobenzene	ug/kg	55.4	59.3	107	77-141	
1,2-Dichloroethane	ug/kg	55.4	53.2	96	65-137	
1,2-Dichloropropane	ug/kg	55.4	57.5	104	72-136	
1,3,5-Trimethylbenzene	ug/kg	55.4	65.6	118	76-133	
1,3-Dichlorobenzene	ug/kg	55.4	58.6	106	74-138	
1,3-Dichloropropane	ug/kg	55.4	56.9	103	71-139	
1,4-Dichlorobenzene	ug/kg	55.4	59.1	107	76-138	
2,2-Dichloropropane	ug/kg	55.4	55.1	99	68-137	
2-Butanone (MEK)	ug/kg	111	87.3J	79	58-147	
2-Chlorotoluene	ug/kg	55.4	61.7	111	73-139	
2-Hexanone	ug/kg	111	96.9	87	62-145	
4-Chlorotoluene	ug/kg	55.4	60.5	109	76-141	
4-Methyl-2-pentanone (MIBK)	ug/kg	111	96.0	87	64-149	
Acetone	ug/kg	111	92.6J	84	53-153	
Benzene	ug/kg	55.4	61.2	110	73-135	
Bromobenzene	ug/kg	55.4	59.2	107	75-133	
Bromochloromethane	ug/kg	55.4	50.6	91	73-134	
Bromodichloromethane	ug/kg	55.4	51.7	93	71-135	
Bromoform	ug/kg	55.4	49.2	89	66-141	
Bromomethane	ug/kg	55.4	53.3	96	53-160	
Carbon tetrachloride	ug/kg	55.4	59.5	107	60-145	
Chlorobenzene	ug/kg	55.4	58.5	106	78-130	
Chloroethane	ug/kg	55.4	68.9	124	64-149	
Chloroform	ug/kg	55.4	49.8	90	70-134	
Chloromethane	ug/kg	55.4	55.0	99	52-150	
cis-1,2-Dichloroethene	ug/kg	55.4	53.9	97	70-133	
cis-1,3-Dichloropropene	ug/kg	55.4	58.1	105	68-134	
Dibromochloromethane	ug/kg	55.4	51.6	93	71-138	
Dibromomethane	ug/kg	55.4	53.8	97	74-130	
Dichlorodifluoromethane	ug/kg	55.4	59.1	107	40-160	
Diisopropyl ether	ug/kg	55.4	52.4	94	69-141	
Ethylbenzene	ug/kg	55.4	61.4	111	75-133	
Hexachloro-1,3-butadiene	ug/kg	55.4	65.6	118	68-143	
Isopropylbenzene (Cumene)	ug/kg	55.4	61.0	110	76-143	
m&p-Xylene	ug/kg	111	118	107	75-136	
Methyl-tert-butyl ether	ug/kg	55.4	47.4	85	68-144	
Methylene Chloride	ug/kg	55.4	58.1	105	45-154	
n-Butylbenzene	ug/kg	55.4	67.6	122	72-137	
n-Propylbenzene	ug/kg	55.4	61.9	112	76-136	
Naphthalene	ug/kg	55.4	59.9	108	68-151	
o-Xylene	ug/kg	55.4	57.7	104	76-141	
p-Isopropyltoluene	ug/kg	55.4	64.2	116	76-140	
sec-Butylbenzene	ug/kg	55.4	63.3	114	79-139	
Styrene	ug/kg	55.4	59.3	107	79-137	
tert-Butylbenzene	ug/kg	55.4	54.8	99	74-143	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

LABORATORY CONTROL SAMPLE: 1384032

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/kg	55.4	58.7	106	71-138	
Toluene	ug/kg	55.4	58.8	106	74-131	
trans-1,2-Dichloroethene	ug/kg	55.4	57.3	103	67-135	
trans-1,3-Dichloropropene	ug/kg	55.4	56.9	103	65-146	
Trichloroethene	ug/kg	55.4	61.9	112	67-135	
Trichlorofluoromethane	ug/kg	55.4	63.7	115	59-144	
Vinyl acetate	ug/kg	111	67.4	61	40-160	F3
Vinyl chloride	ug/kg	55.4	57.8	104	56-141	
Xylene (Total)	ug/kg	166	176	106	76-137	
1,2-Dichloroethane-d4 (S)	%			96	70-132	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE SAMPLE: 1384810

Parameter	Units	92235867006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	21.1	52.3	247	70-130	M1
1,1,1-Trichloroethane	ug/kg	ND	21.1	30.0	142	70-130	M1
1,1,2,2-Tetrachloroethane	ug/kg	ND	21.1	66.3	314	70-130	M1
1,1,2-Trichloroethane	ug/kg	ND	21.1	56.7	268	70-130	M1
1,1-Dichloroethane	ug/kg	ND	21.1	28.7	136	70-130	M1
1,1-Dichloroethene	ug/kg	ND	21.1	22.4	106	49-180	
1,1-Dichloropropene	ug/kg	ND	21.1	31.3	148	70-130	M1
1,2,3-Trichlorobenzene	ug/kg	ND	21.1	52.6	249	70-130	M1
1,2,3-Trichloropropane	ug/kg	ND	21.1	67.4	319	70-130	M1
1,2,4-Trichlorobenzene	ug/kg	ND	21.1	50.1	237	70-130	M1
1,2,4-Trimethylbenzene	ug/kg	ND	21.1	53.1	251	70-130	M1
1,2-Dibromo-3-chloropropane	ug/kg	ND	21.1	72.7	344	70-130	M1
1,2-Dibromoethane (EDB)	ug/kg	ND	21.1	57.0	270	70-130	M1
1,2-Dichlorobenzene	ug/kg	ND	21.1	54.9	260	70-130	M1
1,2-Dichloroethane	ug/kg	ND	21.1	40.1	190	70-130	M1
1,2-Dichloropropane	ug/kg	ND	21.1	39.9	189	70-130	M1
1,3,5-Trimethylbenzene	ug/kg	ND	21.1	50.5	239	70-130	M1
1,3-Dichlorobenzene	ug/kg	ND	21.1	49.8	236	70-130	M1
1,3-Dichloropropane	ug/kg	ND	21.1	54.7	259	70-130	M1
1,4-Dichlorobenzene	ug/kg	ND	21.1	50.4	238	70-130	M1
2,2-Dichloropropane	ug/kg	ND	21.1	27.1	128	70-130	
2-Butanone (MEK)	ug/kg	ND	42.3	84.3J	200	70-130	M1
2-Chlorotoluene	ug/kg	ND	21.1	49.6	235	70-130	M1
2-Hexanone	ug/kg	ND	42.3	137	325	70-130	M1
4-Chlorotoluene	ug/kg	ND	21.1	48.3	229	70-130	M1
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	42.3	140	332	70-130	M1
Acetone	ug/kg	ND	42.3	96.8J	229	70-130	M1
Benzene	ug/kg	ND	21.1	33.2	157	50-166	
Bromobenzene	ug/kg	ND	21.1	52.6	249	70-130	M1

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

MATRIX SPIKE SAMPLE: 1384810		92235867006	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Bromochloromethane	ug/kg	ND	21.1	34.5	164	70-130	M1
Bromodichloromethane	ug/kg	ND	21.1	42.1	199	70-130	M1
Bromoform	ug/kg	ND	21.1	59.6	282	70-130	M1
Bromomethane	ug/kg	ND	21.1	24.1	114	70-130	
Carbon tetrachloride	ug/kg	ND	21.1	30.5	144	70-130	M1
Chlorobenzene	ug/kg	ND	21.1	45.6	216	43-169	M1
Chloroethane	ug/kg	ND	21.1	26.1	123	70-130	
Chloroform	ug/kg	ND	21.1	32.0	151	70-130	M1
Chloromethane	ug/kg	ND	21.1	17.4	83	70-130	
cis-1,2-Dichloroethene	ug/kg	ND	21.1	32.5	154	70-130	M1
cis-1,3-Dichloropropene	ug/kg	ND	21.1	45.7	216	70-130	M1
Dibromochloromethane	ug/kg	ND	21.1	51.8	245	70-130	M1
Dibromomethane	ug/kg	ND	21.1	44.7	212	70-130	M1
Dichlorodifluoromethane	ug/kg	ND	21.1	19.7	93	70-130	
Diisopropyl ether	ug/kg	ND	21.1	34.2	162	70-130	M1
Ethylbenzene	ug/kg	ND	21.1	44.7	212	70-130	M1
Hexachloro-1,3-butadiene	ug/kg	ND	21.1	43.6	206	70-130	M1
Isopropylbenzene (Cumene)	ug/kg	ND	21.1	46.0	218	70-130	M1
m&p-Xylene	ug/kg	ND	42.3	85.2	202	70-130	M1
Methyl-tert-butyl ether	ug/kg	ND	21.1	37.0	175	70-130	M1
Methylene Chloride	ug/kg	ND	21.1	37.3	137	70-130	M1
n-Butylbenzene	ug/kg	ND	21.1	48.5	229	70-130	M1
n-Propylbenzene	ug/kg	ND	21.1	46.0	218	70-130	M1
Naphthalene	ug/kg	ND	21.1	70.3	333	70-130	M1
o-Xylene	ug/kg	ND	21.1	44.3	210	70-130	M1
p-Isopropyltoluene	ug/kg	ND	21.1	47.9	227	70-130	M1
sec-Butylbenzene	ug/kg	ND	21.1	47.2	223	70-130	M1
Styrene	ug/kg	ND	21.1	49.1	232	70-130	M1
tert-Butylbenzene	ug/kg	ND	21.1	42.9	203	70-130	M1
Tetrachloroethene	ug/kg	ND	21.1	34.9	165	70-130	M1
Toluene	ug/kg	ND	21.1	39.3	186	52-163	M1
trans-1,2-Dichloroethene	ug/kg	ND	21.1	25.3	120	70-130	
trans-1,3-Dichloropropene	ug/kg	ND	21.1	54.1	256	70-130	M1
Trichloroethene	ug/kg	ND	21.1	35.5	168	49-167	M1
Trichlorofluoromethane	ug/kg	ND	21.1	25.1	119	70-130	
Vinyl acetate	ug/kg	ND	42.3	50J	118	70-130	
Vinyl chloride	ug/kg	ND	21.1	21.0	100	70-130	
1,2-Dichloroethane-d4 (S)	%				108	70-132	
4-Bromofluorobenzene (S)	%				98	70-130	
Toluene-d8 (S)	%				98	70-130	

SAMPLE DUPLICATE: 1384811

Parameter	Units	92236063001 Result	Dup Result	RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND		

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

SAMPLE DUPLICATE: 1384811

Parameter	Units	92236063001 Result	Dup Result	RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	ND		
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND		
1,1,2-Trichloroethane	ug/kg	ND	ND		
1,1-Dichloroethane	ug/kg	ND	ND		
1,1-Dichloroethene	ug/kg	ND	ND		
1,1-Dichloropropene	ug/kg	ND	ND		
1,2,3-Trichlorobenzene	ug/kg	ND	ND		
1,2,3-Trichloropropane	ug/kg	ND	ND		
1,2,4-Trichlorobenzene	ug/kg	ND	ND		
1,2,4-Trimethylbenzene	ug/kg	ND	ND		
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND		
1,2-Dibromoethane (EDB)	ug/kg	ND	ND		
1,2-Dichlorobenzene	ug/kg	ND	ND		
1,2-Dichloroethane	ug/kg	ND	ND		
1,2-Dichloropropane	ug/kg	ND	ND		
1,3,5-Trimethylbenzene	ug/kg	ND	ND		
1,3-Dichlorobenzene	ug/kg	ND	ND		
1,3-Dichloropropane	ug/kg	ND	ND		
1,4-Dichlorobenzene	ug/kg	ND	ND		
2,2-Dichloropropane	ug/kg	ND	ND		
2-Butanone (MEK)	ug/kg	ND	ND		
2-Chlorotoluene	ug/kg	ND	ND		
2-Hexanone	ug/kg	ND	ND		
4-Chlorotoluene	ug/kg	ND	ND		
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND		
Acetone	ug/kg	ND	ND		
Benzene	ug/kg	ND	ND		
Bromobenzene	ug/kg	ND	ND		
Bromochloromethane	ug/kg	ND	ND		
Bromodichloromethane	ug/kg	ND	ND		
Bromoform	ug/kg	ND	ND		
Bromomethane	ug/kg	ND	ND		
Carbon tetrachloride	ug/kg	ND	ND		
Chlorobenzene	ug/kg	ND	ND		
Chloroethane	ug/kg	ND	ND		
Chloroform	ug/kg	ND	ND		
Chloromethane	ug/kg	ND	ND		
cis-1,2-Dichloroethene	ug/kg	ND	ND		
cis-1,3-Dichloropropene	ug/kg	ND	ND		
Dibromochloromethane	ug/kg	ND	ND		
Dibromomethane	ug/kg	ND	ND		
Dichlorodifluoromethane	ug/kg	ND	ND		
Diisopropyl ether	ug/kg	ND	ND		
Ethylbenzene	ug/kg	ND	ND		
Hexachloro-1,3-butadiene	ug/kg	ND	ND		
Isopropylbenzene (Cumene)	ug/kg	ND	ND		
m&p-Xylene	ug/kg	ND	ND		

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QUALITY CONTROL DATA

Project: ROW-504 32213

Pace Project No.: 92234867

SAMPLE DUPLICATE: 1384811

Parameter	Units	92236063001 Result	Dup Result	RPD	Qualifiers
Methyl-tert-butyl ether	ug/kg	ND	ND		
Methylene Chloride	ug/kg	ND	ND		
n-Butylbenzene	ug/kg	ND	ND		
n-Propylbenzene	ug/kg	ND	ND		
Naphthalene	ug/kg	ND	ND		
o-Xylene	ug/kg	ND	ND		
p-Isopropyltoluene	ug/kg	ND	ND		
sec-Butylbenzene	ug/kg	ND	ND		
Styrene	ug/kg	ND	ND		
tert-Butylbenzene	ug/kg	ND	ND		
Tetrachloroethene	ug/kg	ND	ND		
Toluene	ug/kg	ND	ND		
trans-1,2-Dichloroethene	ug/kg	ND	ND		
trans-1,3-Dichloropropene	ug/kg	ND	ND		
Trichloroethene	ug/kg	ND	ND		
Trichlorofluoromethane	ug/kg	ND	ND		
Vinyl acetate	ug/kg	ND	ND		
Vinyl chloride	ug/kg	ND	ND		
Xylene (Total)	ug/kg	ND	ND		
1,2-Dichloroethane-d4 (S)	%	108	93	35	
4-Bromofluorobenzene (S)	%	97	98	19	
Toluene-d8 (S)	%	113	110	24	

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QUALIFIERS

Project: ROW-504 32213

Pace Project No.: 92234867

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

- | | |
|----|---|
| 1g | 8260 results are from a total analysis which show that analytes are not present or that they are present but at such low levels that the appropriate regulatory levels could not possibly be exceeded, per Section 1.2 of Method 1311 |
| 2g | The internal standard response is below criteria. No hits associated with this internal standard. Results unaffected by high bias. |
| F3 | The recovery of the second source standard used to verify the initial calibration curve for this analyte is outside the laboratory's control limits. The result is estimated. |
| IC | The initial calibration for this compound was outside of method control limits. The result is estimated. |
| L0 | Analyte recovery in the laboratory control sample (LCS) was outside QC limits. |
| L2 | Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low. |
| M0 | Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits. |
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. |

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

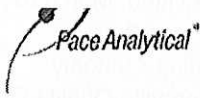
Project: ROW-504 32213

Pace Project No.: 92234867

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92234867001	7B-1 (0-2)	EPA 3050	MPRP/17790	EPA 6010	ICP/16005
92234867002	7B-2 (0-2)	EPA 3050	MPRP/17796	EPA 6010	ICP/16017
92234867003	7B-3 (14-15)	EPA 3050	MPRP/17796	EPA 6010	ICP/16017
92234867004	7B-4 (14-15)	EPA 3050	MPRP/17796	EPA 6010	ICP/16017
92234867005	7B-5 (0-2)	EPA 3050	MPRP/17796	EPA 6010	ICP/16017
92234867007	7B-7 (14-15)	EPA 3050	MPRP/17796	EPA 6010	ICP/16017
92234867011	7B8-(14-15)	EPA 3050	MPRP/17796	EPA 6010	ICP/16017
92234867005	7B-5 (0-2)	EPA 3010	MPRP/17976	EPA 6010	ICP/16163
92234867008	7BS-Drum	EPA 3010	MPRP/17806	EPA 6010	ICP/16027
92234867009	7BW-Drum	EPA 3010	MPRP/17830	EPA 6010	ICP/16046
92234867005	7B-5 (0-2)	EPA 7470	MERP/7614	EPA 7470	MERC/7308
92234867008	7BS-Drum	EPA 7470	MERP/7527	EPA 7470	MERC/7225
92234867009	7BW-Drum	EPA 7470	MERP/7544	EPA 7470	MERC/7241
92234867001	7B-1 (0-2)	EPA 7471	MERP/7520	EPA 7471	MERC/7218
92234867002	7B-2 (0-2)	EPA 7471	MERP/7520	EPA 7471	MERC/7218
92234867003	7B-3 (14-15)	EPA 7471	MERP/7520	EPA 7471	MERC/7218
92234867004	7B-4 (14-15)	EPA 7471	MERP/7520	EPA 7471	MERC/7218
92234867005	7B-5 (0-2)	EPA 7471	MERP/7520	EPA 7471	MERC/7218
92234867007	7B-7 (14-15)	EPA 7471	MERP/7520	EPA 7471	MERC/7218
92234867011	7B8-(14-15)	EPA 7471	MERP/7520	EPA 7471	MERC/7218
92234867008	7BS-Drum	EPA 8260	MSV/30139		
92234867009	7BW-Drum	EPA 8260	MSV/30152		
92234867010	TW-7B	EPA 8260	MSV/30222		
92234867001	7B-1 (0-2)	EPA 8260	MSV/30199		
92234867002	7B-2 (0-2)	EPA 8260	MSV/30199		
92234867003	7B-3 (14-15)	EPA 8260	MSV/30199		
92234867004	7B-4 (14-15)	EPA 8260	MSV/30227		
92234867005	7B-5 (0-2)	EPA 8260	MSV/30199		
92234867006	7B-6 (0-2)	EPA 8260	MSV/30199		
92234867007	7B-7 (14-15)	EPA 8260	MSV/30199		
92234867011	7B8-(14-15)	EPA 8260	MSV/30199		
92234867001	7B-1 (0-2)	ASTM D2974-87	PMST/7476		
92234867002	7B-2 (0-2)	ASTM D2974-87	PMST/7476		
92234867003	7B-3 (14-15)	ASTM D2974-87	PMST/7476		
92234867004	7B-4 (14-15)	ASTM D2974-87	PMST/7476		
92234867005	7B-5 (0-2)	ASTM D2974-87	PMST/7476		
92234867006	7B-6 (0-2)	ASTM D2974-87	PMST/7476		
92234867007	7B-7 (14-15)	ASTM D2974-87	PMST/7476		
92234867011	7B8-(14-15)	ASTM D2974-87	PMST/7476		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt (SCUR)

Document Number: F-CHR-CS-003-rev.15

Issuing Authority: Pace Huntersville Quality Office

Client Name: Harv Hickman

Courier: Fed Ex UPS USPS Client Commercial Pace Other PS 1/26

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

Packing Material: Bubble V Bubble Bags None Other

Thermometer Used: IR Gun T1401 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 3.1 °C Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: PS 1/26/15

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8. #6 - insufficient for 6010
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: Dave Gorchel Date/Time: 1/27/15

Comments/ Resolution: PM informed of missing metals container, K6.

SCURF Review:

JY

Date:

1/26/15

SRF Review:

JY

Date:

1/27/15

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

WO#: 92234867



92234867



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
 Required Client Information:
 Company: **HART HECKMAN**
 Address: **2923 SITTACON ST**
CLT, NC, 28203
 Email To: **daken@northhickman.com**
 Phone: **7045860001** Fax:
 Requested Due Date/AT: **Standard**

Section B
 Required Project Information:
 Report To: **David Graham**
 Copy To:
 Purchase Order No.:
 Project Name:
 Project Number: **ROW-504**

Section C
 Invoice Information:
 Attention:
 Company Name: **HHH**
 Address:
 Pace Quote Reference:
 Pace Project Manager:
 Pace Profile #:

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location STATE: **NC**

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9 / .) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil WP Wipe AR Air TS Tissue 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)
					DATE	TIME			DATE	TIME	H ₂ SO ₄	HNO ₃	HCl	NaOH			
1	7B-1 (0-2)		SL G		1/24/15	1200	7										
2	7B-2 (0-2)		SL G		1/24/15	1310	1										
3	7B-3 (14-15)		SL G		1/24/15	1355	1										
4	7B-4 (14-15)		SL G		1/24/15	1315	1										
5	7B-5 (0-2)		SL G		1/24/15	1735	1										
6	7B-6 (0-2)		SL G		1/24/15	1715	1										
7	7B-7 (14-15)		SL G		1/24/15	0730	2										
8	7B-8 - Drive		SL G		1/24/15	1015	2										
9	7B-9 - Drive		SL G		1/24/15	1000	2										
10	*7B-10 - Drive		SL G		1/24/15	0935	3										
11	7B-11 (14-15)		SL G		1/24/15	1725	2										
12																	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
				<i>P. Jones</i>	1/26/15	800	3.1 Y N Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: **Brian Kaysen**
 SIGNATURE of SAMPLER: *[Signature]*
 DATE Signed (MM/DD/YY): **1/25/15**

Temp in °C
 Received on Ice (Y/N)
 Custody Sealed Cooler (Y/N)
 Samples In tact (Y/N)

February 04, 2015

Chemical Testing Engineer
NCDOT
Materials & Tests Unit
1801 Blue Ridge Road
Raleigh, NC 27607

RE: Project: ROW-504 32213
Pace Project No.: 92235383

Dear Chemical Engineer:

Enclosed are the analytical results for sample(s) received by the laboratory on January 28, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,



Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: ROW-504 32213

Pace Project No.: 92235383

Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: ROW-504 32213

Pace Project No.: 92235383

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92235383001	7B-6 (0-2)	EPA 6010	JMW	13	PASI-A
		EPA 7471	SH1	1	PASI-A
		ASTM D2974-87	EJK	1	PASI-C

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ROW-504 32213

Pace Project No.: 92235383

Sample: 7B-6 (0-2) **Lab ID: 92235383001** Collected: 01/28/15 09:15 Received: 01/28/15 17:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Antimony	11.0	mg/kg	0.43	1	01/30/15 17:00	01/30/15 21:03	7440-36-0	
Arsenic	1.5	mg/kg	0.86	1	01/30/15 17:00	01/30/15 21:03	7440-38-2	
Beryllium	0.21	mg/kg	0.086	1	01/30/15 17:00	01/30/15 21:03	7440-41-7	
Cadmium	0.75	mg/kg	0.086	1	01/30/15 17:00	01/30/15 21:03	7440-43-9	
Chromium	22.6	mg/kg	0.43	1	01/30/15 17:00	01/30/15 21:03	7440-47-3	
Copper	68.4	mg/kg	0.43	1	01/30/15 17:00	01/30/15 21:03	7440-50-8	
Lead	209	mg/kg	0.43	1	01/30/15 17:00	01/30/15 21:03	7439-92-1	
Manganese	353	mg/kg	0.43	1	01/30/15 17:00	01/30/15 21:03	7439-96-5	
Nickel	6.8	mg/kg	0.43	1	01/30/15 17:00	01/30/15 21:03	7440-02-0	
Selenium	ND	mg/kg	0.86	1	01/30/15 17:00	01/30/15 21:03	7782-49-2	
Silver	ND	mg/kg	0.43	1	01/30/15 17:00	01/30/15 21:03	7440-22-4	
Thallium	ND	mg/kg	0.86	1	01/30/15 17:00	01/30/15 21:03	7440-28-0	
Zinc	179	mg/kg	0.86	1	01/30/15 17:00	01/30/15 21:03	7440-66-6	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.47	mg/kg	0.049	10	01/31/15 17:05	02/04/15 15:06	7439-97-6	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	9.2	%	0.10	1		01/30/15 15:37		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-504 32213
Pace Project No.: 92235383

QC Batch: MERP/7535 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 92235383001

METHOD BLANK: 1382050 Matrix: Solid
Associated Lab Samples: 92235383001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.0050	02/04/15 13:12	

LABORATORY CONTROL SAMPLE: 1382051

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.067	0.072	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382052 1382053

Parameter	Units	92235763001		MSD		MS		MSD		% Rec Limits	RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
Mercury	mg/kg	0.018	.061	.061	0.082	0.081	106	103	75-125	2		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-504 32213
Pace Project No.: 92235383

QC Batch: MPRP/17812 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 92235383001

METHOD BLANK: 1381671 Matrix: Solid
Associated Lab Samples: 92235383001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/kg	ND	0.50	01/30/15 19:34	
Arsenic	mg/kg	ND	1.0	01/30/15 19:34	
Beryllium	mg/kg	ND	0.10	01/30/15 19:34	
Cadmium	mg/kg	ND	0.10	01/30/15 19:34	
Chromium	mg/kg	ND	0.50	01/30/15 19:34	
Copper	mg/kg	ND	0.50	01/30/15 19:34	
Lead	mg/kg	ND	0.50	01/30/15 19:34	
Manganese	mg/kg	ND	0.50	01/30/15 19:34	
Nickel	mg/kg	ND	0.50	01/30/15 19:34	
Selenium	mg/kg	ND	1.0	01/30/15 19:34	
Silver	mg/kg	ND	0.50	01/30/15 19:34	
Thallium	mg/kg	ND	1.0	01/30/15 19:34	
Zinc	mg/kg	ND	1.0	01/30/15 19:34	

LABORATORY CONTROL SAMPLE: 1381672

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/kg	50	51.2	102	80-120	
Arsenic	mg/kg	50	50.1	100	80-120	
Beryllium	mg/kg	50	51.4	103	80-120	
Cadmium	mg/kg	50	51.2	102	80-120	
Chromium	mg/kg	50	50.0	100	80-120	
Copper	mg/kg	50	50.7	101	80-120	
Lead	mg/kg	50	51.1	102	80-120	
Manganese	mg/kg	50	51.4	103	80-120	
Nickel	mg/kg	50	51.3	103	80-120	
Selenium	mg/kg	50	50.4	101	80-120	
Silver	mg/kg	25	25.4	102	80-120	
Thallium	mg/kg	50	48.9	98	80-120	
Zinc	mg/kg	50	50.7	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1381673 1381674

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		92235165005 Result	Spike Conc.	Spike Conc.	MS Result					
Antimony	mg/kg	ND	54	54	52.6	52.4	97	97	75-125	0
Arsenic	mg/kg	0.65J	54	54	52.7	52.6	97	96	75-125	0
Beryllium	mg/kg	ND	54	54	53.7	53.8	99	100	75-125	0

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: ROW-504 32213

Pace Project No.: 92235383

Parameter	Units	1381673		1381674		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		92235165005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Cadmium	mg/kg	0.070J	54	54	53.7	53.6	99	99	75-125	0		
Chromium	mg/kg	2.3	54	54	54.3	55.7	96	99	75-125	2		
Copper	mg/kg	1.9	54	54	55.7	56.5	100	101	75-125	1		
Lead	mg/kg	4.5	54	54	58.2	59.9	100	103	75-125	3		
Manganese	mg/kg	21.1	54	54	81.0	87.6	111	123	75-125	8		
Nickel	mg/kg	0.76	54	54	54.7	54.8	100	100	75-125	0		
Selenium	mg/kg	ND	54	54	53.0	52.7	98	97	75-125	0		
Silver	mg/kg	ND	26.9	26.9	26.7	26.6	99	98	75-125	0		
Thallium	mg/kg	ND	54	54	50.8	51.6	93	95	75-125	1		
Zinc	mg/kg	9.9	54	54	64.2	67.6	101	107	75-125	5		

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: ROW-504 32213

Pace Project No.: 92235383

QC Batch: PMST/7473

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 92235383001

SAMPLE DUPLICATE: 1380063

Parameter	Units	92235135002 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	14.7	15.2	3	

SAMPLE DUPLICATE: 1380064

Parameter	Units	92235383001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	9.2	8.8	5	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: ROW-504 32213

Pace Project No.: 92235383

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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 (8270 listed analyte) decomposes to Azobenzene.

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.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-C Pace Analytical Services - Charlotte

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ROW-504 32213

Pace Project No.: 92235383

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92235383001	7B-6 (0-2)	EPA 3050	MPRP/17812	EPA 6010	ICP/16029
92235383001	7B-6 (0-2)	EPA 7471	MERP/7535	EPA 7471	MERC/7234
92235383001	7B-6 (0-2)	ASTM D2974-87	PMST/7473		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt (SCUR)
 Document Number:
F-CHR-CS-003-rev.15

Document Revised: September 22, 2014
 Page 1 of 2
 Issuing Authority:
 Pace Huntersville Quality Office

Client Name: Hart & Hickman

Courier: Fed Ex UPS USPS Client Commercial (Pace) Other _____

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

Optional
 Proj. Due Date
 Proj. Name:

Packing Material: Bubble V ip Bubble Bags None Other _____

Thermometer Used: IR Gun T1401 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 2.5 °C Biological Tissue is Frozen: Yes No N/A
 Temp should be above freezing to 6°C

Date and Initials of person examining contents: PS 1/28/15

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: [Signature] Date: 1/28/15
 SRF Review: [Signature] Date: 1/29/15

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO# : 92235383

 92235383
 (if no label available)



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information:

Company: **MARTY REZKMAN** Report To: **David Grauman** Attention: **David Grauman**
 Address: **2923 S. Tulson St Suite 100** Copy To: **David Grauman** Company Name: **Pace Analytical**
 Email To: **dgcauman@rezkman.com** Purchase Order No.: **R0W-504** Address: **12515 17th St NW**
 Phone: **702 5860007** Fax: **702 5860007** Project Name: **R0W-504** Pace Quote Reference: **1889325**
 Requested Due Date/TAT: **01/28/15** Project Number: **R0W-504** Pace Project Manager: **David Grauman** Pace Profile #:

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)	
			COMPOSITE START	COMPOSITE END/GRAB			H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol			Other
1	7B-6 (0-2)	SL	1/28/15	0915	1	1							X	HSL metals	
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	LEWEAVER	1/28/15	0945	David Grauman - Pace	01-28-15	15:05	
	David Grauman	01-28-15	17:10	P. Samir PACE	01-28-15	1710	Temp in °C: 2.5 Received on Ice (Y/N): Y Custody Sealed Cooler (Y/N): N Samples Intact (Y/N): Y

ORIGINAL

SAMPLER NAME AND SIGNATURE: **LEWEAVER**
 PRINT Name of SAMPLER: **LEWEAVER**
 SIGNATURE of SAMPLER: *[Signature]*
 DATE Signed (MM/DD/YY): **01/28/15**

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.
 F-ALL-Q-020rev.07, 15-May-2007

Appendix F

Subsurface Investigation Permit and Well Abandonment Record



SUBSURFACE INVESTIGATION PERMIT

I. Well Owner Information

Name: NC DOT
Attn: Gordon Box
Phone #: 919-707-6859
Address 1: 1020 Birch Ridge Dr.
Address 2: _____
City: Raleigh State: NC Zip: 27610

II. Agent Information (if applicable)

Name: Hart & Hickman
Attn: David Graham
Phone #: 704-586-0007
Address 1: 2923 S. Tryon St, Suite 100
Address 2: _____
City: Charlotte State: NC Zip: 28203

III. Site Information

Site Name: Parking Lot NC DOT Parcel 7B
Parcel ID Number: 07315113
Address: 510 W 4TH ST
City: CHARLOTTE State: NC Zip: 28202

General Conditions of This Permit:

- This permit shall be VALID for a period not to exceed twelve (12) months from the date of issuance.
- This permit is VALID for the site specified above and a representative must be on-site during the course of the investigation and made available to a Department representative upon request.
- A North Carolina Certified Well Contractor must perform any well contractor activities associated with this permit.
- All wells shall be constructed and abandoned to the standards of Chapter VI, Section V and Section VI of the Mecklenburg County Groundwater Well Regulations.
- All temporary wells, including those installed using Direct Push Technology, must be abandoned to the standards of Chapter VI, Section VI of the Mecklenburg County Groundwater Well Regulations.
- Registration information for all wells must be submitted to the Department within thirty (30) days of well completion. If water samples are collected, it is recommended that the well NOT be registered until the analytical results are received.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

KENNY SARGENT

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4226

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #:

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Municipal/Public
<input type="checkbox"/> Geothermal (Heating/Cooling Supply)	<input type="checkbox"/> Residential Water Supply (single)
<input type="checkbox"/> Industrial/Commercial	<input type="checkbox"/> Residential Water Supply (shared)
<input type="checkbox"/> Irrigation	
Non-Water Supply Well:	
<input checked="" type="checkbox"/> Monitoring	<input type="checkbox"/> Recovery
Injection Well:	
<input type="checkbox"/> Aquifer Recharge	<input type="checkbox"/> Groundwater Remediation
<input type="checkbox"/> Aquifer Storage and Recovery	<input type="checkbox"/> Salinity Barrier
<input type="checkbox"/> Aquifer Test	<input type="checkbox"/> Stormwater Drainage
<input type="checkbox"/> Experimental Technology	<input type="checkbox"/> Subsidence Control
<input type="checkbox"/> Geothermal (Closed Loop)	<input type="checkbox"/> Tracer
<input type="checkbox"/> Geothermal (Heating/Cooling Return)	<input type="checkbox"/> Other (explain under 7g)

4. Date well(s) abandoned: 01/25/15

5a. Well location:

ROW - 504

Facility/Owner Name

Facility ID# (if applicable)

510 WEST 4TH STREET CHARLOTTE 28202

Physical Address, City, and Zip

MECKLENBURG

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

35° 13' 48.86" N 80° 50' 54.25" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: TW-7B

6b. Total well depth: 30.0 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____ (ft.)

6e. Outer casing length (if known): _____ (ft.)

6f. Inner casing/tubing length (if known): _____ (ft.)

6g. Screen length (if known): _____ (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1
For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- | | |
|---|---|
| <input checked="" type="checkbox"/> Neat Cement Grout | <input type="checkbox"/> Bentonite Chips or Pellets |
| <input type="checkbox"/> Sand Cement Grout | <input type="checkbox"/> Dry Clay |
| <input type="checkbox"/> Concrete Grout | <input type="checkbox"/> Drill Cuttings |
| <input type="checkbox"/> Specialty Grout | <input type="checkbox"/> Gravel |
| <input type="checkbox"/> Bentonite Slurry | <input type="checkbox"/> Other (explain under 7g) |

7f. For each material selected above, provide amount of materials used:

4.75 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH
PORTLAND BENTONITE SLURRY

8. Certification:


Signature of Certified Well Contractor or Well Owner

02/25/15

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

Appendix G
Disposal Manifests



1703 Vargrave Street
Winston-Salem, NC 27107
ph 336-725-5844
fax 336-725-6244

CERTIFICATE OF DISPOSAL

Evo Corporation does hereby certify that 1 drum of non-hazardous contaminated material received on 02/13/2015 from:

Generator: NC Department of Transportation

Originating at: Parcel 7B - 510 W. 4th St.
Charlotte, NC

EC Waste ID #: 021527

has been disposed of by Evo Corporation in a manner approved by the North Carolina Department of Environment and Natural Resources.

A handwritten signature in black ink, appearing to read "Thomas W. Hammett", is written over a horizontal line.

Signature

Thomas W. Hammett
CEO
Evo Corporation



1703 Vargrave Street
Winston-Salem, NC 27107
ph 336-725-5844
fax 336-725-6244

CERTIFICATE OF DISPOSAL

Evo Corporation does hereby certify that 1 drum of non-hazardous contaminated water received on 02/13/2015 from:

Generator: NC Department of Transportation

Originating at: Parcel 7B - 510 W. 4th St.
Charlotte, NC

EC Waste ID #: 021527

has been disposed of by Evo Corporation in a manner approved by the North Carolina Department of Environment and Natural Resources.

A handwritten signature in black ink, appearing to read "Thomas W. Hammett", is written over a horizontal line.

Signature

Thomas W. Hammett
CEO
Evo Corporation

EVO CORPORATION

1703 Vargrave Street, Winston-Salem, NC 27107

www.evocorp.net

NON-HAZARDOUS MATERIALS MANIFEST

Load #

Manifest No. **73809**

GENERATOR INFORMATION

Generator: **NC Dept of Transportation**
Site Address: **Parcel 7B-510 4th Street**
City/State: **Charlotte, NC 28202**

Phone: **919-707-6859**
Contact: **Gordon Box**

MATERIAL DESCRIPTION / QUANTITY / WEIGHT

Gross Weight (lbs): _____ Material: **Water**
Empty Weight (lbs): _____ Contaminant: **Non Hazardous Metals**
Net Weight (lbs): _____

Quantity

1

Tons **Drums** Pails Sacs Yards Other: _____

TRANSPORTER INFORMATION

Transporter: **Evo Corporation**
Truck #: **401**

Phone: **336-725-5844**
Contact: **Tony Disher**

As the transporter, I certify that the materials described above being shipped under this non-hazardous materials manifest are properly classified, packaged, labeled, secured and are in proper condition for transport in commerce under the applicable regulations governing transportation, and I hereby receive this material for delivery to the facility designate.

Driver Signature: 


Date: **2/13/15**

FACILITY INFORMATION

EVO CORPORATION
1703 Vargrave Street
Winston-Salem, NC 27107

Evo Project #: **021527**
Phone: **(336) 725-5844**
Contact: **Tony Disher**

I certify that the carrier has delivered the materials described above to this facility, and I hereby accept this material for treatment and/or disposal in a manner that has been authorized by the State of North Carolina.

Facility Signature: 

Date: **2-13-15**

White/Facility

Canary/Invoice

Goldenrod/Generator

Pink/Carrier

EVO CORPORATION

1703 Vargrave Street, Winston-Salem, NC 27107

www.evocorp.net

NON-HAZARDOUS MATERIALS MANIFEST

Load #

Manifest No. **73810**

GENERATOR INFORMATION

Generator: **NC Dept of Transportation**

Phone: **919-707-6859**

Site Address: **Parcel 7B-510 4th Street**

City/State: **Charlotte, NC 28202**

Contact: **Gordon Box**

MATERIAL DESCRIPTION / QUANTITY / WEIGHT

Gross Weight (lbs): _____

Material: **Soil**

Empty Weight (lbs): _____

Contaminant: **Non Hazardous Metals**

Net Weight (lbs): _____

Quantity

1

Tons Drums Pails Sacs Yards Other: _____

TRANSPORTER INFORMATION

Transporter: **Evo Corporation**

Phone: **336-725-5844**

Truck #: **401**

Contact: **Tony Disher**

As the transporter, I certify that the materials described above being shipped under this non-hazardous materials manifest are properly classified, packaged, labeled, secured and are in proper condition for transport in commerce under the applicable regulations governing transportation, and I hereby receive this material for delivery to the facility designate.

Driver Signature: 

Date: **2/13/15**

FACILITY INFORMATION

EVO CORPORATION
1703 Vargrave Street
Winston-Salem, NC 27107

Evo Project #: **021527**

Phone: **(336) 725-5844**

Contact: **Tony Disher**

I certify that the carrier has delivered the materials described above to this facility, and I hereby accept this material for treatment and/or disposal in a manner that has been authorized by the State of North Carolina.

Facility Signature: 

Date: **2-13-15**

White/Facility

Canary/Invoice

Goldenrod/Generator

Pink/Carrier