

**PRELIMINARY SITE ASSESSMENT  
FOR  
PARCEL 49, RI CS5, LLC PROPERTY  
S-E FOOD MART 1  
4415 MARKET STREET  
WILMINGTON, NEW HANOVER COUNTY, NC  
FACILITY I.D. #: 0-020578**

**STATE PROJECT: U-3338B  
WBS ELEMENT: 34932.1.1**

**PREPARED FOR:**



**NCDOT GEOTECHNICAL ENGINEERING UNIT  
GEOENVIRONMENTAL SECTION  
1589 MSC  
RALEIGH, NORTH CAROLINA 27699-1589**

**OCTOBER 30, 2012**

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**CATLIN PROJECT NO. 212090**

**CORPORATE GEOLOGY LICENSE CERTIFICATION NO. C-118  
CORPORATE LICENSURE NO. FOR ENGINEERING SERVICES C-0585**

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**1.0 PURPOSE OF INVESTIGATION AND DESCRIPTION**

CATLIN Engineers and Scientists (CATLIN) was retained by the North Carolina Department of Transportation (NCDOT) Geotechnical Engineering Unit to provide a field investigation concluding with a Preliminary Site Assessment (PSA) for the above site. In response to a July 9, 2012 Request for Proposal (RFP) and subsequent work scope clarifications with Mr. Terry Fox, LG, CATLIN submitted a proposal (dated July 19, 2012, revised August 27, 2012) for conducting an investigation at Parcel #49, RI CS5, LLC Property. The parcel/property is located along the NCDOT Kerr Avenue and Market Street intersection improvements project in Wilmington, North Carolina. Sheet 1 illustrates the general location. The NCDOT Conventional Plan Sheet Symbols are provided on Sheet 1A and the site layout is illustrated on Sheet 2.

The following specific parcel information was provided by NCDOT:

*This active gas station (S-E Food Mart 1) is located in the northwest quadrant of Kerr Avenue and US 17 (Market St.) at 4415 Market Street in Wilmington. According to the UST Section registry, there are currently five (5) USTs in use at the site. There is no groundwater incident associated with this parcel.*

According to NCDOT, the parcel/property will be acquired in its entirety. A site investigation is requested before acquisition and roadway construction. An active underground storage tank (UST) system and retail fuel sales are operated at the site. No North Carolina Department of Environment and Natural Resources (NCDENR) groundwater incidents have been identified at the site.

The work scope as requested includes:

- Locate all USTs and determine approximate size and contents (if any).
- Determine if contaminated soils are present.
- If contamination is evident, estimate the quantity of impacted soils and indicate the approximate area of soil contamination on a site map.
- Provide a MicroStation file with the location of USTs, soil contamination and monitoring wells.
- Prepare a report including field activities, findings, and recommendations and submit in triplicate and electronically to the NCDOT GeoEnvironmental Section.

CATLIN received Notice to Proceed on September 19, 2012. This report documents our activities and findings at Parcel 49, RI CS5, LLC Property, S-E Food Mart 1, 4415 Market Street, Wilmington, North Carolina, Facility I.D. #: 0-020578. The site is illustrated on Sheet 2.

## 2.0 METHODS

Approximate proposed boring locations were discussed with NCDOT personnel before final Workplan submittal. Per NCDOT request, borings (soil samples) were located across the site near the active UST system (including tanks and dispensers). No drainage features are proposed at the site.

For screening purposes, soil will be considered impacted if analytical results are above the lowest corresponding NCDENR Maximum Soil Contaminant Concentration (MSCC). Contaminated soil volume will be estimated from the midpoint distance between a clean sample location and dirty sample location or to the property line and edge of pavement.

The NCDENR Wilmington Regional Office was contacted to conduct a file review. Ms. Debbie Mayo with the NCDENR Wilmington Regional Office UST Section indicated there are no releases or Groundwater Incidents associated with the site.

CATLIN coordinated geophysical activities concurrently with soil boring and sampling. The geophysical investigation methods are detailed in the SCHNABEL ENGINEERING SOUTH, PC (Schnabel) geophysical report provided in Appendix A. Final boring/sample locations were determined based on discussion with NCDOT personnel, geophysical results, and field observations. CATLIN's field activities at the site began and concluded on September 19, 2012.

## 2.1 FIELD METHODS

All field work was conducted in general accordance with CATLIN's proposal/workplan dated July 19, 2012 (revised August 27, 2012), state and federal guidelines, and industry standards.

Underground utility locating was coordinated by CATLIN personnel. The North Carolina One Call Center (NC-1-Call) was contacted for underground utility location. The areas around the proposed boring locations were checked and underground utilities were indicated by NC-1-Call personnel.

CATLIN personnel gathered subsurface soil data at the site by Direct Push Technology (DPT) boring advancement using an AMS PowerProbe™ 9600D (PowerProbe). Borings were identified by the parcel number (as indicated by NCDOT) followed by "DPT" and consecutive numbers starting with "01" (example: 49DPT-01). Borings were located around the active dispensers and USTs. The borings were advanced to depth by static force and a 90-pound hydraulic percussion hammer. Two and one-quarter inch diameter by four-foot length steel is used as casing. Soil samples were continuously collected in four-foot long and one and one-half inch diameter clear liners. Liners are removed from the casing and then cut in half longitudinally to allow for visual/manual classification utilizing the Unified Soil Classification System (USCS). Soils were collected continuously from near the surface to boring termination. Borings for soil sample collection were terminated approximately four (4) feet below land surface (BLS) except the 49DPT-01 boring was terminated at 12 feet BLS. Half of the soils from the liners were removed in two-foot intervals and placed in sealable polyethylene bags for organic vapor analysis (OVA) headspace screening utilizing a photo ionization detector (PID). The USCS, OVA/PID reading, and any indication of petroleum impact were recorded on field logs and have been transferred to the Boring Logs provided in Appendix B. As illustrated on Sheet 2, 10 borings were advanced for soil sample collection.

Vadose soil samples for laboratory analysis were collected from the sample interval with the highest OVA/PID reading above the capillary fringe as indicated by soil moisture. The sample interval was included with the boring identification as part of the soil sample identification [example: 49DPT-01(4ft)]. The sample identifications are included on the Boring Logs in Appendix B and the laboratory analytical Chain of Custody in Appendix C. Ten soil samples were submitted for laboratory analysis.

Nine (9) of the borings were terminated at approximately four (4) feet

BLS. The 49DPT-01 boring was terminated at 12 feet BLS.

While there are no petroleum UST releases on record for the site, there were three (3) monitoring wells (AMW1, AMW2, and AMW3) identified at the site. The purpose of these wells was not determined during this investigation. Two (2) of the monitoring wells (AMW-2 and AMW-3) were gauged for depth to water and a groundwater sample was collected from these wells for laboratory analysis.

New disposable nitrile gloves were worn during sampling activities. All samples were placed into laboratory provided glassware and packed on ice in an insulated cooler for transportation to the laboratory. Sample integrity was maintained by following proper Chain of Custody procedures. A copy of the Chain of Custody is provided following the analytical report in Appendix C.

Boreholes were abandoned to just below the surface using three-eighth inch bentonite chips. Bentonite and water were poured into the borehole simultaneously to facilitate hydration. Final borehole and sample locations were surveyed utilizing a Trimble® GPS survey instrument.

## **2.2 LABORATORY TESTING**

Following boring advancement, selected soils were placed in the appropriately labeled glassware. Soil samples were submitted for volatile and semi-volatile organics analysis per Environmental Protection Agency (EPA) Methods 8260B and 8270D. Groundwater samples were submitted for semi-volatile and volatile organics analysis per EPA Method 625 Base Neutral (BN) and Standard Method (SM) 6200B.

A total of 10 soil samples and two (2) groundwater samples were submitted to SGS Analytical Perspectives (NC Certification # 481). Chain of Custody documentation is included in Appendix C.

## **3.0 RESULTS**

### **Geophysical Investigation**

The complete geophysical investigation report by Schnabel is included in Appendix A and indicates that five (5) known (active) USTs are at the site. The known/active USTs include two (2) 10,000 gallon tanks, one (1) 6,000 gallon tank, one (1) 4,000 gallon tank, and one (1) 2,000 gallon tank.

### **Site Reconnaissance**

CATLIN personnel mobilized to the site on September 19, 2012. Photographs are included within the Schnabel report provided in Appendix A. No tanks were identified within the proposed right of way (ROW) or easement(s). The known/active USTs identified at the site include two (2) 10,000 gallon gasoline tanks, one (1) 6,000 gallon gasoline tank, one (1) 4,000 gallon diesel tank, and one (1) 2,000 gallon kerosene tank.

A portion of the southeastern dispenser island is within the proposed ROW and easement. Three (3) monitoring wells were located and were identified as AMW1, AMW2, and AMW3 according to the well tags. The monitoring well locations are illustrated on Sheet 2. The depth to water was measured at approximately seven (7) feet BLS.

### **Soil**

Silty sand soils were encountered across the subject site to four (4) feet BLS and to seven (7) feet BLS at 49DPT-01. Sandy clay and clayey sand were encountered from seven (7) to 12 feet BLS in the 49DPT-01 boring. No petroleum odor was noted in soils from any of the boring locations. The OVA/PID headspace screening/readings ranged from 2.5 to 37.5 parts per million. Wet soils were noted ranging from four (4) to six (6) feet deep. Complete boring logs including OVA/PID results are provided in Appendix B.

Summarized soil sample analytical results are provided on Table 1 and Table 2. Soil sample locations and summarized soil analytical results are illustrated on Sheet 2. As indicated on Tables 1 and 2 and Sheet 2, no EPA Method 8270D contaminants of concern results were reported above the laboratory reporting limit. A number of parameters were detected but at estimated ("J" value) concentrations below the reporting limits and MSCCs.

Analysis per EPA Method 8260B revealed a number of parameters but only Benzene was detected above the lowest (Soil to Groundwater) MSCC in one (1) sample [49DPT-08 (4ft)]. The 49DPT-08 (4ft) sample was collected on the west side of the UST basin and outside the proposed ROW and easements. No other results were reported above the lowest MSCCs.

A minimal impacted soil volume is suspected around the 49DPT-08 boring and adjacent to the active USTs. The contamination revealed at boring 49DPT-08 will likely be excavated during UST removal activities. Without additional soil sampling, a contaminated soil volume in the 49DPT-08 boring area will not be provided.

## **Groundwater**

Summarized groundwater analytical results are provided on Table 3 and Sheet 2. As indicated on the table and sheet, no EPA Method 625BN parameters were detected above the method detection limits. No SM 6200B parameters were detected above the laboratory reporting limits. A number of estimated ("J" concentrations) results per SM 6200B were reported but well below the NCAC T15A:02L Groundwater Quality Standards (2L GWQS).

## **4.0 SUMMARY AND RECOMMENDATIONS**

A Preliminary Site Assessment was conducted at the subject site as requested by NCDOT. NCDOT is planning roadway construction, including ROW acquisition, at the site. According to NCDOT, the entire parcel will be acquired. Ten soil samples were collected around the active UST system. No impacted soils were revealed above the lowest MSCC in the ROW or easement areas, however, one (1) soil sample [49DPT-08 (4ft)] collected on the western side of the active UST basin revealed Benzene concentrations above the lowest MSCC. It is assumed that soils in this area will not be disturbed during roadway construction activities, therefore, no additional sampling is proposed and a volume of contaminated soil is not provided. If excavation is required during roadway construction activities, soils near the boring 49DPT-08 will need to be handled as petroleum impacted waste. No other soil impacts above the lowest MSCC were revealed.

Groundwater samples were collected from two (2) of three (3) monitoring wells at the site. Depth to water was measured at approximately seven (7) feet BLS. No groundwater analytical results were reported above the 2L GWQS.

Five (5) USTs and associated piping with dispensers are currently utilized at the active retail fuel station on the site. The dispensers on the southeastern portion of the site are within the proposed ROW and easement.

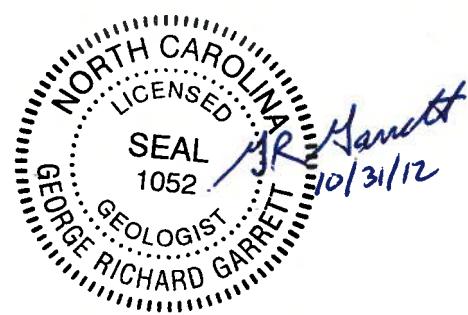
## **5.0 LIMITATIONS**

This report is based on the agreed work scope and a review of available data from limited sampling. It is possible that this investigation may have failed to reveal the presence of contamination in the project area where such contamination may exist. Although CATLIN has used accepted methods appropriate for soil and groundwater sampling, CATLIN cannot guarantee that additional soil and/or groundwater contamination does not exist.

## 6.0 SIGNATURES



Benjamin J. Ashba, P.G.  
Project Manager



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## **TABLES**

**TABLE 1**  
**SUMMARY OF SOIL LABORATORY RESULTS - EPA METHOD 8260B**

Parcel 49, RI CS5, LLC Property  
S-E Food Mart 1  
4415 Market Street  
Facility I.D. #: 0-020578

Sample ID	Contaminant of Concern →	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	Acetone	Benzene	Bromodichloromethane	Carbon tetrachloride	Chloroform	Tetrachloroethene ("Perc")	Toluene	Xylene (total)	All other EPA Method 8260B Parameters
	Date Collected												
49DPT-01 (4ft)	9/19/2012	<0.518	<0.495	<0.549	<3.26	<0.578	5.89	2.24 J	18.6	1.59 J	<0.560	<1.44	BMDL
49DPT-02 (4ft)	9/19/2012	18.9	10.2	<0.657	<3.90	<0.692	<0.685	<0.554	<0.620	<0.731	<0.669	25.2	BMDL
49DPT-03 (4ft)	9/19/2012	<0.524	<0.500	<0.555	<3.30	<0.585	<0.579	<0.468	<0.524	<0.617	0.567 J	<1.46	BMDL
49DPT-04 (4ft)	9/19/2012	<0.592	<0.565	<0.627	<3.73	<0.661	<0.654	<0.529	<0.592	<0.698	<0.639	<1.64	BMDL
49DPT-05 (4ft)	9/19/2012	<0.660	<0.630	<0.699	<4.15	<0.737	<0.729	<0.590	<0.660	<0.778	<0.713	<1.83	BMDL
49DPT-06 (4ft)	9/19/2012	<0.591	<0.564	<0.626	5.01 J	<0.660	<0.653	<0.528	<0.591	<0.697	<0.638	<1.64	BMDL
49DPT-07 (4ft)	9/19/2012	<0.645	<0.616	<0.684	4.43 J	<0.720	<0.713	<0.576	<0.645	<0.761	<0.697	<1.79	BMDL
49DPT-08 (4ft)	9/19/2012	<0.574	<0.548	0.830 J	<3.62	<b>16.2</b>	<0.635	<0.513	<0.574	<0.677	2.07 J	<1.60	BMDL
49DPT-09 (3ft)	9/19/2012	<0.562	<0.536	<0.595	<3.54	<0.627	<0.621	<0.502	1.23 J	<0.662	<0.607	<1.56	BMDL
49DPT-10 (4ft)	9/19/2012	<0.593	<0.566	<0.629	4.01 J	<0.662	<0.656	<0.530	<0.593	<0.700	<0.641	<1.65	BMDL
<b>Residential MSCC (ug/kg)</b>		782,000	782,000	110,000	14,000,000	18,000	NE	NE	20,000	1,100	1,200,000	3,129,000	Varies
<b>Industrial/Commercial MSCC (ug/kg)</b>		20,440,000	20,440,000	1,000,000	360,000,000	164,000	NE	NE	180,000	10,000	32,000,000	81,760,000	Varies
<b>Soil To Groundwater MSCC (ug/kg)</b>		8,500	8,300	99	24,000	5.6	NE	NE	370	7.4	4,300	4,600	Varies

All results in micrograms per kilogram (ug/kg).

Sample depth below land surface provided in parenthesis as part of the sample identification.

BMDL = Below Method Detection Limit, refer to analytical report for a complete list of parameters and detection limits

< = Less than method detection limit

J = Estimated Concentration

**Bold** results indicate concentrations above the lowest Maximum Soil Contaminant Concentration (MSCC).

**TABLE 2**  
**SUMMARY OF SOIL LABORATORY RESULTS - EPA METHOD 8270D**

Parcel 49, RI CS5, LLC Property  
S-E Food Mart 1  
4415 Market Street  
Facility I.D. #: 0-020578

Sample ID	Contaminant of Concern →	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Bis(2-Ethylhexyl)phthalate	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	All other EPA Method 8270D Parameters
	Date Collected											
49DPT-01 (4ft)	9/19/2012	<18.1	<18.6	<19.0	<52.4	<15.8	<38.3	<31.0	<25.7	<21.7	<13.9	BMDL
49DPT-02 (4ft)	9/19/2012	<17.9	32.4 J	45.4 J	<51.7	<15.6	<37.8	48.6 J	<25.3	<21.4	48.6 J	BMDL
49DPT-03 (4ft)	9/19/2012	<18.2	<18.7	<19.0	<52.7	36.3 J	<38.5	<31.1	<25.8	<21.8	<14.0	BMDL
49DPT-04 (4ft)	9/19/2012	<18.9	<19.5	<19.8	<54.8	<16.5	<40.0	<32.3	<26.8	<22.7	<14.5	BMDL
49DPT-05 (4ft)	9/19/2012	47.1 J	67.3 J	94.2 J	53.8 J	<16.2	70.6 J	104 J	50.4 J	<22.2	90.8 J	BMDL
49DPT-06 (4ft)	9/19/2012	<18.3	<18.9	<19.2	<53.1	<16.0	<38.8	<31.3	<26.0	<21.9	<14.1	BMDL
49DPT-07 (4ft)	9/19/2012	52.5 J	63.0 J	87.6 J	<55.9	<16.8	73.6 J	116 J	45.5 J	31.5 J	94.6 J	BMDL
49DPT-08 (4ft)	9/19/2012	<18.8	<19.4	<19.7	<54.5	<16.4	<39.8	<32.2	<26.7	<22.5	<14.4	BMDL
49DPT-09 (3ft)	9/19/2012	<17.9	26.0 J	<18.8	<51.9	32.5 J	<38.0	35.8 J	<25.4	<21.5	39.1 J	BMDL
49DPT-10 (4ft)	9/19/2012	<19.8	<20.3	<20.7	<57.2	<17.2	<41.8	<33.8	<28.0	<23.7	<15.2	BMDL
<b>Residential MSCC (ug/kg)</b>	880	88	880	469,000	46,000	88,000	620,000	880	469,000	469,000	Varies	
<b>Industrial/Commercial MSCC (ug/kg)</b>	8,000	780	8,000	12,264,000	410,000	780,000	16,400,000	8,000	12,264,000	12,264,000	Varies	
<b>Soil To Groundwater MSCC (ug/kg)</b>	350	96	1,200	6,400,000	6,600	39,000	290,000	3,400	56,000	270,000	Varies	

All results in micrograms per kilogram (ug/kg).

Sample depth below land surface provided in parenthesis as part of the sample identification.

BMDL = Below Method Detection Limit, refer to analytical report for a complete list of parameters and detection limits

< = Less than method detection limit

J = Estimated Concentration

**Bold** results indicate concentrations above the lowest Maximum Soil Contaminant Concentration (MSCC).

**TABLE 3**  
**SUMMARY OF GROUNDWATER LABORATORY RESULTS**  
**EPA METHOD 625BN AND STANDARD METHOD 6200B**

Parcel 49, RI CS5, LLC Property  
S-E Food Mart 1  
4415 Market Street  
Facility I.D. #: 0-020578

Analytical Method →		EPA Method 625	Standard Method 6200B				
Contaminant of Concern →		All EPA Method 625 Base Neutral (BN) Parameters	Chloroform	Methylene chloride	tert-Butyl methyl ether (MTBE)	Toluene	All Other Standard Method 6200B Parameters
Sample ID	Date Collected						
AMW2	9/19/2012	BMDL	0.390 J	0.380 J	<0.144	0.140 J	BMDL
AMW3	9/19/2012	BMDL	<0.139	<0.152	0.410 J	<0.133	BMDL
GCL ( $\mu\text{g/L}$ )	Varies	70,000	5,000	20,000	260,000	Varies	
2L GWQS ( $\mu\text{g/L}$ )	Varies	70	5	20	600	Varies	

All results in micrograms per liter ( $\mu\text{g/L}$ ).

BMDL = Below Method Detection Limit

Refer to analytical report for a complete list of parameters and detection limits.

J = Estimated Concentration

< = Less than method detection limit

**SHEETS**

PROJECT REFERENCE NO. SHEET  
34932.1.1 (U-3338B) 1  
**GeoEnvironmental**  
0 2,000 4,000 FEET



Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. 5500000-33388  
SHEET NO. I-A

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

# CONVENTIONAL PLAN SHEET SYMBOLS

## BOUNDARIES AND PROPERTY:

- State Line \_\_\_\_\_  
 County Line \_\_\_\_\_  
 Township Line \_\_\_\_\_  
 City Line \_\_\_\_\_  
 Reservation Line \_\_\_\_\_  
 Property Line \_\_\_\_\_  
 Existing Iron Pin   
 Property Corner \_\_\_\_\_  
 Property Monument   
 Parcel/Sequence Number   
 Existing Fence Line \_\_\_\_\_  
 Proposed Woven Wire Fence \_\_\_\_\_  
 Proposed Chain Link Fence \_\_\_\_\_  
 Proposed Barbed Wire Fence \_\_\_\_\_  
 Existing Wetland Boundary \_\_\_\_\_  
 Proposed Wetland Boundary \_\_\_\_\_  
 Existing Endangered Animal Boundary \_\_\_\_\_  
 Existing Endangered Plant Boundary \_\_\_\_\_  
 Known Soil Contamination: Area or Site   
 Potential Soil Contamination: Area or Site 

## BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or UG Tank Cap   
 Sign   
 Well   
 Small Mine   
 Foundation   
 Area Outline   
 Cemetery   
 Building   
 School   
 Church   
 Dam 

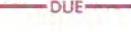
## HYDROLOGY:

- Stream or Body of Water \_\_\_\_\_  
 Hydro, Pool or Reservoir   
 Jurisdictional Stream   
 Buffer Zone 1   
 Buffer Zone 2   
 Flow Arrow   
 Disappearing Stream   
 Spring   
 Wetland   
 Proposed Lateral, Tail, Head Ditch   
 False Sump 

## RAILROADS:

- Standard Gauge   
 RR Signal Milepost \_\_\_\_\_  
 Switch   
 RR Abandoned \_\_\_\_\_  
 RR Dismantled 

## RIGHT OF WAY:

- Baseline Control Point   
 Existing Right of Way Marker   
 Existing Right of Way Line \_\_\_\_\_  
 Proposed Right of Way Line   
 Proposed Right of Way Line with Iron Pin and Cap Marker   
 Proposed Right of Way Line with Concrete or Granite Marker   
 Existing Control of Access   
 Proposed Control of Access   
 Existing Easement Line   
 Proposed Temporary Construction Easement   
 Proposed Temporary Drainage Easement   
 Proposed Permanent Drainage Easement   
 Proposed Permanent Drainage / Utility Easement   
 Proposed Permanent Utility Easement   
 Proposed Temporary Utility Easement   
 Proposed Aerial Utility Easement   
 Proposed Permanent Easement with Iron Pin and Cap Marker 

## ROADS AND RELATED FEATURES:

- Existing Edge of Pavement \_\_\_\_\_  
 Existing Curb \_\_\_\_\_  
 Proposed Slope Stakes Cut   
 Proposed Slope Stakes Fill   
 Proposed Curb Ramp   
 Curb Cut Future Ramp   
 Existing Metal Guardrail \_\_\_\_\_  
 Proposed Guardrail \_\_\_\_\_  
 Existing Cable Guideral   
 Proposed Cable Guideral   
 Equality Symbol   
 Pavement Removal 

## VEGETATION:

- Single Tree   
 Single Shrub   
 Hedge   
 Woods Line 

- Orchard \_\_\_\_\_   
 Vineyard \_\_\_\_\_ 

## EXISTING STRUCTURES:

- MAJOR:  
 Bridge, Tunnel or Box Culvert   
 Bridge Wing Wall, Head Wall and End Wall   
 MINOR:  
 Head and End Wall   
 Pipe Culvert   
 Footbridge   
 Drainage Box: Catch Basin, DI or JB   
 Paved Ditch Gutter \_\_\_\_\_  
 Storm Sewer Manhole   
 Storm Sewer \_\_\_\_\_

## UTILITIES:

- POWER:  
 Existing Power Pole   
 Proposed Power Pole   
 Existing Joint Use Pole   
 Proposed Joint Use Pole   
 Power Manhole   
 Power Line Tower   
 Power Transformer   
 UG Power Cable Hand Hole \_\_\_\_\_  
 H-Frame Pole   
 Recorded UG Power Line \_\_\_\_\_  
 Designated UG Power Line (S.U.E.) 

## TELEPHONE:

- Existing Telephone Pole   
 Proposed Telephone Pole   
 Telephone Manhole   
 Telephone Booth   
 Telephone Pedestal   
 Telephone Cell Tower   
 UG Telephone Cable Hand Hole   
 Recorded UG Telephone Cable \_\_\_\_\_  
 Designated UG Telephone Cable (S.U.E.)   
 Recorded UG Telephone Conduit \_\_\_\_\_  
 Designated UG Telephone Conduit (S.U.E.)   
 Recorded UG Fiber Optics Cable \_\_\_\_\_  
 Designated UG Fiber Optics Cable (S.U.E.) 

## WATER:

- Water Manhole \_\_\_\_\_   
 Water Meter   
 Water Valve   
 Water Hydrant   
 Recorded UG Water Line \_\_\_\_\_  
 Designated UG Water Line (S.U.E.)   
 Above Ground Water Line 

## TV:

- TV Satellite Dish   
 TV Pedestal   
 TV Tower   
 UG TV Cable Hand Hole \_\_\_\_\_  
 Recorded UG TV Cable \_\_\_\_\_  
 Designated UG TV Cable (S.U.E.)   
 Recorded UG Fiber Optic Cable \_\_\_\_\_  
 Designated UG Fiber Optic Cable (S.U.E.) 

## GAS:

- Gas Valve   
 Gas Meter   
 Recorded UG Gas Line \_\_\_\_\_  
 Designated UG Gas Line (S.U.E.)   
 Above Ground Gas Line 

## SANITARY SEWER:

- Sanitary Sewer Manhole   
 Sanitary Sewer Cleanout   
 UG Sanitary Sewer Line   
 Above Ground Sanitary Sewer   
 Recorded SS Forced Main Line   
 Designated SS Forced Main Line (S.U.E.) 

## MISCELLANEOUS:

- Utility Pole   
 Utility Pole with Base   
 Utility Located Object   
 Utility Traffic Signal Box   
 Utility Unknown UG Line   
 UG Tank; Water, Gas, Oil   
 Underground Storage Tank, Approx. Loc.   
 AG Tank; Water, Gas, Oil   
 Geoenvironmental Boring   
 UG Test Hole (S.U.E.)   
 Abandoned According to Utility Records   
 End of Information   
 AATUR   
 E.O.I. 



## **APPENDICES**

## **APPENDIX A**

### **SCHNABEL GEOPHYSICAL REPORT**



October 9, 2012

Mr. Richard Garrett, LG  
Catlin Engineers and Scientists, Inc.  
P.O. Box 10279  
Wilmington, NC 28404-0279

RE: State Project: U-3238B  
WBS Element: 33932.1.1  
County: New Hanover  
Description: SR 1175 (Kerr Ave.) from Randall Parkway to SR 2649 (MLK, Jr. Parkway)

Subject: Project 11821014.20, Report on Geophysical Surveys  
Parcel 46: RI CS5, LLC Property, Wilmington, North Carolina

Dear Mr. Garrett:

**SCHNABEL ENGINEERING SOUTH, PC** (Schnabel) is pleased to present this report on the geophysical surveys we performed on the subject properties. The report includes two 11x17 color figures and four 8.5x11 color figures.

## INTRODUCTION

The work described in this report was performed on September 11, and 20, 2012, by Schnabel under our 2011 contract with the NCDOT. The surveys were performed over the accessible areas of the property as indicated by the NCDOT to support their environmental assessment of the subject property. Photographs of the property are included on Figure 1. The property is located in the northwest quadrant of Kerr Avenue and US 17 (Market Street) in Wilmington, NC. The purpose of the geophysical surveys was to investigate the presence of metal underground storage tanks (USTs) over the accessible areas of the parcel.

The geophysical surveys consisted of an electromagnetic (EM) induction survey and a ground penetrating radar (GPR) survey. The EM survey was performed using a Geonics EM61-MK2 instrument. The EM61 is a time domain metal detector that is used to locate metal objects buried up to about eight feet below ground surface. When collecting EM61 data, three or four time gates are recorded of the response decay rate. The GPR survey was performed over selected EM61 anomalies, including areas of reinforced concrete, using a Geophysical Survey Systems SIR-3000 system equipped with a 400 MHz antenna. Photographs of the equipment used are shown on Figure 2.

## FIELD METHODOLOGY

Locations of geophysical data points were obtained using a sub-meter Trimble Pro-XRS DGPS system. References to direction and location in this report are based on the US State Plane 1983 System, North Carolina 3200 Zone, using the NAD 83 datum, with units in US survey feet. We recorded the locations of existing site features (monitoring wells, signs, etc.) with the Trimble system for later correlation with the geophysical data and locations provided by the NCDOT.

The EM61 data were collected along parallel survey lines spaced approximately 2.5 feet apart. The EM61 and DGPS data were recorded digitally using a field computer and later transferred to a desktop computer for data processing. The GPR data were collected along survey lines spaced one to two feet apart in orthogonal directions over areas of reinforced concrete. The GPR data were reviewed in the field to evaluate the possible presence of USTs. The GPR data also were recorded digitally and later transferred to a desktop computer for further review.

## DISCUSSION OF RESULTS

*i49 AD*  
The contoured EM61 data collected over Parcel 48 is shown on Figures 3 and 4. The EM61 early time gate data are plotted on Figure 3. The early time gate data provide a more sensitive detection of metal objects than the later time gate data. Figure 4 shows the differential response between the top and bottom coils of the EM61 instrument. The differential response data filters out the effect of surface and very shallowly buried metallic objects. Typically, the differential response emphasizes anomalies from deeper and larger objects such as USTs.

The early time gate and differential results show anomalies of unknown cause, in addition to those apparently caused by buried utilities or known site features (Figures 3 and 4). The GPR data indicate that the EM anomalies of unknown cause are probably caused by reinforced concrete and surface metal. The GPR data collected over the tank pit area located immediately north of the building indicate the presence of five known USTs, as shown on Figures 3 and 4. Example GPR images showing the reflections from the known USTs are shown on Figures 3, 4, and 5. The GPR data indicate that known USTs Nos. 1 and 2 are buried approximately 3.5 to 4.5 feet below ground surface, and are about 8 feet in diameter and about 27.5 feet long, equivalent to a capacity of about 10,000 gallons. The GPR data indicate that known UST No. 3 is buried approximately 3.5 to 4.5 feet below ground surface, and is about 8 feet in diameter and about 16 feet long, equivalent to a capacity of about 6,000 gallons. The GPR data indicate that known UST No. 4 is buried approximately 3.5 to 4.5 feet below ground surface, and is about 5.5 feet in diameter and about 24 feet long, equivalent to a capacity of about 4,000 gallons. The GPR data indicate that known UST No. 5 is buried approximately 3.0 to 4.0 feet below ground surface, and is about 5.5 feet in diameter and about 12 feet long, equivalent to a capacity of about 2,000 gallons. Photographs of the approximate locations of the known USTs that were marked in the field are included on Figure 6.

## CONCLUSIONS

Our evaluation of the geophysical data collected on the subject property on Project U-3338B in Wilmington, NC indicates the following:

The geophysical data indicate the presence of five known USTs on Parcel 48. Known USTs Nos. 1 and 2 are about 10,000-gallon capacity and are buried about 3.5 to 4.5 feet below ground surface. Known UST No. 3 is about 6,000-gallon capacity and is buried about 3.5 to 4.5 feet below ground surface. Known UST No. 4 is about 4,000-gallon capacity and is buried about 3.5 to 4.5 feet below ground surface. Known UST No. 5 is about 2,000-gallon capacity and is buried about 3.0 to 4.0 feet below ground surface.

49 (P)

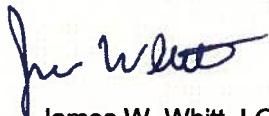
## LIMITATIONS

These services have been performed and this report prepared for Catlin Engineers and Scientists, Inc. and the North Carolina Department of Transportation in accordance with generally accepted guidelines for conducting geophysical surveys. It is generally recognized that the results of geophysical surveys are non-unique and may not represent actual subsurface conditions.

We appreciate the opportunity to have provided these services. Please call if you need additional information or have any questions.

Sincerely,

**SCHNABEL ENGINEERING SOUTH, PC**



James W. Whitt, LG  
Senior Staff Geophysicist



Jeremy S. Strohmeyer, LG  
Project Manager

JW:JS

Attachments: Figures (6)

CC: Terry Fox, NCDOT

FILE: G:\2011-SDE-JOBS\11821014\_00\_NCDOT\_2011\_GEOTECHNICAL\_UNIT\_SERVICES\11821014\_20\_U-3338B\_NEW\_HANOVER COUNTY\REPORT\PARCEL 48\SCHNABEL GEOPHYSICAL REPORT ON PARCEL 48 (U-3338B).DOCX



Parcel 48 (RI CS5, LLC Property), looking north

49  
60



Parcel 48 (RI CS5, LLC Property), looking east

49  
60



**Schnabel**  
ENGINEERING

NC DEPT. OF TRANSPORTATION  
STATE PROJECT U-3338B  
NEW HANOVER COUNTY, NC  
PROJECT NO. 11821014.20

PARCEL 48  
49 50  
SITE PHOTOS

FIGURE 1



Geonics EM61-MK2 Metal Detector with Trimble DGPS Unit



GSSI SIR-3000 Ground-Penetrating Radar with 400 MHz Antenna

Note: Stock photographs – not taken on site.

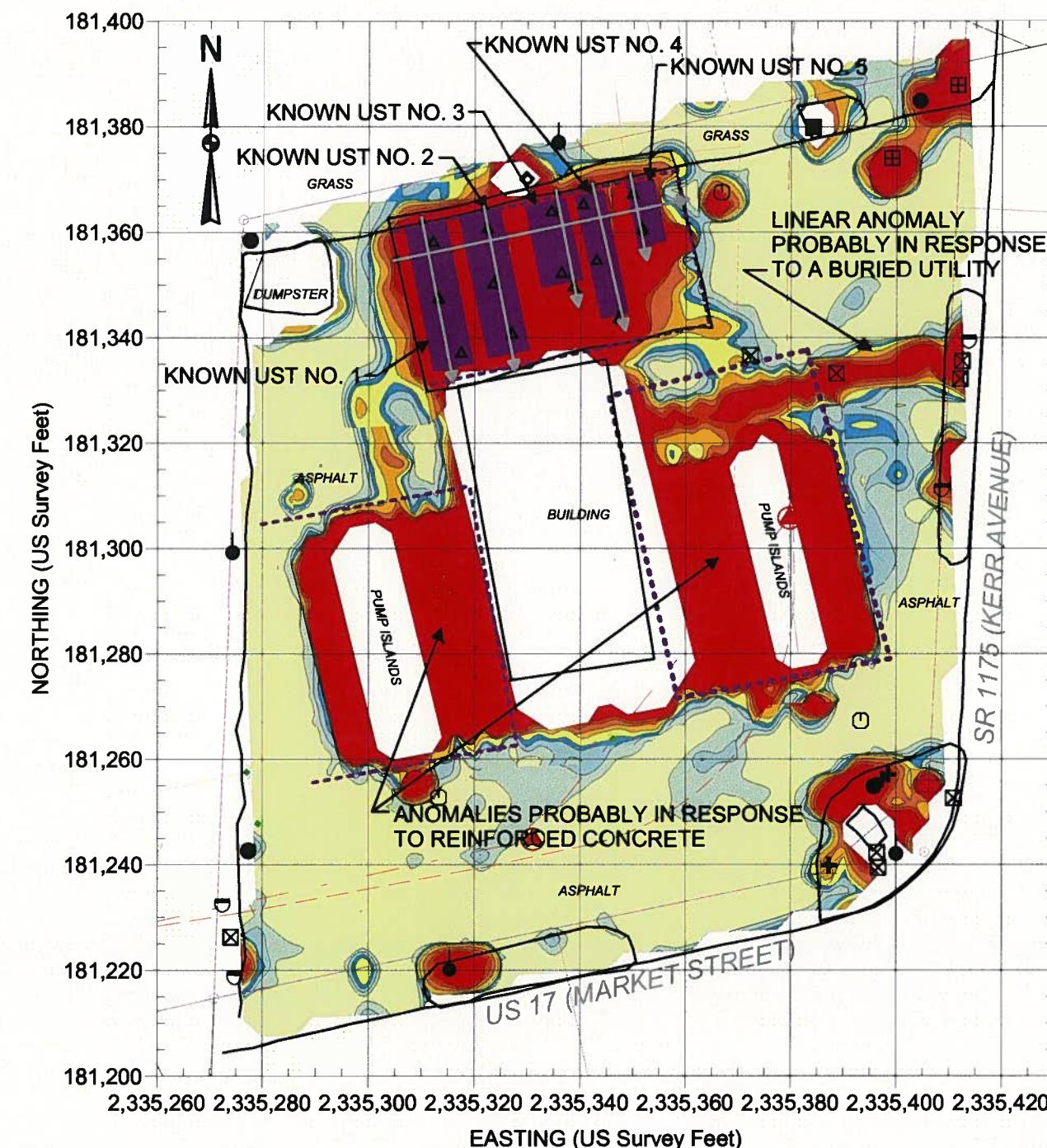


**Schnabel**  
ENGINEERING

NC DEPT. OF TRANSPORTATION  
STATE PROJECT U-3338B  
NEW HANOVER COUNTY, NC  
PROJECT NO. 11821014.20

PHOTOS OF  
GEOPHYSICAL  
EQUIPMENT USED

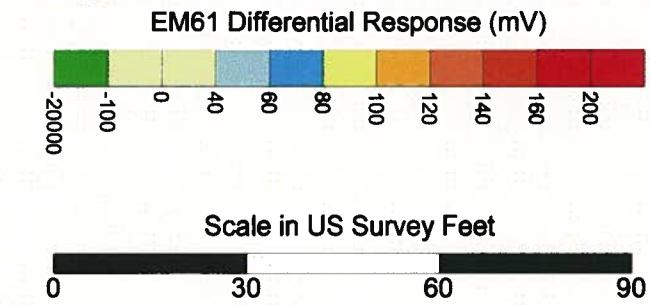
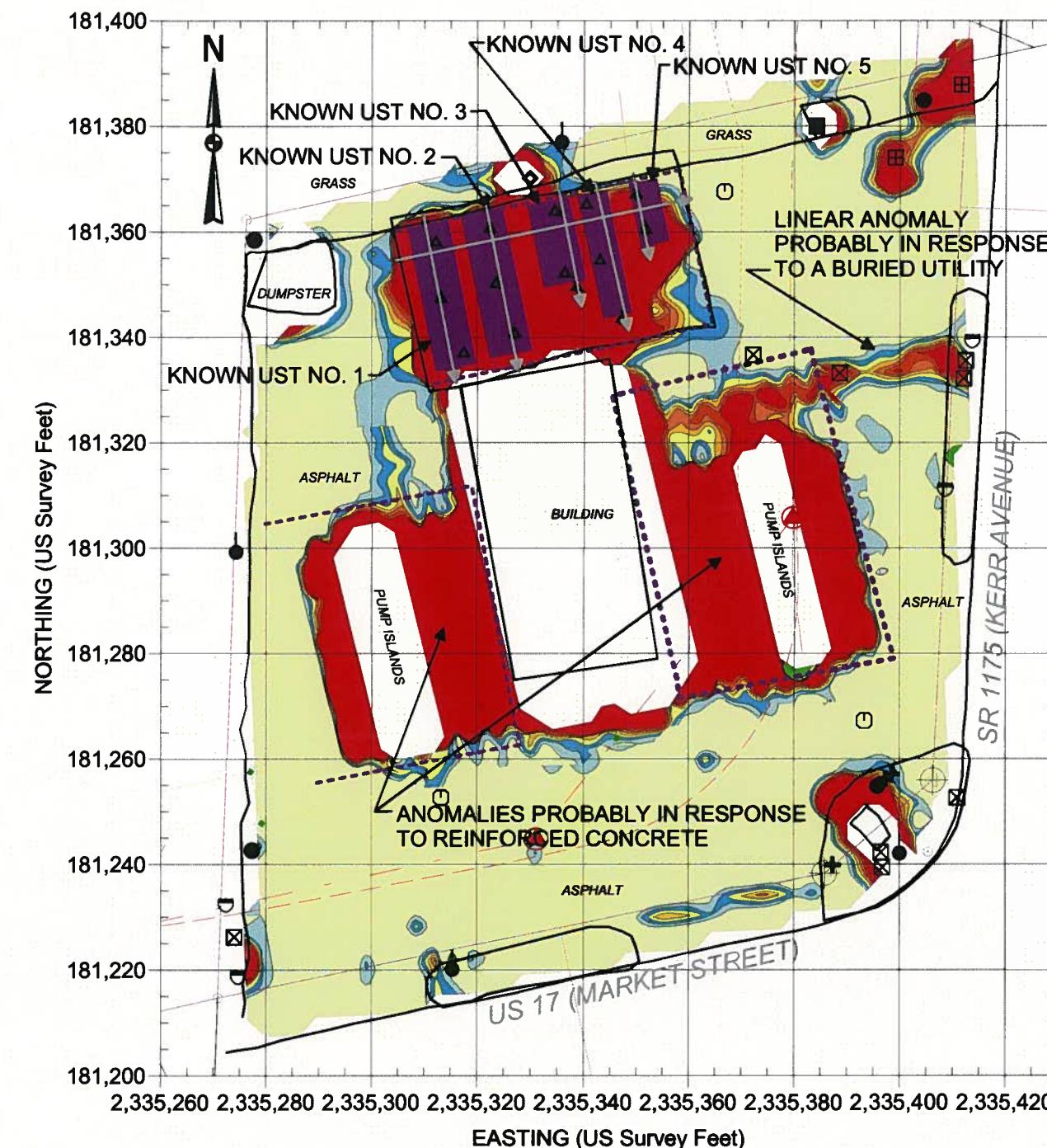
FIGURE 2



NC DEPARTMENT OF TRANSPORTATION  
STATE PROJECT U-333B  
NEW HANOVER COUNTY, NC  
PROJECT NO. 11821014.20

EM61  
EARLY TIME GATE  
RESPONSE

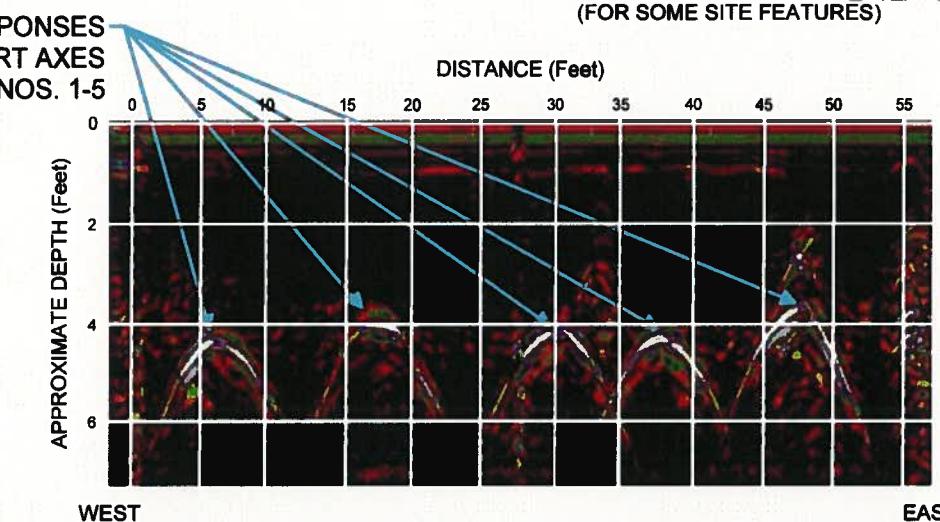
FIGURE 3



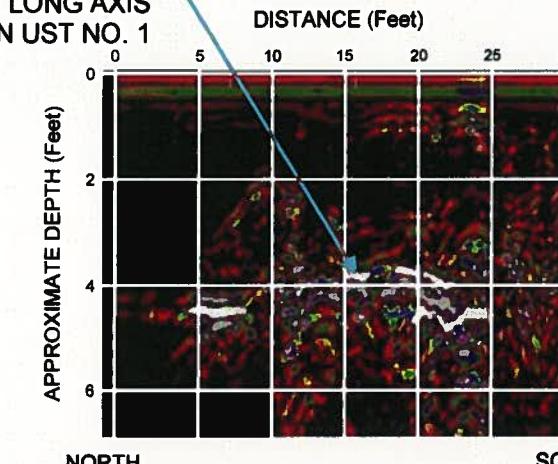
EXPLANATION	
□	SIGN
■	MISCELLANEOUS METALLIC OBJECT
☒	UTILITY MANHOLE, METER, BOX, ETC.
▢	STORMSEWER INLET
◆	VENT PIPE
+	GUY WIRE
●	LIGHTPOLE
△	UST FILLPORT OR ACCESS PLATE
○	MONITORING WELL
○	UTILITY POLE
○	EDGE OF NCDOT PROPOSED RW
—	PROPERTY LINE
→	EXAMPLE GPR LINE LOCATION
----	GPR SURVEY AREA
■■■■■	LOCATION OF KNOWN OR SUSPECT USTS MARKED ON SITE

REF.: NCDOT FILE: u3338b\_rdy\_psh\_s12.dgn  
(FOR SOME SITE FEATURES)

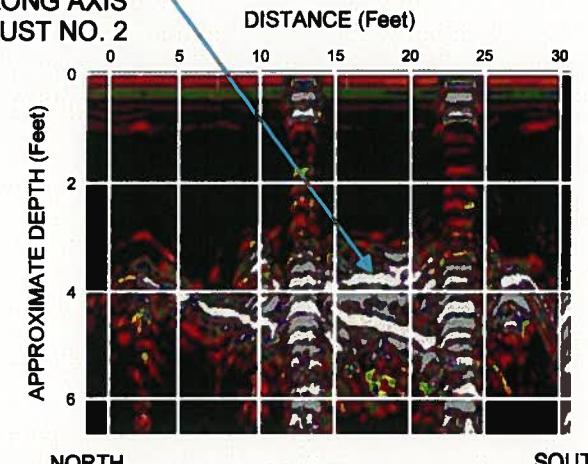
EXAMPLE GPR RESPONSES  
FROM THE SHORT AXES  
OF KNOWN UST NOS. 1-5



EXAMPLE GPR RESPONSE  
FROM THE LONG AXIS  
OF KNOWN UST NO. 1



EXAMPLE GPR RESPONSE  
FROM THE LONG AXIS  
OF KNOWN UST NO. 2



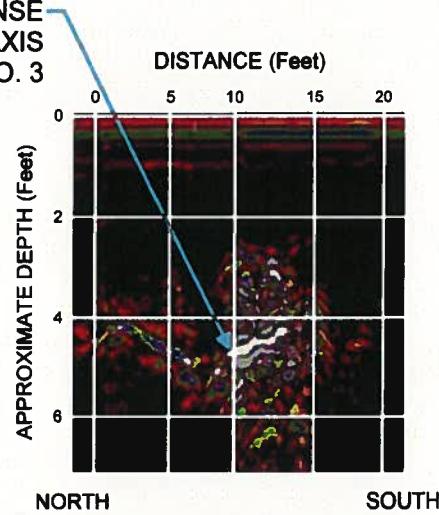
Note: The contour plot shows the difference, in millivolts (mV), between the readings from the top and bottom coils of the EM61. The difference is taken to reduce the effect of shallow metal objects and emphasize anomalies caused by deeper metallic objects, such as drums and tanks. The EM data were collected on September 11, 2012, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina 3200 Zone, using the NAD 1983 datum. GPR data were acquired on September 20, 2012, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.



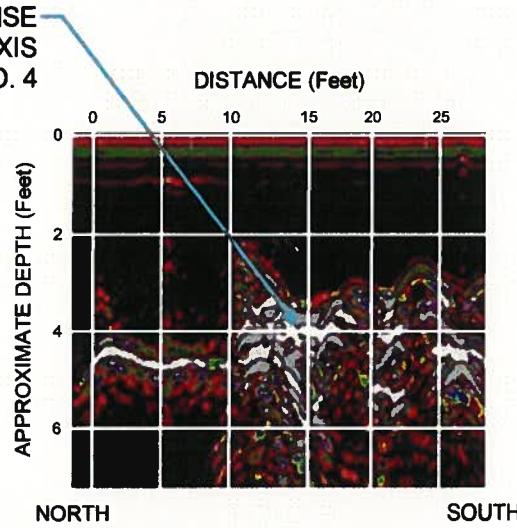
NC DEPARTMENT OF TRANSPORTATION  
STATE PROJECT U-3338B  
NEW HANOVER COUNTY, NC  
PROJECT NO. 11821014.20

EM61  
DIFFERENTIAL  
RESPONSE

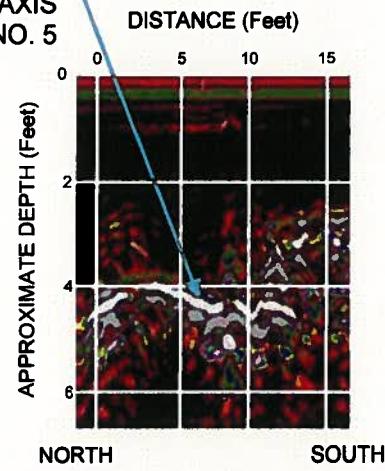
**EXAMPLE GPR RESPONSE  
FROM THE LONG AXIS  
OF KNOWN UST NO. 3**



**EXAMPLE GPR RESPONSE  
FROM THE LONG AXIS  
OF KNOWN UST NO. 4**



**EXAMPLE GPR RESPONSE  
FROM THE LONG AXIS  
OF KNOWN UST NO. 5**



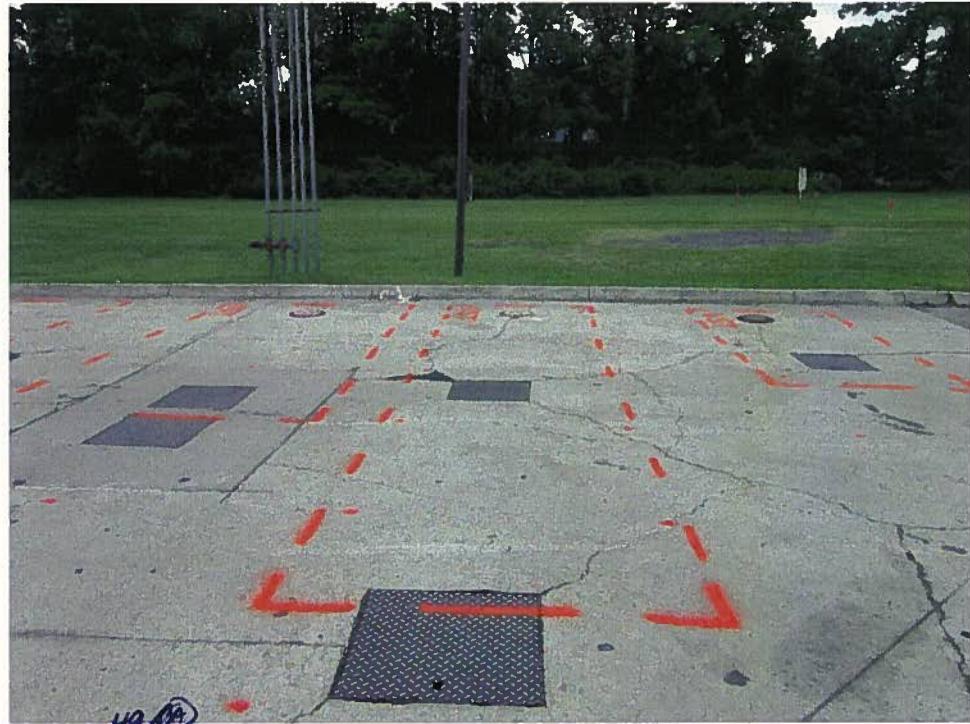
NC DEPARTMENT OF TRANSPORTATION  
STATE PROJECT U-3338B  
NEW HANOVER CO., NORTH CAROLINA  
PROJECT NO. 11821014.20

49 (48)  
PARCEL 48 ADDITIONAL  
GPR IMAGES

FIGURE 5



Parcel 48 (RI CS5, LLC Property), looking north. Photo shows approximate marked location of known UST Nos. 1 and 2 near the northwest corner of the building.



Parcel 48 (RI CS5, LLC Property), looking north. Photo shows approximate marked location of known UST Nos. 3, 4, and 5 near the northeast corner of the building.



**Schnabel**  
ENGINEERING

NC DEPT. OF TRANSPORTATION  
STATE PROJECT U-3338B  
NEW HANOVER COUNTY, NC  
PROJECT NO. 11821014.20

PHOTOS OF  
UST LOCATIONS

FIGURE 6

## **APPENDIX B**

### **BORING LOGS**

# BORING LOG

 **CATLIN**  
Engineers and Scientists  
WBS Element: 34932.1.1  
State Project: U-3338B  
Wilmington, NC

PROJECT NO.:	212090	STATE:	NC	COUNTY:	New Hanover	LOCATION:	Wilmington	
PROJECT NAME:	Parcel 049, RI CS5, LLC Property	LOGGED BY:	Corey Futral	BORING ID:				
NORTHING:	181,357.80	EASTING:	2,335,360.90	DRILLER:	John E. Wood, III			
SYSTEM:	NCSP NAD 83 (USft)	BORING LOCATION:		CREW:	John Boone			
DRILL MACHINE:	Power Probe	METHOD:	DPT	0 HOUR DTW:	N/A	BORING DEPTH:	12.0	
START DATE:	09/19/12	FINISH DATE:	09/12/12	24 HOUR DTW:	N/A	ROCK DEPTH:	--	
DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm)	LAB.	U S C S	L O G	SOIL AND ROCK DESCRIPTION	ELEVATION
0.0			0 250 500 750 1,000				0.0	LAND SURFACE
0.0		D	▲7.5			GW	Lt. gray, GRAVEL. Dry.	
2.0		D	▲5.0					
4.0		D	▲9.3			SM	Med. to dk. brown, Silty, f. SAND. Dry.	
6.0		W	▲3.9					
8.0		W	▲3.6			CL	Lt. gray, Sandy, CLAY. Low plasticity. Wet.	
10.0		W	▲9.1			SC	Lt. gray, Clayey, f. SAND. Wet.	
12.0							Boring Terminated at Depth 12.0 ft Clayey, f. SAND	
CATLIN ENVIRONMENTAL LOG #212090, REVERE AVE, PESAS, PARCEL #249, CATLIN INC. 10/12/12								

 = 0hr. DTW

 = 24hr. DTW

# BORING LOG

 **CATLIN**  
Engineers and Scientists  
WBS Element: 34932.1.1  
State Project: U-3338B  
Wilmington, NC

PROJECT NO.:	212090	STATE:	NC	COUNTY:	New Hanover	LOCATION:	Wilmington
PROJECT NAME:	Parcel 049, RI CS5, LLC Property			LOGGED BY:	Corey Futral	BORING ID:	
				DRILLER:	John E. Wood, III		49DPT-02
NORTHING:	181,308.60	EASTING:	2,335,376.40	CREW:	John Boone		
SYSTEM:	NCSP NAD 83 (USft)	BORING LOCATION:					LAND ELEV.: NM
DRILL MACHINE:	Power Probe	METHOD:	DPT			0 HOUR DTW:	N/A
START DATE:	09/19/12	FINISH DATE:	09/12/12			24 HOUR DTW:	N/A
DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm)	LAB.	U S C S L O G	DEPTH	SOIL AND ROCK DESCRIPTION ELEVATION
0.0			0 250 500 750 1,000			0.0	LAND SURFACE
						0.5	Lt. gray, GRAVEL
		D	6.0				
2.0					SM		Dk. brown w/ orange mottling grading to black/ lt. gray @ 3.5', Silty, f. SAND.
		D	6.9				
4.0						4.0	Boring Terminated at Depth 4.0 ft Silty, f. SAND
CATLIN ENVIRONMENTAL CONSULTANTS, INC. #49.GPL.CATLIN.GDT 10/21/12							
 = 0hr. DTW				 = 24hr. DTW			

# BORING LOG



**CATLIN**  
Engineers and Scientists

WBS Element: 34932.1.1

State Project: U-3338B

Wilmington, NC

PROJECT NO.:			212090	STATE:	NC	COUNTY:	New Hanover			LOCATION:	Wilmington
PROJECT NAME:			Parcel 049, RI CS5, LLC Property			LOGGED BY:			Corey Futral	BORING ID:	
NORTHING:			181,291.70	EASTING:	2,335,378.40	DRILLER:			John E. Wood, III	49DPT-03	
SYSTEM: NCSP NAD 83 (USft)			BORING LOCATION:			CREW:			John Boone	LAND ELEV.:	NM
DRILL MACHINE: Power Probe			METHOD: DPT			0 HOUR DTW: N/A			BORING DEPTH: 4.0		
START DATE: 09/19/12			FINISH DATE: 09/19/12			24 HOUR DTW: N/A			ROCK DEPTH: --		
DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm)			LAB.	U S C S	L O G	DEPTH	SOIL AND ROCK DESCRIPTION	
0.0			0	250	500	750	1,000		0.0	LAND SURFACE	
										Dk. gray, GRAVEL. Dry.	
		D	43.7						1.0		
2.0										Lt. tan w/orange mottling grading to dk brown @3', Silty, f. SAND. Rocks and asphalt present from 3-4'.	
		M	413.0								
4.0									4.0	Boring Terminated at Depth 4.0 ft Silty, f. SAND w/rocks and asphalt present from 3-4'	

# BORING LOG

 **CATLIN**  
Engineers and Scientists  
WBS Element: 34932.1.1  
State Project: U-3338B  
Wilmington, NC

PROJECT NO.:	212090	STATE:	NC	COUNTY:	New Hanover	LOCATION:	Wilmington
PROJECT NAME:	Parcel 049, RI CS5, LLC Property			LOGGED BY:	Corey Futral	BORING ID:	
NORTHING:	181,276.80	EASTING:	2,335,366.20	DRILLER:	John E. Wood, III		49DPT-04
SYSTEM:	NCSP NAD 83 (USft)	BORING LOCATION:		CREW:	John Boone	LAND ELEV.:	NM
DRILL MACHINE:	Power Probe	METHOD:	DPT	0 HOUR DTW:	N/A	BORING DEPTH:	4.0
START DATE:	09/19/12	FINISH DATE:	09/19/12	24 HOUR DTW:	N/A	ROCK DEPTH:	--
DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm)	LAB.	U S C S G W	L O G DEPTH	SOIL AND ROCK DESCRIPTION
0.0			0 250 500 750 1,000			0.0	LAND SURFACE
2.0		D	▲2.5		SM	0.5	Dk. gray to lt. gray, GRAVEL.
4.0		D	▲6.7			4.0	Dk. brown w/orange mottling to 2' grading to black w/lt. gray, Silty f. SAND.
							Boring Terminated at Depth 4.0 ft Silty, f. SAND

# BORING LOG



**CATLIN**  
Engineers and Scientists

WBS Element: 34932.1.1  
State Project: U-3338B

Wilmington, NC

PROJECT NO.:	212090	STATE:	NC	COUNTY:	New Hanover	LOCATION:	Wilmington
PROJECT NAME:	Parcel 049, RI CS5, LLC Property			LOGGED BY:	Corey Futral	BORING ID:	
				DRILLER:	John E. Wood, III		
NORTHING:	181,266.50	EASTING:	2,335,316.80	CREW:	John Boone		
SYSTEM:	NCSP NAD 83 (USft)	BORING LOCATION:				LAND ELEV.:	NM
DRILL MACHINE:	Power Probe	METHOD:	DPT	0 HOUR DTW:	N/A	BORING DEPTH:	4.0
START DATE:	09/19/12	FINISH DATE:	09/19/12	24 HOUR DTW:	N/A	ROCK DEPTH:	--
DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm)	LAB.	U S C S	L O G	SOIL AND ROCK DESCRIPTION ELEVATION
0.0			0 250 500 750 1,000				DEPTH 0.0 LAND SURFACE
							Dk. grading to lt. gray, GRAVEL
							1.0
2.0							Dk. orange mottling grading to lt./med. brown w/black and lt. gray @ depth, Silty, f. SAND.
4.0							4.0 Boring Terminated at Depth 4.0 ft Silty, f. SAND

# BORING LOG



Wilmington, NC

WBS Element: 34932.1.1  
State Project: U-3338B

PROJECT NO.:	212090	STATE:	NC	COUNTY:	New Hanover	LOCATION:	Wilmington
PROJECT NAME:	Parcel 049, RI CS5, LLC Property			LOGGED BY:	Corey Futral	BORING ID:	
				DRILLER:	John E. Wood, III		
NORTHING:	181,281.10	EASTING:	2,335,306.40	CREW:	John Boone		
SYSTEM:	NCSP NAD 83 (USft)	BORING LOCATION:				LAND ELEV.:	NM
DRILL MACHINE:	Power Probe	METHOD:	DPT	0 HOUR DTW:	N/A	BORING DEPTH:	4.0
START DATE:	09/19/12	FINISH DATE:	09/19/12	24 HOUR DTW:	N/A	ROCK DEPTH:	--
DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm)	LAB.	U S C S	L O G	SOIL AND ROCK DESCRIPTION ELEVATION
0.0			0 250 500 750 1,000				0.0 LAND SURFACE
							Dk. to lt. gray, GRAVEL.
							1.0
2.0							Dk. orange mottling grading to dk. brown/tr. lt. gray @ depth, Silty, f. SAND.
4.0							Boring Terminated at Depth 4.0 ft Silty, f. SAND

# BORING LOG

A stylized graphic element consisting of three horizontal wavy lines of increasing length from left to right.

**CATLIN**  
Engineers and Scientists

WBS Element: 34932.1.1  
State Project: U-3338B

PROJECT NO.:	212090	STATE:	NC	COUNTY:	New Hanover	LOCATION:	Wilmington			
PROJECT NAME:	Parcel 049, RI CS5, LLC Property			LOGGED BY:	Corey Futral	BORING ID:				
NORTHING:	181,294.40	EASTING:	2,335,312.20	DRILLER:	John E. Wood, III	49DPT-07				
SYSTEM:	NCSP NAD 83 (USft)	BORING LOCATION:			CREW:			John Boone		
DRILL MACHINE:	Power Probe		METHOD:	DPT		0 HOUR DTW:	N/A			
START DATE:	09/19/12		FINISH DATE:	09/19/12		24 HOUR DTW:	N/A			
DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm)		LAB.	U S C S	L O G	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
0.0			0	250	500	750	1,000		0.0	LAND SURFACE
								GW	Dk. to lt. gray, GRAVEL.	
		D	▲6.0							
2.0								SM	Dk. orange grading to black to lt. brown and grays, Silty, f. SAND.	
		W	▲7.1							
4.0									4.0	Boring Terminated at Depth 4.0 ft Silty, f. SAND

CAT IN ENVIRCO LOG 212080 KERR AVE PSAS PABCE #48 \$49 GP/I CAT IN SGT 10/31/12

▽ = Ohr. DTW

 = 24hr. DTW

# BORING LOG

 **CATLIN**  
Engineers and Scientists  
WBS Element: 34932.1.1  
State Project: U-3338B  
Wilmington, NC

PROJECT NO.:	212090	STATE:	NC	COUNTY:	New Hanover	LOCATION:	Wilmington
PROJECT NAME:	Parcel 049, RI CS5, LLC Property			LOGGED BY:	Corey Futral	BORING ID:	
				DRILLER:	John E. Wood, III		
NORTHING:	181,346.70	EASTING:	2,335,305.90	CREW:	John Boone		
SYSTEM:	NCSP NAD 83 (USft)	BORING LOCATION:				LAND ELEV.:	NM
DRILL MACHINE:	Power Probe	METHOD:	DPT		0 HOUR DTW:	N/A	BORING DEPTH: 4.0
START DATE:	09/19/12	FINISH DATE:	09/19/12		24 HOUR DTW:	N/A	ROCK DEPTH: --
DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm)	LAB.	U S C S L O G	DEPTH	SOIL AND ROCK DESCRIPTION ELEVATION
0.0			0 250 500 750 1,000			0.0	LAND SURFACE
		D	.....		GW	1.0	Dk. black to med. gray, GRAVEL.
		D	▲5.8		SM		Dk. brown/black w/interlying med grays tr. orange mottling, Silty, f. SAND.
		M	▲37.5			4.0	Boring Terminated at Depth 4.0 ft Silty, f. SAND
CATLIN ENVIRONMENTAL LOG 212090 KEEB AVE - PARCEL #49 CS5 - CATLIN BORING ID: 10511/12							
 = 0hr. DTW				 = 24hr. DTW			

# BORING LOG

 **CATLIN**  
Engineers and Scientists  
WBS Element: 34932.1.1  
State Project: U-3338B  
Wilmington, NC

PROJECT NO.:	212090	STATE:	NC	COUNTY:	New Hanover	LOCATION:	Wilmington
PROJECT NAME:	Parcel 049, RI CS5, LLC Property			LOGGED BY:	Corey Futral	BORING ID:	
				DRILLER:	John E. Wood, III		49DPT-09
NORTHING:	181,333.00	EASTING:	2,335,334.40	CREW:	John Boone		
SYSTEM:	NCSP NAD 83 (USft)	BORING LOCATION:				LAND ELEV.:	NM
DRILL MACHINE:	Power Probe	METHOD:	DPT	0 HOUR DTW:	N/A	BORING DEPTH:	3.0
START DATE:	09/19/12	FINISH DATE:	09/19/12	24 HOUR DTW:	N/A	ROCK DEPTH:	--
DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm)	LAB.	U S C S L O G	DEPTH	SOIL AND ROCK DESCRIPTION
0.0			0 250 500 750 1,000			0.0	LAND SURFACE
		D	▲3.8		GW		Dk. black to med gray, GRAVEL.
						1.5	
2.0		D	▲4.8		SM		Lt. brown w/tans and orange mottling, Silty f. SAND tr. clay @ 2.5'. Hit something hard @ 3' terminated boring @ 3'.
3.0						3.0	Boring Terminated at Depth 3.0 ft Silty, f. SAND
CATLIN ENGINEERS & SCIENTISTS, INC. #212090 - PARCEL 049, RI CS5, WILMINGTON, NC 28401-1081							
 = 0hr. DTW				 = 24hr. DTW			

# BORING LOG

**CATLIN**  
 Engineers and Scientists

 WBS Element: 34932.1.1  
 State Project: U-3338B  
 Wilmington, NC

PROJECT NO.:	212090	STATE:	NC	COUNTY:	New Hanover	LOCATION:	Wilmington	
PROJECT NAME:	Parcel 049, RI CS5, LLC Property			LOGGED BY:	Corey Futral	BORING ID:		
NORTHING:	181,372.60	EASTING:	2,335,329.20	DRILLER:	John E. Wood, III		49DPT-10	
SYSTEM:	NCSP NAD 83 (USft)	BORING LOCATION:		CREW:	John Boone	LAND ELEV.:	NM	
DRILL MACHINE:	Power Probe	METHOD:	DPT	0 HOUR DTW:	N/A	BORING DEPTH:	4.0	
START DATE:	09/19/12	FINISH DATE:	09/19/12	24 HOUR DTW:	N/A	ROCK DEPTH:	--	
DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm)	LAB.	U S C S	L O G	SOIL AND ROCK DESCRIPTION	ELEVATION
0.0			0 250 500 750 1,000				0.0 LAND SURFACE	
					SM		0.2 Dk. brown organic bark.	
		D	5.9					
2.0					SM		Dk. brown/black, Silty, f. SAND w/tr.clay.	
		M	6.1					
4.0						4.0	Boring Terminated at Depth 4.0 ft Silty, f. SAND. Tr. clay	

## **APPENDIX C**

### **LABORATORY REPORT AND CHAIN OF CUSTODY RECORD**



## Laboratory Report of Analysis

To: Ben Ashba  
RICHARD CATLIN & ASSOCIATES  
P.O. Box 10279  
Wilmington, NC 28404

Report Number: 31203002

Client Project: Kerr Ave. PSAs U-3338B

Dear Ben Ashba,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or services performed during this project, please call Barbara A. Hager at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

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

Sincerely,  
SGS North America Inc.

Barbara A. Hager  
2012.10.02 12:00:16 -05'00'

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Barbara A. Hager  
Project Manager  
barbara.hager@sgs.com

Date

Print Date: 10/02/2012

N.C. Certification # 481

**ANALYTICAL PERSPECTIVES IS NOW PART OF SGS, THE WORLD'S LEADING INSPECTION,  
VERIFICATION, TESTING AND CERTIFICATION COMPANY.**

## Laboratory Qualifiers

### Report Definitions

DL	Method, Instrument, or Estimated Detection Limit per Analytical Method
CL	Control Limits for the recovery result of a parameter
LOQ	Reporting Limit
DF	Dilution Factor
RPD	Relative Percent Difference
LCS(D)	Laboratory Control Spike (Duplicate)
MS(D)	Matrix Spike (Duplicate)
MB	Method Blank

### Qualifier Definitions

*	Recovery or RPD outside of control limits
B	Analyte was detected in the Lab Method Blank at a level above the LOQ
U	Undetected (Reported as ND or < DL)
V	Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit
A	Amount detected is less than the Lower Method Calibration Limit
J	Estimated Concentration.
O	The recovery of this analyte in the OPR is above the Method QC Limits and the reported concentration in the sample may be biased high
E	Amount detected is greater than the Upper Calibration Limit
S	The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s)
Q	Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s)
I	Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s)
DPE	Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s)
TIC	Tentatively Identified Compound
EMPC	Estimated Maximum possible Concentration due to ion ratio failure
ND	Not Detected
K	Result is estimated due to ion ratio failure in High Resolution PCB Analysis
P	RPD > 40% between results of dual columns
D	Spike or surrogate was diluted out in order to achieve a parameter result within instrument calibration range

Samples requiring manual integrations for various congeners and/or standards are marked and dated by the analyst. A code definition is provided below:

M1 Mis-identified peak

Note Results pages that include a value for "Solids (%)" have been adjusted for moisture content.

**Sample Summary**

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
49DPT-01 (4ft)	31203002001	09/19/2012 11:00	09/20/2012 08:35	Soil-Solid as dry weight
49DPT-02 (4ft)	31203002002	09/19/2012 11:40	09/20/2012 08:35	Soil-Solid as dry weight
49DPT-03 (4ft)	31203002003	09/19/2012 12:00	09/20/2012 08:35	Soil-Solid as dry weight
49DPT-04 (4ft)	31203002004	09/19/2012 12:30	09/20/2012 08:35	Soil-Solid as dry weight
49DPT-05 (4ft)	31203002005	09/19/2012 13:30	09/20/2012 08:35	Soil-Solid as dry weight
49DPT-06 (4ft)	31203002006	09/19/2012 14:00	09/20/2012 08:35	Soil-Solid as dry weight
49DPT-07 (4ft)	31203002007	09/19/2012 14:30	09/20/2012 08:35	Soil-Solid as dry weight
49DPT-08 (4ft)	31203002008	09/19/2012 14:45	09/20/2012 08:35	Soil-Solid as dry weight
49DPT-09 (3ft)	31203002009	09/19/2012 15:10	09/20/2012 08:35	Soil-Solid as dry weight
49DPT-10 (4ft)	31203002010	09/19/2012 15:30	09/20/2012 08:35	Soil-Solid as dry weight
AMW2	31203002011	09/19/2012 14:10	09/20/2012 08:35	Water
AMW3	31203002012	09/19/2012 15:50	09/20/2012 08:35	Water
Trip Blank (Not on COC)	31203002013	09/19/2012 00:00	09/20/2012 08:35	Water
Trip Blanks (Not on COC)	31203002014	09/19/2012 00:00	09/20/2012 08:35	Soil-Solid as dry weight

**Case Narrative****49DPT-01 (4ft)**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

**49DPT-02 (4ft)**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

**49DPT-02 (4ft)(90329MS)**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

**49DPT-03 (4ft)**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

**49DPT-04 (4ft)**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

**49DPT-05 (4ft)**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

**49DPT-06 (4ft)**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

**49DPT-07 (4ft)**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

8260 - The reported Internal Standard recoveries were confirmed by duplicate analysis.

**49DPT-08 (4ft)**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

**49DPT-09 (3ft)**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

**49DPT-10 (4ft)**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

**LCSD-S for HBN 29113 [VXX/4030]**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

**Case Narrative****LCS-S for HBN 29113 [VXX/4030]**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

**MB-S for HBN 29113 [VXX/4030]**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

**Trip Blanks (Not on COC)**

8260 - A Duplicate analysis is not reported with batch VMS2564 as the parent sample has reported Internal Standard recoveries below the QC limit.

8260 - This Trip Blank has a reported 'J' concentration for Methylene Chloride.

### Detectable Results Summary

Client Sample ID: **49DPT-01 (4ft)**

Lab Sample ID: 31203002001-A

**SW-846 8260B**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
Bromodichloromethane	5.89	ug/Kg	
Carbon tetrachloride	2.24	ug/Kg	J
Chloroform	18.6	ug/Kg	
Tetrachloroethylene	1.59	ug/Kg	J

Client Sample ID: **49DPT-02 (4ft)**

Lab Sample ID: 31203002002-A

**SW-846 8260B****SW-846 8270D**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
1,2,4-Trimethylbenzene	18.9	ug/Kg	
1,3,5-Trimethylbenzene	10.2	ug/Kg	
Xylenes (total)	25.2	ug/Kg	
m,p-Xylene	18.2	ug/Kg	
o-Xylene	6.99	ug/Kg	
Benzo(a)pyrene	32.4	ug/Kg	J
Benzo(b)fluoranthene	45.4	ug/Kg	J
Fluoranthene	48.6	ug/Kg	J
Pyrene	48.6	ug/Kg	J

Client Sample ID: **49DPT-03 (4ft)**

Lab Sample ID: 31203002003-A

**SW-846 8260B****SW-846 8270D**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
Toluene	0.567	ug/Kg	J
Bis(2-Ethylhexyl)phthalate	36.3	ug/Kg	J

Client Sample ID: **49DPT-05 (4ft)**

Lab Sample ID: 31203002005-E

**SW-846 8270D**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
Benzo(a)anthracene	47.1	ug/Kg	J
Benzo(a)pyrene	67.3	ug/Kg	J
Benzo(b)fluoranthene	94.2	ug/Kg	J
Benzo(g,h,i)perylene	53.8	ug/Kg	J
Chrysene	70.6	ug/Kg	J
Fluoranthene	104	ug/Kg	J
Indeno(1,2,3-cd)pyrene	50.4	ug/Kg	J
Pyrene	90.8	ug/Kg	J

Client Sample ID: **49DPT-06 (4ft)**

Lab Sample ID: 31203002006-B

**SW-846 8260B**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
Acetone	5.01	ug/Kg	J

Client Sample ID: **49DPT-07 (4ft)**

Lab Sample ID: 31203002007-A

**SW-846 8260B****SW-846 8270D**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
Acetone	4.43	ug/Kg	J
Benzo(a)anthracene	52.5	ug/Kg	J
Benzo(a)pyrene	63.0	ug/Kg	J
Benzo(b)fluoranthene	87.6	ug/Kg	J
Chrysene	73.6	ug/Kg	J
Fluoranthene	116	ug/Kg	J
Indeno(1,2,3-cd)pyrene	45.5	ug/Kg	J
Phenanthrene	31.5	ug/Kg	J
Pyrene	94.6	ug/Kg	J

**Detectable Results Summary****Client Sample ID: 49DPT-08 (4ft)**

Lab Sample ID: 31203002008-A

**SW-846 8260B**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
1,4-Dichlorobenzene	0.830	ug/Kg	J
Benzene	16.2	ug/Kg	
Toluene	2.07	ug/Kg	J

**Client Sample ID: 49DPT-09 (3ft)**

Lab Sample ID: 31203002009-A

**SW-846 8260B****SW-846 8270D**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
Chloroform	1.23	ug/Kg	J
Benzo(a)pyrene	26.0	ug/Kg	J
Bis(2-Ethylhexyl)phthalate	32.5	ug/Kg	J
Fluoranthene	35.8	ug/Kg	J
Pyrene	39.1	ug/Kg	J

**Client Sample ID: 49DPT-10 (4ft)**

Lab Sample ID: 31203002010-B

**SW-846 8260B**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
Acetone	4.01	ug/Kg	J

**Client Sample ID: AMW2**

Lab Sample ID: 31203002011-A

**SM 6200-B**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
Chloroform	0.390	ug/L	J
Methylene chloride	0.380	ug/L	J
Toluene	0.140	ug/L	J

**Client Sample ID: AMW3**

Lab Sample ID: 31203002012-A

**SM 6200-B**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
tert-Butyl methyl ether (MTBE)	0.410	ug/L	J

**Client Sample ID: Trip Blanks (Not on COC)**

Lab Sample ID: 31203002014-A

**SW-846 8260B**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
Methylene chloride	1.82	ug/Kg	J



### Results of 49DPT-01 (4ft)

Client Sample ID: 49DPT-01 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002001-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 11:00

Received Date: 09/20/2012 08:35

Matrix: Soil-Solid as dry weight

Solids (%): 88.70

### Results by SW-846 8260B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.577	4.07	ug/Kg	1	09/21/2012 11:59
1,1,1-Trichloroethane	ND	U	0.613	4.07	ug/Kg	1	09/21/2012 11:59
1,1,2,2-Tetrachloroethane	ND	U	0.952	4.07	ug/Kg	1	09/21/2012 11:59
1,1,2-Trichloroethane	ND	U	0.846	4.07	ug/Kg	1	09/21/2012 11:59
1,1-Dichloroethane	ND	U	0.438	4.07	ug/Kg	1	09/21/2012 11:59
1,1-Dichloroethene	ND	U	0.944	4.07	ug/Kg	1	09/21/2012 11:59
1,1-Dichloropropene	ND	U	0.550	4.07	ug/Kg	1	09/21/2012 11:59
1,2,3-Trichlorobenzene	ND	U	0.677	4.07	ug/Kg	1	09/21/2012 11:59
1,2,3-Trichloropropane	ND	U	0.838	4.07	ug/Kg	1	09/21/2012 11:59
1,2,4-Trichlorobenzene	ND	U	0.593	4.07	ug/Kg	1	09/21/2012 11:59
1,2,4-Trimethylbenzene	ND	U	0.518	4.07	ug/Kg	1	09/21/2012 11:59
1,2-Dibromo-3-chloropropane	ND	U	6.03	24.4	ug/Kg	1	09/21/2012 11:59
1,2-Dibromoethane	ND	U	1.07	4.07	ug/Kg	1	09/21/2012 11:59
1,2-Dichlorobenzene	ND	U	0.578	4.07	ug/Kg	1	09/21/2012 11:59
1,2-Dichloroethane	ND	U	0.743	4.07	ug/Kg	1	09/21/2012 11:59
1,2-Dichloropropane	ND	U	0.935	4.07	ug/Kg	1	09/21/2012 11:59
1,3,5-Trimethylbenzene	ND	U	0.495	4.07	ug/Kg	1	09/21/2012 11:59
1,3-Dichlorobenzene	ND	U	0.585	4.07	ug/Kg	1	09/21/2012 11:59
1,3-Dichloropropane	ND	U	0.715	4.07	ug/Kg	1	09/21/2012 11:59
1,4-Dichlorobenzene	ND	U	0.549	4.07	ug/Kg	1	09/21/2012 11:59
2,2-Dichloropropane	ND	U	0.600	4.07	ug/Kg	1	09/21/2012 11:59
2-Butanone	ND	U	2.75	20.3	ug/Kg	1	09/21/2012 11:59
2-Chlorotoluene	ND	U	0.762	4.07	ug/Kg	1	09/21/2012 11:59
2-Hexanone	ND	U	2.62	10.2	ug/Kg	1	09/21/2012 11:59
4-Chlorotoluene	ND	U	0.615	4.07	ug/Kg	1	09/21/2012 11:59
4-Isopropyltoluene	ND	U	0.525	4.07	ug/Kg	1	09/21/2012 11:59
4-Methyl-2-pentanone	ND	U	3.04	10.2	ug/Kg	1	09/21/2012 11:59
Acetone	ND	U	3.26	40.7	ug/Kg	1	09/21/2012 11:59
Benzene	ND	U	0.578	4.07	ug/Kg	1	09/21/2012 11:59
Bromobenzene	ND	U	0.567	4.07	ug/Kg	1	09/21/2012 11:59
Bromochloromethane	ND	U	0.765	4.07	ug/Kg	1	09/21/2012 11:59
Bromodichloromethane	5.89		0.573	4.07	ug/Kg	1	09/21/2012 11:59
Bromoform	ND	U	0.589	4.07	ug/Kg	1	09/21/2012 11:59
Bromomethane	ND	U	1.18	4.07	ug/Kg	1	09/21/2012 11:59
n-Butylbenzene	ND	U	0.534	4.07	ug/Kg	1	09/21/2012 11:59
Carbon disulfide	ND	U	0.425	4.07	ug/Kg	1	09/21/2012 11:59
Carbon tetrachloride	2.24	J	0.463	4.07	ug/Kg	1	09/21/2012 11:59
Chlorobenzene	ND	U	0.568	4.07	ug/Kg	1	09/21/2012 11:59
Chloroethane	ND	U	0.813	4.07	ug/Kg	1	09/21/2012 11:59
Chloroform	18.6		0.518	4.07	ug/Kg	1	09/21/2012 11:59
Chloromethane	ND	U	1.16	4.07	ug/Kg	1	09/21/2012 11:59
Dibromochloromethane	ND	U	0.903	4.07	ug/Kg	1	09/21/2012 11:59
Dibromomethane	ND	U	0.717	4.07	ug/Kg	1	09/21/2012 11:59

Print Date: 10/02/2012

N.C. Certification # 481



### Results of 49DPT-01 (4ft)

Client Sample ID: 49DPT-01 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002001-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 11:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 88.70

### Results by SW-846 8260B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND	U	0.854	4.07	ug/Kg	1	09/21/2012 11:59
cis-1,3-Dichloropropene	ND	U	0.838	4.07	ug/Kg	1	09/21/2012 11:59
trans-1,3-Dichloropropene	ND	U	0.768	4.07	ug/Kg	1	09/21/2012 11:59
Diisopropyl Ether	ND	U	0.668	4.07	ug/Kg	1	09/21/2012 11:59
Ethyl Benzene	ND	U	0.573	4.07	ug/Kg	1	09/21/2012 11:59
Hexachlorobutadiene	ND	U	0.559	4.07	ug/Kg	1	09/21/2012 11:59
Isopropylbenzene (Cumene)	ND	U	0.506	4.07	ug/Kg	1	09/21/2012 11:59
Methyl Iodide	ND	U	0.623	4.07	ug/Kg	1	09/21/2012 11:59
Methylene chloride	ND	U	0.854	16.3	ug/Kg	1	09/21/2012 11:59
Naphthalene	ND	U	0.739	4.07	ug/Kg	1	09/21/2012 11:59
Styrene	ND	U	0.469	4.07	ug/Kg	1	09/21/2012 11:59
Tetrachloroethene	1.59	J	0.611	4.07	ug/Kg	1	09/21/2012 11:59
Toluene	ND	U	0.560	4.07	ug/Kg	1	09/21/2012 11:59
Trichloroethene	ND	U	0.685	4.07	ug/Kg	1	09/21/2012 11:59
Trichlorofluoromethane	ND	U	0.822	4.07	ug/Kg	1	09/21/2012 11:59
Vinyl chloride	ND	U	0.773	4.07	ug/Kg	1	09/21/2012 11:59
Xylene (total)	ND	U	1.44	8.13	ug/Kg	1	09/21/2012 11:59
cis-1,2-Dichloroethene	ND	U	0.497	4.07	ug/Kg	1	09/21/2012 11:59
m,p-Xylene	ND	U	1.37	8.13	ug/Kg	1	09/21/2012 11:59
n-Propylbenzene	ND	U	0.595	4.07	ug/Kg	1	09/21/2012 11:59
o-Xylene	ND	U	0.623	4.07	ug/Kg	1	09/21/2012 11:59
sec-Butylbenzene	ND	U	0.488	4.07	ug/Kg	1	09/21/2012 11:59
tert-Butyl methyl ether (MTBE)	ND	U	0.647	4.07	ug/Kg	1	09/21/2012 11:59
tert-Butylbenzene	ND	U	0.547	4.07	ug/Kg	1	09/21/2012 11:59
trans-1,2-Dichloroethene	ND	U	0.594	4.07	ug/Kg	1	09/21/2012 11:59
trans-1,4-Dichloro-2-butene	ND	U	3.42	20.3	ug/Kg	1	09/21/2012 11:59
<b>Surrogates</b>							
1,2-Dichloroethane-d4	114			55.0-173	%	1	09/21/2012 11:59
4-Bromofluorobenzene	98.0			23.0-141	%	1	09/21/2012 11:59
Toluene d8	104			57.0-134	%	1	09/21/2012 11:59

### Batch Information

Analytical Batch: VMS2564

Prep Batch: VXX4030

Analytical Method: SW-846 8260B

Prep Method: SW-846 5035 SL

Instrument: MSD9

Prep Date/Time: 09/21/2012 08:50

Analyst: DVO

Prep Initial Wt./Vol.: 6.93 g

Prep Extract Vol: 5 mL



### Results of 49DPT-01 (4ft)

Client Sample ID: 49DPT-01 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002001-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 11:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 88.70

### Results by SW-846 8270D

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	U	29.1	330	ug/Kg	1	09/24/2012 17:13
1,2-Dichlorobenzene	ND	U	16.4	330	ug/Kg	1	09/24/2012 17:13
1,3-Dichlorobenzene	ND	U	22.2	330	ug/Kg	1	09/24/2012 17:13
1,4-Dichlorobenzene	ND	U	23.3	330	ug/Kg	1	09/24/2012 17:13
2,4,5-Trichlorophenol	ND	U	22.0	330	ug/Kg	1	09/24/2012 17:13
2,4,6-Trichlorophenol	ND	U	22.3	330	ug/Kg	1	09/24/2012 17:13
2,4-Dichlorophenol	ND	U	19.1	330	ug/Kg	1	09/24/2012 17:13
2,4-Dinitrophenol	ND	U	30.5	1650	ug/Kg	1	09/24/2012 17:13
2,4-Dinitrotoluene	ND	U	16.6	330	ug/Kg	1	09/24/2012 17:13
2,6-Dinitrotoluene	ND	U	23.6	330	ug/Kg	1	09/24/2012 17:13
2-Chloronaphthalene	ND	U	19.4	330	ug/Kg	1	09/24/2012 17:13
2-Chlorophenol	ND	U	17.5	330	ug/Kg	1	09/24/2012 17:13
2-Methylnaphthalene	ND	U	26.6	330	ug/Kg	1	09/24/2012 17:13
2-Methylphenol	ND	U	18.2	330	ug/Kg	1	09/24/2012 17:13
2-Nitroaniline	ND	U	21.7	330	ug/Kg	1	09/24/2012 17:13
2-Nitrophenol	ND	U	15.8	330	ug/Kg	1	09/24/2012 17:13
3 and/or 4-Methylphenol	ND	U	21.4	330	ug/Kg	1	09/24/2012 17:13
3,3'-Dichlorobenzidine	ND	U	15.8	659	ug/Kg	1	09/24/2012 17:13
3-Nitroaniline	ND	U	14.8	1650	ug/Kg	1	09/24/2012 17:13
4,6-Dinitro-2-methylphenol	ND	U	15.5	1650	ug/Kg	1	09/24/2012 17:13
4-Chloro-3-methylphenol	ND	U	16.4	330	ug/Kg	1	09/24/2012 17:13
4-Chloroaniline	ND	U	26.3	330	ug/Kg	1	09/24/2012 17:13
4-Chlorophenyl phenyl ether	ND	U	35.2	330	ug/Kg	1	09/24/2012 17:13
Acenaphthene	ND	U	15.0	330	ug/Kg	1	09/24/2012 17:13
Acenaphthylene	ND	U	13.9	330	ug/Kg	1	09/24/2012 17:13
Anthracene	ND	U	14.6	330	ug/Kg	1	09/24/2012 17:13
Benzo(a)anthracene	ND	U	18.1	330	ug/Kg	1	09/24/2012 17:13
Benzo(a)pyrene	ND	U	18.6	330	ug/Kg	1	09/24/2012 17:13
Benzo(b)fluoranthene	ND	U	19.0	330	ug/Kg	1	09/24/2012 17:13
Benzo(g,h,i)perylene	ND	U	52.4	330	ug/Kg	1	09/24/2012 17:13
Benzo(k)fluoranthene	ND	U	39.5	330	ug/Kg	1	09/24/2012 17:13
Benzolic acid	ND	U	7.31	1650	ug/Kg	1	09/24/2012 17:13
Bis(2-Chloroethoxy)methane	ND	U	14.8	330	ug/Kg	1	09/24/2012 17:13
Bis(2-Chloroethyl)ether	ND	U	30.7	330	ug/Kg	1	09/24/2012 17:13
Bis(2-Chloroisopropyl)ether	ND	U	28.7	330	ug/Kg	1	09/24/2012 17:13
Bis(2-Ethylhexyl)phthalate	ND	U	15.8	330	ug/Kg	1	09/24/2012 17:13
4-Bromophenyl phenyl ether	ND	U	21.7	330	ug/Kg	1	09/24/2012 17:13
Butyl benzyl phthalate	ND	U	28.6	330	ug/Kg	1	09/24/2012 17:13
Chrysene	ND	U	38.3	330	ug/Kg	1	09/24/2012 17:13
Di-n-butyl phthalate	ND	U	15.6	330	ug/Kg	1	09/24/2012 17:13
Di-n-octyl phthalate	ND	U	18.2	330	ug/Kg	1	09/24/2012 17:13
Dibenz(a,h)anthracene	ND	U	14.8	330	ug/Kg	1	09/24/2012 17:13
Dibenzofuran	ND	U	25.8	330	ug/Kg	1	09/24/2012 17:13

Print Date: 10/02/2012

N.C. Certification # 481

**Results of 49DPT-01 (4ft)**

Client Sample ID: 49DPT-01 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002001-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 11:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 88.70

**Results by SW-846 8270D**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Diethyl phthalate	ND	U	17.8	330	ug/Kg	1	09/24/2012 17:13
Dimethyl phthalate	ND	U	25.3	330	ug/Kg	1	09/24/2012 17:13
2,4-Dimethylphenol	ND	U	24.1	330	ug/Kg	1	09/24/2012 17:13
Diphenylamine	ND	U	14.8	330	ug/Kg	1	09/24/2012 17:13
Fluoranthene	ND	U	31.0	330	ug/Kg	1	09/24/2012 17:13
Fluorene	ND	U	17.5	330	ug/Kg	1	09/24/2012 17:13
Hexachlorobenzene	ND	U	31.2	1650	ug/Kg	1	09/24/2012 17:13
Hexachlorobutadiene	ND	U	19.7	330	ug/Kg	1	09/24/2012 17:13
Hexachlorocyclopentadiene	ND	U	99.7	659	ug/Kg	1	09/24/2012 17:13
Hexachloroethane	ND	U	19.0	330	ug/Kg	1	09/24/2012 17:13
Indeno(1,2,3-cd)pyrene	ND	U	25.7	330	ug/Kg	1	09/24/2012 17:13
Isophorone	ND	U	15.0	330	ug/Kg	1	09/24/2012 17:13
Naphthalene	ND	U	28.4	330	ug/Kg	1	09/24/2012 17:13
4-Nitroaniline	ND	U	19.0	1650	ug/Kg	1	09/24/2012 17:13
Nitrobenzene	ND	U	19.0	330	ug/Kg	1	09/24/2012 17:13
4-Nitrophenol	ND	U	32.4	1650	ug/Kg	1	09/24/2012 17:13
Pentachlorophenol	ND	U	26.3	1650	ug/Kg	1	09/24/2012 17:13
Phenanthrrene	ND	U	21.7	330	ug/Kg	1	09/24/2012 17:13
Phenol	ND	U	30.7	330	ug/Kg	1	09/24/2012 17:13
Pyrene	ND	U	13.9	330	ug/Kg	1	09/24/2012 17:13
n-Nitrosodi-n-propylamine	ND	U	94.3	330	ug/Kg	1	09/24/2012 17:13

**Surrogates**

2,4,6-Tribromophenol	93.0	41.0-129	%	1	09/24/2012 17:13
2-Fluorobiphenyl	97.0	48.0-123	%	1	09/24/2012 17:13
2-Fluorophenol	89.0	42.0-123	%	1	09/24/2012 17:13
Nitrobenzene-d5	90.0	46.0-117	%	1	09/24/2012 17:13
Phenol-d6	95.0	48.0-125	%	1	09/24/2012 17:13
Terphenyl-d14	99.0	44.0-140	%	1	09/24/2012 17:13

**Batch Information**

Analytical Batch: XMS1673  
 Analytical Method: SW-846 8270D  
 Instrument: MSD10  
 Analyst: CMP

Prep Batch: XXX3080  
 Prep Method: SW-846 3541  
 Prep Date/Time: 09/20/2012 17:46  
 Prep Initial Wt./Vol.: 34.26 g  
 Prep Extract Vol: 10 mL

**Results of 49DPT-02 (4ft)**

Client Sample ID: 49DPT-02 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002002-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 11:40  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 93.10

**Results by SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.690	4.86	ug/Kg	1	09/21/2012 12:25
1,1,1-Trichloroethane	ND	U	0.734	4.86	ug/Kg	1	09/21/2012 12:25
1,1,2,2-Tetrachloroethane	ND	U	1.14	4.86	ug/Kg	1	09/21/2012 12:25
1,1,2-Trichloroethane	ND	U	1.01	4.86	ug/Kg	1	09/21/2012 12:25
1,1-Dichloroethane	ND	U	0.523	4.86	ug/Kg	1	09/21/2012 12:25
1,1-Dichloroethene	ND	U	1.13	4.86	ug/Kg	1	09/21/2012 12:25
1,1-Dichloropropene	ND	U	0.658	4.86	ug/Kg	1	09/21/2012 12:25
1,2,3-Trichlorobenzene	ND	U	0.809	4.86	ug/Kg	1	09/21/2012 12:25
1,2,3-Trichloropropane	ND	U	1.00	4.86	ug/Kg	1	09/21/2012 12:25
1,2,4-Trichlorobenzene	ND	U	0.709	4.86	ug/Kg	1	09/21/2012 12:25
1,2,4-Trimethylbenzene	18.9		0.620	4.86	ug/Kg	1	09/21/2012 12:25
1,2-Dibromo-3-chloropropane	ND	U	7.21	29.2	ug/Kg	1	09/21/2012 12:25
1,2-Dibromoethane	ND	U	1.27	4.86	ug/Kg	1	09/21/2012 12:25
1,2-Dichlorobenzene	ND	U	0.692	4.86	ug/Kg	1	09/21/2012 12:25
1,2-Dichloroethane	ND	U	0.888	4.86	ug/Kg	1	09/21/2012 12:25
1,2-Dichloropropane	ND	U	1.12	4.86	ug/Kg	1	09/21/2012 12:25
1,3,5-Trimethylbenzene	10.2		0.591	4.86	ug/Kg	1	09/21/2012 12:25
1,3-Dichlorobenzene	ND	U	0.699	4.86	ug/Kg	1	09/21/2012 12:25
1,3-Dichloropropane	ND	U	0.855	4.86	ug/Kg	1	09/21/2012 12:25
1,4-Dichlorobenzene	ND	U	0.657	4.86	ug/Kg	1	09/21/2012 12:25
2,2-Dichloropropane	ND	U	0.718	4.86	ug/Kg	1	09/21/2012 12:25
2-Butanone	ND	U	3.29	24.3	ug/Kg	1	09/21/2012 12:25
2-Chlorotoluene	ND	U	0.912	4.86	ug/Kg	1	09/21/2012 12:25
2-Hexanone	ND	U	3.13	12.2	ug/Kg	1	09/21/2012 12:25
4-Chlorotoluene	ND	U	0.735	4.86	ug/Kg	1	09/21/2012 12:25
4-Isopropyltoluene	ND	U	0.627	4.86	ug/Kg	1	09/21/2012 12:25
4-Methyl-2-pentanone	ND	U	3.64	12.2	ug/Kg	1	09/21/2012 12:25
Acetone	ND	U	3.90	48.6	ug/Kg	1	09/21/2012 12:25
Benzene	ND	U	0.692	4.86	ug/Kg	1	09/21/2012 12:25
Bromobenzene	ND	U	0.678	4.86	ug/Kg	1	09/21/2012 12:25
Bromochloromethane	ND	U	0.914	4.86	ug/Kg	1	09/21/2012 12:25
Bromodichloromethane	ND	U	0.685	4.86	ug/Kg	1	09/21/2012 12:25
Bromoform	ND	U	0.704	4.86	ug/Kg	1	09/21/2012 12:25
Bromomethane	ND	U	1.41	4.86	ug/Kg	1	09/21/2012 12:25
n-Butylbenzene	ND	U	0.639	4.86	ug/Kg	1	09/21/2012 12:25
Carbon disulfide	ND	U	0.509	4.86	ug/Kg	1	09/21/2012 12:25
Carbon tetrachloride	ND	U	0.554	4.86	ug/Kg	1	09/21/2012 12:25
Chlorobenzene	ND	U	0.679	4.86	ug/Kg	1	09/21/2012 12:25
Chloroethane	ND	U	0.973	4.86	ug/Kg	1	09/21/2012 12:25
Chloroform	ND	U	0.620	4.86	ug/Kg	1	09/21/2012 12:25
Chloromethane	ND	U	1.39	4.86	ug/Kg	1	09/21/2012 12:25
Dibromochloromethane	ND	U	1.08	4.86	ug/Kg	1	09/21/2012 12:25
Dibromomethane	ND	U	0.858	4.86	ug/Kg	1	09/21/2012 12:25

Print Date: 10/02/2012

N.C. Certification # 481

**Results of 49DPT-02 (4ft)**

Client Sample ID: 49DPT-02 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002002-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 11:40  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 93.10

**Results by SW-846 8260B**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Dichlorodifluoromethane	ND	U	1.02	4.86	ug/Kg	1	09/21/2012 12:25
cis-1,3-Dichloropropene	ND	U	1.00	4.86	ug/Kg	1	09/21/2012 12:25
trans-1,3-Dichloropropene	ND	U	0.918	4.86	ug/Kg	1	09/21/2012 12:25
Diisopropyl Ether	ND	U	0.799	4.86	ug/Kg	1	09/21/2012 12:25
Ethyl Benzene	ND	U	0.686	4.86	ug/Kg	1	09/21/2012 12:25
Hexachlorobutadiene	ND	U	0.668	4.86	ug/Kg	1	09/21/2012 12:25
Isopropylbenzene (Cumene)	ND	U	0.605	4.86	ug/Kg	1	09/21/2012 12:25
Methyl iodide	ND	U	0.745	4.86	ug/Kg	1	09/21/2012 12:25
Methylene chloride	ND	U	1.02	19.5	ug/Kg	1	09/21/2012 12:25
Naphthalene	ND	U	0.884	4.86	ug/Kg	1	09/21/2012 12:25
Styrene	ND	U	0.560	4.86	ug/Kg	1	09/21/2012 12:25
Tetrachloroethene	ND	U	0.731	4.86	ug/Kg	1	09/21/2012 12:25
Toluene	ND	U	0.669	4.86	ug/Kg	1	09/21/2012 12:25
Trichloroethene	ND	U	0.819	4.86	ug/Kg	1	09/21/2012 12:25
Trichlorofluoromethane	ND	U	0.983	4.86	ug/Kg	1	09/21/2012 12:25
Vinyl chloride	ND	U	0.924	4.86	ug/Kg	1	09/21/2012 12:25
Xylene (total)	25.2		1.72	9.73	ug/Kg	1	09/21/2012 12:25
cis-1,2-Dichloroethene	ND	U	0.594	4.86	ug/Kg	1	09/21/2012 12:25
m,p-Xylene	18.2		1.64	9.73	ug/Kg	1	09/21/2012 12:25
n-Propylbenzene	ND	U	0.712	4.86	ug/Kg	1	09/21/2012 12:25
o-Xylene	6.99		0.745	4.86	ug/Kg	1	09/21/2012 12:25
sec-Butylbenzene	ND	U	0.584	4.86	ug/Kg	1	09/21/2012 12:25
tert-Butyl methyl ether (MTBE)	ND	U	0.773	4.86	ug/Kg	1	09/21/2012 12:25
tert-Butylbenzene	ND	U	0.655	4.86	ug/Kg	1	09/21/2012 12:25
trans-1,2-Dichloroethene	ND	U	0.710	4.86	ug/Kg	1	09/21/2012 12:25
trans-1,4-Dichloro-2-butene	ND	U	4.09	24.3	ug/Kg	1	09/21/2012 12:25

**Surrogates**

1,2-Dichloroethane-d4	117	55.0-173	%	1	09/21/2012 12:25
4-Bromofluorobenzene	98.0	23.0-141	%	1	09/21/2012 12:25
Toluene d8	102	57.0-134	%	1	09/21/2012 12:25

**Batch Information**

Analytical Batch: VMS2564  
 Analytical Method: SW-846 8260B  
 Instrument: MSD9  
 Analyst: DVO

Prep Batch: VXX4030  
 Prep Method: SW-846 5035 SL  
 Prep Date/Time: 09/21/2012 08:52  
 Prep Initial Wt./Vol.: 5.52 g  
 Prep Extract Vol: 5 mL

## Results of 49DPT-02 (4ft)

Client Sample ID: 49DPT-02 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002002-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 11:40  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 93.10

## Results by SW-846 8270D

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	U	28.7	325	ug/Kg	1	09/24/2012 18:21
1,2-Dichlorobenzene	ND	U	16.2	325	ug/Kg	1	09/24/2012 18:21
1,3-Dichlorobenzene	ND	U	21.9	325	ug/Kg	1	09/24/2012 18:21
1,4-Dichlorobenzene	ND	U	23.0	325	ug/Kg	1	09/24/2012 18:21
2,4,5-Trichlorophenol	ND	U	21.7	325	ug/Kg	1	09/24/2012 18:21
2,4,6-Trichlorophenol	ND	U	22.0	325	ug/Kg	1	09/24/2012 18:21
2,4-Dichlorophenol	ND	U	18.8	325	ug/Kg	1	09/24/2012 18:21
2,4-Dinitrophenol	ND	U	30.1	1630	ug/Kg	1	09/24/2012 18:21
2,4-Dinitrotoluene	ND	U	16.4	325	ug/Kg	1	09/24/2012 18:21
2,6-Dinitrotoluene	ND	U	23.3	325	ug/Kg	1	09/24/2012 18:21
2-Chloronaphthalene	ND	U	19.1	325	ug/Kg	1	09/24/2012 18:21
2-Chlorophenol	ND	U	17.2	325	ug/Kg	1	09/24/2012 18:21
2-Methylnaphthalene	ND	U	26.3	325	ug/Kg	1	09/24/2012 18:21
2-Methylphenol	ND	U	18.0	325	ug/Kg	1	09/24/2012 18:21
2-Nitroaniline	ND	U	21.4	325	ug/Kg	1	09/24/2012 18:21
2-Nitrophenol	ND	U	15.6	325	ug/Kg	1	09/24/2012 18:21
3 and/or 4-Methylphenol	ND	U	21.1	325	ug/Kg	1	09/24/2012 18:21
3,3'-Dichlorobenzidine	ND	U	15.6	650	ug/Kg	1	09/24/2012 18:21
3-Nitroaniline	ND	U	14.6	1630	ug/Kg	1	09/24/2012 18:21
4,6-Dinitro-2-methylphenol	ND	U	15.3	1630	ug/Kg	1	09/24/2012 18:21
4-Chloro-3-methylphenol	ND	U	16.2	325	ug/Kg	1	09/24/2012 18:21
4-Chloroaniline	ND	U	26.0	325	ug/Kg	1	09/24/2012 18:21
4-Chlorophenyl phenyl ether	ND	U	34.7	325	ug/Kg	1	09/24/2012 18:21
Acenaphthene	ND	U	14.7	325	ug/Kg	1	09/24/2012 18:21
Acenaphthylene	ND	U	13.7	325	ug/Kg	1	09/24/2012 18:21
Anthracene	ND	U	14.4	325	ug/Kg	1	09/24/2012 18:21
Benzo(a)anthracene	ND	U	17.9	325	ug/Kg	1	09/24/2012 18:21
Benzo(a)pyrene	32.4	J	18.4	325	ug/Kg	1	09/24/2012 18:21
Benzo(b)fluoranthene	45.4	J	18.7	325	ug/Kg	1	09/24/2012 18:21
Benzo(g,h,i)perylene	ND	U	51.7	325	ug/Kg	1	09/24/2012 18:21
Benzo(k)fluoranthene	ND	U	38.9	325	ug/Kg	1	09/24/2012 18:21
Benzolic acid	ND	U	7.21	1630	ug/Kg	1	09/24/2012 18:21
Bis(2-Chloroethoxy)methane	ND	U	14.6	325	ug/Kg	1	09/24/2012 18:21
Bis(2-Chloroethyl)ether	ND	U	30.3	325	ug/Kg	1	09/24/2012 18:21
Bis(2-Chloroisopropyl)ether	ND	U	28.4	325	ug/Kg	1	09/24/2012 18:21
Bis(2-Ethylhexyl)phthalate	ND	U	15.6	325	ug/Kg	1	09/24/2012 18:21
4-Bromophenyl phenyl ether	ND	U	21.4	325	ug/Kg	1	09/24/2012 18:21
Butyl benzyl phthalate	ND	U	28.3	325	ug/Kg	1	09/24/2012 18:21
Chrysene	ND	U	37.8	325	ug/Kg	1	09/24/2012 18:21
Di-n-butyl phthalate	ND	U	15.4	325	ug/Kg	1	09/24/2012 18:21
Di-n-octyl phthalate	ND	U	18.0	325	ug/Kg	1	09/24/2012 18:21
Dibenz(a,h)anthracene	ND	U	14.6	325	ug/Kg	1	09/24/2012 18:21
Dibenzofuran	ND	U	25.4	325	ug/Kg	1	09/24/2012 18:21

**Results of 49DPT-02 (4ft)**

Client Sample ID: 49DPT-02 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002002-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 11:40  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 93.10

**Results by SW-846 8270D**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diethyl phthalate	ND	U	17.6	325	ug/Kg	1	09/24/2012 18:21
Dimethyl phthalate	ND	U	24.9	325	ug/Kg	1	09/24/2012 18:21
2,4-Dimethylphenol	ND	U	23.8	325	ug/Kg	1	09/24/2012 18:21
Diphenylamine	ND	U	14.6	325	ug/Kg	1	09/24/2012 18:21
Fluoranthene	48.6	J	30.5	325	ug/Kg	1	09/24/2012 18:21
Fluorene	ND	U	17.2	325	ug/Kg	1	09/24/2012 18:21
Hexachlorobenzene	ND	U	30.7	1630	ug/Kg	1	09/24/2012 18:21
Hexachlorobutadiene	ND	U	19.4	325	ug/Kg	1	09/24/2012 18:21
Hexachlorocyclopentadiene	ND	U	98.4	650	ug/Kg	1	09/24/2012 18:21
Hexachloroethane	ND	U	18.7	325	ug/Kg	1	09/24/2012 18:21
Indeno(1,2,3-cd)pyrene	ND	U	25.3	325	ug/Kg	1	09/24/2012 18:21
Isophorone	ND	U	14.7	325	ug/Kg	1	09/24/2012 18:21
Naphthalene	ND	U	28.0	325	ug/Kg	1	09/24/2012 18:21
4-Nitroaniline	ND	U	18.7	1630	ug/Kg	1	09/24/2012 18:21
Nitrobenzene	ND	U	18.7	325	ug/Kg	1	09/24/2012 18:21
4-Nitrophenol	ND	U	32.0	1630	ug/Kg	1	09/24/2012 18:21
Pentachlorophenol	ND	U	26.0	1630	ug/Kg	1	09/24/2012 18:21
Phenanthrene	ND	U	21.4	325	ug/Kg	1	09/24/2012 18:21
Phenol	ND	U	30.3	325	ug/Kg	1	09/24/2012 18:21
Pyrene	48.6	J	13.7	325	ug/Kg	1	09/24/2012 18:21
n-Nitrosodi-n-propylamine	ND	U	93.1	325	ug/Kg	1	09/24/2012 18:21

**Surrogates**

2,4,6-Tribromophenol	91.0	41.0-129	%	1	09/24/2012 18:21
2-Fluorobiphenyl	93.0	48.0-123	%	1	09/24/2012 18:21
2-Fluorophenol	83.0	42.0-123	%	1	09/24/2012 18:21
Nitrobenzene-d5	85.0	46.0-117	%	1	09/24/2012 18:21
Phenol-d6	91.0	48.0-125	%	1	09/24/2012 18:21
Terphenyl-d14	100	44.0-140	%	1	09/24/2012 18:21

**Batch Information**

Analytical Batch: XMS1673  
 Analytical Method: SW-846 8270D  
 Instrument: MSD10  
 Analyst: CMP

Prep Batch: XXX3080  
 Prep Method: SW-846 3541  
 Prep Date/Time: 09/20/2012 17:46  
 Prep Initial Wt./Vol.: 33.09 g  
 Prep Extract Vol: 10 mL

**Results of 49DPT-03 (4ft)**

Client Sample ID: 49DPT-03 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002003-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 12:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 88.70

**Results by SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.583	4.11	ug/Kg	1	09/21/2012 12:52
1,1,1-Trichloroethane	ND	U	0.620	4.11	ug/Kg	1	09/21/2012 12:52
1,1,2,2-Tetrachloroethane	ND	U	0.962	4.11	ug/Kg	1	09/21/2012 12:52
1,1,2-Trichloroethane	ND	U	0.855	4.11	ug/Kg	1	09/21/2012 12:52
1,1-Dichloroethane	ND	U	0.442	4.11	ug/Kg	1	09/21/2012 12:52
1,1-Dichloroethene	ND	U	0.954	4.11	ug/Kg	1	09/21/2012 12:52
1,1-Dichloropropene	ND	U	0.556	4.11	ug/Kg	1	09/21/2012 12:52
1,2,3-Trichlorobenzene	ND	U	0.684	4.11	ug/Kg	1	09/21/2012 12:52
1,2,3-Trichloropropane	ND	U	0.847	4.11	ug/Kg	1	09/21/2012 12:52
1,2,4-Trichlorobenzene	ND	U	0.599	4.11	ug/Kg	1	09/21/2012 12:52
1,2,4-Trimethylbenzene	ND	U	0.524	4.11	ug/Kg	1	09/21/2012 12:52
1,2-Dibromo-3-chloropropane	ND	U	6.09	24.7	ug/Kg	1	09/21/2012 12:52
1,2-Dibromoethane	ND	U	1.08	4.11	ug/Kg	1	09/21/2012 12:52
1,2-Dichlorobenzene	ND	U	0.585	4.11	ug/Kg	1	09/21/2012 12:52
1,2-Dichloroethane	ND	U	0.751	4.11	ug/Kg	1	09/21/2012 12:52
1,2-Dichloropropane	ND	U	0.946	4.11	ug/Kg	1	09/21/2012 12:52
1,3,5-Trimethylbenzene	ND	U	0.500	4.11	ug/Kg	1	09/21/2012 12:52
1,3-Dichlorobenzene	ND	U	0.591	4.11	ug/Kg	1	09/21/2012 12:52
1,3-Dichloropropane	ND	U	0.723	4.11	ug/Kg	1	09/21/2012 12:52
1,4-Dichlorobenzene	ND	U	0.555	4.11	ug/Kg	1	09/21/2012 12:52
2,2-Dichloropropane	ND	U	0.607	4.11	ug/Kg	1	09/21/2012 12:52
2-Butanone	ND	U	2.78	20.6	ug/Kg	1	09/21/2012 12:52
2-Chlorotoluene	ND	U	0.770	4.11	ug/Kg	1	09/21/2012 12:52
2-Hexanone	ND	U	2.65	10.3	ug/Kg	1	09/21/2012 12:52
4-Chlorotoluene	ND	U	0.622	4.11	ug/Kg	1	09/21/2012 12:52
4-Isopropyltoluene	ND	U	0.530	4.11	ug/Kg	1	09/21/2012 12:52
4-Methyl-2-pentanone	ND	U	3.07	10.3	ug/Kg	1	09/21/2012 12:52
Acetone	ND	U	3.30	41.1	ug/Kg	1	09/21/2012 12:52
Benzene	ND	U	0.585	4.11	ug/Kg	1	09/21/2012 12:52
Bromobenzene	ND	U	0.573	4.11	ug/Kg	1	09/21/2012 12:52
Bromochloromethane	ND	U	0.773	4.11	ug/Kg	1	09/21/2012 12:52
Bromodichloromethane	ND	U	0.579	4.11	ug/Kg	1	09/21/2012 12:52
Bromoform	ND	U	0.595	4.11	ug/Kg	1	09/21/2012 12:52
Bromomethane	ND	U	1.19	4.11	ug/Kg	1	09/21/2012 12:52
n-Butylbenzene	ND	U	0.540	4.11	ug/Kg	1	09/21/2012 12:52
Carbon disulfide	ND	U	0.430	4.11	ug/Kg	1	09/21/2012 12:52
Carbon tetrachloride	ND	U	0.468	4.11	ug/Kg	1	09/21/2012 12:52
Chlorobenzene	ND	U	0.574	4.11	ug/Kg	1	09/21/2012 12:52
Chloroethane	ND	U	0.822	4.11	ug/Kg	1	09/21/2012 12:52
Chloroform	ND	U	0.524	4.11	ug/Kg	1	09/21/2012 12:52
Chloromethane	ND	U	1.18	4.11	ug/Kg	1	09/21/2012 12:52
Dibromochloromethane	ND	U	0.913	4.11	ug/Kg	1	09/21/2012 12:52
Dibromomethane	ND	U	0.725	4.11	ug/Kg	1	09/21/2012 12:52

Print Date: 10/02/2012

N.C. Certification # 481

**Results of 49DPT-03 (4ft)**

Client Sample ID: 49DPT-03 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002003-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 12:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 88.70

**Results by SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND	U	0.863	4.11	ug/Kg	1	09/21/2012 12:52
cis-1,3-Dichloropropene	ND	U	0.847	4.11	ug/Kg	1	09/21/2012 12:52
trans-1,3-Dichloropropene	ND	U	0.776	4.11	ug/Kg	1	09/21/2012 12:52
Diisopropyl Ether	ND	U	0.675	4.11	ug/Kg	1	09/21/2012 12:52
Ethyl Benzene	ND	U	0.580	4.11	ug/Kg	1	09/21/2012 12:52
Hexachlorobutadiene	ND	U	0.565	4.11	ug/Kg	1	09/21/2012 12:52
Isopropylbenzene (Cumene)	ND	U	0.511	4.11	ug/Kg	1	09/21/2012 12:52
Methyl iodide	ND	U	0.630	4.11	ug/Kg	1	09/21/2012 12:52
Methylene chloride	ND	U	0.863	16.4	ug/Kg	1	09/21/2012 12:52
Naphthalene	ND	U	0.747	4.11	ug/Kg	1	09/21/2012 12:52
Styrene	ND	U	0.474	4.11	ug/Kg	1	09/21/2012 12:52
Tetrachloroethene	ND	U	0.617	4.11	ug/Kg	1	09/21/2012 12:52
Toluene	0.567	J	0.566	4.11	ug/Kg	1	09/21/2012 12:52
Trichloroethene	ND	U	0.692	4.11	ug/Kg	1	09/21/2012 12:52
Trichlorofluoromethane	ND	U	0.830	4.11	ug/Kg	1	09/21/2012 12:52
Vinyl chloride	ND	U	0.781	4.11	ug/Kg	1	09/21/2012 12:52
Xylene (total)	ND	U	1.46	8.22	ug/Kg	1	09/21/2012 12:52
cis-1,2-Dichloroethene	ND	U	0.502	4.11	ug/Kg	1	09/21/2012 12:52
m,p-Xylene	ND	U	1.39	8.22	ug/Kg	1	09/21/2012 12:52
n-Propylbenzene	ND	U	0.602	4.11	ug/Kg	1	09/21/2012 12:52
o-Xylene	ND	U	0.630	4.11	ug/Kg	1	09/21/2012 12:52
sec-Butylbenzene	ND	U	0.493	4.11	ug/Kg	1	09/21/2012 12:52
tert-Butyl methyl ether (MTBE)	ND	U	0.654	4.11	ug/Kg	1	09/21/2012 12:52
tert-Butylbenzene	ND	U	0.553	4.11	ug/Kg	1	09/21/2012 12:52
trans-1,2-Dichloroethene	ND	U	0.600	4.11	ug/Kg	1	09/21/2012 12:52
trans-1,4-Dichloro-2-butene	ND	U	3.45	20.6	ug/Kg	1	09/21/2012 12:52

**Surrogates**

1,2-Dichloroethane-d4	97.0	55.0-173	%	1	09/21/2012 12:52
4-Bromofluorobenzene	98.0	23.0-141	%	1	09/21/2012 12:52
Toluene d8	102	57.0-134	%	1	09/21/2012 12:52

**Batch Information**

Analytical Batch: VMS2564

Prep Batch: VXX4030

Analytical Method: SW-846 8260B

Prep Method: SW-846 5035 SL

Instrument: MSD9

Prep Date/Time: 09/21/2012 08:53

Analyst: DVO

Prep Initial Wt./Vol.: 6.86 g

Prep Extract Vol: 5 mL

## Results of 49DPT-03 (4ft)

Client Sample ID: 49DPT-03 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002003-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 12:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 88.70

## Results by SW-846 8270D

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	U	29.2	331	ug/Kg	1	09/26/2012 16:04
1,2-Dichlorobenzene	ND	U	16.5	331	ug/Kg	1	09/26/2012 16:04
1,3-Dichlorobenzene	ND	U	22.3	331	ug/Kg	1	09/26/2012 16:04
1,4-Dichlorobenzene	ND	U	23.4	331	ug/Kg	1	09/26/2012 16:04
2,4,5-Trichlorophenol	ND	U	22.1	331	ug/Kg	1	09/26/2012 16:04
2,4,6-Trichlorophenol	ND	U	22.4	331	ug/Kg	1	09/26/2012 16:04
2,4-Dichlorophenol	ND	U	19.2	331	ug/Kg	1	09/26/2012 16:04
2,4-Dinitrophenol	ND	U	30.7	1660	ug/Kg	1	09/26/2012 16:04
2,4-Dinitrotoluene	ND	U	16.7	331	ug/Kg	1	09/26/2012 16:04
2,6-Dinitrotoluene	ND	U	23.7	331	ug/Kg	1	09/26/2012 16:04
2-Chloronaphthalene	ND	U	19.5	331	ug/Kg	1	09/26/2012 16:04
2-Chlorophenol	ND	U	17.6	331	ug/Kg	1	09/26/2012 16:04
2-Methylnaphthalene	ND	U	26.8	331	ug/Kg	1	09/26/2012 16:04
2-Methylphenol	ND	U	18.3	331	ug/Kg	1	09/26/2012 16:04
2-Nitroaniline	ND	U	21.8	331	ug/Kg	1	09/26/2012 16:04
2-Nitrophenol	ND	U	15.9	331	ug/Kg	1	09/26/2012 16:04
3 and/or 4-Methylphenol	ND	U	21.5	331	ug/Kg	1	09/26/2012 16:04
3,3'-Dichlorobenzidine	ND	U	15.9	662	ug/Kg	1	09/26/2012 16:04
3-Nitroaniline	ND	U	14.9	1660	ug/Kg	1	09/26/2012 16:04
4,6-Dinitro-2-methylphenol	ND	U	15.6	1660	ug/Kg	1	09/26/2012 16:04
4-Chloro-3-methylphenol	ND	U	16.5	331	ug/Kg	1	09/26/2012 16:04
4-Chloroaniline	ND	U	26.5	331	ug/Kg	1	09/26/2012 16:04
4-Chlorophenyl phenyl ether	ND	U	35.3	331	ug/Kg	1	09/26/2012 16:04
Acenaphthene	ND	U	15.0	331	ug/Kg	1	09/26/2012 16:04
Acenaphthylene	ND	U	14.0	331	ug/Kg	1	09/26/2012 16:04
Anthracene	ND	U	14.7	331	ug/Kg	1	09/26/2012 16:04
Benz(a)anthracene	ND	U	18.2	331	ug/Kg	1	09/26/2012 16:04
Benz(a)pyrene	ND	U	18.7	331	ug/Kg	1	09/26/2012 16:04
Benz(b)fluoranthene	ND	U	19.0	331	ug/Kg	1	09/26/2012 16:04
Benz(g,h,i)perylene	ND	U	52.7	331	ug/Kg	1	09/26/2012 16:04
Benz(k)fluoranthene	ND	U	39.7	331	ug/Kg	1	09/26/2012 16:04
Benzoic acid	ND	U	7.34	1660	ug/Kg	1	09/26/2012 16:04
Bis(2-Chloroethoxy)methane	ND	U	14.9	331	ug/Kg	1	09/26/2012 16:04
Bis(2-Chloroethyl)ether	ND	U	30.9	331	ug/Kg	1	09/26/2012 16:04
Bis(2-Chloroisopropyl)ether	ND	U	28.9	331	ug/Kg	1	09/26/2012 16:04
Bis(2-Ethylhexyl)phthalate	36.3	J	15.9	331	ug/Kg	1	09/26/2012 16:04
4-Bromophenyl phenyl ether	ND	U	21.8	331	ug/Kg	1	09/26/2012 16:04
Butyl benzyl phthalate	ND	U	28.8	331	ug/Kg	1	09/26/2012 16:04
Chrysene	ND	U	38.5	331	ug/Kg	1	09/26/2012 16:04
Di-n-butyl phthalate	ND	U	15.7	331	ug/Kg	1	09/26/2012 16:04
Di-n-octyl phthalate	ND	U	18.3	331	ug/Kg	1	09/26/2012 16:04
Dibenz(a,h)anthracene	ND	U	14.9	331	ug/Kg	1	09/26/2012 16:04
Dibenzofuran	ND	U	25.9	331	ug/Kg	1	09/26/2012 16:04

**Results of 49DPT-03 (4ft)**

Client Sample ID: 49DPT-03 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002003-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 12:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 88.70

**Results by SW-846 8270D**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LQO/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Diethyl phthalate	ND	U	17.9	331	ug/Kg	1	09/26/2012 16:04
Dimethyl phthalate	ND	U	25.4	331	ug/Kg	1	09/26/2012 16:04
2,4-Dimethylphenol	ND	U	24.2	331	ug/Kg	1	09/26/2012 16:04
Diphenylamine	ND	U	14.9	331	ug/Kg	1	09/26/2012 16:04
Fluoranthene	ND	U	31.1	331	ug/Kg	1	09/26/2012 16:04
Fluorene	ND	U	17.6	331	ug/Kg	1	09/26/2012 16:04
Hexachlorobenzene	ND	U	31.3	1660	ug/Kg	1	09/26/2012 16:04
Hexachlorobutadiene	ND	U	19.8	331	ug/Kg	1	09/26/2012 16:04
Hexachlorocyclopentadiene	ND	U	100	662	ug/Kg	1	09/26/2012 16:04
Hexachloroethane	ND	U	19.0	331	ug/Kg	1	09/26/2012 16:04
Indeno(1,2,3-cd)pyrene	ND	U	25.8	331	ug/Kg	1	09/26/2012 16:04
Isophorone	ND	U	15.0	331	ug/Kg	1	09/26/2012 16:04
Naphthalene	ND	U	28.6	331	ug/Kg	1	09/26/2012 16:04
4-Nitroaniline	ND	U	19.0	1660	ug/Kg	1	09/26/2012 16:04
Nitrobenzene	ND	U	19.0	331	ug/Kg	1	09/26/2012 16:04
4-Nitrophenol	ND	U	32.6	1660	ug/Kg	1	09/26/2012 16:04
Pentachlorophenol	ND	U	26.5	1660	ug/Kg	1	09/26/2012 16:04
Phenanthrene	ND	U	21.8	331	ug/Kg	1	09/26/2012 16:04
Phenol	ND	U	30.9	331	ug/Kg	1	09/26/2012 16:04
Pyrene	ND	U	14.0	331	ug/Kg	1	09/26/2012 16:04
n-Nitrosodi-n-propylamine	ND	U	94.8	331	ug/Kg	1	09/26/2012 16:04

**Surrogates**

2,4,6-Tribromophenol	75.0	41.0-129	%	1	09/26/2012 16:04
2-Fluorobiphenyl	77.0	48.0-123	%	1	09/26/2012 16:04
2-Fluorophenol	78.0	42.0-123	%	1	09/26/2012 16:04
Nitrobenzene-d5	79.0	46.0-117	%	1	09/26/2012 16:04
Phenol-d6	82.0	48.0-125	%	1	09/26/2012 16:04
Terphenyl-d14	80.0	44.0-140	%	1	09/26/2012 16:04

**Batch Information**

Analytical Batch: XMS1677  
 Analytical Method: SW-846 8270D  
 Instrument: MSD10  
 Analyst: CMP

Prep Batch: XXX3080  
 Prep Method: SW-846 3541  
 Prep Date/Time: 09/20/2012 17:46  
 Prep Initial Wt./Vol.: 34.11 g  
 Prep Extract Vol: 10 mL



### Results of 49DPT-04 (4ft)

Client Sample ID: 49DPT-04 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002004-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 12:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 95.20

### Results by SW-846 8260B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.659	4.65	ug/Kg	1	09/21/2012 13:18
1,1,1-Trichloroethane	ND	U	0.701	4.65	ug/Kg	1	09/21/2012 13:18
1,1,2,2-Tetrachloroethane	ND	U	1.09	4.65	ug/Kg	1	09/21/2012 13:18
1,1,2-Trichloroethane	ND	U	0.966	4.65	ug/Kg	1	09/21/2012 13:18
1,1-Dichloroethane	ND	U	0.500	4.65	ug/Kg	1	09/21/2012 13:18
1,1-Dichloroethene	ND	U	1.08	4.65	ug/Kg	1	09/21/2012 13:18
1,1-Dichloropropene	ND	U	0.628	4.65	ug/Kg	1	09/21/2012 13:18
1,2,3-Trichlorobenzene	ND	U	0.773	4.65	ug/Kg	1	09/21/2012 13:18
1,2,3-Trichloropropane	ND	U	0.957	4.65	ug/Kg	1	09/21/2012 13:18
1,2,4-Trichlorobenzene	ND	U	0.677	4.65	ug/Kg	1	09/21/2012 13:18
1,2,4-Trimethylbenzene	ND	U	0.592	4.65	ug/Kg	1	09/21/2012 13:18
1,2-Dibromo-3-chloropropane	ND	U	6.89	27.9	ug/Kg	1	09/21/2012 13:18
1,2-Dibromoethane	ND	U	1.22	4.65	ug/Kg	1	09/21/2012 13:18
1,2-Dichlorobenzene	ND	U	0.661	4.65	ug/Kg	1	09/21/2012 13:18
1,2-Dichloroethane	ND	U	0.848	4.65	ug/Kg	1	09/21/2012 13:18
1,2-Dichloropropane	ND	U	1.07	4.65	ug/Kg	1	09/21/2012 13:18
1,3,5-Trimethylbenzene	ND	U	0.565	4.65	ug/Kg	1	09/21/2012 13:18
1,3-Dichlorobenzene	ND	U	0.668	4.65	ug/Kg	1	09/21/2012 13:18
1,3-Dichloropropane	ND	U	0.817	4.65	ug/Kg	1	09/21/2012 13:18
1,4-Dichlorobenzene	ND	U	0.627	4.65	ug/Kg	1	09/21/2012 13:18
2,2-Dichloropropane	ND	U	0.686	4.65	ug/Kg	1	09/21/2012 13:18
2-Butanone	ND	U	3.14	23.2	ug/Kg	1	09/21/2012 13:18
2-Chlorotoluene	ND	U	0.871	4.65	ug/Kg	1	09/21/2012 13:18
2-Hexanone	ND	U	2.99	11.6	ug/Kg	1	09/21/2012 13:18
4-Chlorotoluene	ND	U	0.703	4.65	ug/Kg	1	09/21/2012 13:18
4-Isopropyltoluene	ND	U	0.599	4.65	ug/Kg	1	09/21/2012 13:18
4-Methyl-2-pentanone	ND	U	3.48	11.6	ug/Kg	1	09/21/2012 13:18
Acetone	ND	U	3.73	46.5	ug/Kg	1	09/21/2012 13:18
Benzene	ND	U	0.661	4.65	ug/Kg	1	09/21/2012 13:18
Bromobenzene	ND	U	0.648	4.65	ug/Kg	1	09/21/2012 13:18
Bromochloromethane	ND	U	0.874	4.65	ug/Kg	1	09/21/2012 13:18
Bromodichloromethane	ND	U	0.654	4.65	ug/Kg	1	09/21/2012 13:18
Bromoform	ND	U	0.673	4.65	ug/Kg	1	09/21/2012 13:18
Bromomethane	ND	U	1.35	4.65	ug/Kg	1	09/21/2012 13:18
n-Butylbenzene	ND	U	0.611	4.65	ug/Kg	1	09/21/2012 13:18
Carbon disulfide	ND	U	0.486	4.65	ug/Kg	1	09/21/2012 13:18
Carbon tetrachloride	ND	U	0.529	4.65	ug/Kg	1	09/21/2012 13:18
Chlorobenzene	ND	U	0.649	4.65	ug/Kg	1	09/21/2012 13:18
Chloroethane	ND	U	0.929	4.65	ug/Kg	1	09/21/2012 13:18
Chloroform	ND	U	0.592	4.65	ug/Kg	1	09/21/2012 13:18
Chloromethane	ND	U	1.33	4.65	ug/Kg	1	09/21/2012 13:18
Dibromochloromethane	ND	U	1.03	4.65	ug/Kg	1	09/21/2012 13:18
Dibromomethane	ND	U	0.820	4.65	ug/Kg	1	09/21/2012 13:18

Print Date: 10/02/2012

N.C. Certification # 481

**Results of 49DPT-04 (4ft)**

Client Sample ID: 49DPT-04 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002004-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 12:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 95.20

**Results by SW-846 8260B**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Dichlorodifluoromethane	ND	U	0.976	4.65	ug/Kg	1	09/21/2012 13:18
cis-1,3-Dichloropropene	ND	U	0.957	4.65	ug/Kg	1	09/21/2012 13:18
trans-1,3-Dichloropropene	ND	U	0.877	4.65	ug/Kg	1	09/21/2012 13:18
Diisopropyl Ether	ND	U	0.763	4.65	ug/Kg	1	09/21/2012 13:18
Ethyl Benzene	ND	U	0.655	4.65	ug/Kg	1	09/21/2012 13:18
Hexachlorobutadiene	ND	U	0.638	4.65	ug/Kg	1	09/21/2012 13:18
Isopropylbenzene (Cumene)	ND	U	0.578	4.65	ug/Kg	1	09/21/2012 13:18
Methyl Iodide	ND	U	0.712	4.65	ug/Kg	1	09/21/2012 13:18
Methylene chloride	ND	U	0.976	18.6	ug/Kg	1	09/21/2012 13:18
Naphthalene	ND	U	0.845	4.65	ug/Kg	1	09/21/2012 13:18
Styrene	ND	U	0.535	4.65	ug/Kg	1	09/21/2012 13:18
Tetrachloroethene	ND	U	0.698	4.65	ug/Kg	1	09/21/2012 13:18
Toluene	ND	U	0.639	4.65	ug/Kg	1	09/21/2012 13:18
Trichloroethene	ND	U	0.782	4.65	ug/Kg	1	09/21/2012 13:18
Trichlorofluoromethane	ND	U	0.939	4.65	ug/Kg	1	09/21/2012 13:18
Vinyl chloride	ND	U	0.883	4.65	ug/Kg	1	09/21/2012 13:18
Xylene (total)	ND	U	1.64	9.29	ug/Kg	1	09/21/2012 13:18
cis-1,2-Dichloroethene	ND	U	0.568	4.65	ug/Kg	1	09/21/2012 13:18
m,p-Xylene	ND	U	1.57	9.29	ug/Kg	1	09/21/2012 13:18
n-Propylbenzene	ND	U	0.680	4.65	ug/Kg	1	09/21/2012 13:18
o-Xylene	ND	U	0.712	4.65	ug/Kg	1	09/21/2012 13:18
sec-Butylbenzene	ND	U	0.558	4.65	ug/Kg	1	09/21/2012 13:18
tert-Butyl methyl ether (MTBE)	ND	U	0.739	4.65	ug/Kg	1	09/21/2012 13:18
tert-Butylbenzene	ND	U	0.625	4.65	ug/Kg	1	09/21/2012 13:18
trans-1,2-Dichloroethene	ND	U	0.678	4.65	ug/Kg	1	09/21/2012 13:18
trans-1,4-Dichloro-2-butene	ND	U	3.90	23.2	ug/Kg	1	09/21/2012 13:18

**Surrogates**

1,2-Dichloroethane-d4	113	55.0-173	%	1	09/21/2012 13:18
4-Bromofluorobenzene	103	23.0-141	%	1	09/21/2012 13:18
Toluene d8	103	57.0-134	%	1	09/21/2012 13:18

**Batch Information**

Analytical Batch: VMS2564  
 Analytical Method: SW-846 8260B  
 Instrument: MSD9  
 Analyst: DVO

Prep Batch: VXX4030  
 Prep Method: SW-846 5035 SL  
 Prep Date/Time: 09/21/2012 08:55  
 Prep Initial Wt./Vol.: 5.65 g  
 Prep Extract Vol: 5 mL

**Results of 49DPT-04 (4ft)**

Client Sample ID: 49DPT-04 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002004-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 12:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 95.20

**Results by SW-846 8270D**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	U	30.4	344	ug/Kg	1	09/24/2012 18:43
1,2-Dichlorobenzene	ND	U	17.2	344	ug/Kg	1	09/24/2012 18:43
1,3-Dichlorobenzene	ND	U	23.2	344	ug/Kg	1	09/24/2012 18:43
1,4-Dichlorobenzene	ND	U	24.3	344	ug/Kg	1	09/24/2012 18:43
2,4,5-Trichlorophenol	ND	U	23.0	344	ug/Kg	1	09/24/2012 18:43
2,4,6-Trichlorophenol	ND	U	23.3	344	ug/Kg	1	09/24/2012 18:43
2,4-Dichlorophenol	ND	U	19.9	344	ug/Kg	1	09/24/2012 18:43
2,4-Dinitrophenol	ND	U	31.9	1720	ug/Kg	1	09/24/2012 18:43
2,4-Dinitrotoluene	ND	U	17.4	344	ug/Kg	1	09/24/2012 18:43
2,6-Dinitrotoluene	ND	U	24.6	344	ug/Kg	1	09/24/2012 18:43
2-Chloronaphthalene	ND	U	20.2	344	ug/Kg	1	09/24/2012 18:43
2-Chlorophenol	ND	U	18.3	344	ug/Kg	1	09/24/2012 18:43
2-Methylnaphthalene	ND	U	27.8	344	ug/Kg	1	09/24/2012 18:43
2-Methylphenol	ND	U	19.0	344	ug/Kg	1	09/24/2012 18:43
2-Nitroaniline	ND	U	22.7	344	ug/Kg	1	09/24/2012 18:43
2-Nitrophenol	ND	U	16.5	344	ug/Kg	1	09/24/2012 18:43
3 and/or 4-Methylphenol	ND	U	22.3	344	ug/Kg	1	09/24/2012 18:43
3,3'-Dichlorobenzidine	ND	U	16.5	689	ug/Kg	1	09/24/2012 18:43
3-Nitroaniline	ND	U	15.5	1720	ug/Kg	1	09/24/2012 18:43
4,6-Dinitro-2-methylphenol	ND	U	16.2	1720	ug/Kg	1	09/24/2012 18:43
4-Chloro-3-methylphenol	ND	U	17.2	344	ug/Kg	1	09/24/2012 18:43
4-Chloroaniline	ND	U	27.5	344	ug/Kg	1	09/24/2012 18:43
4-Chlorophenyl phenyl ether	ND	U	36.7	344	ug/Kg	1	09/24/2012 18:43
Acenaphthene	ND	U	15.6	344	ug/Kg	1	09/24/2012 18:43
Acenaphthylene	ND	U	14.5	344	ug/Kg	1	09/24/2012 18:43
Anthracene	ND	U	15.3	344	ug/Kg	1	09/24/2012 18:43
Benz(a)anthracene	ND	U	18.9	344	ug/Kg	1	09/24/2012 18:43
Benz(a)pyrene	ND	U	19.5	344	ug/Kg	1	09/24/2012 18:43
Benz(b)fluoranthene	ND	U	19.8	344	ug/Kg	1	09/24/2012 18:43
Benz(g,h,i)perylene	ND	U	54.8	344	ug/Kg	1	09/24/2012 18:43
Benz(k)fluoranthene	ND	U	41.2	344	ug/Kg	1	09/24/2012 18:43
Benzoic acid	ND	U	7.63	1720	ug/Kg	1	09/24/2012 18:43
Bis(2-Chloroethoxy)methane	ND	U	15.5	344	ug/Kg	1	09/24/2012 18:43
Bis(2-Chloroethyl)ether	ND	U	32.1	344	ug/Kg	1	09/24/2012 18:43
Bis(2-Chloroisopropyl)ether	ND	U	30.0	344	ug/Kg	1	09/24/2012 18:43
Bis(2-Ethylhexyl)phthalate	ND	U	16.5	344	ug/Kg	1	09/24/2012 18:43
4-Bromophenyl phenyl ether	ND	U	22.7	344	ug/Kg	1	09/24/2012 18:43
Butyl benzyl phthalate	ND	U	29.9	344	ug/Kg	1	09/24/2012 18:43
Chrysene	ND	U	40.0	344	ug/Kg	1	09/24/2012 18:43
Di-n-butyl phthalate	ND	U	16.3	344	ug/Kg	1	09/24/2012 18:43
Di-n-octyl phthalate	ND	U	19.0	344	ug/Kg	1	09/24/2012 18:43
Dibenz(a,h)anthracene	ND	U	15.5	344	ug/Kg	1	09/24/2012 18:43
Dibenzofuran	ND	U	26.9	344	ug/Kg	1	09/24/2012 18:43

Print Date: 10/02/2012

N.C. Certification # 481

**Results of 49DPT-04 (4ft)**

Client Sample ID: 49DPT-04 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002004-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 12:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 95.20

**Results by SW-846 8270D**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diethyl phthalate	ND	U	18.6	344	ug/Kg	1	09/24/2012 18:43
Dimethyl phthalate	ND	U	26.4	344	ug/Kg	1	09/24/2012 18:43
2,4-Dimethylphenol	ND	U	25.2	344	ug/Kg	1	09/24/2012 18:43
Diphenylamine	ND	U	15.5	344	ug/Kg	1	09/24/2012 18:43
Fluoranthene	ND	U	32.3	344	ug/Kg	1	09/24/2012 18:43
Fluorene	ND	U	18.3	344	ug/Kg	1	09/24/2012 18:43
Hexachlorobenzene	ND	U	32.6	1720	ug/Kg	1	09/24/2012 18:43
Hexachlorobutadiene	ND	U	20.6	344	ug/Kg	1	09/24/2012 18:43
Hexachlorocyclopentadiene	ND	U	104	689	ug/Kg	1	09/24/2012 18:43
Hexachloroethane	ND	U	19.8	344	ug/Kg	1	09/24/2012 18:43
Indeno(1,2,3-cd)pyrene	ND	U	26.8	344	ug/Kg	1	09/24/2012 18:43
Isophorone	ND	U	15.6	344	ug/Kg	1	09/24/2012 18:43
Naphthalene	ND	U	29.7	344	ug/Kg	1	09/24/2012 18:43
4-Nitroaniline	ND	U	19.8	1720	ug/Kg	1	09/24/2012 18:43
Nitrobenzene	ND	U	19.8	344	ug/Kg	1	09/24/2012 18:43
4-Nitrophenol	ND	U	33.9	1720	ug/Kg	1	09/24/2012 18:43
Pentachlorophenol	ND	U	27.5	1720	ug/Kg	1	09/24/2012 18:43
Phenanthrene	ND	U	22.7	344	ug/Kg	1	09/24/2012 18:43
Phenol	ND	U	32.1	344	ug/Kg	1	09/24/2012 18:43
Pyrene	ND	U	14.5	344	ug/Kg	1	09/24/2012 18:43
n-Nitrosodi-n-propylamine	ND	U	98.6	344	ug/Kg	1	09/24/2012 18:43

**Surrogates**

2,4,6-Tribromophenol	99.0	41.0-129	%	1	09/24/2012 18:43
2-Fluorobiphenyl	102	48.0-123	%	1	09/24/2012 18:43
2-Fluorophenol	85.0	42.0-123	%	1	09/24/2012 18:43
Nitrobenzene-d5	90.0	46.0-117	%	1	09/24/2012 18:43
Phenol-d6	93.0	48.0-125	%	1	09/24/2012 18:43
Terphenyl-d14	105	44.0-140	%	1	09/24/2012 18:43

**Batch Information**

Analytical Batch: XMS1673  
 Analytical Method: SW-846 8270D  
 Instrument: MSD10  
 Analyst: CMP

Prep Batch: XXX3080  
 Prep Method: SW-846 3541  
 Prep Date/Time: 09/20/2012 17:46  
 Prep Initial Wt./Vol.: 30.55 g  
 Prep Extract Vol: 10 mL

## Results of 49DPT-05 (4ft)

Client Sample ID: 49DPT-05 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002005-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 13:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 94.30

## Results by SW-846 8260B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.735	5.18	ug/Kg	1	09/21/2012 13:45
1,1,1-Trichloroethane	ND	U	0.781	5.18	ug/Kg	1	09/21/2012 13:45
1,1,2,2-Tetrachloroethane	ND	U	1.21	5.18	ug/Kg	1	09/21/2012 13:45
1,1,2-Trichloroethane	ND	U	1.08	5.18	ug/Kg	1	09/21/2012 13:45
1,1-Dichloroethane	ND	U	0.557	5.18	ug/Kg	1	09/21/2012 13:45
1,1-Dichloroethene	ND	U	1.20	5.18	ug/Kg	1	09/21/2012 13:45
1,1-Dichloropropene	ND	U	0.700	5.18	ug/Kg	1	09/21/2012 13:45
1,2,3-Trichlorobenzene	ND	U	0.862	5.18	ug/Kg	1	09/21/2012 13:45
1,2,3-Trichloropropane	ND	U	1.07	5.18	ug/Kg	1	09/21/2012 13:45
1,2,4-Trichlorobenzene	ND	U	0.755	5.18	ug/Kg	1	09/21/2012 13:45
1,2,4-Trimethylbenzene	ND	U	0.660	5.18	ug/Kg	1	09/21/2012 13:45
1,2-Dibromo-3-chloropropane	ND	U	7.68	31.1	ug/Kg	1	09/21/2012 13:45
1,2-Dibromoethane	ND	U	1.36	5.18	ug/Kg	1	09/21/2012 13:45
1,2-Dichlorobenzene	ND	U	0.737	5.18	ug/Kg	1	09/21/2012 13:45
1,2-Dichloroethane	ND	U	0.946	5.18	ug/Kg	1	09/21/2012 13:45
1,2-Dichloropropane	ND	U	1.19	5.18	ug/Kg	1	09/21/2012 13:45
1,3,5-Trimethylbenzene	ND	U	0.630	5.18	ug/Kg	1	09/21/2012 13:45
1,3-Dichlorobenzene	ND	U	0.745	5.18	ug/Kg	1	09/21/2012 13:45
1,3-Dichloropropane	ND	U	0.911	5.18	ug/Kg	1	09/21/2012 13:45
1,4-Dichlorobenzene	ND	U	0.699	5.18	ug/Kg	1	09/21/2012 13:45
2,2-Dichloropropane	ND	U	0.765	5.18	ug/Kg	1	09/21/2012 13:45
2-Butanone	ND	U	3.50	25.9	ug/Kg	1	09/21/2012 13:45
2-Chlorotoluene	ND	U	0.971	5.18	ug/Kg	1	09/21/2012 13:45
2-Hexanone	ND	U	3.34	13.0	ug/Kg	1	09/21/2012 13:45
4-Chlorotoluene	ND	U	0.783	5.18	ug/Kg	1	09/21/2012 13:45
4-Isopropyltoluene	ND	U	0.668	5.18	ug/Kg	1	09/21/2012 13:45
4-Methyl-2-pentanone	ND	U	3.87	13.0	ug/Kg	1	09/21/2012 13:45
Acetone	ND	U	4.15	51.8	ug/Kg	1	09/21/2012 13:45
Benzene	ND	U	0.737	5.18	ug/Kg	1	09/21/2012 13:45
Bromobenzene	ND	U	0.722	5.18	ug/Kg	1	09/21/2012 13:45
Bromochloromethane	ND	U	0.974	5.18	ug/Kg	1	09/21/2012 13:45
Bromodichloromethane	ND	U	0.729	5.18	ug/Kg	1	09/21/2012 13:45
Bromoform	ND	U	0.750	5.18	ug/Kg	1	09/21/2012 13:45
Bromomethane	ND	U	1.50	5.18	ug/Kg	1	09/21/2012 13:45
n-Butylbenzene	ND	U	0.681	5.18	ug/Kg	1	09/21/2012 13:45
Carbon disulfide	ND	U	0.542	5.18	ug/Kg	1	09/21/2012 13:45
Carbon tetrachloride	ND	U	0.590	5.18	ug/Kg	1	09/21/2012 13:45
Chlorobenzene	ND	U	0.723	5.18	ug/Kg	1	09/21/2012 13:45
Chloroethane	ND	U	1.04	5.18	ug/Kg	1	09/21/2012 13:45
Chloroform	ND	U	0.660	5.18	ug/Kg	1	09/21/2012 13:45
Chloromethane	ND	U	1.48	5.18	ug/Kg	1	09/21/2012 13:45
Dibromochloromethane	ND	U	1.15	5.18	ug/Kg	1	09/21/2012 13:45
Dibromomethane	ND	U	0.914	5.18	ug/Kg	1	09/21/2012 13:45

Print Date: 10/02/2012

N.C. Certification # 481



### Results of 49DPT-05 (4ft)

Client Sample ID: 49DPT-05 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002005-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 13:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 94.30

### Results by SW-846 8260B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND	U	1.09	5.18	ug/Kg	1	09/21/2012 13:45
cis-1,3-Dichloropropene	ND	U	1.07	5.18	ug/Kg	1	09/21/2012 13:45
trans-1,3-Dichloropropene	ND	U	0.978	5.18	ug/Kg	1	09/21/2012 13:45
Diisopropyl Ether	ND	U	0.851	5.18	ug/Kg	1	09/21/2012 13:45
Ethyl Benzene	ND	U	0.730	5.18	ug/Kg	1	09/21/2012 13:45
Hexachlorobutadiene	ND	U	0.712	5.18	ug/Kg	1	09/21/2012 13:45
isopropylbenzene (Cumene)	ND	U	0.644	5.18	ug/Kg	1	09/21/2012 13:45
Methyl iodide	ND	U	0.794	5.18	ug/Kg	1	09/21/2012 13:45
Methylene chloride	ND	U	1.09	20.7	ug/Kg	1	09/21/2012 13:45
Naphthalene	ND	U	0.942	5.18	ug/Kg	1	09/21/2012 13:45
Styrene	ND	U	0.597	5.18	ug/Kg	1	09/21/2012 13:45
Tetrachloroethene	ND	U	0.778	5.18	ug/Kg	1	09/21/2012 13:45
Toluene	ND	U	0.713	5.18	ug/Kg	1	09/21/2012 13:45
Trichloroethene	ND	U	0.872	5.18	ug/Kg	1	09/21/2012 13:45
Trichlorofluoromethane	ND	U	1.05	5.18	ug/Kg	1	09/21/2012 13:45
Vinyl chloride	ND	U	0.984	5.18	ug/Kg	1	09/21/2012 13:45
Xylene (total)	ND	U	1.83	10.4	ug/Kg	1	09/21/2012 13:45
cis-1,2-Dichloroethene	ND	U	0.633	5.18	ug/Kg	1	09/21/2012 13:45
m,p-Xylene	ND	U	1.75	10.4	ug/Kg	1	09/21/2012 13:45
n-Propylbenzene	ND	U	0.758	5.18	ug/Kg	1	09/21/2012 13:45
o-Xylene	ND	U	0.794	5.18	ug/Kg	1	09/21/2012 13:45
sec-Butylbenzene	ND	U	0.622	5.18	ug/Kg	1	09/21/2012 13:45
tert-Butyl methyl ether (MTBE)	ND	U	0.824	5.18	ug/Kg	1	09/21/2012 13:45
tert-Butylbenzene	ND	U	0.697	5.18	ug/Kg	1	09/21/2012 13:45
trans-1,2-Dichloroethene	ND	U	0.756	5.18	ug/Kg	1	09/21/2012 13:45
trans-1,4-Dichloro-2-butene	ND	U	4.35	25.9	ug/Kg	1	09/21/2012 13:45

### Surrogates

1,2-Dichloroethane-d4	115	55.0-173	%	1	09/21/2012 13:45
4-Bromofluorobenzene	92.0	23.0-141	%	1	09/21/2012 13:45
Toluene d8	102	57.0-134	%	1	09/21/2012 13:45

### Batch Information

Analytical Batch: VMS2564

Prep Batch: VXX4030

Analytical Method: SW-846 8260B

Prep Method: SW-846 5035 SL

Instrument: MSD9

Prep Date/Time: 09/21/2012 08:57

Analyst: DVO

Prep Initial Wt./Vol.: 5.12 g

Prep Extract Vol: 5 mL

## Results of 49DPT-05 (4ft)

Client Sample ID: 49DPT-05 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002005-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 13:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 94.30

## Results by SW-846 8270D

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	U	29.7	337	ug/Kg	1	09/24/2012 19:06
1,2-Dichlorobenzene	ND	U	16.8	337	ug/Kg	1	09/24/2012 19:06
1,3-Dichlorobenzene	ND	U	22.7	337	ug/Kg	1	09/24/2012 19:06
1,4-Dichlorobenzene	ND	U	23.8	337	ug/Kg	1	09/24/2012 19:06
2,4,5-Trichlorophenol	ND	U	22.5	337	ug/Kg	1	09/24/2012 19:06
2,4,6-Trichlorophenol	ND	U	22.8	337	ug/Kg	1	09/24/2012 19:06
2,4-Dichlorophenol	ND	U	19.5	337	ug/Kg	1	09/24/2012 19:06
2,4-Dinitrophenol	ND	U	31.2	1690	ug/Kg	1	09/24/2012 19:06
2,4-Dinitrotoluene	ND	U	17.0	337	ug/Kg	1	09/24/2012 19:06
2,6-Dinitrotoluene	ND	U	24.1	337	ug/Kg	1	09/24/2012 19:06
2-Chloronaphthalene	ND	U	19.8	337	ug/Kg	1	09/24/2012 19:06
2-Chlorophenol	ND	U	17.9	337	ug/Kg	1	09/24/2012 19:06
2-Methylnaphthalene	ND	U	27.3	337	ug/Kg	1	09/24/2012 19:06
2-Methylphenol	ND	U	18.6	337	ug/Kg	1	09/24/2012 19:06
2-Nitroaniline	ND	U	22.2	337	ug/Kg	1	09/24/2012 19:06
2-Nitrophenol	ND	U	16.2	337	ug/Kg	1	09/24/2012 19:06
3 and/or 4-Methylphenol	ND	U	21.9	337	ug/Kg	1	09/24/2012 19:06
3,3'-Dichlorobenzidine	ND	U	16.2	674	ug/Kg	1	09/24/2012 19:06
3-Nitroaniline	ND	U	15.2	1690	ug/Kg	1	09/24/2012 19:06
4,6-Dinitro-2-methylphenol	ND	U	15.8	1690	ug/Kg	1	09/24/2012 19:06
4-Chloro-3-methylphenol	ND	U	16.8	337	ug/Kg	1	09/24/2012 19:06
4-Chloroaniline	ND	U	26.9	337	ug/Kg	1	09/24/2012 19:06
4-Chlorophenyl phenyl ether	ND	U	36.0	337	ug/Kg	1	09/24/2012 19:06
Acenaphthene	ND	U	15.3	337	ug/Kg	1	09/24/2012 19:06
Acenaphthylene	ND	U	14.2	337	ug/Kg	1	09/24/2012 19:06
Anthracene	ND	U	15.0	337	ug/Kg	1	09/24/2012 19:06
Benz(a)anthracene	47.1	J	18.5	337	ug/Kg	1	09/24/2012 19:06
Benz(a)pyrene	67.3	J	19.1	337	ug/Kg	1	09/24/2012 19:06
Benz(b)fluoranthene	94.2	J	19.4	337	ug/Kg	1	09/24/2012 19:06
Benz(g,h,i)perylene	53.8	J	53.7	337	ug/Kg	1	09/24/2012 19:06
Benz(k)fluoranthene	ND	U	40.4	337	ug/Kg	1	09/24/2012 19:06
Benzoic acid	ND	U	7.48	1690	ug/Kg	1	09/24/2012 19:06
Bis(2-Chloroethoxy)methane	ND	U	15.2	337	ug/Kg	1	09/24/2012 19:06
Bis(2-Chloroethyl)ether	ND	U	31.5	337	ug/Kg	1	09/24/2012 19:06
Bis(2-Chloroisopropyl)ether	ND	U	29.4	337	ug/Kg	1	09/24/2012 19:06
Bis(2-Ethylhexyl)phthalate	ND	U	16.2	337	ug/Kg	1	09/24/2012 19:06
4-Bromophenyl phenyl ether	ND	U	22.2	337	ug/Kg	1	09/24/2012 19:06
Butyl benzyl phthalate	ND	U	29.3	337	ug/Kg	1	09/24/2012 19:06
Chrysene	70.6	J	39.2	337	ug/Kg	1	09/24/2012 19:06
Di-n-butyl phthalate	ND	U	15.9	337	ug/Kg	1	09/24/2012 19:06
Di-n-octyl phthalate	ND	U	18.6	337	ug/Kg	1	09/24/2012 19:06
Dibenz(a,h)anthracene	ND	U	15.2	337	ug/Kg	1	09/24/2012 19:06
Dibenzofuran	ND	U	26.4	337	ug/Kg	1	09/24/2012 19:06



### Results of 49DPT-05 (4ft)

Client Sample ID: 49DPT-05 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002005-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 13:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 94.30

### Results by SW-846 8270D

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diethyl phthalate	ND	U	18.2	337	ug/Kg	1	09/24/2012 19:06
Dimethyl phthalate	ND	U	25.9	337	ug/Kg	1	09/24/2012 19:06
2,4-Dimethylphenol	ND	U	24.7	337	ug/Kg	1	09/24/2012 19:06
Diphenylamine	ND	U	15.2	337	ug/Kg	1	09/24/2012 19:06
Fluoranthene	104	J	31.7	337	ug/Kg	1	09/24/2012 19:06
Fluorene	ND	U	17.9	337	ug/Kg	1	09/24/2012 19:06
Hexachlorobenzene	ND	U	31.9	1690	ug/Kg	1	09/24/2012 19:06
Hexachlorobutadiene	ND	U	20.1	337	ug/Kg	1	09/24/2012 19:06
Hexachlorocyclopentadiene	ND	U	102	674	ug/Kg	1	09/24/2012 19:06
Hexachloroethane	ND	U	19.4	337	ug/Kg	1	09/24/2012 19:06
Indeno(1,2,3-cd)pyrene	50.4	J	26.3	337	ug/Kg	1	09/24/2012 19:06
Isophorone	ND	U	15.3	337	ug/Kg	1	09/24/2012 19:06
Naphthalene	ND	U	29.1	337	ug/Kg	1	09/24/2012 19:06
4-Nitroaniline	ND	U	19.4	1690	ug/Kg	1	09/24/2012 19:06
Nitrobenzene	ND	U	19.4	337	ug/Kg	1	09/24/2012 19:06
4-Nitrophenol	ND	U	33.2	1690	ug/Kg	1	09/24/2012 19:06
Pentachlorophenol	ND	U	26.9	1690	ug/Kg	1	09/24/2012 19:06
Phenanthrene	ND	U	22.2	337	ug/Kg	1	09/24/2012 19:06
Phenol	ND	U	31.5	337	ug/Kg	1	09/24/2012 19:06
Pyrene	90.8	J	14.2	337	ug/Kg	1	09/24/2012 19:06
n-Nitrosodi-n-propylamine	ND	U	96.5	337	ug/Kg	1	09/24/2012 19:06

### Surrogates

2,4,6-Tribromophenol	100	41.0-129	%	1	09/24/2012 19:06
2-Fluorobiphenyl	101	48.0-123	%	1	09/24/2012 19:06
2-Fluorophenol	86.0	42.0-123	%	1	09/24/2012 19:06
Nitrobenzene-d5	89.0	46.0-117	%	1	09/24/2012 19:06
Phenol-d6	93.0	48.0-125	%	1	09/24/2012 19:06
Terphenyl-d14	102	44.0-140	%	1	09/24/2012 19:06

### Batch Information

Analytical Batch: XMS1673  
 Analytical Method: SW-846 8270D  
 Instrument: MSD10  
 Analyst: CMP

Prep Batch: XXX3080  
 Prep Method: SW-846 3541  
 Prep Date/Time: 09/20/2012 17:46  
 Prep Initial Wt./Vol.: 31.51 g  
 Prep Extract Vol: 10 mL



### Results of 49DPT-06 (4ft)

Client Sample ID: 49DPT-06 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002006-B  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 90.30

### Results by SW-846 8260B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.658	4.64	ug/Kg	1	09/24/2012 15:18
1,1,1-Trichloroethane	ND	U	0.699	4.64	ug/Kg	1	09/24/2012 15:18
1,1,2,2-Tetrachloroethane	ND	U	1.09	4.64	ug/Kg	1	09/24/2012 15:18
1,1,2-Trichloroethane	ND	U	0.965	4.64	ug/Kg	1	09/24/2012 15:18
1,1-Dichloroethane	ND	U	0.499	4.64	ug/Kg	1	09/24/2012 15:18
1,1-Dichloroethene	ND	U	1.08	4.64	ug/Kg	1	09/24/2012 15:18
1,1-Dichloropropene	ND	U	0.627	4.64	ug/Kg	1	09/24/2012 15:18
1,2,3-Trichlorobenzene	ND	U	0.772	4.64	ug/Kg	1	09/24/2012 15:18
1,2,3-Trichloropropane	ND	U	0.955	4.64	ug/Kg	1	09/24/2012 15:18
1,2,4-Trichlorobenzene	ND	U	0.676	4.64	ug/Kg	1	09/24/2012 15:18
1,2,4-Trimethylbenzene	ND	U	0.591	4.64	ug/Kg	1	09/24/2012 15:18
1,2-Dibromo-3-chloropropane	ND	U	6.87	27.8	ug/Kg	1	09/24/2012 15:18
1,2-Dibromoethane	ND	U	1.22	4.64	ug/Kg	1	09/24/2012 15:18
1,2-Dichlorobenzene	ND	U	0.660	4.64	ug/Kg	1	09/24/2012 15:18
1,2-Dichloroethane	ND	U	0.847	4.64	ug/Kg	1	09/24/2012 15:18
1,2-Dichloropropane	ND	U	1.07	4.64	ug/Kg	1	09/24/2012 15:18
1,3,5-Trimethylbenzene	ND	U	0.564	4.64	ug/Kg	1	09/24/2012 15:18
1,3-Dichlorobenzene	ND	U	0.667	4.64	ug/Kg	1	09/24/2012 15:18
1,3-Dichloropropane	ND	U	0.815	4.64	ug/Kg	1	09/24/2012 15:18
1,4-Dichlorobenzene	ND	U	0.626	4.64	ug/Kg	1	09/24/2012 15:18
2,2-Dichloropropane	ND	U	0.685	4.64	ug/Kg	1	09/24/2012 15:18
2-Butanone	ND	U	3.14	23.2	ug/Kg	1	09/24/2012 15:18
2-Chlorotoluene	ND	U	0.869	4.64	ug/Kg	1	09/24/2012 15:18
2-Hexanone	ND	U	2.99	11.6	ug/Kg	1	09/24/2012 15:18
4-Chlorotoluene	ND	U	0.701	4.64	ug/Kg	1	09/24/2012 15:18
4-Isopropyltoluene	ND	U	0.598	4.64	ug/Kg	1	09/24/2012 15:18
4-Methyl-2-pentanone	ND	U	3.47	11.6	ug/Kg	1	09/24/2012 15:18
Acetone	5.01	J	3.72	46.4	ug/Kg	1	09/24/2012 15:18
Benzene	ND	U	0.660	4.64	ug/Kg	1	09/24/2012 15:18
Bromobenzene	ND	U	0.647	4.64	ug/Kg	1	09/24/2012 15:18
Bromochloromethane	ND	U	0.872	4.64	ug/Kg	1	09/24/2012 15:18
Bromodichloromethane	ND	U	0.653	4.64	ug/Kg	1	09/24/2012 15:18
Bromoform	ND	U	0.672	4.64	ug/Kg	1	09/24/2012 15:18
Bromomethane	ND	U	1.35	4.64	ug/Kg	1	09/24/2012 15:18
n-Butylbenzene	ND	U	0.609	4.64	ug/Kg	1	09/24/2012 15:18
Carbon disulfide	ND	U	0.485	4.64	ug/Kg	1	09/24/2012 15:18
Carbon tetrachloride	ND	U	0.528	4.64	ug/Kg	1	09/24/2012 15:18
Chlorobenzene	ND	U	0.647	4.64	ug/Kg	1	09/24/2012 15:18
Chloroethane	ND	U	0.928	4.64	ug/Kg	1	09/24/2012 15:18
Chloroform	ND	U	0.591	4.64	ug/Kg	1	09/24/2012 15:18
Chloromethane	ND	U	1.33	4.64	ug/Kg	1	09/24/2012 15:18
Dibromochloromethane	ND	U	1.03	4.64	ug/Kg	1	09/24/2012 15:18
Dibromomethane	ND	U	0.818	4.64	ug/Kg	1	09/24/2012 15:18

Print Date: 10/02/2012

N.C. Certification # 481

**Results of 49DPT-06 (4ft)**

Client Sample ID: 49DPT-06 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002006-B  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 90.30

**Results by SW-846 8260B**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Dichlorodifluoromethane	ND	U	0.974	4.64	ug/Kg	1	09/24/2012 15:18
cis-1,3-Dichloropropene	ND	U	0.955	4.64	ug/Kg	1	09/24/2012 15:18
trans-1,3-Dichloropropene	ND	U	0.876	4.64	ug/Kg	1	09/24/2012 15:18
Diisopropyl Ether	ND	U	0.762	4.64	ug/Kg	1	09/24/2012 15:18
Ethyl Benzene	ND	U	0.654	4.64	ug/Kg	1	09/24/2012 15:18
Hexachlorobutadiene	ND	U	0.637	4.64	ug/Kg	1	09/24/2012 15:18
Isopropylbenzene (Cumene)	ND	U	0.577	4.64	ug/Kg	1	09/24/2012 15:18
Methyl Iodide	ND	U	0.711	4.64	ug/Kg	1	09/24/2012 15:18
Methylene chloride	ND	U	0.974	18.6	ug/Kg	1	09/24/2012 15:18
Naphthalene	ND	U	0.843	4.64	ug/Kg	1	09/24/2012 15:18
Styrene	ND	U	0.534	4.64	ug/Kg	1	09/24/2012 15:18
Tetrachloroethene	ND	U	0.697	4.64	ug/Kg	1	09/24/2012 15:18
Toluene	ND	U	0.638	4.64	ug/Kg	1	09/24/2012 15:18
Trichloroethene	ND	U	0.781	4.64	ug/Kg	1	09/24/2012 15:18
Trichlorofluoromethane	ND	U	0.937	4.64	ug/Kg	1	09/24/2012 15:18
Vinyl chloride	ND	U	0.881	4.64	ug/Kg	1	09/24/2012 15:18
Xylene (total)	ND	U	1.64	9.28	ug/Kg	1	09/24/2012 15:18
cis-1,2-Dichloroethene	ND	U	0.567	4.64	ug/Kg	1	09/24/2012 15:18
m,p-Xylene	ND	U	1.57	9.28	ug/Kg	1	09/24/2012 15:18
n-Propylbenzene	ND	U	0.679	4.64	ug/Kg	1	09/24/2012 15:18
o-Xylene	ND	U	0.711	4.64	ug/Kg	1	09/24/2012 15:18
sec-Butylbenzene	ND	U	0.557	4.64	ug/Kg	1	09/24/2012 15:18
tert-Butyl methyl ether (MTBE)	ND	U	0.737	4.64	ug/Kg	1	09/24/2012 15:18
tert-Butylbenzene	ND	U	0.624	4.64	ug/Kg	1	09/24/2012 15:18
trans-1,2-Dichloroethene	ND	U	0.677	4.64	ug/Kg	1	09/24/2012 15:18
trans-1,4-Dichloro-2-butene	ND	U	3.90	23.2	ug/Kg	1	09/24/2012 15:18

**Surrogates**

1,2-Dichloroethane-d4	118	55.0-173	%	1	09/24/2012 15:18
4-Bromofluorobenzene	94.0	23.0-141	%	1	09/24/2012 15:18
Toluene d8	101	57.0-134	%	1	09/24/2012 15:18

**Batch Information**

Analytical Batch: VMS2567  
 Analytical Method: SW-846 8260B  
 Instrument: MSD9  
 Analyst: DVO

Prep Batch: VXX4038  
 Prep Method: SW-846 5035 SL  
 Prep Date/Time: 09/21/2012 09:00  
 Prep Initial Wt./Vol.: 5.97 g  
 Prep Extract Vol: 5 mL

## Results of 49DPT-06 (4ft)

Client Sample ID: 49DPT-06 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002006-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 90.30

## Results by SW-846 8270D

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	U	29.4	333	ug/Kg	1	09/24/2012 19:29
1,2-Dichlorobenzene	ND	U	16.6	333	ug/Kg	1	09/24/2012 19:29
1,3-Dichlorobenzene	ND	U	22.5	333	ug/Kg	1	09/24/2012 19:29
1,4-Dichlorobenzene	ND	U	23.5	333	ug/Kg	1	09/24/2012 19:29
2,4,5-Trichlorophenol	ND	U	22.3	333	ug/Kg	1	09/24/2012 19:29
2,4,6-Trichlorophenol	ND	U	22.6	333	ug/Kg	1	09/24/2012 19:29
2,4-Dichlorophenol	ND	U	19.3	333	ug/Kg	1	09/24/2012 19:29
2,4-Dinitrophenol	ND	U	30.9	1670	ug/Kg	1	09/24/2012 19:29
2,4-Dinitrotoluene	ND	U	16.8	333	ug/Kg	1	09/24/2012 19:29
2,6-Dinitrotoluene	ND	U	23.9	333	ug/Kg	1	09/24/2012 19:29
2-Chloronaphthalene	ND	U	19.6	333	ug/Kg	1	09/24/2012 19:29
2-Chlorophenol	ND	U	17.7	333	ug/Kg	1	09/24/2012 19:29
2-Methylnaphthalene	ND	U	27.0	333	ug/Kg	1	09/24/2012 19:29
2-Methylphenol	ND	U	18.4	333	ug/Kg	1	09/24/2012 19:29
2-Nitroaniline	ND	U	21.9	333	ug/Kg	1	09/24/2012 19:29
2-Nitrophenol	ND	U	16.0	333	ug/Kg	1	09/24/2012 19:29
3 and/or 4-Methylphenol	ND	U	21.6	333	ug/Kg	1	09/24/2012 19:29
3,3'-Dichlorobenzidine	ND	U	16.0	667	ug/Kg	1	09/24/2012 19:29
3-Nitroaniline	ND	U	15.0	1670	ug/Kg	1	09/24/2012 19:29
4,6-Dinitro-2-methylphenol	ND	U	15.7	1670	ug/Kg	1	09/24/2012 19:29
4-Chloro-3-methylphenol	ND	U	16.6	333	ug/Kg	1	09/24/2012 19:29
4-Chloroaniline	ND	U	26.6	333	ug/Kg	1	09/24/2012 19:29
4-Chlorophenyl phenyl ether	ND	U	35.6	333	ug/Kg	1	09/24/2012 19:29
Acenaphthene	ND	U	15.1	333	ug/Kg	1	09/24/2012 19:29
Acenaphthylene	ND	U	14.1	333	ug/Kg	1	09/24/2012 19:29
Anthracene	ND	U	14.8	333	ug/Kg	1	09/24/2012 19:29
Benz(a)anthracene	ND	U	18.3	333	ug/Kg	1	09/24/2012 19:29
Benz(a)pyrene	ND	U	18.9	333	ug/Kg	1	09/24/2012 19:29
Benz(b)fluoranthene	ND	U	19.2	333	ug/Kg	1	09/24/2012 19:29
Benz(g,h,i)perylene	ND	U	53.1	333	ug/Kg	1	09/24/2012 19:29
Benz(k)fluoranthene	ND	U	39.9	333	ug/Kg	1	09/24/2012 19:29
Benzoic acid	ND	U	7.39	1670	ug/Kg	1	09/24/2012 19:29
Bis(2-Chloroethoxy)methane	ND	U	15.0	333	ug/Kg	1	09/24/2012 19:29
Bis(2-Chloroethyl)ether	ND	U	31.1	333	ug/Kg	1	09/24/2012 19:29
Bis(2-Chloroisopropyl)ether	ND	U	29.1	333	ug/Kg	1	09/24/2012 19:29
Bis(2-Ethylhexyl)phthalate	ND	U	16.0	333	ug/Kg	1	09/24/2012 19:29
4-Bromophenyl phenyl ether	ND	U	21.9	333	ug/Kg	1	09/24/2012 19:29
Butyl benzyl phthalate	ND	U	29.0	333	ug/Kg	1	09/24/2012 19:29
Chrysene	ND	U	38.8	333	ug/Kg	1	09/24/2012 19:29
Di-n-butyl phthalate	ND	U	15.8	333	ug/Kg	1	09/24/2012 19:29
Di-n-octyl phthalate	ND	U	18.4	333	ug/Kg	1	09/24/2012 19:29
Dibenz(a,h)anthracene	ND	U	15.0	333	ug/Kg	1	09/24/2012 19:29
Dibenzofuran	ND	U	26.1	333	ug/Kg	1	09/24/2012 19:29

Print Date: 10/02/2012

N.C. Certification # 481

**Results of 49DPT-06 (4ft)**

Client Sample ID: 49DPT-06 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002006-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 90.30

**Results by SW-846 8270D**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Diethyl phthalate	ND	U	18.0	333	ug/Kg	1	09/24/2012 19:29
Dimethyl phthalate	ND	U	25.6	333	ug/Kg	1	09/24/2012 19:29
2,4-Dimethyphenol	ND	U	24.4	333	ug/Kg	1	09/24/2012 19:29
Diphenylamine	ND	U	15.0	333	ug/Kg	1	09/24/2012 19:29
Fluoranthene	ND	U	31.3	333	ug/Kg	1	09/24/2012 19:29
Fluorene	ND	U	17.7	333	ug/Kg	1	09/24/2012 19:29
Hexachlorobenzene	ND	U	31.5	1670	ug/Kg	1	09/24/2012 19:29
Hexachlorobutadiene	ND	U	19.9	333	ug/Kg	1	09/24/2012 19:29
Hexachlorocyclopentadiene	ND	U	101	667	ug/Kg	1	09/24/2012 19:29
Hexachloroethane	ND	U	19.2	333	ug/Kg	1	09/24/2012 19:29
Indeno(1,2,3-cd)pyrene	ND	U	26.0	333	ug/Kg	1	09/24/2012 19:29
Isophorone	ND	U	15.1	333	ug/Kg	1	09/24/2012 19:29
Naphthalene	ND	U	28.8	333	ug/Kg	1	09/24/2012 19:29
4-Nitroaniline	ND	U	19.2	1670	ug/Kg	1	09/24/2012 19:29
Nitrobenzene	ND	U	19.2	333	ug/Kg	1	09/24/2012 19:29
4-Nitrophenol	ND	U	32.8	1670	ug/Kg	1	09/24/2012 19:29
Pentachlorophenol	ND	U	26.6	1670	ug/Kg	1	09/24/2012 19:29
Phenanthrene	ND	U	21.9	333	ug/Kg	1	09/24/2012 19:29
Phenol	ND	U	31.1	333	ug/Kg	1	09/24/2012 19:29
Pyrene	ND	U	14.1	333	ug/Kg	1	09/24/2012 19:29
n-Nitrosodi-n-propylamine	ND	U	95.4	333	ug/Kg	1	09/24/2012 19:29

**Surrogates**

2,4,6-Tribromophenol	97.0	41.0-129	%	1	09/24/2012 19:29
2-Fluorobiphenyl	98.0	48.0-123	%	1	09/24/2012 19:29
2-Fluorophenol	87.0	42.0-123	%	1	09/24/2012 19:29
Nitrobenzene-d5	90.0	46.0-117	%	1	09/24/2012 19:29
Phenol-d6	95.0	48.0-125	%	1	09/24/2012 19:29
Terphenyl-d14	103	44.0-140	%	1	09/24/2012 19:29

**Batch Information**

Analytical Batch: XMS1673  
 Analytical Method: SW-846 8270D  
 Instrument: MSD10  
 Analyst: CMP

Prep Batch: XXX3080  
 Prep Method: SW-846 3541  
 Prep Date/Time: 09/20/2012 17:46  
 Prep Initial Wt./Vol.: 33.27 g  
 Prep Extract Vol: 10 mL

## Results of 49DPT-07 (4ft)

Client Sample ID: 49DPT-07 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002007-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 92.60

## Results by SW-846 8260B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.718	5.06	ug/Kg	1	09/21/2012 16:38
1,1,1-Trichloroethane	ND	U	0.764	5.06	ug/Kg	1	09/21/2012 16:38
1,1,2,2-Tetrachloroethane	ND	U	1.19	5.06	ug/Kg	1	09/21/2012 16:38
1,1,2-Trichloroethane	ND	U	1.05	5.06	ug/Kg	1	09/21/2012 16:38
1,1-Dichloroethane	ND	U	0.545	5.06	ug/Kg	1	09/21/2012 16:38
1,1-Dichloroethene	ND	U	1.17	5.06	ug/Kg	1	09/21/2012 16:38
1,1-Dichloropropene	ND	U	0.685	5.06	ug/Kg	1	09/21/2012 16:38
1,2,3-Trichlorobenzene	ND	U	0.843	5.06	ug/Kg	1	09/21/2012 16:38
1,2,3-Trichloropropane	ND	U	1.04	5.06	ug/Kg	1	09/21/2012 16:38
1,2,4-Trichlorobenzene	ND	U	0.738	5.06	ug/Kg	1	09/21/2012 16:38
1,2,4-Trimethylbenzene	ND	U	0.645	5.06	ug/Kg	1	09/21/2012 16:38
1,2-Dibromo-3-chloropropane	ND	U	7.51	30.4	ug/Kg	1	09/21/2012 16:38
1,2-Dibromoethane	ND	U	1.33	5.06	ug/Kg	1	09/21/2012 16:38
1,2-Dichlorobenzene	ND	U	0.720	5.06	ug/Kg	1	09/21/2012 16:38
1,2-Dichloroethane	ND	U	0.925	5.06	ug/Kg	1	09/21/2012 16:38
1,2-Dichloropropane	ND	U	1.16	5.06	ug/Kg	1	09/21/2012 16:38
1,3,5-Trimethylbenzene	ND	U	0.616	5.06	ug/Kg	1	09/21/2012 16:38
1,3-Dichlorobenzene	ND	U	0.728	5.06	ug/Kg	1	09/21/2012 16:38
1,3-Dichloropropane	ND	U	0.890	5.06	ug/Kg	1	09/21/2012 16:38
1,4-Dichlorobenzene	ND	U	0.684	5.06	ug/Kg	1	09/21/2012 16:38
2,2-Dichloropropane	ND	U	0.748	5.06	ug/Kg	1	09/21/2012 16:38
2-Butanone	ND	U	3.42	25.3	ug/Kg	1	09/21/2012 16:38
2-Chlorotoluene	ND	U	0.949	5.06	ug/Kg	1	09/21/2012 16:38
2-Hexanone	ND	U	3.26	12.7	ug/Kg	1	09/21/2012 16:38
4-Chlorotoluene	ND	U	0.766	5.06	ug/Kg	1	09/21/2012 16:38
4-Isopropyltoluene	ND	U	0.653	5.06	ug/Kg	1	09/21/2012 16:38
4-Methyl-2-pentanone	ND	U	3.79	12.7	ug/Kg	1	09/21/2012 16:38
Acetone	4.43	J	4.06	50.6	ug/Kg	1	09/21/2012 16:38
Benzene	ND	U	0.720	5.06	ug/Kg	1	09/21/2012 16:38
Bromobenzene	ND	U	0.706	5.06	ug/Kg	1	09/21/2012 16:38
Bromochloromethane	ND	U	0.952	5.06	ug/Kg	1	09/21/2012 16:38
Bromodichloromethane	ND	U	0.713	5.06	ug/Kg	1	09/21/2012 16:38
Bromoform	ND	U	0.733	5.06	ug/Kg	1	09/21/2012 16:38
Bromomethane	ND	U	1.47	5.06	ug/Kg	1	09/21/2012 16:38
n-Butylbenzene	ND	U	0.665	5.06	ug/Kg	1	09/21/2012 16:38
Carbon disulfide	ND	U	0.530	5.06	ug/Kg	1	09/21/2012 16:38
Carbon tetrachloride	ND	U	0.576	5.06	ug/Kg	1	09/21/2012 16:38
Chlorobenzene	ND	U	0.707	5.06	ug/Kg	1	09/21/2012 16:38
Chloroethane	ND	U	1.01	5.06	ug/Kg	1	09/21/2012 16:38
Chloroform	ND	U	0.645	5.06	ug/Kg	1	09/21/2012 16:38
Chloromethane	ND	U	1.45	5.06	ug/Kg	1	09/21/2012 16:38
Dibromochloromethane	ND	U	1.12	5.06	ug/Kg	1	09/21/2012 16:38
Dibromomethane	ND	U	0.893	5.06	ug/Kg	1	09/21/2012 16:38

Print Date: 10/02/2012

N.C. Certification # 481

**Results of 49DPT-07 (4ft)**

Client Sample ID: 49DPT-07 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002007-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:30

Received Date: 09/20/2012 08:35

Matrix: Soil-Solid as dry weight

Solids (%): 92.60

**Results by SW-846 8260B**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Dichlorodifluoromethane	ND	U	1.06	5.06	ug/Kg	1	09/21/2012 16:38
cis-1,3-Dichloropropene	ND	U	1.04	5.06	ug/Kg	1	09/21/2012 16:38
trans-1,3-Dichloropropene	ND	U	0.956	5.06	ug/Kg	1	09/21/2012 16:38
Diisopropyl Ether	ND	U	0.832	5.06	ug/Kg	1	09/21/2012 16:38
Ethyl Benzene	ND	U	0.714	5.06	ug/Kg	1	09/21/2012 16:38
Hexachlorobutadiene	ND	U	0.696	5.06	ug/Kg	1	09/21/2012 16:38
Isopropylbenzene (Cumene)	ND	U	0.630	5.06	ug/Kg	1	09/21/2012 16:38
Methyl Iodide	ND	U	0.776	5.06	ug/Kg	1	09/21/2012 16:38
Methylene chloride	ND	U	1.06	20.3	ug/Kg	1	09/21/2012 16:38
Naphthalene	ND	U	0.921	5.06	ug/Kg	1	09/21/2012 16:38
Styrene	ND	U	0.583	5.06	ug/Kg	1	09/21/2012 16:38
Tetrachloroethene	ND	U	0.761	5.06	ug/Kg	1	09/21/2012 16:38
Toluene	ND	U	0.697	5.06	ug/Kg	1	09/21/2012 16:38
Trichloroethene	ND	U	0.853	5.06	ug/Kg	1	09/21/2012 16:38
Trichlorofluoromethane	ND	U	1.02	5.06	ug/Kg	1	09/21/2012 16:38
Vinyl chloride	ND	U	0.962	5.06	ug/Kg	1	09/21/2012 16:38
Xylene (total)	ND	U	1.79	10.1	ug/Kg	1	09/21/2012 16:38
cis-1,2-Dichloroethene	ND	U	0.619	5.06	ug/Kg	1	09/21/2012 16:38
m,p-Xylene	ND	U	1.71	10.1	ug/Kg	1	09/21/2012 16:38
n-Propylbenzene	ND	U	0.741	5.06	ug/Kg	1	09/21/2012 16:38
o-Xylene	ND	U	0.776	5.06	ug/Kg	1	09/21/2012 16:38
sec-Butylbenzene	ND	U	0.608	5.06	ug/Kg	1	09/21/2012 16:38
tert-Butyl methyl ether (MTBE)	ND	U	0.805	5.06	ug/Kg	1	09/21/2012 16:38
tert-Butylbenzene	ND	U	0.682	5.06	ug/Kg	1	09/21/2012 16:38
trans-1,2-Dichloroethene	ND	U	0.739	5.06	ug/Kg	1	09/21/2012 16:38
trans-1,4-Dichloro-2-butene	ND	U	4.25	25.3	ug/Kg	1	09/21/2012 16:38

**Surrogates**

1,2-Dichloroethane-d4	129	55.0-173	%	1	09/21/2012 16:38
4-Bromofluorobenzene	81.0	23.0-141	%	1	09/21/2012 16:38
Toluene d8	92.0	57.0-134	%	1	09/21/2012 16:38

**Batch Information**

Analytical Batch: VMS2564

Prep Batch: VXX4030

Analytical Method: SW-846 8260B

Prep Method: SW-846 5035 SL

Instrument: MSD9

Prep Date/Time: 09/21/2012 09:03

Analyst: DVO

Prep Initial Wt./Vol.: 5.33 g

Prep Extract Vol: 5 mL



### Results of 49DPT-07 (4ft)

Client Sample ID: 49DPT-07 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002007-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 92.60

### Results by SW-846 8270D

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	U	31.0	351	ug/Kg	1	09/24/2012 19:53
1,2-Dichlorobenzene	ND	U	17.5	351	ug/Kg	1	09/24/2012 19:53
1,3-Dichlorobenzene	ND	U	23.7	351	ug/Kg	1	09/24/2012 19:53
1,4-Dichlorobenzene	ND	U	24.8	351	ug/Kg	1	09/24/2012 19:53
2,4,5-Trichlorophenol	ND	U	23.5	351	ug/Kg	1	09/24/2012 19:53
2,4,6-Trichlorophenol	ND	U	23.8	351	ug/Kg	1	09/24/2012 19:53
2,4-Dichlorophenol	ND	U	20.3	351	ug/Kg	1	09/24/2012 19:53
2,4-Dinitrophenol	ND	U	32.5	1760	ug/Kg	1	09/24/2012 19:53
2,4-Dinitrotoluene	ND	U	17.7	351	ug/Kg	1	09/24/2012 19:53
2,6-Dinitrotoluene	ND	U	25.1	351	ug/Kg	1	09/24/2012 19:53
2-Chloronaphthalene	ND	U	20.6	351	ug/Kg	1	09/24/2012 19:53
2-Chlorophenol	ND	U	18.6	351	ug/Kg	1	09/24/2012 19:53
2-Methylnaphthalene	ND	U	28.4	351	ug/Kg	1	09/24/2012 19:53
2-Methylphenol	ND	U	19.4	351	ug/Kg	1	09/24/2012 19:53
2-Nitroaniline	ND	U	23.1	351	ug/Kg	1	09/24/2012 19:53
2-Nitrophenol	ND	U	16.8	351	ug/Kg	1	09/24/2012 19:53
3 and/or 4-Methylphenol	ND	U	22.8	351	ug/Kg	1	09/24/2012 19:53
3,3'-Dichlorobenzidine	ND	U	16.8	702	ug/Kg	1	09/24/2012 19:53
3-Nitroaniline	ND	U	15.8	1760	ug/Kg	1	09/24/2012 19:53
4,6-Dinitro-2-methylphenol	ND	U	16.5	1760	ug/Kg	1	09/24/2012 19:53
4-Chloro-3-methylphenol	ND	U	17.5	351	ug/Kg	1	09/24/2012 19:53
4-Chloroaniline	ND	U	28.1	351	ug/Kg	1	09/24/2012 19:53
4-Chlorophenyl phenyl ether	ND	U	37.5	351	ug/Kg	1	09/24/2012 19:53
Acenaphthene	ND	U	15.9	351	ug/Kg	1	09/24/2012 19:53
Acenaphthylene	ND	U	14.8	351	ug/Kg	1	09/24/2012 19:53
Anthracene	ND	U	15.6	351	ug/Kg	1	09/24/2012 19:53
Benz(a)anthracene	52.5	J	19.3	351	ug/Kg	1	09/24/2012 19:53
Benz(a)pyrene	63.0	J	19.9	351	ug/Kg	1	09/24/2012 19:53
Benz(b)fluoranthene	87.6	J	20.2	351	ug/Kg	1	09/24/2012 19:53
Benz(g,h,i)perylene	ND	U	55.9	351	ug/Kg	1	09/24/2012 19:53
Benz(k)fluoranthene	ND	U	42.1	351	ug/Kg	1	09/24/2012 19:53
Benzoic acid	ND	U	7.79	1760	ug/Kg	1	09/24/2012 19:53
Bis(2-Chloroethoxy)methane	ND	U	15.8	351	ug/Kg	1	09/24/2012 19:53
Bis(2-Chloroethyl)ether	ND	U	32.8	351	ug/Kg	1	09/24/2012 19:53
Bis(2-Chloroisopropyl)ether	ND	U	30.6	351	ug/Kg	1	09/24/2012 19:53
Bis(2-Ethylhexyl)phthalate	ND	U	16.8	351	ug/Kg	1	09/24/2012 19:53
4-Bromophenyl phenyl ether	ND	U	23.1	351	ug/Kg	1	09/24/2012 19:53
Butyl benzyl phthalate	ND	U	30.5	351	ug/Kg	1	09/24/2012 19:53
Chrysene	73.6	J	40.8	351	ug/Kg	1	09/24/2012 19:53
Di-n-butyl phthalate	ND	U	16.6	351	ug/Kg	1	09/24/2012 19:53
Di-n-octyl phthalate	ND	U	19.4	351	ug/Kg	1	09/24/2012 19:53
Dibenz(a,h)anthracene	ND	U	15.8	351	ug/Kg	1	09/24/2012 19:53
Dibenzofuran	ND	U	27.5	351	ug/Kg	1	09/24/2012 19:53

Print Date: 10/02/2012

N.C. Certification # 481

**Results of 49DPT-07 (4ft)**

Client Sample ID: 49DPT-07 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002007-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 92.60

**Results by SW-846 8270D**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Diethyl phthalate	ND	U	19.0	351	ug/Kg	1	09/24/2012 19:53
Dimethyl phthalate	ND	U	26.9	351	ug/Kg	1	09/24/2012 19:53
2,4-Dimethylphenol	ND	U	25.7	351	ug/Kg	1	09/24/2012 19:53
Diphenylamine	ND	U	15.8	351	ug/Kg	1	09/24/2012 19:53
Fluoranthene	116	J	33.0	351	ug/Kg	1	09/24/2012 19:53
Fluorene	ND	U	18.6	351	ug/Kg	1	09/24/2012 19:53
Hexachlorobenzene	ND	U	33.2	1760	ug/Kg	1	09/24/2012 19:53
Hexachlorobutadiene	ND	U	21.0	351	ug/Kg	1	09/24/2012 19:53
Hexachlorocyclopentadiene	ND	U	106	702	ug/Kg	1	09/24/2012 19:53
Hexachloroethane	ND	U	20.2	351	ug/Kg	1	09/24/2012 19:53
Indeno(1,2,3-cd)pyrene	45.5	J	27.4	351	ug/Kg	1	09/24/2012 19:53
Isophorone	ND	U	15.9	351	ug/Kg	1	09/24/2012 19:53
Naphthalene	ND	U	30.3	351	ug/Kg	1	09/24/2012 19:53
4-Nitroaniline	ND	U	20.2	1760	ug/Kg	1	09/24/2012 19:53
Nitrobenzene	ND	U	20.2	351	ug/Kg	1	09/24/2012 19:53
4-Nitrophenol	ND	U	34.6	1760	ug/Kg	1	09/24/2012 19:53
Pentachlorophenol	ND	U	28.1	1760	ug/Kg	1	09/24/2012 19:53
Phenanthrene	31.5	J	23.1	351	ug/Kg	1	09/24/2012 19:53
Phenol	ND	U	32.8	351	ug/Kg	1	09/24/2012 19:53
Pyrene	94.6	J	14.8	351	ug/Kg	1	09/24/2012 19:53
n-Nitrosodi-n-propylamine	ND	U	101	351	ug/Kg	1	09/24/2012 19:53

**Surrogates**

2,4,6-Tribromophenol	100	41.0-129	%	1	09/24/2012 19:53
2-Fluorobiphenyl	102	48.0-123	%	1	09/24/2012 19:53
2-Fluorophenol	88.0	42.0-123	%	1	09/24/2012 19:53
Nitrobenzene-d5	94.0	46.0-117	%	1	09/24/2012 19:53
Phenol-d6	97.0	48.0-125	%	1	09/24/2012 19:53
Terphenyl-d14	105	44.0-140	%	1	09/24/2012 19:53

**Batch Information**

Analytical Batch: XMS1673  
 Analytical Method: SW-846 8270D  
 Instrument: MSD10  
 Analyst: CMP

Prep Batch: XXX3080  
 Prep Method: SW-846 3541  
 Prep Date/Time: 09/20/2012 17:46  
 Prep Initial Wt./Vol.: 30.79 g  
 Prep Extract Vol: 10 mL



### Results of 49DPT-08 (4ft)

Client Sample ID: 49DPT-08 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002008-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:45  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 90.90

### Results by SW-846 8260B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.639	4.51	ug/Kg	1	09/21/2012 17:04
1,1,1-Trichloroethane	ND	U	0.680	4.51	ug/Kg	1	09/21/2012 17:04
1,1,2,2-Tetrachloroethane	ND	U	1.06	4.51	ug/Kg	1	09/21/2012 17:04
1,1,2-Trichloroethane	ND	U	0.938	4.51	ug/Kg	1	09/21/2012 17:04
1,1-Dichloroethane	ND	U	0.485	4.51	ug/Kg	1	09/21/2012 17:04
1,1-Dichloroethene	ND	U	1.05	4.51	ug/Kg	1	09/21/2012 17:04
1,1-Dichloropropene	ND	U	0.610	4.51	ug/Kg	1	09/21/2012 17:04
1,2,3-Trichlorobenzene	ND	U	0.750	4.51	ug/Kg	1	09/21/2012 17:04
1,2,3-Trichloropropane	ND	U	0.929	4.51	ug/Kg	1	09/21/2012 17:04
1,2,4-Trichlorobenzene	ND	U	0.657	4.51	ug/Kg	1	09/21/2012 17:04
1,2,4-Trimethylbenzene	ND	U	0.574	4.51	ug/Kg	1	09/21/2012 17:04
1,2-Dibromo-3-chloropropane	ND	U	6.68	27.1	ug/Kg	1	09/21/2012 17:04
1,2-Dibromoethane	ND	U	1.18	4.51	ug/Kg	1	09/21/2012 17:04
1,2-Dichlorobenzene	ND	U	0.641	4.51	ug/Kg	1	09/21/2012 17:04
1,2-Dichloroethane	ND	U	0.823	4.51	ug/Kg	1	09/21/2012 17:04
1,2-Dichloropropane	ND	U	1.04	4.51	ug/Kg	1	09/21/2012 17:04
1,3,5-Trimethylbenzene	ND	U	0.548	4.51	ug/Kg	1	09/21/2012 17:04
1,3-Dichlorobenzene	ND	U	0.648	4.51	ug/Kg	1	09/21/2012 17:04
1,3-Dichloropropane	ND	U	0.793	4.51	ug/Kg	1	09/21/2012 17:04
1,4-Dichlorobenzene	0.830	J	0.609	4.51	ug/Kg	1	09/21/2012 17:04
2,2-Dichloropropane	ND	U	0.666	4.51	ug/Kg	1	09/21/2012 17:04
2-Butanone	ND	U	3.05	22.5	ug/Kg	1	09/21/2012 17:04
2-Chlorotoluene	ND	U	0.845	4.51	ug/Kg	1	09/21/2012 17:04
2-Hexanone	ND	U	2.90	11.3	ug/Kg	1	09/21/2012 17:04
4-Chlorotoluene	ND	U	0.682	4.51	ug/Kg	1	09/21/2012 17:04
4-Isopropyltoluene	ND	U	0.582	4.51	ug/Kg	1	09/21/2012 17:04
4-Methyl-2-pentanone	ND	U	3.37	11.3	ug/Kg	1	09/21/2012 17:04
Acetone	ND	U	3.62	45.1	ug/Kg	1	09/21/2012 17:04
Benzene	16.2		0.641	4.51	ug/Kg	1	09/21/2012 17:04
Bromobenzene	ND	U	0.629	4.51	ug/Kg	1	09/21/2012 17:04
Bromochloromethane	ND	U	0.848	4.51	ug/Kg	1	09/21/2012 17:04
Bromodichloromethane	ND	U	0.635	4.51	ug/Kg	1	09/21/2012 17:04
Bromoform	ND	U	0.653	4.51	ug/Kg	1	09/21/2012 17:04
Bromomethane	ND	U	1.31	4.51	ug/Kg	1	09/21/2012 17:04
n-Butylbenzene	ND	U	0.592	4.51	ug/Kg	1	09/21/2012 17:04
Carbon disulfide	ND	U	0.472	4.51	ug/Kg	1	09/21/2012 17:04
Carbon tetrachloride	ND	U	0.513	4.51	ug/Kg	1	09/21/2012 17:04
Chlorobenzene	ND	U	0.629	4.51	ug/Kg	1	09/21/2012 17:04
Chloroethane	ND	U	0.902	4.51	ug/Kg	1	09/21/2012 17:04
Chloroform	ND	U	0.574	4.51	ug/Kg	1	09/21/2012 17:04
Chloromethane	ND	U	1.29	4.51	ug/Kg	1	09/21/2012 17:04
Dibromochloromethane	ND	U	1.00	4.51	ug/Kg	1	09/21/2012 17:04
Dibromomethane	ND	U	0.795	4.51	ug/Kg	1	09/21/2012 17:04

Print Date: 10/02/2012

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### Results of 49DPT-08 (4ft)

Client Sample ID: 49DPT-08 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002008-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:45  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 90.90

### Results by SW-846 8260B

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Dichlorodifluoromethane	ND	U	0.947	4.51	ug/Kg	1	09/21/2012 17:04
cis-1,3-Dichloropropene	ND	U	0.929	4.51	ug/Kg	1	09/21/2012 17:04
trans-1,3-Dichloropropene	ND	U	0.851	4.51	ug/Kg	1	09/21/2012 17:04
Diisopropyl Ether	ND	U	0.740	4.51	ug/Kg	1	09/21/2012 17:04
Ethyl Benzene	ND	U	0.636	4.51	ug/Kg	1	09/21/2012 17:04
Hexachlorobutadiene	ND	U	0.620	4.51	ug/Kg	1	09/21/2012 17:04
Isopropylbenzene (Cumene)	ND	U	0.561	4.51	ug/Kg	1	09/21/2012 17:04
Methyl Iodide	ND	U	0.691	4.51	ug/Kg	1	09/21/2012 17:04
Methylene chloride	ND	U	0.947	18.0	ug/Kg	1	09/21/2012 17:04
Naphthalene	ND	U	0.820	4.51	ug/Kg	1	09/21/2012 17:04
Styrene	ND	U	0.519	4.51	ug/Kg	1	09/21/2012 17:04
Tetrachloroethene	ND	U	0.677	4.51	ug/Kg	1	09/21/2012 17:04
Toluene	2.07	J	0.620	4.51	ug/Kg	1	09/21/2012 17:04
Trichloroethene	ND	U	0.759	4.51	ug/Kg	1	09/21/2012 17:04
Trichlorofluoromethane	ND	U	0.911	4.51	ug/Kg	1	09/21/2012 17:04
Vinyl chloride	ND	U	0.857	4.51	ug/Kg	1	09/21/2012 17:04
Xylene (total)	ND	U	1.60	9.02	ug/Kg	1	09/21/2012 17:04
cis-1,2-Dichloroethene	ND	U	0.551	4.51	ug/Kg	1	09/21/2012 17:04
m,p-Xylene	ND	U	1.52	9.02	ug/Kg	1	09/21/2012 17:04
n-Propylbenzene	ND	U	0.660	4.51	ug/Kg	1	09/21/2012 17:04
o-Xylene	ND	U	0.691	4.51	ug/Kg	1	09/21/2012 17:04
sec-Butylbenzene	ND	U	0.541	4.51	ug/Kg	1	09/21/2012 17:04
tert-Butyl methyl ether (MTBE)	ND	U	0.717	4.51	ug/Kg	1	09/21/2012 17:04
tert-Butylbenzene	ND	U	0.607	4.51	ug/Kg	1	09/21/2012 17:04
trans-1,2-Dichloroethene	ND	U	0.658	4.51	ug/Kg	1	09/21/2012 17:04
trans-1,4-Dichloro-2-butene	ND	U	3.79	22.5	ug/Kg	1	09/21/2012 17:04

### Surrogates

1,2-Dichloroethane-d4	113	55.0-173	%	1	09/21/2012 17:04
4-Bromofluorobenzene	100	23.0-141	%	1	09/21/2012 17:04
Toluene d8	100	57.0-134	%	1	09/21/2012 17:04

### Batch Information

Analytical Batch: VMS2564  
 Analytical Method: SW-846 8260B  
 Instrument: MSD9  
 Analyst: DVO

Prep Batch: VXX4030  
 Prep Method: SW-846 5035 SL  
 Prep Date/Time: 09/21/2012 09:04  
 Prep Initial Wt./Vol.: 6.1 g  
 Prep Extract Vol: 5 mL



### Results of 49DPT-08 (4ft)

Client Sample ID: 49DPT-08 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002008-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:45  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 90.90

### Results by SW-846 8270D

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	U	30.2	342	ug/Kg	1	09/24/2012 20:16
1,2-Dichlorobenzene	ND	U	17.1	342	ug/Kg	1	09/24/2012 20:16
1,3-Dichlorobenzene	ND	U	23.1	342	ug/Kg	1	09/24/2012 20:16
1,4-Dichlorobenzene	ND	U	24.2	342	ug/Kg	1	09/24/2012 20:16
2,4,5-Trichlorophenol	ND	U	22.9	342	ug/Kg	1	09/24/2012 20:16
2,4,6-Trichlorophenol	ND	U	23.2	342	ug/Kg	1	09/24/2012 20:16
2,4-Dichlorophenol	ND	U	19.8	342	ug/Kg	1	09/24/2012 20:16
2,4-Dinitrophenol	ND	U	31.7	1710	ug/Kg	1	09/24/2012 20:16
2,4-Dinitrotoluene	ND	U	17.3	342	ug/Kg	1	09/24/2012 20:16
2,6-Dinitrotoluene	ND	U	24.5	342	ug/Kg	1	09/24/2012 20:16
2-Choronaphthalene	ND	U	20.1	342	ug/Kg	1	09/24/2012 20:16
2-Chlorophenol	ND	U	18.2	342	ug/Kg	1	09/24/2012 20:16
2-Methylnaphthalene	ND	U	27.7	342	ug/Kg	1	09/24/2012 20:16
2-Methylphenol	ND	U	18.9	342	ug/Kg	1	09/24/2012 20:16
2-Nitroaniline	ND	U	22.5	342	ug/Kg	1	09/24/2012 20:16
2-Nitrophenol	ND	U	16.4	342	ug/Kg	1	09/24/2012 20:16
3 and/or 4-Methylphenol	ND	U	22.2	342	ug/Kg	1	09/24/2012 20:16
3,3'-Dichlorobenzidine	ND	U	16.4	685	ug/Kg	1	09/24/2012 20:16
3-Nitroaniline	ND	U	15.4	1710	ug/Kg	1	09/24/2012 20:16
4,6-Dinitro-2-methylphenol	ND	U	16.1	1710	ug/Kg	1	09/24/2012 20:16
4-Chloro-3-methylphenol	ND	U	17.1	342	ug/Kg	1	09/24/2012 20:16
4-Chloroaniline	ND	U	27.4	342	ug/Kg	1	09/24/2012 20:16
4-Chlorophenyl phenyl ether	ND	U	36.5	342	ug/Kg	1	09/24/2012 20:16
Acenaphthene	ND	U	15.5	342	ug/Kg	1	09/24/2012 20:16
Acenaphthylene	ND	U	14.4	342	ug/Kg	1	09/24/2012 20:16
Anthracene	ND	U	15.2	342	ug/Kg	1	09/24/2012 20:16
Benz(a)anthracene	ND	U	18.8	342	ug/Kg	1	09/24/2012 20:16
Benzo(a)pyrene	ND	U	19.4	342	ug/Kg	1	09/24/2012 20:16
Benzo(b)fluoranthene	ND	U	19.7	342	ug/Kg	1	09/24/2012 20:16
Benzo(g,h,i)perylene	ND	U	54.5	342	ug/Kg	1	09/24/2012 20:16
Benzo(k)fluoranthene	ND	U	41.0	342	ug/Kg	1	09/24/2012 20:16
Benzolic acid	ND	U	7.59	1710	ug/Kg	1	09/24/2012 20:16
Bis(2-Chloroethoxy)methane	ND	U	15.4	342	ug/Kg	1	09/24/2012 20:16
Bis(2-Chloroethyl)ether	ND	U	31.9	342	ug/Kg	1	09/24/2012 20:16
Bis(2-Chloroisopropyl)ether	ND	U	29.9	342	ug/Kg	1	09/24/2012 20:16
Bis(2-Ethylhexyl)phthalate	ND	U	16.4	342	ug/Kg	1	09/24/2012 20:16
4-Bromophenyl phenyl ether	ND	U	22.5	342	ug/Kg	1	09/24/2012 20:16
Butyl benzyl phthalate	ND	U	29.8	342	ug/Kg	1	09/24/2012 20:16
Chrysene	ND	U	39.8	342	ug/Kg	1	09/24/2012 20:16
Di-n-butyl phthalate	ND	U	16.2	342	ug/Kg	1	09/24/2012 20:16
Di-n-octyl phthalate	ND	U	18.9	342	ug/Kg	1	09/24/2012 20:16
Dibenz(a,h)anthracene	ND	U	15.4	342	ug/Kg	1	09/24/2012 20:16
Dibenzofuran	ND	U	26.8	342	ug/Kg	1	09/24/2012 20:16

Print Date: 10/02/2012

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**Results of 49DPT-08 (4ft)**

Client Sample ID: 49DPT-08 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002008-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:45  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 90.90

**Results by SW-846 8270D**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Diethyl phthalate	ND	U	18.5	342	ug/Kg	1	09/24/2012 20:16
Dimethyl phthalate	ND	U	26.3	342	ug/Kg	1	09/24/2012 20:16
2,4-Dimethylphenol	ND	U	25.1	342	ug/Kg	1	09/24/2012 20:16
Diphenylamine	ND	U	15.4	342	ug/Kg	1	09/24/2012 20:16
Fluoranthene	ND	U	32.2	342	ug/Kg	1	09/24/2012 20:16
Fluorene	ND	U	18.2	342	ug/Kg	1	09/24/2012 20:16
Hexachlorobenzene	ND	U	32.4	1710	ug/Kg	1	09/24/2012 20:16
Hexachlorobutadiene	ND	U	20.5	342	ug/Kg	1	09/24/2012 20:16
Hexachlorocyclopentadiene	ND	U	104	685	ug/Kg	1	09/24/2012 20:16
Hexachloroethane	ND	U	19.7	342	ug/Kg	1	09/24/2012 20:16
Indeno(1,2,3-cd)pyrene	ND	U	26.7	342	ug/Kg	1	09/24/2012 20:16
Isophorone	ND	U	15.5	342	ug/Kg	1	09/24/2012 20:16
Naphthalene	ND	U	29.5	342	ug/Kg	1	09/24/2012 20:16
4-Nitroaniline	ND	U	19.7	1710	ug/Kg	1	09/24/2012 20:16
Nitrobenzene	ND	U	19.7	342	ug/Kg	1	09/24/2012 20:16
4-Nitrophenol	ND	U	33.7	1710	ug/Kg	1	09/24/2012 20:16
Pentachlorophenol	ND	U	27.4	1710	ug/Kg	1	09/24/2012 20:16
Phenanthrene	ND	U	22.5	342	ug/Kg	1	09/24/2012 20:16
Phenol	ND	U	31.9	342	ug/Kg	1	09/24/2012 20:16
Pyrene	ND	U	14.4	342	ug/Kg	1	09/24/2012 20:16
n-Nitrosodi-n-propylamine	ND	U	98.0	342	ug/Kg	1	09/24/2012 20:16

**Surrogates**

2,4,6-Tribromophenol	102	41.0-129	%	1	09/24/2012 20:16
2-Fluorobiphenyl	103	48.0-123	%	1	09/24/2012 20:16
2-Fluorophenol	89.0	42.0-123	%	1	09/24/2012 20:16
Nitrobenzene-d5	93.0	46.0-117	%	1	09/24/2012 20:16
Phenol-d6	98.0	48.0-125	%	1	09/24/2012 20:16
Terphenyl-d14	108	44.0-140	%	1	09/24/2012 20:16

**Batch Information**

Analytical Batch: XMS1673  
 Analytical Method: SW-846 8270D  
 Instrument: MSD10  
 Analyst: CMP

Prep Batch: XXX3080  
 Prep Method: SW-846 3541  
 Prep Date/Time: 09/20/2012 17:46  
 Prep Initial Wt./Vol.: 32.18 g  
 Prep Extract Vol: 10 mL



### Results of 49DPT-09 (3ft)

Client Sample ID: 49DPT-09 (3ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002009-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 15:10  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 91.60

### Results by SW-846 8260B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.625	4.41	ug/Kg	1	09/21/2012 14:14
1,1,1-Trichloroethane	ND	U	0.665	4.41	ug/Kg	1	09/21/2012 14:14
1,1,2,2-Tetrachloroethane	ND	U	1.03	4.41	ug/Kg	1	09/21/2012 14:14
1,1,2-Trichloroethane	ND	U	0.917	4.41	ug/Kg	1	09/21/2012 14:14
1,1-Dichloroethane	ND	U	0.474	4.41	ug/Kg	1	09/21/2012 14:14
1,1-Dichloroethene	ND	U	1.02	4.41	ug/Kg	1	09/21/2012 14:14
1,1-Dichloropropene	ND	U	0.596	4.41	ug/Kg	1	09/21/2012 14:14
1,2,3-Trichlorobenzene	ND	U	0.734	4.41	ug/Kg	1	09/21/2012 14:14
1,2,3-Trichloropropane	ND	U	0.908	4.41	ug/Kg	1	09/21/2012 14:14
1,2,4-Trichlorobenzene	ND	U	0.643	4.41	ug/Kg	1	09/21/2012 14:14
1,2,4-Trimethylbenzene	ND	U	0.562	4.41	ug/Kg	1	09/21/2012 14:14
1,2-Dibromo-3-chloropropane	ND	U	6.53	26.4	ug/Kg	1	09/21/2012 14:14
1,2-Dibromoethane	ND	U	1.15	4.41	ug/Kg	1	09/21/2012 14:14
1,2-Dichlorobenzene	ND	U	0.627	4.41	ug/Kg	1	09/21/2012 14:14
1,2-Dichloroethane	ND	U	0.805	4.41	ug/Kg	1	09/21/2012 14:14
1,2-Dichloropropane	ND	U	1.01	4.41	ug/Kg	1	09/21/2012 14:14
1,3,5-Trimethylbenzene	ND	U	0.536	4.41	ug/Kg	1	09/21/2012 14:14
1,3-Dichlorobenzene	ND	U	0.634	4.41	ug/Kg	1	09/21/2012 14:14
1,3-Dichloropropane	ND	U	0.775	4.41	ug/Kg	1	09/21/2012 14:14
1,4-Dichlorobenzene	ND	U	0.595	4.41	ug/Kg	1	09/21/2012 14:14
2,2-Dichloropropane	ND	U	0.651	4.41	ug/Kg	1	09/21/2012 14:14
2-Butanone	ND	U	2.98	22.0	ug/Kg	1	09/21/2012 14:14
2-Chlorotoluene	ND	U	0.826	4.41	ug/Kg	1	09/21/2012 14:14
2-Hexanone	ND	U	2.84	11.0	ug/Kg	1	09/21/2012 14:14
4-Chlorotoluene	ND	U	0.667	4.41	ug/Kg	1	09/21/2012 14:14
4-Isopropyltoluene	ND	U	0.569	4.41	ug/Kg	1	09/21/2012 14:14
4-Methyl-2-pentanone	ND	U	3.30	11.0	ug/Kg	1	09/21/2012 14:14
Acetone	ND	U	3.54	44.1	ug/Kg	1	09/21/2012 14:14
Benzene	ND	U	0.627	4.41	ug/Kg	1	09/21/2012 14:14
Bromobenzene	ND	U	0.614	4.41	ug/Kg	1	09/21/2012 14:14
Bromochloromethane	ND	U	0.829	4.41	ug/Kg	1	09/21/2012 14:14
Bromodichloromethane	ND	U	0.621	4.41	ug/Kg	1	09/21/2012 14:14
Bromoform	ND	U	0.638	4.41	ug/Kg	1	09/21/2012 14:14
Bromomethane	ND	U	1.28	4.41	ug/Kg	1	09/21/2012 14:14
n-Butylbenzene	ND	U	0.579	4.41	ug/Kg	1	09/21/2012 14:14
Carbon disulfide	ND	U	0.461	4.41	ug/Kg	1	09/21/2012 14:14
Carbon tetrachloride	ND	U	0.502	4.41	ug/Kg	1	09/21/2012 14:14
Chlorobenzene	ND	U	0.615	4.41	ug/Kg	1	09/21/2012 14:14
Chloroethane	ND	U	0.882	4.41	ug/Kg	1	09/21/2012 14:14
Chloroform	1.23	J	0.562	4.41	ug/Kg	1	09/21/2012 14:14
Chloromethane	ND	U	1.26	4.41	ug/Kg	1	09/21/2012 14:14
Dibromochloromethane	ND	U	0.979	4.41	ug/Kg	1	09/21/2012 14:14
Dibromomethane	ND	U	0.778	4.41	ug/Kg	1	09/21/2012 14:14

Print Date: 10/02/2012

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**Results of 49DPT-09 (3ft)**

Client Sample ID: 49DPT-09 (3ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002009-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 15:10  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 91.60

**Results by SW-846 8260B**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Dichlorodifluoromethane	ND	U	0.926	4.41	ug/Kg	1	09/21/2012 14:14
cis-1,3-Dichloropropene	ND	U	0.908	4.41	ug/Kg	1	09/21/2012 14:14
trans-1,3-Dichloropropene	ND	U	0.832	4.41	ug/Kg	1	09/21/2012 14:14
Diisopropyl Ether	ND	U	0.724	4.41	ug/Kg	1	09/21/2012 14:14
Ethyl Benzene	ND	U	0.622	4.41	ug/Kg	1	09/21/2012 14:14
Hexachlorobutadiene	ND	U	0.606	4.41	ug/Kg	1	09/21/2012 14:14
Isopropylbenzene (Cumene)	ND	U	0.548	4.41	ug/Kg	1	09/21/2012 14:14
Methyl Iodide	ND	U	0.675	4.41	ug/Kg	1	09/21/2012 14:14
Methylene chloride	ND	U	0.926	17.6	ug/Kg	1	09/21/2012 14:14
Naphthalene	ND	U	0.801	4.41	ug/Kg	1	09/21/2012 14:14
Styrene	ND	U	0.508	4.41	ug/Kg	1	09/21/2012 14:14
Tetrachloroethene	ND	U	0.662	4.41	ug/Kg	1	09/21/2012 14:14
Toluene	ND	U	0.607	4.41	ug/Kg	1	09/21/2012 14:14
Trichloroethene	ND	U	0.742	4.41	ug/Kg	1	09/21/2012 14:14
Trichlorofluoromethane	ND	U	0.890	4.41	ug/Kg	1	09/21/2012 14:14
Vinyl chloride	ND	U	0.838	4.41	ug/Kg	1	09/21/2012 14:14
Xylene (total)	ND	U	1.56	8.82	ug/Kg	1	09/21/2012 14:14
cis-1,2-Dichloroethene	ND	U	0.539	4.41	ug/Kg	1	09/21/2012 14:14
m,p-Xylene	ND	U	1.49	8.82	ug/Kg	1	09/21/2012 14:14
n-Propylbenzene	ND	U	0.645	4.41	ug/Kg	1	09/21/2012 14:14
o-Xylene	ND	U	0.675	4.41	ug/Kg	1	09/21/2012 14:14
sec-Butylbenzene	ND	U	0.529	4.41	ug/Kg	1	09/21/2012 14:14
tert-Butyl methyl ether (MTBE)	ND	U	0.701	4.41	ug/Kg	1	09/21/2012 14:14
tert-Butylbenzene	ND	U	0.593	4.41	ug/Kg	1	09/21/2012 14:14
trans-1,2-Dichloroethene	ND	U	0.644	4.41	ug/Kg	1	09/21/2012 14:14
trans-1,4-Dichloro-2-butene	ND	U	3.70	22.0	ug/Kg	1	09/21/2012 14:14
<b>Surrogates</b>							
1,2-Dichloroethane-d4	119			55.0-173	%	1	09/21/2012 14:14
4-Bromofluorobenzene	95.0			23.0-141	%	1	09/21/2012 14:14
Toluene d8	102			57.0-134	%	1	09/21/2012 14:14

**Batch Information**

Analytical Batch: VMS2564  
 Analytical Method: SW-846 8260B  
 Instrument: MSD9  
 Analyst: DVO

Prep Batch: VXX4030  
 Prep Method: SW-846 5035 SL  
 Prep Date/Time: 09/21/2012 09:06  
 Prep Initial Wt./Vol.: 6.19 g  
 Prep Extract Vol: 5 mL

## Results of 49DPT-09 (3ft)

Client Sample ID: 49DPT-09 (3ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002009-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 15:10  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 91.60

## Results by SW-846 8270D

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	U	28.8	326	ug/Kg	1	09/26/2012 16:27
1,2-Dichlorobenzene	ND	U	16.3	326	ug/Kg	1	09/26/2012 16:27
1,3-Dichlorobenzene	ND	U	22.0	326	ug/Kg	1	09/26/2012 16:27
1,4-Dichlorobenzene	ND	U	23.0	326	ug/Kg	1	09/26/2012 16:27
2,4,5-Trichlorophenol	ND	U	21.8	326	ug/Kg	1	09/26/2012 16:27
2,4,6-Trichlorophenol	ND	U	22.1	326	ug/Kg	1	09/26/2012 16:27
2,4-Dichlorophenol	ND	U	18.9	326	ug/Kg	1	09/26/2012 16:27
2,4-Dinitrophenol	ND	U	30.2	1630	ug/Kg	1	09/26/2012 16:27
2,4-Dinitrotoluene	ND	U	16.5	326	ug/Kg	1	09/26/2012 16:27
2,6-Dinitrotoluene	ND	U	23.4	326	ug/Kg	1	09/26/2012 16:27
2-Chloronaphthalene	ND	U	19.2	326	ug/Kg	1	09/26/2012 16:27
2-Chlorophenol	ND	U	17.3	326	ug/Kg	1	09/26/2012 16:27
2-Methylnaphthalene	ND	U	26.4	326	ug/Kg	1	09/26/2012 16:27
2-Methylphenol	ND	U	18.0	326	ug/Kg	1	09/26/2012 16:27
2-Nitroaniline	ND	U	21.5	326	ug/Kg	1	09/26/2012 16:27
2-Nitrophenol	ND	U	15.6	326	ug/Kg	1	09/26/2012 16:27
3 and/or 4-Methylphenol	ND	U	21.2	326	ug/Kg	1	09/26/2012 16:27
3,3'-Dichlorobenzidine	ND	U	15.6	653	ug/Kg	1	09/26/2012 16:27
3-Nitroaniline	ND	U	14.7	1630	ug/Kg	1	09/26/2012 16:27
4,6-Dinitro-2-methylphenol	ND	U	15.3	1630	ug/Kg	1	09/26/2012 16:27
4-Chloro-3-methylphenol	ND	U	16.3	326	ug/Kg	1	09/26/2012 16:27
4-Chloroaniline	ND	U	26.1	326	ug/Kg	1	09/26/2012 16:27
4-Chlorophenyl phenyl ether	ND	U	34.8	326	ug/Kg	1	09/26/2012 16:27
Acenaphthene	ND	U	14.8	326	ug/Kg	1	09/26/2012 16:27
Acenaphthylene	ND	U	13.8	326	ug/Kg	1	09/26/2012 16:27
Anthracene	ND	U	14.5	326	ug/Kg	1	09/26/2012 16:27
Benzo(a)anthracene	ND	U	17.9	326	ug/Kg	1	09/26/2012 16:27
Benzo(a)pyrene	26.0	J	18.5	326	ug/Kg	1	09/26/2012 16:27
Benzo(b)fluoranthene	ND	U	18.8	326	ug/Kg	1	09/26/2012 16:27
Benzo(g,h,i)perylene	ND	U	51.9	326	ug/Kg	1	09/26/2012 16:27
Benzo(k)fluoranthene	ND	U	39.1	326	ug/Kg	1	09/26/2012 16:27
Benzolic acid	ND	U	7.24	1630	ug/Kg	1	09/26/2012 16:27
Bis(2-Chloroethoxy)methane	ND	U	14.7	326	ug/Kg	1	09/26/2012 16:27
Bis(2-Chloroethyl)ether	ND	U	30.5	326	ug/Kg	1	09/26/2012 16:27
Bis(2-Chloroisopropyl)ether	ND	U	28.5	326	ug/Kg	1	09/26/2012 16:27
Bis(2-Ethylhexyl)phthalate	32.5	J	15.6	326	ug/Kg	1	09/26/2012 16:27
4-Bromophenyl phenyl ether	ND	U	21.5	326	ug/Kg	1	09/26/2012 16:27
Butyl benzyl phthalate	ND	U	28.4	326	ug/Kg	1	09/26/2012 16:27
Chrysene	ND	U	38.0	326	ug/Kg	1	09/26/2012 16:27
Di-n-butyl phthalate	ND	U	15.4	326	ug/Kg	1	09/26/2012 16:27
Di-n-octyl phthalate	ND	U	18.0	326	ug/Kg	1	09/26/2012 16:27
Dibenz(a,h)anthracene	ND	U	14.7	326	ug/Kg	1	09/26/2012 16:27
Dibenzofuran	ND	U	25.6	326	ug/Kg	1	09/26/2012 16:27

Print Date: 10/02/2012

N.C. Certification # 481

**Results of 49DPT-09 (3ft)**

Client Sample ID: 49DPT-09 (3ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002009-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 15:10  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 91.60

**Results by SW-846 8270D**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Diethyl phthalate	ND	U	17.6	326	ug/Kg	1	09/26/2012 16:27
Dimethyl phthalate	ND	U	25.0	326	ug/Kg	1	09/26/2012 16:27
2,4-Dimethylphenol	ND	U	23.9	326	ug/Kg	1	09/26/2012 16:27
Diphenylamine	ND	U	14.7	326	ug/Kg	1	09/26/2012 16:27
Fluoranthene	35.8	J	30.7	326	ug/Kg	1	09/26/2012 16:27
Fluorene	ND	U	17.3	326	ug/Kg	1	09/26/2012 16:27
Hexachlorobenzene	ND	U	30.9	1630	ug/Kg	1	09/26/2012 16:27
Hexachlorobutadiene	ND	U	19.5	326	ug/Kg	1	09/26/2012 16:27
Hexachlorocyclopentadiene	ND	U	98.8	653	ug/Kg	1	09/26/2012 16:27
Hexachloroethane	ND	U	18.8	326	ug/Kg	1	09/26/2012 16:27
Indeno(1,2,3-cd)pyrene	ND	U	25.4	326	ug/Kg	1	09/26/2012 16:27
Isophorone	ND	U	14.8	326	ug/Kg	1	09/26/2012 16:27
Naphthalene	ND	U	28.2	326	ug/Kg	1	09/26/2012 16:27
4-Nitroaniline	ND	U	18.8	1630	ug/Kg	1	09/26/2012 16:27
Nitrobenzene	ND	U	18.8	326	ug/Kg	1	09/26/2012 16:27
4-Nitrophenol	ND	U	32.1	1630	ug/Kg	1	09/26/2012 16:27
Pentachlorophenol	ND	U	26.1	1630	ug/Kg	1	09/26/2012 16:27
Phenanthrene	ND	U	21.5	326	ug/Kg	1	09/26/2012 16:27
Phenol	ND	U	30.5	326	ug/Kg	1	09/26/2012 16:27
Pyrene	39.1	J	13.8	326	ug/Kg	1	09/26/2012 16:27
n-Nitrosodi-n-propylamine	ND	U	93.4	326	ug/Kg	1	09/26/2012 16:27

**Surrogates**

2,4,6-Tribromophenol	85.0	41.0-129	%	1	09/26/2012 16:27
2-Fluorobiphenyl	93.0	48.0-123	%	1	09/26/2012 16:27
2-Fluorophenol	84.0	42.0-123	%	1	09/26/2012 16:27
Nitrobenzene-d5	88.0	46.0-117	%	1	09/26/2012 16:27
Phenol-d6	88.0	48.0-125	%	1	09/26/2012 16:27
Terphenyl-d14	105	44.0-140	%	1	09/26/2012 16:27

**Batch Information**

Analytical Batch: XMS1677  
 Analytical Method: SW-846 8270D  
 Instrument: MSD10  
 Analyst: CMP

Prep Batch: XXX3080  
 Prep Method: SW-846 3541  
 Prep Date/Time: 09/20/2012 17:46  
 Prep Initial Wt./Vol.: 33.49 g  
 Prep Extract Vol: 10 mL



### Results of 49DPT-10 (4ft)

Client Sample ID: 49DPT-10 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002010-B  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 15:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 89.60

### Results by SW-846 8260B

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	ND	U	0.660	4.66	ug/Kg	1	09/21/2012 18:25
1,1,1-Trichloroethane	ND	U	0.702	4.66	ug/Kg	1	09/21/2012 18:25
1,1,2,2-Tetrachloroethane	ND	U	1.09	4.66	ug/Kg	1	09/21/2012 18:25
1,1,2-Trichloroethane	ND	U	0.969	4.66	ug/Kg	1	09/21/2012 18:25
1,1-Dichloroethane	ND	U	0.501	4.66	ug/Kg	1	09/21/2012 18:25
1,1-Dichloroethene	ND	U	1.08	4.66	ug/Kg	1	09/21/2012 18:25
1,1-Dichloropropene	ND	U	0.630	4.66	ug/Kg	1	09/21/2012 18:25
1,2,3-Trichlorobenzene	ND	U	0.775	4.66	ug/Kg	1	09/21/2012 18:25
1,2,3-Trichloropropane	ND	U	0.959	4.66	ug/Kg	1	09/21/2012 18:25
1,2,4-Trichlorobenzene	ND	U	0.679	4.66	ug/Kg	1	09/21/2012 18:25
1,2,4-Trimethylbenzene	ND	U	0.593	4.66	ug/Kg	1	09/21/2012 18:25
1,2-Dibromo-3-chloropropane	ND	U	6.90	27.9	ug/Kg	1	09/21/2012 18:25
1,2-Dibromoethane	ND	U	1.22	4.66	ug/Kg	1	09/21/2012 18:25
1,2-Dichlorobenzene	ND	U	0.662	4.66	ug/Kg	1	09/21/2012 18:25
1,2-Dichloroethane	ND	U	0.850	4.66	ug/Kg	1	09/21/2012 18:25
1,2-Dichloropropane	ND	U	1.07	4.66	ug/Kg	1	09/21/2012 18:25
1,3,5-Trimethylbenzene	ND	U	0.566	4.66	ug/Kg	1	09/21/2012 18:25
1,3-Dichlorobenzene	ND	U	0.670	4.66	ug/Kg	1	09/21/2012 18:25
1,3-Dichloropropane	ND	U	0.819	4.66	ug/Kg	1	09/21/2012 18:25
1,4-Dichlorobenzene	ND	U	0.629	4.66	ug/Kg	1	09/21/2012 18:25
2,2-Dichloropropane	ND	U	0.687	4.66	ug/Kg	1	09/21/2012 18:25
2-Butanone	ND	U	3.15	23.3	ug/Kg	1	09/21/2012 18:25
2-Chlorotoluene	ND	U	0.873	4.66	ug/Kg	1	09/21/2012 18:25
2-Hexanone	ND	U	3.00	11.6	ug/Kg	1	09/21/2012 18:25
4-Chlorotoluene	ND	U	0.704	4.66	ug/Kg	1	09/21/2012 18:25
4-isopropyltoluene	ND	U	0.601	4.66	ug/Kg	1	09/21/2012 18:25
4-Methyl-2-pentanone	ND	U	3.48	11.6	ug/Kg	1	09/21/2012 18:25
Acetone	4.01	J	3.74	46.6	ug/Kg	1	09/21/2012 18:25
Benzene	ND	U	0.662	4.66	ug/Kg	1	09/21/2012 18:25
Bromobenzene	ND	U	0.649	4.66	ug/Kg	1	09/21/2012 18:25
Bromochloromethane	ND	U	0.876	4.66	ug/Kg	1	09/21/2012 18:25
Bromodichloromethane	ND	U	0.656	4.66	ug/Kg	1	09/21/2012 18:25
Bromoform	ND	U	0.674	4.66	ug/Kg	1	09/21/2012 18:25
Bromomethane	ND	U	1.35	4.66	ug/Kg	1	09/21/2012 18:25
n-Butylbenzene	ND	U	0.612	4.66	ug/Kg	1	09/21/2012 18:25
Carbon disulfide	ND	U	0.487	4.66	ug/Kg	1	09/21/2012 18:25
Carbon tetrachloride	ND	U	0.530	4.66	ug/Kg	1	09/21/2012 18:25
Chlorobenzene	ND	U	0.650	4.66	ug/Kg	1	09/21/2012 18:25
Chloroethane	ND	U	0.931	4.66	ug/Kg	1	09/21/2012 18:25
Chloroform	ND	U	0.593	4.66	ug/Kg	1	09/21/2012 18:25
Chloromethane	ND	U	1.33	4.66	ug/Kg	1	09/21/2012 18:25
Dibromochloromethane	ND	U	1.03	4.66	ug/Kg	1	09/21/2012 18:25
Dibromomethane	ND	U	0.822	4.66	ug/Kg	1	09/21/2012 18:25

Print Date: 10/02/2012

N.C. Certification # 481



### Results of 49DPT-10 (4ft)

Client Sample ID: 49DPT-10 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002010-B  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 15:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 89.60

### Results by SW-846 8260B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND	U	0.978	4.66	ug/Kg	1	09/21/2012 18:25
cis-1,3-Dichloropropene	ND	U	0.959	4.66	ug/Kg	1	09/21/2012 18:25
trans-1,3-Dichloropropene	ND	U	0.879	4.66	ug/Kg	1	09/21/2012 18:25
Diisopropyl Ether	ND	U	0.765	4.66	ug/Kg	1	09/21/2012 18:25
Ethyl Benzene	ND	U	0.657	4.66	ug/Kg	1	09/21/2012 18:25
Hexachlorobutadiene	ND	U	0.640	4.66	ug/Kg	1	09/21/2012 18:25
Isopropylbenzene (Cumene)	ND	U	0.579	4.66	ug/Kg	1	09/21/2012 18:25
Methyl Iodide	ND	U	0.714	4.66	ug/Kg	1	09/21/2012 18:25
Methylene chloride	ND	U	0.978	18.6	ug/Kg	1	09/21/2012 18:25
Naphthalene	ND	U	0.847	4.66	ug/Kg	1	09/21/2012 18:25
Styrene	ND	U	0.537	4.66	ug/Kg	1	09/21/2012 18:25
Tetrachloroethene	ND	U	0.700	4.66	ug/Kg	1	09/21/2012 18:25
Toluene	ND	U	0.641	4.66	ug/Kg	1	09/21/2012 18:25
Trichloroethene	ND	U	0.784	4.66	ug/Kg	1	09/21/2012 18:25
Trichlorofluoromethane	ND	U	0.941	4.66	ug/Kg	1	09/21/2012 18:25
Vinyl chloride	ND	U	0.885	4.66	ug/Kg	1	09/21/2012 18:25
Xylene (total)	ND	U	1.65	9.31	ug/Kg	1	09/21/2012 18:25
cis-1,2-Dichloroethene	ND	U	0.569	4.66	ug/Kg	1	09/21/2012 18:25
m,p-Xylene	ND	U	1.57	9.31	ug/Kg	1	09/21/2012 18:25
n-Propylbenzene	ND	U	0.682	4.66	ug/Kg	1	09/21/2012 18:25
o-Xylene	ND	U	0.714	4.66	ug/Kg	1	09/21/2012 18:25
sec-Butylbenzene	ND	U	0.559	4.66	ug/Kg	1	09/21/2012 18:25
tert-Butyl methyl ether (MTBE)	ND	U	0.741	4.66	ug/Kg	1	09/21/2012 18:25
tert-Butylbenzene	ND	U	0.627	4.66	ug/Kg	1	09/21/2012 18:25
trans-1,2-Dichloroethene	ND	U	0.680	4.66	ug/Kg	1	09/21/2012 18:25
trans-1,4-Dichloro-2-butene	ND	U	3.91	23.3	ug/Kg	1	09/21/2012 18:25

### Surrogates

1,2-Dichloroethane-d4	115	55.0-173	%	1	09/21/2012 18:25
4-Bromofluorobenzene	98.0	23.0-141	%	1	09/21/2012 18:25
Toluene d8	104	57.0-134	%	1	09/21/2012 18:25

### Batch Information

Analytical Batch: VMS2564

Prep Batch: VXX4030

Analytical Method: SW-846 8260B

Prep Method: SW-846 5035 SL

Instrument: MSD9

Prep Date/Time: 09/21/2012 09:07

Analyst: DVO

Prep Initial Wt./Vol.: 5.99 g

Prep Extract Vol: 5 mL



### Results of 49DPT-10 (4ft)

Client Sample ID: 49DPT-10 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002010-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 15:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 89.60

### Results by SW-846 8270D

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	U	31.7	360	ug/Kg	1	09/24/2012 21:47
1,2-Dichlorobenzene	ND	U	17.9	360	ug/Kg	1	09/24/2012 21:47
1,3-Dichlorobenzene	ND	U	24.2	360	ug/Kg	1	09/24/2012 21:47
1,4-Dichlorobenzene	ND	U	25.4	360	ug/Kg	1	09/24/2012 21:47
2,4,5-Trichlorophenol	ND	U	24.0	360	ug/Kg	1	09/24/2012 21:47
2,4,6-Trichlorophenol	ND	U	24.4	360	ug/Kg	1	09/24/2012 21:47
2,4-Dichlorophenol	ND	U	20.8	360	ug/Kg	1	09/24/2012 21:47
2,4-Dinitrophenol	ND	U	33.3	1800	ug/Kg	1	09/24/2012 21:47
2,4-Dinitrotoluene	ND	U	18.2	360	ug/Kg	1	09/24/2012 21:47
2,6-Dinitrotoluene	ND	U	25.7	360	ug/Kg	1	09/24/2012 21:47
2-Chloronaphthalene	ND	U	21.1	360	ug/Kg	1	09/24/2012 21:47
2-Chlorophenol	ND	U	19.1	360	ug/Kg	1	09/24/2012 21:47
2-Methylnaphthalene	ND	U	29.1	360	ug/Kg	1	09/24/2012 21:47
2-Methylphenol	ND	U	19.9	360	ug/Kg	1	09/24/2012 21:47
2-Nitroaniline	ND	U	23.7	360	ug/Kg	1	09/24/2012 21:47
2-Nitrophenol	ND	U	17.2	360	ug/Kg	1	09/24/2012 21:47
3 and/or 4-Methylphenol	ND	U	23.3	360	ug/Kg	1	09/24/2012 21:47
3,3'-Dichlorobenzidine	ND	U	17.2	719	ug/Kg	1	09/24/2012 21:47
3-Nitroaniline	ND	U	16.2	1800	ug/Kg	1	09/24/2012 21:47
4,6-Dinitro-2-methylphenol	ND	U	16.9	1800	ug/Kg	1	09/24/2012 21:47
4-Chloro-3-methylphenol	ND	U	17.9	360	ug/Kg	1	09/24/2012 21:47
4-Chloroaniline	ND	U	28.7	360	ug/Kg	1	09/24/2012 21:47
4-Chlorophenyl phenyl ether	ND	U	38.4	360	ug/Kg	1	09/24/2012 21:47
Acenaphthene	ND	U	16.3	360	ug/Kg	1	09/24/2012 21:47
Acenaphthylene	ND	U	15.2	360	ug/Kg	1	09/24/2012 21:47
Anthracene	ND	U	16.0	360	ug/Kg	1	09/24/2012 21:47
Benz(a)anthracene	ND	U	19.8	360	ug/Kg	1	09/24/2012 21:47
Benz(a)pyrene	ND	U	20.3	360	ug/Kg	1	09/24/2012 21:47
Benz(b)fluoranthene	ND	U	20.7	360	ug/Kg	1	09/24/2012 21:47
Benz(g,h,i)perylene	ND	U	57.2	360	ug/Kg	1	09/24/2012 21:47
Benz(k)fluoranthene	ND	U	43.1	360	ug/Kg	1	09/24/2012 21:47
Benzoic acid	ND	U	7.97	1800	ug/Kg	1	09/24/2012 21:47
Bis(2-Chloroethoxy)methane	ND	U	16.2	360	ug/Kg	1	09/24/2012 21:47
Bis(2-Chloroethyl)ether	ND	U	33.5	360	ug/Kg	1	09/24/2012 21:47
Bis(2-Chloroisopropyl)ether	ND	U	31.4	360	ug/Kg	1	09/24/2012 21:47
Bis(2-Ethylhexyl)phthalate	ND	U	17.2	360	ug/Kg	1	09/24/2012 21:47
4-Bromophenyl phenyl ether	ND	U	23.7	360	ug/Kg	1	09/24/2012 21:47
Butyl benzyl phthalate	ND	U	31.3	360	ug/Kg	1	09/24/2012 21:47
Chrysene	ND	U	41.8	360	ug/Kg	1	09/24/2012 21:47
Di-n-butyl phthalate	ND	U	17.0	360	ug/Kg	1	09/24/2012 21:47
Di-n-octyl phthalate	ND	U	19.9	360	ug/Kg	1	09/24/2012 21:47
Dibenz(a,h)anthracene	ND	U	16.2	360	ug/Kg	1	09/24/2012 21:47
Dibenzofuran	ND	U	28.1	360	ug/Kg	1	09/24/2012 21:47

Print Date: 10/02/2012

N.C. Certification # 481

**Results of 49DPT-10 (4ft)**

Client Sample ID: 49DPT-10 (4ft)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002010-E  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 15:30  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 89.60

**Results by SW-846 8270D**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Diethyl phthalate	ND	U	19.4	360	ug/Kg	1	09/24/2012 21:47
Dimethyl phthalate	ND	U	27.6	360	ug/Kg	1	09/24/2012 21:47
2,4-Dimethylphenol	ND	U	26.3	360	ug/Kg	1	09/24/2012 21:47
Diphenylamine	ND	U	16.2	360	ug/Kg	1	09/24/2012 21:47
Fluoranthene	ND	U	33.8	360	ug/Kg	1	09/24/2012 21:47
Fluorene	ND	U	19.1	360	ug/Kg	1	09/24/2012 21:47
Hexachlorobenzene	ND	U	34.0	1800	ug/Kg	1	09/24/2012 21:47
Hexachlorobutadiene	ND	U	21.5	360	ug/Kg	1	09/24/2012 21:47
Hexachlorocyclopentadiene	ND	U	109	719	ug/Kg	1	09/24/2012 21:47
Hexachloroethane	ND	U	20.7	360	ug/Kg	1	09/24/2012 21:47
Indeno(1,2,3-cd)pyrene	ND	U	28.0	360	ug/Kg	1	09/24/2012 21:47
Isophorone	ND	U	16.3	360	ug/Kg	1	09/24/2012 21:47
Naphthalene	ND	U	31.0	360	ug/Kg	1	09/24/2012 21:47
4-Nitroaniline	ND	U	20.7	1800	ug/Kg	1	09/24/2012 21:47
Nitrobenzene	ND	U	20.7	360	ug/Kg	1	09/24/2012 21:47
4-Nitrophenol	ND	U	35.4	1800	ug/Kg	1	09/24/2012 21:47
Pentachlorophenol	ND	U	28.7	1800	ug/Kg	1	09/24/2012 21:47
Phenanthrene	ND	U	23.7	360	ug/Kg	1	09/24/2012 21:47
Phenol	ND	U	33.5	360	ug/Kg	1	09/24/2012 21:47
Pyrene	ND	U	15.2	360	ug/Kg	1	09/24/2012 21:47
n-Nitrosodi-n-propylamine	ND	U	103	360	ug/Kg	1	09/24/2012 21:47

**Surrogates**

2,4,6-Tribromophenol	94.0		41.0-129	%	1	09/24/2012 21:47
2-Fluorobiphenyl	98.0		48.0-123	%	1	09/24/2012 21:47
2-Fluorophenol	87.0		42.0-123	%	1	09/24/2012 21:47
Nitrobenzene-d5	93.0		46.0-117	%	1	09/24/2012 21:47
Phenol-d6	95.0		48.0-125	%	1	09/24/2012 21:47
Terphenyl-d14	95.0		44.0-140	%	1	09/24/2012 21:47

**Batch Information**

Analytical Batch: XMS1673  
 Analytical Method: SW-846 8270D  
 Instrument: MSD10  
 Analyst: CMP

Prep Batch: XXX3080  
 Prep Method: SW-846 3541  
 Prep Date/Time: 09/20/2012 17:46  
 Prep Initial Wt./Vol.: 31.08 g  
 Prep Extract Vol: 10 mL

## Results of AMW2

Client Sample ID: AMW2  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002011-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:10  
 Received Date: 09/20/2012 08:35  
 Matrix: Water

## Results by SM 6200-B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.104	0.500	ug/L	1	09/28/2012 11:35
1,1,1-Trichloroethane	ND	U	0.123	0.500	ug/L	1	09/28/2012 11:35
1,1,2,2-Tetrachloroethane	ND	U	0.156	0.500	ug/L	1	09/28/2012 11:35
1,1,2-Trichloroethane	ND	U	0.126	0.500	ug/L	1	09/28/2012 11:35
1,1-Dichloroethane	ND	U	0.165	0.500	ug/L	1	09/28/2012 11:35
1,1-Dichloroethene	ND	U	0.212	0.500	ug/L	1	09/28/2012 11:35
1,1-Dichloropropene	ND	U	0.112	0.500	ug/L	1	09/28/2012 11:35
1,2,3-Trichlorobenzene	ND	U	0.110	0.500	ug/L	1	09/28/2012 11:35
1,2,3-Trichloropropane	ND	U	0.212	0.500	ug/L	1	09/28/2012 11:35
1,2,4-Trichlorobenzene	ND	U	0.0913	0.500	ug/L	1	09/28/2012 11:35
1,2,4-Trimethylbenzene	ND	U	0.0961	0.500	ug/L	1	09/28/2012 11:35
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1	09/28/2012 11:35
1,2-Dibromoethane	ND	U	0.120	0.500	ug/L	1	09/28/2012 11:35
1,2-Dichlorobenzene	ND	U	0.137	0.500	ug/L	1	09/28/2012 11:35
1,2-Dichloroethane	ND	U	0.167	0.500	ug/L	1	09/28/2012 11:35
1,2-Dichloropropane	ND	U	0.163	0.500	ug/L	1	09/28/2012 11:35
1,3,5-Trimethylbenzene	ND	U	0.113	0.500	ug/L	1	09/28/2012 11:35
1,3-Dichlorobenzene	ND	U	0.103	0.500	ug/L	1	09/28/2012 11:35
1,3-Dichloropropane	ND	U	0.189	0.500	ug/L	1	09/28/2012 11:35
1,4-Dichlorobenzene	ND	U	0.130	0.500	ug/L	1	09/28/2012 11:35
2,2-Dichloropropane	ND	U	0.393	0.500	ug/L	1	09/28/2012 11:35
2-Chlorotoluene	ND	U	0.113	0.500	ug/L	1	09/28/2012 11:35
4-Chlorotoluene	ND	U	0.125	0.500	ug/L	1	09/28/2012 11:35
4-Isopropyltoluene	ND	U	0.0769	0.500	ug/L	1	09/28/2012 11:35
Benzene	ND	U	0.113	0.500	ug/L	1	09/28/2012 11:35
Bromobenzene	ND	U	0.110	0.500	ug/L	1	09/28/2012 11:35
Bromochloromethane	ND	U	0.211	0.500	ug/L	1	09/28/2012 11:35
Bromodichloromethane	ND	U	0.110	0.500	ug/L	1	09/28/2012 11:35
Bromoform	ND	U	0.0974	0.500	ug/L	1	09/28/2012 11:35
Bromomethane	ND	U	0.237	0.500	ug/L	1	09/28/2012 11:35
n-Butylbenzene	ND	U	0.0769	0.500	ug/L	1	09/28/2012 11:35
Carbon tetrachloride	ND	U	0.101	0.500	ug/L	1	09/28/2012 11:35
Chlorobenzene	ND	U	0.116	0.500	ug/L	1	09/28/2012 11:35
Chloroethane	ND	U	0.311	0.500	ug/L	1	09/28/2012 11:35
Chloroform	0.390	J	0.139	0.500	ug/L	1	09/28/2012 11:35
Chloromethane	ND	U	0.448	0.500	ug/L	1	09/28/2012 11:35
Dibromochloromethane	ND	U	0.134	0.500	ug/L	1	09/28/2012 11:35
Dibromomethane	ND	U	0.168	0.500	ug/L	1	09/28/2012 11:35
Dichlorodifluoromethane	ND	U	0.171	5.00	ug/L	1	09/28/2012 11:35
cis-1,3-Dichloropropene	ND	U	0.0767	0.500	ug/L	1	09/28/2012 11:35
trans-1,3-Dichloropropene	ND	U	0.0862	0.500	ug/L	1	09/28/2012 11:35
Disopropyl Ether	ND	U	0.155	0.500	ug/L	1	09/28/2012 11:35
Ethyl Benzene	ND	U	0.0877	0.500	ug/L	1	09/28/2012 11:35

Print Date: 10/02/2012

N.C. Certification # 481

**Results of AMW2**

**Client Sample ID:** AMW2  
**Client Project ID:** Kerr Ave. PSAs U-3338B  
**Lab Sample ID:** 31203002011-A  
**Lab Project ID:** 31203002

**Collection Date:** 09/19/2012 14:10  
**Received Date:** 09/20/2012 08:35  
**Matrix:** Water

**Results by SM 6200-B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	U	0.0792	0.500	ug/L	1	09/28/2012 11:35
Isopropylbenzene (Cumene)	ND	U	0.0869	0.500	ug/L	1	09/28/2012 11:35
Methylene chloride	0.380	J	0.152	5.00	ug/L	1	09/28/2012 11:35
Naphthalene	ND	U	0.0855	0.500	ug/L	1	09/28/2012 11:35
Styrene	ND	U	0.102	0.500	ug/L	1	09/28/2012 11:35
Tetrachloroethene	ND	U	0.155	0.500	ug/L	1	09/28/2012 11:35
Toluene	0.140	J	0.133	0.500	ug/L	1	09/28/2012 11:35
Trichloroethene	ND	U	0.125	0.500	ug/L	1	09/28/2012 11:35
Trichlorofluoromethane	ND	U	0.137	0.500	ug/L	1	09/28/2012 11:35
Vinyl chloride	ND	U	0.124	0.500	ug/L	1	09/28/2012 11:35
Xylene (total)	ND	U	0.269	1.50	ug/L	1	09/28/2012 11:35
cis-1,2-Dichloroethene	ND	U	0.136	0.500	ug/L	1	09/28/2012 11:35
m,p-Xylene	ND	U	0.182	1.00	ug/L	1	09/28/2012 11:35
n-Propylbenzene	ND	U	0.113	0.500	ug/L	1	09/28/2012 11:35
o-Xylene	ND	U	0.0874	0.500	ug/L	1	09/28/2012 11:35
sec-Butylbenzene	ND	U	0.112	0.500	ug/L	1	09/28/2012 11:35
tert-Butyl methyl ether (MTBE)	ND	U	0.144	0.500	ug/L	1	09/28/2012 11:35
tert-Butylbenzene	ND	U	0.0855	0.500	ug/L	1	09/28/2012 11:35
trans-1,2-Dichloroethene	ND	U	0.223	0.500	ug/L	1	09/28/2012 11:35

**Surrogates**

1,2-Dichloroethane-d4	106	64.0-140	%	1	09/28/2012 11:35
4-Bromofluorobenzene	99.0	85.0-115	%	1	09/28/2012 11:35
Toluene d8	103	82.0-117	%	1	09/28/2012 11:35

**Batch Information**

Analytical Batch: VMS2587  
Analytical Method: SM 6200-B  
Instrument: MSD8  
Analyst: DVO

Prep Batch: VXX4059  
Prep Method: SM 6200-B Prep  
Prep Date/Time: 09/28/2012 08:34  
Prep Initial Wt./Vol.: 40 mL  
Prep Extract Vol: 40 mL

**Results of AMW2**

Client Sample ID: AMW2  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002011-D  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 14:10  
 Received Date: 09/20/2012 08:35  
 Matrix: Water

**Results by EPA 625**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	U	1.75	5.06	ug/L	1	09/27/2012 0:06
2,4-Dinitrotoluene	ND	U	1.86	5.06	ug/L	1	09/27/2012 0:06
2,6-Dinitrotoluene	ND	U	1.90	5.06	ug/L	1	09/27/2012 0:06
2-Chloronaphthalene	ND	U	2.02	5.06	ug/L	1	09/27/2012 0:06
3,3'-Dichlorobenzidine	ND	U	1.77	10.1	ug/L	1	09/27/2012 0:06
4-Chlorophenyl phenyl ether	ND	U	2.49	5.06	ug/L	1	09/27/2012 0:06
Acenaphthene	ND	U	2.09	5.06	ug/L	1	09/27/2012 0:06
Acenaphthylene	ND	U	2.02	5.06	ug/L	1	09/27/2012 0:06
Anthracene	ND	U	1.95	5.06	ug/L	1	09/27/2012 0:06
Benz(a)anthracene	ND	U	1.98	5.06	ug/L	1	09/27/2012 0:06
Benz(a)pyrene	ND	U	1.88	5.06	ug/L	1	09/27/2012 0:06
Benz(b)fluoranthene	ND	U	1.98	5.06	ug/L	1	09/27/2012 0:06
Benz(g,h,i)perylene	ND	U	2.18	5.06	ug/L	1	09/27/2012 0:06
Benz(k)fluoranthene	ND	U	2.34	5.06	ug/L	1	09/27/2012 0:06
Bis(2-Chloroethoxy)methane	ND	U	2.15	5.06	ug/L	1	09/27/2012 0:06
Bis(2-Chloroethyl)ether	ND	U	2.24	5.06	ug/L	1	09/27/2012 0:06
Bis(2-Chloroisopropyl)ether	ND	U	2.06	5.06	ug/L	1	09/27/2012 0:06
Bis(2-Ethylhexyl)phthalate	ND	U	1.97	5.06	ug/L	1	09/27/2012 0:06
4-Bromophenyl phenyl ether	ND	U	2.06	5.06	ug/L	1	09/27/2012 0:06
Butyl benzyl phthalate	ND	U	1.91	5.06	ug/L	1	09/27/2012 0:06
Chrysene	ND	U	2.23	5.06	ug/L	1	09/27/2012 0:06
Di-n-butyl phthalate	ND	U	1.93	5.06	ug/L	1	09/27/2012 0:06
Di-n-octyl phthalate	ND	U	1.48	5.06	ug/L	1	09/27/2012 0:06
Dibenz(a,h)anthracene	ND	U	2.04	5.06	ug/L	1	09/27/2012 0:06
Diethyl phthalate	ND	U	2.13	5.06	ug/L	1	09/27/2012 0:06
Dimethyl phthalate	ND	U	2.17	5.06	ug/L	1	09/27/2012 0:06
Diphenylamine	ND	U	2.04	5.06	ug/L	1	09/27/2012 0:06
Fluoranthene	ND	U	2.04	5.06	ug/L	1	09/27/2012 0:06
Fluorene	ND	U	2.47	5.06	ug/L	1	09/27/2012 0:06
Hexachlorobenzene	ND	U	1.95	5.06	ug/L	1	09/27/2012 0:06
Hexachlorobutadiene	ND	U	1.54	5.06	ug/L	1	09/27/2012 0:06
Hexachlorocyclopentadiene	ND	U	0.798	10.1	ug/L	1	09/27/2012 0:06
Hexachloroethane	ND	U	1.42	5.06	ug/L	1	09/27/2012 0:06
Indeno(1,2,3-cd)pyrene	ND	U	2.04	5.06	ug/L	1	09/27/2012 0:06
Isophorone	ND	U	2.12	5.06	ug/L	1	09/27/2012 0:06
Naphthalene	ND	U	1.96	5.06	ug/L	1	09/27/2012 0:06
Nitrobenzene	ND	U	2.22	5.06	ug/L	1	09/27/2012 0:06
Phenanthrene	ND	U	2.01	5.06	ug/L	1	09/27/2012 0:06
Pyrene	ND	U	2.03	5.06	ug/L	1	09/27/2012 0:06
n-Nitrosodi-n-propylamine	ND	U	2.26	5.06	ug/L	1	09/27/2012 0:06
<b>Surrogates</b>							
2-Fluorobiphenyl	88.2			50.0-107	%	1	09/27/2012 0:06



### Results of AMW2

Client Sample ID: **AMW2**  
Client Project ID: **Kerr Ave. PSAs U-3338B**  
Lab Sample ID: **31203002011-D**  
Lab Project ID: **31203002**

Collection Date: **09/19/2012 14:10**  
Received Date: **09/20/2012 08:35**  
Matrix: **Water**

### Results by EPA 625

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Nitrobenzene-d5	82.6			46.0-118	%	1	09/27/2012 0:06
Terphenyl-d14	98.7			22.1-142	%	1	09/27/2012 0:06

### Batch Information

Analytical Batch: **XMS1678**  
Analytical Method: **EPA 625**  
Instrument: **MSD10**  
Analyst: **CMP**

Prep Batch: **XXX3088**  
Prep Method: **EPA 625**  
Prep Date/Time: **09/24/2012 10:10**  
Prep Initial Wt./Vol.: **988 mL**  
Prep Extract Vol: **5 mL**



### Results of AMW3

Client Sample ID: AMW3

Client Project ID: Kerr Ave. PSAs U-3338B

Lab Sample ID: 31203002012-A

Lab Project ID: 31203002

Collection Date: 09/19/2012 15:50

Received Date: 09/20/2012 08:35

Matrix: Water

### Results by SM 6200-B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.104	0.500	ug/L	1	09/28/2012 11:10
1,1,1-Trichloroethane	ND	U	0.123	0.500	ug/L	1	09/28/2012 11:10
1,1,2,2-Tetrachloroethane	ND	U	0.156	0.500	ug/L	1	09/28/2012 11:10
1,1,2-Trichloroethane	ND	U	0.126	0.500	ug/L	1	09/28/2012 11:10
1,1-Dichloroethane	ND	U	0.165	0.500	ug/L	1	09/28/2012 11:10
1,1-Dichloroethene	ND	U	0.212	0.500	ug/L	1	09/28/2012 11:10
1,1-Dichloropropene	ND	U	0.112	0.500	ug/L	1	09/28/2012 11:10
1,2,3-Trichlorobenzene	ND	U	0.110	0.500	ug/L	1	09/28/2012 11:10
1,2,3-Trichloropropane	ND	U	0.212	0.500	ug/L	1	09/28/2012 11:10
1,2,4-Trichlorobenzene	ND	U	0.0913	0.500	ug/L	1	09/28/2012 11:10
1,2,4-Trimethylbenzene	ND	U	0.0961	0.500	ug/L	1	09/28/2012 11:10
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1	09/28/2012 11:10
1,2-Dibromoethane	ND	U	0.120	0.500	ug/L	1	09/28/2012 11:10
1,2-Dichlorobenzene	ND	U	0.137	0.500	ug/L	1	09/28/2012 11:10
1,2-Dichloroethane	ND	U	0.167	0.500	ug/L	1	09/28/2012 11:10
1,2-Dichloropropane	ND	U	0.163	0.500	ug/L	1	09/28/2012 11:10
1,3,5-Trimethylbenzene	ND	U	0.113	0.500	ug/L	1	09/28/2012 11:10
1,3-Dichlorobenzene	ND	U	0.103	0.500	ug/L	1	09/28/2012 11:10
1,3-Dichloropropane	ND	U	0.189	0.500	ug/L	1	09/28/2012 11:10
1,4-Dichlorobenzene	ND	U	0.130	0.500	ug/L	1	09/28/2012 11:10
2,2-Dichloropropane	ND	U	0.393	0.500	ug/L	1	09/28/2012 11:10
2-Chlorotoluene	ND	U	0.113	0.500	ug/L	1	09/28/2012 11:10
4-Chlorotoluene	ND	U	0.125	0.500	ug/L	1	09/28/2012 11:10
4-Isopropyltoluene	ND	U	0.0769	0.500	ug/L	1	09/28/2012 11:10
Benzene	ND	U	0.113	0.500	ug/L	1	09/28/2012 11:10
Bromobenzene	ND	U	0.110	0.500	ug/L	1	09/28/2012 11:10
Bromochloromethane	ND	U	0.211	0.500	ug/L	1	09/28/2012 11:10
Bromodichloromethane	ND	U	0.110	0.500	ug/L	1	09/28/2012 11:10
Bromoform	ND	U	0.0974	0.500	ug/L	1	09/28/2012 11:10
Bromomethane	ND	U	0.237	0.500	ug/L	1	09/28/2012 11:10
n-Butylbenzene	ND	U	0.0769	0.500	ug/L	1	09/28/2012 11:10
Carbon tetrachloride	ND	U	0.101	0.500	ug/L	1	09/28/2012 11:10
Chlorobenzene	ND	U	0.116	0.500	ug/L	1	09/28/2012 11:10
Chloroethane	ND	U	0.311	0.500	ug/L	1	09/28/2012 11:10
Chloroform	ND	U	0.139	0.500	ug/L	1	09/28/2012 11:10
Chloromethane	ND	U	0.448	0.500	ug/L	1	09/28/2012 11:10
Dibromochloromethane	ND	U	0.134	0.500	ug/L	1	09/28/2012 11:10
Dibromomethane	ND	U	0.168	0.500	ug/L	1	09/28/2012 11:10
Dichlorodifluoromethane	ND	U	0.171	5.00	ug/L	1	09/28/2012 11:10
cis-1,3-Dichloropropene	ND	U	0.0767	0.500	ug/L	1	09/28/2012 11:10
trans-1,3-Dichloropropene	ND	U	0.0862	0.500	ug/L	1	09/28/2012 11:10
Diisopropyl Ether	ND	U	0.155	0.500	ug/L	1	09/28/2012 11:10
Ethyl Benzene	ND	U	0.0877	0.500	ug/L	1	09/28/2012 11:10

Print Date: 10/02/2012

N.C. Certification # 481



### Results of AMW3

Client Sample ID: AMW3  
Client Project ID: Kerr Ave. PSAs U-3338B  
Lab Sample ID: 31203002012-A  
Lab Project ID: 31203002

Collection Date: 09/19/2012 15:50  
Received Date: 09/20/2012 08:35  
Matrix: Water

### Results by SM 6200-B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	U	0.0792	0.500	ug/L	1	09/28/2012 11:10
Isopropylbenzene (Cumene)	ND	U	0.0869	0.500	ug/L	1	09/28/2012 11:10
Methylene chloride	ND	U	0.152	5.00	ug/L	1	09/28/2012 11:10
Naphthalene	ND	U	0.0855	0.500	ug/L	1	09/28/2012 11:10
Styrene	ND	U	0.102	0.500	ug/L	1	09/28/2012 11:10
Tetrachloroethene	ND	U	0.155	0.500	ug/L	1	09/28/2012 11:10
Toluene	ND	U	0.133	0.500	ug/L	1	09/28/2012 11:10
Trichloroethene	ND	U	0.125	0.500	ug/L	1	09/28/2012 11:10
Trichlorofluoromethane	ND	U	0.137	0.500	ug/L	1	09/28/2012 11:10
Vinyl chloride	ND	U	0.124	0.500	ug/L	1	09/28/2012 11:10
Xylene (total)	ND	U	0.269	1.50	ug/L	1	09/28/2012 11:10
cis-1,2-Dichloroethene	ND	U	0.136	0.500	ug/L	1	09/28/2012 11:10
m,p-Xylene	ND	U	0.182	1.00	ug/L	1	09/28/2012 11:10
n-Propylbenzene	ND	U	0.113	0.500	ug/L	1	09/28/2012 11:10
o-Xylene	ND	U	0.0874	0.500	ug/L	1	09/28/2012 11:10
sec-Butylbenzene	ND	U	0.112	0.500	ug/L	1	09/28/2012 11:10
tert-Butyl methyl ether (MTBE)	0.410	J	0.144	0.500	ug/L	1	09/28/2012 11:10
tert-Butylbenzene	ND	U	0.0855	0.500	ug/L	1	09/28/2012 11:10
trans-1,2-Dichloroethene	ND	U	0.223	0.500	ug/L	1	09/28/2012 11:10
<b>Surrogates</b>							
1,2-Dichloroethane-d4	103			64.0-140	%	1	09/28/2012 11:10
4-Bromofluorobenzene	106			85.0-115	%	1	09/28/2012 11:10
Toluene d8	101			82.0-117	%	1	09/28/2012 11:10

### Batch Information

Analytical Batch: VMS2587  
Analytical Method: SM 6200-B  
Instrument: MSD8  
Analyst: DVO

Prep Batch: VXX4059  
Prep Method: SM 6200-B Prep  
Prep Date/Time: 09/28/2012 08:34  
Prep Initial Wt./Vol.: 40 mL  
Prep Extract Vol: 40 mL

**Results of AMW3**

Client Sample ID: AMW3

Client Project ID: Kerr Ave. PSAs U-3338B

Lab Sample ID: 31203002012-D

Lab Project ID: 31203002

Collection Date: 09/19/2012 15:50

Received Date: 09/20/2012 08:35

Matrix: Water

**Results by EPA 625**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
1,2,4-Trichlorobenzene	ND	U	1.74	5.03	ug/L	1	09/27/2012 0:29
2,4-Dinitrotoluene	ND	U	1.85	5.03	ug/L	1	09/27/2012 0:29
2,6-Dinitrotoluene	ND	U	1.89	5.03	ug/L	1	09/27/2012 0:29
2-Chloronaphthalene	ND	U	2.01	5.03	ug/L	1	09/27/2012 0:29
3,3'-Dichlorobenzidine	ND	U	1.76	10.1	ug/L	1	09/27/2012 0:29
4-Chlorophenyl phenyl ether	ND	U	2.47	5.03	ug/L	1	09/27/2012 0:29
Acenaphthene	ND	U	2.07	5.03	ug/L	1	09/27/2012 0:29
Acenaphthylene	ND	U	2.01	5.03	ug/L	1	09/27/2012 0:29
Anthracene	ND	U	1.94	5.03	ug/L	1	09/27/2012 0:29
Benzo(a)anthracene	ND	U	1.97	5.03	ug/L	1	09/27/2012 0:29
Benzo(a)pyrene	ND	U	1.87	5.03	ug/L	1	09/27/2012 0:29
Benzo(b)fluoranthene	ND	U	1.97	5.03	ug/L	1	09/27/2012 0:29
Benzo(g,h,i)perylene	ND	U	2.16	5.03	ug/L	1	09/27/2012 0:29
Benzo(k)fluoranthene	ND	U	2.32	5.03	ug/L	1	09/27/2012 0:29
Bis(2-Chloroethoxy)methane	ND	U	2.13	5.03	ug/L	1	09/27/2012 0:29
Bis(2-Chloroethyl)ether	ND	U	2.22	5.03	ug/L	1	09/27/2012 0:29
Bis(2-Chloroisopropyl)ether	ND	U	2.05	5.03	ug/L	1	09/27/2012 0:29
Bis(2-Ethylhexyl)phthalate	ND	U	1.96	5.03	ug/L	1	09/27/2012 0:29
4-Bromophenyl phenyl ether	ND	U	2.05	5.03	ug/L	1	09/27/2012 0:29
Butyl benzyl phthalate	ND	U	1.90	5.03	ug/L	1	09/27/2012 0:29
Chrysene	ND	U	2.21	5.03	ug/L	1	09/27/2012 0:29
Di-n-butyl phthalate	ND	U	1.92	5.03	ug/L	1	09/27/2012 0:29
Di-n-octyl phthalate	ND	U	1.47	5.03	ug/L	1	09/27/2012 0:29
Dibenz(a,h)anthracene	ND	U	2.03	5.03	ug/L	1	09/27/2012 0:29
Diethyl phthalate	ND	U	2.11	5.03	ug/L	1	09/27/2012 0:29
Dimethyl phthalate	ND	U	2.15	5.03	ug/L	1	09/27/2012 0:29
Diphenylamine	ND	U	2.03	5.03	ug/L	1	09/27/2012 0:29
Fluoranthene	ND	U	2.03	5.03	ug/L	1	09/27/2012 0:29
Fluorene	ND	U	2.45	5.03	ug/L	1	09/27/2012 0:29
Hexachlorobenzene	ND	U	1.94	5.03	ug/L	1	09/27/2012 0:29
Hexachlorobutadiene	ND	U	1.53	5.03	ug/L	1	09/27/2012 0:29
Hexachlorocyclopentadiene	ND	U	0.792	10.1	ug/L	1	09/27/2012 0:29
Hexachloroethane	ND	U	1.41	5.03	ug/L	1	09/27/2012 0:29
Indeno(1,2,3-cd)pyrene	ND	U	2.03	5.03	ug/L	1	09/27/2012 0:29
Isophorone	ND	U	2.10	5.03	ug/L	1	09/27/2012 0:29
Naphthalene	ND	U	1.95	5.03	ug/L	1	09/27/2012 0:29
Nitrobenzene	ND	U	2.20	5.03	ug/L	1	09/27/2012 0:29
Phenanthrene	ND	U	2.00	5.03	ug/L	1	09/27/2012 0:29
Pyrene	ND	U	2.02	5.03	ug/L	1	09/27/2012 0:29
n-Nitrosodi-n-propylamine	ND	U	2.24	5.03	ug/L	1	09/27/2012 0:29

**Surrogates**

2-Fluorobiphenyl	95.3	50.0-107	%	1	09/27/2012 0:29
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Print Date: 10/02/2012

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**Results of AMW3**Client Sample ID: **AMW3**Client Project ID: **Kerr Ave. PSAs U-3338B**Lab Sample ID: **31203002012-D**Lab Project ID: **31203002**Collection Date: **09/19/2012 15:50**Received Date: **09/20/2012 08:35**Matrix: **Water****Results by EPA 625**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Nitrobenzene-d5	88.4			46.0-118	%	1	09/27/2012 0:29
Terphenyl-d14	107			22.1-142	%	1	09/27/2012 0:29

**Batch Information**Analytical Batch: **XMS1678**Analytical Method: **EPA 625**Instrument: **MSD10**Analyst: **CMP**Prep Batch: **XXX3088**Prep Method: **EPA 625**Prep Date/Time: **09/24/2012 10:10**Prep Initial Wt./Vol.: **995 mL**Prep Extract Vol: **5 mL**



### Results of Trip Blank (Not on COC)

Client Sample ID: Trip Blank (Not on COC)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002013-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 00:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Water

### Results by SM 6200-B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.104	0.500	ug/L	1	09/28/2012 10:46
1,1,1-Trichloroethane	ND	U	0.123	0.500	ug/L	1	09/28/2012 10:46
1,1,2,2-Tetrachloroethane	ND	U	0.156	0.500	ug/L	1	09/28/2012 10:46
1,1,2-Trichloroethane	ND	U	0.126	0.500	ug/L	1	09/28/2012 10:46
1,1-Dichloroethane	ND	U	0.165	0.500	ug/L	1	09/28/2012 10:46
1,1-Dichloroethene	ND	U	0.212	0.500	ug/L	1	09/28/2012 10:46
1,1-Dichloropropene	ND	U	0.112	0.500	ug/L	1	09/28/2012 10:46
1,2,3-Trichlorobenzene	ND	U	0.110	0.500	ug/L	1	09/28/2012 10:46
1,2,3-Trichloropropane	ND	U	0.212	0.500	ug/L	1	09/28/2012 10:46
1,2,4-Trichlorobenzene	ND	U	0.0913	0.500	ug/L	1	09/28/2012 10:46
1,2,4-Trimethylbenzene	ND	U	0.0961	0.500	ug/L	1	09/28/2012 10:46
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1	09/28/2012 10:46
1,2-Dibromoethane	ND	U	0.120	0.500	ug/L	1	09/28/2012 10:46
1,2-Dichlorobenzene	ND	U	0.137	0.500	ug/L	1	09/28/2012 10:46
1,2-Dichloroethane	ND	U	0.167	0.500	ug/L	1	09/28/2012 10:46
1,2-Dichloropropane	ND	U	0.163	0.500	ug/L	1	09/28/2012 10:46
1,3,5-Trimethylbenzene	ND	U	0.113	0.500	ug/L	1	09/28/2012 10:46
1,3-Dichlorobenzene	ND	U	0.103	0.500	ug/L	1	09/28/2012 10:46
1,3-Dichloropropane	ND	U	0.189	0.500	ug/L	1	09/28/2012 10:46
1,4-Dichlorobenzene	ND	U	0.130	0.500	ug/L	1	09/28/2012 10:46
2,2-Dichloropropane	ND	U	0.393	0.500	ug/L	1	09/28/2012 10:46
2-Chlorotoluene	ND	U	0.113	0.500	ug/L	1	09/28/2012 10:46
4-Chlorotoluene	ND	U	0.125	0.500	ug/L	1	09/28/2012 10:46
4-Isopropyltoluene	ND	U	0.0769	0.500	ug/L	1	09/28/2012 10:46
Benzene	ND	U	0.113	0.500	ug/L	1	09/28/2012 10:46
Bromobenzene	ND	U	0.110	0.500	ug/L	1	09/28/2012 10:46
Bromochloromethane	ND	U	0.211	0.500	ug/L	1	09/28/2012 10:46
Bromodichloromethane	ND	U	0.110	0.500	ug/L	1	09/28/2012 10:46
Bromoform	ND	U	0.0974	0.500	ug/L	1	09/28/2012 10:46
Bromomethane	ND	U	0.237	0.500	ug/L	1	09/28/2012 10:46
n-Butylbenzene	ND	U	0.0769	0.500	ug/L	1	09/28/2012 10:46
Carbon tetrachloride	ND	U	0.101	0.500	ug/L	1	09/28/2012 10:46
Chlorobenzene	ND	U	0.116	0.500	ug/L	1	09/28/2012 10:46
Chloroethane	ND	U	0.311	0.500	ug/L	1	09/28/2012 10:46
Chloroform	ND	U	0.139	0.500	ug/L	1	09/28/2012 10:46
Chloromethane	ND	U	0.448	0.500	ug/L	1	09/28/2012 10:46
Dibromochloromethane	ND	U	0.134	0.500	ug/L	1	09/28/2012 10:46
Dibromomethane	ND	U	0.168	0.500	ug/L	1	09/28/2012 10:46
Dichlorodifluoromethane	ND	U	0.171	5.00	ug/L	1	09/28/2012 10:46
cis-1,3-Dichloropropene	ND	U	0.0767	0.500	ug/L	1	09/28/2012 10:46
trans-1,3-Dichloropropene	ND	U	0.0862	0.500	ug/L	1	09/28/2012 10:46
Diisopropyl Ether	ND	U	0.155	0.500	ug/L	1	09/28/2012 10:46
Ethyl Benzene	ND	U	0.0877	0.500	ug/L	1	09/28/2012 10:46

Print Date: 10/02/2012

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### Results of Trip Blank (Not on COC)

Client Sample ID: Trip Blank (Not on COC)  
Client Project ID: Kerr Ave. PSAs U-3338B  
Lab Sample ID: 31203002013-A  
Lab Project ID: 31203002

Collection Date: 09/19/2012 00:00  
Received Date: 09/20/2012 08:35  
Matrix: Water

### Results by SM 6200-B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	U	0.0792	0.500	ug/L	1	09/28/2012 10:46
Isopropylbenzene (Cumene)	ND	U	0.0869	0.500	ug/L	1	09/28/2012 10:46
Methylene chloride	ND	U	0.152	5.00	ug/L	1	09/28/2012 10:46
Naphthalene	ND	U	0.0855	0.500	ug/L	1	09/28/2012 10:46
Styrene	ND	U	0.102	0.500	ug/L	1	09/28/2012 10:46
Tetrachloroethene	ND	U	0.155	0.500	ug/L	1	09/28/2012 10:46
Toluene	ND	U	0.133	0.500	ug/L	1	09/28/2012 10:46
Trichloroethene	ND	U	0.125	0.500	ug/L	1	09/28/2012 10:46
Trichlorofluoromethane	ND	U	0.137	0.500	ug/L	1	09/28/2012 10:46
Vinyl chloride	ND	U	0.124	0.500	ug/L	1	09/28/2012 10:46
Xylene (total)	ND	U	0.269	1.50	ug/L	1	09/28/2012 10:46
cis-1,2-Dichloroethene	ND	U	0.136	0.500	ug/L	1	09/28/2012 10:46
m,p-Xylene	ND	U	0.182	1.00	ug/L	1	09/28/2012 10:46
n-Propylbenzene	ND	U	0.113	0.500	ug/L	1	09/28/2012 10:46
o-Xylene	ND	U	0.0874	0.500	ug/L	1	09/28/2012 10:46
sec-Butylbenzene	ND	U	0.112	0.500	ug/L	1	09/28/2012 10:46
tert-Butyl methyl ether (MTBE)	ND	U	0.144	0.500	ug/L	1	09/28/2012 10:46
tert-Butylbenzene	ND	U	0.0855	0.500	ug/L	1	09/28/2012 10:46
trans-1,2-Dichloroethene	ND	U	0.223	0.500	ug/L	1	09/28/2012 10:46

### Surrogates

1,2-Dichloroethane-d4	99.6	64.0-140	%	1	09/28/2012 10:46
4-Bromofluorobenzene	98.6	85.0-115	%	1	09/28/2012 10:46
Toluene d8	103	82.0-117	%	1	09/28/2012 10:46

### Batch Information

Analytical Batch: VMS2587  
Analytical Method: SM 6200-B  
Instrument: MSD8  
Analyst: DVO

Prep Batch: VXX4059  
Prep Method: SM 6200-B Prep  
Prep Date/Time: 09/28/2012 08:34  
Prep Initial Wt./Vol.: 40 mL  
Prep Extract Vol: 40 mL

**Results of Trip Blanks (Not on COC)**

Client Sample ID: Trip Blanks (Not on COC)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002014-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 00:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 100.00

**Results by SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.709	5.00	ug/Kg	1	09/21/2012 17:58
1,1,1-Trichloroethane	ND	U	0.754	5.00	ug/Kg	1	09/21/2012 17:58
1,1,2,2-Tetrachloroethane	ND	U	1.17	5.00	ug/Kg	1	09/21/2012 17:58
1,1,2-Trichloroethane	ND	U	1.04	5.00	ug/Kg	1	09/21/2012 17:58
1,1-Dichloroethane	ND	U	0.538	5.00	ug/Kg	1	09/21/2012 17:58
1,1-Dichloroethene	ND	U	1.16	5.00	ug/Kg	1	09/21/2012 17:58
1,1-Dichloropropene	ND	U	0.676	5.00	ug/Kg	1	09/21/2012 17:58
1,2,3-Trichlorobenzene	ND	U	0.832	5.00	ug/Kg	1	09/21/2012 17:58
1,2,3-Trichloropropane	ND	U	1.03	5.00	ug/Kg	1	09/21/2012 17:58
1,2,4-Trichlorobenzene	ND	U	0.729	5.00	ug/Kg	1	09/21/2012 17:58
1,2,4-Trimethylbenzene	ND	U	0.637	5.00	ug/Kg	1	09/21/2012 17:58
1,2-Dibromo-3-chloropropane	ND	U	7.41	30.0	ug/Kg	1	09/21/2012 17:58
1,2-Dibromoethane	ND	U	1.31	5.00	ug/Kg	1	09/21/2012 17:58
1,2-Dichlorobenzene	ND	U	0.711	5.00	ug/Kg	1	09/21/2012 17:58
1,2-Dichloroethane	ND	U	0.913	5.00	ug/Kg	1	09/21/2012 17:58
1,2-Dichloropropane	ND	U	1.15	5.00	ug/Kg	1	09/21/2012 17:58
1,3,5-Trimethylbenzene	ND	U	0.608	5.00	ug/Kg	1	09/21/2012 17:58
1,3-Dichlorobenzene	ND	U	0.719	5.00	ug/Kg	1	09/21/2012 17:58
1,3-Dichloropropane	ND	U	0.879	5.00	ug/Kg	1	09/21/2012 17:58
1,4-Dichlorobenzene	ND	U	0.675	5.00	ug/Kg	1	09/21/2012 17:58
2,2-Dichloropropane	ND	U	0.738	5.00	ug/Kg	1	09/21/2012 17:58
2-Butanone	ND	U	3.38	25.0	ug/Kg	1	09/21/2012 17:58
2-Chlorotoluene	ND	U	0.937	5.00	ug/Kg	1	09/21/2012 17:58
2-Hexanone	ND	U	3.22	12.5	ug/Kg	1	09/21/2012 17:58
4-Chlorotoluene	ND	U	0.756	5.00	ug/Kg	1	09/21/2012 17:58
4-Isopropyltoluene	ND	U	0.645	5.00	ug/Kg	1	09/21/2012 17:58
4-Methyl-2-pentanone	ND	U	3.74	12.5	ug/Kg	1	09/21/2012 17:58
Acetone	ND	U	4.01	50.0	ug/Kg	1	09/21/2012 17:58
Benzene	ND	U	0.711	5.00	ug/Kg	1	09/21/2012 17:58
Bromobenzene	ND	U	0.697	5.00	ug/Kg	1	09/21/2012 17:58
Bromochloromethane	ND	U	0.940	5.00	ug/Kg	1	09/21/2012 17:58
Bromodichloromethane	ND	U	0.704	5.00	ug/Kg	1	09/21/2012 17:58
Bromoform	ND	U	0.724	5.00	ug/Kg	1	09/21/2012 17:58
Bromomethane	ND	U	1.45	5.00	ug/Kg	1	09/21/2012 17:58
n-Butylbenzene	ND	U	0.657	5.00	ug/Kg	1	09/21/2012 17:58
Carbon disulfide	ND	U	0.523	5.00	ug/Kg	1	09/21/2012 17:58
Carbon tetrachloride	ND	U	0.569	5.00	ug/Kg	1	09/21/2012 17:58
Chlorobenzene	ND	U	0.698	5.00	ug/Kg	1	09/21/2012 17:58
Chloroethane	ND	U	1.00	5.00	ug/Kg	1	09/21/2012 17:58
Chloroform	ND	U	0.637	5.00	ug/Kg	1	09/21/2012 17:58
Chloromethane	ND	U	1.43	5.00	ug/Kg	1	09/21/2012 17:58
Dibromochloromethane	ND	U	1.11	5.00	ug/Kg	1	09/21/2012 17:58
Dibromomethane	ND	U	0.882	5.00	ug/Kg	1	09/21/2012 17:58

Print Date: 10/02/2012

N.C. Certification # 481



### Results of Trip Blanks (Not on COC)

Client Sample ID: Trip Blanks (Not on COC)  
 Client Project ID: Kerr Ave. PSAs U-3338B  
 Lab Sample ID: 31203002014-A  
 Lab Project ID: 31203002

Collection Date: 09/19/2012 00:00  
 Received Date: 09/20/2012 08:35  
 Matrix: Soil-Solid as dry weight  
 Solids (%): 100.00

### Results by SW-846 8260B

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Dichlorodifluoromethane	ND	U	1.05	5.00	ug/Kg	1	09/21/2012 17:58
cis-1,3-Dichloropropene	ND	U	1.03	5.00	ug/Kg	1	09/21/2012 17:58
trans-1,3-Dichloropropene	ND	U	0.944	5.00	ug/Kg	1	09/21/2012 17:58
Diisopropyl Ether	ND	U	0.821	5.00	ug/Kg	1	09/21/2012 17:58
Ethyl Benzene	ND	U	0.705	5.00	ug/Kg	1	09/21/2012 17:58
Hexachlorobutadiene	ND	U	0.687	5.00	ug/Kg	1	09/21/2012 17:58
Isopropylbenzene (Cumene)	ND	U	0.622	5.00	ug/Kg	1	09/21/2012 17:58
Methyl Iodide	ND	U	0.766	5.00	ug/Kg	1	09/21/2012 17:58
Methylene chloride	1.82	J	1.05	20.0	ug/Kg	1	09/21/2012 17:58
Naphthalene	ND	U	0.909	5.00	ug/Kg	1	09/21/2012 17:58
Styrene	ND	U	0.576	5.00	ug/Kg	1	09/21/2012 17:58
Tetrachloroethene	ND	U	0.751	5.00	ug/Kg	1	09/21/2012 17:58
Toluene	ND	U	0.688	5.00	ug/Kg	1	09/21/2012 17:58
Trichloroethene	ND	U	0.842	5.00	ug/Kg	1	09/21/2012 17:58
Trichlorofluoromethane	ND	U	1.01	5.00	ug/Kg	1	09/21/2012 17:58
Vinyl chloride	ND	U	0.950	5.00	ug/Kg	1	09/21/2012 17:58
Xylene (total)	ND	U	1.77	10.0	ug/Kg	1	09/21/2012 17:58
cis-1,2-Dichloroethene	ND	U	0.611	5.00	ug/Kg	1	09/21/2012 17:58
m,p-Xylene	ND	U	1.69	10.0	ug/Kg	1	09/21/2012 17:58
n-Propylbenzene	ND	U	0.732	5.00	ug/Kg	1	09/21/2012 17:58
o-Xylene	ND	U	0.766	5.00	ug/Kg	1	09/21/2012 17:58
sec-Butylbenzene	ND	U	0.600	5.00	ug/Kg	1	09/21/2012 17:58
tert-Butyl methyl ether (MTBE)	ND	U	0.795	5.00	ug/Kg	1	09/21/2012 17:58
tert-Butylbenzene	ND	U	0.673	5.00	ug/Kg	1	09/21/2012 17:58
trans-1,2-Dichloroethene	ND	U	0.730	5.00	ug/Kg	1	09/21/2012 17:58
trans-1,4-Dichloro-2-butene	ND	U	4.20	25.0	ug/Kg	1	09/21/2012 17:58

### Surrogates

1,2-Dichloroethane-d4	113	55.0-173	%	1	09/21/2012 17:58
4-Bromofluorobenzene	100	23.0-141	%	1	09/21/2012 17:58
Toluene d8	104	57.0-134	%	1	09/21/2012 17:58

### Batch Information

Analytical Batch: VMS2564

Prep Batch: VXX4030

Analytical Method: SW-846 8260B

Prep Method: SW-846 5035 SL

Instrument: MSD9

Prep Date/Time: 09/21/2012 09:08

Analyst: DVO

Prep Initial Wt./Vol.: 5 g

Prep Extract Vol: 5 mL



### Batch Summary

Analytical Method: SM 6200-B

Prep Method: SW-846 5030B

Prep Batch: VXX4059

Prep Date: 09/28/2012 08:13

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Analysis Date</u>	<u>Analytical Batch</u>	<u>Instrument</u>	<u>Analyst</u>
LCS for HBN 29508 [VXX/4059]	91878	09/28/2012 09:08	VMS2587	MSD8	DVO
LCSD for HBN 29508 [VXX/4059]	91879	09/28/2012 09:32	VMS2587	MSD8	DVO
MB for HBN 29508 [VXX/4059]	91880	09/28/2012 10:21	VMS2587	MSD8	DVO
Trip Blank (Not on COC)	31203002013	09/28/2012 10:46	VMS2587	MSD8	DVO
AMW3	31203002012	09/28/2012 11:10	VMS2587	MSD8	DVO
AMW2	31203002011	09/28/2012 11:35	VMS2587	MSD8	DVO
Prevatte Well(90311MS)	92293	09/28/2012 19:21	VMS2587	MSD8	DVO
Prevatte Well(90311MSD)	92294	09/28/2012 19:45	VMS2587	MSD8	DVO

Print Date: 10/02/2012

N.C. Certification # 481

**Method Blank**

Blank ID: MB for HBN 29508 [VXX/4059]

Blank Lab ID: 91880

QC for Samples:

31203002011, 31203002012, 31203002013

Matrix: Water

**Results by SM 6200-B**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>
Dichlorodifluoromethane	ND	U	0.171	5.00	ug/L	1
Chloromethane	ND	U	0.448	0.500	ug/L	1
Vinyl chloride	ND	U	0.124	0.500	ug/L	1
Bromomethane	ND	U	0.237	0.500	ug/L	1
Chloroethane	ND	U	0.311	0.500	ug/L	1
Trichlorofluoromethane	ND	U	0.137	0.500	ug/L	1
1,1-Dichloroethene	ND	U	0.212	0.500	ug/L	1
Methylene chloride	ND	U	0.152	5.00	ug/L	1
trans-1,2-Dichloroethene	ND	U	0.223	0.500	ug/L	1
tert-Butyl methyl ether (MTBE)	ND	U	0.144	0.500	ug/L	1
1,1-Dichloroethane	ND	U	0.165	0.500	ug/L	1
Diisopropyl Ether	ND	U	0.155	0.500	ug/L	1
2,2-Dichloropropane	ND	U	0.393	0.500	ug/L	1
cis-1,2-Dichloroethene	ND	U	0.136	0.500	ug/L	1
Bromochloromethane	ND	U	0.211	0.500	ug/L	1
Chloroform	ND	U	0.139	0.500	ug/L	1
1,1,1-Trichloroethane	ND	U	0.123	0.500	ug/L	1
Carbon tetrachloride	ND	U	0.101	0.500	ug/L	1
1,1-Dichloropropene	ND	U	0.112	0.500	ug/L	1
Benzene	ND	U	0.113	0.500	ug/L	1
1,2-Dichloroethane	ND	U	0.167	0.500	ug/L	1
Trichloroethene	ND	U	0.125	0.500	ug/L	1
1,2-Dichloropropane	ND	U	0.163	0.500	ug/L	1
Dibromomethane	ND	U	0.168	0.500	ug/L	1
Bromodichloromethane	ND	U	0.110	0.500	ug/L	1
cis-1,3-Dichloropropene	ND	U	0.0767	0.500	ug/L	1
Toluene	ND	U	0.133	0.500	ug/L	1
trans-1,3-Dichloropropene	ND	U	0.0862	0.500	ug/L	1
1,1,2-Trichloroethane	ND	U	0.126	0.500	ug/L	1
Tetrachloroethene	ND	U	0.155	0.500	ug/L	1
1,3-Dichloropropane	ND	U	0.189	0.500	ug/L	1
Dibromochloromethane	ND	U	0.134	0.500	ug/L	1
1,2-Dibromoethane	ND	U	0.120	0.500	ug/L	1
Chlorobenzene	ND	U	0.116	0.500	ug/L	1
1,1,1,2-Tetrachloroethane	ND	U	0.104	0.500	ug/L	1
Bromoform	ND	U	0.0974	0.500	ug/L	1
Bromobenzene	ND	U	0.110	0.500	ug/L	1
1,1,2,2-Tetrachloroethane	ND	U	0.156	0.500	ug/L	1
1,2,3-Trichloropropane	ND	U	0.212	0.500	ug/L	1
Ethyl Benzene	ND	U	0.0877	0.500	ug/L	1
m,p-Xylene	ND	U	0.182	1.00	ug/L	1

**Method Blank**

Blank ID: MB for HBN 29508 [VXX/4059]

Matrix: Water

Blank Lab ID: 91880

QC for Samples:

31203002011, 31203002012, 31203002013

**Results by SM 6200-B**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>
Styrene	ND	U	0.102	0.500	ug/L	1
o-Xylene	ND	U	0.0874	0.500	ug/L	1
Xylene (total)	ND	U	0.269	1.50	ug/L	1
Isopropylbenzene (Cumene)	ND	U	0.0869	0.500	ug/L	1
n-Propylbenzene	ND	U	0.113	0.500	ug/L	1
2-Chlorotoluene	ND	U	0.113	0.500	ug/L	1
4-Chlorotoluene	ND	U	0.125	0.500	ug/L	1
1,3,5-Trimethylbenzene	ND	U	0.113	0.500	ug/L	1
tert-Butylbenzene	ND	U	0.0855	0.500	ug/L	1
1,2,4-Trimethylbenzene	ND	U	0.0961	0.500	ug/L	1
sec-Butylbenzene	ND	U	0.112	0.500	ug/L	1
1,3-Dichlorobenzene	ND	U	0.103	0.500	ug/L	1
4-Isopropyltoluene	ND	U	0.0769	0.500	ug/L	1
1,4-Dichlorobenzene	ND	U	0.130	0.500	ug/L	1
1,2-Dichlorobenzene	ND	U	0.137	0.500	ug/L	1
n-Butylbenzene	ND	U	0.0769	0.500	ug/L	1
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1
1,2,4-Trichlorobenzene	ND	U	0.0913	0.500	ug/L	1
Hexachlorobutadiene	ND	U	0.0792	0.500	ug/L	1
Naphthalene	ND	U	0.0855	0.500	ug/L	1
1,2,3-Trichlorobenzene	ND	U	0.110	0.500	ug/L	1
<b>Surrogates</b>						
1,2-Dichloroethane-d4	98.1			64.0-140	%	1
Toluene d8	98.6			82.0-117	%	1
4-Bromofluorobenzene	101			85.0-115	%	1

**Batch Information**

Analytical Batch: VMS2587

Prep Batch: VXX4059

Analytical Method: SM 6200-B

Prep Method: SW-846 5030B

Instrument: MSD8

Prep Date/Time: 9/28/2012 8:13:29AM

Analyst: DVO

Prep Initial Wt./Vol.: 40 mL

Prep Extract Vol: 40 mL



### Blank Spike Summary

Blank Spike ID: LCS for HBN 29508 [VXX/4059]

Blank Spike Lab ID: 91878

Date Analyzed: 09/28/2012 09:08

Spike Duplicate ID: LCSD for HBN 29508 [VXX/4059]

Spike Duplicate Lab ID: 91879

Date Analyzed: 09/28/2012 09:32

Matrix: Water

QC for Samples: 31203002011, 31203002012, 31203002013

### Results by SM 6200-B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Dichlorodifluoromethane	5.00	5.20	104	5.00	5.24	105	33.0-170	0.77	30.00
Chloromethane	5.00	4.78	96	5.00	4.79	96	57.0-132	0.21	30.00
Vinyl chloride	5.00	4.46	89	5.00	4.73	95	59.0-138	5.9	30.00
Bromomethane	5.00	5.99	120	5.00	6.10	122	51.0-134	1.8	30.00
Chloroethane	5.00	4.81	96	5.00	5.18	104	64.0-145	7.4	30.00
Trichlorofluoromethane	5.00	4.44	89	5.00	4.65	93	64.0-133	4.6	30.00
1,1-Dichloroethene	5.00	4.61	92	5.00	4.56	91	71.0-128	1.1	30.00
Methylene chloride	5.00	4.80	96	5.00	4.26	85	70.0-113	12	30.00
trans-1,2-Dichloroethene	5.00	4.87	97	5.00	4.10	82	57.0-138	17	30.00
tert-Butyl methyl ether (MTBE)	5.00	4.53	91	5.00	4.22	84	47.0-142	7.1	30.00
1,1-Dichloroethane	5.00	4.75	95	5.00	4.29	86	68.0-133	10	30.00
Diisopropyl Ether	5.00	4.74	95	5.00	4.46	89	66.0-132	6.1	30.00
2,2-Dichloropropane	5.00	4.95	99	5.00	4.92	98	74.0-125	0.61	30.00
cis-1,2-Dichloroethene	5.00	4.43	89	5.00	4.83	97	73.0-128	8.6	30.00
Bromochloromethane	5.00	4.20	84	5.00	4.73	95	73.0-128	12	30.00
Chloroform	5.00	4.45	89	5.00	4.82	96	74.0-124	8.0	30.00
1,1,1-Trichloroethane	5.00	4.67	93	5.00	4.88	98	76.0-119	4.4	30.00
Carbon tetrachloride	5.00	4.45	89	5.00	4.66	93	75.0-120	4.6	30.00
1,1-Dichloropropene	5.00	4.47	89	5.00	4.73	95	76.0-124	5.7	30.00
Benzene	5.00	4.57	91	5.00	4.80	96	76.0-124	4.9	30.00
1,2-Dichloroethane	5.00	4.49	90	5.00	4.77	95	76.0-119	6.0	30.00
Trichloroethene	5.00	4.35	87	5.00	5.02	100	74.0-121	14	30.00
1,2-Dichloropropane	5.00	4.43	89	5.00	4.95	99	74.0-124	11	30.00
Dibromomethane	5.00	4.34	87	5.00	4.84	97	71.0-128	11	30.00
Bromodichloromethane	5.00	4.24	85	5.00	4.48	90	72.0-120	5.5	30.00
cis-1,3-Dichloropropene	5.00	4.54	91	5.00	4.65	93	73.0-122	2.4	30.00
Toluene	5.00	4.60	92	5.00	4.66	93	75.0-123	1.3	30.00
trans-1,3-Dichloropropene	5.00	4.30	86	5.00	4.80	96	70.0-125	11	30.00
1,1,2-Trichloroethane	5.00	4.09	82	5.00	4.41	88	76.0-121	7.5	30.00
Tetrachloroethene	5.00	4.46	89	5.00	4.87	97	59.0-112	8.8	30.00
1,3-Dichloropropane	5.00	4.19	84	5.00	4.81	96	74.0-120	14	30.00
Dibromochloromethane	5.00	4.00	80	5.00	4.49	90	67.0-122	12	30.00
1,2-Dibromoethane	5.00	4.41	88	5.00	4.63	93	74.0-119	4.9	30.00
Chlorobenzene	5.00	4.33	87	5.00	4.72	94	74.0-120	8.6	30.00

Print Date: 10/02/2012

N.C. Certification # 481

**Blank Spike Summary**

Blank Spike ID: LCS for HBN 29508 [VXX/4059]

Blank Spike Lab ID: 91878

Date Analyzed: 09/28/2012 09:08

Spike Duplicate ID: LCSD for HBN 29508 [VXX/4059]

Spike Duplicate Lab ID: 91879

Date Analyzed: 09/28/2012 09:32

Matrix: Water

QC for Samples: 31203002011, 31203002012, 31203002013

**Results by SM 6200-B**

<b>Parameter</b>	Blank Spike (ug/L)				Spike Duplicate (ug/L)				<b>CL</b>	<b>RPD (%)</b>	<b>RPD CL</b>
	<b>Spike</b>	<b>Result</b>	<b>Rec (%)</b>	<b>Spike</b>	<b>Result</b>	<b>Rec (%)</b>					
1,1,1,2-Tetrachloroethane	5.00	4.44	89	5.00	4.89	98	73.0-119	9.6	30.00		
Bromoform	5.00	4.15	83	5.00	4.72	94	62.0-127	13	30.00		
Bromobenzene	5.00	4.28	86	5.00	4.74	95	75.0-120	10	30.00		
1,1,2,2-Tetrachloroethane	5.00	3.84	77	5.00	4.73	95	68.0-129	21	30.00		
1,2,3-Trichloropropane	5.00	4.58	92	5.00	5.18	104	67.0-126	12	30.00		
Ethyl Benzene	5.00	3.91	78	5.00	4.62	92	76.0-123	17	30.00		
m,p-Xylene	10.0	7.97	80	10.0	9.33	93	76.0-124	16	30.00		
Styrene	5.00	4.05	81	5.00	4.45	89	76.0-121	9.4	30.00		
o-Xylene	5.00	3.97	79	5.00	4.68	94	75.0-124	16	30.00		
Isopropylbenzene (Cumene)	5.00	4.17	83	5.00	4.62	92	77.0-120	10	30.00		
n-Propylbenzene	5.00	4.13	83	5.00	4.65	93	77.0-123	12	30.00		
2-Chlorotoluene	5.00	4.20	84	5.00	4.42	88	74.0-127	5.1	30.00		
4-Chlorotoluene	5.00	3.78	76*	5.00	4.31	86	77.0-123	13	30.00		
1,3,5-Trimethylbenzene	5.00	4.05	81	5.00	4.58	92	76.0-122	12	30.00		
tert-Butylbenzene	5.00	4.14	83	5.00	4.74	95	67.0-122	14	30.00		
1,2,4-Trimethylbenzene	5.00	3.97	79	5.00	4.60	92	76.0-124	15	30.00		
sec-Butylbenzene	5.00	4.14	83	5.00	4.68	94	78.0-121	12	30.00		
1,3-Dichlorobenzene	5.00	4.13	83	5.00	4.75	95	75.0-120	14	30.00		
4-Isopropyltoluene	5.00	4.00	80	5.00	4.63	93	77.0-120	15	30.00		
1,4-Dichlorobenzene	5.00	4.11	82	5.00	4.62	92	70.0-125	12	30.00		
1,2-Dichlorobenzene	5.00	4.09	82	5.00	4.69	94	76.0-118	14	30.00		
n-Butylbenzene	5.00	4.18	84	5.00	4.83	97	78.0-118	14	30.00		
1,2-Dibromo-3-chloropropane	30.0	24.2	81	30.0	31.8	106	62.0-130	27	30.00		
1,2,4-Trichlorobenzene	5.00	3.60	72	5.00	5.91	118	72.0-119	49*	30.00		
Hexachlorobutadiene	5.00	4.29	86	5.00	5.69	114	69.0-121	28	30.00		
Naphthalene	5.00	4.01	80	5.00	6.11	122	67.0-122	42*	30.00		
1,2,3-Trichlorobenzene	5.00	3.93	79	5.00	6.03	121	21.0-193	42*	30.00		
<b>Surrogates</b>											
1,2-Dichloroethane-d4			103			98.6	64.0-140				
Toluene d8			101			99	82.0-117				
4-Bromofluorobenzene			101			102	85.0-115				

**Blank Spike Summary**

Blank Spike ID: LCS for HBN 29508 [VXX/4059]

Blank Spike Lab ID: 91878

Date Analyzed: 09/28/2012 09:08

QC for Samples: 31203002011, 31203002012, 31203002013

Spike Duplicate ID: LCSD for HBN 29508 [VXX/4059]

Spike Duplicate Lab ID: 91879

Date Analyzed: 09/28/2012 09:32

Matrix: Water

**Results by SM 6200-B**

<u>Parameter</u>	Blank Spike (%)			Spike Duplicate (%)				<u>RPD (%)</u>	<u>RPD CL</u>
	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL		

**Batch Information**

Analytical Batch: VMS2587

Analytical Method: SM 6200-B

Instrument: MSD8

Analyst: DVO

Prep Batch: VXX4059

Prep Method: SW-846 5030B

Prep Date/Time: 09/28/2012 08:13

Spike Init Wt./Vol.: 40 mL Extract Vol: 40 mL

Dupe Init Wt./Vol.: 40 mL Extract Vol: 40 mL

**Batch Summary**

Analytical Method: SW-846 8260B

Prep Method: SW-846 5035 SL

Prep Batch: VXX4030

Prep Date: 09/21/2012 08:27

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Analysis Date</u>	<u>Analytical Batch</u>	<u>Instrument</u>	<u>Analyst</u>
LCS-S for HBN 29113 [VXX/4030]	90639	09/21/2012 09:46	VMS2564	MSD9	DVO
LCSD-S for HBN 29113 [VXX/4030]	90640	09/21/2012 10:13	VMS2564	MSD9	DVO
MB-S for HBN 29113 [VXX/4030]	90641	09/21/2012 11:06	VMS2564	MSD9	DVO
49DPT-01 (4ft)	31203002001	09/21/2012 11:59	VMS2564	MSD9	DVO
49DPT-02 (4ft)	31203002002	09/21/2012 12:25	VMS2564	MSD9	DVO
49DPT-03 (4ft)	31203002003	09/21/2012 12:52	VMS2564	MSD9	DVO
49DPT-04 (4ft)	31203002004	09/21/2012 13:18	VMS2564	MSD9	DVO
49DPT-05 (4ft)	31203002005	09/21/2012 13:45	VMS2564	MSD9	DVO
49DPT-09 (3ft)	31203002009	09/21/2012 14:14	VMS2564	MSD9	DVO
49DPT-07 (4ft)	31203002007	09/21/2012 16:38	VMS2564	MSD9	DVO
49DPT-08 (4ft)	31203002008	09/21/2012 17:04	VMS2564	MSD9	DVO
Trip Blanks (Not on COC)	31203002014	09/21/2012 17:58	VMS2564	MSD9	DVO
49DPT-10 (4ft)	31203002010	09/21/2012 18:25	VMS2564	MSD9	DVO
49DPT-02 (4ft)(90329MS)	91083	09/21/2012 18:52	VMS2564	MSD9	DVO

Print Date: 10/02/2012

N.C. Certification # 481

**Method Blank**

Blank ID: MB-S for HBN 29113 [VXX/4030]

Matrix: Soil-Solid as dry weight

Blank Lab ID: 90641

QC for Samples:

31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002007, 31203002008,  
31203002009, 31203002010, 31203002014**Results by SW-846 8260B**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>
Dichlorodifluoromethane	ND	U	1.05	5.00	ug/Kg	1
Chloromethane	ND	U	1.43	5.00	ug/Kg	1
Vinyl chloride	ND	U	0.950	5.00	ug/Kg	1
Bromomethane	ND	U	1.45	5.00	ug/Kg	1
Chloroethane	ND	U	1.00	5.00	ug/Kg	1
Trichlorofluoromethane	ND	U	1.01	5.00	ug/Kg	1
1,1-Dichloroethene	ND	U	1.16	5.00	ug/Kg	1
Acetone	ND	U	4.01	50.0	ug/Kg	1
Methylene chloride	ND	U	1.05	20.0	ug/Kg	1
trans-1,2-Dichloroethene	ND	U	0.730	5.00	ug/Kg	1
tert-Butyl methyl ether (MTBE)	ND	U	0.795	5.00	ug/Kg	1
1,1-Dichloroethane	ND	U	0.538	5.00	ug/Kg	1
Diisopropyl Ether	ND	U	0.821	5.00	ug/Kg	1
2,2-Dichloropropane	ND	U	0.738	5.00	ug/Kg	1
cis-1,2-Dichloroethene	ND	U	0.611	5.00	ug/Kg	1
2-Butanone	ND	U	3.38	25.0	ug/Kg	1
Bromochloromethane	ND	U	0.940	5.00	ug/Kg	1
Chloroform	ND	U	0.637	5.00	ug/Kg	1
1,1,1-Trichloroethane	ND	U	0.754	5.00	ug/Kg	1
Carbon tetrachloride	ND	U	0.569	5.00	ug/Kg	1
1,1-Dichloropropene	ND	U	0.676	5.00	ug/Kg	1
Benzene	ND	U	0.711	5.00	ug/Kg	1
1,2-Dichloroethane	ND	U	0.913	5.00	ug/Kg	1
Trichloroethene	ND	U	0.842	5.00	ug/Kg	1
1,2-Dichloropropane	ND	U	1.15	5.00	ug/Kg	1
Dibromomethane	ND	U	0.882	5.00	ug/Kg	1
Bromodichloromethane	ND	U	0.704	5.00	ug/Kg	1
cis-1,3-Dichloropropene	ND	U	1.03	5.00	ug/Kg	1
4-Methyl-2-pentanone	ND	U	3.74	12.5	ug/Kg	1
Toluene	ND	U	0.688	5.00	ug/Kg	1
Methyl Iodide	ND	U	0.766	5.00	ug/Kg	1
trans-1,3-Dichloropropene	ND	U	0.944	5.00	ug/Kg	1
Carbon disulfide	ND	U	0.523	5.00	ug/Kg	1
1,1,2-Trichloroethane	ND	U	1.04	5.00	ug/Kg	1
Tetrachloroethene	ND	U	0.751	5.00	ug/Kg	1
1,3-Dichloropropane	ND	U	0.879	5.00	ug/Kg	1
2-Hexanone	ND	U	3.22	12.5	ug/Kg	1
Dibromochloromethane	ND	U	1.11	5.00	ug/Kg	1
1,2-Dibromoethane	ND	U	1.31	5.00	ug/Kg	1
Chlorobenzene	ND	U	0.698	5.00	ug/Kg	1
1,1,1,2-Tetrachloroethane	ND	U	0.709	5.00	ug/Kg	1



### Method Blank

Blank ID: MB-S for HBN 29113 [VXX/4030]

Matrix: Soil-Solid as dry weight

Blank Lab ID: 90641

QC for Samples:

31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002007, 31203002008,  
31203002009, 31203002010, 31203002014

### Results by SW-846 8260B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Bromoform	ND	U	0.724	5.00	ug/Kg	1
Bromobenzene	ND	U	0.697	5.00	ug/Kg	1
1,1,2,2-Tetrachloroethane	ND	U	1.17	5.00	ug/Kg	1
1,2,3-Trichloropropane	ND	U	1.03	5.00	ug/Kg	1
Ethyl Benzene	ND	U	0.705	5.00	ug/Kg	1
m,p-Xylene	ND	U	1.69	10.0	ug/Kg	1
Styrene	ND	U	0.576	5.00	ug/Kg	1
o-Xylene	ND	U	0.766	5.00	ug/Kg	1
Xylene (total)	ND	U	1.77	10.0	ug/Kg	1
Isopropylbenzene (Cumene)	ND	U	0.622	5.00	ug/Kg	1
n-Propylbenzene	ND	U	0.732	5.00	ug/Kg	1
2-Chlorotoluene	ND	U	0.937	5.00	ug/Kg	1
4-Chlorotoluene	ND	U	0.756	5.00	ug/Kg	1
1,3,5-Trimethylbenzene	ND	U	0.608	5.00	ug/Kg	1
tert-Butylbenzene	ND	U	0.673	5.00	ug/Kg	1
1,2,4-Trimethylbenzene	ND	U	0.637	5.00	ug/Kg	1
sec-Butylbenzene	ND	U	0.600	5.00	ug/Kg	1
1,3-Dichlorobenzene	ND	U	0.719	5.00	ug/Kg	1
4-Isopropyltoluene	ND	U	0.645	5.00	ug/Kg	1
1,4-Dichlorobenzene	ND	U	0.675	5.00	ug/Kg	1
1,2-Dichlorobenzene	ND	U	0.711	5.00	ug/Kg	1
n-Butylbenzene	ND	U	0.657	5.00	ug/Kg	1
1,2-Dibromo-3-chloropropane	ND	U	7.41	30.0	ug/Kg	1
1,2,4-Trichlorobenzene	ND	U	0.729	5.00	ug/Kg	1
Hexachlorobutadiene	ND	U	0.687	5.00	ug/Kg	1
Naphthalene	ND	U	0.909	5.00	ug/Kg	1
trans-1,4-Dichloro-2-butene	ND	U	4.20	25.0	ug/Kg	1
1,2,3-Trichlorobenzene	ND	U	0.832	5.00	ug/Kg	1
<b>Surrogates</b>						
1,2-Dichloroethane-d4	108			55.0-173	%	1
Toluene d8	104			57.0-134	%	1
4-Bromofluorobenzene	100			23.0-141	%	1

### Batch Information

Analytical Batch: VMS2564

Prep Batch: VXX4030

Analytical Method: SW-846 8260B

Prep Method: SW-846 5035 SL

Instrument: MSD9

Prep Date/Time: 9/21/2012 8:27:10AM

Analyst: DVO

Prep Initial Wt/Vol.: 5 g

Prep Extract Vol: 5 mL

**Blank Spike Summary**

Blank Spike ID: LCS-S for HBN 29113 [VXX/4030]

Blank Spike Lab ID: 90639

Date Analyzed: 09/21/2012 09:46

Spike Duplicate ID: LCSD-S for HBN 29113 [VXX/4030]

Spike Duplicate Lab ID: 90640

Date Analyzed: 09/21/2012 10:13

Matrix: Soil-Solid as dry weight

QC for Samples: 31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002007,  
31203002008, 31203002009, 31203002010, 31203002014**Results by SW-846 8260B**

Parameter	Blank Spike (ug/Kg)			Spike Duplicate (ug/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Dichlorodifluoromethane	30.0	25.8	86	30.0	24.8	83	52.0-133	4.0	30.00
Chloromethane	30.0	28.3	94	30.0	24.3	81	64.0-126	15	30.00
Vinyl chloride	30.0	26.5	88	30.0	26.0	87	69.0-120	1.9	30.00
Bromomethane	30.0	33.3	111	30.0	29.4	98	41.0-160	12	30.00
Chloroethane	30.0	30.2	101	30.0	28.6	95	69.0-126	5.4	30.00
Trichlorofluoromethane	30.0	29.2	97	30.0	29.0	97	72.0-123	0.69	30.00
1,1-Dichloroethene	30.0	30.2	101	30.0	28.3	94	78.0-113	6.5	30.00
Acetone	75.0	29.1	39	75.0	35.9	48	0.00-243	21	30.00
Methylene chloride	30.0	28.9	96	30.0	27.6	92	40.0-156	4.6	30.00
trans-1,2-Dichloroethene	30.0	31.0	103	30.0	28.7	96	78.0-111	7.7	30.00
tert-Butyl methyl ether (MTBE)	30.0	31.1	104	30.0	30.0	100	68.0-138	3.6	30.00
1,1-Dichloroethane	30.0	31.2	104	30.0	29.5	98	71.0-121	5.6	30.00
Diisopropyl Ether	30.0	32.1	107	30.0	30.0	100	60.0-141	6.8	30.00
2,2-Dichloropropane	30.0	38.3	128*	30.0	35.1	117	79.0-127	8.7	30.00
cis-1,2-Dichloroethene	30.0	31.3	104	30.0	30.0	100	80.0-114	4.2	30.00
2-Butanone	75.0	45.2	60	75.0	47.9	64	31.0-189	5.8	30.00
Bromochloromethane	30.0	31.8	106	30.0	31.6	105	81.0-115	0.63	30.00
Chloroform	30.0	32.2	107	30.0	30.3	101	76.0-114	6.1	30.00
1,1,1-Trichloroethane	30.0	33.4	111	30.0	31.3	104	79.0-117	6.5	30.00
Carbon tetrachloride	30.0	35.1	117	30.0	31.5	105	82.0-119	11	30.00
1,1-Dichloropropene	30.0	30.8	103	30.0	28.9	96	82.0-114	6.4	30.00
Benzene	30.0	30.8	103	30.0	28.8	96	82.0-113	6.7	30.00
1,2-Dichloroethane	30.0	31.8	106	30.0	30.7	102	72.0-126	3.5	30.00
Trichloroethene	30.0	30.3	101	30.0	28.6	95	82.0-108	5.8	30.00
1,2-Dichloropropane	30.0	31.1	104	30.0	29.0	97	78.0-116	7.0	30.00
Dibromomethane	30.0	30.9	103	30.0	30.4	101	79.0-125	1.6	30.00
Bromodichloromethane	30.0	33.7	112	30.0	30.9	103	79.0-122	8.7	30.00
cis-1,3-Dichloropropene	30.0	32.1	107	30.0	30.4	101	75.0-127	5.4	30.00
4-Methyl-2-pentanone	75.0	81.3	108	75.0	83.3	111	57.0-159	2.4	30.00
Toluene	30.0	31.5	105	30.0	29.6	99	83.0-111	6.2	30.00
Methyl iodide	30.0	32.5	108	30.0	30.5	102	63.0-137	6.3	30.00
trans-1,3-Dichloropropene	30.0	35.0	117	30.0	33.7	112	75.0-134	3.8	30.00
Carbon disulfide	30.0	31.1	104	30.0	28.8	96	72.0-116	7.7	30.00
1,1,2-Trichloroethane	30.0	29.5	98	30.0	29.9	100	73.0-121	1.3	30.00

**Blank Spike Summary**

Blank Spike ID: LCS-S for HBN 29113 [VXX/4030]

Blank Spike Lab ID: 90639

Date Analyzed: 09/21/2012 09:46

Spike Duplicate ID: LCSD-S for HBN 29113 [VXX/4030]

Spike Duplicate Lab ID: 90640

Date Analyzed: 09/21/2012 10:13

Matrix: Soil-Solid as dry weight

QC for Samples: 31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002007,  
31203002008, 31203002009, 31203002010, 31203002014**Results by SW-846 8260B**

<b>Parameter</b>	Blank Spike (ug/Kg)			Spike Duplicate (ug/Kg)			<b>CL</b>	<b>RPD (%)</b>	<b>RPD CL</b>
	<b>Spike</b>	<b>Result</b>	<b>Rec (%)</b>	<b>Spike</b>	<b>Result</b>	<b>Rec (%)</b>			
Tetrachloroethene	30.0	29.8	99	30.0	28.0	93	60.0-118	6.2	30.00
1,3-Dichloropropane	30.0	29.6	99	30.0	28.4	95	76.0-121	4.1	30.00
2-Hexanone	75.0	54.6	73	75.0	55.8	74	41.0-171	2.2	30.00
Dibromochloromethane	30.0	32.6	109	30.0	30.2	101	77.0-126	7.6	30.00
1,2-Dibromoethane	30.0	30.5	102	30.0	30.0	100	76.0-125	1.7	30.00
Chlorobenzene	30.0	29.4	98	30.0	27.8	93	78.0-109	5.6	30.00
1,1,1,2-Tetrachloroethane	30.0	36.0	120*	30.0	32.7	109	81.0-117	9.6	30.00
Bromoform	30.0	36.6	122	30.0	34.3	114	72.0-134	6.5	30.00
Bromobenzene	30.0	30.1	100	30.0	28.1	94	76.0-113	6.9	30.00
1,1,2,2-Tetrachloroethane	30.0	32.5	108	30.0	31.8	106	76.0-129	2.2	30.00
1,2,3-Trichloropropane	30.0	29.4	98	30.0	31.0	103	70.0-145	5.3	30.00
Ethyl Benzene	30.0	28.4	95	30.0	25.8	86	72.0-115	9.6	30.00
m,p-Xylene	60.0	57.1	95	60.0	52.2	87	73.0-114	9.0	30.00
Styrene	30.0	28.5	95	30.0	26.0	87	74.0-114	9.2	30.00
o-Xylene	30.0	28.8	96	30.0	26.5	88	74.0-113	8.3	30.00
Isopropylbenzene (Cumene)	30.0	29.3	98	30.0	26.7	89	72.0-115	9.3	30.00
n-Propylbenzene	30.0	30.0	100	30.0	26.9	90	71.0-117	11	30.00
2-Chlorotoluene	30.0	29.3	98	30.0	26.8	89	76.0-111	8.9	30.00
4-Chlorotoluene	30.0	28.9	96	30.0	26.3	88	75.0-113	9.4	30.00
1,3,5-Trimethylbenzene	30.0	29.5	98	30.0	26.8	89	72.0-115	9.6	30.00
tert-Butylbenzene	30.0	29.6	99	30.0	26.8	89	74.0-112	9.9	30.00
1,2,4-Trimethylbenzene	30.0	29.7	99	30.0	26.9	90	73.0-114	9.9	30.00
sec-Butylbenzene	30.0	29.1	97	30.0	25.9	86	72.0-115	12	30.00
1,3-Dichlorobenzene	30.0	29.9	100	30.0	27.2	91	75.0-110	9.5	30.00
4-Isopropyltoluene	30.0	29.3	98	30.0	26.4	88	73.0-114	10	30.00
1,4-Dichlorobenzene	30.0	29.8	99	30.0	27.6	92	76.0-110	7.7	30.00
1,2-Dichlorobenzene	30.0	30.0	100	30.0	26.9	90	77.0-109	11	30.00
n-Butylbenzene	30.0	29.5	98	30.0	26.6	89	72.0-118	10	30.00
1,2-Dibromo-3-chloropropane	180	192	107	180	192	107	54.0-166	0.0	30.00
1,2,4-Trichlorobenzene	30.0	32.2	107	30.0	27.6	92	76.0-115	15	30.00
Hexachlorobutadiene	30.0	31.7	106	30.0	27.9	93	70.0-111	13	30.00
Naphthalene	30.0	30.9	103	30.0	29.4	98	71.0-129	5.0	30.00
trans-1,4-Dichloro-2-butene	150	159	106	150	156	104	62.0-164	1.9	30.00
1,2,3-Trichlorobenzene	30.0	31.0	103	30.0	28.5	95	78.0-115	8.4	30.00



### Blank Spike Summary

Blank Spike ID: LCS-S for HBN 29113 [VXX/4030]

Blank Spike Lab ID: 90639

Date Analyzed: 09/21/2012 09:46

Spike Duplicate ID: LCSD-S for HBN 29113 [VXX/4030]

Spike Duplicate Lab ID: 90640

Date Analyzed: 09/21/2012 10:13

Matrix: Soil-Solid as dry weight

QC for Samples: 31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002007,  
31203002008, 31203002009, 31203002010, 31203002014

### Results by SW-846 8260B

Parameter	Blank Spike (ug/Kg)			Spike Duplicate (ug/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
<b>Surrogates</b>									
1,2-Dichloroethane-d4		103			109		55.0-173		
Toluene d8		102			103		57.0-134		
4-Bromofluorobenzene		104			104		23.0-141		

### Batch Information

Analytical Batch: VMS2564

Analytical Method: SW-846 8260B

Instrument: MSD9

Analyst: DVO

Prep Batch: VXX4030

Prep Method: SW-846 5035 SL

Prep Date/Time: 09/21/2012 08:27

Spike Init Wt./Vol.: 5 g Extract Vol: 5 mL

Dupe Init Wt./Vol.: 5 g Extract Vol: 5 mL

**Matrix Spike Summary**

Original Sample ID: 31203002002 (49DPT-02 (4ft))

MS Sample ID: 91083

MSD Sample ID:

Analysis Date: 09/21/2012 12:25

Analysis Date: 09/21/2012 18:52

Analysis Date:

Matrix: Soil-Solid as drv weight

QC for Samples: 31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002007,  
31203002008, 31203002009, 31203002010, 31203002014**Results by SW-846 8260B**

Parameter	Sample	Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	ND	29.3	30.6	104					69.0-120	
1,1,1-Trichloroethane	ND	29.3	30.5	104					78.0-121	
1,1,2,2-Tetrachloroethane	ND	29.3	39.2	134					76.0-136	
1,1,2-Trichloroethane	ND	29.3	33.3	114					65.0-128	
1,1-Dichloroethane	ND	29.3	29.6	101					72.0-139	
1,1-Dichloroethene	ND	29.3	29.2	100					72.0-135	
1,1-Dichloropropene	ND	29.3	30.2	103					69.0-137	
1,2,3-Trichlorobenzene	ND	29.3	19.1	65					61.0-126	
1,2,3-Trichloropropane	ND	29.3	41.0	140					10.0-218	
1,2,4-Trichlorobenzene	ND	29.3	20.4	70					61.0-125	
1,2,4-Trimethylbenzene	18.9	29.3	43.5	84					31.0-172	
1,2-Dibromo-3-chloropropane	ND	176	296	169					43.0-229	
1,2-Dibromoethane	ND	29.3	34.9	119					78.0-148	
1,2-Dichlorobenzene	ND	29.3	26.5	91					58.0-148	
1,2-Dichloroethane	ND	29.3	35.6	122					73.0-146	
1,2-Dichloropropane	ND	29.3	30.4	104					76.0-136	
1,3,5-Trimethylbenzene	10.2	29.3	34.5	83					68.0-132	
1,3-Dichlorobenzene	ND	29.3	26.1	89					55.0-145	
1,3-Dichloropropane	ND	29.3	32.2	110					33.0-137	
1,4-Dichlorobenzene	ND	29.3	26.8	91					53.0-146	
2,2-Dichloropropane	ND	29.3	29.0	99					58.0-150	
2-Butanone	ND	73.3	83.3	114					41.0-256	
2-Chlorotoluene	ND	29.3	28.1	96					60.0-144	
2-Hexanone	ND	73.3	97.1	133 *					42.0-111	
4-Chlorotoluene	ND	29.3	26.9	92					59.0-141	
4-Isopropyltoluene	ND	29.3	25.3	86					75.0-122	
4-Methyl-2-pentanone	ND	73.3	131	179 *					6.90-166	
Acetone	ND	73.3	65.2	89					6.80-355	
Benzene	ND	29.3	30.9	105					75.0-133	
Bromobenzene	ND	29.3	28.6	98					66.0-140	
Bromochloromethane	ND	29.3	34.6	118					85.0-136	
Bromodichloromethane	ND	29.3	30.5	104					77.0-140	
Bromoform	ND	29.3	35.7	122					75.0-151	
Bromomethane	ND	29.3	18.1	62					30.0-127	
n-Butylbenzene	ND	29.3	24.6	84					41.0-147	
Carbon disulfide	ND	29.3	25.2	86					64.0-145	
Carbon tetrachloride	ND	29.3	29.7	101					64.0-142	
Chlorobenzene	ND	29.3	28.3	97					66.0-135	

**Matrix Spike Summary**

Original Sample ID: 31203002002 (49DPT-02 (4ft))

Analysis Date: 09/21/2012 12:25

MS Sample ID: 91083

Analysis Date: 09/21/2012 18:52

MSD Sample ID:

Analysis Date:

QC for Samples: 31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002007,  
31203002008, 31203002009, 31203002010, 31203002014

Matrix: Soil-Solid as dry weight

**Results by SW-846 8260B**

<u>Parameter</u>	<u>Sample</u>	Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)			<u>CL</u>	<u>RPD (%)</u>	<u>RPD CL</u>
		<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>			
Chloroethane	ND	29.3	23.5	80				21.0-182		
Chloroform	ND	29.3	31.4	107				71.0-143		
Chloromethane	ND	29.3	27.2	93				69.0-138		
Dibromochloromethane	ND	29.3	29.9	102				78.0-141		
Dibromomethane	ND	29.3	35.1	120				80.0-150		
Dichlorodifluoromethane	ND	29.3	25.5	87				82.0-130		
cis-1,3-Dichloropropene	ND	29.3	28.2	96				72.0-146		
trans-1,3-Dichloropropene	ND	29.3	31.1	106				45.0-144		
Disopropyl Ether	ND	29.3	30.8	105				79.0-122		
Ethyl Benzene	ND	29.3	28.0	96				74.0-126		
Hexachlorobutadiene	ND	29.3	19.1	65				52.0-134		
Isopropylbenzene (Cumene)	ND	29.3	28.1	96				74.0-123		
Methyl Iodide	ND	29.3	28.4	97				41.0-126		
Methylene chloride	ND	29.3	30.8	105				49.0-155		
Naphthalene	ND	29.3	19.5	66				55.0-140		
Styrene	ND	29.3	26.6	91				73.0-123		
Tetrachloroethene	ND	29.3	28.6	98				46.0-153		
Toluene	ND	29.3	31.2	106				66.0-128		
Trichloroethene	ND	29.3	28.8	98				35.0-136		
Trichlorofluoromethane	ND	29.3	29.3	100				77.0-132		
Vinyl chloride	ND	29.3	26.7	91				68.0-137		
cis-1,2-Dichloroethene	ND	29.3	31.5	108				77.0-134		
m,p-Xylene	18.2	58.5	66.9	83				80.0-118		
n-Propylbenzene	ND	29.3	28.0	95				72.0-128		
o-Xylene	6.99	29.3	32.6	88				80.0-121		
sec-Butylbenzene	ND	29.3	25.3	86				57.0-138		
tert-Butyl methyl ether (MTBE)	ND	29.3	32.5	111				67.0-135		
tert-Butylbenzene	ND	29.3	27.4	94				61.0-142		
trans-1,2-Dichloroethene	ND	29.3	29.4	100				72.0-135		
trans-1,4-Dichloro-2-butene	ND	146	224	153				49.0-211		

**Surrogates**

1,2-Dichloroethane-d4	116	55.0-173
4-Bromofluorobenzene	102	23.0-141
Toluene d8	102	57.0-134

**Matrix Spike Summary**

Original Sample ID: 31203002002 (49DPT-02 (4ft))

Analysis Date: 09/21/2012 12:25

MS Sample ID: 91083

Analysis Date: 09/21/2012 18:52

MSD Sample ID:

Analysis Date:

QC for Samples: 31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002007,  
31203002008, 31203002009, 31203002010, 31203002014

Matrix: Soil-Solid as dry weight

**Results by SW-846 8260B**

Parameter	Sample	Spike	Matrix Spike (%)		Spike Duplicate (%)		CL	RPD (%)	RPD CL
			Result	Rec (%)	Spike	Result			

**Batch Information**

Analytical Batch: VMS2564

Prep Batch: VXX4030

Analytical Method: SW-846 8260B

Prep Method: SW-846 5035 SL

Instrument: MSD9

Prep Date/Time: 09/21/2012 08:52

Analyst: DVO

MS Init Wt./Vol.: 5.5 g Extract Vol.: 5 mL

**Batch Summary**

Analytical Method: SW-846 8260B

Prep Method: SW-846 5035 SL

Prep Batch: VXX4038

Prep Date: 09/24/2012 11:33

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Analysis Date</u>	<u>Analytical Batch</u>	<u>Instrument</u>	<u>Analyst</u>
LCS-S for HBN 29269 [VXX/4038]	91021	09/24/2012 13:04	VMS2567	MSD9	DVO
LCSD-S for HBN 29269 [VXX/4038]	91022	09/24/2012 13:31	VMS2567	MSD9	DVO
MB-S for HBN 29269 [VXX/4038]	91023	09/24/2012 14:24	VMS2567	MSD9	DVO
49DPT-06 (4ft)	31203002006	09/24/2012 15:18	VMS2567	MSD9	DVO
48DPT-01 (3ft)(90702DUP)	91371	09/24/2012 22:28	VMS2567	MSD9	DVO
48DPT-02 (3ft)(90703MS)	91372	09/24/2012 22:55	VMS2567	MSD9	DVO

Print Date: 10/02/2012

N.C. Certification # 481

**Method Blank**

Blank ID: MB-S for HBN 29269 [VXX/4038]

Blank Lab ID: 91023

QC for Samples:

31203002006

Matrix: Soil-Solid as dry weight

**Results by SW-846 8260B**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>
Dichlorodifluoromethane	ND	U	1.05	5.00	ug/Kg	1
Chloromethane	ND	U	1.43	5.00	ug/Kg	1
Vinyl chloride	ND	U	0.950	5.00	ug/Kg	1
Bromomethane	ND	U	1.45	5.00	ug/Kg	1
Chloroethane	ND	U	1.00	5.00	ug/Kg	1
Trichlorofluoromethane	ND	U	1.01	5.00	ug/Kg	1
1,1-Dichloroethene	ND	U	1.16	5.00	ug/Kg	1
Acetone	ND	U	4.01	50.0	ug/Kg	1
Methylene chloride	ND	U	1.05	20.0	ug/Kg	1
trans-1,2-Dichloroethene	ND	U	0.730	5.00	ug/Kg	1
tert-Butyl methyl ether (MTBE)	ND	U	0.795	5.00	ug/Kg	1
1,1-Dichloroethane	ND	U	0.538	5.00	ug/Kg	1
Disopropyl Ether	ND	U	0.821	5.00	ug/Kg	1
2,2-Dichloropropane	ND	U	0.738	5.00	ug/Kg	1
cis-1,2-Dichloroethene	ND	U	0.611	5.00	ug/Kg	1
2-Butanone	ND	U	3.38	25.0	ug/Kg	1
Bromoform	ND	U	0.940	5.00	ug/Kg	1
Chloroform	ND	U	0.637	5.00	ug/Kg	1
1,1,1-Trichloroethane	ND	U	0.754	5.00	ug/Kg	1
Carbon tetrachloride	ND	U	0.569	5.00	ug/Kg	1
1,1-Dichloropropene	ND	U	0.676	5.00	ug/Kg	1
Benzene	ND	U	0.711	5.00	ug/Kg	1
1,2-Dichloroethane	ND	U	0.913	5.00	ug/Kg	1
Trichloroethene	ND	U	0.842	5.00	ug/Kg	1
1,2-Dichloropropane	ND	U	1.15	5.00	ug/Kg	1
Dibromomethane	ND	U	0.882	5.00	ug/Kg	1
Bromodichloromethane	ND	U	0.704	5.00	ug/Kg	1
cis-1,3-Dichloropropene	ND	U	1.03	5.00	ug/Kg	1
4-Methyl-2-pentanone	ND	U	3.74	12.5	ug/Kg	1
Toluene	ND	U	0.688	5.00	ug/Kg	1
Methyl iodide	ND	U	0.766	5.00	ug/Kg	1
trans-1,3-Dichloropropene	ND	U	0.944	5.00	ug/Kg	1
Carbon disulfide	ND	U	0.523	5.00	ug/Kg	1
1,1,2-Trichloroethane	ND	U	1.04	5.00	ug/Kg	1
Tetrachloroethene	ND	U	0.751	5.00	ug/Kg	1
1,3-Dichloropropane	ND	U	0.879	5.00	ug/Kg	1
2-Hexanone	ND	U	3.22	12.5	ug/Kg	1
Dibromochloromethane	ND	U	1.11	5.00	ug/Kg	1
1,2-Dibromoethane	ND	U	1.31	5.00	ug/Kg	1
Chlorobenzene	ND	U	0.698	5.00	ug/Kg	1
1,1,1,2-Tetrachloroethane	ND	U	0.709	5.00	ug/Kg	1

**Method Blank**

Blank ID: MB-S for HBN 29269 [VXX/4038]

Blank Lab ID: 91023

QC for Samples:

31203002006

Matrix: Soil-Solid as dry weight

**Results by SW-846 8260B**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>
Bromoform	ND	U	0.724	5.00	ug/Kg	1
Bromobenzene	ND	U	0.697	5.00	ug/Kg	1
1,1,2,2-Tetrachloroethane	ND	U	1.17	5.00	ug/Kg	1
1,2,3-Trichloropropane	ND	U	1.03	5.00	ug/Kg	1
Ethyl Benzene	ND	U	0.705	5.00	ug/Kg	1
m,p-Xylene	ND	U	1.69	10.0	ug/Kg	1
Styrene	ND	U	0.576	5.00	ug/Kg	1
o-Xylene	ND	U	0.766	5.00	ug/Kg	1
Xylene (total)	ND	U	1.77	10.0	ug/Kg	1
Isopropylbenzene (Cumene)	ND	U	0.622	5.00	ug/Kg	1
n-Propylbenzene	ND	U	0.732	5.00	ug/Kg	1
2-Chlorotoluene	ND	U	0.937	5.00	ug/Kg	1
4-Chlorotoluene	ND	U	0.756	5.00	ug/Kg	1
1,3,5-Trimethylbenzene	ND	U	0.608	5.00	ug/Kg	1
tert-Butylbenzene	ND	U	0.673	5.00	ug/Kg	1
1,2,4-Trimethylbenzene	ND	U	0.637	5.00	ug/Kg	1
sec-Butylbenzene	ND	U	0.600	5.00	ug/Kg	1
1,3-Dichlorobenzene	ND	U	0.719	5.00	ug/Kg	1
4-Isopropyltoluene	ND	U	0.645	5.00	ug/Kg	1
1,4-Dichlorobenzene	ND	U	0.675	5.00	ug/Kg	1
1,2-Dichlorobenzene	ND	U	0.711	5.00	ug/Kg	1
n-Butylbenzene	ND	U	0.657	5.00	ug/Kg	1
1,2-Dibromo-3-chloropropane	ND	U	7.41	30.0	ug/Kg	1
1,2,4-Trichlorobenzene	ND	U	0.729	5.00	ug/Kg	1
Hexachlorobutadiene	ND	U	0.687	5.00	ug/Kg	1
Naphthalene	ND	U	0.909	5.00	ug/Kg	1
trans-1,4-Dichloro-2-butene	ND	U	4.20	25.0	ug/Kg	1
1,2,3-Trichlorobenzene	ND	U	0.832	5.00	ug/Kg	1
<b>Surrogates</b>						
1,2-Dichloroethane-d4	109			55.0-173	%	1
Toluene d8	104			57.0-134	%	1
4-Bromofluorobenzene	104			23.0-141	%	1

**Batch Information**

Analytical Batch: VMS2567

Analytical Method: SW-846 8260B

Instrument: MSD9

Analyst: DVO

Prep Batch: VXX4038

Prep Method: SW-846 5035 SL

Prep Date/Time: 9/24/2012 11:33:22AM

Prep Initial Wt./Vol.: 5 g

Prep Extract Vol: 5 mL

Print Date: 10/02/2012

N.C. Certification # 481



### Blank Spike Summary

Blank Spike ID: LCS-S for HBN 29269 [VXX/4038]

Blank Spike Lab ID: 91021

Date Analyzed: 09/24/2012 13:04

QC for Samples: 31203002006

Spike Duplicate ID: LCSD-S for HBN 29269 [VXX/4038]

Spike Duplicate Lab ID: 91022

Date Analyzed: 09/24/2012 13:31

Matrix: Soil-Solid as dry weight

### Results by SW-846 8260B

Parameter	Blank Spike (ug/Kg)				Spike Duplicate (ug/Kg)				CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)			
Dichlorodifluoromethane	30.0	26.7	89	30.0	25.6	85	52.0-133	4.2	30.00		
Chloromethane	30.0	28.4	95	30.0	22.3	74	64.0-126	24	30.00		
Vinyl chloride	30.0	27.2	91	30.0	26.2	87	69.0-120	3.7	30.00		
Bromomethane	30.0	32.2	107	30.0	27.1	90	41.0-160	17	30.00		
Chloroethane	30.0	29.9	100	30.0	29.3	98	69.0-126	2.0	30.00		
Trichlorofluoromethane	30.0	30.7	102	30.0	29.6	99	72.0-123	3.6	30.00		
1,1-Dichloroethene	30.0	30.4	101	30.0	30.0	100	78.0-113	1.3	30.00		
Acetone	75.0	36.4	49	75.0	33.2	44	0.00-243	9.2	30.00		
Methylene chloride	30.0	29.0	97	30.0	28.0	93	40.0-156	3.5	30.00		
trans-1,2-Dichloroethene	30.0	31.9	106	30.0	30.4	101	78.0-111	4.8	30.00		
tert-Butyl methyl ether (MTBE)	30.0	32.2	107	30.0	31.2	104	68.0-138	3.2	30.00		
1,1-Dichloroethane	30.0	31.6	105	30.0	25.7	86	71.0-121	21	30.00		
Disopropyl Ether	30.0	32.4	108	30.0	23.4	78	60.0-141	32*	30.00		
2,2-Dichloropropane	30.0	40.4	135*	30.0	36.4	121	79.0-127	10	30.00		
cis-1,2-Dichloroethene	30.0	31.8	106	30.0	30.5	102	80.0-114	4.2	30.00		
2-Butanone	75.0	49.9	67	75.0	45.5	61	31.0-189	9.2	30.00		
Bromochloromethane	30.0	33.2	111	30.0	32.4	108	81.0-115	2.4	30.00		
Chloroform	30.0	32.4	108	30.0	31.2	104	76.0-114	3.8	30.00		
1,1,1-Trichloroethane	30.0	34.6	115	30.0	32.6	109	79.0-117	6.0	30.00		
Carbon tetrachloride	30.0	35.9	120*	30.0	33.7	112	82.0-119	6.3	30.00		
1,1-Dichloropropene	30.0	32.0	107	30.0	30.7	102	82.0-114	4.1	30.00		
Benzene	30.0	31.4	105	30.0	30.3	101	82.0-113	3.6	30.00		
1,2-Dichloroethane	30.0	32.8	109	30.0	32.5	108	72.0-126	0.92	30.00		
Trichloroethene	30.0	31.8	106	30.0	30.8	103	82.0-108	3.2	30.00		
1,2-Dichloropropane	30.0	31.3	104	30.0	30.7	102	78.0-116	1.9	30.00		
Dibromomethane	30.0	32.8	109	30.0	31.7	106	79.0-125	3.4	30.00		
Bromodichloromethane	30.0	34.5	115	30.0	32.2	107	79.0-122	6.9	30.00		
cis-1,3-Dichloropropene	30.0	33.6	112	30.0	32.7	109	75.0-127	2.7	30.00		
4-Methyl-2-pentanone	75.0	85.2	114	75.0	83.7	112	57.0-159	1.8	30.00		
Toluene	30.0	32.5	108	30.0	31.2	104	83.0-111	4.1	30.00		
Methyl iodide	30.0	32.8	109	30.0	32.6	109	63.0-137	0.61	30.00		
trans-1,3-Dichloropropene	30.0	36.8	123	30.0	35.9	120	75.0-134	2.5	30.00		
Carbon disulfide	30.0	31.0	103	30.0	29.5	98	72.0-116	5.0	30.00		
1,1,2-Trichloroethane	30.0	30.6	102	30.0	32.2	107	73.0-121	5.1	30.00		

Print Date: 10/02/2012

N.C. Certification # 481

**Blank Spike Summary**

Blank Spike ID: LCS-S for HBN 29269 [VXX/4038]

Blank Spike Lab ID: 91021

Date Analyzed: 09/24/2012 13:04

QC for Samples: 31203002006

Spike Duplicate ID: LCSD-S for HBN 29269 [VXX/4038]

Spike Duplicate Lab ID: 91022

Date Analyzed: 09/24/2012 13:31

Matrix: Soil-Solid as dry weight

**Results by SW-846 8260B**

<u>Parameter</u>	Blank Spike (ug/Kg)			Spike Duplicate (ug/Kg)			<u>CL</u>	<u>RPD (%)</u>	<u>RPD CL</u>
	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>			
Tetrachloroethene	30.0	31.2	104	30.0	30.1	100	60.0-118	3.6	30.00
1,3-Dichloropropane	30.0	30.2	101	30.0	31.0	103	76.0-121	2.6	30.00
2-Hexanone	75.0	58.2	78	75.0	59.4	79	41.0-171	2.0	30.00
Dibromochloromethane	30.0	32.7	109	30.0	34.9	116	77.0-126	6.5	30.00
1,2-Dibromoethane	30.0	31.9	106	30.0	31.8	106	76.0-125	0.31	30.00
Chlorobenzene	30.0	30.1	100	30.0	28.8	96	78.0-109	4.4	30.00
1,1,1,2-Tetrachloroethane	30.0	35.7	119*	30.0	38.5	128*	81.0-117	7.5	30.00
Bromoform	30.0	37.2	124	30.0	43.1	144*	72.0-134	15	30.00
Bromobenzene	30.0	30.4	101	30.0	31.1	104	76.0-113	2.3	30.00
1,1,2,2-Tetrachloroethane	30.0	33.7	112	30.0	34.6	115	76.0-129	2.6	30.00
1,2,3-Trichloropropane	30.0	32.5	108	30.0	32.8	109	70.0-145	0.92	30.00
Ethyl Benzene	30.0	27.8	93	30.0	27.7	92	72.0-115	0.36	30.00
m,p-Xylene	60.0	56.0	93	60.0	55.5	93	73.0-114	0.90	30.00
Styrene	30.0	27.9	93	30.0	27.9	93	74.0-114	0.0	30.00
o-Xylene	30.0	28.0	93	30.0	27.5	92	74.0-113	1.8	30.00
Isopropylbenzene (Cumene)	30.0	28.6	95	30.0	28.3	94	72.0-115	1.1	30.00
n-Propylbenzene	30.0	28.7	96	30.0	29.0	97	71.0-117	1.0	30.00
2-Chlorotoluene	30.0	29.2	97	30.0	28.9	96	76.0-111	1.0	30.00
4-Chlorotoluene	30.0	28.5	95	30.0	27.9	93	75.0-113	2.1	30.00
1,3,5-Trimethylbenzene	30.0	28.9	96	30.0	28.7	96	72.0-115	0.69	30.00
tert-Butylbenzene	30.0	28.5	95	30.0	28.3	94	74.0-112	0.70	30.00
1,2,4-Trimethylbenzene	30.0	29.1	97	30.0	28.8	96	73.0-114	1.0	30.00
sec-Butylbenzene	30.0	27.8	93	30.0	28.0	93	72.0-115	0.72	30.00
1,3-Dichlorobenzene	30.0	29.3	98	30.0	28.5	95	75.0-110	2.8	30.00
4-Isopropyltoluene	30.0	28.4	95	30.0	28.1	94	73.0-114	1.1	30.00
1,4-Dichlorobenzene	30.0	29.5	98	30.0	28.6	95	76.0-110	3.1	30.00
1,2-Dichlorobenzene	30.0	28.8	96	30.0	27.9	93	77.0-109	3.2	30.00
n-Butylbenzene	30.0	28.9	96	30.0	28.2	94	72.0-118	2.5	30.00
1,2-Dibromo-3-chloropropane	180	202	112	180	213	118	54.0-166	5.3	30.00
1,2,4-Trichlorobenzene	30.0	30.0	100	30.0	31.9	106	76.0-115	6.1	30.00
Hexachlorobutadiene	30.0	30.2	101	30.0	31.0	103	70.0-111	2.6	30.00
Naphthalene	30.0	30.3	101	30.0	31.0	103	71.0-129	2.3	30.00
trans-1,4-Dichloro-2-butene	150	159	106	150	166	111	62.0-164	4.3	30.00
1,2,3-Trichlorobenzene	30.0	29.7	99	30.0	30.8	103	78.0-115	3.6	30.00



### Blank Spike Summary

Blank Spike ID: LCS-S for HBN 29269 [VXX/4038]

Blank Spike Lab ID: 91021

Date Analyzed: 09/24/2012 13:04

QC for Samples: 31203002006

Spike Duplicate ID: LCSD-S for HBN 29269 [VXX/4038]

Spike Duplicate Lab ID: 91022

Date Analyzed: 09/24/2012 13:31

Matrix: Soil-Solid as dry weight

### Results by SW-846 8260B

Parameter	Blank Spike (ug/Kg)			Spike Duplicate (ug/Kg)				CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)				
<b>Surrogates</b>										
1,2-Dichloroethane-d4		105			102		55.0-173			
Toluene d8		103			101		57.0-134			
4-Bromofluorobenzene		104			109		23.0-141			

### Batch Information

Analytical Batch: VMS2567

Analytical Method: SW-846 8260B

Instrument: MSD9

Analyst: DVO

Prep Batch: VXX4038

Prep Method: SW-846 5035 SL

Prep Date/Time: 09/24/2012 11:33

Spike Init Wt./Vol.: 5 g Extract Vol: 5 mL

Dupe Init Wt./Vol.: 5 g Extract Vol: 5 mL



### Batch Summary

Analytical Method: EPA 625

Prep Method: EPA 625

Prep Batch: XXX3088

Prep Date: 09/24/2012 10:10

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Analysis Date</u>	<u>Analytical Batch</u>	<u>Instrument</u>	<u>Analyst</u>
MB for HBN 29259 [XXX/3088]	90950	09/26/2012 22:56	XMS1678	MSD10	CMP
LCS for HBN 29259 [XXX/3088]	90951	09/26/2012 23:20	XMS1678	MSD10	CMP
LCSD for HBN 29259 [XXX/3088]	90952	09/26/2012 23:43	XMS1678	MSD10	CMP
AMW2	31203002011	09/27/2012 00:06	XMS1678	MSD10	CMP
AMW3	31203002012	09/27/2012 00:29	XMS1678	MSD10	CMP

Print Date: 10/02/2012

N.C. Certification # 481

**Method Blank**

Blank ID: MB for HBN 29259 [XXX/3088]

Blank Lab ID: 90950

QC for Samples:

31203002011, 31203002012

Matrix: Water

**Results by EPA 625**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Bis(2-Chloroethyl)ether	ND	U	2.21	5.00	ug/L	1
Bis(2-Chloroisopropyl)ether	ND	U	2.04	5.00	ug/L	1
n-Nitrosodi-n-propylamine	ND	U	2.23	5.00	ug/L	1
Hexachloroethane	ND	U	1.40	5.00	ug/L	1
Nitrobenzene	ND	U	2.19	5.00	ug/L	1
Isophorone	ND	U	2.09	5.00	ug/L	1
Bis(2-Chloroethoxy)methane	ND	U	2.12	5.00	ug/L	1
1,2,4-Trichlorobenzene	ND	U	1.73	5.00	ug/L	1
Naphthalene	ND	U	1.94	5.00	ug/L	1
Hexachlorobutadiene	ND	U	1.52	5.00	ug/L	1
Hexachlorocyclopentadiene	ND	U	0.788	10.0	ug/L	1
2-Chloronaphthalene	ND	U	2.00	5.00	ug/L	1
Dimethyl phthalate	ND	U	2.14	5.00	ug/L	1
2,6-Dinitrotoluene	ND	U	1.88	5.00	ug/L	1
Acenaphthene	ND	U	2.06	5.00	ug/L	1
2,4-Dinitrotoluene	ND	U	1.84	5.00	ug/L	1
Fluorene	ND	U	2.44	5.00	ug/L	1
Diethyl phthalate	ND	U	2.10	5.00	ug/L	1
4-Chlorophenyl phenyl ether	ND	U	2.46	5.00	ug/L	1
Diphenylamine	ND	U	2.02	5.00	ug/L	1
4-Bromophenyl phenyl ether	ND	U	2.04	5.00	ug/L	1
Hexachlorobenzene	ND	U	1.93	5.00	ug/L	1
Phenanthrene	ND	U	1.99	5.00	ug/L	1
Anthracene	ND	U	1.93	5.00	ug/L	1
Di-n-butyl phthalate	ND	U	1.91	5.00	ug/L	1
Fluoranthene	ND	U	2.02	5.00	ug/L	1
Pyrene	ND	U	2.01	5.00	ug/L	1
Butyl benzyl phthalate	ND	U	1.89	5.00	ug/L	1
Benzo(a)anthracene	ND	U	1.96	5.00	ug/L	1
3,3'-Dichlorobenzidine	ND	U	1.75	10.0	ug/L	1
Chrysene	ND	U	2.20	5.00	ug/L	1
Bis(2-Ethylhexyl)phthalate	ND	U	1.95	5.00	ug/L	1
Benzo(b)fluoranthene	ND	U	1.96	5.00	ug/L	1
Benzo(k)fluoranthene	ND	U	2.31	5.00	ug/L	1
Benzo(a)pyrene	ND	U	1.86	5.00	ug/L	1
Indeno(1,2,3-cd)pyrene	ND	U	2.02	5.00	ug/L	1
Dibenz(a,h)anthracene	ND	U	2.02	5.00	ug/L	1
Benzo(g,h,i)perylene	ND	U	2.15	5.00	ug/L	1
Acenaphthylene	ND	U	2.00	5.00	ug/L	1
Di-n-octyl phthalate	ND	U	1.46	5.00	ug/L	1

**Surrogates**

Print Date: 10/02/2012

N.C. Certification # 481

**Method Blank**

Blank ID: MB for HBN 29259 [XXX/3088]

Matrix: Water

Blank Lab ID: 90950

QC for Samples:

31203002011, 31203002012

**Results by EPA 625**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
2-Fluorophenol	83.3			33.1-118	%	1
Phenol-d6	87.6			49.0-120	%	1
Nitrobenzene-d5	90.0			46.0-118	%	1
2-Fluorobiphenyl	101			50.0-107	%	1
2,4,6-Tribromophenol	79.9			29.3-152	%	1
Terphenyl-d14	110			22.1-142	%	1

**Batch Information**

Analytical Batch: XMS1678

Prep Batch: XXX3088

Analytical Method: EPA 625

Prep Method: EPA 625

Instrument: MSD10

Prep Date/Time: 9/24/2012 10:10:42AM

Analyst: CMP

Prep Initial Wt./Vol.: 1000 mL

Prep Extract Vol: 5 mL

**Blank Spike Summary**

Blank Spike ID: LCS for HBN 29259 [XXX/3088]

Blank Spike Lab ID: 90951

Date Analyzed: 09/26/2012 23:20

Spike Duplicate ID: LCSD for HBN 29259 [XXX/3088]

Spike Duplicate Lab ID: 90952

Date Analyzed: 09/26/2012 23:43

Matrix: Water

QC for Samples: 31203002011, 31203002012

**Results by EPA 625**

<u>Parameter</u>	Blank Spike (ug/L)			Spike Duplicate (ug/L)			<u>CL</u>	<u>RPD (%)</u>	RPD CL
	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>			
Bis(2-Chloroethyl)ether	50.0	47.7	95	50.0	47.4	95	12.0-158	0.63	30.00
Bis(2-Chloroisopropyl)ether	50.0	45.3	91	50.0	45.4	91	36.0-166	0.22	30.00
n-Nitrosodi-n-propylamine	50.0	44.4	89	50.0	43.0	86	0.0100-230	3.2	30.00
Hexachloroethane	50.0	29.8	60	50.0	34.9	70	40.0-113	16	30.00
Nitrobenzene	50.0	47.7	95	50.0	47.5	95	35.0-180	0.42	30.00
Isophorone	50.0	49.2	98	50.0	49.1	98	21.0-196	0.20	30.00
Bis(2-Chloroethoxy)methane	50.0	50.9	102	50.0	50.8	102	33.0-184	0.20	30.00
1,2,4-Trichlorobenzene	50.0	47.8	96	50.0	49.7	99	44.0-142	3.9	30.00
Naphthalene	50.0	46.5	93	50.0	47.3	95	21.0-133	1.7	30.00
Hexachlorobutadiene	50.0	41.8	84	50.0	44.8	90	24.0-116	6.9	30.00
Hexachlorocyclopentadiene	50.0	48.3	97	50.0	48.1	96	0.0100-417	0.41	30.00
2-Chloronaphthalene	50.0	45.9	92	50.0	46.1	92	60.0-118	0.43	30.00
Dimethyl phthalate	50.0	51.3	103	50.0	51.6	103	0.0100-112	0.58	30.00
2,6-Dinitrotoluene	50.0	49.2	98	50.0	48.4	97	50.0-158	1.6	30.00
Acenaphthene	50.0	49.8	100	50.0	49.6	99	47.0-145	0.40	30.00
2,4-Dinitrotoluene	50.0	49.8	100	50.0	49.9	100	39.0-139	0.20	30.00
Fluorene	50.0	54.4	109	50.0	53.9	108	59.0-121	0.92	30.00
Diethyl phthalate	50.0	52.6	105	50.0	52.7	105	0.0100-114	0.19	30.00
4-Chlorophenyl phenyl ether	50.0	53.4	107	50.0	53.5	107	25.0-158	0.19	30.00
Diphenylamine	50.0	52.6	105*	50.0	51.8	104*	63.8-100	1.5	30.00
4-Bromophenyl phenyl ether	50.0	54.9	110	50.0	54.5	109	53.0-127	0.73	30.00
Hexachlorobenzene	50.0	53.9	108	50.0	54.7	109	0.0100-152	1.5	30.00
Phenanthrene	50.0	55.1	110	50.0	54.7	109	54.0-120	0.73	30.00
Anthracene	50.0	51.5	103	50.0	50.0	100	27.0-133	3.0	30.00
Di-n-butyl phthalate	50.0	57.6	115	50.0	56.6	113	1.00-118	1.8	30.00
Fluoranthene	50.0	56.1	112	50.0	55.3	111	26.0-137	1.4	30.00
Pyrene	50.0	54.3	109	50.0	53.8	108	52.0-115	0.93	30.00
Butyl benzyl phthalate	50.0	54.4	109	50.0	54.2	108	0.0100-152	0.37	30.00
Benzo(a)anthracene	50.0	51.4	103	50.0	51.4	103	33.0-143	0.0	30.00
3,3'-Dichlorobenzidine	50.0	49.1	98	50.0	49.4	99	0.0100-262	0.61	30.00
Chrysene	50.0	50.9	102	50.0	51.1	102	17.0-168	0.39	30.00
Bis(2-Ethylhexyl)phthalate	50.0	56.9	114	50.0	57.2	114	8.00-158	0.53	30.00
Benzo(b)fluoranthene	50.0	50.0	100	50.0	50.2	100	24.0-159	0.40	30.00
Benzo(k)fluoranthene	50.0	61.4	123	50.0	60.8	122	11.0-162	0.98	30.00

**Blank Spike Summary**

Blank Spike ID: LCS for HBN 29259 [XXX/3088]

Blank Spike Lab ID: 90951

Date Analyzed: 09/26/2012 23:20

QC for Samples: 31203002011, 31203002012

Spike Duplicate ID: LCSD for HBN 29259 [XXX/3088]

Spike Duplicate Lab ID: 90952

Date Analyzed: 09/26/2012 23:43

Matrix: Water

**Results by EPA 625**

<u>Parameter</u>	Blank Spike (ug/L)			Spike Duplicate (ug/L)				<u>CL</u>	<u>RPD (%)</u>	<u>RPD CL</u>
	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>				
Benzo(a)pyrene	50.0	48.7	97	50.0	47.5	95	17.0-163	2.5	30.00	
Indeno(1,2,3-cd)pyrene	50.0	41.7	83	50.0	43.0	86	0.0100-171	3.1	30.00	
Dibenz(a,h)anthracene	50.0	42.3	85	50.0	43.7	87	0.0100-227	3.3	30.00	
Benzo(g,h,i)perylene	50.0	39.1	78	50.0	40.9	82	0.0100-219	4.5	30.00	
Acenaphthylene	50.0	49.6	99	50.0	50.0	100	33.0-145	0.80	30.00	
Di-n-octyl phthalate	50.0	74.7	149	50.0	75.9	152	-	1.6		

**Surrogates**

2-Fluorophenol	79.5	81.8	33.1-118
Phenol-d6	94.3	92.2	49.0-120
Nitrobenzene-d5	91.5	90.2	46.0-118
2-Fluorobiphenyl	103	99.5	50.0-107
2,4,6-Tribromophenol	102	101	29.3-152
Terphenyl-d14	104	102	22.1-142

**Batch Information**

Analytical Batch: XMS1678

Prep Batch: XXX3088

Analytical Method: EPA 625

Prep Method: EPA 625

Instrument: MSD10

Prep Date/Time: 09/24/2012 10:10

Analyst: CMP

Spike Init Wt./Vol.: 1000 mL Extract Vol: 5 mL

Dupe Init Wt./Vol.: 1000 mL Extract Vol: 5 mL

**Batch Summary**

Analytical Method: SW-846 8270D

Prep Method: SW-846 3541

Prep Batch: XXX3080

Prep Date: 09/20/2012 17:46

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Analysis Date</u>	<u>Analytical Batch</u>	<u>Instrument</u>	<u>Analyst</u>
MB for HBN 29110 [XXX/3080]	90615	09/24/2012 10:45	XMS1673	MSD10	CMP
LCS for HBN 29110 [XXX/3080]	90616	09/24/2012 11:31	XMS1673	MSD10	CMP
49DPT-01 (4ft)	31203002001	09/24/2012 17:13	XMS1673	MSD10	CMP
49DPT-01 (4ft)(90328MS)	90617	09/24/2012 17:35	XMS1673	MSD10	CMP
49DPT-01 (4ft)(90328MSD)	90618	09/24/2012 17:58	XMS1673	MSD10	CMP
49DPT-02 (4ft)	31203002002	09/24/2012 18:21	XMS1673	MSD10	CMP
49DPT-04 (4ft)	31203002004	09/24/2012 18:43	XMS1673	MSD10	CMP
49DPT-05 (4ft)	31203002005	09/24/2012 19:06	XMS1673	MSD10	CMP
49DPT-06 (4ft)	31203002006	09/24/2012 19:29	XMS1673	MSD10	CMP
49DPT-07 (4ft)	31203002007	09/24/2012 19:53	XMS1673	MSD10	CMP
49DPT-08 (4ft)	31203002008	09/24/2012 20:16	XMS1673	MSD10	CMP
49DPT-10 (4ft)	31203002010	09/24/2012 21:47	XMS1673	MSD10	CMP
49DPT-03 (4ft)	31203002003	09/26/2012 16:04	XMS1677	MSD10	CMP
49DPT-09 (3ft)	31203002009	09/26/2012 16:27	XMS1677	MSD10	CMP

**Method Blank**

Blank ID: MB for HBN 29110 [XXX/3080]

Matrix: Soil-Solid as dry weight

Blank Lab ID: 90615

QC for Samples:

31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002006, 31203002007,  
31203002008, 31203002009, 31203002010**Results by SW-846 8270D**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Phenol	ND	U	29.2	313	ug/Kg	1
Bis(2-Chloroethyl)ether	ND	U	29.2	313	ug/Kg	1
2-Chlorophenol	ND	U	16.6	313	ug/Kg	1
1,3-Dichlorobenzene	ND	U	21.1	313	ug/Kg	1
1,4-Dichlorobenzene	ND	U	22.1	313	ug/Kg	1
1,2-Dichlorobenzene	ND	U	15.6	313	ug/Kg	1
2-Methylphenol	ND	U	17.3	313	ug/Kg	1
3 and/or 4-Methylphenol	ND	U	20.3	313	ug/Kg	1
Bis(2-Chloroisopropyl)ether	ND	U	27.3	313	ug/Kg	1
n-Nitrosodi-n-propylamine	ND	U	89.6	313	ug/Kg	1
Hexachloroethane	ND	U	18.0	313	ug/Kg	1
Nitrobenzene	ND	U	18.0	313	ug/Kg	1
Isophorone	ND	U	14.2	313	ug/Kg	1
2-Nitrophenol	ND	U	15.0	313	ug/Kg	1
2,4-Dimethylphenol	ND	U	22.9	313	ug/Kg	1
Bis(2-Chloroethoxy)methane	ND	U	14.1	313	ug/Kg	1
2,4-Dichlorophenol	ND	U	18.1	313	ug/Kg	1
1,2,4-Trichlorobenzene	ND	U	27.6	313	ug/Kg	1
Naphthalene	ND	U	27.0	313	ug/Kg	1
4-Chloroaniline	ND	U	25.0	313	ug/Kg	1
Hexachlorobutadiene	ND	U	18.7	313	ug/Kg	1
4-Chloro-3-methylphenol	ND	U	15.6	313	ug/Kg	1
2-Methylnaphthalene	ND	U	25.3	313	ug/Kg	1
Hexachlorocyclopentadiene	ND	U	94.7	626	ug/Kg	1
2,4,5-Trichlorophenol	ND	U	20.9	313	ug/Kg	1
2,4,6-Trichlorophenol	ND	U	21.2	313	ug/Kg	1
2-Chloronaphthalene	ND	U	18.4	313	ug/Kg	1
2-Nitroaniline	ND	U	20.6	313	ug/Kg	1
3-Nitroaniline	ND	U	14.1	1570	ug/Kg	1
Dimethyl phthalate	ND	U	24.0	313	ug/Kg	1
2,6-Dinitrotoluene	ND	U	22.4	313	ug/Kg	1
Acenaphthene	ND	U	14.2	313	ug/Kg	1
2,4-Dinitrophenol	ND	U	29.0	1570	ug/Kg	1
4-Nitrophenol	ND	U	30.8	1570	ug/Kg	1
Dibenzofuran	ND	U	24.5	313	ug/Kg	1
2,4-Dinitrotoluene	ND	U	15.8	313	ug/Kg	1
Fluorene	ND	U	16.6	313	ug/Kg	1
Diethyl phthalate	ND	U	16.9	313	ug/Kg	1
4-Chlorophenyl phenyl ether	ND	U	33.4	313	ug/Kg	1
4-Nitroaniline	ND	U	18.0	1570	ug/Kg	1
4,6-Dinitro-2-methylphenol	ND	U	14.7	1570	ug/Kg	1

**Method Blank**

Blank ID: MB for HBN 29110 [XXX/3080]

Matrix: Soil-Solid as dry weight

Blank Lab ID: 90615

QC for Samples:

31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002006, 31203002007,  
31203002008, 31203002009, 31203002010**Results by SW-846 8270D**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>
Diphenylamine	ND	U	14.1	313	ug/Kg	1
4-Bromophenyl phenyl ether	ND	U	20.6	313	ug/Kg	1
Hexachlorobenzene	ND	U	29.6	1570	ug/Kg	1
Pentachlorophenol	ND	U	25.0	1570	ug/Kg	1
Phenanthrene	ND	U	20.6	313	ug/Kg	1
Anthracene	ND	U	13.9	313	ug/Kg	1
Di-n-butyl phthalate	ND	U	14.8	313	ug/Kg	1
Fluoranthene	ND	U	29.4	313	ug/Kg	1
Pyrene	ND	U	13.2	313	ug/Kg	1
Butyl benzyl phthalate	ND	U	27.2	313	ug/Kg	1
Benzo(a)anthracene	ND	U	17.2	313	ug/Kg	1
3,3'-Dichlorobenzidine	ND	U	15.0	626	ug/Kg	1
Chrysene	ND	U	36.4	313	ug/Kg	1
Bis(2-Ethylhexyl)phthalate	ND	U	15.0	313	ug/Kg	1
Di-n-octyl phthalate	ND	U	17.3	313	ug/Kg	1
Benzo(b)fluoranthene	ND	U	18.0	313	ug/Kg	1
Benzo(k)fluoranthene	ND	U	37.5	313	ug/Kg	1
Benzo(a)pyrene	ND	U	17.7	313	ug/Kg	1
Indeno(1,2,3-cd)pyrene	ND	U	24.4	313	ug/Kg	1
Dibenz(a,h)anthracene	ND	U	14.1	313	ug/Kg	1
Benzo(g,h,i)perylene	ND	U	49.8	313	ug/Kg	1
Benzoic acid	ND	U	6.94	1570	ug/Kg	1
Acenaphthylene	ND	U	13.2	313	ug/Kg	1
<b>Surrogates</b>						
2-Fluorophenol	83.0			42.0-123	%	1
Phenol-d6	92.0			48.0-125	%	1
Nitrobenzene-d5	87.0			46.0-117	%	1
2-Fluorobiphenyl	99.0			48.0-123	%	1
2,4,6-Tribromophenol	87.0			41.0-129	%	1
Terphenyl-d14	97.0			44.0-140	%	1

**Batch Information**

Analytical Batch: XMS1673

Prep Batch: XXX3080

Analytical Method: SW-846 8270D

Prep Method: SW-846 3541

Instrument: MSD10

Prep Date/Time: 9/20/2012 5:46:11PM

Analyst: CMP

Prep Initial Wt./Vol.: 32 g

**Blank Spike Summary**

Blank Spike ID: LCS for HBN 29110 [XXX/3080]

Blank Spike Lab ID: 90616

Date Analyzed: 09/24/2012 11:31

Matrix: Soil-Solid as dry weight

QC for Samples: 31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002006,  
31203002007, 31203002008, 31203002009, 31203002010**Results by SW-846 8270D****Blank Spike (ug/Kg)**

<u>Parameter</u>	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>CL</u>
Phenol	3130	2830	90	67.0-112
Bis(2-Chloroethyl)ether	3130	2700	86	63.0-116
2-Chlorophenol	3130	2810	90	67.0-109
1,3-Dichlorobenzene	3130	2820	90	66.0-109
1,4-Dichlorobenzene	3130	2820	90	65.0-112
1,2-Dichlorobenzene	3130	2840	91	67.0-110
2-Methylphenol	3130	2830	91	68.0-110
3 and/or 4-Methylphenol	6250	5930	95	66.0-113
Bis(2-Chloroisopropyl)ether	3130	2590	83	64.0-114
n-Nitrosodi-n-propylamine	3130	2670	85	66.0-111
Hexachloroethane	3130	2720	87	64.0-110
Nitrobenzene	3130	2810	90	69.0-112
Isophorone	3130	2950	94	69.0-108
2-Nitrophenol	3130	2880	92	65.0-117
2,4-Dimethylphenol	3130	2770	88	69.0-112
Bis(2-Chloroethoxy)methane	3130	2960	95	68.0-112
Benzoic acid	3130	1620	52	0.00-203
2,4-Dichlorophenol	3130	2980	95	67.0-118
1,2,4-Trichlorobenzene	3130	3110	100	65.0-114
Naphthalene	3130	2860	92	70.0-111
4-Chloroaniline	3130	2100	67	41.0-93.0
Hexachlorobutadiene	3130	2910	93	63.0-124
4-Chloro-3-methylphenol	3130	2940	94	70.0-114
2-Methylnaphthalene	3130	2960	95	69.0-110
Hexachlorocyclopentadiene	3130	3020	97	0.00-1080
2,4,5-Trichlorophenol	3130	3180	102	66.0-119
2,4,6-Trichlorophenol	3130	2950	94	67.0-119
2-Chloronaphthalene	3130	2760	88	57.0-96.0
2-Nitroaniline	3130	2500	80	61.0-100
3-Nitroaniline	3130	2510	80	48.0-103
Dimethyl phthalate	3130	3020	97	69.0-118
2,6-Dinitrotoluene	3130	3040	97	69.0-122
Acenaphthene	3130	2950	94	68.0-111
2,4-Dinitrophenol	3130	2920	93	12.0-125

Print Date: 10/02/2012

N.C. Certification # 481

**Blank Spike Summary**

Blank Spike ID: LCS for HBN 29110 [XXX/3080]

Blank Spike Lab ID: 90616

Date Analyzed: 09/24/2012 11:31

Matrix: Soil-Solid as dry weight

QC for Samples: 31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002006,  
31203002007, 31203002008, 31203002009, 31203002010**Results by SW-846 8270D****Blank Spike (ug/Kg)**

<u>Parameter</u>	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>CL</u>
4-Nitrophenol	3130	2880	92	45.0-120
Dibenzofuran	3130	2990	96	71.0-114
2,4-Dinitrotoluene	3130	3010	96	68.0-123
Fluorene	3130	3060	98	66.0-116
Diethyl phthalate	3130	2920	93	68.0-114
4-Chlorophenyl phenyl ether	3130	3080	98	66.0-120
4-Nitroaniline	3130	2760	88	66.0-114
4,6-Dinitro-2-methylphenol	3130	3440	110	24.0-123
Diphenylamine	3130	2970	95	60.0-118
4-Bromophenyl phenyl ether	3130	3090	99	63.0-118
Hexachlorobenzene	3130	2910	93	62.0-112
Pentachlorophenol	3130	2980	95	34.0-125
Phenanthrene	3130	3030	97	60.0-122
Anthracene	3130	3040	97	63.0-113
Di-n-butyl phthalate	3130	3040	97	64.0-121
Fluoranthene	3130	3090	99	64.0-118
Pyrene	3130	2970	95	67.0-116
Butyl benzyl phthalate	3130	2850	91	68.0-118
Benzo(a)anthracene	3130	2980	95	65.0-118
3,3'-Dichlorobenzidine	3130	2740	88	54.0-118
Chrysene	3130	3070	98	66.0-118
Bis(2-Ethylhexyl)phthalate	3130	2940	94	67.0-123
Di-n-octyl phthalate	3130	2930	94	62.0-131
Benzo(b)fluoranthene	3130	2900	93	63.0-119
Benzo(k)fluoranthene	3130	2940	94	69.0-118
Benzo(a)pyrene	3130	3090	99	69.0-113
Indeno(1,2,3-cd)pyrene	3130	3310	106	64.0-123
Dibenzo(a,h)anthracene	3130	3300	105	64.0-123
Benzo(g,h,i)perylene	3130	3360	107	57.0-128
Acenaphthylene	3130	3080	99	72.0-115
<b>Surrogates</b>				
2-Fluorophenol		86		42.0-123
Phenol-d6		93		48.0-125

Print Date: 10/02/2012

N.C. Certification # 481

**Matrix Spike Summary**

Original Sample ID: 31203002001 (49DPT-01 (4ft))

MS Sample ID: 90617

MSD Sample ID: 90618

Analysis Date: 09/24/2012 17:13

Analysis Date: 09/24/2012 17:35

Analysis Date: 09/24/2012 17:58

Matrix: Soil-Solid as dry weight

QC for Samples: 31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002006,  
31203002007, 31203002008, 31203002009, 31203002010**Results by SW-846 8270D**

<u>Parameter</u>	<u>Sample</u>	Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)			<u>CL</u>	<u>RPD (%)</u>	<u>RPD CL</u>
		<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>			
1,2,4-Trichlorobenzene	ND	3596	3930	109	3743	3860	103	68.9-119	1.4	30.00
1,2-Dichlorobenzene	ND	3596	3640	101	3743	3590	96	73.3-121	1.2	30.00
1,3-Dichlorobenzene	ND	3596	3560	99	3743	3490	93	69.7-119	1.6	30.00
1,4-Dichlorobenzene	ND	3596	3600	100	3743	3540	95	70.6-117	1.6	30.00
2,4,5-Trichlorophenol	ND	3596	4060	113	3743	4050	108	72.4-118	0.28	30.00
2,4,6-Trichlorophenol	ND	3596	3780	105	3743	3740	100	67.9-116	0.90	30.00
2,4-Dichlorophenol	ND	3596	3870	108	3743	3790	101	74.5-115	2.1	30.00
2,4-Dinitrophenol	ND	3596	4310	120	3743	3890	104	20.4-130	10	30.00
2,4-Dinitrotoluene	ND	3596	3890	108	3743	3840	103	67.6-136	1.5	30.00
2,6-Dinitrotoluene	ND	3596	3840	107	3743	3810	102	69.3-131	0.59	30.00
2-Chloronaphthalene	ND	3596	3480	97	3743	3420	91	70.3-124	1.6	30.00
2-Chlorophenol	ND	3596	3670	102	3743	3630	97	77.1-111	0.93	30.00
2-Methylnaphthalene	ND	3596	3790	105	3743	3720	99	74.1-111	1.8	30.00
2-Methylphenol	ND	3596	3760	104	3743	3600	96	78.7-116	4.3	30.00
2-Nitroaniline	ND	3596	3300	92	3743	3240	87	70.0-129	2.1	30.00
2-Nitrophenol	ND	3596	3740	104	3743	3730	100	63.3-112	0.30	30.00
3 and/or 4-Methylphenol	ND	7193	7940	110 *	7475	7670	103 *	71.2-101	3.3	30.00
3,3'-Dichlorobenzidine	ND	3596	3370	94	3743	3400	91	14.2-302	0.67	30.00
3-Nitroaniline	ND	3596	3440	96	3743	3370	90	76.6-356	2.0	30.00
4,6-Dinitro-2-methylphenol	ND	3596	4540	126	3743	4100	110	39.4-126	9.9	30.00
4-Chloro-3-methylphenol	ND	3596	3860	107	3743	3800	102	80.0-115	1.5	30.00
4-Chloroaniline	ND	3596	2690	75	3743	2710	72	25.1-237	0.42	30.00
4-Chlorophenyl phenyl ether	ND	3596	3930	109	3743	3850	103	72.8-125	1.7	30.00
Acenaphthene	ND	3596	3750	104	3743	3680	99	71.0-125	1.8	30.00
Acenaphthylene	ND	3596	3890	108	3743	3790	101	73.0-140	2.6	30.00
Anthracene	ND	3596	3760	104	3743	3710	99	66.9-119	1.2	30.00
Benzo(a)anthracene	ND	3596	3810	106	3743	3680	98	51.8-127	3.6	30.00
Benzo(a)pyrene	ND	3596	3620	101	3743	3550	95	78.5-137	1.9	30.00
Benzo(b)fluoranthene	ND	3596	3280	91	3743	3260	87	62.3-134	0.69	30.00
Benzo(g,h,i)perylene	ND	3596	3310	92	3743	3080	82	56.2-149	7.4	30.00
Benzo(k)fluoranthene	ND	3596	3760	105	3743	3650	98	79.7-133	3.0	30.00
Benzoic acid	ND	3596	2360	66	3743	2460	66	1.00-140	4.2	30.00
Bis(2-Chloroethoxy)methane	ND	3596	3810	106	3743	3770	101	71.4-123	0.89	30.00
Bis(2-Chloroethyl)ether	ND	3596	3520	98	3743	3520	94	64.0-120	0.0	30.00
Bis(2-Chloroisopropyl)ether	ND	3596	3380	94	3743	3300	88	60.5-123	2.4	30.00
Bis(2-Ethylhexyl)phthalate	ND	3596	4060	113	3743	3900	104	68.5-134	4.0	30.00
4-Bromophenyl phenyl ether	ND	3596	3880	108	3743	3830	103	65.2-127	1.2	30.00
Butyl benzyl phthalate	ND	3596	3840	107	3743	3710	99	64.4-133	3.6	30.00

**Matrix Spike Summary**

Original Sample ID: 31203002001 (49DPT-01 (4ft))

MS Sample ID: 90617

MSD Sample ID: 90618

Analysis Date: 09/24/2012 17:13

Analysis Date: 09/24/2012 17:35

Analysis Date: 09/24/2012 17:58

Matrix: Soil-Solid as dry weight

QC for Samples: 31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002006,  
31203002007, 31203002008, 31203002009, 31203002010**Results by SW-846 8270D**

<u>Parameter</u>	<u>Sample</u>	Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)			<u>CL</u>	<u>RPD (%)</u>	<u>RPD CL</u>
		<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>			
Chrysene	ND	3596	4020	112	3743	3820	102	72.7-124	4.9	30.00
Di-n-butyl phthalate	ND	3596	3720	103	3743	3700	99	67.9-125	0.61	30.00
Di-n-octyl phthalate	ND	3596	3820	106	3743	3790	101	48.9-162	0.89	30.00
Dibenz(a,h)anthracene	ND	3596	3400	95	3743	3230	86	58.6-146	5.1	30.00
Dibenzofuran	ND	3596	3780	105	3743	3690	99	70.6-115	2.1	30.00
Diethyl phthalate	ND	3596	3750	104	3743	3660	98	70.8-127	2.4	30.00
Dimethyl phthalate	ND	3596	3870	108	3743	3840	103	68.5-122	0.88	30.00
2,4-Dimethylphenol	ND	3596	3600	100	3743	3490	93	85.4-138	3.2	30.00
Diphenylamine	ND	3596	3800	106	3743	3790	101	73.6-208	0.30	30.00
Fluoranthene	ND	3596	3560	99	3743	3520	94	64.6-129	0.95	30.00
Fluorene	ND	3596	3950	110	3743	3870	104	72.4-128	2.0	30.00
Hexachlorobenzene	ND	3596	3640	101	3743	3630	97	62.9-124	0.31	30.00
Hexachlorobutadiene	ND	3596	3610	100	3743	3580	96	69.1-118	0.94	30.00
Hexachlorocyclopentadiene	ND	3596	3850	107	3743	3710	99	1.00-176	3.9	30.00
Hexachloroethane	ND	3596	3540	98	3743	3450	92	68.0-122	2.6	30.00
Indeno(1,2,3-cd)pyrene	ND	3596	3380	94	3743	3190	85	29.1-157	5.5	30.00
Isophorone	ND	3596	3740	104	3743	3680	99	65.2-143	1.5	30.00
Naphthalene	ND	3596	3670	102	3743	3610	97	49.9-137	1.9	30.00
4-Nitroaniline	ND	3596	3620	101	3743	3530	94	50.8-178	2.5	30.00
Nitrobenzene	ND	3596	3600	100	3743	3560	95	71.4-122	0.94	30.00
4-Nitrophenol	ND	3596	3880	108	3743	3830	102	56.8-133	1.5	30.00
Pentachlorophenol	ND	3596	3920	109 *	3743	3950	106	29.2-108	0.57	30.00
Phenanthrene	ND	3596	3860	107	3743	3770	101	55.8-128	2.4	30.00
Phenol	ND	3596	3650	102	3743	3550	95	71.2-120	2.8	30.00
Pyrene	ND	3596	4240	118	3743	4070	109	68.5-140	4.1	30.00
n-Nitrosodi-n-propylamine	ND	3596	3560	99	3743	3470	93	74.3-133	2.6	30.00
<b>Surrogates</b>										
2,4,6-Tribromophenol				108			103	41.0-129		
2-Fluorobiphenyl				104			99	48.0-123		
2-Fluorophenol				91			87	42.0-123		
Nitrobenzene-d5				94			89	46.0-117		
Phenol-d6				101			95	48.0-125		
Terphenyl-d14				108			101	44.0-140		

**Matrix Spike Summary**

Original Sample ID: 31203002001 (49DPT-01 (4ft))

Analysis Date: 09/24/2012 17:13

MS Sample ID: 90617

Analysis Date: 09/24/2012 17:35

MSD Sample ID: 90618

Analysis Date: 09/24/2012 17:58

Matrix: Soil-Solid as drv weiaht  
QC for Samples: 31203002001, 31203002002, 31203002003, 31203002004, 31203002005, 31203002006,  
31203002007, 31203002008, 31203002009, 31203002010**Results by SW-846 8270D**

Parameter	Sample	Spike	Matrix Spike (%)		Spike Duplicate (%)		CL	RPD (%)	RPD CL
			Result	Rec (%)	Spike	Result			
<b>Batch Information</b>									
Analytical Batch:	XMS1673				Prep Batch:	XXX3080			
Analytical Method:	SW-846 8270D				Prep Method:	SW-846 3541			
Instrument:	MSD10				Prep Date/Time:	09/20/2012 17:46			
Analyst:	CMP				MS Init Wt./Vol.:	31.35 g Extract Vol.: 10 mL			
					MSD Init Wt./Vol.:	30.16 g Extract Vol.: 10 mL			

# SGS

ANALYTICAL PERSPECTIVES

## CHAIN OF CUSTODY

SGS ANALYTICAL PERSPECTIVES  
5500 Business Drive  
Wilmington, NC 28405  
+1 910 350 1903  
[www.sgs.com](http://www.sgs.com)

CLIENT: Catlin / NCDOT

CONTACT: Deon Ashby Catlin PHONE NO: (910) 452-5861

PROJECT: Kerr Ave. PSAs SITE / PWSID: 33932-1-1

REPORTS TO: Deon Catlin U-33383 New Horizons

EMAIL: [deon.ashby@nch.usa.com](mailto:deon.ashby@nch.usa.com)

INVOICE TO: QUOTE # NCDOT

P.O. NUMBER NCDOT

SGS Reference #: 31203002

PAGE 1  
OF 2

#	SAMPLE TYPE	PREPARATION USED	ANALYSIS REQUIRED	REMARKS		
C	D	N	T	A	E	R
G	GRAB					S
49DPT-01	(4')	9/19/12	1100	Soil	5	5
49DPT-02	(4')		1140			
49DPT-03	(4')		1200			
49DPT-04	(4')		1230			
49DPT-05	(4')		1330			
49DPT-06	(4')		1400			
49DPT-07	(4')		1430			
49DPT-08	(4')		1445			
49DPT-09	(3')		1510			
49DPT-10	(4')		1530	→	→	→
COLLECTED/RELINQUISHED BY: (1)						
<i>Con D. Fitch</i>	DATE 9/20/12	TIME 0835	RECEIVED BY: <i>Julie Johnson</i>	REPORT LEVEL:	REQUESTED TURNAROUND TIME:	
RELINQUISHED BY: (2)						
	Date	Time	Received By:	□ Level I <input checked="" type="checkbox"/> Level II <input type="checkbox"/> Level IV <input type="checkbox"/> Rush:	<input checked="" type="checkbox"/> Standard	
				<input type="checkbox"/> DoD <input checked="" type="checkbox"/> EDD: <i>Summary</i>	<input type="checkbox"/> State of Origin: <i>NC</i>	<input type="checkbox"/> Trust Fund
RELINQUISHED BY: (3)						
	Date	Time	Received By:	SPECIAL INSTRUCTIONS:		
Received For Laboratory By:						
	Date	Time	CoC Seal: INTACT BROKEN <input checked="" type="checkbox"/>	Shipping Carrier: <i>3-2-TC</i>	Notes: <i>Sample Receipt Temp: C</i>	
				Shipping Ticket No:		

# SGS



ANALYTICAL PERSPECTIVES

## CHAIN OF CUSTODY

CLIENT: Cotton / NC DOT

CONTACT: Ben Ashbee Cotton

PHONE NO: (910) 1 462-5861

PROJECT: Keger Ave PSAs

SITE / PWNSID **WBS 1**: 33932.1.1

U-333 SRTS

New Hanover

QUOTE #:

NC DOT

P.O. NUMBER: NC DOT

SGS Reference #: 31203002

#

SAMPLE TYPE

REPRESENTATIVE

ANALYST REQUIRED

C-0

C- COMP

C- GRAB

C- ERS

REMARKS

1/4

2/4

62582

6200

62582

6200

62582

6200

62582

6200

62582

6200

62582

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62582

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62582

6200

62582

6200

62582

6200

62582

6200

62582

LAB NO.

SAMPLE IDENTIFICATION

DATE

TIME

MATRIX

REMARKS

AMW 2

4/19

1410

water

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

LAB NO.

SAMPLE IDENTIFICATION

DATE

TIME

MATRIX

REMARKS

AMW 3

4/19

1550

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REQUESTED TURNAROUND TIME:

Standard

Rush: \_\_\_\_\_

Level I

Level II

Level IV

Trust Fund

Other: DoD

EDD: Summary

DoD

SPECIAL INSTRUCTIONS:

CoC Seal: INTACT BROKEN  ABSENT  
Sample Receipt Temp: C. 3-2°C  
Shipping Carrier: \_\_\_\_\_  
Shipping Ticket No.: \_\_\_\_\_

Notes: \_\_\_\_\_

COLLECTED/RELINQUISHED BY: (1)

DATE

TIME

RECEIVED BY:

\_\_\_\_\_  
*Ben J. John*

Received By: \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

\_\_\_\_\_  
*Ben J. John*

COLLECTED/RELINQUISHED BY: (2)

DATE

TIME

RECEIVED BY:

\_\_\_\_\_  
*Ben J. John*

Received By: \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

\_\_\_\_\_  
*Ben J. John*

COLLECTED/RELINQUISHED BY: (3)

DATE

TIME

RECEIVED BY:

\_\_\_\_\_  
*Ben J. John*

Received By: \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

\_\_\_\_\_  
*Ben J. John*

RElinquished For Laboratory By:

DATE

TIME

CoC Seal: INTACT BROKEN  ABSENT

Sample Receipt Temp: C. 3-2°C

Shipping Carrier: \_\_\_\_\_

Shipping Ticket No.: \_\_\_\_\_

Notes: \_\_\_\_\_

White - Retained by Lab  
Yellow - Retained by Client

ANALYTICAL PERSPECTIVES IS NOW PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

# SGS North America Inc.

## Sample Receipt Checklist (SRC)

Client: NCDOT-Catlin Work Order No.: 31203002

- |  |                                  |
|--|----------------------------------|
| 1. <input type="checkbox"/> Shipped<br><input checked="" type="checkbox"/> Hand Delivered  | Notes: _____<br>_____<br>_____   |
| 2. <input checked="" type="checkbox"/> COC Present on Receipt<br><input type="checkbox"/> No COC<br><input type="checkbox"/> Additional Transmittal Forms  | _____<br>_____<br>_____          |
| 3. <input type="checkbox"/> Custody Tape on Container<br><input checked="" type="checkbox"/> No Custody Tape   | _____<br>_____<br>_____          |
| 4. <input checked="" type="checkbox"/> Samples Intact<br><input type="checkbox"/> Samples Broken / Leaking   | _____<br>_____<br>_____          |
| 5. <input checked="" type="checkbox"/> Chilled on Receipt      Actual Temp.(s) in °C: 3.2<br><input type="checkbox"/> Ambient on Receipt<br><input type="checkbox"/> Walk-in on Ice; Coming down to temp.<br><input type="checkbox"/> Received Outside of Temperature Specifications | _____<br>_____<br>_____<br>_____ |
| 6. <input checked="" type="checkbox"/> Sufficient Sample Submitted<br><input type="checkbox"/> Insufficient Sample Submitted   | _____<br>_____<br>_____          |
| 7. <input type="checkbox"/> Chlorine absent<br><input type="checkbox"/> HNO3 < 2<br><input type="checkbox"/> HCL < 2<br><input type="checkbox"/> Additional Preservatives verified (see notes)   | _____<br>_____<br>_____<br>_____ |
| 8. <input checked="" type="checkbox"/> Received Within Holding Time<br><input type="checkbox"/> Not Received Within Holding Time   | _____<br>_____<br>_____          |
| 9. <input checked="" type="checkbox"/> No Discrepancies Noted<br><input type="checkbox"/> Discrepancies Noted<br><input type="checkbox"/> NCDENR notified of Discrepancies*  | _____<br>_____<br>_____          |
| 10. <input checked="" type="checkbox"/> No Headspace present in VOC vials<br><input type="checkbox"/> Headspace present in VOC vials >6mm  | _____<br>_____<br>_____          |

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Inspected and Logged in by: JJ

Date: Thu-9/20/12 00:00