

APPENDIX J

PHASE II PRELIMINARY SITE INVESTIGATION REPORT, DECEMBER 2012

From: [Jeffrey Ballard](#)
To: [Margaret Slater](#)
Cc: [Skinner, Nancy T.](#)
Subject: HazMat Update for PIN 101423.00 - SR-162EXT (Pellissippi Parkway), From SR-33 to SR-73 (US-321), Blount Co.
Date: Wednesday, May 07, 2014 8:44:06 AM

Margaret,

Based on a review of the Phase I Preliminary Assessment Study (PAS) for this project, dated November 2008, the four (Alternative A East Shift, Alternative A West Shift, Alternative C, and Alternative D) proposed Alternatives and Google Earth imagery dated November 11, 2013, it appears that very little has changed. The previous HazMat evaluation is still valid.

On Alternative C, a residential building has been built on Old Plantation Way within the proposed ROW. On Alternative D, some earthwork has occurred within the proposed ROW near the residence located at Latitude 35.789451, Longitude -83903790.

The PAS identified four sites that would require further investigation, depending on which Alternative is chosen. They are listed as follows:

- Alternative A, (East and West Shift) - A and M American Gas - TDECT Facility ID – 2-050284, 3338 E. Lamar Alexander Parkway, Maryville, TN 37804.
- Alternative C - Sunoco/D.T's Market and Deli (Formerly LEN'S Texaco) – TDEC Facility ID 2-050272, 3439 E. Lamar Alexander Parkway, Maryville, TN 37801 and Dump Site – No Address – Site is located 850 feet west of Sevierville Rd.
- Alternative D – Hackney Amoco/Aztex Food Shop #110 –TDEC Facility ID – 2-050114, 3553 E. Lamar Alexander Parkway, Maryville, TN 37801.

Alternative A was previously selected as the preferred alternative and a Phase II Preliminary Site Investigation was conducted on the A and M American Gas property in February 2013. Based on the analytical results, further action regarding the soil on this property is not currently warranted prior to commencement of construction activities. If Alternative A is chosen, removal of the onsite UST system in accordance with TDEC DUST Closure Assessment Guidelines, as well as proper removal and disposal of the items associated with the former automotive service garage is recommended.

If Alternative C or D are selected, a Phase II Preliminary Site Investigation will be required on the affected sites listed above.

In the event hazardous substances/wastes are encountered within the proposed right-of-way, their disposition shall be subject to all applicable regulations, including the applicable sections of the Federal Resource Conservation and Recovery Act, as amended; and the Comprehensive Environmental Response, Compensation, and Liability Act, as amended; and the Tennessee Hazardous Waste Management Act of 1983, as amended.

Please let me know if you have questions or comments.

Jeffrey Ballard, P.E.
K.S. Ware & Associates

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For Jim Ozment



Phase II Preliminary Site Investigation Report
Site 5 – Former A and M American Gas

Termini: Pellissippi Parkway from SR-33 to US-321/SR-73
Maryville, Blount County, Tennessee
TDOT Project Number PE 62006-2213-94
TDOT PIN Number 101423.00

Prepared For:
Parsons Brinckerhoff

Prepared By:



KSWA Project No. 100-12-0061

Prepared: December 2012

KSWA Environmental Manager

Heidi S. Wilbarger
Approval:

Signature

Heidi S. Wilbarger, P.G. December 21, 2012

Printed Name/Date

KSWA Environmental Scientist

Michael A. Tharpe
Signature

Signature

Michael A. Tharpe December 21, 2012

Printed Name/Date

TABLE OF CONTENTS

1.0	EXECUTIVE SUMMARY	1
2.0	INTRODUCTION.....	2
3.0	PHASE II ACTIVITIES SUMMARY.....	3
3.1	SITE 5.....	3
4.0	RECOMMENDATIONS AND CONCLUSIONS	6

FIGURES

Figure 1 – Site Vicinity Map

Figure 2 – Approximate Soil Boring Locations Map

APPENDICES

Appendix A – Photographs

Appendix B – Soil Boring Logs

Appendix C – Laboratory Analytical Report

1.0 EXECUTIVE SUMMARY

Parsons Brinckerhoff (PB) retained K.S. Ware and Associates, L.L.C. (KSWA) to complete a Phase II Environmental Site Assessment (ESA) of one property (Site 5) affected by the Tennessee Department of Transportation's (TDOT) proposed approximately 4.5 mile extension of the existing Pellissippi Parkway from SR-33 to US-321/SR-73 in the cities of Alcoa and Maryville, as well as unincorporated Blount County (TDOT Project Number PE 62006-2213-94).

On November 27, 2012, KSWA representative, Mr. Mike Tharpe, mobilized to Maryville, Blount County, Tennessee and met with Tri-State Drilling, LLC (TSD) personnel to advance a total of eight (8) soil borings on Site 5, located at 3338 East Lamar Alexander Parkway in Maryville, Blount County, Tennessee. The selected soil samples were submitted to Environmental Testing & Consulting, Inc. (ETC) in Memphis, Tennessee, for laboratory analysis.

All laboratory analyses were conducted in accordance with the specified analytical method. Analytes were compared to their respective 2007 Tennessee Department of Environment and Conservation (TDEC) Division of Underground Storage Tanks (DUST) Initial Screening Levels (ISLs) and the April 2012 United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for regulatory compliance. Of the eight collected soil samples sent for laboratory analysis, none of the subject analytes were detected in concentrations exceeding any of their respective threshold values.

2.0 INTRODUCTION

Authorization and Background

Parsons Brinckerhoff (PB) retained K.S. Ware and Associates, L.L.C. (KSWA) to complete a Phase II Environmental Site Assessment (ESA) of one property (Site 5) affected by the Tennessee Department of Transportation's (TDOT) proposed approximately 4.5 mile extension of the existing Pellissippi Parkway from SR-33 to US-321/SR-73 in the cities of Alcoa and Maryville, as well as unincorporated Blount County (TDOT Project Number PE 62006-2213-94). Site 5 is currently a thrift store called *Frugals Thrift Store*. However, Site 5 historically housed a fueling station and automotive service garage called *A and M American Gas* (**Photos 1, 2**). The registered underground storage tank (UST) system (Facility ID 2-050284), consisting of three 6,000 gasoline tanks, canopy, and fuel islands, are still present onsite. The fuel dispensers have been removed. Historically, the property also housed two above ground storage tanks (ASTs): one 1,000 gallon diesel tank and one 500 gallon kerosene tank that have also been removed. The property currently still houses one 550 gallon waste oil tank located behind the building structure adjacent to the former automotive service garage (**Photo 3**). KSWA did not previously perform an initial Phase I ESA at Site 5, but was requested to perform a Phase II ESA prior to TDOT purchasing the property as part of the subject project. A site vicinity map showing the general location of the project area is included as **Figure 1**.

3.0 PHASE II ACTIVITIES SUMMARY

3.1 SITE 5

Onsite Field Activities

On November 27, 2012, KSWA personnel mobilized to Site 5 and met with Tri-State Drilling, LLC (TSD) personnel to advance a total of eight (8) soil borings on Site 5, located at 3338 East Lamar Alexander Parkway in Maryville, Blount County, Tennessee. Underground utilities were located prior to drilling activities through the Tennessee One-Call system. All eight soil borings on Site 5 were advanced to the boring termination depth of approximately 15 feet below ground surface. A site vicinity map showing the general location of the subject project site is included as Figure 1. A soil boring location map showing the approximate locations of these eight borings is included as **Figure 2**. Photographs of the subject property are included in **Appendix A**.

The collected samples were observed for soil type, color, texture, moisture, and visual or olfactory indicators of contamination. A portion of each sample interval was placed into a zipper-lock plastic bag and gently mixed to create a homogeneous sample and allowed to equilibrate to ambient temperatures. An additional portion of each sample was placed into laboratory supplied jars and placed on ice until submitted to the laboratory for analysis. The headspace of each bagged, discrete sample was then screened for the presence of organic vapors with a calibrated Photo Ionization Detector (PID). The results of the field PID screenings are provided on the soil boring logs, contained in **Appendix B**. The collected sample interval with the highest PID field screening result from each boring was submitted for laboratory analysis. If field screening results were determined to be inconclusive, the deepest non-saturated sample interval from each boring was submitted for laboratory analysis.

Soil Lithology

Soil Boring SB-01 was advanced on Site 5 on the west side of the canopy, adjacent to the tankhold (reference Figure 2, **Photo 4**). The soil boring was observed to consist of approximately 4 inches of asphalt at the surface, then turning to slightly moist to dry, slightly firm, brown silty clay with trace to abundant sand, and minor to abundant rock fragments. The boring was terminated at 15 feet below ground surface as refusal was not encountered. None of the screened intervals had odors, and PID readings were all 0.0 parts per million (ppm). The 10-15 foot interval was selected for laboratory analysis.

Soil Boring SB-02 was advanced on Site 5 adjacent to the northwest corner of the canopy (reference Figure 2, **Photo 5**). The soil boring was observed to consist of approximately 4 inches of asphalt at the surface, then turning to slightly moist to dry, slightly firm to firm, brown silty clay with abundant rock fragments. The boring was terminated at 15 feet below ground surface as refusal was not encountered. None of the screened intervals had odors, and PID readings were all 0.0 ppm. The 10-15 foot interval was selected for laboratory analysis.

Soil Boring SB-03 was advanced on Site 5 adjacent to the north side of the canopy (reference Figure 2, **Photo 5**). The soil boring was observed to consist of approximately 4 inches of asphalt at the surface, then turning to dry, slightly firm to firm, brown to red silty clay with minor to abundant rock fragments, and minor asphalt fragments. The boring was terminated at 15 feet below ground surface as refusal was not

encountered. None of the screened intervals had odors, and PID readings were all 0.0 ppm. The 10-15 foot interval was selected for laboratory analysis.

Soil Boring SB-04 was advanced on Site 5 adjacent to the east side of the canopy (reference Figure 2, **Photo 6**). The soil boring was observed to consist of approximately 4 inches of asphalt at the surface, then turning to dry, slightly firm to firm, brown to red silty clay with minor to abundant rock fragments. The boring was terminated at 15 feet below ground surface as refusal was not encountered. None of the screened intervals had odors, and PID readings were all 0.0 ppm. The 10-15 foot interval was selected for laboratory analysis.

Soil Boring SB-05 was advanced on Site 5 adjacent to the northeast corner of the building and the former automotive service garage (reference Figure 2, **Photo 7**). The soil boring was observed to consist of approximately 4 inches of asphalt at the surface, then turning to slightly moist to dry, slightly firm to firm, red to brown silty clay with minor to abundant rock/asphalt fragments. The boring was terminated at 15 feet below ground surface as refusal was not encountered. None of the screened intervals had odors, and PID readings were all 0 parts per million (ppm). The 10-15 foot interval was selected for laboratory analysis.

Soil Boring SB-06 was advanced on Site 5 adjacent to the east side of the building and the former automotive service garage (reference Figure 2, **Photo 8**). The soil boring was observed to consist of approximately 4 inches of asphalt at the surface, then turning to dry to moist, slightly firm to firm, brown silty clay with minor to abundant rock fragments. The boring was terminated at 15 feet below ground surface as refusal was not encountered. None of the screened intervals had odors, and PID readings were all 0.0 ppm. The 10-15 foot interval was selected for laboratory analysis.

Soil Boring SB-07 was advanced on Site 5 behind the building structure, adjacent to the former automotive service garage (reference Figure 2, Photo 3). The soil boring was observed to consist of approximately 4 inches of topsoil at the surface, then turning to slightly moist to dry, slightly firm to firm, brown to red silty clay with some gray mottling, and minor rock/asphalt/brick fragments. The boring was terminated at 15 feet below ground surface as refusal was not encountered. None of the screened intervals had odors, and PID readings were all 0.0 to ppm. The 10-15 foot interval was selected for laboratory analysis.

Soil Boring SB-08 was advanced on Site 5 behind the building structure, adjacent to the southeast corner of the building (reference Figure 2, **Photo 9**). The soil boring was observed to consist of approximately 4 inches of topsoil at the surface, then turning to slightly moist to saturated, slightly firm, red to brown silty clay with minor to abundant rock and asphalt fragments. The boring was terminated at 15 feet below ground surface as refusal was not encountered. None of the screened intervals had odors, and PID readings were observed to range from 0.0 to 0.8 ppm. The 0-5 foot interval was selected for laboratory analysis.

Soil Analytical Results

The selected soil samples from the eight soil borings (SB-01 (10-15 ft.), SB-02 (10-15 ft.), SB-03 (10-15 ft.), SB-04 (10-15 ft.), SB-05 (10-15 ft.), SB-06 (10-15 ft.), SB-07 (0-5 ft.), SB-08 (10-15 ft.)) were submitted to Environmental Testing & Consulting, Inc. (ETC) in Memphis, Tennessee, under chain-of-custody (COC) protocol for laboratory analysis for Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Methyl-tert-butyl-ether (MTBE), and Naphthalene due to the property historically being a fueling station.

All laboratory analyses were conducted in accordance with the specified analytical methods. Original copies of the laboratory analytical results are included in **Appendix C**. Analytes were compared to their respective 2007 Tennessee Department of Environment and Conservation (TDEC) Division of Underground Storage Tanks (DUST) Initial Screening Levels (ISLs) and the April 2012 United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for regulatory compliance. Of the eight collected soil samples sent for laboratory analysis, none of the subject analytes were detected in concentrations exceeding any of their respective threshold values. **Table 1** below shows the soil analytical results of all eight samples collected on Site 5.

**Table 1 – Site 5 Soil Analytical Results
 Maryville, Blount County, Tennessee**

Target Analytes						
Sample	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene
SB-01	<0.0020	<0.0100	<0.0020	<0.0020	<0.0020	<0.0100
SB-02	<0.0020	<0.0100	<0.0020	<0.0020	<0.0020	<0.0100
SB-03	<0.0020	<0.0100	<0.0020	<0.0020	<0.0020	<0.0100
SB-04	<0.0020	<0.0100	<0.0020	<0.0020	<0.0020	<0.0100
SB-05	<0.0020	<0.0100	<0.0020	<0.0020	<0.0020	<0.0100
SB-06	<0.0020	<0.0100	<0.0020	<0.0020	<0.0020	<0.0100
SB-07	<0.0020	<0.0100	<0.0020	<0.0020	<0.0020	<0.0100
SB-08	<0.0020	<0.0100	<0.0020	<0.0020	<0.0020	<0.0100
Regulatory Screening Levels						
EPA May 2011 Residential Soil RSLs	1.1	5000	5.4	630	43	3.6
EPA May 2011 Industrial Soil RSLs	5.4	45000	27	2700	220	18
TDEC-DUST 2007 Commercial Soil ISLs	3.8	62.2	1310	88	364	403

All data is presented in mg/kg (ppm).

4.0 RECOMMENDATIONS AND CONCLUSIONS

KSWA performed a Phase II Preliminary Site Investigation of one property (Site 5) affected by the Tennessee Department of Transportation's (TDOT) proposed approximately 4.5 mile extension of the existing Pellissippi Parkway from SR-33 to US-321/SR-73 in the cities of Alcoa and Maryville, as well as unincorporated Blount County (TDOT Project Number PE 62006-2213-94). None of the analytical results from the eight total samples collected from Site 5 for laboratory analysis indicate analyte concentrations above any of their respective threshold values. Based on the analytical results, further action regarding the soil on Site 5 is not currently warranted prior to commencement of construction activities.

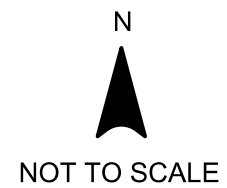
However, a registered underground storage tank (UST) system is presently located on the subject property. The UST tankhold is located adjacent to the southwest corner of the canopy and the northwest corner of the building structure (Reference Figure 2). According to *Sheet A9* of the 2008 *TDOT Technical Studies Map – Alignment A*, it appears that the proposed interchange right-of-way (ROW) may come extremely close to, if not actually intersect, the tankhold. Additionally, as a portion of the building was used as an automotive service garage up until several years ago, there are currently piles of tires, a waste oil tank, vehicle parts, and multiple vehicles located adjacent to this portion of the building.

If TDOT purchases the property, KSWA recommends that TDOT or the current owner remove the onsite UST system in accordance with TDEC DUST Closure Assessment Guidelines (CAG), as well as properly remove and dispose of the aforementioned items associated with the former automotive service garage, prior to the commencement of construction activities at Site 5. KSWA also recommends that an asbestos and lead-based paint survey be performed by an Environmental Protection Agency (EPA) AHERA-trained Asbestos Building Inspector prior to any demolition or alteration of the building structure or canopy located on Site 5.

FIGURES



IMAGE SOURCE: Google Earth



JOB NO.: 100-12-0061
 CLIENT:
 Parsons Brinkerhoff
 1900 Church Street, Suite 400
 Nashville, TN 37203
 DATE: 12/20/2012

SITE VICINITY MAP

SITE 5

FORMER A and M AMERICAN GAS

FILE LOCATION: PROJECTS/2012/100-12-0061/FIGURES/100-12-0061 FIGURE 1 DRAWN BY: MC REVIEWED BY: MT

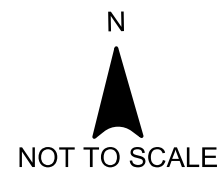
LEGEND



FIGURE 1



IMAGE SOURCE: GOOGLE EARTH



JOB NO.: 100-12-0061
 CLIENT:
 Parsons Brinkerhoff
 1900 Church Street, Suite 400
 Nashville, TN 37203
 DATE: 12/20/2012

APPROXIMATE SOIL BORING LOCATION MAP
 SITE 5
 FORMER A and M AMERICAN GAS

FILE LOCATION: PROJECTS/2012/100-12-0061/FIGURES/ 100-12-0061 FIGURE 2

DRAWN BY: MC

REVIEWED BY: MT

LEGEND

⊕ APPROX. BORING LOCATION



FIGURE 2

APPENDIX A
PHOTOGRAPHS



Photo 1: View of Site 5 showing that the former fueling station has been converted to a thrift store.



Photo 2: View of portion of Site 5 showing the former automotive service garage.



Photo 3: View of portion of Site 5 showing the waste oil AST located behind the building structure.



Photo 4: View of portion of Site 5 showing general location where soil boring SB-01 was advanced.



Photo 5: View of portion of Site 5 showing general location where soil borings SB-02 and SB-03 were advanced.



Photo 6: View of portion of Site 5 showing general location where soil boring SB-04 was advanced.



Photo 7: View of portion of Site 5 showing general location where soil boring SB-05 was advanced.



Photo 8: View of portion of Site 5 showing general location where soil boring SB-06 was advanced.



Photo 9: View of portion of Site 5 showing general location where soil boring SB-08 was advanced.

APPENDIX B
SOIL BORING LOGS



K.S. Ware & Associates, L.L.C.
Engineering & Testing Services

LOG OF BORING NO. SB-01

Project Name: **TDOT Blount County - Maryville, TN**

Location: **3338 East Lamar Alexander Parkway**

Number: **100-12-0061**

Sheet 1 of 1

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Recovery %
		Surface El.:		
		Location:		
		0.30		
		ASPHALT - 4"		
		Brown silty clay, abundant sand and rock fragments, slightly firm, dry, no odor. PID results - 0-5' = 0.0 ppm		100
4		5.00		
		Red/brown silty clay, abundant rock fragments, slightly firm, slightly moist, no odor. PID results - 5-10' = 0.0 ppm		100
8		10.00		
		Brown silty clay, abundant rock fragments and trace sand, slightly firm, dry, no odor. PID results - 10-15' = 0.0 ppm		100
12		15.00		
		Boring Terminated at 15 ft BGS - No Refusal.		
16				

LOG_OF_BORING2 100-12-0061 TDOT BLOUNT COUNTY - PB-AMERICAS.GPJ KSWARE.GDT 12/19/12

Completion Depth: **15.0**
 Date Started: **11/27/12**
 Date Completed: **11/27/12**
 Drilled By: **Tri-State Drilling**
 Logged By: **KSWA / M. Tharpe**

Remarks: **Boring completed with remote controlled track-mounted DPT rig. Groundwater was not encountered during or after drilling activities.**



K.S. Ware & Associates, L.L.C.
Engineering & Testing Services

LOG OF BORING NO. SB-02

Project Name: **TDOT Blount County - Maryville, TN**

Location: **3338 East Lamar Alexander Parkway**

Number: **100-12-0061**

Sheet 1 of 1

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Recovery %
		Surface El.:		
		Location:		
		0.30		
		ASPHALT - 4"		
		Reddish brown silty clay, abundant rock fragments, slightly firm, dry, no odor. PID results - 0-5' = 0.0 ppm		100
4		5.00		
		Red/brown silty clay, abundant rock fragments, slightly firm to firm, slightly moist to dry, no odor. PID results - 5-10' = 0.0 ppm		100
8		10.00		
		Brown silty clay, abundant rock fragments, slightly firm to firm, slightly moist to dry, no odor. PID results - 10-15' = 0.0 ppm		100
12		15.00		
		Boring Terminated at 15 ft BGS - No Refusal.		
16				

LOG_OF_BORING2 100-12-0061 TDOT BLOUNT COUNTY - PB-AMERICAS.GPJ KSWARE.GDT 12/19/12

Completion Depth: **15.0**
 Date Started: **11/27/12**
 Date Completed: **11/27/12**
 Drilled By: **Tri-State Drilling**
 Logged By: **KSWA / M. Tharpe**

Remarks: **Boring completed with remote controlled track-mounted DPT rig. Groundwater was not encountered during or after drilling activities.**



K.S. Ware & Associates, L.L.C.
Engineering & Testing Services

LOG OF BORING NO. SB-03

Project Name: **TDOT Blount County - Maryville, TN**

Location: **3338 East Lamar Alexander Parkway**

Number: **100-12-0061**

Sheet 1 of 1

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Recovery %
		Surface El.:		
		Location:		
		0.30		
		ASPHALT - 4"		
		Red silty clay, abundant rock fragments, firm, dry, no odor. PID results - 0-5' = 0.0 ppm		100
4		5.00		
		Brown silty clay, minor rock/asphalt fragments, slightly firm to firm, dry, no odor. PID results - 5-10' = 0.0 ppm		100
8		10.00		
		Red silty clay, minor rock fragments, firm, dry, no odor. PID results - 10-15' = 0.0 ppm		100
12		15.00		
		Boring Terminated at 15 ft BGS - No Refusal.		
16				

LOG_OF_BORING2 100-12-0061 TDOT BLOUNT COUNTY - PB-AMERICAS.GPJ KSWARE.GDT 12/19/12

Completion Depth: **15.0**
 Date Started: **11/27/12**
 Date Completed: **11/27/12**
 Drilled By: **Tri-State Drilling**
 Logged By: **KSWA / M. Tharpe**

Remarks: **Boring completed with remote controlled track-mounted DPT rig. Groundwater was not encountered during or after drilling activities.**



K.S. Ware & Associates, L.L.C.
Engineering & Testing Services

LOG OF BORING NO. SB-04

Project Name: **TDOT Blount County - Maryville, TN**

Location: **3338 East Lamar Alexander Parkway**

Number: **100-12-0061**

Sheet 1 of 1

Depth, feet	Graphic Log	Surface El.: Location: MATERIAL DESCRIPTION	Samples	Recovery %
		ASPHALT - 4" 0.30		
		Reddish brown silty clay, minor rock fragments, firm, dry, no odor. PID results - 0-5' = 0.0 ppm		100
4				
		Brown silty clay, abundant rock fragments, slightly firm to firm, dry, no odor. PID results - 5-10' = 0.0 ppm 5.00		100
8				
		Brown silty clay, abundant rock fragments, slightly firm to firm, dry, no odor. PID results - 10-15' = 0.0 ppm 10.00		100
12				
		Boring Terminated at 15 ft BGS - No Refusal. 15.00		
16				

LOG_OF_BORING2 100-12-0061 TDOT BLOUNT COUNTY - PB-AMERICAS.GPJ KSWARE.GDT 12/19/12

Completion Depth: **15.0**
Date Started: **11/27/12**
Date Completed: **11/27/12**
Drilled By: **Tri-State Drilling**
Logged By: **KSWA / M. Tharpe**

Remarks: **Boring completed with remote controlled track-mounted DPT rig. Groundwater was not encountered during or after drilling activities.**



K.S. Ware & Associates, L.L.C.
Engineering & Testing Services

LOG OF BORING NO. SB-05

Project Name: **TDOT Blount County - Maryville, TN**

Location: **3338 East Lamar Alexander Parkway**

Number: **100-12-0061**

Sheet 1 of 1

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Recovery %
		Surface El.:		
		Location:		
		0.30		
		ASPHALT - 4"		
		Red silty clay, slightly firm, dry, no odor. PID results - 0-5' = 0.0 ppm		100
4		5.00		
		Red/brown silty clay, abundant rock/asphalt fragments, slightly firm to firm, slightly moist to moist, no odor. PID results - 5-10' = 0.0 ppm		100
8		10.00		
		Brown silty clay, minor rock fragments, slightly firm to firm, slightly moist, no odor. PID results - 10-15' = 0.0 ppm		100
12		15.00		
		Boring Terminated at 15 ft BGS - No Refusal.		
16				

LOG_OF_BORING2 100-12-0061 TDOT BLOUNT COUNTY - PB-AMERICAS.GPJ KSWARE.GDT 12/19/12

Completion Depth: **15.0**
 Date Started: **11/27/12**
 Date Completed: **11/27/12**
 Drilled By: **Tri-State Drilling**
 Logged By: **KSWA / M. Tharpe**

Remarks: **Boring completed with remote controlled track-mounted DPT rig. Groundwater was not encountered during or after drilling activities.**



K.S. Ware & Associates, L.L.C.
Engineering & Testing Services

LOG OF BORING NO. SB-06

Project Name: **TDOT Blount County - Maryville, TN**

Location: **3338 East Lamar Alexander Parkway**

Number: **100-12-0061**

Sheet 1 of 1

Depth, feet	Graphic Log	MATERIAL DESCRIPTION	Samples	Recovery %
		Surface El.:		
		Location:		
		0.30		
		ASPHALT - 4"		
		Brown silty clay, abundant rock fragments, minor asphalt fragments, stiff, dry to slightly moist, no odor. PID results - 0-5' = 0.0 ppm		100
4		5.00		
		Brown silty clay, minor rock fragments, minor brick fragments, slightly firm, slightly moist, no odor. PID results - 5-10' = 0.0 ppm		100
8		10.00		
		Brown silty clay, slightly firm, slightly moist to moist, no odor. PID results - 10-15' = 0.0 ppm		100
12		15.00		
		Boring Terminated at 15 ft BGS - No Refusal.		
16				

LOG_OF_BORING2 100-12-0061 TDOT BLOUNT COUNTY - PB-AMERICAS.GPJ KSWARE.GDT 12/19/12

Completion Depth: **15.0**
 Date Started: **11/27/12**
 Date Completed: **11/27/12**
 Drilled By: **Tri-State Drilling**
 Logged By: **KSWA / M. Tharpe**

Remarks: **Boring completed with remote controlled track-mounted DPT rig. Groundwater was not encountered during or after drilling activities.**



K.S. Ware & Associates, L.L.C.
Engineering & Testing Services

LOG OF BORING NO. SB-07

Project Name: **TDOT Blount County - Maryville, TN**

Location: **3338 East Lamar Alexander Parkway**

Number: **100-12-0061**

Sheet 1 of 1

Depth, feet	Graphic Log	Surface El.:		Samples	Recovery %
		Location:			
		MATERIAL DESCRIPTION			
	[Hatched Pattern]	Red/brown silty clay, abundant rock/asphalt fragments, slightly firm, slightly moist, no odor. PID results - 0-5' = 0.8 ppm			
4			5.00		
	[Hatched Pattern]	Brown silty clay, minor rock fragments, slightly firm, slightly moist, no odor. PID results - 5-10' = 0.0 ppm			
8			10.00		
	[Hatched Pattern]	Brown silty clay, slightly firm, saturated, no odor. PID results - 10-15' = N/A			
12			15.00		
	[Hatched Pattern]	Boring Terminated at 15 ft BGS - No Refusal.			
16					

LOG_OF_BORING2 100-12-0061 TDOT BLOUNT COUNTY - PB-AMERICAS.GPJ KSWARE.GDT 12/19/12

Completion Depth: **15.0**
 Date Started: **11/27/12**
 Date Completed: **11/27/12**
 Drilled By: **Tri-State Drilling**
 Logged By: **KSWA / M. Tharpe**

Remarks: **Boring completed with remote controlled track-mounted DPT rig. Groundwater was not encountered during or after drilling activities.**



K.S. Ware & Associates, L.L.C.
Engineering & Testing Services

LOG OF BORING NO. SB-08

Project Name: **TDOT Blount County - Maryville, TN**

Location: **3338 East Lamar Alexander Parkway**

Number: **100-12-0061**

Sheet 1 of 1

Depth, feet	Graphic Log	Surface El.:	Samples	Recovery %
		Location:		
		MATERIAL DESCRIPTION		
		Reddish brown silty clay, with rock/asphalt/brick fragments, slightly firm to firm, dry, no odor. PID results - 0-5' = 0.0 ppm		100
4				
		Brown silty clay, minor rock/asphalt fragments, some organics, slightly firm to firm, slightly moist to dry, no odor. PID results - 5-10' = 0.0 ppm		100
8				
		Red silty clay, minor rock fragments, some grey mottling, slightly firm to firm, slightly moist to dry, no odor. PID results - 10-15' = 0.0 ppm		100
12				
		Boring Terminated at 15 ft BGS - No Refusal.		
16				

LOG_OF_BORING2 100-12-0061 TDOT BLOUNT COUNTY - PB-AMERICAS.GPJ KSWARE.GDT 12/19/12

Completion Depth: **15.0**
 Date Started: **11/27/12**
 Date Completed: **11/27/12**
 Drilled By: **Tri-State Drilling**
 Logged By: **KSWA / M. Tharpe**

Remarks: **Boring completed with remote controlled track-mounted DPT rig. Groundwater was not encountered during or after drilling activities.**

APPENDIX C
LABORATORY ANALYTICAL REPORT

12/3/2012

K.S. Ware and Associates
Mr. Mike Tharpe
54 Lindsley Avenue
Nashville, TN, 37210

Ref: Analytical Testing
ETC Report Number: 12-334-0218
Client Project Description: TDOT Blount County
TN
Project #100-12-0061

Dear Mr. Mike Tharpe:

Environmental Testing and Consulting, Inc. received sample(s) on 11/29/2012 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters (NELAP and non-NELAP) were performed in accordance with guidelines established by the USEPA and NELAC unless otherwise indicated. Any parameter for which the laboratory is not officially NELAP accredited is indicated by a '~' symbol. These are not included in the scope because NELAP accreditation is either not available or has not been applied for. Additional certifications may be held/are available for parameters, where NELAP accreditation is not required or applicable. A full list of certifications is available upon request.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,



Randy Thomas
Project Manager

Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.

Alabama	#40750	Louisiana	#04015	VA NELAP	#460181	Texas	#T104704180-11-6	Arkansas	#88-0650
Mississippi		California	#09267CA	NC	#415	Oklahoma	#9311	Virginia	#00106
Kentucky	#90047	Tennessee	#TN02027	EPA	#TN00012	Kentucky UST	#41	Kansas	#E-10396



Client: K.S. Ware and Associates
Project: TDOT Blount County
Lab Report Number: 12-334-0218
Date: 12/3/2012

CASE NARRATIVE

Volatile Organic Compounds - GC/MS Method SW-8260B

Sample 97891 (SB-03 (10-15'))

Surrogate(s) exhibited a high bias in this project sample where no target analytes were detected. The high recovery(s) had no impact on the data.

Sample 97892 (SB-04 (10-15'))

Surrogate(s) exhibited a high bias in this project sample where no target analytes were detected. The high recovery(s) had no impact on the data.

Sample 97893 (SB-05 (10-15'))

Surrogate(s) exhibited a high bias in this project sample where no target analytes were detected. The high recovery(s) had no impact on the data.

Sample 97895 (SB-07 (0-5'))

Surrogate(s) exhibited a high bias in this project sample where no target analytes were detected. The high recovery(s) had no impact on the data.

06466

K.S. Ware and Associates
Mr. Mike Tharpe
54 Lindsley Avenue
Nashville, TN 37210

Project TDOT Blount County
Information : TN
Project #100-12-0061

Report Date : 12/03/2012
Received : 11/29/2012

Randell H. Thomas

Report Number : **12-334-0218**

REPORT OF ANALYSIS

Randy Thomas
Project Manager

Lab No : **97889**

Matrix: **Solids**

Sample ID : **SB-01 (10-15')**

Sampled: **11/27/2012 15:20**

Analytical Method: 8260B

Prep Method: 5030A

Prep Batch(es): L148737

Date/Time Prepped: 11/30/2012 09:58:00

Test	Results	Units	ML	DF	Date / Time Analyzed	By	Analytical Batch
Benzene	<0.0020	mg/Kg	0.0020	1	11/30/12 14:07	RHL	L148747
Ethylbenzene	<0.0020	mg/Kg	0.0020	1	01/01/00 00:00	RHL	L148747
Methyl tert-butyl ether (MTBE)	<0.0020	mg/Kg	0.0020	1	11/30/12 14:07	RHL	L148747
Naphthalene	<0.0100	mg/Kg	0.0100	1	11/30/12 14:07	RHL	L148747
Toluene	<0.0100	mg/Kg	0.0100	1	11/30/12 14:07	RHL	L148747
o-Xylene	<0.0020	mg/Kg	0.0020	1	11/30/12 14:07	RHL	L148747
m,p-Xylene	<0.0040	mg/Kg	0.0040	1	11/30/12 14:07	RHL	L148747
Xylene (Total)	<0.0020	mg/Kg	0.0020	1	11/30/12 14:07		L148747
Surrogate: 4-Bromofluorobenzene	126		Limits: 60-130%	1	11/30/12 14:07	RHL	L148747
Surrogate: 1,2-Dichloroethane - d4	114		Limits: 60-132%	1	11/30/12 14:07	RHL	L148747
Surrogate: Toluene-d8	105		Limits: 70-122%	1	11/30/12 14:07	RHL	L148747

**Qualifiers/
Definitions**

* Outside QC limit
MQL Method Quantitation Limit

DF Dilution Factor

06466

K.S. Ware and Associates
Mr. Mike Tharpe
54 Lindsley Avenue
Nashville, TN 37210

Project TDOT Blount County
Information : TN
Project #100-12-0061

Report Date : 12/03/2012
Received : 11/29/2012

Randell H. Thomas

Report Number : **12-334-0218**

REPORT OF ANALYSIS

Randy Thomas
Project Manager

Lab No : **97890**

Matrix: **Solids**

Sample ID : **SB-02 (10-15')**

Sampled: **11/27/2012 15:00**

Analytical Method: 8260B

Prep Method: 5030A

Prep Batch(es): L148737

Date/Time Prepped: 11/30/2012 09:58:00

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Benzene	<0.0020	mg/Kg	0.0020	1	11/30/12 14:38	RHL	L148747
Ethylbenzene	<0.0020	mg/Kg	0.0020	1	11/30/12 14:38	RHL	L148747
Methyl tert-butyl ether (MTBE)	<0.0020	mg/Kg	0.0020	1	11/30/12 14:38	RHL	L148747
Naphthalene	<0.0100	mg/Kg	0.0100	1	11/30/12 14:38	RHL	L148747
Toluene	<0.0100	mg/Kg	0.0100	1	11/30/12 14:38	RHL	L148747
o-Xylene	<0.0020	mg/Kg	0.0020	1	11/30/12 14:38	RHL	L148747
m,p-Xylene	<0.0040	mg/Kg	0.0040	1	11/30/12 14:38	RHL	L148747
Xylene (Total)	<0.0020	mg/Kg	0.0020	1	11/30/12 14:38		L148747
Surrogate: 4-Bromofluorobenzene	118		Limits: 60-130%	1	11/30/12 14:38	RHL	L148747
Surrogate: 1,2-Dichloroethane - d4	114		Limits: 60-132%	1	11/30/12 14:38	RHL	L148747
Surrogate: Toluene-d8	119		Limits: 70-122%	1	11/30/12 14:38	RHL	L148747

**Qualifiers/
Definitions**

* Outside QC limit
MQL Method Quantitation Limit

DF Dilution Factor

06466

K.S. Ware and Associates
Mr. Mike Tharpe
54 Lindsley Avenue
Nashville, TN 37210

Project TDOT Blount County
Information : TN
Project #100-12-0061

Report Date : 12/03/2012
Received : 11/29/2012

Randell H. Thomas

Report Number : **12-334-0218**

REPORT OF ANALYSIS

Randy Thomas
Project Manager

Lab No : **97891**

Matrix: **Solids**

Sample ID : **SB-03 (10-15')**

Sampled: **11/27/2012 14:45**

Analytical Method: 8260B

Prep Method: 5030A

Prep Batch(es): L148737

Date/Time Prepped: 11/30/2012 09:58:00

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Benzene	<0.0020	mg/Kg	0.0020	1	11/30/12 15:10	RHL	L148747
Ethylbenzene	<0.0020	mg/Kg	0.0020	1	11/30/12 15:10	RHL	L148747
Methyl tert-butyl ether (MTBE)	<0.0020	mg/Kg	0.0020	1	11/30/12 15:10	RHL	L148747
Naphthalene	<0.0100	mg/Kg	0.0100	1	11/30/12 15:10	RHL	L148747
Toluene	<0.0100	mg/Kg	0.0100	1	11/30/12 15:10	RHL	L148747
o-Xylene	<0.0020	mg/Kg	0.0020	1	11/30/12 15:10	RHL	L148747
m,p-Xylene	<0.0040	mg/Kg	0.0040	1	11/30/12 15:10	RHL	L148747
Xylene (Total)	<0.0020	mg/Kg	0.0020	1	11/30/12 15:10		L148747
Surrogate: 4-Bromofluorobenzene	132 *		Limits: 60-130%	1	11/30/12 15:10	RHL	L148747
Surrogate: 1,2-Dichloroethane - d4	108		Limits: 60-132%	1	11/30/12 15:10	RHL	L148747
Surrogate: Toluene-d8	104		Limits: 70-122%	1	11/30/12 15:10	RHL	L148747

**Qualifiers/
Definitions**

* Outside QC limit
MQL Method Quantitation Limit

DF Dilution Factor

06466

K.S. Ware and Associates
Mr. Mike Tharpe
54 Lindsley Avenue
Nashville, TN 37210

Project TDOT Blount County
Information : TN
Project #100-12-0061

Report Date : 12/03/2012
Received : 11/29/2012

Randell H. Thomas

Report Number : **12-334-0218**

REPORT OF ANALYSIS

Randy Thomas
Project Manager

Lab No : **97892**

Matrix: **Solids**

Sample ID : **SB-04 (10-15')**

Sampled: **11/27/2012 14:30**

Analytical Method: 8260B

Prep Method: 5030A

Prep Batch(es): L148737

Date/Time Prepped: 11/30/2012 09:58:00

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Benzene	<0.0020	mg/Kg	0.0020	1	11/30/12 15:41	RHL	L148747
Ethylbenzene	<0.0020	mg/Kg	0.0020	1	11/30/12 15:41	RHL	L148747
Methyl tert-butyl ether (MTBE)	<0.0020	mg/Kg	0.0020	1	11/30/12 15:41	RHL	L148747
Naphthalene	<0.0100	mg/Kg	0.0100	1	11/30/12 15:41	RHL	L148747
Toluene	<0.0100	mg/Kg	0.0100	1	11/30/12 15:41	RHL	L148747
o-Xylene	<0.0020	mg/Kg	0.0020	1	11/30/12 15:41	RHL	L148747
m,p-Xylene	<0.0040	mg/Kg	0.0040	1	11/30/12 15:41	RHL	L148747
Xylene (Total)	<0.0020	mg/Kg	0.0020	1	11/30/12 15:41		L148747
Surrogate: 4-Bromofluorobenzene	142 *		Limits: 60-130%	1	11/30/12 15:41	RHL	L148747
Surrogate: 1,2-Dichloroethane - d4	114		Limits: 60-132%	1	11/30/12 15:41	RHL	L148747
Surrogate: Toluene-d8	107		Limits: 70-122%	1	11/30/12 15:41	RHL	L148747

**Qualifiers/
Definitions**

* Outside QC limit
MQL Method Quantitation Limit

DF Dilution Factor

06466

K.S. Ware and Associates
Mr. Mike Tharpe
54 Lindsley Avenue
Nashville, TN 37210

Project TDOT Blount County
Information : TN
Project #100-12-0061

Report Date : 12/03/2012
Received : 11/29/2012

Randell H. Thomas

Report Number : **12-334-0218**

REPORT OF ANALYSIS

Randy Thomas
Project Manager

Lab No : **97893**

Matrix: **Solids**

Sample ID : **SB-05 (10-15')**

Sampled: **11/27/2012 14:15**

Analytical Method: 8260B

Prep Method: 5030A

Prep Batch(es): L148737

Date/Time Prepped: 11/30/2012 09:58:00

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Benzene	<0.0020	mg/Kg	0.0020	1	11/30/12 16:12	RHL	L148747
Ethylbenzene	<0.0020	mg/Kg	0.0020	1	11/30/12 16:12	RHL	L148747
Methyl tert-butyl ether (MTBE)	<0.0020	mg/Kg	0.0020	1	11/30/12 16:12	RHL	L148747
Naphthalene	<0.0100	mg/Kg	0.0100	1	11/30/12 16:12	RHL	L148747
Toluene	<0.0100	mg/Kg	0.0100	1	11/30/12 16:12	RHL	L148747
o-Xylene	<0.0020	mg/Kg	0.0020	1	11/30/12 16:12	RHL	L148747
m,p-Xylene	<0.0040	mg/Kg	0.0040	1	11/30/12 16:12	RHL	L148747
Xylene (Total)	<0.0020	mg/Kg	0.0020	1	11/30/12 16:12		L148747
Surrogate: 4-Bromofluorobenzene	132 *		Limits: 60-130%	1	11/30/12 16:12	RHL	L148747
Surrogate: 1,2-Dichloroethane - d4	121		Limits: 60-132%	1	11/30/12 16:12	RHL	L148747
Surrogate: Toluene-d8	114		Limits: 70-122%	1	11/30/12 16:12	RHL	L148747

**Qualifiers/
Definitions**

* Outside QC limit
MQL Method Quantitation Limit

DF Dilution Factor

06466

K.S. Ware and Associates
Mr. Mike Tharpe
54 Lindsley Avenue
Nashville, TN 37210

Project TDOT Blount County
Information : TN
Project #100-12-0061

Report Date : 12/03/2012
Received : 11/29/2012

Randell H. Thomas

Report Number : **12-334-0218**

REPORT OF ANALYSIS

Randy Thomas
Project Manager

Lab No : **97894**

Matrix: **Solids**

Sample ID : **SB-06 (10-15')**

Sampled: **11/27/2012 14:00**

Analytical Method: 8260B

Prep Method: 5030A

Prep Batch(es): L148737

Date/Time Prepped: 11/30/2012 09:58:00

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Benzene	<0.0020	mg/Kg	0.0020	1	11/30/12 16:43	RHL	L148747
Ethylbenzene	<0.0020	mg/Kg	0.0020	1	11/30/12 16:43	RHL	L148747
Methyl tert-butyl ether (MTBE)	<0.0020	mg/Kg	0.0020	1	11/30/12 16:43	RHL	L148747
Naphthalene	<0.0100	mg/Kg	0.0100	1	11/30/12 16:43	RHL	L148747
Toluene	<0.0100	mg/Kg	0.0100	1	11/30/12 16:43	RHL	L148747
o-Xylene	<0.0020	mg/Kg	0.0020	1	11/30/12 16:43	RHL	L148747
m,p-Xylene	<0.0040	mg/Kg	0.0040	1	11/30/12 16:43	RHL	L148747
Xylene (Total)	<0.0020	mg/Kg	0.0020	1	11/30/12 16:43		L148747
Surrogate: 4-Bromofluorobenzene	120		Limits: 60-130%	1	11/30/12 16:43	RHL	L148747
Surrogate: 1,2-Dichloroethane - d4	103		Limits: 60-132%	1	11/30/12 16:43	RHL	L148747
Surrogate: Toluene-d8	99.7		Limits: 70-122%	1	11/30/12 16:43	RHL	L148747

**Qualifiers/
Definitions**

* Outside QC limit
MQL Method Quantitation Limit

DF Dilution Factor

06466

K.S. Ware and Associates
Mr. Mike Tharpe
54 Lindsley Avenue
Nashville, TN 37210

Project TDOT Blount County
Information : TN
Project #100-12-0061

Report Date : 12/03/2012
Received : 11/29/2012

Randell H. Thomas

Report Number : **12-334-0218**

REPORT OF ANALYSIS

Randy Thomas
Project Manager

Lab No : **97895**

Matrix: **Solids**

Sample ID : **SB-07 (0-5')**

Sampled: **11/27/2012 15:45**

Analytical Method: 8260B

Prep Method: 5030A

Prep Batch(es): L148737

Date/Time Prepped: 11/30/2012 09:58:00

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Benzene	<0.0020	mg/Kg	0.0020	1	11/30/12 17:15	RHL	L148747
Ethylbenzene	<0.0020	mg/Kg	0.0020	1	11/30/12 17:15	RHL	L148747
Methyl tert-butyl ether (MTBE)	<0.0020	mg/Kg	0.0020	1	11/30/12 17:15	RHL	L148747
Naphthalene	<0.0100	mg/Kg	0.0100	1	11/30/12 17:15	RHL	L148747
Toluene	<0.0100	mg/Kg	0.0100	1	11/30/12 17:15	RHL	L148747
o-Xylene	<0.0020	mg/Kg	0.0020	1	11/30/12 17:15	RHL	L148747
m,p-Xylene	<0.0040	mg/Kg	0.0040	1	11/30/12 17:15	RHL	L148747
Xylene (Total)	<0.0020	mg/Kg	0.0020	1	11/30/12 17:15		L148747
Surrogate: 4-Bromofluorobenzene	134 *		Limits: 60-130%	1	11/30/12 17:15	RHL	L148747
Surrogate: 1,2-Dichloroethane - d4	110		Limits: 60-132%	1	11/30/12 17:15	RHL	L148747
Surrogate: Toluene-d8	109		Limits: 70-122%	1	11/30/12 17:15	RHL	L148747

**Qualifiers/
Definitions**

* Outside QC limit DF Dilution Factor
MQL Method Quantitation Limit

06466

K.S. Ware and Associates
Mr. Mike Tharpe
54 Lindsley Avenue
Nashville, TN 37210

Project TDOT Blount County
Information : TN
Project #100-12-0061

Report Date : 12/03/2012
Received : 11/29/2012

Randell H. Thomas

Report Number : **12-334-0218**

REPORT OF ANALYSIS

Randy Thomas
Project Manager

Lab No : **97896**

Matrix: **Solids**

Sample ID : **SB-08 (10-15')**

Sampled: **11/27/2012 15:40**

Analytical Method: 8260B

Prep Method: 5030A

Prep Batch(es): L148737

Date/Time Prepped: 11/30/2012 09:58:00

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Benzene	<0.0020	mg/Kg	0.0020	1	11/30/12 17:46	RHL	L148747
Ethylbenzene	<0.0020	mg/Kg	0.0020	1	11/30/12 17:46	RHL	L148747
Methyl tert-butyl ether (MTBE)	<0.0020	mg/Kg	0.0020	1	11/30/12 17:46	RHL	L148747
Naphthalene	<0.0100	mg/Kg	0.0100	1	11/30/12 17:46	RHL	L148747
Toluene	<0.0100	mg/Kg	0.0100	1	11/30/12 17:46	RHL	L148747
o-Xylene	<0.0020	mg/Kg	0.0020	1	11/30/12 17:46	RHL	L148747
m,p-Xylene	<0.0040	mg/Kg	0.0040	1	11/30/12 17:46	RHL	L148747
Xylene (Total)	<0.0020	mg/Kg	0.0020	1	11/30/12 17:46		L148747
Surrogate: 4-Bromofluorobenzene	128		Limits: 60-130%	1	11/30/12 17:46	RHL	L148747
Surrogate: 1,2-Dichloroethane - d4	116		Limits: 60-132%	1	11/30/12 17:46	RHL	L148747
Surrogate: Toluene-d8	96.3		Limits: 70-122%	1	11/30/12 17:46	RHL	L148747

**Qualifiers/
Definitions**

* Outside QC limit
MQL Method Quantitation Limit

DF Dilution Factor

Cooler Receipt Form

Customer Number: **06466**

Customer Name: **K.S. Ware and Associates**

Report Number: **12-334-0218**

Shipping Method

Fed Ex UPS US Postal Client Lab Courier Other :

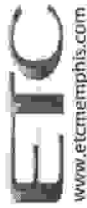
Shipping container/cooler uncompromised?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Custody seals intact on shipping container/cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Not Required
Custody seals intact on sample bottles?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Chain of Custody (COC) present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC agrees with sample label(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC properly completed	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Samples in proper containers?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sample containers intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sufficient sample volume for indicated test(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
All samples received within holding time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler temperature in compliance?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Water - Sample containers properly preserved	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Water - VOA vials free of headspace	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Trip Blanks received with VOAs	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Soil VOA method 5035 – compliance criteria met	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
<input type="checkbox"/> High concentration container (48 hr)		<input type="checkbox"/> Low concentration EnCore samplers (48 hr)	
<input type="checkbox"/> High concentration pre-weighed (methanol -14 d)		<input type="checkbox"/> Low conc pre-weighed vials (Sod Bis -14 d)	
Special precautions or instructions included?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	

Comments:

Any regulatory non-compliance issues will be recorded on non-compliance report.

Signature:

Date & Time:



ENVIRONMENTAL TESTING & CONSULTING, INC.
 2790 Whitten Rd. Memphis, TN 38133 (901) 213-2400 Fax (901) 213-2440
 www.etcmemphis.com

Chain of Custody

www.etcmemphis.com

Company Name: K.S. Ware and Assoc, LLC
 Project/Site: TDOT Blount County
 Account Number: ---
 State Project Loc: TN
 Phone Number: 615-255-9702
 PO Number: ---
 FID Number: ---
 Project Number: 100-12-0061

Type of Event (Routine Sampling Events Only)
 Single Daily Weekly Monthly Quarterly Semi-Annual Annually

RUSH (Surcharges may apply)
 Project Manager/Contact: Mike Tharpe
 E-Mail Address: mtharpe@kswarellc.com
 Ice

Analysis Reqs: (Note special detection limit)
BTEX, MTBE, Naphthalene

Which Regulations Apply?
 NPDES Risk Based Limits
 Wastewater TRRP 13
 RCRA LA RECAP
 UST USACE
 Other ---

12-334-0218
 06466
 2012-11-29
 10:21:37

K.S. Ware and Associates
 TDOT Blount County

# of Containers	Sample ID/Number	Depth	Sample Date & Time	Matrix	Grab/Comp	Comments		Lab ID Number (for internal use only)
						Matrix	Comp	
1	SB-01 (10-15')	10-15'	11/27/12 15:20	3	G			
1	SB-02 (10-15')	10-15'	11/27/12 15:40	3	G			
1	SB-03 (10-15')	10-15'	11/27/12 14:45	3	G			
1	SB-04 (10-15')	10-15'	11/27/12 14:30	3	G			
1	SB-05 (10-15')	10-15'	11/27/12 14:15	3	G			
1	SB-06 (10-15')	10-15'	11/27/12 14:00	3	G			
1	SB-07 (0-5')	0-5'	11/27/12 15:45	3	G			
1	SB-08 (10-15')	10-15'	11/27/12 15:40	3	G			

Sampled By: Mike Tharpe Method of Shipment: UPS Blank/Cooler Temp: 9C Remarks: Standard TAT

Relinquished By (sign): Mike Tharpe Date: 11/29/12 Time: 9:00
 Relinquished By (sign): --- Date: --- Time: ---

Received By (sign): --- Date: --- Time: ---
 Received By (sign): --- Date: 11/29/12 Time: 09:37

Please return ETC Sample Kit Request Form with Chain of Custody