



# ECS Southeast, LLP

Environmental Site Assessment Report

Pharr Mill Road and Mulberry Road Property  
Harrisburg, Cabarrus County, North Carolina  
ECS Project No. 49:17330-A

August 9, 2022

Prepared For:

Ms. Brooke Bures  
Trammell Crow Company  
500 W 2<sup>nd</sup> Street  
Suite 1400  
Austin, Texas 78701





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Trammell Crow Company  
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Austin, Texas 78701

Reference: Environmental Site Assessment Report  
Pharr Mill Road and Mulberry Road Property  
Pharr Mill Road and Mulberry Road  
Harrisburg, Cabarrus County, North Carolina  
ECS Project No. 49:17330-A

Dear Ms. Bures:

ECS Southeast, LLP (ECS) has prepared this Environmental Assessment Report describing supplemental assessment activities and results of soil sampling and soil gas screening conducted at the subject site. Assessment activities were conducted in accordance with the ECS Proposal for Environmental Assessment Services (ECS Proposal Number: 49:31802) dated June 7, 2022 and authorized on June 14, 2022.

ECS appreciates the opportunity to provide our environmental consulting services. If you have any questions concerning this report or this project, please contact us.

Sincerely,

**ECS SOUTHEAST, LLP**

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## **1.0 BACKGROUND INFORMATION**

The subject property is located at Pharr Mill Road and Mulberry Road, Harrisburg, North Carolina. The subject property is identified by the Cabarrus County Online Geographic Information Systems (GIS) as Parcel Identification Number (PIN) 55179854430000, consists of 132.792 acres, and is owned by Mulberry Holdings LLC. A topographic location map for the site is included as **Figure 1**. An aerial photograph site location map is included in **Figure 2**.

ECS completed a Phase I Environmental Site Assessment (ESA) at the site on June 3, 2022 (ECS Project No. 17330). In the Phase I, ECS observed three above ground storage tanks (ASTs) in the vicinity of agricultural buildings present on the central portion of the subject property. One AST labeled as containing motor oil was observed to the south of the workshop shed. Staining was observed on the ground surface beneath the AST. Staining was also observed on the soil surface throughout the interior of the workshop shed. ECS considers the staining encountered in the vicinity of the AST as well as throughout the surface of the interior of the workshop shed to be a Recognized Environmental Condition (REC) for the subject property.

ECS was requested to conduct environmental assessment services at the subject property in an effort to evaluate whether the RECs identified have adversely impacted the subject property. Additionally, ECS was requested to screen soil gas along the northern portions of the subject property to assess for possible methane vapor intrusion concerns and flammable/explosive hazards from the off-site Greenway Waste Solutions of Harrisburg, LLC C&D Landfill which adjoins the subject property to the northeast.

## 2.0 SCOPE OF SERVICES

### 2.1 Soil Assessment Activities

Based on our understanding of the project information, ECS conducted the following soil assessment activities:

- ECS mobilized an environmental professional to the project site to collect nine (9) soil samples in an effort to identify soil impacts from the AST and interior of the workshop shed.
- Soil borings were advanced using a decontaminated hand auger. A soil boring was made in the area of stained soil in the vicinity of the AST and was sampled at a depth of 1 foot below ground surface (bgs) and 3 feet bgs. An additional three (3) borings were advanced on three sides of the soil staining at approximately 5 feet stepping out from the central sample to a depth of 2 feet bgs. Two soil borings were advanced inside of the workshop with stained surfaces and each boring was sampled at a depth of 1 ft bgs and 3 ft bgs. Photodocumentation has been included as **Appendix A**. Boring logs are available in **Appendix B**. The approximate locations of soil samples are located in **Figure 3**.
- The soil sample containers were labeled and delivered to Rapid Environmental Diagnostic (RED) Lab located in Wilmington, North Carolina for analysis. Each sample was submitted to be analyzed for total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) and as diesel range organics (GRO) using ultraviolet fluorescence (UVF). ECS maintained chain-of-custody (COC) procedures throughout the sample collection and transportation process for the subsurface soil samples. A copy of the COC documentation is included along with the laboratory data in **Appendix C**.

### 2.2 Soil Gas Screening Activities

#### Soil Gas Sample Point Installation Activities

On July 6, 2022, ECS installed three soil gas points identified as SG-1 through SG-3, at the approximate locations illustrated on the attached Figure 2. Using a decontaminated stainless-steel hand auger, sample points SG-1, SG-2, and SG-3 were installed to an approximate depth of 5 feet (ft) below ground surface (bgs). A vapor implant connected to a length of Nylaflo tubing was then positioned near the base of each boring. Clean filter sand was placed in the annular space around, and approximately 6 inches above the vapor implant, and bentonite was placed in the remaining annular space. Distilled water was poured into the bentonite and allowed to hydrate for at least 2 hours prior to screening.

#### Soil Gas Screening Activities

Following installation of the sample points on July 6<sup>th</sup>, ECS performed soil gas screening activities of SG-1 through SG-3. Soil gas sample points were screened for methane, oxygen, carbon dioxide, hydrogen sulfide, and pressure utilizing a Landtec GEM 5000 Plus Landfill Gas Monitor (GEM 5000), as well as for volatile organic vapors utilizing a photoionization detector (PID).

ECS re-mobilized to the site on July 7, 2022 for a second screening event. Following completion of the second soil gas screening, the sampling equipment was removed, and the borings were backfilled with bentonite and soil cuttings to match the pre-existing grade of the land surface.

### 3.0 RESULTS

#### 3.1 Soil Assessment Activities Results

TPH-GRO and/or TPH-DRO were detected above laboratory detection limits in the soil samples collected as part of soil assessment activities. TPH-GRO was detected above its respective NCDEQ Action Level of 50 milligrams per Kilogram (mg/Kg) in the soil sample identified as SB-5-1, which was obtained inside of the workshop at a depth of 1 ft bgs. TPH-DRO was detected above its respective NCDEQ action level of 100 mg/Kg in the soil samples identified as SB-1-1, SB-5-1, SB-6-1, and SB-6-3. SB-1-1 was obtained in the vicinity of the AST on the exterior of the shed. SB-6-1, SB-5-1, and SB-6-3 were obtained in the interior of the shed. The soil analytical results are summarized in **Table 1**, and a copy of the laboratory report and chain-of-custody are available in Appendix B.

#### 3.2 Soil Gas Screening Results

Methane was not detected in the three soil gas screening points installed as part of this assessment. Hydrogen sulfide was detected at 1 part per million (ppm) on the first day of screening on July 6, 2022, which is above NCDEQ Vapor Intrusion Screening Levels (VISLs) for residential and non-residential scenarios, but below the lower explosive limit for hydrogen sulfide. Hydrogen sulfide was not detected on the second day of screening.

Static pressures ranged from 0.01 inches of water (in-H<sub>2</sub>O) at SG-1 to 0.06 in-H<sub>2</sub>O at SG-2. Differential pressures ranged from 0.020 in-H<sub>2</sub>O at SG-2 to 0.030 in-H<sub>2</sub>O at SG-3. The soil gas and pressure screening results are summarized on **Table 2**.

The results of the methane screening and pressure readings did not indicate methane concentrations greater than the NCDEQ Brownfields Program Threshold Criteria for Methane Site Development (December 2020), including properties intended for residential reuse. This document indicates residential redevelopment would not be permitted if methane concentrations exceed 30 percent by volume (% bv) and a mitigation system is required if methane concentrations exceed 1.25 % bv within 50 feet of proposed buildings. In addition, this document indicates that there can be no measurable static pressure differential greater than atmospheric pressure within 200 feet of proposed buildings.

### 4.0 FINDINGS AND CONCLUSIONS

Based on the field activities laboratory analytical results of the soil gas samples collected during this assessment, ECS concludes the following:

- On July 6 and July 7, 2022, ECS screened three (3) soil gas points (SG-1 through SG-3) that were installed via hand auger at the subject property on July 6. The soil gas screening points were abandoned after the second screening event on July 7.
- Methane was not detected in the soil gas points on either day of the screening event. Hydrogen sulfide was detected on July 6 at a concentration of 1 ppm. Hydrogen sulfide was not detected on the second day of screening.

- Methane readings collected on July 6 and 7, 2022, were not greater than the NCDEQ Brownfields Program Threshold Criteria for Methane Site Development intended for residential reuse or the 1.25% threshold for requiring a methane mitigation system.
- The maximum differential pressure identified was 0.030 in H<sub>2</sub>O, which is within the accuracy of the Landtec GEM 5000 Plus (discussed below). ECS opines such negligible pressures do not constitute “measurable” differential pressures as contemplated by the Threshold Criteria for Methane Site Development.
- Based upon information provided by the Landtec GEM 5000 Plus manufacturer, the accuracy of the Landtec GEM 5000 Plus is +/- 0.5% by volume (bv) for methane, +/- 2.0 in H<sub>2</sub>O for static pressure, and +/- 0.7 in H<sub>2</sub>O for differential pressure. As such, each of the static and differential pressure readings, and methane readings recorded during this investigation, were within the accuracy limits of the instrument and are considered negligible. No further methane or pressure screening activities appear to be warranted for the subject property.
- A total of 9 soil quality samples were obtained in the vicinity of the leaking AST on the subject property, as well as in areas in the interior of the workshop shed that had had visual evidence of petroleum staining.
- Four out of the nine soil samples collected were analyzed for TPH-GRO and/or TPH-DRO above their respective NCDEQ Action levels, indicating that soil had been impacted by the RECs discovered in the previous Phase I ESA. Three of those four soil samples were collected at 1 ft bgs, and their respective samples collected from 3 ft bgs were below the NCDEQ Action Levels. SB-6-3 collected from 3 ft bgs was reported with a concentration of TPH-DRO at 119.7 mg/Kg, in excess of TPH-DRO NCDEQ Action Level of 100 mg/Kg.

## **5.0 RECOMMENDATIONS**

Based on the results of this assessment, ECS recommends the following:

- Soil impacted by petroleum hydrocarbons around the AST and interior to the workshop shed be properly removed from the site and disposed.
- Confirmatory post-excavation soil samples be taken in an effort to confirm that soils on site have been adequately remediated to below NCDEQ Action Levels.
- A copy of this report be kept for future reference.

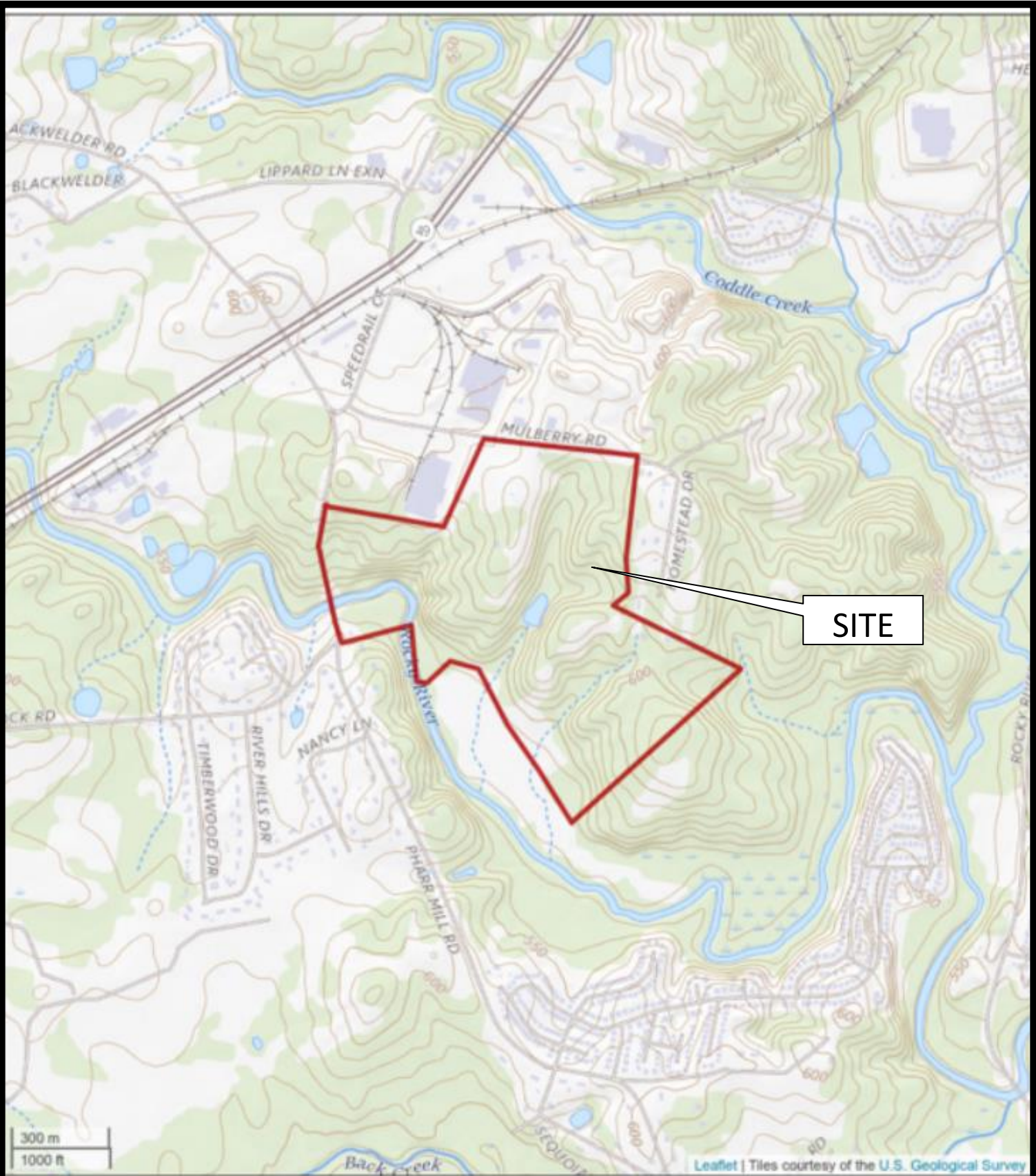
## **6.0 QUALIFICATIONS OF REPORT**

The activities and evaluative approaches used in this assessment are consistent with those normally employed in environmental assessment projects of this type and in this area. Our evaluation of site conditions has been based on our understanding of the site project information and the data obtained during our field activities. This report was prepared for the express use of Trammell Crow Company. This report summarizes our evaluation of the conditions on the days of testing. Our findings are based on observations at the site and analysis of a limited number of samples obtained. The findings of this assessment are not intended to serve as an audit of health and safety or compliance issues pertaining to improvements or activities on-site. ECS is not responsible or liable for the discovery and elimination of hazards that may potentially cause damage, accidents, or injuries. No warranty, expressed or implied, is made with regard to the conclusions presented within this report.

This report is provided for the exclusive use of Trammell Crow Company. The scope of services performed in the execution of this assessment may not be appropriate to satisfy the needs of other users. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties without the written consent of ECS. The use of this report by any undesignated third party or parties will be at such party's sole risk and ECS disclaims liability for any such third-party use or reliance.



## FIGURES



**SOURCE:**



USGS 7.5-MINUTE TOPOGRAPHIC SERIES –  
CONCORD SE QUADRANGLE

**SCALE SHOWN ABOVE**



**FIGURE 1  
SITE TOPOGRAPHIC MAP**

Pharr Mill & Mulberry Road Site  
Harrisburg, NC  
ECS Project Number: 49:17330-A



**SOURCE:**

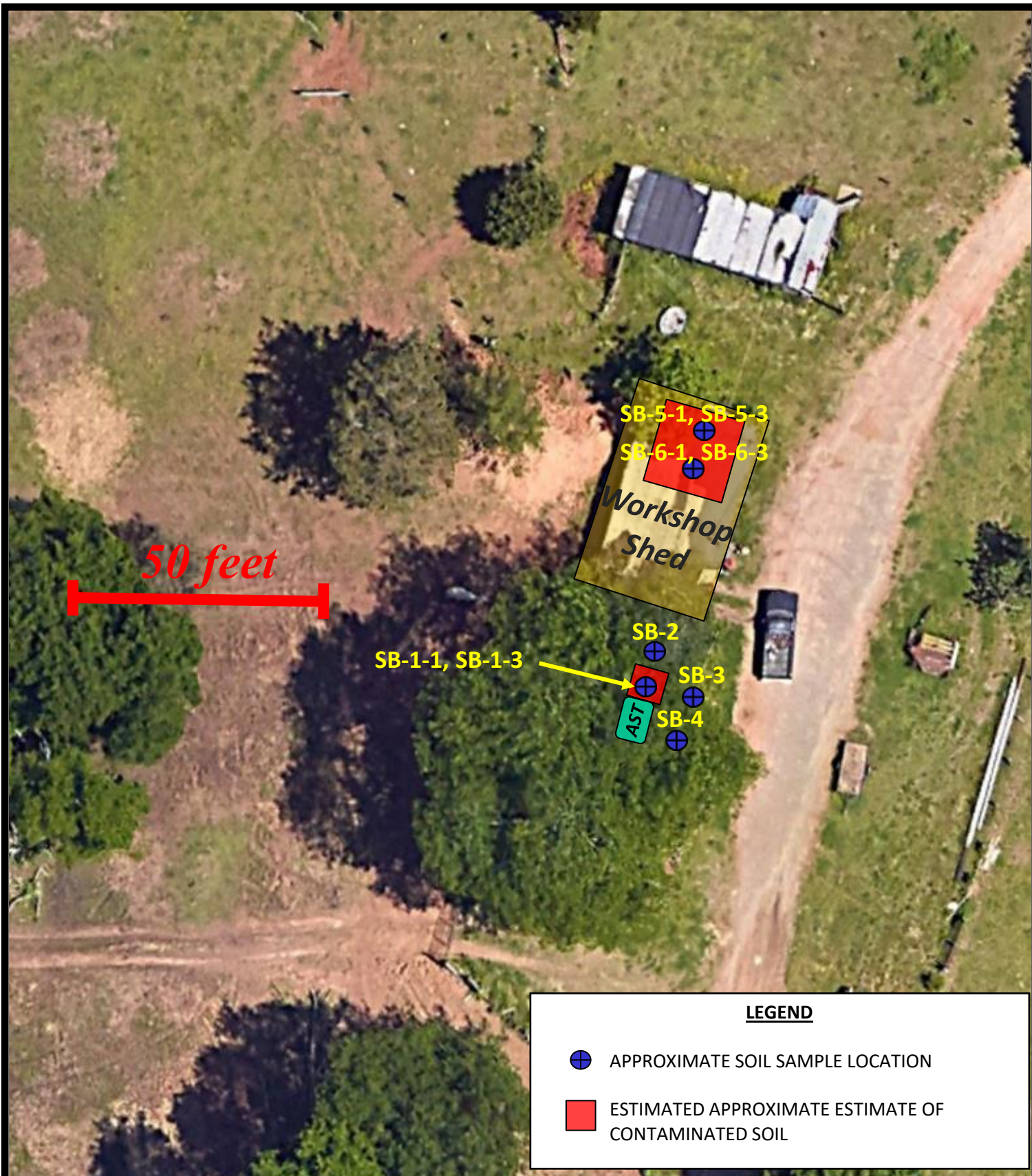
2020 IMAGERY

**SCALE SHOWN ABOVE**



**FIGURE 2**  
**SITE AERIAL AND SOIL GAS SCREENING**  
**LOCATION MAP**

Pharr Mill & Mulberry Road Site  
Harrisburg, NC  
ECS Project Number: 49:17330-A



**SOURCE:**

GOOGLE EARTH (2018 IMAGERY)

**SCALE SHOWN ABOVE**



**FIGURE 3  
SOIL SAMPLE LOCATION MAP**

Pharr Mill & Mulberry Road Site  
Harrisburg, NC  
ECS Project Number: 49:17330-A

## TABLES

**Table 1:**  
**Summary of Soil Analysis Results**  
 Pharr Mill Road and Mulberry Road - Phase II ESA  
 Pharr Mill Road and Mulberry Road  
 Harrisburg, Cabarrus County, North Carolina  
 ECS Project No. 49:17330-A

Sample ID	Sample Matrix	Sample Depth (ft)	Sample Date	Gasoline Range Organics (C5-C10)	Diesel Range Organics (C10-C35)	Total Petroleum Hydrocarbon (C5-C35)
<i>NCDEQ Action Levels</i>				50	100	NA
SB-1-1	Soil	1	07/06/22	<9	<b>128.2</b>	128.2
SB-1-3	Soil	3	07/06/22	4.2	24.5	28.7
SB-2	Soil	2	07/06/22	<0.64	20.4	20.4
SB-3	Soil	2	07/06/22	<0.63	10.6	10.6
SB-4	Soil	2	07/06/22	<0.59	0.59	0.59
SB-5-1	Soil	1	07/06/22	<b>51.6</b>	<b>226.8</b>	278.4
SB-5-3	Soil	3	07/06/22	5.9	34.8	40.7
SB-6-1	Soil	1	07/06/22	41.1	<b>493.1</b>	534.2
SB-6-3	Soil	3	07/06/22	<8.1	<b>119.7</b>	119.7

**Notes:**

*Results Generated by a QED HC-1 analyser.*

*Concentration values in mg/kg*

*Soil values are not corrected for moisture or stone content*

*< = not detected*

**Bold indicates analytes above NCDEQ Action Levels for TPH DRO / GRO**

**Table 2:**  
**Summary of Soil Gas Screening**  
Pharr Mill Road and Mulberry Road Property  
Pharr Mill Road and Mulberry Road  
Harrisburg, Cabarrus County, North Carolina  
ECS Project No. 49:17330-A

Sample ID	Sample Date	Initial vs. Stabilized	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Carbon Monoxide (ppm)	Hydrogen Sulfide (ppm)	Static Pressure ("H2O)	Differential Pressure ("H2O)	PID Reading (ppm)
<i>NCDEQ Residential VISLs</i>			NS	NS	NS	NS	0.014	NA	NA	NS
<i>NCDEQ Non-Residential VISLs</i>			NS	NS	NS	NS	0.18	NA	NA	NS
<i>Lower Explosive Limit</i>			5	NA	NA	125,000	43,000	NA	NA	NA
SG-1	7/6/2022	To	0.0	0.1	20.1	9	0	--	--	--
	7/6/2022	T <sub>60</sub>	0.0	0.5	19.6	0	0	0.01	0.024	0.1
	7/7/2022	To	0.0	0.1	21.1	2	0	--	--	--
	7/7/2022	T <sub>60</sub>	0.0	1.1	18.9	2	0	0.02	0.025	0.0
SG-2	7/6/2022	To	0.0	0.2	19.5	0	<b>1</b>	--	--	--
	7/6/2022	T <sub>60</sub>	0.0	0.1	19.6	0	<b>1</b>	0.06	0.027	10.2
	7/7/2022	To	0.0	0.1	20.7	0	0	--	--	--
	7/7/2022	T <sub>60</sub>	0.0	2.6	18.0	0	0	0.06	0.020	0.0
SG-3	7/6/2022	To	0.0	0.2	19.9	0	0	--	--	--
	7/6/2022	T <sub>60</sub>	0.0	0.3	19.6	0	0	0.03	0.030	1.4
	7/7/2022	To	0.0	0.1	20.1	0	0	--	--	--
	7/7/2022	T <sub>60</sub>	0.0	0.8	19.5	0	0	0.05	0.024	0.0

**Notes:**

% = percent

ppm = parts per million

"H2O = inches of water

NCDEQ = North Carolina Department of Environmental Quality

VISLs = Vapor Intrusion Screening Levels (as of January 2022)

*italics* = constituent detected above residential VISLs

**BOLD** = constituent detected above non-residential VISLs

PID = Photoionization Detector

NS = No Standard

NA = Not Applicable

Measurements made with Landtec GEM™ 5000 PLUS Landfill Gas Analyzer and Extraction Monitor

**APPENDIX A:**

**PHOTOGRAPH DOCUMENTATION**





Photo 1 – SG-1

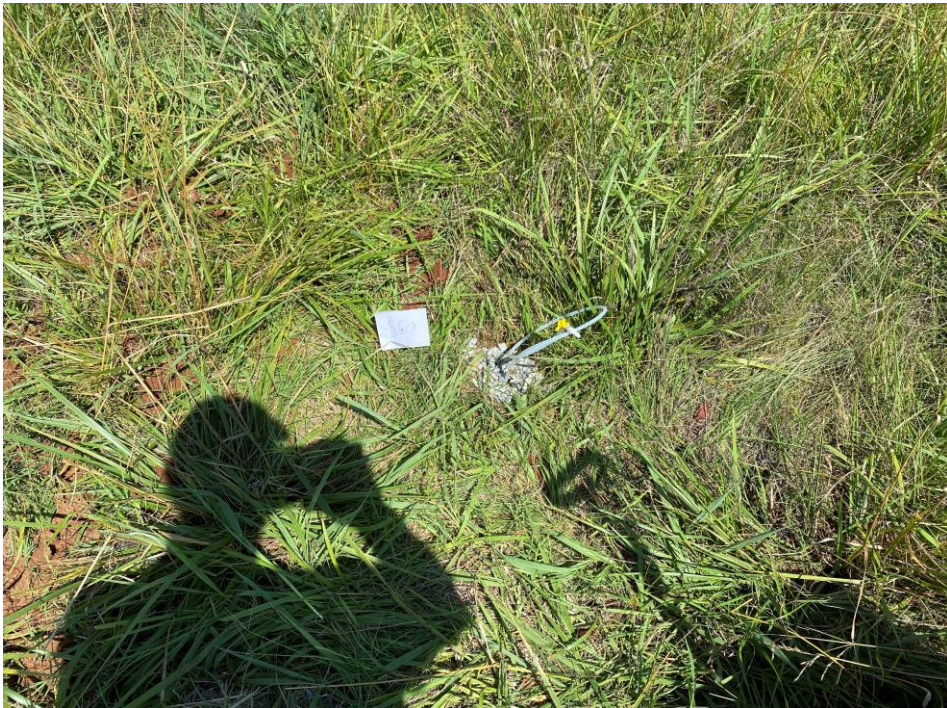


Photo 2 – SG-2

Photolog



PHARR MILL RD & MULBERRY RD  
ENVIRONMENTAL SITE ASSESSMENT  
PHARR RD & MULBERRY RD,  
HARRISBURG, NORTH CAROLINA  
ECS Project No. 49:17330-A



Photo 3 – SG-3



Photo 4 – Decontaminated Hand Auger

Photolog



PHARR MILL RD & MULBERRY RD  
ENVIRONMENTAL SITE ASSESSMENT  
PHARR RD & MULBERRY RD,  
HARRISBURG, NORTH CAROLINA  
ECS Project No. 49:17330-A



Photo 5 – Soil Gas Screening with GEM-5000 and PID



Photo 6 – Exterior AST


Photolog



PHARR MILL RD & MULBERRY RD  
ENVIRONMENTAL SITE ASSESSMENT  
PHARR RD & MULBERRY RD,  
HARRISBURG, NORTH CAROLINA  
ECS Project No. 49:17330-A


**APPENDIX B:**

**BORING LOGS**

Project Name: <b>Pharr Mill Road and Mulberry Road Property</b>	Sheet: <b>1 of 1</b>	Boring No: <b>SB-1</b>	
Client: <b>Trammell Crow Company</b>	Project No.: <b>17330-A</b>		
Site Location: <b>Pharr Mill Road and Mulberry Road, Harrisburg, North Carolina</b>	Driller: <b>N/A</b>	Drill Rig: <b>Hand Auger</b>	
Latitude/Longitude:			


Depth/Elevation	PID Reading	Sample Number	Sample Recovery (in)	Graphic Log	Soil Classification	Description
0.0		SB-1-1		[Pattern]	<b>SM</b>	Dark Brown SANDY SILT
0.0		SB-1-3		[Pattern]	<b>SM</b>	Red Brown SANDY SILT
5	-5					<b>END OF DRILLING AT 5.0 FT</b>
10	-10					
15	-15					
20	-20					
25	-25					
30						

<input type="checkbox"/> WL (First Encountered)	Boring Started: <b>Jul 06 2022</b>
<input checked="" type="checkbox"/> WL (Completion)	Boring Completed: <b>Jul 06 2022</b>
Remarks:	Logged By: <b>Seth Greene</b>
	Principal Engineer/ Responsible PG: <b>Joseph Nestor</b>

Project Name: <b>Pharr Mill Road and Mulberry Road Property</b>	Sheet: <b>1 of 1</b>	Boring No: <b>SB-2</b>	
Client: <b>Trammell Crow Company</b>	Project No.: <b>17330-A</b>		
Site Location: <b>Pharr Mill Road and Mulberry Road, Harrisburg, North Carolina</b>	Driller: <b>N/A</b>	Drill Rig: <b>Hand Auger</b>	
Latitude/Longitude:			


Depth/Elevation	PID Reading	Sample Number	Sample Recovery (in)	Graphic Log	Soil Classification	Description
0.0		SB-2		[Pattern]	<b>SM</b>	Dark Brown SANDY SILT
5	-5					<b>END OF DRILLING AT 5.0 FT</b>
10	-10					
15	-15					
20	-20					
25	-25					
30						


<input type="checkbox"/> WL (First Encountered)	Boring Started: <b>Jul 06 2022</b>
<input checked="" type="checkbox"/> WL (Completion)	Boring Completed: <b>Jul 06 2022</b>
Remarks:	Logged By: <b>Seth Greene</b>
	Principal Engineer/ Responsible PG: <b>Joseph Nestor</b>

Project Name: <b>Pharr Mill Road and Mulberry Road Property</b>	Sheet: <b>1 of 1</b>	Boring No: <b>SB-3</b>	
Client: <b>Trammell Crow Company</b>	Project No.: <b>17330-A</b>		
Site Location: <b>Pharr Mill Road and Mulberry Road, Harrisburg, North Carolina</b>	Driller: <b>N/A</b>	Drill Rig: <b>Hand Auger</b>	
Latitude/Longitude:			

Depth/Elevation	PID Reading	Sample Number	Sample Recovery (in)	Graphic Log	Soil Classification	Description
3.6		SB-3		[Pattern]	<b>SM</b>	Dark Brown SANDY SILT
5	-5					<b>END OF DRILLING AT 5.0 FT</b>
10	-10					
15	-15					
20	-20					
25	-25					
30						


<input type="checkbox"/> WL (First Encountered)	Boring Started: <b>Jul 06 2022</b>
<input checked="" type="checkbox"/> WL (Completion)	Boring Completed: <b>Jul 06 2022</b>
Remarks:	Logged By: <b>Seth Greene</b>
	Principal Engineer/ Responsible PG: <b>Joseph Nestor</b>

Project Name: <b>Pharr Mill Road and Mulberry Road Property</b>	Sheet: <b>1 of 1</b>	Boring No: <b>SB-4</b>	
Client: <b>Trammell Crow Company</b>	Project No.: <b>17330-A</b>		
Site Location: <b>Pharr Mill Road and Mulberry Road, Harrisburg, North Carolina</b>	Driller: <b>N/A</b>	Drill Rig: <b>Hand Auger</b>	
Latitude/Longitude:			

Depth/Elevation	PID Reading	Sample Number	Sample Recovery (in)	Graphic Log	Soil Classification	Description
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">0.3</div> <div style="margin-bottom: 10px;">5     -5</div> <div style="margin-bottom: 10px;">10   -10</div> <div style="margin-bottom: 10px;">15   -15</div> <div style="margin-bottom: 10px;">20   -20</div> <div style="margin-bottom: 10px;">25   -25</div> <div style="margin-bottom: 10px;">30</div> </div>	0.3	SB-4			<b>ML/CL</b>	Red Brown CLAYEY SILT  <b>END OF DRILLING AT 2.0 FT</b>


<input type="checkbox"/> WL (First Encountered)	Boring Started: <b>Jul 06 2022</b>
<input checked="" type="checkbox"/> WL (Completion)	Boring Completed: <b>Jul 06 2022</b>
Remarks:	Logged By: <b>Seth Greene</b>
	Principal Engineer/ Responsible PG: <b>Joseph Nestor</b>





Project Name: <b>Pharr Mill Road and Mulberry Road Property</b>	Sheet: <b>1 of 1</b>	Boring No: <b>SB-5</b>	
Client: <b>Trammell Crow Company</b>	Project No.: <b>17330-A</b>		
Site Location: <b>Pharr Mill Road and Mulberry Road, Harrisburg, North Carolina</b>	Driller: <b>N/A</b>	Drill Rig: <b>Hand Auger</b>	
Latitude/Longitude:			

Depth/Elevation	PID Reading	Sample Number	Sample Recovery (in)	Graphic Log	Soil Classification	Description
0.0		SB-5-1		[Pattern]	<b>SM</b>	Red Brown SANDY SILT
0.0		SB-5-3		[Pattern]	<b>ML/CL</b>	Red Brown CLAYEY SILT
5	-5					<b>END OF DRILLING AT 3.0 FT</b>
10	-10					
15	-15					
20	-20					
25	-25					
30						

<input type="checkbox"/> WL (First Encountered)	Boring Started: <b>Jul 06 2022</b>
<input checked="" type="checkbox"/> WL (Completion)	Boring Completed: <b>Jul 06 2022</b>
Remarks:	Logged By: <b>Seth Greene</b>
	Principal Engineer/ Responsible PG: <b>Joseph Nestor</b>

Project Name: <b>Pharr Mill Road and Mulberry Road Property</b>	Sheet: <b>1 of 1</b>	Boring No: <b>SB-6</b>	
Client: <b>Trammell Crow Company</b>	Project No.: <b>17330-A</b>		
Site Location: <b>Pharr Mill Road and Mulberry Road, Harrisburg, North Carolina</b>	Driller: <b>N/A</b>	Drill Rig: <b>Hand Auger</b>	
Latitude/Longitude:			

Depth/Elevation	PID Reading	Sample Number	Sample Recovery (in)	Graphic Log	Soil Classification	Description
0.0		SB-6-1			<b>SM</b>	Dark Brown SANDY SILT
0.0		SB-6-3			<b>ML/CL</b>	Red Brown CLAYEY SILT
5 -5						<b>END OF DRILLING AT 3.0 FT</b>
10 -10						
15 -15						
20 -20						
25 -25						
30						

<input type="checkbox"/> WL (First Encountered)	Boring Started: <b>Jul 06 2022</b>
<input checked="" type="checkbox"/> WL (Completion)	Boring Completed: <b>Jul 06 2022</b>
Remarks:	Logged By: <b>Seth Greene</b>
	Principal Engineer/ Responsible PG: <b>Joseph Nestor</b>

**APPENDIX C**

**LABORATORY DATA REPORT AND CHAIN OF CUSTODY DOCUMENTATION**



### Hydrocarbon Analysis Results

**Client:** ECS  
**Address:** 5260 GREENS DAIRY RD.  
 RALEIGH, NC 27616

**Samples taken** Wednesday, July 6, 2022  
**Samples extracted** Wednesday, July 6, 2022  
**Samples analysed** Friday, July 8, 2022

**Contact:** RON NAVARRO

**Operator** CLAIRE NAKAMURA

**Project:** # 17330-A

											U00904						
Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	Ratios			HC Fingerprint Match				
										% light	% mid	% heavy					
s	SB-1-1	360.0	<9	<9	128.2	128.2	81.7	3.6	<0.36	0	68.5	31.5	Deg.Fuel 66.6%,(FCM)				
s	SB-1-3	25.2	<0.63	4.2	24.5	28.7	16.4	0.7	<0.025	28.7	50.8	20.5	Deg.Fuel 65%,(FCM),(BO)				
s	SB-2	25.7	<0.64	<0.64	20.4	20.4	9.8	0.47	<0.026	0	80	20	V.Deg.PHC 78.4%,(FCM),(BO)				
s	SB-3	25.0	<0.63	<0.63	10.6	10.6	6.4	0.31	<0.025	0	70.9	29.1	V.Deg.PHC 77.7%,(FCM),(BO)				
s	SB-4	23.6	<0.59	<0.59	0.59	0.59	0.46	<0.19	<0.024	0	60.1	39.9	V.Deg.PHC 58.2%,(FCM),(BO)				
s	SB-5-1	289.0	<7.2	51.6	226.8	278.4	109.8	4.7	<0.29	44.6	43.7	11.7	Deg.Fuel 81.4%,(FCM)				
s	SB-5-3	26.5	<0.66	5.9	34.8	40.7	17.3	0.74	<0.027	33.8	52.4	13.8	Deg.Fuel 77.5%,(FCM)				
s	SB-6-1	338.0	<8.5	41.1	493.1	534.2	236.5	10.4	<0.34	19.3	64.6	16.1	Deg.Fuel 82.5%,(FCM)				
s	SB-6-3	325.0	<8.1	<8.1	119.7	119.7	57	<2.6	<0.33	0	76	24	Deg.Fuel 82.6%,(FCM)				
Initial Calibrator QC check											OK		Final FCM QC Check		OK		100.3 %

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

