# PRELIMINARY SITE ASSESSMENT

US 17 FROM WASHINGTON BYP NORTH OF NC 171 TO MULTI-LANES SOUTH OF WILLIAMSTON – PARCEL NO. NA 10052 US 17 HWY N WASHINGTON, BEAUFORT COUNTY, NORTH CAROLINA

> NCDOT WBS ELEMENT 35494.1.1 STATE PROJECT R-2511

> > June 18, 2018

Prepared for:

Mr. Gordon Box, P.G. North Carolina Department of Transportation Geotechnical Engineering Unit 1592 Mail Service Center Raleigh, North Carolina 27699

Prepared by:

ECS Southeast, LLP 9001 Glenwood Avenue Raleigh, North Carolina 27617



"Setting the Standard for Service"

NC Registered Engineering Firm F-1078 NC Registered Geologists Firm C-406 SC Registered Engineering Firm 3250

June 18, 2018

Mr. Gordon Box, P.G. North Carolina Department of Transportation Geotechnical Engineering Unit 1592 Mail Service Center Raleigh, NC 27699

Reference: **Preliminary Site Assessment** State Project: R-2511 WBS Element: 35494.1.1 Parcel # NA 10052 US 17 HWY N Washington, Beaufort County, North Carolina 27889 ECS Project 49:6617

Dear Mr. Box:

Please find enclosed a report summarizing the sampling activities for the preliminary site assessment conducted at the referenced site. This report summarizes our field activities, results, laboratory report, conclusions, and recommendations.

Should questions arise or additional information be required, please contact the undersigned.

Sincerely,

#### ECS SOUTHEAST, LLP

DocuSigned by: Sand Kad

7C355849CBF14B8... Sarah Kordon Environmental Staff Project Manager skordon@ecslimited.com 919-861-9828

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John Lair **Principal Geologist** NC License No. 2075 ilair@ecslimited.com 910-726-3075

#### PRELIMINARY SITE ASSESSMENT

Site Name and Location:	US 17 from Washington BYP North of NC 171 to Multi-Lanes South of Williamston 10052 US 17 HWY N Washington, Beaufort County, North Carolina
Property Owner	Mary Williams 208 Buckingham Drive Winterville, North Carolina 28590
NCDOT Project No.:	NCDOT WBS Element 35494.1.1 State Project R-2511
Date of Report:	June 18, 2018
Consultant:	ECS Southeast, LLP 6714 Netherlands Drive Wilmington, North Carolina 28405 Attn: Mr. John Lair, P.G. Phone: 910-726-3075

#### Seal and Signature of Certifying Licensed Geologist

I, John S. Lair, P.G., a Licensed Geologist for ECS Southeast, LLP, do certify that the information contained in this report is correct and accurate to the best of my knowledge.

DocuSigned by: DocuSigned by: BB5407050AED409.2075 6 8 018
not concrete the unless all signatures are completed

John S. Lair, P.G. NC License No. 2075

ECS Southeast, LLP is permitted to practice geology | engineering in North Carolina. The certification number of the corporation is C-406.

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#### **1.0 INTRODUCTION**

ECS Southeast, LLP (ECS) has prepared this Preliminary Site Assessment (PSA) report which documents assessment activities performed within the proposed right-of-way and easement up to the edge of the pavement of 10052 US 17 Highway N, Washington, Beaufort County, North Carolina (Figure 1). Approximately 80 ft of the parcel adjacent to the US 17 is documented to be current NCDOT Right of Way. This assessment was conducted on behalf of the North Carolina Department of Transportation (NCDOT) in accordance with ECS Proposal 49:7825-P dated December 20, 2017.

The NCDOT is proposing to widen US-17 Highway from Washington BYP North of NC 171 to multi-lane south of Williamston (State Project: R-2511, WBS Element: 35494.1.1). The proposed right-of-way is located along the western side of 10052 US 17 Highway (Figure 2). There is concern that contaminated soils could be encountered during the construction activities at this site. The purpose of this assessment was to determine the presence or absence of impacted soil at the subject property in proposed construction areas related to the construction of the widening of US 17 Highway.

#### 1.1 Site Description & Site Reconnaissance Findings

The proposed right-of-way is located along the western side of the property owned by Mary Williams. At the time of our site reconnaissance in December 2017 and April 2018, this parcel was unoccupied by tenants.

During the site reconnaissance on December 7, 2017, ECS spoke with a neighbor, who resided approximately 500 ft. north of East Beargrass Road (NC 1420) along the eastern side of US 17. The neighbor indicated that he believed that there were possibly two lifts and a sand filled "pit" in the garage. ECS observed fill pipes on the northern portion of the building, no visible signs of underground storage tank (UST) fill ports were observed. The neighbor did not believe that the USTs had been removed. A dispenser island with two pump locations were observed on the west side of the building following US 17 Highway. An aboveground storage tank (AST) with unknown contents and a propane AST were observed adjacent to the residence near the detached garage.

During the site reconnaissance on April 20, 2018, ECS met with the property owner, Ms. Mary Williams, and determined the following information regarding the multiple buildings on this parcel: a northernmost residential building with a detached garage, an inactive water supply well contained in a locked pump house (located in the rear yard of the garage facility) and a southernmost former automotive service facility with two bay doors combined with the former gasoline retail station with a pump island where two former fuel dispenser were previously removed. ECS utilized a metal detector and located the fill port for the UST system. No monitoring wells or observation wells were identified. Ms. Williams informed ECS that the inactive water supply well once supplied potable water to the residence and the garage facility. Additionally, she was uncertain of the location, last use, or last contents of the USTs.

Ms. Williams was able to open the one of two bay doors to the former automotive service station and revealed a step-down service pit filled with sand. Because of the overlaying sand, ECS was unable to observe the base of the pit. ECS utilized a probe rod and determined that the structure likely contained a concrete base but could not observe the bottom to determine if a floor drain was present. It was not feasible to mobilize a drill rig into the confined garage space; therefore, samples were not collected from this area. ECS did not observe evidence of a hydraulic lift. Approximate AST and UST locations are depicted on Figure 2. Site photographs are shown in Appendix A.

#### 1.2 Site Location

The subject site is located at 10052 US 17 Highway, Washington, Beaufort County, North Carolina (Figures 1 and 2). The site is directly east of US 17 Highway.

#### 1.3 NCDEQ File Review

ECS reviewed the North Carolina Department of Environment Quality (NCDEQ) underground storage tank (UST) database via the NCDEQ Laserfiche WebLink and Underground Storage Tank Incidents Map regarding the subject site on May 14, 2018. No information related to the USTs or ASTs at the subject site was identified during our review.

#### 2.0 SITE ASSESSMENT

#### 2.1 Geophysical Investigation

ESP Associates, Inc. (ESP) conducted a geophysical investigation on the west side and rear of the former gas station and residence at 10052 US 17 Highway N., Washington, North Carolina on April 3, 2018 and April 25, 2018.

ESP utilized electromagnetic (EM) induction technology and ground penetrating radar (GPR) to identify potential geophysical anomalies and potential USTs at the site. A more detailed description of their scope of work is explained in their Report on Geophysical Services included in Appendix B.

#### 2.2 Soil Sampling

Prior to implementing the field activities, ECS contacted North Carolina One Call to locate/mark public utilities at the site. Required separation distances between subsurface activities and marked utilities (typically 30-inches) were maintained during the field activities.

To determine if contaminated soil may be encountered during the proposed construction activities in the vicinity of the NCDOT right of way and easement, soil samples were collected along the western side of the property. ECS personnel and Quantex, a North Carolina Licensed Well Operator, met at the property on April 20, 2018. Fifteen (15) soil borings were drilled by a Geoprobe® utilizing direct push technology (DPT) to a total depth of 10 feet below the ground surface (bgs) to collect 15 soil samples (SS-1 through SS-15). The approximate location of the borings is shown on Figure 3.

The soil samples were collected by driving a macrocore sampler in 5-foot intervals in each soil boring. Each 5-foot sample sleeve was divided in half and screened for volatile organic compounds in the field using a MiniRae 1000 photoionization detector (PID). In each boring, the soil interval with the highest PID reading was collected for laboratory analysis. If no organic vapors were detected, the driest sample collected from the bottom of the boring was submitted for analysis. The PID identified relative levels of volatile organic compounds (VOCs) in the soil samples collected from four of the borings. Additionally, ECS personnel detected olfactory petroleum odors from the soil samples collected from same four soil borings where elevated relative levels of volatile organic vapors were detected. The PID readings are summarized in Table 1. Copies of the boring logs are included in Appendix C.

Prior to the initial boring and after each subsequent boring, the sampling equipment was decontaminated using a high pressure steam cleaner. The soil samples collected for laboratory analysis were analyzed for total petroleum hydrocarbons (TPH) similar to diesel and gasoline range organic compounds (DRO/GRO) using ultraviolet fluorescence (UVF). Each soil sample was placed into laboratory provided jars, labeled, and maintained on ice until delivered to Red Labs, located in Wilmington, North Carolina, where the samples were analyzed using Ultraviolet Light Fluoresce (UVF). Copies of the COCs are included in Appendix D.

#### 2.3 Groundwater Sampling

Quantex and ECS installed two temporary groundwater monitoring wells (SS-1-TW and SS-9-TW) in the borings associated with soil samples SS-1 and SS-9. Temporary monitoring well SS-1-TW was installed in the northeastern portion of the subject site near the residence approximately 100 feet north of the location of the UST basin and approximately 85 feet west of the ASTs. Temporary monitoring well SS-9-TW was installed in the western portion of the site approximately 5 feet from the UST basin. The locations of the temporary monitoring wells are shown on Figure 3.

The temporary wells were constructed with one-inch diameter Schedule 40 PVC flush-threaded casing and screen. The PVC screen and casing were lowered into the open borehole. A tenfoot length of slotted well screen with machined 0.010-inch slot widths and a threaded bottom plug were installed at the bottom of each 15 foot well. A solid section of PVC casing was placed above the screened interval and extended to a point just above the ground surface. The annular space around each well was filled with a washed and graded, medium sand to approximately two feet above the top of the 10 foot length screen atop 5 feet of riser. Groundwater at the time of sampling was encountered at a depth of 1.32 ft. below top of casing (btoc.) in the temporary monitoring well at the source site of soil sample SS-1 and 1.68 ft btoc. in the temporary monitoring well at the source site of soil sample SS-9, as relatively gauged from the top of casing utilizing a decontaminated water level meter.

Groundwater was purged and sampled subsequent to being pumped to the surface using a peristaltic pump with dedicated disposable polyethylene tubing lowered through the temporary monitoring well casing. Groundwater samples were placed directly into laboratory prepared containers at each sample location.

Groundwater sample containers were labeled with ECS project number, sample identification, sample date and time, and requested analytical analysis. The containers were properly packaged and placed into a cooler with ice to maintain the samples at approximately 4° Celsius (C°). Groundwater samples were submitted for chemical analysis for volatile organic compounds using Standard Method 6200B and 1,2-Dibromoethane (EDB) using EPA method 504.1. Groundwater laboratory analysis was conducted by the NCDOT approved laboratory, Prism Laboratories, located in Charlotte, North Carolina (North Carolina Certification #402). ECS maintained proper COC procedures throughout the sample collection and transportation process. Copies of the COCs are included in Appendix D. Following the completion of the groundwater sampling activities, the borings were properly abandoned.

#### 3.0 RESULTS

#### 3.1 Geophysical Investigation Findings

ESP's results indicate that the GPR and EM investigation identified four (4) anomalies indicative of USTs near the relic pump island (Figure 3). ESP concluded that it is probable that the USTs are each approximately 1,800 gallons in capacity, 5 feet diameter by 12 feet in length and buried about 2.5 feet below the ground surface. Another anomaly was identified in the south western portion of the property; ESP believes that this is a relic site feature or utility feature of the site. ESP outlined the area of the probable USTs using pink marking paint for reference. ESP's report is included in Appendix B.

#### 3.2 Soil Analytical Results

Soil samples were screen in the field using a PID and recorded in a designated field notebook. PID readings can be observed in Table 1. Elevated PID readings were detected in soil samples SS-5 (0.5 parts per million (ppm)), SS-8 (9.4 ppm), SS-9 (27.4 ppm), and SS-10 (120 ppm).

Laboratory analysis detected TPH-GRO in the soil samples collected from soil borings SS-3, SS-4, SS-7, SS-8, SS-9, SS-10, and SS-13. Soil samples exceeded the laboratory reporting limit but did not exceed the NCDEQ State Action Level of 50 milligram per kilogram (mg/kg). Laboratory analysis of soil sample detected SS-10 concentrations of TPH-GRO above the reporting limit and the NCDEQ State Action Level of 50 mg/kg at a concentration of 68.4 mg/kg.

Laboratory analysis detected TPH-DRO in the soil samples collected from soil borings SS-1, SS-3, SS-5, SS-7, SS-8, SS-9, SS-10, SS-12, SS-14, and SS-15. Soil samples exceeded the laboratory reporting limit but did not exceed the NCDEQ State Action Level of 100 mg/kg.

Laboratory results are summarized in Table 1 and on Figure 4. The laboratory report and associated chain-of-custody document are included in Appendix D.

#### 3.3 Groundwater Analytical Results

Laboratory analysis of groundwater sample SS-9-TW detected several VOCs above the North Carolina Administration Code, Title 15A Subchapter 02L Groundwater Standards (NC2LGWQS). Groundwater sample SS-9-TW exhibited concentrations of 1,2,4-Trimethylbenzene, 1,2,5-Trimethylbenzene, benzene, ethylbenzene, isopropylbenzene (cumene), m,p-xylene, naphthalene, n-propylbenzene, o-xylene, toluene, and total xylene above their respective NC2LGWQS but below their respective Gross Contamination Levels (GCLs).

An estimated concentration of acetone was detected above the laboratory reporting limit in the groundwater sample collected from temporary monitoring well SS-1-TW; however, ECS attributes this analyte estimation detection as a laboratory artifact. Laboratory analysis did not report additional targeted analytes at concentrations above laboratory reporting limits in the groundwater sample collected from temporary monitoring well SS-1-TW.

Laboratory results are summarized in Table 2. The laboratory report and associated chain-ofcustody document are included in Appendix D.

# 4.0 CONCLUSIONS

Based on results of the laboratory analysis, geophysical investigation, and field observations, ECS has the following conclusions:

- The NCDEQ regulatory databases reviewed did not identify the subject site with registered USTs/ ASTs or previously documented releases.
- ECS did not observe evidence of a hydraulic lift in the former automotive service facility.
- Four (4) anomalies indicative of USTs were identified in the proposed NCDOT right of way. The contents and last use of the USTs is currently unknown. Soil and groundwater sampling conducted during this preliminary site assessment confirmed that a petroleum release has likely occurred.
- Soil samples were collected at an approximate depth of 4 to 5 feet below grade from fifteen locations at the subject site. Analytical results for soil samples indicate that the detected concentration of TPH-GRO exceeded action levels established by the NCDEQ in one of these fifteen locations. The detected TPH-GRO concentration associated with soil sample SS-10 is 68.4 milligrams per kilogram (mg/kg) and the NCDEQ action level is 50 mg/kg. Analytical results do not indicate exceedances of action levels for soil samples collected at the remaining sample locations.
- Soil sample location SS-10 is bounded to the southwest and northeast by sample locations SS-11 and SS-15, respectively. No soil sample locations are present to the southeast or northwest of the sample location. Therefore, the extent of impacted soil exceeding the indicated action level is undefined in these directions.

- Field observations of soil samples collected during the advancement of soil borings at the site indicated that saturated soil was first encountered at a depth of approximately 7 feet below grade. However, when temporary wells were set in several borings and allowed to stabilize, the water level was noted to be approximately 1.5 feet below grade.
- For estimating the volume of petroleum-impacted soil which exceeds the action level, ECS made the following assumptions:
  - Soil with impacts exceeding the action level extend from sample location SS-10 in a southwesterly to sample location SS-11, a distance of approximately 20 feet and in a northeasterly to sample location SS-15, also a distance of approximately 20 feet.
  - Soil with impacts exceeding the action level extend from sample location SS-10 in other directions at similar distances as that in the southwesterly and northeasterly directions.
  - Soils with impacts exceeding the action level do not extend beyond a depth of 7 feet below grade.
  - Based upon the foregoing assumptions, ECS estimates that less than 50 cubic yards of potentially petroleum-impacted soil which exceed the action level remain at the site. ESC estimates that this volume of saturated soil weighs approximately 80 tons.
- Laboratory analysis reported several VOC's at concentrations above their respective NC2LGWQS but below their respective GCLs in the groundwater samples collected from temporary monitoring well SS-9-TW.

#### 5.0 RECOMMENDATIONS

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

- Based on the laboratory analytical results, which are indicative of a petroleum release, ECS understands that a reporting obligation exists to the NCDEQ and recommends that the NCDOT provide a copy of this report to the NCDEQ Washington Regional Office for their review.
- ECS recommends that the USTs be properly closed.

#### **6.0 QUALIFICATIONS OF REPORT**

The activities and evaluative approaches used in this assessment are consistent with those normally employed in projects of this type. 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 NCDOT. Use of this report by any other individual or company implies their acceptance of the General Conditions of Service of the original contract.

# TABLES

#### TABLE 1: SUMMARY OF SOIL ANALYTICAL RESULTS

Preliminary Site Assessment US 17 From Washington BYP North of NC 171 to Multi-Lane South of Williamston State Project: R-2511 WBS Element: 35494.1.1 Parcel #NA, Faircloth, Mary Williams 10052 US 17 HWY N Washington, Beaufort County, North Carolina ECS Project No. 49:6617

Parameter								Comparison Criteria								
Sample ID	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-11	SS-12	SS-13	SS-14	SS-15	
PID Reading	0.0	0.0	0.0	0.0	0.5	0.0	0.0	9.4	27.4	120.0	0.0	0.0	0.0	0.0	0.0	NCDEQ State
Collection Depth (feet bgs)	4-5 Action Le					Action Level										
Collection Date	4/20/18															
Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) and TPH Diesel Range Organics (DRO) via Ultraviolet Fluorescence (UVF)																
DRO	0.06	<0.03	1.6	<0.03	11.5	<0.12	0.34	19.8	19.3	79.9	<0.03	0.23	<0.03	0.56	0.69	100
GRO	<0.42	<0.43	2.3	0.45	<0.41	<1.5	0.69	9.9	31.9	68.4	<0.43	<0.42	1.1	<0.47	<0.45	50

#### Notes:

Results presented in milligrams per kilogram (mg/kg), parts per million (ppm)

Feet bgs = Feet below ground surface

NCDEQ = North Carolina Department of Environmental Quality **Bold** = Detected above the NCDEQ Action Level

#### TABLE 2: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Preliminary Site Assessment US 17 From Washington BYP North of NC 171 to Multi-Lane South of Williamston State Project: R-2511 WBS Element: 35494.1.1 Parcel #NA, Faircloth, Mary Williams 10052 US 17 HWY N Washington, Beaufort County, North Carolina ECS Project No. 49:6617

Parameter	ANALYTICA	L RESULTS	COMPARISIO	N CRITERIA
Sample ID	SS-1-TW	SS-9-TW		GCL
Collection Date	4/20	)/18	NCZLGWQS (µg/L)	(µg/L)
Volatile Organic Compounds by C	GC/MS			
Acetone	6.3 J	<10.0	6000	600000
1,2,4-Trimethylbenzene	<0.50	2200 A	400	28500
1,3,5-Trimethylbenzene	<0.50	660 A	400	25000
4-Isopropyltoluene	<0.50	10	25	11700
Benzene	<0.50	86	1	5000
Ethylbenzene	<0.50	2500 A	600	84500
Isopropyl Ether	<0.50	1	70	70000
Isopropylbenzene (Cumene)	<0.50	95	70	25000
m,p-Xylene	<1.0	8500 A	500	85500
Naphthalene	<1.0	360 A	6	6000
n-Propylbenzene	<0.50	320 A	70	30000
o-Xylene	<0.50	3700 A	500	85500
sec-Butylbenzene	<0.50	15	70	8500
Styrene	<0.50	85	70	70000
tert-Butylbenzene	<0.50	0.68	70	15000
Toluene	<0.50	5500 A	600	260000
Xylenes, Total	<1.5	12000 A	500	85500

Notes:

Results presented in micrograms per liter (ug/L), analogous to parts per billion (ppb)

NCDEQ = North Carolina Department of Environmental Quality

GCL = NCDEQ's Gross Contamination Levels for Groundwater as of April 16, 2012

NC2LGWQS = North Carolina Administrative Code, Title 15A Subchapter 02L Groundwater Standards as of April 1, 2013

J = Analtye detected below the reporting limit, result is a laboratory estimate.

A = Dilution prefored outside of holding time. Original run within the holding time.

< = analyte is below the reporting limit (RL)

Bold denotes concentration exceeds the NC2LGWQS

FIGURES







FIGURE 1 - SITE LOCATION MAP US 17 From Washington BYP North of NC 171 to Multi-Lane South of Williamston State Project: R-2511 WBS Element: 35494.1.1 Parcel #NA, Faircloth, Mary Williams 10052 US 17 HWY N Washington, Beaufort County, North Carolina ECS Project No. 49:6617



April 3, 2018 and April 25, 2018



Approximate UST Location\* Approximate Soil Sample Location Approximate Soil Sample and Groundwater Sample Location

\*as determined by the ESP Associates, Inc. geophysical investigation conducted on April 3, 2018 and April 25, 2018



US 17 From Washington BYP North of NC 171 to Multi-Lane South of Williamston State Project: R-2511 WBS Element: 35494.1.1 Parcel #NA, Faircloth, Mary Williams 10052 US 17 HWY N Washington, Beaufort County, North Carolina ECS Project No. 49:6617



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	Potential Soil Contamination: Boundary or Site		Proposed Temporary Drainage Easement		POWER:		Gas Valv
	BUILDINGS AND OTHER CULT	URE:	Proposed Permanent Drainage Easement —	PDE	Existing Power Pole	. 🖕	Gas Met
	Gas Pump Ventor U/G Tank Cap	- 0	Proposed Permanent Drainage / Utility Easeme	ent	Proposed Power Pole	· 6	Recorder
	Sign	- Os	Proposed Permanent Utility Easement	PUE	Existing Joint Use Pole	· •	Designat
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	Stream or Body of Water			CTB)	Existing Telephone Pole	-	Utility Pr
	Hydro, Pool or Reservoir ————		Existing Metal Guardrall		Proposed Telephone Pole	-0-	Utility Pr
	Jurisdictional Stream		Fraposea Guaranan		Telephone Manhole	0	Utility Le
	Buffer Zone 1	BZ 1	Proposed Cable Guiderail	<u> </u>	lelephone Booth		Utility Tr
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	Flow Arrow	<b>~</b>	Pavement Removal		Ielephone Cell Tower		U/G Tar
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#### FIGURE 5 - DOT LEGEND SHEET PARCELS #: NA 10052 US 17 HWY N WASHINGTON, BEAUFORT COUNTY, NORTH CAROLINA

NC DOT PROJECT ID: R-2511	DATE: 05/21/2018	WBS ELEMENT: 35494.1.1
DRAWN BY: JRF	CHECKED BY: JRF	ECS PROJECT NO.: 49:6617

**APPENDIX A** 



Photograph 1: View of the subject site – vacant residence and former automotive service facility with two bay doors combined with former gasoline retail station with a pump island where two former fuel dispenser were previously removed.



Photograph 2: View of rear of garage facility with inactive water supply well pump house.



#### SITE PHOTOGRAPHS

US 17 From Washington BYP North of NC 171 to Multi-Lane South of Williamston State Project: R-2511 WBS Element: 35494.1.1 Parcel #NA, Faircloth, Mary Williams 10052 US 17 HWY N Washington, Beaufort County, North Carolina



Photograph 3: View of the subject site interior - former automotive service facility.



Photograph 4: Additional view of the subject site interior - former automotive service facility.



#### SITE PHOTOGRAPHS

US 17 From Washington BYP North of NC 171 to Multi-Lane South of Williamston State Project: R-2511 WBS Element: 35494.1.1 Parcel #NA, Faircloth, Mary Williams 10052 US 17 HWY N Washington, Beaufort County, North Carolina



Photograph 5: View of the ASTs in the rear of the residence.



Photograph 6: View of UST basin and fill port.



#### SITE PHOTOGRAPHS

US 17 From Washington BYP North of NC 171 to Multi-Lane South of Williamston State Project: R-2511 WBS Element: 35494.1.1 Parcel #NA, Faircloth, Mary Williams 10052 US 17 HWY N Washington, Beaufort County, North Carolina

**APPENDIX B** 



April 27, 2018

Sarah Kordon ECS Carolinas, LLP 4811 Koger Boulevard Greensboro, NC 27407

# Reference:REPORT ON GEOPHYSICAL SERVICES TO SUPPORT<br/>PRELIMINARY SITE ASSESSMENT<br/>10052 US 17 HWY N<br/>Washington, North Carolina<br/>ESP Project No. EQ02.309

State Project:	R-2511
WBS Element:	35494.1.1
County:	Beaufort
Description:	US 17 From Washington BYP North of NC 171 To Multi-Lanes South of
Ĩ	Williamston

Dear Ms. Kordon:

ESP Associates, Inc. (ESP) is pleased to present this report to ECS Carolinas, LLP (ECS) on the geophysical services we provided for the referenced project. This work was performed under our subconsultant agreement dated September 11, 2014, in accordance with our cost proposal to you dated December 18, 2017, and also in accordance to Change Order 1 dated April 18, 2018. The purpose of the work was to help identify known and abandoned underground storage tanks (USTs).

# 1.0 GEOPHYSICAL DATA COLLECTION

On April 3, 2018, ESP performed geophysical studies on the west side of the former gas station and residence at 10052 US 17 Highway N., Washington, North Carolina. At the request of ECS, we returned to the site on April 25 and expanded the study area to include

the rear of the buildings and the area around the garage behind the residence. The work consisted of metal detection using a Geonics EM61 MK2 instrument and subsurface imaging using a Sensors and Software Noggin 250 Ground-Penetrating Radar (GPR) instrument. Representative photographs of the geophysical study areas are provided on Figure 1.

The EM61 data were collected over the accessible areas of the site using a line spacing of approximately 3 feet. We used a Hemisphere XF101 sub-meter differential GPS instrument (DGPS) connected to an Archer field computer to provide approximate locations of the EM61 data in real time. We collected GPR data over selected EM61 anomalies with responses significant enough to represent possible USTs. The DGPS instrument was also used to obtain the approximate location of site features that could affect the EM61 readings.

# 2.0 DATA ANALYSIS AND PRESENTATION

The EM61 data were gridded and contoured to produce plan view contour maps of the early time gate response (Figure 2) and the differential response (Figure 3). The differential response is calculated by subtracting the response of the bottom coil from the response of the top coil of the EM61. Typically, the differential response diminishes the response from smaller, near-surface metallic objects, thus emphasizing the response from deeper and larger metallic objects. The approximate DGPS locations of observed site features were superimposed on the EM61 contour maps so that anomalies caused by site features such as metal objects on the ground surface could be recognized.

The EM61 early time gate response and differential response were exported from Surfer as georeferenced images and attached to the NCDOT plan sheet in MicroStation (Figures 6 and 7). The legend for the NCDOT line types and symbols is shown on Figure 8. The plan sheet has been updated to show the approximate locations of the known USTs mapped in the field with DGPS.

# 3.0 DISCUSSION OF RESULTS

The EM61 differential contour plot indicated high amplitude responses (anomalies) that correspond to sign poles and other metallic features on the ground surface. In addition, the EM61 differential data showed three anomalies that did not correspond to known metallic features.

We collected GPR data over three EM61 differential anomalies. Our on-site review of the GPR data indicated the location of four probable USTs on the north side of the relic pump island (Figures 4 and 5). The anomaly near the southwest portion of the site appears to be caused by a relic site feature or utility feature. The four probable USTs are all approximately

5 feet diameter by 12 feet long and buried about 2.5 feet below the surface. We outlined the area of the probable USTs using pink marking paint (Photos D and E, Figure 1).

# 4.0 SUMMARY AND CONCLUSIONS

Our review of the geophysical data collected for this project indicates the location of four probable USTs. In addition, there were two above-ground storage tanks (ASTs) behind the residence (Photo C, Figure 1). The probable USTs are each approximately 1,800 gallons in size and buried about 2.5 feet below the ground surface. We recommend that drilling and sampling be performed at least 2 feet outside of the area we marked indicating the approximate edges of the known UST.

# 5.0 LIMITATIONS

These services have been provided to ECS in accordance with generally accepted guidelines for performing geophysical surveys. It is recognized that the results of geophysical surveys are non-unique and subject to interpretation. Further, the locations of data and features included in this report are approximate and were collected using a sub-meter DGPS instrument. ESP makes no guarantee as to the accuracy of these locations.

Thank you for the opportunity to be of service to ECS on this project. Please contact us if you have any questions or need further information.

Sincerely,

ESP ASSOCIATES, Inc.

And 3

Edward D. Billington, PG

DMN/EDB

Attachments: Figures 1 - 8



A. Photo from southwest side of site, looking northeast.



B. Photo from north side of site, looking south.



C. Photo of two ASTs behind residence.



D. Photo of marked location of probable USTs, looking south



E. Photo of marked location of probable UST, looking west.

4/26/18	US 17 FROM WASHINGTON BYP N LANES SOUTH OF W
NTS	PHOTOGRAPHS
PROJECT NO. EQ02.309	FIGURE 1 – 10052 L

US 17 HWY N IS OF SITE

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EQ02.309	FIGURE 2 – 10052
AS SHOWN	EM61 EARLY TIME GA
4/26/18	US 17 FROM WASHINGTON BYP NO
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# **EXPLANATION**

Utility feature (water meter, hydrant, etc.) Miscellaneous metal objects on ground surface Sign pole, other pole Power pole Guy wire anchor EM61 data collection areas GPR data collection area

JS 17 HWY N ATE RESPONSE

ORTH OF NC 171 TO MULTI ILLIAMSTON



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EQ02.309	FIGURE 3 – 10052
AS SHOWN	EM61 DIFFERENTIAL
4/26/18	US 17 FROM WASHINGTON BYP NO
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# **EXPLANATION**

Utility feature (water meter, hydrant, etc.) Miscellaneous metal objects on ground surface Sign pole, other pole Power pole Guy wire anchor EM61 data collection areas GPR data collection area

JS 17 HWY N AL RESPONSE

ORTH OF NC 171 TO MULTI /ILLIAMSTON



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A. GPR image from NW to SE across probable USTs.





FIGURE	PROJECT NO. EQ02.309
GPR IMAGES OF PR	AS SHOWN
US 17 FROM WASHINGTON BYP N	4/26/18
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APPROXIMATE NORTH

C. Portion of Figure 2 showing approximate locations of GPR cross-sections (dashed black lines with arrows).

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RTH OF NC 171 TO MULT LLIAMSTON



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Time (ns)

B. GPR image from NW to SE across probable UST.

PRO IECT NO	
EQ02.309	FIGURE
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APPROXIMATE NORTH

C. Portion of Figure 2 showing approximate locations of GPR cross-sections (dashed black lines with arrows).

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ORTH OF NC 171 TO MULTI *ILLIAMSTON* 



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BOUNDAKIES AND PROPERTY:		Note: Not to So	ale *S	LU.E. = Subsurface Utility Engineering		WATER:
State Line						Water Manhole —
County Line		RAILROADS:				Water Meter
Township Line		Standard Gauge		Orchard		Water Valve
City Line		RR Signal Milepost	O UN REPORT IN	Vineyard	Vineyard	Water Hydrant —
Reservation Line		Switch		EXISTING STRUCTURES:		U/G Water Line L
Property Line		RR Abandoned	switcн → → → →	MAIOR:		U/G Water Line L
Existing Iron Pin	©	RR Dismantled		Bridge, Tunnel or Box Culvert	CONC	U/G Water Line L
Property Corner	*	RIGHT OF WAY:		Bridge Wing Wall Head Wall and End Wall	- )	Above Ground W
Property Monument		Baseline Control Point	▲	MINOR:	, ,	TV:
Parcel/Sequence Number	69	Existing Right of Way Marker	Ň	Head and End Wall	CONC HW	TV Pedesta
Existing Fence Line	-xx	Existing Right of Way Line		Pipe Culvert		TV Tower
Proposed Woven Wire Fence	<del></del>	Proposed Pight of Way Line		Footbridge	———	U/G TV Cable H
Proposed Chain Link Fence		Proposed Right of Way Line with		Drainage Boy: Catch Basin DL or IB	Па	U/G TV Cable LC
Proposed Barbed Wire Fence ———————————————————————————————————	<b>~</b>	Iron Pin and Cap Marker	-©	Brund Ditch Cuttor		U/G TV Cable LC
Existing Wetland Boundary ————————————————————————————————————	<b>11</b>	Proposed Right of Way Line with		Storm Sover Manholo	<u> </u>	U/G TV Cable LC
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Existing Endangered Plant Boundary —————	<b>5</b> 7	Existing Control of Access		UTILITIES:		U/G Fiber Optic (
Existing Historic Property Boundary		Proposed Control of Access		POWER:		GAS:
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Potential Contamination Area: Soil	xx	Proposed Temporary Construction Easement -	F	Proposed Power Pole	- <b>5</b>	Gas Motor
Known Contamination Area: Water —————	va—— x	Proposed Temporary Drainage Easement	TDE	Existing Joint Use Pole	· -	
Potential Contamination Area: Water —————	x x	Proposed Permanent Drainage Easement	PDE	Proposed Joint Use Pole	•	U/G Gas Line LO
Contaminated Site: Known or Potential	XX XX	Proposed Permanent Drainage / Utility Easement	DUE	Power Manhole	· Ø	U/G Gas Line LO
BUILDINGS AND OTHER CULTUR	RE:	Proposed Permanent Utility Easement	DUE	Power Line Tower	- 🛛	
Gas Pump Vent or U/G Tank Cap	0	Proposed Temporary Utility Easement	FUE	Power Transformer	- 2	Above Ground G
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Foundation		ROADS AND RELATED FEATURE	ç.	U/G Power Line LOS C (S.U.E.*)	·	U/G Sanitary Sew
Area Outline		Existing Edge of Payement		U/G Power Line LOS D (S.U.E.*)	·/	Above Ground So
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School		Proposed Slope Stakes Col		Existing Telephone Pole	-	SS Forced Main I
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HYDROLOGY:		Existing Metal Guardrali		Telephone Pedestal	• 🔟	Utility Pole —
Stream or Body of Water		Froposed Gudrardi		Telephone Cell Tower	. , <b>ā</b> ,	Utility Pole with B
Hydro, Pool or Reservoir —	-———			U/G Telephone Cable Hand Hole	. 🖪	Utility Located Ob
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HEET FIGURES		

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DRTH OF NC 171 TO MULTI-ILLIAMSTON


**APPENDIX C** 

PROJEC <sup>®</sup> CLIENT:	T: NC	DOT WB	S Elem	nent 3	5494.1.1	BORING NUM. SS-1 PROJECT NO. 49:661	7	ECo
LOCATION:							ELEVATION:	
		Washing	gton, Be	eaufo	rt county, No	rth Carolina		
				0	iontov		04/20/2019	S. Kordon/ J.
DRILL RIG:				Q	lantex		DEPTH TO WATER	
				Geo	oProbe		1.32 ft	btoc
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	ashington, Beaufor	rt county, No	rth Carolina			
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DRILL RIG:				Q	uantex		DEPTH TO WATER	Sikes (ECS)
_				Ge	oProbe			
Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DE	ESCRIPTION	
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PROJEC <sup>-</sup> CLIENT:	T: NC NCDC	DOT WB	S Elem	nent (	35494.1.1	BORING NUM. SS-6/SS PROJECT NO. 49:661	<b>5-7</b> 7	Efe
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			_	Ge	oProbe			
Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DE	ESCRIPTION	
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				Qı	lantex		04/20/2018	Sikes (ECS)
DRILL RIG.				Gov	Probo		1 69 ft l	
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Washington, Beaufort County, North Carolina		
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-				///		BORING TERMINATED		
- 6 - - - 7.5 - - - - - - - - - - - - - - - - - - -								

PROJEC <sup>®</sup> CLIENT:	T: NC NCDC	DOT WB	S Eleme	ent 3	5494.1.1	BORING NUM. SS-11 PROJECT NO. 49:661	1 7	Efe
LOCATION:							ELEVATION:	
		Washing	ton, Bea	aufor	t County, No	orth Carolina		n n
DRILLER:							DATE DRILLED:	LOGGED BY: S. Kordon/ J.
				Qı	lantex		04/20/2018	Sikes (ECS)
				Co	Draha			<b>.</b>
				<u> </u>			/	
Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Lo	Soil Classificatio	SOIL DE	ESCRIPTION	
0	0.0				Asphalt	ASPHALT/ AUGER SPOIL		
- - 1.5 - - - - - - - - - - - - - - - - - - -	0.0			IN I	SC/CH	GRAY CLAYEY SAND		
	0.0				VC	GRAY SANDY CLAY WITH SI BGS. BORING TERMINATED.	LTS - SATURATED	AROUND 7 FT.
- 10.5								

PROJEC <sup>®</sup> CLIENT:	T: NC NCDC	DOT WB	S Elem	ent 3	35494.1.1	BORING NUM. SS-12 PROJECT NO. 49:661	<b>2</b> 7	Efe
LOCATION:							ELEVATION:	
		Washing	ton, Be	eaufo	rt County, No	orth Carolina		
DRILLER:			DATE DRILLED:	S. Kordon/ J.				
DRILL RIG:				Q	uantex		DEPTH TO WATER	Sikes (ECS) R:
				Ge	oProbe			
Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DE	ESCRIPTION	
	0.0				Topsoil			
- 1.5 - 1.5 	0.0			<u> ANN ANN ANN ANN ANN ANN ANN ANN ANN AN</u>	SC/CH SC/CH	GRAY CLAYEY SAND		
						BORING TERMINATED		

PROJEC <sup>®</sup> CLIENT:	T: NC NCDC	DOT WB	S Elem	ent 3	35494.1.1	BORING NUM. SS-13 PROJECT NO. 49:661	<b>3</b> 7	Efe
LOCATION:							ELEVATION:	
		Washing	ton, Be	aufo	rt County, No	orth Carolina		
DRILLER:				_			DATE DRILLED:	S. Kordon/ J.
DRILL RIG:				Q	uantex		DEPTH TO WATER	<u>Sikes (ECS)</u> R:
_				Ge	oProbe			
Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil	SOIL DE	ESCRIPTION	
0	0.0				Topsoil			
- 1.5 1.5 	0.0			I) I) I) I)	SC/CH	RED AND GRAY CLAYEY SA	ND	
- 	0.0				SC/CH	BORING TERMINATED		

PROJECT: NCDOT WBS Element 35494.1.1       BORING NUM. SS-14/SS-15         CLIENT: NCDOT       PROJECT NO. 49:6617											
LOCATION:							ELEVATION:				
		Washing	ton, Be	aufo	rt County, No	orth Carolina					
DRILLER.				0			DATE DRILLED.	S. Kordon/ J.			
DRILL RIG:			DEPTH TO WATE	Sikes (ECS) R:							
				Ge	oProbe						
Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DE	ESCRIPTION				
	0.0				Topsoil						
- 1.5 1.5 	0.0			IN IN IN IN IN	SC/CH	DARK GRAY CLAYEY SAND					
- 6 	0.0				50/011	BORING TERMINATED					

**APPENDIX D** 

Q	ED										_		<u>QROS</u>
				Hydroca	arbon An	alysis Ro	esults						
Client: ECS RALEIGH Address: 9001 GLENWOOD AVE RALEIGH NC				Sa Sample Sampl	mples es extr les ana	taken acted Ilysed		Thursday, April 19, 2018 Thursday, April 19, 2018 Friday, April 20, 2018					
Contact: SARAH KORDON     Operator     NICK HENDRIX								NICK HENDRIX					
Fiojeci.	#49.0017 FAIRCEOTH												
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	c	% Ratios	3	HC Fingerprint Match
										C5 - C10	C10 - C18	C18	
S	SS-1	17.0	<0.85	<0.42	0.06	0.06	0.08	<0.02	<0.008	88.8	10.3	0.8	V.Deg.PHC 80%,(FCM),(OCR)
S	SS-2	17.2	<0.43	<0.43	<0.03	<0.43	<0.09	<0.02	<0.009	0	100	0	Residual HC,(OCR)
S	SS-3	18.4	<0.92	2.3	1.6	3.9	0.97	0.03	<0.009	74	25.1	0.8	V.Deg.PHC 79.2%,(FCM)
S	SS-4	17.1	<0.86	0.45	<0.03	0.45	<0.09	<0.02	<0.009	100	0	0	Residual HC,(OCR)
S	SS-5	16.4	<0.41	<0.41	11.5	11.5	6.3	0.31	<0.008	0	97.8	2	Deg.PHC 78.8%,(FCM)
S	SS-6	61.7	<3.1	<1.5	<0.12	<1.5	<0.31	<0.06	<0.031	0	85.3	13	Residual HC,(BO),(P)
S	SS-7	17.0	<0.85	0.69	0.34	1.03	0.34	< 0.02	<0.008	70.7	29	0.3	V.Deg.PHC 58.4%,(FCM),(OCR)
S	SS-8	18.6	<0.46	9.9	19.8	29.7	5.4	0.19	<0.009	68.8	31.2	0.1	Deg.Diesel 78.5%,(FCM),(P)
S	SS-9	54.3	5.9	31.9	19.3	51.2	4.2	0.15	<0.027	90	9.9	0	Deg Gas 87.4%,(FCM)
S	55-10	17.3	<0.43	68.4	79.9	148.3	34.2	1.2	<0.009	70.6	29.3	0	Deg Gas 78.2%,(FCM),(BO)
		initial Calibrator (	LC Check	UK					Final FC		Check	OK	99.9 %
Concentration Abbreviation B = Blank D % Ratios es	on values in mg/kg for soil sample is :- FCM = Results calculated us rift : (SBS)/(LBS) = Site Specific c timated aromatic carbon number	es and mg/L for water sa sing Fundamental Calibi or Library Background S proportions : HC = Hydr	mples. Soil ation Mode ubtraction a ocarbon : P	values uncor : % = confide pplied to resu HC = Petrole	rected for moi nce of hydroc It : (BO) = Bao um HC : FP =	sture or stone arbon identific ckground Org Fingerprint or	e content. Finge cation : (PFM) = anics detected hly. Data g	rprints prov Poor Finge (OCR) = C generated b	ide a tentativ erprint Match Dutside cal ra by <b>HC-1 Ana</b>	ve hydro n : (T) = <sup>-</sup> ange : (N alyser	carbon id Turbid : ( /) = Mod	dentifica (P) = Pa lifed Res	tion. rticulate detected sult.

Q	ED										_		<u>QROS</u>
				Hydroca	arbon An	alysis Re	esults						
Client: Address:	ECS RALEIGHSamples taken: 9001 GLENWOOD AVESamples extractedRALEIGH NCSamples analysed			Thursday, April 19, 2018 Thursday, April 19, 2018 Friday, April 20, 2018									
Contact:	SARAH KORDON									Оре	erator		NICK HENDRIX
Project:	#49:6617 FAIRCLOTH												
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
							(010 000)			C5 - C10	C10 - C18	C18	
S	SS-11	17.3	<0.43	<0.43	<0.03	<0.43	<0.09	<0.02	<0.009	0	0	0	PHC not detected,(OCR)
S	SS-12	16.7	<0.42	<0.42	0.23	0.23	0.08	<0.02	<0.008	0	100	0	Deg Fuel 25%,(FCM),(OCR),(P)
S	SS-13	17.0	<0.85	1.1	<0.03	1.1	<0.08	<0.02	<0.008	100	0	0	Deg.Light.Fuel 66.6%,(FCM)
S	SS-14	18.8	<0.47	<0.47	0.56	0.56	0.56	0.03	<0.009	0	87.7	11.2	V.Deg.PHC 56.4%,(FCM),(BO),(P)
S	SS-15	17.9	<0.45	<0.45	0.69	0.69	0.38	<0.02	<0.009	0	97.7	2	V.Deg.Diesel 79.1%,(FCM),(OCR),(P)
Concentratio	In t		amples Soil	Values uncor	rected for moi	sture or stope	content Finge	erorints prov	FINAL F(		uneck	OK	98.2 %
Abbreviation B = Blank D % Ratios est	s :- FCM = Results calculated using F rift : (SBS)/(LBS) = Site Specific or Libr iimated aromatic carbon number propo	undamental Calib ary Background S rtions : HC = Hyd	ration Mode aubtraction a rocarbon : P	: % = confide pplied to resu HC = Petrole	ince of hydroc ilt : (BO) = Bao um HC : FP =	arbon identific ckground Orga Fingerprint or	cation : (PFM) = anics detected hly. Data g	= Poor Finge : (OCR) = C generated b	erprint Match Outside cal ra	n : (T) = T ange : (M alyser	urbid : (l	P) = Par ifed Res	ticulate detected ult.

Comments: Relinquis SADAH 10 Relinquis	Email: Phone #: Collected by: Date/Time 4/14/2016 11:50 11:05 10:45 10:45 10:45 10:45 10:45 10:45 10:45 10:45 10:45 10:45 11:15 14:32	Client Name: Address: Contact: Project Ref.:
MBH TAT MBH TAT MADON (EUS) hed by	APAH Convector	ELS Philutyle 1001 affanweist feuc 5ADAH Gobron 49: 6617 Fair
MUNKAJOS! Date/Time 4/19/2018 16:40 Date/Time	Initials CHA	
Accepted by 4/19 Date/Time N/T 4/19 N 18:7 Accepted by J Date/Time	IN OF CUSTODY AND ANALYTICAL REQUEST FORM Sample ID SS-1 SS-1 SS-1 SS-1 SS-1 SS-1 SS-1 SS-	
	Each samp           BTEX, GRC           aro $59.6$ $57.0$ $57.0$ $57.0$ $57.0$ $57.0$ $57.0$ $57.0$ $57.0$ $57.0$ $57.0$ $57.0$ $57.0$ $57.0$ $57.0$ $57.2$ $57.2$ $57.2$ $57.2$ $57.2$ $57.2$ $57.2$	TM RED Lab, LLC 5598 Marvir MARBIONC I Wilmington,
D Lab USE ONLY	ole will be analyzed for         D, DRO, TPH, PAH total         Imatics and Bap         Tare Wt.       Sample Wt. $43.7$ $15.3$ $43.5$ $15.1$ $44.7$ $15.3$ $43.6$ $15.2$ $44.7$ $15.2$ $44.7$ $15.2$ $44.7$ $15.2$ $44.7$ $15.2$ $44.7$ $15.2$ $44.7$ $15.2$ $45.3$ $15.2$ $45.3$ $15.2$ $47.6$ $14.2$ $47.6$ $15.2$ $47.6$ $15.2$ $47.6$ $15.2$ $47.6$ $15.2$ $47.3$ $15.3$ $47.6$ $15.2$ $47.3$ $15.3$ $47.3$ $15.3$ $47.3$ $15.3$ $47.5$ $15.3$ $47.5$ $15.3$ $47.5$ $15.3$ $47.5$ $15.3$ $47.5$ $15.3$ $47.5$ $15.5$	$\frac{1}{NC} \frac{1}{28409}$



Full-Service Analytical & Environmental Solutions

NC Certification No. 402 NC Drinking Water Cert No. 37735 SC Certification No. 99012

05/04/2018

ECS Carolinas, LLP (Raleigh) Sarah Kordon 9001 Glenwood Ave. Raleigh, NC 27617 Project: NCDOT Faircloth Property Project No.: WBS# 35494.1.1 R-2511 Lab Submittal Date: 04/24/2018 Prism Work Order: 8040469

This data package contains the analytical results for the project identified above and includes a Case Narrative, Sample Results and Chain of Custody. Unless otherwise noted, all samples were received in acceptable condition and processed according to the referenced methods.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative.

Please call if you have any questions relating to this analytical report.

Respectfully,

PRISM LABORATORIES, INC.

Angela D. Overcash VP Laboratory Services

Reviewed By Angela D. Overcash VP Laboratory Services

#### Data Qualifiers Key Reference:

- A Dilution performed outside of hold time. Original run within hold time
   J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
   BRL Below Reporting Limit
   MDL Method Detection Limit
   RPD Relative Percent Difference
  - \* Results reported to the reporting limit. All other results are reported to the MDL with values between MDL and reporting limit indicated with a J.

# Sample Receipt Summary



05/04/2018

Prism Work Order: 8040469

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received
SS-1-TW	8040469-01	Water	04/19/18	04/24/18
SS-9-TW	8040469-02	Water	04/19/18	04/24/18

Samples were received in good condition at 3.4 degrees C unless otherwise noted.

# **Summary of Detections**



05/04/2018 Prism Work Order: 8040469

Prism ID	Client ID	Parameter	Method	Result		Units
8040469-01	SS-1-TW	Acetone	SM6200 B	6.3	J	ug/L
8040469-02	SS-9-TW	1,2,4-Trimethylbenzene	SM6200 B	2200	А	ug/L
8040469-02	SS-9-TW	1,3,5-Trimethylbenzene	SM6200 B	660	А	ug/L
8040469-02	SS-9-TW	4-Isopropyltoluene	SM6200 B	10		ug/L
8040469-02	SS-9-TW	Benzene	SM6200 B	86		ug/L
8040469-02	SS-9-TW	Ethylbenzene	SM6200 B	2500	А	ug/L
8040469-02	SS-9-TW	Isopropyl Ether	SM6200 B	1.0		ug/L
8040469-02	SS-9-TW	Isopropylbenzene (Cumene)	SM6200 B	95		ug/L
8040469-02	SS-9-TW	m,p-Xylenes	SM6200 B	8500	А	ug/L
8040469-02	SS-9-TW	Naphthalene	SM6200 B	360	А	ug/L
8040469-02	SS-9-TW	n-Propylbenzene	SM6200 B	320	А	ug/L
8040469-02	SS-9-TW	o-Xylene	SM6200 B	3700	А	ug/L
8040469-02	SS-9-TW	sec-Butylbenzene	SM6200 B	15		ug/L
8040469-02	SS-9-TW	Styrene	SM6200 B	85		ug/L
8040469-02	SS-9-TW	tert-Butylbenzene	SM6200 B	0.68		ug/L
8040469-02	SS-9-TW	Toluene	SM6200 B	5500	А	ug/L
8040469-02	SS-9-TW	Xylenes, total	SM6200 B	12000	А	ug/L



05/04/2018

ECS Carolinas, LLP (Raleigh) Attn: Sarah Kordon 9001 Glenwood Ave. Raleigh, NC 27617

#### Project: NCDOT Faircloth Property

Project No.: WBS# 35494.1.1 R-2511 Sample Matrix: Water Client Sample ID: SS-1-TW Prism Sample ID: 8040469-01 Prism Work Order: 8040469 Time Collected: 04/19/18 14:25 Time Submitted: 04/24/18 14:30

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Volatile Organic Compounds by	GC/ECD								
1,2-Dibromoethane (EDB)	BRL	ug/L	0.021	0.0025	1	504.1	5/1/18 17:12	JMV	P8E0030
Volatile Organic Compounds by	GC/MS								
1,1,1,2-Tetrachloroethane	BRL	ug/L	0.50	0.11	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,1,1-Trichloroethane	BRL	ug/L	0.50	0.061	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,1,2,2-Tetrachloroethane	BRL	ug/L	0.50	0.036	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,1,2-Trichloroethane	BRL	ug/L	0.50	0.066	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,1-Dichloroethane	BRL	ug/L	0.50	0.083	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,1-Dichloroethylene	BRL	ug/L	0.50	0.083	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,1-Dichloropropylene	BRL	ug/L	0.50	0.051	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,2,3-Trichlorobenzene	BRL	ug/L	0.50	0.40	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,2,3-Trichloropropane	BRL	ug/L	0.50	0.14	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,2,4-Trichlorobenzene	BRL	ug/L	0.50	0.13	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,2,4-Trimethylbenzene	BRL	ug/L	0.50	0.054	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,2-Dibromo-3-chloropropane	BRL	ug/L	2.0	0.17	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,2-Dibromoethane	BRL	ug/L	0.50	0.051	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,2-Dichlorobenzene	BRL	ug/L	0.50	0.076	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,2-Dichloroethane	BRL	ug/L	0.50	0.066	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,2-Dichloropropane	BRL	ug/L	0.50	0.11	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,3,5-Trimethylbenzene	BRL	ug/L	0.50	0.076	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,3-Dichlorobenzene	BRL	ug/L	0.50	0.054	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,3-Dichloropropane	BRL	ug/L	0.50	0.043	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
1,4-Dichlorobenzene	BRL	ug/L	0.50	0.050	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
2,2-Dichloropropane	BRL	ug/L	2.0	0.11	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
2-Chlorotoluene	BRL	ug/L	0.50	0.066	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
4-Chlorotoluene	BRL	ug/L	0.50	0.050	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
4-Isopropyltoluene	BRL	ug/L	0.50	0.089	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Acetone	6.3 J	ug/L	10	0.31	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Benzene	BRL	ug/L	0.50	0.048	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Bromobenzene	BRL	ug/L	0.50	0.057	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Bromochloromethane	BRL	ug/L	0.50	0.14	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Bromodichloromethane	BRL	ug/L	0.50	0.062	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Bromoform	BRL	ug/L	0.50	0.040	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Bromomethane	BRL	ug/L	1.0	0.18	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Carbon Tetrachloride	BRL	ug/L	0.50	0.11	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Chlorobenzene	BRL	ug/L	0.50	0.062	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Chloroethane	BRL	ug/L	0.50	0.22	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Chloroform	BRL	ug/L	0.50	0.076	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Chloromethane	BRL	ug/L	0.50	0.079	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
cis-1,2-Dichloroethylene	BRL	ug/L	0.50	0.056	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
cis-1,3-Dichloropropylene	BRL	ug/L	0.50	0.079	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Dibromochloromethane	BRL	ug/L	0.50	0.081	1	SM6200 B	5/3/18 1:12	KDM	P8E0080
Dibromomethane	BRL	ug/L	0.50	0.065	1	SM6200 B	5/3/18 1:12	KDM	P8E0080



05/04/2018

ECS Carolinas, LLP (Raleigh) Attn: Sarah Kordon 9001 Glenwood Ave. Raleigh, NC 27617

#### Project: NCDOT Faircloth Property

Project No.: WBS# 35494.1.1 R-2511 Sample Matrix: Water Client Sample ID: SS-1-TW Prism Sample ID: 8040469-01 Prism Work Order: 8040469 Time Collected: 04/19/18 14:25 Time Submitted: 04/24/18 14:30

Parameter	Result	Units	its Report MDL Dilution Me Limit Factor		Method	Method Analysis Date/Time		Analyst	Batch ID	
Dichlorodifluoromethane	BRL	ug/L	1.0	0.11	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Ethanol	BRL	ug/L	200	27	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Ethylbenzene	BRL	ug/L	0.50	0.061	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Hexachlorobutadiene	BRL	ug/L	2.0	0.16	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Isopropyl Ether	BRL	ug/L	0.50	0.050	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Isopropylbenzene (Cumene)	BRL	ug/L	0.50	0.054	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
m,p-Xylenes	BRL	ug/L	1.0	0.12	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Methyl Butyl Ketone (2-Hexanone)	BRL	ug/L	1.0	0.065	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Methyl Ethyl Ketone (2-Butanone)	BRL	ug/L	5.0	0.24	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Methyl Isobutyl Ketone	BRL	ug/L	1.0	0.078	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Methylene Chloride	BRL	ug/L	2.0	0.083	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Methyl-tert-Butyl Ether	BRL	ug/L	1.0	0.042	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Naphthalene	BRL	ug/L	1.0	0.19	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
n-Butylbenzene	BRL	ug/L	0.50	0.076	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
n-Propylbenzene	BRL	ug/L	0.50	0.087	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
o-Xylene	BRL	ug/L	0.50	0.044	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
sec-Butylbenzene	BRL	ug/L	0.50	0.076	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Styrene	BRL	ug/L	0.50	0.047	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
tert-Butylbenzene	BRL	ug/L	0.50	0.088	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Tetrachloroethylene	BRL	ug/L	0.50	0.098	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Toluene	BRL	ug/L	0.50	0.044	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
trans-1,2-Dichloroethylene	BRL	ug/L	0.50	0.070	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
trans-1,3-Dichloropropylene	BRL	ug/L	0.50	0.12	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Trichloroethylene	BRL	ug/L	0.50	0.078	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Trichlorofluoromethane	BRL	ug/L	0.50	0.062	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Vinyl acetate	BRL	ug/L	5.0	0.060	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Vinyl chloride	BRL	ug/L	0.50	0.097	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
Xylenes, total	BRL	ug/L	1.5	0.15	1	SM6200 B	5/3/18	1:12	KDM	P8E0080
			Surrogate			Recovery			Control	_imits
			4-Bromofluorobenzene			102 %			70-130	
			Dibromofluo	oromethane	9	104	4 %		70-130	

Toluene-d8 100 %

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70-130



05/04/2018

ECS Carolinas, LLP (Raleigh) Attn: Sarah Kordon 9001 Glenwood Ave. Raleigh, NC 27617

#### Project: NCDOT Faircloth Property

Project No.: WBS# 35494.1.1 R-2511 Sample Matrix: Water Client Sample ID: SS-9-TW Prism Sample ID: 8040469-02 Prism Work Order: 8040469 Time Collected: 04/19/18 13:50 Time Submitted: 04/24/18 14:30

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Volatile Organic Compounds b	y GC/ECD								
1,2-Dibromoethane (EDB)	BRL	ug/L	0.022	0.0027	1	504.1	5/1/18 17:43	3 JMV	P8E0030
Volatile Organic Compounds b	y GC/MS								
1,1,1,2-Tetrachloroethane	BRL	ug/L	0.50	0.11	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,1,1-Trichloroethane	BRL	ug/L	0.50	0.061	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,1,2,2-Tetrachloroethane	BRL	ug/L	0.50	0.036	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,1,2-Trichloroethane	BRL	ug/L	0.50	0.066	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,1-Dichloroethane	BRL	ug/L	0.50	0.083	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,1-Dichloroethylene	BRL	ug/L	0.50	0.083	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,1-Dichloropropylene	BRL	ug/L	0.50	0.051	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,2,3-Trichlorobenzene	BRL	ug/L	0.50	0.40	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,2,3-Trichloropropane	BRL	ug/L	0.50	0.14	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,2,4-Trichlorobenzene	BRL	ug/L	0.50	0.13	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,2,4-Trimethylbenzene	2200 A	ug/L	50	5.4	100	SM6200 B	5/4/18 3:50	KDM	P8E0080
1,2-Dibromo-3-chloropropane	BRL	ug/L	2.0	0.17	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,2-Dibromoethane	BRL	ug/L	0.50	0.051	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,2-Dichlorobenzene	BRL	ug/L	0.50	0.076	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,2-Dichloroethane	BRL	ug/L	0.50	0.066	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,2-Dichloropropane	BRL	ug/L	0.50	0.11	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,3,5-Trimethylbenzene	660 A	ug/L	50	7.6	100	SM6200 B	5/4/18 3:50	KDM	P8E0080
1,3-Dichlorobenzene	BRL	ug/L	0.50	0.054	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,3-Dichloropropane	BRL	ug/L	0.50	0.043	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
1,4-Dichlorobenzene	BRL	ug/L	0.50	0.050	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
2,2-Dichloropropane	BRL	ug/L	2.0	0.11	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
2-Chlorotoluene	BRL	ug/L	0.50	0.066	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
4-Chlorotoluene	BRL	ug/L	0.50	0.050	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
4-Isopropyltoluene	10	ug/L	0.50	0.089	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Acetone	BRL	ug/L	10	0.31	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Benzene	86	ug/L	0.50	0.048	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Bromobenzene	BRL	ug/L	0.50	0.057	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Bromochloromethane	BRL	ug/L	0.50	0.14	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Bromodichloromethane	BRL	ug/L	0.50	0.062	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Bromoform	BRL	ug/L	0.50	0.040	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Bromomethane	BRL	ug/L	1.0	0.18	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Carbon Tetrachloride	BRL	ug/L	0.50	0.11	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Chlorobenzene	BRL	ug/L	0.50	0.062	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Chloroethane	BRL	ug/L	0.50	0.22	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Chloroform	BRL	ug/L	0.50	0.076	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Chloromethane	BRL	ug/L	0.50	0.079	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
cis-1,2-Dichloroethylene	BRL	ug/L	0.50	0.056	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
cis-1,3-Dichloropropylene	BRL	ug/L	0.50	0.079	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Dibromochloromethane	BRL	ug/L	0.50	0.081	1	SM6200 B	5/3/18 1:46	KDM	P8E0080
Dibromomethane	BRL	ug/L	0.50	0.065	1	SM6200 B	5/3/18 1:46	KDM	P8E0080



05/04/2018

ECS Carolinas, LLP (Raleigh) Attn: Sarah Kordon 9001 Glenwood Ave. Raleigh, NC 27617

#### Project: NCDOT Faircloth Property

Project No.: WBS# 35494.1.1 R-2511 Sample Matrix: Water Client Sample ID: SS-9-TW Prism Sample ID: 8040469-02 Prism Work Order: 8040469 Time Collected: 04/19/18 13:50 Time Submitted: 04/24/18 14:30

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Anal Date/	ysis Time	Analyst	Batch ID
Dichlorodifluoromethane	BRL	ug/L	1.0	0.11	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Ethanol	BRL	ug/L	200	27	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Ethylbenzene	2500 A	ug/L	50	6.1	100	SM6200 B	5/4/18	3:50	KDM	P8E0080
Hexachlorobutadiene	BRL	ug/L	2.0	0.16	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Isopropyl Ether	1.0	ug/L	0.50	0.050	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Isopropylbenzene (Cumene)	95	ug/L	0.50	0.054	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
m,p-Xylenes	8500 A	ug/L	100	12	100	SM6200 B	5/4/18	3:50	KDM	P8E0080
Methyl Butyl Ketone (2-Hexanone)	BRL	ug/L	1.0	0.065	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Methyl Ethyl Ketone (2-Butanone)	BRL	ug/L	5.0	0.24	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Methyl Isobutyl Ketone	BRL	ug/L	1.0	0.078	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Methylene Chloride	BRL	ug/L	2.0	0.083	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Methyl-tert-Butyl Ether	BRL	ug/L	1.0	0.042	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Naphthalene	360 A	ug/L	100	19	100	SM6200 B	5/4/18	3:50	KDM	P8E0080
n-Butylbenzene	BRL	ug/L	0.50	0.076	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
n-Propylbenzene	320 A	ug/L	50	8.7	100	SM6200 B	5/4/18	3:50	KDM	P8E0080
o-Xylene	3700 A	ug/L	50	4.4	100	SM6200 B	5/4/18	3:50	KDM	P8E0080
sec-Butylbenzene	15	ug/L	0.50	0.076	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Styrene	85	ug/L	0.50	0.047	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
tert-Butylbenzene	0.68	ug/L	0.50	0.088	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Tetrachloroethylene	BRL	ug/L	0.50	0.098	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Toluene	5500 A	ug/L	50	4.4	100	SM6200 B	5/4/18	3:50	KDM	P8E0080
trans-1,2-Dichloroethylene	BRL	ug/L	0.50	0.070	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
trans-1,3-Dichloropropylene	BRL	ug/L	0.50	0.12	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Trichloroethylene	BRL	ug/L	0.50	0.078	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Trichlorofluoromethane	BRL	ug/L	0.50	0.062	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Vinyl acetate	BRL	ug/L	5.0	0.060	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Vinyl chloride	BRL	ug/L	0.50	0.097	1	SM6200 B	5/3/18	1:46	KDM	P8E0080
Xylenes, total	12000 A	ug/L	150	15	100	SM6200 B	5/4/18	3:50	KDM	P8E0080
			Surrogate			Recovery			Control Limits	
			4-Bromofluc	probenzene	•	108 %			70-130	
			Dibromofluoromethane			96 %			70-130	
			Toluene-d8		90		70-130			

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#### Project: NCDOT Faircloth Property

Project No: WBS# 35494.1.1 R-2511

#### Prism Work Order: 8040469 Time Submitted: 4/24/2018 2:30:00PM

#### Volatile Organic Compounds by GC/MS - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B8E0080 - SM6200 B										
Blank (P8E0080-BI K1)				Prenared	& Analyze	d. 02/02/1	8			
1 1 1 2-Tetrachloroethane	BRI	0.50	ua/l	riopaioa	a / maryzo		0			
1 1 1-Trichloroethane	BRI	0.50	ug/L							
1.1.2.2-Tetrachloroethane	BRL	0.50	ua/L							
1.1.2-Trichloroethane	BRL	0.50	ua/L							
1,1-Dichloroethane	BRL	0.50	ug/L							
1,1-Dichloroethylene	BRL	0.50	ug/L							
1,1-Dichloropropylene	BRL	0.50	ug/L							
1,2,3-Trichlorobenzene	BRL	0.50	ug/L							
1,2,3-Trichloropropane	BRL	0.50	ug/L							
1,2,4-Trichlorobenzene	BRL	0.50	ug/L							
1,2,4-Trimethylbenzene	BRL	0.50	ug/L							
1,2-Dibromo-3-chloropropane	BRL	2.0	ug/L							
1,2-Dibromoethane	BRL	0.50	ug/L							
1,2-Dichlorobenzene	BRL	0.50	ug/L							
1,2-Dichloroethane	BRL	0.50	ug/L							
1,2-Dichloropropane	BRL	0.50	ug/L							
1,3,5-Trimethylbenzene	BRL	0.50	ug/L							
1,3-Dichlorobenzene	BRL	0.50	ug/L							
1,3-Dichloropropane	BRL	0.50	ug/L							
1,4-Dichlorobenzene	BRL	0.50	ug/L							
2,2-Dichloropropane	BRL	2.0	ug/L							
2-Chlorotoluene	BRL	0.50	ug/L							
4-Chlorotoluene	BRL	0.50	ug/L							
4-Isopropyltoluene	BRL	0.50	ug/L							
Acetone	BRL	10	ug/L							
Benzene	BRL	0.50	ug/L							
Bromobenzene	BRL	0.50	ug/L							
Bromochloromethane	BRL	0.50	ug/L							
Bromodichloromethane	BRL	0.50	ug/L							
Bromoform	BRL	0.50	ug/L							
Bromomethane	BRL	1.0	ug/L							
Carbon Tetrachloride	BRL	0.50	ug/L							
Chlorobenzene	BRL	0.50	ug/L							
Chloroethane	BRL	0.50	ug/L							
Chloroform	BRL	0.50	ug/L							
Chloromethane	BRL	0.50	ug/L							
cis-1,2-Dichloroethylene	BRL	0.50	ug/L							
cis-1,3-Dichloropropylene	BRL	0.50	ug/L							
Dibromochloromethane	BRL	0.50	ug/L							
Dibromomethane	BRL	0.50	ug/L							
Dichlorodifluoromethane	BRL	1.0	ug/L							
Ethanol	BRL	200	ug/L							
Ethylbenzene	BRL	0.50	ug/L							
	BRL	2.0	ug/L							
	BKL	0.50	ug/L							
isopropyidenzene (Cumene)	BKL	0.50	ug/L							



Project: NCDOT Faircloth Property

Project No: WBS# 35494.1.1 R-2511

Denertine

5/4/18

Prism Work Order: 8040469 Time Submitted: 4/24/2018 2:30:00PM

Volatile Organic Compounds by GC/MS - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P8E0080 - SM6200 B										
Blank (P8E0080-BLK1)				Prepared	& Analyze	ed: 05/02/1	8			
m.p-Xylenes	BRL	1.0	ua/L							
Methyl Butyl Ketone (2-Hexanone)	BRL	1.0	ua/L							
Methyl Ethyl Ketone (2-Butanone)	BRL	5.0	ua/L							
Methyl Isobutyl Ketone	BRL	1.0	ua/L							
Methylene Chloride	BRL	2.0	ua/L							
Methyl-tert-Butyl Ether	BRL	1.0	ua/L							
Naphthalene	BRL	1.0	ua/L							
n-Butvlbenzene	BRL	0.50	ua/L							
n-Propylbenzene	BRL	0.50	ua/L							
o-Xvlene	BRL	0.50	ua/L							
sec-Butvlbenzene	BRL	0.50	ua/L							
Styrene	BRL	0.50	ua/L							
tert-Butylbenzene	BRL	0.50	ua/L							
Tetrachloroethylene	BRL	0.50	ua/L							
Toluene	BRL	0.50	ua/L							
trans-1.2-Dichloroethylene	BRL	0.50	ua/L							
trans-1.3-Dichloropropylene	BRL	0.50	ua/L							
Trichloroethylene	BRL	0.50	ua/L							
Trichlorofluoromethane	BRL	0.50	ua/L							
Vinvl acetate	BRL	5.0	ua/L							
Vinvl chloride	BRL	0.50	ua/L							
Xvlenes, total	BRL	1.5	ua/L							
Surrogate: 4-Bromofluorobenzene	51.8		ua/l	50.00		104	70-130			
Surrogate: Dibromofluoromethane	50.4		ug/L	50.00		104	70-130			
Surrogate: Toluene-d8	48.8		ug/L	50.00		98	70-130			
				Droparad	8 Analyza	d: 05/02/1	0			
1 1 1 2 Totraphleroothano	20.0	0.50	ug/l	20.00	& Analyze	105	70 120			
	20.9	0.50	ug/L	20.00		105	70-130			
	20.9	0.50	ug/L	20.00		105	70-130			
1, 1, 2, 2-1 ett actilior dettilane	21.1	0.50	ug/L	20.00		100	70-130			
1,1,2-menoroethana	20.0	0.50	ug/L	20.00		100	70-130			
	20.9	0.50	ug/L	20.00		100	70-130			
	21.7	0.50	ug/L	20.00		109	70-130			
1, 1-Dichlorophopylene	10.1	0.50	ug/L	20.00		05	70-130			
	19.1	0.50	ug/L	20.00		95	70-130			
	19.0	0.50	ug/L	20.00		102	70-130			
	20.4	0.50	ug/L	20.00		102	70-130			
1,2,4- Minetifyidenzene	21.2	0.50	ug/L	20.00		100	70-130			
	20.5	2.0	ug/L	20.00		102	70-130			
	20.1	0.50	ug/L	20.00		101	70-130			
1.2-Dichloroethane	20.4	0.50	ug/L	20.00		102	70-130			
	21.2	0.50	ug/L	20.00		106	70-130			
1.3.5-Trimethylbenzene	21.2	0.50	ug/L	20.00		107	70-130			
1.3-Dichlorohenzene	21.4	0.50	ug/L	20.00		101	70-130			
1 3-Dichloronronane	20.2	0.50	ug/L	20.00		109	70-130			
1 4-Dichlorobenzene	19.0	0.50	ug/L	20.00		95	70-130			
	13.0	0.00	ug/L	20.00		55	10 100			



9001 Glenwood Ave.

Isopropylbenzene (Cumene)

Methyl Isobutyl Ketone

Methyl-tert-Butyl Ether

Methylene Chloride

Methyl Butyl Ketone (2-Hexanone)

Methyl Ethyl Ketone (2-Butanone)

m,p-Xylenes

Naphthalene

o-Xylene

Styrene

Toluene

n-Butylbenzene

n-Propylbenzene

sec-Butylbenzene

tert-Butylbenzene

Trichloroethylene

Vinyl acetate

Trichlorofluoromethane

Tetrachloroethylene

trans-1,2-Dichloroethylene

trans-1,3-Dichloropropylene

Raleigh, NC 27617

ECS Carolinas, LLP (Raleigh) Attn: Sarah Kordon

#### Project: NCDOT Faircloth Property

Project No: WBS# 35494.1.1 R-2511

21.5

42.5

20.0

19.6

20.0

20.6

19.5

18.8

21.6

21.0

21.2

21.4

21.3

21.3

20.3

21.4

21.3

22.8

20.9

17.8

22.0

0.50

1.0

1.0

5.0

1.0

2.0

1.0

1.0

0.50

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60-140

5/4/18

Prism Work Order: 8040469 Time Submitted: 4/24/2018 2:30:00PM

Volatile Organic Compounds by GC/MS - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P8E0080 - SM6200 B										
LCS (P8E0080-BS1)				Prepared	& Analyze	d: 05/02/1	8			
2,2-Dichloropropane	20.9	2.0	ug/L	20.00		105	70-130			
2-Chlorotoluene	20.1	0.50	ug/L	20.00		100	70-130			
4-Chlorotoluene	20.5	0.50	ug/L	20.00		102	70-130			
4-Isopropyltoluene	21.6	0.50	ug/L	20.00		108	70-130			
Acetone	38.6	10	ug/L	40.00		97	40-160			
Benzene	21.4	0.50	ug/L	20.00		107	70-130			
Bromobenzene	19.4	0.50	ug/L	20.00		97	70-130			
Bromochloromethane	19.4	0.50	ug/L	20.00		97	70-130			
Bromodichloromethane	21.2	0.50	ug/L	20.00		106	70-130			
Bromoform	21.1	0.50	ug/L	20.00		105	70-130			
Bromomethane	13.5	1.0	ug/L	20.00		68	60-140			
Carbon Tetrachloride	20.9	0.50	ug/L	20.00		104	70-130			
Chlorobenzene	19.8	0.50	ug/L	20.00		99	70-130			
Chloroethane	18.0	0.50	ug/L	20.00		90	60-140			
Chloroform	20.5	0.50	ug/L	20.00		102	70-130			
Chloromethane	17.3	0.50	ug/L	20.00		87	60-140			
cis-1,2-Dichloroethylene	19.4	0.50	ug/L	20.00		97	70-130			
cis-1,3-Dichloropropylene	22.4	0.50	ug/L	20.00		112	70-130			
Dibromochloromethane	21.7	0.50	ug/L	20.00		109	70-130			
Dibromomethane	20.7	0.50	ug/L	20.00		104	70-130			
Dichlorodifluoromethane	16.0	1.0	ug/L	20.00		80	60-140			
Ethanol	646	200	ug/L	500.0		129	60-140			
Ethylbenzene	20.9	0.50	ug/L	20.00		105	70-130			
Hexachlorobutadiene	19.8	2.0	ug/L	20.00		99	70-130			
Isopropyl Ether	20.6	0.50	ug/L	20.00		103	70-130			



Level II QC Report 5/4/18

ECS Carolinas, LLP (Raleigh) Attn: Sarah Kordon 9001 Glenwood Ave. Raleigh, NC 27617

Project: NCDOT Faircloth Property

Project No: WBS# 35494.1.1 R-2511

Prism Work Order: 8040469 Time Submitted: 4/24/2018 2:30:00PM

#### Volatile Organic Compounds by GC/MS - Quality Control

		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch P8E0080 - SM6200 B											
LCS (P8E0080-BS1)				Prepared	& Analyze	d: 05/02/1	8				
Vinyl chloride	18.3	0.50	ug/L	20.00		92	60-140				
Xylenes, total	63.7	1.5	ug/L	60.00		106	70-130				
Surrogate: 4-Bromofluorobenzene	51.2		ug/L	50.00		102	70-130				
Surrogate: Dibromofluoromethane	50.4		ug/L	50.00		101	70-130				
Surrogate: Toluene-d8	48.6		ug/L	50.00		97	70-130				
LCS Dup (P8E0080-BSD1)			8								
1,1,1,2-Tetrachloroethane	21.1	0.50	ug/L	20.00		105	70-130	0.7	20		
1,1,1-Trichloroethane	20.5	0.50	ug/L	20.00		102	70-130	2	20		
1,1,2,2-Tetrachloroethane	21.2	0.50	ug/L	20.00		106	70-130	0.05	20		
1,1,2-Trichloroethane	20.4	0.50	ug/L	20.00		102	70-130	2	20		
1,1-Dichloroethane	19.5	0.50	ug/L	20.00		97	70-130	7	20		
1,1-Dichloroethylene	20.5	0.50	ug/L	20.00		103	70-130	6	20		
1,1-Dichloropropylene	21.1	0.50	ug/L	20.00		105	70-130	0.8	20		
1,2,3-Trichlorobenzene	19.3	0.50	ug/L	20.00		97	70-130	1	20		
1,2,3-Trichloropropane	19.6	0.50	ug/L	20.00		98	70-130	3	20		
1,2,4-Trichlorobenzene	20.0	0.50	ug/L	20.00		100	70-130	2	20		
1,2,4-Trimethylbenzene	21.1	0.50	ug/L	20.00		105	70-130	0.5	20		
1,2-Dibromo-3-chloropropane	20.8	2.0	ug/L	20.00		104	70-130	1	20		
1,2-Dibromoethane	20.2	0.50	ug/L	20.00		101	70-130	0.3	20		
1,2-Dichlorobenzene	20.0	0.50	ug/L	20.00		100	70-130	2	20		
1,2-Dichloroethane	21.1	0.50	ug/L	20.00		106	70-130	0.5	20		
1,2-Dichloropropane	20.8	0.50	ug/L	20.00		104	70-130	2	20		
1,3,5-Trimethylbenzene	21.1	0.50	ug/L	20.00		105	70-130	2	20		
1,3-Dichlorobenzene	19.6	0.50	ug/L	20.00		98	70-130	3	20		
1,3-Dichloropropane	21.0	0.50	ug/L	20.00		105	70-130	3	20		
1,4-Dichlorobenzene	19.3	0.50	ug/L	20.00		97	70-130	2	20		
2,2-Dichloropropane	20.3	2.0	ug/L	20.00		101	70-130	3	20		
2-Chlorotoluene	20.2	0.50	ug/L	20.00		101	70-130	0.7	20		
4-Chlorotoluene	20.2	0.50	ug/L	20.00		101	70-130	2	20		
4-Isopropyltoluene	21.2	0.50	ug/L	20.00		106	70-130	2	20		
Acetone	36.9	10	ug/L	40.00		92	40-160	4	20		
Benzene	20.9	0.50	ug/L	20.00		104	70-130	2	20		
Bromobenzene	19.9	0.50	ug/L	20.00		100	70-130	3	20		
Bromochloromethane	20.2	0.50	ug/L	20.00		101	70-130	4	20		
Bromodichloromethane	20.5	0.50	ug/L	20.00		103	70-130	3	20		
Bromoform	21.3	0.50	ug/L	20.00		107	70-130	1	20		
Bromomethane	13.4	1.0	ug/L	20.00		67	60-140	1	20		
Carbon Tetrachloride	20.9	0.50	ug/L	20.00		105	70-130	0.2	20		
Chlorobenzene	19.4	0.50	ug/L	20.00		97	70-130	2	20		
Chloroethane	16.9	0.50	ug/L	20.00		85	60-140	6	20		
Chloroform	19.7	0.50	ug/L	20.00		99	70-130	4	20		
Chloromethane	16.4	0.50	ug/L	20.00		82	60-140	5	20		
cis-1,2-Dichloroethylene	18.9	0.50	ug/L	20.00		95	70-130	2	20		
cis-1,3-Dichloropropylene	21.8	0.50	ug/L	20.00		109	70-130	3	20		
Dibromochloromethane	21.1	0.50	ug/L	20.00		106	70-130	3	20		
Dibromomethane	20.0	0.50	ug/L	20.00		100	70-130	4	20		



Project: NCDOT Faircloth Property

Project No: WBS# 35494.1.1 R-2511 5/4/18

Prism Work Order: 8040469 Time Submitted: 4/24/2018 2:30:00PM

#### Volatile Organic Compounds by GC/MS - Quality Control

Angel de	Desult	Reporting	1.1 14	Spike	Source		%REC		RPD	Netes				
Analyte	Result	Limit	Units	Levei	Result	%REC	Limits	RPD	Limit	Notes				
Batch P8E0080 - SM6200 B														
LCS Dup (P8E0080-BSD1)		Prepared & Analyzed: 05/02/18												
Dichlorodifluoromethane	15.4	1.0	ug/L	20.00		77	60-140	4	20					
Ethanol	539	200	ug/L	500.0		108	60-140	18	20					
Ethylbenzene	20.0	0.50	ug/L	20.00		100	70-130	5	20					
Hexachlorobutadiene	20.2	2.0	ug/L	20.00		101	70-130	2	20					
Isopropyl Ether	20.1	0.50	ug/L	20.00		100	70-130	2	20					
Isopropylbenzene (Cumene)	21.5	0.50	ug/L	20.00		107	70-130	0.3	20					
m,p-Xylenes	41.8	1.0	ug/L	40.00		105	70-130	2	20					
Methyl Butyl Ketone (2-Hexanone)	20.5	1.0	ug/L	20.00		102	60-140	2	20					
Methyl Ethyl Ketone (2-Butanone)	19.8	5.0	ug/L	20.00		99	60-140	1	20					
Methyl Isobutyl Ketone	19.8	1.0	ug/L	20.00		99	60-140	0.7	20					
Methylene Chloride	19.7	2.0	ug/L	20.00		98	70-130	5	20					
Methyl-tert-Butyl Ether	19.6	1.0	ug/L	20.00		98	70-130	0.4	20					
Naphthalene	18.8	1.0	ug/L	20.00		94	70-130	0	20					
n-Butylbenzene	21.3	0.50	ug/L	20.00		106	70-130	1	20					
n-Propylbenzene	20.7	0.50	ug/L	20.00		104	70-130	2	20					
o-Xylene	20.5	0.50	ug/L	20.00		103	70-130	3	20					
sec-Butylbenzene	21.3	0.50	ug/L	20.00		106	70-130	0.8	20					
Styrene	20.1	0.50	ug/L	20.00		100	70-130	6	20					
tert-Butylbenzene	20.8	0.50	ug/L	20.00		104	70-130	2	20					
Tetrachloroethylene	19.6	0.50	ug/L	20.00		98	70-130	3	20					
Toluene	20.7	0.50	ug/L	20.00		104	70-130	3	20					
trans-1,2-Dichloroethylene	20.6	0.50	ug/L	20.00		103	70-130	4	20					
trans-1,3-Dichloropropylene	22.4	0.50	ug/L	20.00		112	70-130	2	20					
Trichloroethylene	20.4	0.50	ug/L	20.00		102	70-130	2	20					
Trichlorofluoromethane	17.4	0.50	ug/L	20.00		87	60-140	2	20					
Vinyl acetate	22.5	5.0	ug/L	20.00		112	60-140	2	20					
Vinyl chloride	17.4	0.50	ug/L	20.00		87	60-140	5	20					
Xylenes, total	62.4	1.5	ug/L	60.00		104	70-130	2	20					
Surrogate: 4-Bromofluorobenzene	51.1		ug/L	50.00		102	70-130							
Surrogate: Dibromofluoromethane	50.6		ug/L	50.00		101	70-130							
Surrogate: Toluene-d8	49.9		ug/L	50.00		100	70-130							

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449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543 Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



Project: NCDOT Faircloth Property

Project No: WBS# 35494.1.1 R-2511 Prism Work Order: 8040469 Time Submitted: 4/24/2018 2:30:00PM

#### Volatile Organic Compounds by GC/ECD - Quality Control

		Reporting		Spike	Source		%REC		RPD			
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes		
Batch P8E0030 - 504.1												
Blank (P8E0030-BLK1)	Prepared & Analyzed: 05/01/18											
1,2-Dibromoethane (EDB)	BRL	0.020	ug/L									
LCS (P8E0030-BS1)				Prepared	& Analyze	d: 05/01/1	8					
1,2-Dibromoethane (EDB)	0.243	0.020	ug/L	0.2514		97	70-130					
LCS Dup (P8E0030-BSD1)	Prepared & Analyzed: 05/01/18											
1,2-Dibromoethane (EDB)	0.248	0.020	ug/L	0.2514		99	70-130	2	20			

#### Sample Extraction Data

#### Prep Method: 504.1

Lab Number	Batch	Initial	Final	Date/Time
8040469-01	P8E0030	32.98 mL	35 mL	05/01/18 14:45
8040469-02	P8E0030	31.45 mL	35 mL	05/01/18 14:45

#### Prep Method: SM6200 B

Lab Number	Batch	Initial	Final	Date/Time
8040469-01	P8E0080	10 mL	10 mL	05/02/18 10:21
8040469-02	P8E0080	10 mL	10 mL	05/02/18 10:21
8040469-02	P8E0080	10 mL	10 mL	05/02/18 10:21

*CONTAINER TYPE CODES: A = Amber C = Clear G= Glass	NPDES: UST: GROUNDWATER: DRINKING W	Refinquished By: (Signature) Ref Nethod of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT W	Refinquished V: (Signature)	Reinquished By (Signature)	Upon relinquishing, this Chain of Custody is your authorization fo submitted in wright to the Prism Project Manager. There will be c	Sampler's Signature			MWM 05:51 T, ML-6-55	WWW 22:1-1 8/02/19/14 WT-1-22	CLIENT DATE COLLECTED (SOIL) SAMPLE DESCRIPTION COLLECTED MILITARY WATER OF HOURS SLUDGE)	TIME MATRIX	Phone: 119 000145 Fax (Yes) (No): Email Address: SCOFDON@ECLIMITED.COM EDD Type: PDF X Excel Other Site Location Name: PAIVLINK WINKUM Site Location Physical Address: CAN FWT (LOUATY)	Valuation Contraction Contraction	Full-Service Analytical & Environmental Solutions Advances No. 28217 Phone 704/529-6384 • Fax: 704/525-6409 Client Company Name: Ed. Full Mark Report To/Contact Name: SALAH OPPON
P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zerc		aived For Prism Laburationed By: Date ULF 4-24-78	eived By: (Signature) Date	eived By: (Signature) Date	Prism to proceed with the analyses as requested above. Any changes mus larges for any changes after analyses have been initialized.	y (Print Name) SAPAH KOPON Affiliation ECS &			X X MH	X X DH	SEE BELOW NO. SIZE TIVES	SAMPLE CONTAINER	Purchase Order No./Billing Reference 4300350140 Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days "Working Days" 6-9 Days Standard 10 days Pre-Approved Samples received after 14:00 will be processed next business day. Turnaround time is based on business days, excluding weekends and holidays. (SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)	Address:	CHAIN OF CUSTODY RECORD PAGE OF OUTE # TO ENSURE PROPER BILLING: Project Name: WBS: 354/44,1.1 P-2511 FUVLOUV Short Hold Analysis: (Yes) (No) UST Project: (Yes) (NO) *Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements Invoice To: WBS 354/44.1.1
D Head Space) ORIGINAL	ULU SEE REVERSE FOR TERMS & CONDITIONS	14:30 Mileage:	Site Departure Time:	Military/Hours Additional Comments: Site Arrival Time:	st be PRISM USE ONLY	THUR PRESS DOWN FIRMLY - 3 COPIES			02	0)	REMARKS LAB ID NO.	SIS REQUESTED PRISM	TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL Certification: NELAC DoD FL NC SC OTHER N/A Water Chlorinated: YES NO Sample Iced Upon Collection: YES NO	TEMP: Them ID: 25-7 Observed: 1-0 °C / Corr. 3-11 °C	LAB USE ONLY         YES       NO       NIA         Samples INTACT upon arrival?       YES       NO       NIA         PROPER PRESERVATIVES indicated?



Science & Engineering Consultants synterracorp.com

# **UNDERGROUND STORAGE TANK CLOSURE REPORT**

R-2511 Parcel 65 U.S. 17 North of NC 171 to Multi-Lanes South of Williamston 8889 U.S. Highway 17 North Beaufort County, North Carolina WBS Number 35494.1.1 TIP Number R-2511 NCDOT Parcel No. 65 Beaufort County PIN 5770-06-4184

AUGUST 24, 2021

**PREPARED FOR** 

North Carolina Department of Transportation Geotechnical Engineering Unit Geoenvironmental Section Raleigh, North Carolina

u M and I h

David L. Duncklee P.G. Senior Hydrogeologist Senior Peer Review



✓ J. Harrison Carter II, P.G. North Carolina License No. 2675 Project Scientist

## **EXECUTIVE SUMMARY**

R-2511 Parcel 65 (Site) is located at 8889 U.S Highway 17 (U.S. 17) north of Washington in Beaufort County, North Carolina. The Site was previously developed with a gas station which had been converted into a residence, but was demolished as of the time of the field activities detailed in this report. The North Carolina Department of Transportation (NCDOT) plans to widen the two-lane portion of U.S. 17 between Washington and Williamston, North Carolina. Four underground storage tanks (USTs) were located on this property.

In 2019, Duncklee & Dunham performed a *Revised Preliminary Site Assessment Report* (PSA), which included a geophysical survey to locate the four USTs. Three of the USTs served the gasoline station pumps, which were located to the east of the former structure, and the fourth UST was a heating oil UST located to the west of the former structure.

SynTerra mobilized to the Site with Hazmat Emergency Response and Remediation, Inc. (HERR) on June 28, 2021, to close the UST system. HERR removed a concrete pad and the four USTs, loaded them onto dump trucks, and transported them to EJE Recycling and Disposal Inc. for disposal. HERR also recovered 405 gallons of water from the three gas station USTs by vacuum truck, and transported it to their own facility for disposal. Based on the results of the *Revised Preliminary Site Assessment Report* and field soil screening, it was determined that soil surrounding the tanks was not affected, so excavated soil along with additional fill soil was used to backfill the excavation.

SynTerra collected samples of groundwater pooled in the excavations for both the gas station USTs and the heating oil UST. The sample collected from the heating oil UST excavation contained several constituents that were detected at concentrations greater than North Carolina groundwater standards. The sample from the gas station UST excavation contained several analytes detected at concentrations greater than method detection limits, but none of the reported concentrations were greater than North Carolina groundwater standards. However, a groundwater sample collected during the 2019 PSA adjacent to the gas station USTs did contain analytes with concentrations greater than North Carolina groundwater standards.

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- Appendix C Concrete and Water Disposal Manifests
- Appendix D Laboratory Analytical Report
- Appendix E Photographs
### LIST OF ACRONYMS AND ABBREVIATIONS

North Carolina Administrative Code, Title 15A,
Subchapter 02L, Groundwater Standards and
Classifications
below ground surface
diesel range organics
gasoline range organics
Hazmat Emergency Response and Remediation, Inc.
Massachusetts Department of Environmental Protection
Extractable Hydrocarbons
Massachusetts Department of Environmental Protection
Volatile Hydrocarbons
method detection limit
milligrams per killogram
North Carolina Department of Environmental Quality
photoionization detector
parts per million
Preliminary Site Assessment
8889 U.S. 17 North, Washingtion NC, Parcel 65
total petroleum hydrocarbons
U.S. Environmental Protection Agency
underground storage tank

### A. SITE INFORMATION

### 1. Site Identification

Date of Report: Aug	gust 24, 2021			
Facility I.D.: None,	Unregistered USTs	Incident Nur	nber: N	lot Applicable (N/A)
Site Name: Parcel 65	5 UST Closure			
Site Location: 8889 I	J.S. Highway 17 No	orth		
Nearest City/Town:	Washington	Zip Code: 27889		County: Beaufort
<b>2. Contact Inf</b> UST Owner: Address:	ormation Durwood Kirby Wy 8889 U.S. 17 North,	ynne Sr. Washington, NC 278	889	Phone: Unknown
UST Operator: Address:	Wynn Gulf 8889 U.S. 17 North,	Washington, NC 278	889	Phone: Unknown
Property Owner: Address:	Durwood Kirby Wy 8889 U.S. 17 North,	ynne Sr. Washington, NC 278	889	Phone: Unknown
Property Occupant: Address: N/A	Vacant			Phone: N/A
Consultant/Contrac Address: 511 Ke	tor: SynTerra Co eisler Drive, Suite 10	prporation 2; Cary, NC 27518	Phone	: (919) 858-9898
Analytical Laborato State Cert. No: 404 a	ry: Waypoint A and 37735	nalytical Carolinas, I	nc.	
Address: 449 Sp	oringbrook Road, Ch	arlotte, NC 28217	Phone	: (704) 529-6364

### 3. Release Information

Date Discovered: April 26, 2019

Latitude: 33.6751° Longitude: -77.0784°

Estimate Quantity of Release: Unknown

Cause of Release: Unknown

Source of Release (Dispenser/Piping/UST): Rusted/perforated heating oil UST, hole in one or more gas station USTs

Sizes and contents of UST system(s) from which the release occurred: Three approximately 575-gallon USTs for gas station and one approximately 200-gallon heating oil UST

### **B. SITE HISTORY AND CHARACTERIZATION**

### 1. UST Owner and Operator

The Notice of Intent (Form UST-3) is included in **Appendix A**. The owner and operator is believed to have been Durwood K. Wynne, Sr.; however, there are no known facility identifications or incidents on file with the North Carolina Department of Environmental Quality (NCDEQ) underground storage tank (UST) section.

### 2. UST information

UST information is shown in **Table 1**. The USTs were not registered with NCDEQ. The three USTs on the eastern portion of the property, approximately 575 gallons each, were used previously to store and supply petroleum products to a dispensing island formerly located directly above the tanks. The fourth UST, located to the west of the former structure, was used to store heating oil. The heating oil UST had a capacity of approximately 200 gallons (**Table 1**).

### 3. Non-UST Information

SynTerra did not identify pertinent non-UST information related to the Site.

### 4. Description of Release

Duncklee & Dunham performed a Preliminary Site Assessment (PSA) at the Site on behalf of the North Carolina Department of Transportation (NCDOT) in April 2019. The release was confirmed when Pace Analytical reported groundwater results on April 26, 2019. SynTerra prepared a Revised PSA report dated June 14, 2019. A groundwater sample collected adjacent to and west of the three gas station USTs exhibited concentrations of naphthalene, 1,2,4 trimethylbenzene, 1,3,5 trimethylbenzene, C5-C8 aliphatics, C9-C12 aliphatics, and C8-C10 aromatics greater than applicable North Carolina groundwater quality standards promulgated in Title 15A, Subchapter 02L, Section .0202 of the North Carolina Administrative Code (02L standards).

Duncklee & Dunham also screened soil from soil borings surrounding the gas station USTs and the heating oil UST with a photoionization detector (PID). PID readings ranged from 0.0 parts per million (ppm) to 363 ppm. A sample of the soil at B-6, the location of the greatest PID reading, was collected for total petroleum hydrocarbons (TPH) diesel range organics (DRO) and TPH gasoline range organics (GRO). A TPH DRO concentration of 1.9 milligrams per kilogram (mg/kg) was detected; however, this concentration is less than the NCDEQ action level of 100 mg/kg. TPH GRO was not detected at concentrations greater than laboratory reporting limits. Duncklee & Dunham encountered groundwater at approximately 4 feet below ground surface (bgs) during this investigation.

### 5. Site Characteristics

The Site is located at 8889 U.S. Highway 17 North, Washington, in Beaufort County, North Carolina. The Site was previously developed with a gasoline station that had been converted into a residence and a wood-framed storage shed/garage. The residence and storage shed have been demolished. NCDOT plans to widen U.S. Highway 17, including a bucket-handle turn lane at the location of this property. Overhead power lines are near the location of the three USTs on the eastern part of the Site. The majority of the surrounding properties are residential, agricultural, or undeveloped land. **Figure 1** shows the Site location, and **Figure 2** shows Site details.

The *Geologic Map of North Carolina*, published in 1985 by the North Carolina Department of Natural Resources and Community Development, shows the Site is located in the Coastal Plain Physiographic Province, and is underlain by the Yorktown formation, which is comprised of fossiliferous clay and other marine sediments. Site topography slopes gently to the northwest toward Gum Swamp.

### C. CLOSURE PROCEDURE

NCDOT contracted with SynTerra to close the four USTs by removal. SynTerra contracted with Hazmat Emergency Response and Remediation, Inc. (HERR) to aid in the closure of the USTs. Synterra notified North Carolina 811 in preparation for excavation.

SynTerra mobilized to the Site with HERR on July 28, 2021, to close the USTs by removal. The three gas station USTs were reported to have been abandoned-in-place by filling with concrete. However, an inspection of the tanks indicated that the tanks were only partially filled with concrete with several feet of headspace in each tank and 2 to 5 inches of liquid present. HERR used a vacuum truck to recover as much liquid as possible from the tanks.

Beaufort County Fire Marshall Curtis Avery was on-Site to oversee that the tanks were made inert before removal. Mr. Avery determined the presence of flammable atmosphere with an explosimeter, so he requested that we inert the tanks. HERR placed dry ice in the tanks which was allowed to sublimate until the explosimeter readings fell below the lower explosive limit. After the readings fell below the lower explosive limit, Mr. Avery approved excavation operations. HERR used an excavator to remove the concrete slab from above the three gas station USTs, excavate the soil from above the three tanks, and remove the tanks from the ground. The three tanks were relatively intact. While excavating, the northernmost tank was punctured, and additional water that had been trapped between the concrete and the wall of the tank drained out into the excavation. HERR recovered this water using their vacuum truck. HERR used the excavator to open the tanks and used a miniexcavator with a hammer attachment to break and remove the concrete from within. HERR also removed approximately 10 feet of associated piping. After the tanks had been removed, SynTerra observed groundwater flowing into the excavation. The excavation for the gas station USTs measured 20 feet long, 13 feet wide, and 5 feet deep.

After being unable to locate the heating oil UST using probe rod and shovel, HERR began attempting to locate it by exploratory digging with the excavator. When the excavator bucket contacted the tank, the tank collapsed due to its degraded state and the water inside the tank drained into the excavated hole. The metal was severely rusted and perforated. It appeared that groundwater in this area was approximately 1.5 feet bgs at this location, and that the water inside the tank was effectively part of the water table. The excavation for the heating oil tank was approximately 3 feet wide by 4 feet long by 3 feet deep. **Figure 3** shows the UST locations and the extents of excavation. Photographs of the excavation activities are included in **Appendix F**.

HERR loaded the concrete, empty tanks and piping onto dump trucks for disposal at EJE Recycling & Disposal in Greenville, North Carolina. HERR disposed of the 405 gallons of liquid recovered by their vacuum truck at their own facility in Whiteville, North Carolina. Certificate of UST Disposal is included in **Appendix B** and disposal manifests are included in **Appendix C**.

During the 2019 PSA, it was determined that the excavated material was unaffected; therefore, HERR backfilled the excavation with that material after tank removal. HERR performed the backfill in 18-inch lifts, compacting each lift with the excavator bucket. Approximately 15 tons of additional soil were obtained from Pea Creek Mine, LLC of Greenville, North Carolina to complete the backfill.

### **D. SITE INVESTIGATION**

SynTerra collected soil from each wall of the excavations and stored the soil in closed polyethylene bags. After approximately 15 minutes, the headspace of the bags was screened using a photoionization detector (PID). PID readings of the excavation walls

ranged from 1.2 ppm to 11.4 ppm at the gas station USTs, and 0.0 ppm to 2.0 ppm at the heating oil UST (**Table 2**). Eastern Solutions calibrated the PID before the field activities. SynTerra did not observe staining or petroleum odor in the excavated soil.

The soil consisted of dark brown organic soil from approximately 0-1 feet bgs followed by light brown clayey sandy silt. Groundwater in the excavation for the gas station USTs was encountered at approximately 4 feet bgs and at approximately 1.5 feet in the excavation for the heating oil UST.

SynTerra collected water grab samples from the excavations using a high density polyethylene dipper to be analyzed for:

- Volatile organic chemicals (VOCs) by method SM 6200B
- Semivolatile organic chemicals (SVOCs) by U.S. Environmental Protection Agency (USEPA) Method 625.1
- Massachusetts Department of Environmental Protection (MADEP) extractable petroleum hydrocarbons (EPH), and MADEP volatile petroleum hydrocarbons (VPH), as requested by NCDEQ.

SynTerra collected a sample (GW-1) from the gas station UST excavation at 1:00 p.m. on June 28. SynTerra collected a sample (GW-2) from the heating oil UST excavation at 4:00 p.m. on June 28. Samples were collected in laboratory-provided bottleware and stored on ice. Synterra delivered the samples to Waypoint Analytical at 1:14 p.m. on July 29 under chain-of-custody protocol.

Laboratory analytical results from GW-1 and GW-2 revealed several constituents detected at concentrations greater than method detection limits (MDLs). None of the detected analytes from GW-1 were greater than 02L standards. Of the analytes detected from GW-2, aliphatic C9-C18, aliphatic C9-C12, aromatic C11-C22, and aromatic C9-C10 were greater than 02L standards. No reported concentrations were greater than applicable North Carolina Gross Contamination Levels. A summary of detected analytes is presented on **Table 3**. The completed chain-of-custody is included as **Appendix D** and the laboratory report is included as **Appendix E**.

### E. CONCLUSIONS AND RECOMMENDATION

Four USTs were closed, and waste materials from those tanks were transported to appropriate facilities for disposal. PID soil screening performed during those activities and the PSA in 2019, in combination with lab analysis performed as part of the PSA, does not indicate the presence of affected soil due to the USTs at this Site. However, lab analysis of water samples indicate that petroleum constituents are present in groundwater.

The PSA groundwater sample TW-1 collected adjacent to the gas station USTs contained several VOC and MADEP-EPH/VPH analytes that were greater than 02L standards. Groundwater sample GW-2 collected from the heating oil UST during the PSA contains several MADEP-EPH/VPH analytes that are greater than 02L standards.

SynTerra recommends providing this report to the UST section in the Washington Regional Office of NCDEQ.

### **FIGURES**











### STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS \*S.U.E. = Subsurface Utility Engineering

#### BOUNDARIES AND PROPERTY:

State Line	
County Line	
Township Line	
City Line	
Reservation Line	· ·
Property Line	
Existing Iron Pin	O EP
Computed Property Corner	
Property Monument ———	ECM
Parcel/Sequence Number	(23)
Existing Fence Line	-xxx
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	<b>→</b>
Existing Wetland Boundary	<b>n</b> .B
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
Existing Historic Property Boundary	
Known Contamination Area: Soil	- 🕱 — s — 🕱
Potential Contamination Area: Soil	- <b>XX</b> - s - <b>XX</b>
Known Contamination Area: Water	- 🕱 — w — 🕱
Potential Contamination Area: Water	- X - w - X
Contaminated Site: Known or Potential	XX XX
BUILDINGS AND OTHER CULTU	VRE:
Gas Pump Vent or U/G Tank Cap	0
Sign ———	<b>O</b> s
Well	Ŷ
Small Mine	*
Foundation	
Area Outline	
Cemetery	1
Building	
School	
Church	<u>t</u>
Dam	

#### HYDROLOGY:

Stream or Body of Water	
Hydro, Pool or Reservoir ————	
Jurisdictional Stream	
Buffer Zone 1	——— BZ 1 ———
Buffer Zone 2	——— BZ 2 ———
Flow Arrow	<
Disappearing Stream	×
Spring	0
Wetland	¥
Proposed Lateral, Tail, Head Ditch ———	
False Sump	$\Leftrightarrow$

RAILROADS:	Note: Not to Scale *
Standard Gauge ——	CSX TRANSPORTATION
RR Signal Milepost ——	O MILEPOST 35
Switch ———	SWITCH
RR Abandoned	
RR Dismantled ———	

### RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	- 🔶
Primary Horiz Control Point	- Ö
Primary Horiz and Vert Control Point	- •
Exist Permanent Easment Pin and Cap	- 🛇
New Permanent Easement Pin and Cap —	- 🐟
Vertical Benchmark	- 🔟
Existing Right of Way Marker	- 🛆
Existing Right of Way Line	
New Right of Way Line	
New Right of Way Line with Pin and Cap-	
New Right of Way Line with Concrete or Granite R/W Marker	
New Control of Access Line with Concrete C/A Marker	
Existing Control of Access	( <u>\$</u> )
New Control of Access	
Existing Easement Line	- <u> </u>
New Temporary Construction Easement	E
New Temporary Drainage Easement —	TDE
New Permanent Drainage Easement	PDE
New Permanent Drainage / Utility Easement	DUE
New Permanent Utility Easement	PUE
New Temporary Utility Easement	— — — TUE — —
New Aerial Utility Easement	AUE

#### ROADS AND RELATED FEATURES:

Existing Edge of Pavement	
Existing Curb	
Proposed Slope Stakes Cut	<u>c</u>
Proposed Slope Stakes Fill	<u>F</u>
Proposed Curb Ramp	CR
Existing Metal Guardrail ————	
Proposed Guardrail ————	<u> </u>
Existing Cable Guiderail	<u> </u>
Proposed Cable Guiderail	
Equality Symbol	$\odot$
Pavement Removal	$\times\!\!\!\times\!\!\!\times\!\!\!\times\!\!\!\times\!\!\!\times$
VEGETATION:	
Single Tree	ନ୍ତ
Single Shrub	¢

Hedge	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Woods Line	
Orchard	8 8 8 8
Vineyard	Vineyard
EXISTING STRUCTURES:	
MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall-	- ) CONC WW (
MINOR: Head and End Wall ————	CONC HW
Pipe Culvert	====
Footbridge	≻≺
Drainage Box: Catch Basin, DI or JB	Св
Storm Sever Manhole	ഭ
Storm Sewer	s
UIILIIIES:	
POWER:	
Existing Power Pole	•
Proposed Power Pole	Ô
Existing Joint Use Pole	- <b>-</b> -
Proposed Joint Use Pole ————	-0-
Power Manhole	®
Power Line Tower	$\boxtimes$
Power Transformer	
U/G Power Cable Hand Hole	
H-Frame Pole	••
U/G Power Line LOS B (S.U.E.*)	P
U/G Power Line LOS C (S.U.E.*)	P
U/G Power Line LOS D (S.U.E.*)	P
	Hedge         Woods Line         Orchard         Vineyard         EXISTING STRUCTURES:         MAJOR:         Bridge, Tunnel or Box Culvert         Bridge, Tunnel or Box Culvert         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 Manhole         Storm Sewer         UTILLITIES:         POWER:         Existing Power Pole         Existing Joint Use Pole         Proposed Power Pole         Proposed Joint Use Pole         Power Line Tower         Power Cable Hand Hole         H-Frame Pole         U/G Power Line LOS B (S.U.E.*)         U/G Power Line LOS C (S.U.E.*)         U/G Power Line LOS D (S.U.E.*)

#### TELEPHONE:

Existing Telephone Pole	-•-
Proposed Telephone Pole	<b>-0-</b>
Telephone Manhole	Ō
Telephone Pedestal	Ī
Telephone Cell Tower	<b>""</b>
U/G Telephone Cable Hand Hole	H <sub>H</sub>
U/G Telephone Cable LOS B (S.U.E.*)	
U/G Telephone Cable LOS C (S.U.E.*)	t
U/G Telephone Cable LOS D (S.U.E.*)	t
U/G Telephone Conduit LOS B (S.U.E.*)	
U/G Telephone Conduit LOS C (S.U.E.*)	tc
U/G Telephone Conduit LOS D (S.U.E.*)	TC
U/G Fiber Optics Cable LOS B (S.U.E.*)	T F0
U/G Fiber Optics Cable LOS C (S.U.E.*)	T F0
U/G Fiber Optics Cable LOS D (S.U.E.*)	T F0

# synlerra

	NO SCALE
148 RIVER STRE GREENVILLE, SO PHONE 864-421- www.synterracor	ET, SUITE 220 UTH CAROLINA 29601 -9999 p.com
RAWN BY: C. NEWELI ROJECT MANAGER: H AYOUT: FIGURE 4	L DATE: ( I. CARTER
08/17/2021 4:57 PM	P:\_Cary\NCDOT-Geoenv

#### WATER:

Water Valvo
Water Hydrant —
U/G Water Line
U/G Water Line
U/G Water Line
Above Ground V
TV:
TV Pedestal ——
TV Tower ——
U/G TV Cable H
U/G TV Cable L
U/G TV Cable L
U/G TV Cable L
U/G Fiber Optic
U/G Fiber Optic
U/G Fiber Optic
GAS:
Gas Valve ——
Gas Meter ——
U/G Gas Line LO
U/G Gas Line LO

Water Manhole	Ŵ
Water Meter	0
Water Valve	8
Water Hydrant	Ŷ
U/G Water Line LOS B (S.U.E*)	
U/G Water Line LOS C (S.U.E*)	•_•
U/G Water Line LOS D (S.U.E*)	t
Above Ground Water Line	A/G Water
TV	
TV Pedestal	C
TV Tower ————	$\otimes$
U/G TV Cable Hand Hole	н
U/G TV Cable LOS B (S.U.E.*)	Tv
U/G TV Cable LOS C (S.U.E.*)	tv
U/G TV Cable LOS D (SUE*)	Tv
L/G Fiber Ontic Cable LOS B (SUE*)	- — — — TY FO— — —
U/G Eiber Optic Cable LOS C (SULE*)	TY F0
L/G Fiber Optic Cable LOS D (SULE*)	TY F0
GAS:	•
Gas Valve	<b>\$</b>
Gas Meter	Ø
U/G Gas Line LOS B (S.U.E.*)	c
U/G Gas Line LOS C (S.U.E.*)	c
U/G Gas Line LOS D (S.U.E.*)	G
Above Ground Gas Line	A/G GdS
SANITARY SEWER:	
SANITARY SEWER: Sanitary Sewer Manhole	۲
SANITARY SEWER: Sanitary Sewer Manhole Sanitary Sewer Cleanout	<b>●</b>
SANITARY SEWER: Sanitary Sewer Manhole Sanitary Sewer Cleanout U/G Sanitary Sewer Line	⊕ ⊕s
SANITARY SEWER: Sanitary Sewer Manhole Sanitary Sewer Cleanout U/G Sanitary Sewer Line Above Ground Sanitary Sewer	B     S     S     A/C Sanitary Sever
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SANITARY SEWER: Sanitary Sewer Manhole Sanitary Sewer Cleanout U/G Sanitary Sewer Line Above Ground Sanitary Sewer SS Forced Main Line LOS B (S.U.E.*) SS Forced Main Line LOS C (S.U.E.*)	
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SANITARY SEWER: Sanitary Sewer Manhole Sanitary Sewer Cleanout U/G Sanitary Sewer Line Above Ground Sanitary Sewer SS Forced Main Line LOS B (S.U.E.*) SS Forced Main Line LOS C (S.U.E.*) SS Forced Main Line LOS D (S.U.E.*) MISCELLANEOUS: Utility Pole Utility Pole with Base Utility Located Object	
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SANITARY SEWER: Sanitary Sewer Manhole	

### FIGURE 4 LEGEND SHEET **NCDOT PARCEL 65** 8889 US 17 N, WASHINGTON 08/17/2021 **BEAUFORT COUNTY, NORTH CAROLINA**

### TABLES





Science & Engineering Consultants

## TABLE 1UST SYSTEM INFORMATIONNCDOT U.S. 17 NORTH PARCEL 65BEAUFORT COUNTY, NORTH CAROLINA

UST ID Number	Current/Last Contents	Capacity (gallons)	Tank Dimensions (feet)	Date Installed	Date Closed	Construction Details	Associated Piping and Pumps	Status of UST	Was Release Associated with the UST System
NA	Petroleum	575	Length: 8' Diameter: 3.5'	Unknown	7/28/2021	Single-walled Steel	Steel Product Lines	Permanently closed by removal	Yes
NA	Petroleum	575	Length: 8' Diameter: 3.5'	Unknown	7/28/2021	Single-walled Steel	Steel Product Lines	Permanently closed by removal	Yes
NA	Petroleum	575	Length: 8' Diameter: 3.5'	Unknown	7/28/2021	Single-walled Steel	Steel Product Lines	Permanently closed by removal	Yes
NA	Heating Oil	200	Length: 4' Diameter: 3'	Unknown	7/28/2021	Single-walled Steel	Steel Product Lines	Permanently closed by removal	Yes

Created by: <u>JAS</u> Checked by: <u>JHC</u>

### TABLE 2 SUMMARY OF SIDEWALL SCREENING LEVELS IN SOIL NCDOT U.S. 17 NORTH PARCEL 65 BEAUFORT COUNTY, NORTH CAROLINA

Soil Location	Concentration (ppm)
Petroleum UST	Excavation Pit
North wall	3.4
South wall	1.2
East wall	11.4
West wall	4.1
Heating Oil US	F Excavation Pit
North wall	0.0
South wall	0.6
East wall	2.0
West wall	0.9

Created by: JAS Checked by: JHC

#### Notes:

SynTerra screened soils for volatile organic compounds (VOCs) using a photoionization detector (PID) ppm - parts per million

### TABLE 3 SUMMARY OF EXCAVATION PIT WATER ANALYTICAL RESULTS NCDOT U.S. 17 NORTH PARCEL 65 BEAUFORT COUNTY, NORTH CAROLINA

San	nple Identif	ication	GW-1		GW-2	
Analyte	02L Standard	Gross Contamination Levels for Groundwater	Value	Q	Value	Q
V	olatile Orga	nic Compounds (SM 6200	B)			
Acetone	6,000	6,000,000	2.87	J	4.80	J
n-Butylbenzene	70	5,900	<0.180		1.01	
sec-Butylbenzene	70	8,800	<0.200		2.33	
Ethylbenzene	600	80,000	0.234	J	0.436	J
Isopropylbenzene	70	30,500	<0.180		1.10	
4-Isopropyl toluene	25	11,700	<0.089		1.59	
Naphthalene	6	6,000	<0.470		4.27	
n-Propylbenzene	70	26,100	<0.190		1.73	
Toluene	600	260,000	0.346	J	<0.220	
1,2,4-Trimethylbenzene	400	28,500	1.05		6.30	
1,3,5-Trimethylbenzene	400	24,100	0.340	J	2.38	
o-Xylene	NE	NE	0.468	J	<0.210	
m&p-Xylene	NE	NE	0.830	J	<0.420	
Total Xylene	500	50,000	1.30	J	<0.21	
	MADEP Met	hods (MADEP EPH & VPH)				
Aliphatic C9-C18	400 1	NE	<28.2		151	J
Aliphatic C9-C12	400	NE	27.5	J	267	
Aromatic C11-C22	200 2	NE	<61.2		197	J
Aromatic C9-C10	200	NE	<4.02		117	

Notes:

Results in µg/L.

Samples collected on 2/24/2021.

Bolded result is greater than method detection limit.

Shaded result is greater than 02L standard

02L Standard - North Carolina groundwater quality standard (15A NCAC 02L .0202).

<sup>1</sup> - 02L standard is for sum of aliphatic C9-C12 and C9-C18 fractions

 $^{\rm 2}$  - 02L standard is for sum of aromatic C11-C22 and C9-C10 fractions

< - Analyte not detected at a concentration greater than the method detection limit.

J - Estimated value

EPH - Extractable petroleum hydrocarbons

MADEP - Massachusetts Department of Environmental Protection

NA - Not analyzed

NE - Standard not established.

VPH - Volatile petroleum hydrocarbons

Prepared by: <u>JHC</u> Checked by: <u>BNM</u>

### **APPENDIX A**

### FORM UST-2B



U	ST-2	B	Site Inv	estigatior/	n Report fo S UN-RE	or Per Servic GISTE	manent C e of ERED US	Closure or C	har	nge-ir	า-	En	vironment	) ]. at
Return co	mpleted for	rm to: NC 164 RAI ATT	DEQ / DWM 6 MAIL SER EIGH, NC 2 N: REGISTR	/ UST SECTIO /ICE CENTER 7699-1646 ATION & PER	N		Facility ID # Date Receive	STAT	TE USE	ONLY:			Quanty	
phone	e (919) 707-8	8171 fax (9 <sup>-</sup>	19) 715-1117	http://www.w	vastenotnc.org/									
INSTRUC	TIONS (R	EAD THIS	FIRST)											
1. US Clo <u>ma</u> 2. Per 3. Cha	T permanen sure and Ini <u>nagement-p</u> manent clos ange-in-serv	t closure or itial Respon ermit-guidar sure: Comple ice: Where I	change in se se and Abate ice/undergrou ete all section JST systems	ervice must be ement. The gu <u>ind-storage-tar</u> s of this form. will be convert	completed in a uidelines can b <u>hks-section</u> . ted from storing	e obtain a regul	nce with the la ned at <u>http://c</u> ated substand	atest version of t leq.nc.gov/about ce to a non-regu	the G <u>/divisi</u> lated	uideline <u>ions/wa</u> substar	es for S <u>ste-ma</u> nce, co	Site Ch anager mplete	iecks, <u>nent/w</u> e sectio	Tank v <u>aste-</u> ons I,
4. For 5. <b>Un</b> 6. RE	more than t Registered GISTERED	5 un-register <b>USTs may</b> USTs use F	ed UST syste <b>be subject t</b> e orm UST-2A.	ems, attach ado o unpaid fees	ditional forms a and late pena	s neede I <b>ties</b> .	d.							
I. OWNE	RSHIP OF	TANKS		<b>0</b> .11	-	II. LO	CATION O	TANKS						
Owner Nai Douglas	ne (Corpora Kirby Wyn	ition, Individ ine, Sr.	ual, Public Ag	gency, or Other	Entity)	Facility	y Name or Co her Wynne (	mpany Gu <b>l</b> f						
Street Add 8889 U.S	ress 5. 17 North					Facility	y ID # (If know	vn)						
City Washing	iton		C	ounty Seaufort		Street 8889	Address	th						
State NC			Zi	p Code 2788	9	City			Cou	unty		Zip C	ode 880	
Phone Nur unknowr	nber າ					Phone	Number OWN			201011		21	007	
III. CONTACT PERSONNEL Contact for Facility: Phone #:														
Contact for Facility: Job Title: Phone #:														
Closure Contractor Name:         Closure Contractor Company: HERR, inc         Address: Whiteville, NC         Phone # 910-640-2607														
Primary Co	onsultant Na	ime:	Primary Cor SynTerra (	isultant Compa Corp	iny:		Address: 511 Kiesle	er Dr, Cary, NC	Pho 91	one # 9-858-	9898			
IV. UST I	IV. UST INFORMATION FOR UN-REGISTERED UST SYSTEMS REGISTERED USTs use Form UST-2A.       V. EXCAVATION CONDITION													
Tank ID No.	Size in Gallons	Last Contents	Last Use Date	Permanent Close Date	Method of F Indicate RE material con	Permane MOVED , such a crete/ sa	nt Closure: or enter fill s foam/ and	Change-in- Service Date	Wa exca	ater in avation	Free p	product	Not odd visib contar	able or or le soil minatio n
N/A	575	gasoline	unkown	7/28/2021	REMOVED									
N/A	575	gasoline	unknowr	7/28/2021	REMOVED									
N/A	575	gasoline	unknowi	7/28/2021	REMOVED									
N/A	200	heat. oil	unknowi	7/28/2021	REMOVED									
VI. CERT I certify un based on r and compl Print name	IFICATION der penalty of ny inquiry of ete. e and official	of law that I f those indivi title of owne	have persona duals immed er or owner's	ally examined a iately responsil authorized repr	and am familiar ble for obtaining resentative	with the g the info	information s ormation, I be	submitted in this lieve that the su	and a bmitte	all attach ed inforr	ned doo mation	cumen is true	ts and accur	that ate
Signature							Date Signe	ed						
1646 MAIL	NORTH C	AROLINA D CENTER, R	EPARTMEN ALEIGH, NC	T OF ENVIRON 27699-1646 - F	NMENTAL QUA PHONE (919) 7	ALITY, D 07-817	UVISION OF 1 FAX (919)	WASTE MANAG 715-1117 <u>http://</u>	BEME	NT, US waster	T SEC	TION rg/	1/	2016

### **APPENDIX B**

### **CERTIFICATE OF UST DISPOSAL**





### TANK / VESSEL DISPOSAL MANIFEST



HAZMAT EMERGENCY RESPONSE & REMEDIATION, INC. 1287

	GENERATOR INFORM	IATION	A
Generator:	NCTOT		
Site Address:	8889 US HWY 17		
	WASHINGTON NC		
Signature:		Date:	

	TANK	/ VESSEL INFORMATIO	N
Tank Number # / # 7 # 4 # 4 # 4	Tank Size /,000 /,000 /,000 /,000 /,000	Last Tank Contents CONCrete CONCrete Concrete #2 Fuel Oil	Condition (Comments)

	TANK T	RANSPORTER INF	ORMATION	
La	acknowledge receipt	of the above-listed t	tanks / vessels on	this date:
Transporter 1	Clark Printed Name:	Transporter 1	Clark Signature:	<u>7-78-2/</u> Date:
Transporter 2	Printed Name:	Transporter 2	Signature:	Date:

TANK DISPOSAL / RECYCLING INFORMATION
TANK DISPOSAL / RECTCEING INFORMATION
The tanks / vessels listed above have undergone disposal or recycling:
Tank Disposal (Recycling Method: EJE Recycling & Disposal, The
802 Recycling LANE Greenville NC
Michael Aovernan While to 7-29-21
Printed Name: Signature: Date:

### **APPENDIX C**

### **CONCRETE AND WATER DISPOSAL MANIFESTS**



EJE REYCYCLING & DISPOSAL INC. 802 RECYCLING LN, GREENVILLE, NC 27834 2527528274

### Ticket #: 001-0000007493

7/28/2021 In : 11:43:30 /Out : 11:54:32 Scale # : 1

IN Bound PITT COUNTY 100%

Customer : CASH CUSTOMER Vehicle : 1

Gross Wt:26.16Tare Wt:13.30Net Wt:12.86 TONGross Wt:52,320.00Tare Wt:26,600.00Net Wt:25,720.00 LBS

#### PITT COUNTY

CONCRETE

12.86 TON

Signature: Weigh Master: MW #44498 HERR, INC

Now Selling Crushed Rock.

EJE REYCYCLING & DISPOSAL INC. T 802 RECYCLING LN, GREENVILLE, NC 27834 2527528274

### Ticket #: 001-0000007497

7/28/2021 In : 12:50:13 /Out : 13:05:16 Scale # : 1

IN Bound PITT COUNTY .100% Customer : CASH CUSTOMER

Vehicle : 1

Gross Wt:30.99Tare Wt:13.38Net Wt:17.61 TONGross Wt:61,980.00Tare Wt:26,760.00Net Wt:35,220.00 LBS

#### PITT COUNTY

CONCRETE

17.61 TON

Signature: Weigh Master: MW #44498 HERR, INC

Now Selling Crushed Rock.

### NON-HAZARDOUS WASTE MANIFEST

Pleas	e print or type (Form designed for use on elite (12 pitch) typewriter)					
	NON-HAZARDOUS 1. Generator's US EP/ WASTE MANIFEST	A ID No.		Manifest Document No.	٠	2. Page 1 of
	3. Generator's Name and Mailing Address					
	2729 ((1)	Washington, NC				
	Soon as to					A
	4. Generator's Pnone ( )	6 US EPA ID Number		A State Trans	ortor'a ID	
	HERR INC	WARDOR/288/1		A. State Trans	1 Phone 010_6	10-2607
	7 Transporter 2 Company Name	8. US EPA ID Number		C. State Transi	porter's ID	40-2007
		1		D. Transporter	2 Phone	/
	9. Designated Facility Name and Site Address HERR, INC.	10. US EPA ID Number		E. State Facilit	y's ID	
	303 S. MAULTSBY ST. WHITEVILLE, NC 28472	NCR-000139816		F. Facility's Ph	one 910-6	40-2607
	11. WASTE DESCRIPTION		12. Cor No.	ntainers Type	13. Total Quantity	14. Unit Wt./Vol.
	a. NON-REG. PETROLEUM CONTACT WATE	R	1	TT	405	GAL.
GE	b.					η
NE						
RAT	с.				2	
0						
R	d.					
	G. Additonal Descriptions for Materials Listed Above			H. Handling C	odes for Wastes Listed Ab	oove
		74612)			-	
	(HEKK JOB #KCIO	1102			10	
		13			(P)	1.77
			l.			
	15. Special Handling Instructions and Additional Information	•				
		•			· .	· ·
	<ol> <li>GENERATOR'S CERTIFICATION: I hereby certify that the contents of the in proper condition for transport. The materials described on this manifest</li> </ol>	nis shipment are fully and accurately described are not subject to federal hazardous waste re	and are in gulations.	all respects		
					Г	
		: Signature 4	1			Date
	On b-hallen CDOT Have 1600	Carto Am	A	e	N.	7 12812
Т	17. Transporter 1 Acknowledgement of Receipt of Materials					Date
R	Printed/Typed Name	Signature /	1 .	÷	N	fonth Day Year
S	Broly Williams	MA	h			7 128 21
0 0	18. Transporter 2 Acknowledgement of Receipt of Materials				1	Date
T	Printed/Typed Name	Signature			N	Ionth Day Year
R						
F	19. Discrepancy indication space					
1	20. Facility Owner or Operator; Certification of receipt of the waste materia	s covered by this maifest, except as noted in it	em 19.			
		0		0		Date
T	Printed/Typed Name	Signature A		X		Month Day, Year
ľ	DOT STAQUAND	- year	1	P	/	11019
F-1	4 © 2002 LABELI ASTER (800) 621-5808 www.labelmaster.com	PRINTED ON RECYCLED PAP		TED WITH		Rev. 3/95

**NON-HAZARDOUS WASTE** 

### **APPENDIX D**

### **CHAIN-OF-CUSTODY**



ORIGINAL	Space)	SC DTHEF	LANDFIL D NC D	BRWNFLD	RCRA:	NC SC NC SC	ass P = Plastic		SC SC C = C	C GROUND	In Fed Ex     UPS     Hand-d       NPDES:     UST:     UST:       In C In SC     In C In Sc     In C In Sc       In C In Sc     In C In Sc     In Sc       In C In Sc     In C In Sc     In Sc       In Sc     In Sc
SFE REVERSE FOR		30(8	COC Grou	E LABORATORY,	REGERATION TO THE DRATORY.	SEALS FOR TRAN	UT WITH CUSTODY	BE TAPED SHI	TED AND VEI	S ARE NOT ACCEP	Method of Shipment: NOTE: AL SAMPLE:
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Field Tech Fee:		Sic	Date			(entre	Received By. (Sign			Maria .	Relinguished By: (Signature)
Site Departure Time:	Hours Additional Comments:	21 131	7/29	1		vature)	Received By Trige			Vers	Keinquished By: (Signature)
Site Arrival Time:	ges must be	ve. Any chan zed.	uested abo been initiali	analyses as req analyses have	y changes after	Analytical to pi charges for an	er. There will be	authorizatic oject Manag	dy is your alytical Pro	thain of Culu	Upon relinquishing, this submitted in writing to the
LAB USE ONLY	8	Intern	liation 5	Affi	lie Sik	ame) Ju	led By (Print Na	Samp	bles	ulie (	Sampler's Signature
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		××	x	1		10		N	1300	7 28 21	GN-1
MARKS ID NO.	A CONTRACTOR NET	JAK C	100 52	TIVES	SIZE	OW NO.	R, OR *TYPE OGE) SEE BEL	S SLUE	HOURS	COLLECTED	SAMPLE DESCRIPTION
	QUESTED	ANALYSIS RE	1.5/	ESERVA-	IER	AMPLE CONTAIN	RIX S.	MAT (SO	COLLECT	DATE	CLIENT
AMPLING PERSONNEL	BE FILLEDIN BY CLIENT/S rtification: NC SC Other N/A ater Chlorinated: YES N mples Iced Upon Collection	s Be Co	s 5 Days Work Must 8 Approved ay s and holiday ICES	3 Days I 4 Day 3 Days I 4 Day 10 days I Pres- d next business d d next business d weluding weekend REGARDING SERV , LLC TO CLIENT)	Ing Reference lay 2 Days 2 Days Standard 0 will be processe 0 will be	e Order No./Bi d Due Date D 1 E Days" D 6-9 eccived after 15:0 eccived after 15:0 d time is based or REVERSE FOR TER REVERSE FOR TER	Purchas Requester "Working Samples n Turnarioun (SEE	NC 17	a ton	Address:	Phone: 447 858- Email Address: 1014 EDD Type: PDF Ex Site Location Name: Site Location Physical Site Location Physical
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°°°° ▼× × ≫≪1             	Received IN ICE? Received IN ICE? ROPER PRESERVATIVES indicated Received WITHIN HOLDING TIMES? USTODY SEALS INTACT?	IIV)	evel Tim	UST Proje eporting (QC L	(Ves) (Vo) oject specific r Requirements	Name: Por old Analysis ATTACH any p ns and/or OC F	Project I Short Ho *Please provision	109 109	AL riotte, NC 2 704/525-0	ANALYTIC rook Road · Che 529-6364 · Fas 529-6364 · Fas 529-6364 · Fas	449 Springbi Phone 704 Client Company Name Report To/Contact Nan
YES NO NA	LAB USE O	RD	ECO	ODY R	E # TOENSURE PR	AIN OI	PAGE			boin	Wav

### **APPENDIX E**

### LABORATORY ANALYTICAL REPORT





8/10/2021

Synterra Corporation - Cary Harrison Carter 511 Keisler Dr. Cary, NC, 2758

Ref: Analytical Testing Lab Report Number: 21-211-0017 Client Project Description: Parcel 65

Dear Harrison Carter:

Waypoint Analytical, LLC (Charlotte) received sample(s) on 7/30/2021 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 were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2012) unless otherwise indicated.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an asreceived 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,

Angela D Overcash Senior 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.



### **Certification Summary**

### Laboratory ID: WP CNC: Waypoint Analytical Carolina, Inc. (C), Charlotte, NC

State	Program	Lab ID	Expiration Date
North Carolina	State Program	37735	07/31/2022
North Carolina	State Program	402	12/31/2021
South Carolina	State Program	99012	07/31/2021
South Carolina	State Program	99012	12/31/2021



#### Sample Summary Table

Report Nu Client Pro	mber: ject Description:	21-211-0017 Parcel 65	7		
Lab No	Client Sample ID		Matrix	Date Collected	Date Received
92706	GW-1		Aqueous	07/28/2021 13:00	07/30/2021
92707	GW-2		Aqueous	07/28/2021 16:00	07/30/2021



#### Summary of Detected Analytes

Project:

**Report Number:** 

Parcel 65 21-211-0017

Client Sample ID	Lab Sample ID					
Method	Parameters	Result	Units	<b>Report Limit</b>	Analyzed	Qualifiers
GW-1	V 92706					
6200B	Acetone	2.87	µg/L	1.80	08/03/2021 15:22	J
6200B	Ethylbenzene	0.234	µg/L	0.170	08/03/2021 15:22	J
6200B	Toluene	0.346	µg/L	0.220	08/03/2021 15:22	J
6200B	1,2,4-Trimethylbenzene	1.05	µg/L	0.190	08/03/2021 15:22	
6200B	1,3,5-Trimethylbenzene	0.340	µg/L	0.180	08/03/2021 15:22	J
6200B	o-Xylene	0.468	µg/L	0.210	08/03/2021 15:22	J
6200B	m,p-Xylene	0.830	µg/L	0.420	08/03/2021 15:22	J
6200B	Xylene (Total)	1.30	µg/L	0.210	08/03/2021 15:22	J
MADEP-VPH	Aliphatic C9-C12	27.5	µg/L	25.8	07/30/2021 17:03	J
GW-2	V 92707					
6200B	Acetone	4.80	µg/L	1.80	08/03/2021 17:00	J
6200B	n-Butylbenzene	1.01	µg/L	0.180	08/03/2021 17:00	
6200B	sec-Butyl benzene	2.33	µg/L	0.200	08/03/2021 17:00	
6200B	Ethylbenzene	0.436	µg/L	0.170	08/03/2021 17:00	J
6200B	Isopropylbenzene	1.10	µg/L	0.180	08/03/2021 17:00	
6200B	4-Isopropyl toluene	1.59	µg/L	0.089	08/03/2021 17:00	
6200B	Naphthalene	4.27	µg/L	0.470	08/03/2021 17:00	
6200B	n-Propylbenzene	1.73	µg/L	0.190	08/03/2021 17:00	
6200B	1,2,4-Trimethylbenzene	6.30	µg/L	0.190	08/03/2021 17:00	
6200B	1,3,5-Trimethylbenzene	2.38	µg/L	0.180	08/03/2021 17:00	
MADEP-EPH	Aliphatic C9-C18	151	µg/L	28.2	08/09/2021 22:06	J
MADEP-EPH	Aromatic C11-C22	197	µg/L	61.2	08/09/2021 22:06	J
MADEP-VPH	Aliphatic C9-C12	267	µg/L	25.8	07/30/2021 17:32	
MADEP-VPH	Aromatic C9-C10	117	µg/L	4.02	07/30/2021 17:32	



Client: Synterra Corporation - Cary Project: Parcel 65 Lab Report Number: 21-211-0017 Date: 8/10/2021

#### CASE NARRATIVE

### 625.1 - Base/Neutrals and Acids by GC/MS Method 625.1

Sample 92707 (GW-2) QC Batch No: V7251/V7150 Surrogate(s) were flagged for re-

Surrogate(s) were flagged for recoveries in the associated project sample. During the extraction step, the extraction technician noted that a significant emulsion formed. Batch QC samples (Method Blank and Laboratory Control Samples) all showed surrogate recoveries within QC limits, indicating that the biased recoveries were due to the sample matrix.

Analyte: Benzoic Acid

#### QC Batch No: V7251/V7150

Analyte was flagged for 0% recovery in the LCS due to the result being below the MQL. The actual result was 16 ug/L which calculates to a recovery of 32% which is within the acceptable recovery range.

Analyte: Hexachlorobutadiene

QC Batch No: V7251/V7150

Analyte was flagged for 0% recovery in the LCS due to the result being below the MQL. The actual result was 13.87 ug/L which calculates to a recovery of 27.7% which is within the acceptable recovery range.

Analyte: Hexachlorocyclopentadiene QC Batch No: V7251/V7150 Analyte was flagged for 0% recovery in the LCS due to the result being below the MQL. The actual result was 12.3 ug/L which calculates to a recovery of 24.6% which is below the acceptable recovery range.

Analyte: Pentachlorophenol QC Batch No: V7251/V7150 Analyte was flagged for 0% recovery in the LCS due to the result being below the MQL. The actual result was 42.76 ug/L which calculates to a recovery of 85.5% which is within the acceptable recovery range.

#### Massachusetts EPH Method MADEP-EPH

Sample 92707 (GW-2) Analyte: Chlorooctadecane QC Batch No: V7419/V7234 Surrogate(s) were flagged for recoveries in the associated project sample. During the extraction step, the extraction technician noted that a significant emulsion formed. Batch QC samples (Method Blank and Laboratory Control Samples) all showed surrogate recoveries within QC limits, indicating that the biased recoveries were due to the sample matrix.

Analyte: o-Terphenyl

QC Batch No: V7419/V7234

Surrogate(s) were flagged for recoveries in the associated project sample. During the extraction step, the extraction technician noted that a significant emulsion formed. Batch QC samples (Method Blank and Laboratory Control Samples) all showed surrogate recoveries within QC limits, indicating that the biased recoveries were due to the sample matrix.



449 Springbrook Rd, Charlotte, NC 28217 Main 704.529.6364 www.waypointanalytical.com

Synterra Corporation - Cary Harrison Carter 511 Keisler Dr. Cary, NC 2758

Project Parcel 65

Information :

Report Date : 08/10/2021 Received : 07/30/2021

Matrix: Aqueous

Sampled: 7/28/2021 13:00

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No : **92706** Sample ID : **GW-1** 

Analytical Method: 6200B Prep Method: 6200 PT		Pre	Prep Batch(es): V7231			08/03/21 09:00				
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch	
Acetone		2.87 J	µg/L	1.80	10.0	1	08/03/21 15:22	JLB	V7233	
Benzene		<0.180	µg/L	0.180	0.500	1	08/03/21 15:22	JLB	V7233	
Bromobenzene		<0.210	µg/L	0.210	0.500	1	08/03/21 15:22	JLB	V7233	
Bromochloromethane		<0.420	µg/L	0.420	1.00	1	08/03/21 15:22	JLB	V7233	
Bromodichloromethane	2	<0.160	µg/L	0.160	0.500	1	08/03/21 15:22	JLB	V7233	
Bromoform		<1.50	µg/L	1.50	5.00	1	08/03/21 15:22	JLB	V7233	
Bromomethane		<0.280	µg/L	0.280	1.00	1	08/03/21 15:22	JLB	V7233	
n-Butylbenzene		<0.180	µg/L	0.180	0.500	1	08/03/21 15:22	JLB	V7233	
sec-Butyl benzene		<0.200	µg/L	0.200	0.500	1	08/03/21 15:22	JLB	V7233	
tert-Butyl benzene		<0.920	µg/L	0.920	2.00	1	08/03/21 15:22	JLB	V7233	
Carbon Tetrachloride		<0.180	µg/L	0.180	0.500	1	08/03/21 15:22	JLB	V7233	
Chlorobenzene		<0.190	µg/L	0.190	0.500	1	08/03/21 15:22	JLB	V7233	
Chlorodibromomethane	9	<0.190	µg/L	0.190	0.500	1	08/03/21 15:22	JLB	V7233	
Chloroethane		<0.430	µg/L	0.430	1.00	1	08/03/21 15:22	JLB	V7233	
Chloroform		<0.220	µg/L	0.220	0.500	1	08/03/21 15:22	JLB	V7233	
Chloromethane		<0.220	µg/L	0.220	0.500	1	08/03/21 15:22	JLB	V7233	
2-Chlorotoluene		<0.200	µg/L	0.200	0.500	1	08/03/21 15:22	JLB	V7233	
4-Chlorotoluene		<0.200	µg/L	0.200	0.500	1	08/03/21 15:22	JLB	V7233	
Di-Isopropyl Ether (DIPE)		<0.500	µg/L	0.500	0.500	1	08/03/21 15:22	JLB	V7233	
1,2-Dibromo-3-Chloropropane		<1.10	µg/L	1.10	2.00	1	08/03/21 15:22	JLB	V7233	
1,2-Dibromoethane		<0.200	µg/L	0.200	0.500	1	08/03/21 15:22	JLB	V7233	
Dibromomethane		<0.230	µg/L	0.230	0.500	1	08/03/21 15:22	JLB	V7233	

Qualifiers/ Definitions \*

J

Outside QC Limit Estimated value Dilution Factor

DF

MQL Method Quantitation Limit



449 Springbrook Rd, Charlotte, NC 28217 Main 704.529.6364 www.waypointanalytical.com

Synterra Corporation - Cary Harrison Carter 511 Keisler Dr. Cary, NC 2758

Project Parcel 65

Report Date : 08/10/2021 Received : 07/30/2021

Matrix: Aqueous

Sampled: 7/28/2021 13:00

Information :

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No : **92706** Sample ID : **GW-1** 

Analytical Method: 6200B Prep Method: 6200 PT		Pre	V7231	08/03/21 09:00					
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
1,2-Dichlorobenzene		<0.220	µg/L	0.220	0.500	1	08/03/21 15:22	JLB	V7233
1,3-Dichlorobenzene		<0.190	µg/L	0.190	0.500	1	08/03/21 15:22	JLB	V7233
1,4-Dichlorobenzene		<0.210	µg/L	0.210	0.500	1	08/03/21 15:22	JLB	V7233
Dichlorodifluoromethar	ne	<1.20	µg/L	1.20	5.00	1	08/03/21 15:22	JLB	V7233
1,1-Dichloroethane		<0.240	µg/L	0.240	0.500	1	08/03/21 15:22	JLB	V7233
1,2-Dichloroethane		<0.150	µg/L	0.150	0.500	1	08/03/21 15:22	JLB	V7233
1,1-Dichloroethene		<0.150	µg/L	0.150	0.500	1	08/03/21 15:22	JLB	V7233
cis-1,2-Dichloroethene		<0.200	µg/L	0.200	0.500	1	08/03/21 15:22	JLB	V7233
trans-1,2-Dichloroethene		<0.180	µg/L	0.180	0.500	1	08/03/21 15:22	JLB	V7233
1,2-Dichloropropane		<0.190	µg/L	0.190	0.500	1	08/03/21 15:22	JLB	V7233
1,3-Dichloropropane		<0.130	µg/L	0.130	0.500	1	08/03/21 15:22	JLB	V7233
2,2-Dichloropropane		<0.210	µg/L	0.210	2.00	1	08/03/21 15:22	JLB	V7233
1,1-Dichloropropene		<0.200	µg/L	0.200	0.500	1	08/03/21 15:22	JLB	V7233
cis-1,3-Dichloropropen	e	<0.210	µg/L	0.210	0.500	1	08/03/21 15:22	JLB	V7233
trans-1,3-Dichloroprop	ene	<0.150	µg/L	0.150	0.500	1	08/03/21 15:22	JLB	V7233
Ethanol		<42.0	µg/L	42.0	200	1	08/03/21 15:22	JLB	V7233
Ethylbenzene		0.234 J	µg/L	0.170	0.500	1	08/03/21 15:22	JLB	V7233
Hexachlorobutadiene		<0.350	µg/L	0.350	3.00	1	08/03/21 15:22	JLB	V7233
2-Hexanone <		<0.380	µg/L	0.380	1.00	1	08/03/21 15:22	JLB	V7233
Isopropylbenzene <		<0.180	µg/L	0.180	0.500	1	08/03/21 15:22	JLB	V7233
4-Isopropyl toluene		<0.089	µg/L	0.089	0.500	1	08/03/21 15:22	JLB	V7233
Methyl Ethyl Ketone (MEK)		<0.710	µg/L	0.710	5.00	1	08/03/21 15:22	JLB	V7233

Qualifiers/ Definitions \*

J

Outside QC Limit Estimated value DF Dilution Factor

MQL Method Quantitation Limit



449 Springbrook Rd, Charlotte, NC 28217 Main 704.529.6364 www.waypointanalytical.com

Synterra Corporation - Cary Harrison Carter 511 Keisler Dr. Cary, NC 2758

Project Parcel 65

Information :

Report Date : 08/10/2021 Received : 07/30/2021

Matrix: Aqueous

Sampled: 7/28/2021 13:00

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No : **92706** Sample ID : **GW-1** 

Analytical Methody	(200P								
Prep Method:	6200B 6200 PT	Pre	ep Batch(es):	V7231	08/03/21 09:00				
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
Methyl tert-butyl ether	(MTBE)	<0.140	µg/L	0.140	1.00	1	08/03/21 15:22	JLB	V7233
4-Methyl-2-Pentanone		<0.078	µg/L	0.078	1.00	1	08/03/21 15:22	JLB	V7233
Methylene Chloride		<0.330	µg/L	0.330	2.00	1	08/03/21 15:22	JLB	V7233
Naphthalene		<0.470	µg/L	0.470	1.00	1	08/03/21 15:22	JLB	V7233
n-Propylbenzene		<0.190	µg/L	0.190	0.500	1	08/03/21 15:22	JLB	V7233
Styrene		<0.220	µg/L	0.220	0.500	1	08/03/21 15:22	JLB	V7233
1,1,1,2-Tetrachloroetha	ane	<0.160	µg/L	0.160	0.500	1	08/03/21 15:22	JLB	V7233
1,1,2,2-Tetrachloroetha	ane	<0.160	µg/L	0.160	0.500	1	08/03/21 15:22	JLB	V7233
Tetrachloroethene		<0.220	µg/L	0.220	0.500	1	08/03/21 15:22	JLB	V7233
Toluene		0.346 J	µg/L	0.220	0.500	1	08/03/21 15:22	JLB	V7233
1,2,3-Trichlorobenzene		<0.380	µg/L	0.380	0.500	1	08/03/21 15:22	JLB	V7233
1,2,4-Trichlorobenzene		<0.310	µg/L	0.310	0.500	1	08/03/21 15:22	JLB	V7233
1,1,1-Trichloroethane		<0.160	µg/L	0.160	0.500	1	08/03/21 15:22	JLB	V7233
1,1,2-Trichloroethane		<0.096	µg/L	0.096	0.500	1	08/03/21 15:22	JLB	V7233
Trichloroethene		<0.180	µg/L	0.180	0.500	1	08/03/21 15:22	JLB	V7233
Trichlorofluoromethane		<0.180	µg/L	0.180	0.500	1	08/03/21 15:22	JLB	V7233
1,2,3-Trichloropropane		<0.270	µg/L	0.270	0.500	1	08/03/21 15:22	JLB	V7233
1,2,4-Trimethylbenzene		1.05	µg/L	0.190	0.500	1	08/03/21 15:22	JLB	V7233
1,3,5-Trimethylbenzene		0.340 J	µg/L	0.180	0.500	1	08/03/21 15:22	JLB	V7233
Vinyl Acetate		<1.00	µg/L	1.00	5.00	1	08/03/21 15:22	JLB	V7233
Vinyl Chloride		<0.170	µg/L	0.170	0.500	1	08/03/21 15:22	JLB	V7233
o-Xylene		0.468 J	µg/L	0.210	0.500	1	08/03/21 15:22	JLB	V7233

Qualifiers/ Definitions

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J

Outside QC Limit Estimated value Dilution Factor

DF

MQL Method Quantitation Limit


Synterra Corporation - CaryProjectParcel 65Harrison Carter1Information :511 Keisler Dr.Information :Cary , NC 2758

Report Date : 08/10/2021 Received : 07/30/2021

Report Number : 21-211-0017

Analytical Method: 625.1

625.1 (Prep)

Prep Method:

**REPORT OF ANALYSIS** 

Lab No : <b>92706</b> Sample ID : <b>GW-1</b>							Matrix: Sampled:	Aqueo 7/28/2	us 2021 13:00
Analytical Method: Prep Method:	6200B 6200 PT		Prep Batch(es):	V7231	08/03/2:	L 09:0	0		
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
m,p-Xylene		0.830 J	µg/L	0.420	1.00	1	08/03/21 15:22	JLB	V7233
Xylene (Total)		1.30 J	µg/L	0.210	0.500	1	08/03/21 15:22		V7233
Surrogate: 4-E	Bromofluorobenzene		98.6	Limit	ts: 70-130%		1 08/03/21 15:2	22 JLB	V7233
Surrogate: Dib	promofluoromethane		97.4	Limit	ts: 70-130%		1 08/03/21 15:2	22 JLB	V7233
Surrogate: 1,2	2-Dichloroethane - d4		89.2	Limit	ts: 70-130%		1 08/03/21 15:2	22 JLB	V7233
Surrogate: To	luene-d8		91.8	Limit	ts: 70-130%		1 08/03/21 15:2	22 JLB	V7233

Prep Batch(es): V7150 08/02/21 10:00

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
Acenaphthene	<7.40	ua/l	7 40	10.4	1	08/02/21 18:45	1MV	V7251
Acenaphthylene	<7.10	µg/L	7.10	20.8	1	08/02/21 18:45	JMV	V7251 V7251
Anthracene	<6.83	µg/L	6.83	10.4	1	08/02/21 18:45	JMV	V7251
Benzidine	<5.28	µg/L	5.28	10.4	1	08/02/21 18:45	JMV	V7251
Benzo(a)anthracene	<6.92	µg/L	6.92	10.4	1	08/02/21 18:45	JMV	V7251
Benzo(a)pyrene	<4.86	µg/L	4.86	10.4	1	08/02/21 18:45	JMV	V7251
Benzo(b)fluoranthene	<4.70	µg/L	4.70	10.4	1	08/02/21 18:45	JMV	V7251
Benzo(g,h,i)perylene	<4.41	µg/L	4.41	10.4	1	08/02/21 18:45	JMV	V7251
Benzo(k)fluoranthene	<5.05	µg/L	5.05	10.4	1	08/02/21 18:45	JMV	V7251
Benzoic Acid	<12.0	µg/L	12.0	52.1	1	08/02/21 18:45	JMV	V7251
Benzyl alcohol	<8.94	µg/L	8.94	10.4	1	08/02/21 18:45	JMV	V7251
Bis(2-Chloroethoxy)methane	<5.90	µg/L	5.90	10.4	1	08/02/21 18:45	JMV	V7251

Qualifiers/ Definitions Outside QC Limit Estimated value

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J

Dilution Factor

DF



Synterra Corporation - Cary Harrison Carter 511 Keisler Dr. Cary , NC 2758

Project Parcel 65

Information :

Report Date : 08/10/2021 Received : 07/30/2021

Matrix: Aqueous

Sampled: 7/28/2021 13:00

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No : **92706** Sample ID : **GW-1** 

Analytical Method: Prep Method:	625.1 625.1 (Prep)	Pre	ep Batch(es):	V7150	08/02/2	21 10:0	0		
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
Bis(2-Chloroethyl)ethe	r	<7.59	µg/L	7.59	10.4	1	08/02/21 18:45	JMV	V7251
Bis(2-Chloroisopropyl)	ether	<6.85	µg/L	6.85	10.4	1	08/02/21 18:45	JMV	V7251
Bis(2-ethylhexyl)phtha	late	<9.15	µg/L	9.15	10.4	1	08/02/21 18:45	JMV	V7251
4-Bromophenyl phenyl	ether	<6.51	µg/L	6.51	20.8	1	08/02/21 18:45	JMV	V7251
Butyl benzyl phthalate		<4.71	µg/L	4.71	10.4	1	08/02/21 18:45	JMV	V7251
4-Chloro-3-methylpher	nol	<5.44	µg/L	5.44	10.4	1	08/02/21 18:45	JMV	V7251
2-Chloronaphthalene		<7.68	µg/L	7.68	20.8	1	08/02/21 18:45	JMV	V7251
2-Chlorophenol		<6.84	µg/L	6.84	10.4	1	08/02/21 18:45	JMV	V7251
4-Chlorophenyl phenyl	ether	<7.27	µg/L	7.27	20.8	1	08/02/21 18:45	JMV	V7251
Chrysene		<5.60	µg/L	5.60	10.4	1	08/02/21 18:45	JMV	V7251
Dibenz(a,h)anthracene	2	<6.25	µg/L	6.25	20.8	1	08/02/21 18:45	JMV	V7251
Dibenzofuran		<5.28	µg/L	5.28	20.8	1	08/02/21 18:45	JMV	V7251
1,2-Dichlorobenzene		<6.15	µg/L	6.15	10.4	1	08/02/21 18:45	JMV	V7251
1,3-Dichlorobenzene		<6.06	µg/L	6.06	10.4	1	08/02/21 18:45	JMV	V7251
1,4-Dichlorobenzene		<6.15	µg/L	6.15	10.4	1	08/02/21 18:45	JMV	V7251
3,3'-Dichlorobenzidine		<6.86	µg/L	6.86	10.4	1	08/02/21 18:45	JMV	V7251
2,4-Dichlorophenol		<5.76	µg/L	5.76	10.4	1	08/02/21 18:45	JMV	V7251
Diethyl phthalate		<9.72	µg/L	9.72	20.8	1	08/02/21 18:45	JMV	V7251
Dimethyl phthalate		<8.13	µg/L	8.13	10.4	1	08/02/21 18:45	JMV	V7251
2,4-Dimethylphenol		<11.4	µg/L	11.4	20.8	1	08/02/21 18:45	JMV	V7251
Di-n-butyl phthalate		<7.64	µg/L	7.64	10.4	1	08/02/21 18:45	JMV	V7251
4,6-Dinitro-2-methylph	nenol	<10.3	µg/L	10.3	31.3	1	08/02/21 18:45	JMV	V7251

Qualifiers/ Definitions \*

J

Outside QC Limit Estimated value DF Dilution Factor



Synterra Corporation - Cary Harrison Carter 511 Keisler Dr. Cary, NC 2758

Project Parcel 65

Information :

Report Date : 08/10/2021 Received : 07/30/2021

Matrix: Aqueous

Sampled: 7/28/2021 13:00

Report Number : 21-211-0017

REPORT OF ANALYSIS

Lab No : **92706** Sample ID : **GW-1** 

Analytical Method:625.1Prep Method:625.1 (Prep)		Pr	Prep Batch(es): V7150			21 10:0			
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
2,4-Dinitrophenol		<11.1	µg/L	11.1	31.3	1	08/02/21 18:45	JMV	V7251
2,4-Dinitrotoluene		<5.41	µg/L	5.41	10.4	1	08/02/21 18:45	JMV	V7251
2,6-Dinitrotoluene		<6.14	µg/L	6.14	20.8	1	08/02/21 18:45	JMV	V7251
Di-n-Octyl Phthalate		<5.21	µg/L	5.21	10.4	1	08/02/21 18:45	JMV	V7251
Fluoranthene		<6.27	µg/L	6.27	10.4	1	08/02/21 18:45	JMV	V7251
Fluorene		<7.56	µg/L	7.56	10.4	1	08/02/21 18:45	JMV	V7251
Hexachlorobenzene		<5.98	µg/L	5.98	20.8	1	08/02/21 18:45	JMV	V7251
Hexachlorobutadiene		<6.12	µg/L	6.12	20.8	1	08/02/21 18:45	JMV	V7251
Hexachlorocyclopentadi	ene	<6.14	µg/L	6.14	20.8	1	08/02/21 18:45	JMV	V7251
Hexachloroethane		<5.43	µg/L	5.43	10.4	1	08/02/21 18:45	JMV	V7251
Indeno(1,2,3-cd)pyrene	2	<6.45	µg/L	6.45	10.4	1	08/02/21 18:45	JMV	V7251
Isophorone		<6.98	µg/L	6.98	10.4	1	08/02/21 18:45	JMV	V7251
Naphthalene		<8.20	µg/L	8.20	10.4	1	08/02/21 18:45	JMV	V7251
Nitrobenzene		<8.20	µg/L	8.20	10.4	1	08/02/21 18:45	JMV	V7251
2-Nitrophenol		<5.71	µg/L	5.71	10.4	1	08/02/21 18:45	JMV	V7251
4-Nitrophenol		<2.92	µg/L	2.92	10.4	1	08/02/21 18:45	JMV	V7251
N-Nitrosodiphenylamine	2	<11.4	µg/L	11.4	20.8	1	08/02/21 18:45	JMV	V7251
N-Nitroso-di-n-propylan	nine	<8.42	µg/L	8.42	20.8	1	08/02/21 18:45	JMV	V7251
Pentachlorophenol		<10.1	µg/L	10.1	52.1	1	08/02/21 18:45	JMV	V7251
Phenanthrene		<6.59	µg/L	6.59	10.4	1	08/02/21 18:45	JMV	V7251
Phenol		<2.97	µg/L	2.97	10.4	1	08/02/21 18:45	JMV	V7251
Pyrene		<5.64	µg/L	5.64	10.4	1	08/02/21 18:45	JMV	V7251

Qualifiers/ Definitions

Outside QC Limit Estimated value

\*

J

DF Dilution Factor



Synterra Corporation - Cary Project Harrison Carter 511 Keisler Dr. Information : Cary, NC 2758

Parcel 65

Report Date : 08/10/2021 Received : 07/30/2021

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No : 92706 Sample ID : GW-1

Matrix: Aqueous Sampled: 7/28/2021 13:00

Analytical Method: Prep Method:	625.1 625.1 (Prep)	Prep Batch(es): V7150 08/02/21 10					10:00					
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch			
1,2,4-Trichlorobenzene	2	<6.50	µg/L	6.50	10.4	1	08/02/21 18:45	JMV	V7251			
2,4,6-Trichlorophenol		<6.54	µg/L	6.54	20.8	1	08/02/21 18:45	JMV	V7251			
Surrogate: Phe	enol-d5	2	7.9	Limite	s: 10-63%		1 08/02/21 18:4	5 JMV	V7251			
Surrogate: 2-F	luorobiphenyl	6	9.7	Limits	s: 49-118%		1 08/02/21 18:4	5 JMV	V7251			
Surrogate: 2-F	luorophenol	38	8.3	Limits	s: 22-84%		1 08/02/21 18:4	5 JMV	V7251			
Surrogate: Nitr	robenzene-d5	6	6.0	Limits	s: 43-123%		1 08/02/21 18:4	5 JMV	V7251			
Surrogate: 4-T	erphenyl-d14	93	2.5	Limits	s: 49-151%		1 08/02/21 18:4	5 JMV	V7251			
Surrogate: 2,4	,6-Tribromophenol	9	1.8	Limits	s: 31-144%		1 08/02/21 18:4	5 JMV	V7251			

**Qualifiers/** \* Outside QC Limit Definitions J Estimated value



Synterra Corporation - Cary Harrison Carter 511 Keisler Dr. Cary, NC 2758

Project Parcel 65

Information :

Report Date : 08/10/2021 Received : 07/30/2021

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No : **92706** Sample ID : **GW-1**  Matrix: **Aqueous** Sampled: **7/28/2021 13:00** 

Analytical Method: Prep Method:	MADEP-EPH MAEPH (Prep)	Prep Batch(es):		V7234	08/04/2	1 10:3	0		
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
Aliphatic C9-C18		<28.2	µg/L	28.2	350	1	08/09/21 21:30	ZRC	V7419
Aliphatic C19-C36		<124	µg/L	124	500	1	08/09/21 21:30	ZRC	V7419
Aromatic C11-C22		<61.2	µg/L	61.2	250	1	08/09/21 21:30	ZRC	V7419
Surrogate: 2-B	Bromonaphthalene		84.5	Limit	s: 40-140%		1 08/09/21 21:3	30 ZRC	V7419
Surrogate: Chl	orooctadecane		55.5	Limit	s: 40-140%		1 08/09/21 21:3	30 ZRC	V7419
Surrogate: OT	P Surrogate		75.0	Limit	s: 40-140%		1 08/09/21 21:3	30 ZRC	V7419
Surrogate: 2-F	luorobiphenyl		87.3	Limit	s: 40-140%		1 08/09/21 21:3	30 ZRC	V7419
Analytical Method: Prep Method:	MADEP-VPH MAVPH (Prep)	P	Prep Batch(es):	V7128	07/30/2:	1 08:0	0		
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
Aliphatic C5-C8		<11.5	µg/L	11.5	50.0	1	07/30/21 17:03	TBL	V7130
Aliphatic C9-C12		27.5 J	µg/L	25.8	50.0	1	07/30/21 17:03	TBL	V7130
Aromatic C9-C10		<4.02	µg/L	4.02	50.0	1	07/30/21 17:03	TBL	V7130
Surrogate: 2,5	-Dibromotoluene (FID)		101	Limit	s: 70-130%		1 07/30/21 17:0	)3 TBL	V7130
Surrogate: 2,5	-Dibromotoluene (PID)		96.4	Limit	s: 70-130%		1 07/30/21 17:0	)3 TBL	V7130

Qualifiers/ Definitions \*

J

Outside QC Limit Estimated value



Synterra Corporation - Cary Harrison Carter 511 Keisler Dr. Cary, NC 2758

Project Parcel 65

Information :

Report Date : 08/10/2021 Received : 07/30/2021

Matrix: Aqueous

Sampled: 7/28/2021 16:00

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No : **92707** Sample ID : **GW-2** 

Analytical Method: Prep Method:	6200B 6200 PT	Pro	ep Batch(es):	V7231	08/03/2	21 09:0	0		
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
Acetone		4.80 J	µg/L	1.80	10.0	1	08/03/21 17:00	JLB	V7233
Benzene		<0.180	µg/L	0.180	0.500	1	08/03/21 17:00	JLB	V7233
Bromobenzene		<0.210	µg/L	0.210	0.500	1	08/03/21 17:00	JLB	V7233
Bromochloromethane		<0.420	µg/L	0.420	1.00	1	08/03/21 17:00	JLB	V7233
Bromodichloromethane	2	<0.160	µg/L	0.160	0.500	1	08/03/21 17:00	JLB	V7233
Bromoform		<1.50	µg/L	1.50	5.00	1	08/03/21 17:00	JLB	V7233
Bromomethane		<0.280	µg/L	0.280	1.00	1	08/03/21 17:00	JLB	V7233
n-Butylbenzene		1.01	µg/L	0.180	0.500	1	08/03/21 17:00	JLB	V7233
sec-Butyl benzene		2.33	µg/L	0.200	0.500	1	08/03/21 17:00	JLB	V7233
tert-Butyl benzene		<0.920	µg/L	0.920	2.00	1	08/03/21 17:00	JLB	V7233
Carbon Tetrachloride		<0.180	µg/L	0.180	0.500	1	08/03/21 17:00	JLB	V7233
Chlorobenzene		<0.190	µg/L	0.190	0.500	1	08/03/21 17:00	JLB	V7233
Chlorodibromomethan	9	<0.190	µg/L	0.190	0.500	1	08/03/21 17:00	JLB	V7233
Chloroethane		<0.430	µg/L	0.430	1.00	1	08/03/21 17:00	JLB	V7233
Chloroform		<0.220	µg/L	0.220	0.500	1	08/03/21 17:00	JLB	V7233
Chloromethane		<0.220	µg/L	0.220	0.500	1	08/03/21 17:00	JLB	V7233
2-Chlorotoluene		<0.200	µg/L	0.200	0.500	1	08/03/21 17:00	JLB	V7233
4-Chlorotoluene		<0.200	µg/L	0.200	0.500	1	08/03/21 17:00	JLB	V7233
Di-Isopropyl Ether (DI	PE)	<0.500	µg/L	0.500	0.500	1	08/03/21 17:00	JLB	V7233
1,2-Dibromo-3-Chlorop	propane	<1.10	µg/L	1.10	2.00	1	08/03/21 17:00	JLB	V7233
1,2-Dibromoethane		<0.200	µg/L	0.200	0.500	1	08/03/21 17:00	JLB	V7233
Dibromomethane		<0.230	µg/L	0.230	0.500	1	08/03/21 17:00	JLB	V7233

Qualifiers/ Definitions \*

J

Outside QC Limit Estimated value Dilution Factor

DF



Synterra Corporation - Cary Harrison Carter 511 Keisler Dr. Cary, NC 2758

Project Parcel 65

Information :

Report Date : 08/10/2021 Received : 07/30/2021

Matrix: Aqueous

Sampled: 7/28/2021 16:00

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No : **92707** Sample ID : **GW-2** 

Analytical Method:6200BPrep Method:6200 PT	Prep Batch(es): V7231				08/03/21 09:00				
Test R	Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch	
1,2-Dichlorobenzene <(	0.220	µg/L	0.220	0.500	1	08/03/21 17:00	JLB	V7233	
1,3-Dichlorobenzene <(	0.190	µg/L	0.190	0.500	1	08/03/21 17:00	JLB	V7233	
1,4-Dichlorobenzene <(	0.210	µg/L	0.210	0.500	1	08/03/21 17:00	JLB	V7233	
Dichlorodifluoromethane	<1.20	µg/L	1.20	5.00	1	08/03/21 17:00	JLB	V7233	
1,1-Dichloroethane <(	0.240	µg/L	0.240	0.500	1	08/03/21 17:00	JLB	V7233	
1,2-Dichloroethane <(	0.150	µg/L	0.150	0.500	1	08/03/21 17:00	JLB	V7233	
1,1-Dichloroethene <(	0.150	µg/L	0.150	0.500	1	08/03/21 17:00	JLB	V7233	
cis-1,2-Dichloroethene <(	0.200	µg/L	0.200	0.500	1	08/03/21 17:00	JLB	V7233	
trans-1,2-Dichloroethene <(	0.180	µg/L	0.180	0.500	1	08/03/21 17:00	JLB	V7233	
1,2-Dichloropropane <(	0.190	µg/L	0.190	0.500	1	08/03/21 17:00	JLB	V7233	
1,3-Dichloropropane <(	0.130	µg/L	0.130	0.500	1	08/03/21 17:00	JLB	V7233	
2,2-Dichloropropane <(	0.210	µg/L	0.210	2.00	1	08/03/21 17:00	JLB	V7233	
1,1-Dichloropropene <(	0.200	µg/L	0.200	0.500	1	08/03/21 17:00	JLB	V7233	
cis-1,3-Dichloropropene <(	0.210	µg/L	0.210	0.500	1	08/03/21 17:00	JLB	V7233	
trans-1,3-Dichloropropene <(	0.150	µg/L	0.150	0.500	1	08/03/21 17:00	JLB	V7233	
Ethanol	<42.0	µg/L	42.0	200	1	08/03/21 17:00	JLB	V7233	
Ethylbenzene 0	).436 J	µg/L	0.170	0.500	1	08/03/21 17:00	JLB	V7233	
Hexachlorobutadiene <(	0.350	µg/L	0.350	3.00	1	08/03/21 17:00	JLB	V7233	
2-Hexanone <(	0.380	µg/L	0.380	1.00	1	08/03/21 17:00	JLB	V7233	
Isopropylbenzene	1.10	µg/L	0.180	0.500	1	08/03/21 17:00	JLB	V7233	
4-Isopropyl toluene	1.59	µg/L	0.089	0.500	1	08/03/21 17:00	JLB	V7233	
Methyl Ethyl Ketone (MEK) <0	0.710	µg/L	0.710	5.00	1	08/03/21 17:00	JLB	V7233	

Qualifiers/ Definitions \*

J

Outside QC Limit Estimated value Dilution Factor

DF



Synterra Corporation - Cary Harrison Carter 511 Keisler Dr. Cary , NC 2758

Project Parcel 65

Information :

Report Date : 08/10/2021 Received : 07/30/2021

Matrix: Aqueous

Sampled: 7/28/2021 16:00

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No : **92707** Sample ID : **GW-2** 

Analytical Method: Prep Method:	6200B 6200 PT	Prep Batch(es): V7231 08/03/21 09:00							
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
Methyl tert-butyl ether	(MTBE)	<0.140	µg/L	0.140	1.00	1	08/03/21 17:00	JLB	V7233
4-Methyl-2-Pentanone		<0.078	µg/L	0.078	1.00	1	08/03/21 17:00	JLB	V7233
Methylene Chloride		<0.330	µg/L	0.330	2.00	1	08/03/21 17:00	JLB	V7233
Naphthalene		4.27	µg/L	0.470	1.00	1	08/03/21 17:00	JLB	V7233
n-Propylbenzene		1.73	µg/L	0.190	0.500	1	08/03/21 17:00	JLB	V7233
Styrene		<0.220	µg/L	0.220	0.500	1	08/03/21 17:00	JLB	V7233
1,1,1,2-Tetrachloroeth	ane	<0.160	µg/L	0.160	0.500	1	08/03/21 17:00	JLB	V7233
1,1,2,2-Tetrachloroeth	ane	<0.160	µg/L	0.160	0.500	1	08/03/21 17:00	JLB	V7233
Tetrachloroethene		<0.220	µg/L	0.220	0.500	1	08/03/21 17:00	JLB	V7233
Toluene		<0.220	µg/L	0.220	0.500	1	08/03/21 17:00	JLB	V7233
1,2,3-Trichlorobenzene	2	<0.380	µg/L	0.380	0.500	1	08/03/21 17:00	JLB	V7233
1,2,4-Trichlorobenzene	2	<0.310	µg/L	0.310	0.500	1	08/03/21 17:00	JLB	V7233
1,1,1-Trichloroethane		<0.160	µg/L	0.160	0.500	1	08/03/21 17:00	JLB	V7233
1,1,2-Trichloroethane		<0.096	µg/L	0.096	0.500	1	08/03/21 17:00	JLB	V7233
Trichloroethene		<0.180	µg/L	0.180	0.500	1	08/03/21 17:00	JLB	V7233
Trichlorofluoromethan	е	<0.180	µg/L	0.180	0.500	1	08/03/21 17:00	JLB	V7233
1,2,3-Trichloropropane	9	<0.270	µg/L	0.270	0.500	1	08/03/21 17:00	JLB	V7233
1,2,4-Trimethylbenzen	e	6.30	µg/L	0.190	0.500	1	08/03/21 17:00	JLB	V7233
1,3,5-Trimethylbenzen	e	2.38	µg/L	0.180	0.500	1	08/03/21 17:00	JLB	V7233
Vinyl Acetate		<1.00	µg/L	1.00	5.00	1	08/03/21 17:00	JLB	V7233
Vinyl Chloride		<0.170	µg/L	0.170	0.500	1	08/03/21 17:00	JLB	V7233
o-Xylene		<0.210	µg/L	0.210	0.500	1	08/03/21 17:00	JLB	V7233

Qualifiers/ Definitions Outside QC Limit Estimated value

\*

J

Dilution Factor

DF



Synterra Corporation - CaryProjectParcel 65Harrison Carter511 Keisler Dr.Information :Cary , NC 2758

Report Date : 08/10/2021 Received : 07/30/2021

Matrix: **Aqueous** Sampled: **7/28/2021 16:00** 

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No :	92707
Sample ID	: <b>GW-2</b>

Analytical Method: Prep Method:	6200B 6200 PT	Pr	rep Batch(es):	V7231	<b>V7231</b> 08/03/21 09:00				
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
m,p-Xylene		<0.420	µg/L	0.420	1.00	1	08/03/21 17:00	JLB	V7233
Xylene (Total)		<0.21	µg/L	0.210	0.500	1	08/03/21 17:00		V7233
Surrogate: 4-B	romofluorobenzene	ç	95.2	Limits	s: 70-130%		1 08/03/21 17:0	0 JLB	V7233
Surrogate: Dib	romofluoromethane	ç	98.8	Limits	s: 70-130%		1 08/03/21 17:0	0 JLB	V7233
Surrogate: 1,2-Dichloroethane - d4		8	39.8	Limits	s: 70-130%		1 08/03/21 17:0	0 JLB	V7233
Surrogate: Toluene-d8		ç	91.4	Limits	s: 70-130%		1 08/03/21 17:0	0 JLB	V7233
Analytical Method:	625.1	Рг	ep Batch(es):	V7150	08/02/2	1 10:0	)		
Prep Method:	625.1 (Prep)								
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
Acenaphthene		<8.40	µg/L	8.40	11.8	1	08/02/21 19:07	JMV	V7251
Acenaphthylene		<8.15	µg/L	8.15	23.5	1	08/02/21 19:07	JMV	V7251
Anthracene		<7.75	µg/L	7.75	11.8	1	08/02/21 19:07	JMV	V7251
Benzidine		<5.99	µg/L	5.99	11.8	1	08/02/21 19:07	JMV	V7251
Benzo(a)anthracene		<7.85	µg/L	7.85	11.8	1	08/02/21 19:07	JMV	V7251
Benzo(a)pyrene		<5.51	µg/L	5.51	11.8	1	08/02/21 19:07	JMV	V7251
Benzo(b)fluoranthene		<5.33	µg/L	5.33	11.8	1	08/02/21 19:07	JMV	V7251
Benzo(g,h,i)perylene		<5.00	µg/L	5.00	11.8	1	08/02/21 19:07	JMV	V7251
Benzo(k)fluoranthene		<5.73	µg/L	5.73	11.8	1	08/02/21 19:07	JMV	V7251
Benzoic Acid		<13.5	µg/L	13.5	58.8	1	08/02/21 19:07	JMV	V7251
Benzyl alcohol		<10.1	µg/L	10.1	11.8	1	08/02/21 19:07	JMV	V7251
Bis(2-Chloroethoxy)me	thane	<6.69	µg/L	6.69	11.8	1	08/02/21 19:07	JMV	V7251

Qualifiers/ Definitions \*

J

Outside QC Limit Estimated value Dilution Factor

DF



Synterra Corporation - Cary Harrison Carter 511 Keisler Dr. Cary, NC 2758

Project Parcel 65

Information :

Report Date : 08/10/2021 Received : 07/30/2021

Matrix: Aqueous

Sampled: 7/28/2021 16:00

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No : **92707** Sample ID : **GW-2** 

Analytical Method:	625.1	Pre	ep Batch(es):	V7150	08/02/2	21 10.00	n		
Prep Method:	625.1 (Prep)			17 100	00,02,2	1 10.00			
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
Bis(2-Chloroethyl)ether		<8.61	µg/L	8.61	11.8	1	08/02/21 19:07	JMV	V7251
Bis(2-Chloroisopropyl)e	ther	<7.78	µg/L	7.78	11.8	1	08/02/21 19:07	JMV	V7251
Bis(2-ethylhexyl)phthala	ate	<10.4	µg/L	10.4	11.8	1	08/02/21 19:07	JMV	V7251
4-Bromophenyl phenyl	ether	<7.36	µg/L	7.36	23.5	1	08/02/21 19:07	JMV	V7251
Butyl benzyl phthalate		<5.35	µg/L	5.35	11.8	1	08/02/21 19:07	JMV	V7251
4-Chloro-3-methylpheno	lc	<6.17	µg/L	6.17	11.8	1	08/02/21 19:07	JMV	V7251
2-Chloronaphthalene		<8.67	µg/L	8.67	23.5	1	08/02/21 19:07	JMV	V7251
2-Chlorophenol		<7.76	µg/L	7.76	11.8	1	08/02/21 19:07	JMV	V7251
4-Chlorophenyl phenyl	ether	<8.21	µg/L	8.21	23.5	1	08/02/21 19:07	JMV	V7251
Chrysene		<6.35	µg/L	6.35	11.8	1	08/02/21 19:07	JMV	V7251
Dibenz(a,h)anthracene		<7.06	µg/L	7.06	23.5	1	08/02/21 19:07	JMV	V7251
Dibenzofuran		<5.97	µg/L	5.97	23.5	1	08/02/21 19:07	JMV	V7251
1,2-Dichlorobenzene		<6.97	µg/L	6.97	11.8	1	08/02/21 19:07	JMV	V7251
1,3-Dichlorobenzene		<6.88	µg/L	6.88	11.8	1	08/02/21 19:07	JMV	V7251
1,4-Dichlorobenzene		<6.97	µg/L	6.97	11.8	1	08/02/21 19:07	JMV	V7251
3,3'-Dichlorobenzidine		<7.79	µg/L	7.79	11.8	1	08/02/21 19:07	JMV	V7251
2,4-Dichlorophenol		<6.54	µg/L	6.54	11.8	1	08/02/21 19:07	JMV	V7251
Diethyl phthalate		<11.0	µg/L	11.0	23.5	1	08/02/21 19:07	JMV	V7251
Dimethyl phthalate		<9.23	µg/L	9.23	11.8	1	08/02/21 19:07	JMV	V7251
2,4-Dimethylphenol		<12.9	µg/L	12.9	23.5	1	08/02/21 19:07	JMV	V7251
Di-n-butyl phthalate <8.6		<8.67	µg/L	8.67	11.8	1	08/02/21 19:07	JMV	V7251
4,6-Dinitro-2-methylphe	enol	<11.7	µg/L	11.7	35.3	1	08/02/21 19:07	JMV	V7251

Qualifiers/ Definitions \*

J

Outside QC Limit Estimated value DF Dilution Factor



Synterra Corporation - Cary Harrison Carter 511 Keisler Dr. Cary, NC 2758

Project Parcel 65

Information :

Report Date : 08/10/2021 Received : 07/30/2021

Matrix: Aqueous

Sampled: 7/28/2021 16:00

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No : **92707** Sample ID : **GW-2** 

Analytical Method: 62	25.1 25.1 (Pren)	Prep Bato	ch(es): V	/7150	08/02/21	10:00	)		
Test	Resu	ılts Uı	nits I	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
2,4-Dinitrophenol	<12	.5 µg	g/L	12.5	35.3	1	08/02/21 19:07	JMV	V7251
2,4-Dinitrotoluene	<6.3	.4 µg	g/L	6.14	11.8	1	08/02/21 19:07	JMV	V7251
2,6-Dinitrotoluene	<6.9	93 Hé	g/L	6.93	23.5	1	08/02/21 19:07	JMV	V7251
Di-n-Octyl Phthalate	<5.9	91 Þ.	g/L	5.91	11.8	1	08/02/21 19:07	JMV	V7251
Fluoranthene	<7.1	.2 µ9	g/L	7.12	11.8	1	08/02/21 19:07	JMV	V7251
Fluorene	<8.5	58 Þý	g/L	8.58	11.8	1	08/02/21 19:07	JMV	V7251
Hexachlorobenzene	<6.7	76 μ <u>ά</u>	g/L	6.76	23.5	1	08/02/21 19:07	JMV	V7251
Hexachlorobutadiene	<6.9	91 Þ.	g/L	6.91	23.5	1	08/02/21 19:07	JMV	V7251
Hexachlorocyclopentadien	e <6.9	)3 hi	g/L	6.93	23.5	1	08/02/21 19:07	JMV	V7251
Hexachloroethane	<6.1	.6 µ	g/L	6.16	11.8	1	08/02/21 19:07	JMV	V7251
Indeno(1,2,3-cd)pyrene	<7.3	32 µg	g/L	7.32	11.8	1	08/02/21 19:07	JMV	V7251
Isophorone	<7.9	)2 µ	g/L	7.92	11.8	1	08/02/21 19:07	JMV	V7251
Naphthalene	<9.3	30 há	g/L	9.30	11.8	1	08/02/21 19:07	JMV	V7251
Nitrobenzene	<9.3	30 Þý	g/L	9.30	11.8	1	08/02/21 19:07	JMV	V7251
2-Nitrophenol	<6.4	18 Há	g/L	6.48	11.8	1	08/02/21 19:07	JMV	V7251
4-Nitrophenol	<3.3	32 µg	g/L	3.32	11.8	1	08/02/21 19:07	JMV	V7251
N-Nitrosodiphenylamine	<12	.8 þ	g/L	12.8	23.5	1	08/02/21 19:07	JMV	V7251
N-Nitroso-di-n-propylamin	e <9.5	52 Þ.	g/L	9.52	23.5	1	08/02/21 19:07	JMV	V7251
Pentachlorophenol	<11	.4 µg	g/L	11.4	58.8	1	08/02/21 19:07	JMV	V7251
Phenanthrene	<7.4	18 Há	g/L	7.48	11.8	1	08/02/21 19:07	JMV	V7251
Phenol	<3.3	37 Þ.	g/L	3.37	11.8	1	08/02/21 19:07	JMV	V7251
Pyrene	<6.4	io hi	g/L	6.40	11.8	1	08/02/21 19:07	JMV	V7251

Qualifiers/ Definitions Outside QC Limit Estimated value

\*

J

DF Dilution Factor



Synterra Corporation - CaryProjectParcel 65Harrison Carter11Information :511 Keisler Dr.Information :Cary , NC 2758

Report Date : 08/10/2021 Received : 07/30/2021

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No : **92707** Sample ID : **GW-2**  Matrix: **Aqueous** Sampled: **7/28/2021 16:00** 

Analytical Method: Prep Method:	625.1 625.1 (Prep)	Ρ	rep Batch(es):	V7150	08/02/2	1 10:0	0		
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
1,2,4-Trichlorobenzene	9	<7.38	µg/L	7.38	11.8	1	08/02/21 19:07	JMV	V7251
2,4,6-Trichlorophenol		<7.39	µg/L	7.39	23.5	1	08/02/21 19:07	JMV	V7251
Surrogate: Phe	enol-d5	5	5.25 *	Limit	s: 10-63%		1 08/02/21 19:0	7 JMV	V7251
Surrogate: 2-F	luorobiphenyl	1	L <b>4.9</b> *	Limit	s: 49-118%		1 08/02/21 19:0	)7 JMV	V7251
Surrogate: 2-F	luorophenol	e	5.19 *	Limit	s: 22-84%		1 08/02/21 19:0	)7 JMV	V7251
Surrogate: Nitr	robenzene-d5	t	L <b>4.1</b> *	Limit	s: 43-123%		1 08/02/21 19:0	7 JMV	V7251
Surrogate: 4-T	erphenyl-d14	1	L9.6 *	Limit	s: 49-151%		1 08/02/21 19:0	)7 JMV	V7251
Surrogate: 2,4	,6-Tribromophenol	7	<b>7.51</b> *	Limit	s: 31-144%		1 08/02/21 19:0	)7 JMV	V7251



Synterra Corporation - Cary Harrison Carter 511 Keisler Dr. Cary, NC 2758

Project Parcel 65

Information :

Report Date : 08/10/2021 Received : 07/30/2021

Report Number : 21-211-0017

**REPORT OF ANALYSIS** 

Lab No : **92707** Sample ID : **GW-2**  Matrix: **Aqueous** Sampled: **7/28/2021 16:00** 

Analytical Method: Prep Method:	MADEP-EPH MAEPH (Prep)	Pr	ep Batch(es):	V7234	08/04/21	1 10:3	0		
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
Aliphatic C9-C18		151 J	μg/L	28.2	350	1	08/09/21 22:06	ZRC	V7419
Aliphatic C19-C36		<124	µg/L	124	500	1	08/09/21 22:06	ZRC	V7419
Aromatic C11-C22		197 J	µg/L	61.2	250	1	08/09/21 22:06	ZRC	V7419
Surrogate: 2-B	romonaphthalene	:	102	Limit	s: 40-140%		1 08/09/21 22:0	6 ZRC	V7419
Surrogate: Chl	orooctadecane	9	.50 *	Limit	s: 40-140%		1 08/09/21 22:0	6 ZRC	V7419
Surrogate: OT	P Surrogate	1	2.4 *	Limit	s: 40-140%		1 08/09/21 22:0	6 ZRC	V7419
Surrogate: 2-F	luorobiphenyl	9	2.0	Limit	s: 40-140%		1 08/09/21 22:0	6 ZRC	V7419
Analytical Method: Prep Method:	MADEP-VPH MAVPH (Prep)	Pr	ep Batch(es):	V7128	07/30/21	1 08:0	0		
Test		Results	Units	MDL	MQL	DF	Date / Time Analyzed	Ву	Analytical Batch
Aliphatic C5-C8		<11.5	µg/L	11.5	50.0	1	07/30/21 17:32	TBL	V7130
Aliphatic C9-C12		267	µg/L	25.8	50.0	1	07/30/21 17:32	TBL	V7130
Aromatic C9-C10		117	µg/L	4.02	50.0	1	07/30/21 17:32	TBL	V7130
Surrogate: 2,5	-Dibromotoluene (FID)	:	110	Limit	s: 70-130%		1 07/30/21 17:3	32 TBL	V7130
Surrogate: 2,5	-Dibromotoluene (PID)		107	Limit	s: 70-130%		1 07/30/21 17:3	32 TBL	V7130

Qualifiers/ Definitions \*

J

Outside QC Limit Estimated value



Client ID:	Synterra Corpora	tion - Cary	/				
Project Description:	Parcel 65						
	21-211-0017						
QC Prep: QC Prep Batch Method:	6200 PT			QC Analytica Analysis Met	hod: 6200B		
				Analysis Des	cription: Volatile Org	anic Compounds - GC/N	15
Lab Reagent Blank Associated Lab Samples: 9	2706, 92707	LRB-V72	31	Matı	rix: AQU		
Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
Acetone	µg/L	<1.80	1.80	10.0	08/03/21 12:54		
Benzene	µg/L	<0.180	0.180	0.500	08/03/21 12:54		
Bromobenzene	µg/L	<0.210	0.210	0.500	08/03/21 12:54		
Bromochloromethane	µg/L	<0.420	0.420	1.00	08/03/21 12:54		
Bromodichloromethane	µg/L	<0.160	0.160	0.500	08/03/21 12:54		
Bromoform	µg/L	<1.50	1.50	5.00	08/03/21 12:54		
Bromomethane	µg/L	<0.280	0.280	1.00	08/03/21 12:54		
n-Butylbenzene	µg/L	<0.180	0.180	0.500	08/03/21 12:54		
sec-Butyl benzene	µg/L	<0.200	0.200	0.500	08/03/21 12:54		
tert-Butyl benzene	µg/L	<0.920	0.920	2.00	08/03/21 12:54		
Carbon Tetrachloride	µg/L	<0.180	0.180	0.500	08/03/21 12:54		
Chlorobenzene	µg/L	<0.190	0.190	0.500	08/03/21 12:54		
Chlorodibromomethane	µg/L	<0.190	0.190	0.500	08/03/21 12:54		
Chloroethane	µg/L	<0.430	0.430	1.00	08/03/21 12:54		
Chloroform	µg/L	<0.220	0.220	0.500	08/03/21 12:54		
Chloromethane	µg/L	<0.220	0.220	0.500	08/03/21 12:54		
2-Chlorotoluene	µg/L	<0.200	0.200	0.500	08/03/21 12:54		
4-Chlorotoluene	µg/L	<0.200	0.200	0.500	08/03/21 12:54		
Di-Isopropyl Ether (DIPE)	µg/L	<0.500	0.500	0.500	08/03/21 12:54		
1,2-Dibromo-3-Chloropropan	e μg/L	<1.10	1.10	2.00	08/03/21 12:54		
1,2-Dibromoethane	µg/L	<0.200	0.200	0.500	08/03/21 12:54		
Dibromomethane	µg/L	<0.230	0.230	0.500	08/03/21 12:54		
1,2-Dichlorobenzene	µg/L	<0.220	0.220	0.500	08/03/21 12:54		
1,3-Dichlorobenzene	µg/L	<0.190	0.190	0.500	08/03/21 12:54		
1,4-Dichlorobenzene	µg/L	<0.210	0.210	0.500	08/03/21 12:54		
Dichlorodifluoromethane	µg/L	<1.20	1.20	5.00	08/03/21 12:54		
1,1-Dichloroethane	µg/L	<0.240	0.240	0.500	08/03/21 12:54		

Date: 08/10/2021 01:51 PM



Client ID:	Synterra Corpora	tion - Cary	/				
Project Description:	Parcel 65						
Report No:	21-211-0017						
QC Prep: QC Prep Batch Method:	V7231 6200 PT			QC Analytica Analysis Me Analysis Des	al Batch(es): V7233 thod: 6200B scription: Volatile Org	anic Compounds - GC/I	٩S
Lab Reagent Blank Associated Lab Samples: 9	2706, 92707	LRB-V72	31	Ma	trix: AQU		
Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
1,2-Dichloroethane	µg/L	<0.150	0.150	0.500	08/03/21 12:54		
1,1-Dichloroethene	µg/L	<0.150	0.150	0.500	08/03/21 12:54		
cis-1,2-Dichloroethene	µg/L	<0.200	0.200	0.500	08/03/21 12:54		
trans-1,2-Dichloroethene	µg/L	<0.180	0.180	0.500	08/03/21 12:54		
1,2-Dichloropropane	µg/L	<0.190	0.190	0.500	08/03/21 12:54		
1,3-Dichloropropane	µg/L	<0.130	0.130	0.500	08/03/21 12:54		
2,2-Dichloropropane	µg/L	<0.210	0.210	2.00	08/03/21 12:54		
1,1-Dichloropropene	µg/L	<0.200	0.200	0.500	08/03/21 12:54		
cis-1,3-Dichloropropene	µg/L	<0.210	0.210	0.500	08/03/21 12:54		
trans-1,3-Dichloropropene	µg/L	<0.150	0.150	0.500	08/03/21 12:54		
Ethanol	µg/L	<42.0	42.0	200	08/03/21 12:54		
Ethylbenzene	µg/L	<0.170	0.170	0.500	08/03/21 12:54		
Hexachlorobutadiene	µg/L	<0.350	0.350	3.00	08/03/21 12:54		
2-Hexanone	µg/L	<0.380	0.380	1.00	08/03/21 12:54		
Isopropylbenzene	µg/L	<0.180	0.180	0.500	08/03/21 12:54		
4-Isopropyl toluene	µg/L	<0.089	0.089	0.500	08/03/21 12:54		
Methyl Ethyl Ketone (MEK)	µg/L	<0.710	0.710	5.00	08/03/21 12:54		
Methyl tert-butyl ether (MTBE	i) µg/L	<0.140	0.140	1.00	08/03/21 12:54		
4-Methyl-2-Pentanone	µg/L	<0.078	0.078	1.00	08/03/21 12:54		
Methylene Chloride	µg/L	<0.330	0.330	2.00	08/03/21 12:54		
Naphthalene	µg/L	<0.470	0.470	1.00	08/03/21 12:54		
n-Propylbenzene	µg/L	<0.190	0.190	0.500	08/03/21 12:54		
Styrene	µg/L	<0.220	0.220	0.500	08/03/21 12:54		
1,1,1,2-Tetrachloroethane	µg/L	<0.160	0.160	0.500	08/03/21 12:54		
1,1,2,2-Tetrachloroethane	µg/L	<0.160	0.160	0.500	08/03/21 12:54		
Tetrachloroethene	µg/L	<0.220	0.220	0.500	08/03/21 12:54		
Toluene	µg/L	<0.220	0.220	0.500	08/03/21 12:54		

Date: 08/10/2021 01:51 PM



Client ID:	Synterra Corpora	tion - Cary	/					
Project Description:	Parcel 65							
Report No:	21-211-0017							
QC Prep: QC Prep Batch Method:	V7231 6200 PT			QC Analytical Analysis Meth Analysis Desc	Batch(es): od: ription:	V7233 6200B Volatile Organ	ic Compounds - GC/MS	
Lab Reagent Blank Associated Lab Samples:	92706, 92707	LRB-V72	31	Matri	x: AQU			
Parameter	Units	Blank Result	MDL	MQL	An	alyzed	% Recovery	% Rec Limits
1,2,3-Trichlorobenzene	µg/L	<0.380	0.380	0.500	08/03	3/21 12:54		
1,2,4-Trichlorobenzene	µg/L	<0.310	0.310	0.500	08/03	3/21 12:54		
1,1,1-Trichloroethane	µg/L	<0.160	0.160	0.500	08/03	3/21 12:54		
1,1,2-Trichloroethane	µg/L	<0.096	0.096	0.500	08/03	3/21 12:54		
Trichloroethene	µg/L	<0.180	0.180	0.500	08/03	3/21 12:54		
Trichlorofluoromethane	µg/L	<0.180	0.180	0.500	08/03	3/21 12:54		
1,2,3-Trichloropropane	µg/L	<0.270	0.270	0.500	08/03	3/21 12:54		
1,2,4-Trimethylbenzene	µg/L	<0.190	0.190	0.500	08/03	3/21 12:54		
1,3,5-Trimethylbenzene	µg/L	<0.180	0.180	0.500	08/03	3/21 12:54		
Vinyl Acetate	µg/L	<1.00	1.00	5.00	08/03	3/21 12:54		
Vinyl Chloride	µg/L	<0.170	0.170	0.500	08/03	3/21 12:54		
o-Xylene	µg/L	<0.210	0.210	0.500	08/03	3/21 12:54		
m,p-Xylene	µg/L	<0.420	0.420	1.00	08/03	3/21 12:54		
4-Bromofluorobenzene (S)					08/03	3/21 12:54	96.4	70-130
Dibromofluoromethane (S)					08/03	3/21 12:54	95.8	70-130
1,2-Dichloroethane - d4 (S)					08/03	3/21 12:54	87.6	70-130
Toluene-d8 (S)					08/03	3/21 12:54	91.6	70-130

Laboratory Control Sample & LCSD

Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
µg/L	40.0	39.4	39.0	98.5	97.5	40-160	1.0	20.0
µg/L	20.0	20.8	20.4	104	102	70-130	1.9	20.0
µg/L	20.0	17.0	15.9	85.0	79.5	70-130	6.6	20.0
µg/L	20.0	23.0	22.6	115	113	70-130	1.7	20.0
µg/L	20.0	21.4	20.9	107	105	70-130	2.3	20.0
	<b>Units</b> μg/L μg/L μg/L μg/L μg/L	Units         Spike Conc.           μg/L         40.0           μg/L         20.0           μg/L         20.0           μg/L         20.0           μg/L         20.0           μg/L         20.0           μg/L         20.0	Units         Spike Conc.         LCS Result           µg/L         40.0         39.4           µg/L         20.0         20.8           µg/L         20.0         17.0           µg/L         20.0         23.0           µg/L         20.0         21.4	Units         Spike Conc.         LCS Result         LCSD Result           µg/L         40.0         39.4         39.0           µg/L         20.0         20.8         20.4           µg/L         20.0         17.0         15.9           µg/L         20.0         23.0         22.6           µg/L         20.0         21.4         20.9	Units         Spike Conc.         LCS Result         LCSD Result         LCS Result           µg/L         40.0         39.4         39.0         98.5           µg/L         20.0         20.8         20.4         104           µg/L         20.0         17.0         15.9         85.0           µg/L         20.0         23.0         22.6         115           µg/L         20.0         21.4         20.9         107	Units         Spike Conc.         LCS Result         LCSD Result         LCS Mesult         Mesult         LCS Mesult         Mesult         LCS Mesult         Mesult         Mesult	Units         Spike Conc.         LCS Result         LCSD Result         LCSD %Rec         LCSD %Rec         % Rec Limits           µg/L         40.0         39.4         39.0         98.5         97.5         40-160           µg/L         20.0         20.8         20.4         104         102         70-130           µg/L         20.0         17.0         15.9         85.0         79.5         70-130           µg/L         20.0         23.0         22.6         115         113         70-130           µg/L         20.0         21.4         20.9         107         105         70-130	Units         Spike Conc.         LCS Result         LCS Result         LCS %Rec         LCS limits         RPD           µg/L         40.0         39.4         39.0         98.5         97.5         40-160         1.0           µg/L         20.0         20.8         20.4         104         102         70-130         1.9           µg/L         20.0         17.0         15.9         85.0         79.5         70-130         6.6           µg/L         20.0         23.0         22.6         115         113         70-130         1.7           µg/L         20.0         21.4         20.9         107         105         70-130         2.3



Client ID:	Synterra Corporation - Cary		
Project Description:	Parcel 65		
Report No:	21-211-0017		
QC Prep:	V7231	QC Analytical Batch(es):	V7233
QC Prep Batch Method:	6200 PT	Analysis Method: Analysis Description:	6200B Volatile Organic Compounds - GC/MS

Laboratory Control Sample & LCSD

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
Bromoform	µg/L	20.0	21.3	19.4	107	97.0	70-130	9.3	20.0
Bromomethane	µg/L	20.0	20.7	19.3	104	96.5	60-140	7.0	20.0
n-Butylbenzene	µg/L	20.0	18.4	16.7	92.0	83.5	70-130	9.6	20.0
sec-Butyl benzene	µg/L	20.0	18.1	17.5	90.5	87.5	70-130	3.3	20.0
tert-Butyl benzene	µg/L	20.0	18.3	18.1	91.5	90.5	70-130	1.0	20.0
Carbon Tetrachloride	µg/L	20.0	23.3	22.4	117	112	70-130	3.9	20.0
Chlorobenzene	µg/L	20.0	19.5	19.2	97.5	96.0	70-130	1.5	20.0
Chlorodibromomethane	µg/L	20.0	20.7	20.3	104	102	70-130	1.9	20.0
Chloroethane	µg/L	20.0	20.0	19.8	100	99.0	60-140	1.0	20.0
Chloroform	µg/L	20.0	20.4	19.9	102	99.5	70-130	2.4	20.0
Chloromethane	µg/L	20.0	20.4	20.4	102	102	60-140	0.0	20.0
2-Chlorotoluene	µg/L	20.0	18.3	17.6	91.5	88.0	70-130	3.8	20.0
4-Chlorotoluene	µg/L	20.0	17.8	17.1	89.0	85.5	70-130	4.0	20.0
Di-Isopropyl Ether (DIPE)	µg/L	20.0	19.7	19.8	98.5	99.0	70-130	0.5	20.0
1,2-Dibromo-3-Chloropropane	µg/L	20.0	20.0	20.8	100	104	70-130	3.9	20.0
1,2-Dibromoethane	µg/L	20.0	21.2	20.3	106	102	70-130	4.3	20.0
Dibromomethane	µg/L	20.0	20.6	20.7	103	104	70-130	0.4	20.0
1,2-Dichlorobenzene	µg/L	20.0	18.6	18.2	93.0	91.0	70-130	2.1	20.0
1,3-Dichlorobenzene	µg/L	20.0	18.4	18.3	92.0	91.5	70-130	0.5	20.0
1,4-Dichlorobenzene	µg/L	20.0	18.4	17.9	92.0	89.5	70-130	2.7	20.0
Dichlorodifluoromethane	µg/L	20.0	18.3	17.8	91.5	89.0	60-140	2.7	20.0
1,1-Dichloroethane	µg/L	20.0	20.6	20.2	103	101	70-130	1.9	20.0
1,2-Dichloroethane	µg/L	20.0	20.1	19.6	101	98.0	70-130	2.5	20.0
1,1-Dichloroethene	µg/L	20.0	20.9	20.5	105	103	70-130	1.9	20.0
cis-1,2-Dichloroethene	µg/L	20.0	19.6	19.5	98.0	97.5	70-130	0.5	20.0
trans-1,2-Dichloroethene	µg/L	20.0	20.6	20.2	103	101	70-130	1.9	20.0



Client ID:	Synterra Corporation - Cary		
Project Description:	Parcel 65		
Report No:	21-211-0017		
QC Prep:	V7231	QC Analytical Batch(es):	V7233
QC Prep Batch Method:	6200 PT	Analysis Method:	6200B
		Analysis Description:	Volatile Organic Compounds - GC/MS

Laboratory Control Sample & LCSD

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
1,2-Dichloropropane	µg/L	20.0	19.7	19.3	98.5	96.5	70-130	2.0	20.0
1,3-Dichloropropane	µg/L	20.0	19.1	18.9	95.5	94.5	70-130	1.0	20.0
2,2-Dichloropropane	µg/L	20.0	24.6	20.5	123	103	70-130	18.1	20.0
1,1-Dichloropropene	µg/L	20.0	20.4	20.6	102	103	70-130	0.9	20.0
cis-1,3-Dichloropropene	μg/L	20.0	22.0	21.6	110	108	70-130	1.8	20.0
trans-1,3-Dichloropropene	μg/L	20.0	23.3	22.4	117	112	70-130	3.9	20.0
Ethanol	μg/L	500	519	597	104	119	60-140	13.9	20.0
Ethylbenzene	μg/L	20.0	19.3	18.3	96.5	91.5	70-130	5.3	20.0
Hexachlorobutadiene	μg/L	20.0	20.1	21.2	101	106	70-130	5.3	20.0
2-Hexanone	μg/L	20.0	17.9	18.4	89.5	92.0	60-140	2.7	20.0
Isopropylbenzene	μg/L	20.0	18.2	20.8	91.0	104	70-130	13.3	20.0
4-Isopropyl toluene	μg/L	20.0	18.4	17.4	92.0	87.0	70-130	5.5	20.0
Methyl Ethyl Ketone (MEK)	μg/L	20.0	17.1	18.0	85.5	90.0	60-140	5.1	20.0
Methyl tert-butyl ether (MTBE)	μg/L	20.0	24.5	22.8	123	114	70-130	7.1	20.0
4-Methyl-2-Pentanone	μg/L	20.0	19.0	19.5	95.0	97.5	60-140	2.5	20.0
Methylene Chloride	μg/L	20.0	18.8	18.1	94.0	90.5	70-130	3.7	20.0
Naphthalene	μg/L	20.0	21.7	18.7	109	93.5	70-130	14.8	20.0
n-Propylbenzene	μg/L	20.0	18.1	16.7	90.5	83.5	70-130	8.0	20.0
Styrene	μg/L	20.0	20.0	16.8	100	84.0	70-130	17.3	20.0
1,1,1,2-Tetrachloroethane	μg/L	20.0	21.2	18.8	106	94.0	70-130	12.0	20.0
1,1,2,2-Tetrachloroethane	μg/L	20.0	16.8	15.2	84.0	76.0	70-130	10.0	20.0
Tetrachloroethene	μg/L	20.0	20.7	20.5	104	103	70-130	0.9	20.0
Toluene	μg/L	20.0	20.9	20.7	105	104	70-130	0.9	20.0
1,2,3-Trichlorobenzene	μg/L	20.0	20.5	17.6	103	88.0	70-130	15.2	20.0
1,2,4-Trichlorobenzene	μg/L	20.0	20.7	19.0	104	95.0	70-130	8.5	20.0
1,1,1-Trichloroethane	μg/L	20.0	22.5	22.4	113	112	70-130	0.4	20.0



Client ID:	Synterra Corporation - Cary		
Project Description:	Parcel 65		
Report No:	21-211-0017		
QC Prep:	V7231	QC Analytical Batch(es):	V7233
QC Prep Batch Method:	6200 PT	Analysis Method:	6200B
		Analysis Description:	Volatile Organic Compounds - GC/MS

Laboratory Control Sample & LCSD

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
1,1,2-Trichloroethane	µg/L	20.0	21.4	21.2	107	106	70-130	0.9	20.0
Trichloroethene	µg/L	20.0	21.8	21.1	109	106	70-130	3.2	20.0
Trichlorofluoromethane	µg/L	20.0	21.0	20.4	105	102	60-140	2.8	20.0
1,2,3-Trichloropropane	µg/L	20.0	17.7	18.9	88.5	94.5	70-130	6.5	20.0
1,2,4-Trimethylbenzene	µg/L	20.0	18.2	18.0	91.0	90.0	70-130	1.1	20.0
1,3,5-Trimethylbenzene	µg/L	20.0	18.5	17.9	92.5	89.5	70-130	3.2	20.0
Vinyl Acetate	µg/L	20.0	24.8	24.5	124	123	60-140	1.2	20.0
Vinyl Chloride	µg/L	20.0	17.5	17.0	87.5	85.0	60-140	2.8	20.0
o-Xylene	µg/L	20.0	19.9	17.1	99.5	85.5	70-130	15.1	20.0
m,p-Xylene	µg/L	40.0	40.6	34.7	102	86.7	70-130	15.6	20.0
4-Bromofluorobenzene (S)					94.6	91.4	70-130		
Dibromofluoromethane (S)					97.4	96.2	70-130		
1,2-Dichloroethane - d4 (S)					91.6	91.8	70-130		
Toluene-d8 (S)					91.0	91.4	70-130		



Project Description:       Pa         Report No:       2:         QC Prep:       V         QC Prep Batch Method:       6	Arcel 65 I-211-0017 77150 25.1 (Prep) 706, 92707	LRB-V71	50	QC Analytic Analysis Mo Analysis De	cal Batch(es): \ ethod: 6	/7251			
Report No:   2:     QC Prep:   V     QC Prep Batch Method:   6	7150 25.1 (Prep) 706, 92707	LRB-V71	50	QC Analytic Analysis M Analysis De	cal Batch(es): \ ethod: 6	/7251			
QC Prep: V QC Prep Batch Method: 6	7150 25.1 (Prep) 706, 92707	LRB-V71	50	QC Analytic Analysis M Analysis De	cal Batch(es): \ ethod: 6	/7251			
	706, 92707	LRB-V71	50		escription: 6	525.1 525.1 - Base/I	Neutrals and Acids by	y GC/MS	
Lab Reagent Blank Associated Lab Samples: 927				M	atrix: AQU				
Parameter	Units	Blank Result	MDL	MQL	Anal	yzed	% Recovery	% Rec Limits	
Acenaphthene	µg/L	<7.12	7.12	10.0	08/02/	21 16:53			
Acenaphthylene	µg/L	<6.94	6.94	20.0	08/02/2	21 16:53			
Anthracene	µg/L	<6.57	6.57	10.0	08/02/2	21 16:53			
Benzidine	µg/L	<5.08	5.08	10.0	08/02/2	21 16:53			
Benzo(a)anthracene	µg/L	<6.65	6.65	10.0	08/02/2	21 16:53			
Benzo(a)pyrene	µg/L	<4.67	4.67	10.0	08/02/2	21 16:53			
Benzo(b)fluoranthene	µg/L	<4.52	4.52	10.0	08/02/2	21 16:53			
Benzo(g,h,i)perylene	µg/L	<4.24	4.24	10.0	08/02/2	21 16:53			
Benzo(k)fluoranthene	µg/L	<4.86	4.86	10.0	08/02/2	21 16:53			
Benzoic Acid	µg/L	<11.5	11.5	50.0	08/02/2	21 16:53			
Benzyl alcohol	µg/L	<8.60	8.60	10.0	08/02/2	21 16:53			
Bis(2-Chloroethoxy)methane	µg/L	<5.67	5.67	10.0	08/02/2	21 16:53			
Bis(2-Chloroethyl)ether	µg/L	<7.30	7.30	10.0	08/02/2	21 16:53			
Bis(2-Chloroisopropyl)ether	µg/L	<6.59	6.59	10.0	08/02/2	21 16:53			
Bis(2-ethylhexyl)phthalate	µg/L	<8.80	8.80	10.0	08/02/2	21 16:53			
4-Bromophenyl phenyl ether	µg/L	<6.26	6.26	20.0	08/02/2	21 16:53			
Butyl benzyl phthalate	µg/L	<4.53	4.53	10.0	08/02/2	21 16:53			
4-Chloro-3-methylphenol	µg/L	<5.23	5.23	10.0	08/02/2	21 16:53			
2-Chloronaphthalene	µg/L	<7.38	7.38	20.0	08/02/2	21 16:53			
2-Chlorophenol	µg/L	<6.58	6.58	10.0	08/02/2	21 16:53			
4-Chlorophenyl phenyl ether	µg/L	<6.99	6.99	20.0	08/02/2	21 16:53			
Chrysene	µg/L	<5.38	5.38	10.0	08/02/2	21 16:53			
Dibenz(a,h)anthracene	µg/L	<6.01	6.01	20.0	08/02/2	21 16:53			
Dibenzofuran	µg/L	<5.08	5.08	20.0	08/02/	21 16:53			
1,2-Dichlorobenzene	µg/L	<5.91	5.91	10.0	08/02/	21 16:53			
1,3-Dichlorobenzene	µg/L	<5.83	5.83	10.0	08/02/	21 16:53			
1,4-Dichlorobenzene	µg/L	<5.91	5.91	10.0	08/02/2	21 16:53			



Client ID:	Synterra Corpora	tion - Car	У				
Project Description:	Parcel 65						
Report No:	21-211-0017						
QC Prep: QC Prep Batch Method:	V7150 625.1 (Prep)	7150 25.1 (Prep)			QC Analytical Batch(es):         V7251           Analysis Method:         625.1           Analysis Description:         625.1 - Base/I		Acids by GC/MS
Lab Reagent Blank Associated Lab Samples:	92706, 92707	LRB-V71	50	М	atrix: AQU		
Parameter	Units	Blank Result	MDL	MQL	Analyzed	d % Recover	% Rec y Limits
3,3'-Dichlorobenzidine	µg/L	<6.60	6.60	10.0	08/02/21 1	6:53	
2,4-Dichlorophenol	µg/L	<5.54	5.54	10.0	08/02/21 1	6:53	
Diethyl phthalate	µg/L	<9.35	9.35	20.0	08/02/21 1	6:53	
Dimethyl phthalate	µg/L	<7.82	7.82	10.0	08/02/21 1	6:53	
2,4-Dimethylphenol	µg/L	<10.9	10.9	20.0	08/02/21 1	6:53	
Di-n-butyl phthalate	µg/L	<7.35	7.35	10.0	08/02/21 1	6:53	
4,6-Dinitro-2-methylphenol	µg/L	<9.92	9.92	30.0	08/02/21 1	6:53	
2,4-Dinitrophenol	µg/L	<10.6	10.6	30.0	08/02/21 1	6:53	
2,4-Dinitrotoluene	µg/L	<5.20	5.20	10.0	08/02/21 1	6:53	
2,6-Dinitrotoluene	µg/L	<5.90	5.90	20.0	08/02/21 1	6:53	
Di-n-Octyl Phthalate	µg/L	<5.01	5.01	10.0	08/02/21 1	6:53	
Fluoranthene	µg/L	<6.03	6.03	10.0	08/02/21 1	6:53	
Fluorene	µg/L	<7.27	7.27	10.0	08/02/21 1	6:53	
Hexachlorobenzene	µg/L	<5.75	5.75	20.0	08/02/21 1	6:53	
Hexachlorobutadiene	µg/L	<5.88	5.88	20.0	08/02/21 1	6:53	
Hexachlorocyclopentadiene	µg/L	<5.90	5.90	20.0	08/02/21 1	6:53	
Hexachloroethane	µg/L	<5.22	5.22	10.0	08/02/21 1	6:53	
Indeno(1,2,3-cd)pyrene	µg/L	<6.20	6.20	10.0	08/02/21 1	6:53	
Isophorone	µg/L	<6.71	6.71	10.0	08/02/21 1	6:53	
Naphthalene	µg/L	<7.88	7.88	10.0	08/02/21 1	6:53	
Nitrobenzene	µg/L	<7.88	7.88	10.0	08/02/21 1	6:53	
2-Nitrophenol	µg/L	<5.49	5.49	10.0	08/02/21 1	6:53	
4-Nitrophenol	µg/L	<2.81	2.81	10.0	08/02/21 1	6:53	
N-Nitrosodiphenylamine	µg/L	<10.9	10.9	20.0	08/02/21 1	6:53	
N-Nitroso-di-n-propylamine	µg/L	<8.10	8.10	20.0	08/02/21 1	6:53	
Pentachlorophenol	µg/L	<9.73	9.73	50.0	08/02/21 1	6:53	
Phenanthrene	µg/L	<6.34	6.34	10.0	08/02/21 1	6:53	



Client ID:	Synterra Corporation - Cary								
Project Description:	Parcel 65								
Report No:	21-211-0017								
QC Prep:	V7150			QC Analytical	Batch(es):	V7251			
QC Prep Batch Method	: 625.1 (Prep)			Analysis Meth	od:	625.1			
				Analysis Desc	ription:	625.1 - Base/N	Neutrals and Acids by	y GC/MS	
Lab Reagent Blank Associated Lab Samples:	92706, 92707	LRB-V71	50	Matri	x: AQU				
Parameter	Units	Blank Result	MDL	MQL	An	alyzed	% Recovery	% Rec Limits	
Phenol	µg/L	<2.86	2.86	10.0	08/0	2/21 16:53			
Pyrene	µg/L	<5.42	5.42	10.0	08/0	2/21 16:53			
1,2,4-Trichlorobenzene	µg/L	<6.25	6.25	10.0	08/0	2/21 16:53			
2,4,6-Trichlorophenol	µg/L	<6.29	6.29	20.0	08/0	2/21 16:53			
2-Fluorobiphenyl (S)					08/0	2/21 16:53	64.8	49-118	
2-Fluorophenol (S)					08/0	2/21 16:53	32.6	22-84	
Nitrobenzene-d5 (S)					08/0	2/21 16:53	57.0	43-123	
4-Terphenyl-d14 (S)					08/0	2/21 16:53	101	49-151	
2,4,6-Tribromophenol (S)					08/0	2/21 16:53	79.9	31-144	
Phenol-d5 (S)					08/0	2/21 16:53	22.9	10-63	

Laboratory Control Sample

LCS-V7150

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits	
Acenaphthene	µg/L	50.0	33.1	66.2	47-145	
Acenaphthylene	µg/L	50.0	34.9	69.8	33-145	
Anthracene	µg/L	50.0	45.1	90.2	27-133	
Benzidine	µg/L	50.0	40.3	80.6	15-150	
Benzo(a)anthracene	µg/L	50.0	44.1	88.2	33-143	
Benzo(a)pyrene	µg/L	50.0	53.0	106	17-163	
Benzo(b)fluoranthene	µg/L	50.0	47.2	94.4	24-159	
Benzo(g,h,i)perylene	µg/L	50.0	45.7	91.4	10-219	
Benzo(k)fluoranthene	µg/L	50.0	46.5	93.0	11-162	
Benzoic Acid	µg/L	50.0	16.0	0.0*	10-125	
Benzyl alcohol	µg/L	50.0	32.4	64.8	16-107	
Bis(2-Chloroethoxy)methane	µg/L	50.0	41.0	82.0	33-184	
Bis(2-Chloroethyl)ether	µg/L	50.0	27.4	54.8	12-158	



Client ID:	Synterra Corporation - Cary		
Project Description:	Parcel 65		
Report No:	21-211-0017		
QC Prep:	V7150	QC Analytical Batch(es):	V7251
QC Prep Batch Method:	625.1 (Prep)	Analysis Method:	625.1
		Analysis Description:	625.1 - Base/Neutrals and Acids by GC/MS

Laboratory Control Sample

LCS-V7150

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits	
Bis(2-Chloroisopropyl)ether	µg/L	50.0	27.6	55.2	36-166	
Bis(2-ethylhexyl)phthalate	µg/L	50.0	49.9	99.8	10-158	
4-Bromophenyl phenyl ether	µg/L	50.0	41.2	82.4	53-127	
Butyl benzyl phthalate	µg/L	50.0	47.4	94.8	10-152	
4-Chloro-3-methylphenol	µg/L	50.0	43.6	87.2	22-147	
2-Chloronaphthalene	µg/L	50.0	25.9	51.8*	60-118	
2-Chlorophenol	µg/L	50.0	31.3	62.6	23-134	
4-Chlorophenyl phenyl ether	µg/L	50.0	39.9	79.8	25-158	
Chrysene	µg/L	50.0	44.9	89.8	17-168	
Dibenz(a,h)anthracene	µg/L	50.0	29.4	58.8	10-227	
Dibenzofuran	µg/L	50.0	37.4	74.8	39-114	
1,2-Dichlorobenzene	µg/L	50.0	13.0	26.0*	32-129	
1,3-Dichlorobenzene	µg/L	50.0	12.2	24.4	20-124	
1,4-Dichlorobenzene	µg/L	50.0	12.0	24.0	20-124	
3,3'-Dichlorobenzidine	µg/L	50.0	48.8	97.6	10-262	
2,4-Dichlorophenol	µg/L	50.0	38.2	76.4	39-135	
Diethyl phthalate	µg/L	50.0	45.7	91.4	10-114	
Dimethyl phthalate	µg/L	50.0	43.1	86.2	10-112	
2,4-Dimethylphenol	µg/L	50.0	38.8	77.6	32-119	
Di-n-butyl phthalate	µg/L	50.0	50.3	101	10-118	
4,6-Dinitro-2-methylphenol	µg/L	50.0	41.7	83.4	10-181	
2,4-Dinitrophenol	µg/L	50.0	40.2	80.4	10-191	
2,4-Dinitrotoluene	µg/L	50.0	46.2	92.4	39-139	
2,6-Dinitrotoluene	µg/L	50.0	45.5	91.0	50-158	
Di-n-Octyl Phthalate	µg/L	50.0	50.1	100	10-146	
Fluoranthene	µg/L	50.0	45.8	91.6	26-137	
Fluorene	µg/L	50.0	41.1	82.2	59-121	

\* QC Fail



Client ID:	Synterra Corporation - Cary		
Project Description:	Parcel 65		
Report No:	21-211-0017		
QC Prep:	V7150	QC Analytical Batch(es):	V7251
QC Prep Batch Method:	625.1 (Prep)	Analysis Method:	625.1
		Analysis Description:	625.1 - Base/Neutrals and Acids by GC/MS

Laboratory Control Sample

LCS-V7150

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits	
Hexachlorobenzene	µg/L	50.0	43.5	87.0	10-152	
Hexachlorobutadiene	μg/L	50.0	13.9	0.0*	24-116	
Hexachlorocyclopentadiene	µg/L	50.0	12.3	0.0*	32-117	
Hexachloroethane	µg/L	50.0	10.9	21.8*	40-113	
Indeno(1,2,3-cd)pyrene	μg/L	50.0	46.2	92.4	10-171	
Isophorone	μg/L	50.0	35.2	70.4	21-196	
Naphthalene	μg/L	50.0	18.6	37.2	21-133	
Nitrobenzene	μg/L	50.0	30.9	61.8	35-180	
2-Nitrophenol	μg/L	50.0	33.7	67.4	29-182	
4-Nitrophenol	μg/L	50.0	24.5	49.0	10-132	
N-Nitrosodiphenylamine	μg/L	50.0	52.4	105	69-152	
N-Nitroso-di-n-propylamine	µg/L	50.0	36.5	73.0	10-230	
Pentachlorophenol	μg/L	50.0	42.8	0.0*	14-176	
Phenanthrene	μg/L	50.0	44.7	89.4	54-120	
Phenol	μg/L	50.0	15.8	31.6	10-112	
Pyrene	μg/L	50.0	45.2	90.4	52-115	
1,2,4-Trichlorobenzene	μg/L	50.0	14.5	29.0*	44-142	
2,4,6-Trichlorophenol	μg/L	50.0	40.6	81.2	37-144	
2-Fluorobiphenyl (S)				66.8	49-118	
2-Fluorophenol (S)				38.3	22-84	
Nitrobenzene-d5 (S)				66.4	43-123	
4-Terphenyl-d14 (S)				117	49-151	
2,4,6-Tribromophenol (S)				94.6	31-144	
Phenol-d5 (S)				27.0	10-63	



Client ID:	Synterra Corporation - Cary		
Project Description:	Parcel 65		
Report No:	21-211-0017		
QC Prep:	V7150	QC Analytical Batch(es):	V7251
QC Prep Batch Method:	625.1 (Prep)	Analysis Method:	625.1
		Analysis Description:	625.1 - Base/Neutrals and Acids by GC/MS

Matrix Spike & Matrix Spike Duplicate

V 92607-MS-V7150 V 92607-MSD-V7150

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Acenaphthene	µg/L	< 18.7	132	135	35.8	26.0	27.1*	0.0*	47-145	28.0	33.0
Acenaphthylene	µg/L	< 18.3	132	135	37.5	27.2	0.0*	0.0*	33-145	0.0	30.0
Anthracene	µg/L	< 17.3	132	135	39.9	31.8	30.2	23.5*	27-133	22.5	27.0
Benzidine	μg/L	< 13.4	132	135	<13.4	<13.7	0.0*	0.0*	15-150	0.0	50.0
Benzo(a)anthracene	μg/L	< 17.5	132	135	40.4	32.0	30.6*	23.7*	33-143	23.2*	18.0
Benzo(a)pyrene	μg/L	< 12.3	132	135	47.8	37.0	36.2	27.4	17-163	25.4*	21.0
Benzo(b)fluoranthene	μg/L	< 11.9	132	135	43.8	34.5	33.1	25.5	24-159	23.7	34.0
Benzo(g,h,i)perylene	μg/L	< 11.2	132	135	41.8	32.3	31.6	23.9	10-219	25.6	27.0
Benzo(k)fluoranthene	μg/L	< 12.8	132	135	43.8	33.1	33.1	24.5	11-162	27.8	39.0
Benzoic Acid	μg/L	< 30.4	132	135	<30.4	<31.1	0.0*	0.0*	10-125	0.0	51.0
Benzyl alcohol	μg/L	< 22.6	132	135	41.1	44.2	31.1	32.7	16-107	7.2	37.0
Bis(2-Chloroethoxy)methane	μg/L	< 14.9	132	135	37.4	26.3	28.3*	0.0*	33-184	32.2*	30.0
Bis(2-Chloroethyl)ether	µg/L	< 19.2	132	135	25.6	20.0	0.0*	0.0*	12-158	0.0	33.0
Bis(2-Chloroisopropyl)ether	μg/L	< 17.3	132	135	28.7	21.1	21.7*	0.0*	36-166	6.1	34.0
Bis(2-ethylhexyl)phthalate	μg/L	< 23.1	132	135	48.5	37.8	36.7	28.0	10-158	24.7*	21.0
4-Bromophenyl phenyl ether	μg/L	< 16.5	132	135	36.3	28.5	0.0*	0.0*	53-127	0.0	21.0
Butyl benzyl phthalate	μg/L	< 11.9	132	135	42.6	33.2	32.2	24.5	10-152	24.8*	23.0
4-Chloro-3-methylphenol	μg/L	< 13.8	132	135	14.4	19.6	0.0*	0.0*	22-147	0.0	25.0
2-Chloronaphthalene	μg/L	< 19.4	132	135	33.4	25.2	0.0*	0.0*	60-118	0.0	30.0
2-Chlorophenol	μg/L	< 17.3	132	135	<17.3	<17.8	0.0*	0.0*	23-134	0.0	37.0
4-Chlorophenyl phenyl ether	μg/L	< 18.4	132	135	36.3	29.0	0.0*	0.0*	25-158	0.0	29.0
Chrysene	µg/L	< 14.1	132	135	41.7	32.5	31.5	24.0	17-168	24.7	30.0
Dibenz(a,h)anthracene	μg/L	< 15.8	132	135	27.1	20.3	0.0*	0.0*	10-227	0.0	28.0
Dibenzofuran	μg/L	< 13.4	132	135	37.4	27.9	0.0*	0.0*	39-114	0.0	23.0
1,2-Dichlorobenzene	μg/L	< 15.5	132	135	22.3	16.2	0.0*	0.0*	32-129	0.0	34.0
1,3-Dichlorobenzene	µg/L	< 15.3	132	135	21.7	<15.7	0.0*	0.0*	20-124	0.0	36.0



Client ID:	Synterra Corporation - Cary		
Project Description:	Parcel 65		
Report No:	21-211-0017		
QC Prep:	V7150	QC Analytical Batch(es):	V7251
QC Prep Batch Method:	625.1 (Prep)	Analysis Method:	625.1
		Analysis Description:	625.1 - Base/Neutrals and Acids by GC/MS

Matrix Spike & Matrix Spike Duplicate

V 92607-MS-V7150 V 92607-MSD-V7150

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
1,4-Dichlorobenzene	µg/L	< 15.5	132	135	20.7	<16.0	0.0*	0.0*	20-124	0.0	35.0
3,3'-Dichlorobenzidine	µg/L	< 17.4	132	135	<17.4	<17.8	0.0*	0.0*	10-262	0.0	34.0
2,4-Dichlorophenol	µg/L	< 14.6	132	135	<14.6	15.4	0.0*	0.0*	39-135	0.0	31.0
Diethyl phthalate	µg/L	< 24.6	132	135	42.0	29.8	0.0*	0.0*	10-114	0.0	22.0
Dimethyl phthalate	µg/L	< 20.6	132	135	40.0	27.5	30.3	20.3	10-112	37.0*	25.0
2,4-Dimethylphenol	µg/L	< 28.8	132	135	<28.8	<29.6	0.0*	0.0*	32-119	0.0	36.0
Di-n-butyl phthalate	µg/L	< 19.3	132	135	45.9	36.3	34.7	26.8	10-118	23.3	24.0
4,6-Dinitro-2-methylphenol	µg/L	< 26.1	132	135	<26.1	<26.8	0.0*	0.0*	10-181	0.0	35.0
2,4-Dinitrophenol	µg/L	< 28.0	132	135	<28.0	29.5	0.0*	0.0*	10-191	0.0	41.0
2,4-Dinitrotoluene	µg/L	< 13.7	132	135	42.4	28.7	32.1*	21.2*	39-139	38.5*	24.0
2,6-Dinitrotoluene	µg/L	< 15.5	132	135	41.1	29.1	0.0*	0.0*	50-158	0.0	28.0
Di-n-Octyl Phthalate	µg/L	< 13.2	132	135	45.8	36.0	34.6	26.6	10-146	23.9*	21.0
Fluoranthene	µg/L	< 15.9	132	135	43.3	34.6	32.8	25.6*	26-137	22.3	26.0
Fluorene	µg/L	< 19.1	132	135	37.9	29.2	28.7*	21.6*	59-121	25.9	30.0
Hexachlorobenzene	µg/L	< 15.1	132	135	38.5	29.5	0.0*	0.0*	10-152	0.0	29.0
Hexachlorobutadiene	μg/L	< 15.5	132	135	24.4	17.4	0.0*	0.0*	24-116	0.0	35.0
Hexachlorocyclopentadiene	µg/L	< 15.5	132	135	21.3	<16.0	0.0*	0.0*	32-117	0.0	36.0
Hexachloroethane	µg/L	< 13.7	132	135	20.1	15.0	0.0*	0.0*	40-113	0.0	37.0
Indeno(1,2,3-cd)pyrene	µg/L	< 16.3	132	135	40.8	32.2	30.9	23.8	10-171	23.5	34.0
Isophorone	µg/L	< 17.6	132	135	31.5	21.0	23.8	0.0*	21-196	15.3	27.0
Naphthalene	µg/L	< 20.7	132	135	29.2	<21.3	22.1	0.0*	21-133	7.8	35.0
Nitrobenzene	µg/L	< 20.7	132	135	31.4	23.3	23.7*	0.0*	35-180	15.0	34.0
2-Nitrophenol	μg/L	< 14.4	132	135	<14.4	<14.8	0.0*	0.0*	29-182	0.0	33.0
4-Nitrophenol	μg/L	< 7.39	132	135	15.7	24.9	0.0*	0.0*	10-132	0.0	40.0
N-Nitrosodiphenylamine	µg/L	< 28.7	132	135	33.9	<29.6	0.0*	0.0*	69-152	0.0	26.0
N-Nitroso-di-n-propylamine	µg/L	< 21.3	132	135	32.4	22.6	0.0*	0.0*	10-230	0.0	33.0



Client ID:	Synterra Corporation - Cary		
Project Description:	Parcel 65		
Report No:	21-211-0017		
QC Prep:	V7150	QC Analytical Batch(es):	V7251
QC Prep Batch Method:	625.1 (Prep)	Analysis Method:	625.1
		Analysis Description:	625.1 - Base/Neutrals and Acids by GC/MS

Matrix Spike & Matrix Spike Duplicate V

V 92607-MS-V7150 V 92607-MSD-V7150

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Pentachlorophenol	µg/L	< 25.7	132	135	<25.7	<26.3	0.0*	0.0*	14-176	0.0	36.0
Phenanthrene	µg/L	< 16.7	132	135	41.4	31.6	31.3*	23.4*	54-120	26.8*	23.0
Phenol	µg/L	< 7.52	132	135	13.4	22.5	0.0*	0.0*	10-112	0.0	43.0
Pyrene	µg/L	< 14.3	132	135	42.7	33.0	32.3*	24.4*	52-115	25.6	31.0
1,2,4-Trichlorobenzene	µg/L	< 16.4	132	135	25.3	18.2	0.0*	0.0*	44-142	0.0	30.0
2,4,6-Trichlorophenol	µg/L	< 16.5	132	135	<16.5	<17.0	0.0*	0.0*	37-144	0.0	30.0
2-Fluorobiphenyl (S)							24.7*	18.2*	49-118		
2-Fluorophenol (S)							6.1*	11.5*	22-84		
Nitrobenzene-d5 (S)							22.4*	16.0*	43-123		
4-Terphenyl-d14 (S)							28.1*	22.7*	49-151		
2,4,6-Tribromophenol (S)							7.3*	9.4*	31-144		
Phenol-d5 (S)							6.6*	12.9	10-63		



Client ID: Project Description: Report No: QC Prep: QC Prep Batch Method:	Synterra Corporation Parcel 65 21-211-0017 V7234 MAEPH (Prep)	tion - Car	y	QC Analyti Analysis M Analysis D	cal Batch(es): ethod: escription:	V7419 MADEP-EPH Massachusetts	EPH	
Lab Reagent Blank Associated Lab Samples:	92706, 92707	LRB-V72	34	М	latrix: AQU			
Parameter	Units	Blank Result	MDL	MQL	An	alyzed	% Recovery	% Rec Limits
Aliphatic C9-C18	µg/L	<28.2	28.2	350	08/09	9/21 15:26		
Aliphatic C19-C36	µg/L	<124	124	500	08/09	9/21 15:26		
Aromatic C11-C22	µg/L	<61.2	61.2	250	08/0	9/21 15:26		
2-Fluorobiphenyl (S)					08/09	9/21 15:26	79.7	40-140
2-Bromonaphthalene (S)					08/09	9/21 15:26	57.5	40-140
Chlorooctadecane (S)					08/09	9/21 15:26	80.0	40-140
OTP Surrogate (S)					08/09	9/21 15:26	67.5	40-140

Laboratory Control Sample & LCSD LCS-V7234 LCSD-V7234

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
Aliphatic C9-C18	µg/L	600	359	358	59.8	59.6	40-140	0.2	50.0
Aliphatic C19-C36	µg/L	800	652	621	81.5	77.6	40-140	4.8	50.0
Aromatic C11-C22	μg/L	1700	1320	1210	77.6	71.1	40-140	8.6	50.0
2-Fluorobiphenyl (S)					87.7	83.5	40-140		
2-Bromonaphthalene (S)					78.2	83.5	40-140		
Chlorooctadecane (S)					78.5	73.0	40-140		
OTP Surrogate (S)					81.5	75.0	40-140		



Client ID:	Synterra Corpora	tion - Car	У					
Project Description:	Parcel 65							
Report No:	21-211-0017							
QC Prep:	V7128			QC Analyti	cal Batch(es):	V7130		
QC Prep Batch Method:	MAVPH (Prep)			Analysis M	ethod:	MADEP-VPH		
				Analysis D	escription:	Massachusetts	s VPH	
Lab Reagent Blank Associated Lab Samples:	92706, 92707	LRB-V71	.28	Μ	latrix: AQU			
Parameter	Units	Blank Result	MDL	MQL	An	alyzed	% Recovery	% Rec Limits
Aliphatic C5-C8	µg/L	<11.5	11.5	50.0	07/3	0/21 16:34		
Aliphatic C9-C12	µg/L	<25.8	25.8	50.0	07/3	0/21 16:34		
Augustia CO C10								
Aromatic C9-C10	µg/L	<4.02	4.02	50.0	07/3	0/21 16:34		
2,5-Dibromotoluene (FID) (	µg/L S)	<4.02	4.02	50.0	07/3 07/3	D/21 16:34 D/21 16:34	95.4	70-130
2,5-Dibromotoluene (FID) ( 2,5-Dibromotoluene (PID) (	µg/L S) S)	<4.02	4.02	50.0	07/3 07/3 07/3	D/21 16:34 D/21 16:34 D/21 16:34	95.4 92.4	70-130 70-130

Laboratory Control Sample & LCSD

LCS-V7128 LCSD-V7128

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
Aliphatic C5-C8	µg/L	300	334	347	111	116	70-130	3.8	50.0
Aliphatic C9-C12	µg/L	300	325	334	108	111	70-130	2.7	50.0
Aromatic C9-C10	µg/L	100	102	104	102	104	70-130	1.9	50.0
2,5-Dibromotoluene (FID) (S)					95.7	97.2	70-130		
2,5-Dibromotoluene (PID) (S)					93.0	93.9	70-130		



#### **Shipment Receipt Form**

#### Customer Number: 00018

Cust	omer l	Name:	Synterra Corporation - Cary
-			04 044 0047

Report Number: 21-211-0017

		Shippin	g Method		
◯ Fed Ex	US Postal	🔿 Lab		Other :	
	Client	Courie	er	Thermometer ID:	IRT-15 5.1 C
Shipping containe	er/cooler uncompromi	sed?	• Yes	◯ No	
Number of cooler	rs/boxes received		1		
Custody seals int	act on shipping contai	ner/cooler?	⊖ Yes	◯ No	Not Present
Custody seals int	act on sample bottles	?	⊖ Yes	◯ No	Not Present
Chain of Custody	r (COC) present?		Yes	◯ No	
COC agrees with	sample label(s)?		• Yes	◯ No	
COC properly co	mpleted		Yes	◯ No	
Samples in prope	er containers?		Yes	◯ No	
Sample containe	rs intact?		Yes	◯ No	
Sufficient sample	volume for indicated	test(s)?	Yes	◯ No	
All samples recei	ved within holding time	e?	Yes	◯ No	
Cooler temperatu	ire in compliance?		Yes	◯ No	
Cooler/Samples a Samples were co process had begin	arrived at the laborator Insidered acceptable a un.	ry on ice. as cooling	Yes	◯ No	
Water - Sample of	containers properly pre	eserved	• Yes	◯ No	○ N/A
Water - VOA vials	s free of headspace		Yes	◯ No	○ N/A
Trip Blanks received	ved with VOAs		⊖ Yes	◯ No	• N/A
Soil VOA method	5035 – compliance ci	riteria met	⊖ Yes	◯ No	• N/A
High concentr	ation container (48 hr	)	Lov	w concentration EnC	Core samplers (48 hr)
High concentr	ation pre-weighed (me	ethanol -14 d	) 🗌 Lov	w conc pre-weighed	vials (Sod Bis -14 d)
Special precautio	ons or instructions inclu	uded?	⊖ Yes	No	
Comments:					

Signature: Angela D Overcash

Date & Time: 08/10/2021 13:48:36

ORIGINAL	IER: C I SC	IC SC NN Nalysis (Zero He	SC LAP	SC D NC D	RCRA:	SOLID WASTE	G= Glass P = Pla		C GROUNDW	CONTAINER TYPE CO
SEE REVERSE FOR	9	71301	RY. O	TO THE LABORATO	ANORADORATION ABORATORY.	ODY SEALS FOR THE	AGAINST COC UNTIL I	ED AND VERIFIED	LL SAMPLE COOLER S ARE NOT ACCEPTE	Method of Shipment: NOTE: A SAMPLE
Mileage:	200	129124124	1.0		P	Vaypoint Analytical B	Received			Relinquished By: (Signature)
Field Tech Fee:		Ste				(Signature)	Recained By:	and	Laboren .	Relinguished By: (Signature)
3: Site Departure Time:	Additional Comments	29/21 1 Mil	2.	(	M	(Suggesture)	Received		Nex	Relinquished By: (Signature)
Site Arrival Time:	langes must be	ed above. Any ch initialized.	s requeste have been	the analyses a after analyses h	any changes	ll be charges for	rization for Waypo Manager. There wi	y is your autho lytical Project I	thain of Culubd ne Waypoint Anal	Upon relinquishing, this submitted in writing to the submitted in writing to the submitted in writing to the submitted in the
LAB USE ONLY	ra	Synter	Affiliation	Kes	rlie S	t Name) J	Sampled By (Prin	her	hillien	Sampler's Signature
					COPIES	FIRMLY - 2	PRESS DOWN			
12:05:42	Tation - Carv 1	Parcel 65								
21-211-0017 00018				14						
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					1					
	×	×	×			10	W	1600	7/28/24	GW-2
1	X	XX	×			10	N	1300	7 28 21	(AN-)
REMARKS ID NO.	EAC .	STOL YA	10	TIVES	SIZE	HELOW NO.	WATER, OR *1 SLUDGE) SEE	MILITARY HOURS	COLLECTED	SAMPLE DESCRIPTION
	REQUESTED	S/ IS/		PRESERVA-	AINER	SAMPLE CONT	(SOIL,	TIME	DATE	CLIENT
ISAMPLING PERSONNEL	TO BE FILLEDIN BY CLIENT Certification: NC SC Other N Water Chlorinated: YES Samples Iced Upon Collectic	5 Days 4 Must Be ved holidays.	4 Days Pre-Approvess day ekends and services	ence ys 3 Days 4 andard 10 days 4 cessed next busin cessed next busin ays, excluding wet rows REGARDING rricAL, LLC TO CLI	1 Day 2 Day 1 Day 2 Days State 6-9 Days State 5:00 will be pro- d on business d d on business d TEEMS & CONDI- VAYPOINT ANALY	Thase Order No. Insted Due Date Date Date data and the steeled after 1 es received after 1 es received after 1 es receives after 2 es receives after 3 es receives 3	Purce Reque Sampl Turnar	TON NO: NO	48058 (Yes)( 45059/mHcm ccel X Other washing Mashing Address: 8	Phone: QIAT 85 8- Email Address: Sik EDD Type: PDF E Site Location Name: Site Location Physica Site Location Physica
served Stoc /Corr. St. C	VOLATILES rec'd W/OUT HEADSP PROPER CONTAINERS used?		nom	ratorpi	synten	ess:	K 102 Addr	Pr Su	ans Hears	Report To/Contact Nar Reporting Address:
ated?	Received IN ICE? PROPER PRESERVATIVES indica Received WITHIN HOLDING TIME: CUSTODY SEALS INTACT?	(es) No)	Project: (QC LEVE	UST F UST F Cific reporting (	(Yes) (Yes) project spec	t Hold Analysis se ATTACH any sions and/or Q	Proje Shor *Plea provi	L otte, NC 28217 704/525-0409	ANALYTICA rook Road · Chart /529-6364 · Fax :: SynTer	449 Springb Phone 704 Client Company Name
YES NO NA	LAB USE	CORD	ING:	STODY	OF CU	HAIN	PAGE		point	Way
	States and a state of the state									

# **APPENDIX F**

## **Photographs**







# Site Photographs Site Name: US 17 N, Parcel 65



