March 23, 2021

North Carolina Department of Transportation
Attention: Mr. John Pilipchuk, LG, PE
GeoEnvironmental Engineering Unit
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

Re: Phase II Preliminary Site Assessment Report
NC 55 from South of SR 1532 to North of NC 210
Parcel 29 - Carrie Bullard Property
4798 NC 55, Angier, Harnett County, North Carolina
TIP No. R-5705A
WBS Element: 46377.1.2

Dear Mr. Pilipchuk:

Terracon Consultants, Inc. (Terracon) is pleased to submit this Phase II Preliminary Site Assessment (PSA) Report for the above referenced site. This assessment was performed in accordance with our *Revised Proposal for GeoEnvironmental Phase II Site Investigations* (Terracon Proposal No. P70207241) dated December 8, 2020. This report includes the findings of the investigation and provides our conclusions and recommendations. Terracon appreciates the opportunity to provide these services to the North Carolina Department of Transportation. If you have any questions concerning this report or need additional information, please contact us at 919-873-2211.

Sincerely,

Terracon Consultants, Inc.

DocuSigned by:
5ABC0739D7334DC...
James M. Perry
Field Scientist

DocuSigned by:
076CA5FA770E478...
Ethan C. Dinwiddie, GIT
Field Geologist

DocuSigned by:
67EB838805B1477...
Donald R. Malone, PE, RSM
Senior Engineer

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Phase II Preliminary Site Assessment Report

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March 23, 2021

Terracon Project No. 70207241

Prepared for:

North Carolina Department of Transportation
Raleigh, North Carolina

Prepared by:

Terracon Consultants, Inc.
Raleigh, North Carolina

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TIP NO. R-5705A
WBS ELEMENT: 46377.1.2
PARCEL 29 - CARRIE BULLARD PROPERTY
4798 NC 55, ANGIER, HARNETT COUNTY, NORTH CAROLINA

1.0 INTRODUCTION

1.1 Site Description

Site Name	Carrie Bullard Property (4798 NC 55, Angier)
Site Location/Address	4798 NC 55, Angier, Harnett County, North Carolina
General Site Description	The site consists of an approximate 0.58-acre portion of a 0.75-acre parcel and is developed with an approximate 4,800 square foot building. The remainder of the site consisted of paved parking areas and grassed areas.

1.2 Site History

At the time of the Phase II Preliminary Site Assessment (PSA), the site was observed to contain an approximate 4,800 square foot building that operated as a thrift store. The remainder of the site consisted of paved parking areas and grassed areas. According to a GeoEnvironmental Planning Report dated September 26, 2018, the design of the building suggests it may have been a convenience store/gas station at one time (Terracon, 2020). The address is not listed in the North Carolina Department of Environmental Quality (NCDEQ), Division of Waste Management, Underground Storage Tank (UST) section registry. Additional historical records were not available for review.

1.3 Scope of Work

Terracon conducted the following PSA scope of work in accordance with Terracon's Proposal No. P70207241 dated December 8, 2020. This PSA is being completed prior to a planned upgrade to NC 55 from South of SR 1532 (Oak Grove Church Road) to North of NC 210. The scope of work included a geophysical investigation, the collection of soil and groundwater samples, and preparation of a report documenting our investigation activities. The PSA is not intended to delineate potential impacts. The PSA was performed within the proposed rights-of-way (ROW) as indicated by North Carolina Department of Transportation (NCDOT) provided plan sheets.

1.4 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either expressed or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These services were performed in accordance with our *Revised Proposal for GeoEnvironmental Phase II Site Investigations* (Terracon Proposal No. P70207241) dated December 8, 2020 and were not necessarily conducted in strict accordance with ASTM E1903-11.

1.5 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, undetectable or not present during these services; thus, we cannot represent that the site is free of hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this PSA. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

1.6 Reliance

This report has been prepared for the exclusive use of the NCDOT. Authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the expressed written authorization of the client and Terracon.

2.0 FIELD ACTIVITIES

The following PSA activities are presented in the order that they were conducted in the field. **Exhibit 1** presents the topography of the site on a portion of the USGS topographic quadrangle map of Coats, North Carolina, 1997. **Exhibit 2** depicts conventional plan sheet symbols used by the NCDOT, Division of Highways. **Exhibit 3** depicts the site layout and indicate the approximate locations of the site features, soil boring and temporary well locations, and analytical results.

2.1 Geophysical Survey

On January 21 and 22, 2021, Terracon conducted a geophysical investigation at the site in an effort to determine if unknown, metallic USTs or other geophysical anomalies were present beneath the proposed ROW area. The geophysical investigation included an electromagnetic (EM) induction survey using a Geonics EM31-SH metal detection instrument and a ground penetrating radar (GPR) survey using a Geophysical Survey Systems SIR-4000 unit. In addition to metal detection and GPR scans, NC One Call public utility locator was used to identify several underground utility lines and to clear boring locations. A copy of the geophysical report is in **Appendix A**.

The geophysical investigation identified two probable metallic USTs located north of the on-site building and within the proposed ROW area. The probable USTs measured approximately 14 and 17 feet long and were located approximately 2.5 feet below land surface (bls). This area of the site was covered by grass and fill ports were observed in association with the probable USTs, although other surface features such as vent pipes were not observed. Terracon was unable to remove the fill port of the probable USTs to evaluate the presence of petroleum products within the USTs. Additionally, several possible fuel lines were identified in the geophysical investigation extending from the USTs to the southeast and southwest.

Terracon also identified three locations (two west of the on-site building and one north of the building) within the proposed ROW where former fuel dispensers were possibly located. The two locations west of the on-site building were identified by rectangular asphalt patches and the location north of the on-site building was identified by GPR. Photographs of the site and relevant site features are in **Appendix B**.

2.2 Soil Sampling

Based on the findings of the geophysical investigation and Terracon's site observations, Terracon oversaw the advancement of eight soil borings (29-SB-01 through 29-SB-08) throughout the parcel and within the proposed NCDOT ROW. The borings were completed by a North Carolina Certified Well Contractor (Regional Probing Services, Inc. [Regional Probing]) using a truck-mount Geoprobe® 5410 direct-push drill rig.

Terracon collected soil samples in 5-foot long, disposable, Macro-Core® sampler tubes to document soil lithology, color, moisture content, and sensory evidence of impacts. Each soil sample was screened for organic vapors using an 11.7 electron volt photoionization detector (PID). The PID data was collected to select the most appropriate sample intervals for laboratory analyses and to corroborate with the laboratory data. PID readings from the borings ranged from

less than the instrument detection limit of 0.1 parts per million (ppm) to 1,697 ppm. The highest PID readings were in 29-SB-04. The PID screening values are summarized in **Table 1**.

Terracon directed Regional Probing to advance each soil borings to a depth of approximately 10 feet below land surface (bls). Based on the results of the field screening, seven soil samples, one from each boring, were collected from depths between approximately 2 feet and 10 feet bls. Soil samples were collected generally from the depth interval with the greatest PID reading. Samples were placed in laboratory provided sample containers, packed in an iced cooler, and shipped to REDLAB/QROS, LLC – Environmental Testing (REDLAB) for analysis by Ultraviolet Fluorescence (UVF).

While on-site for the soil sampling event, Terracon directed the driller to advance two borings, down-gradient of the probable USTs, in order to further assess the probable USTs, and three borings (one near each location) adjacent to the possible former fuel dispenser locations. Borings 29-SB-05 and 29-SB-06 were advanced on the eastern side of the probable USTs and borings 29-SB-03, 29-SB-04, and 29-SB-07 were advanced near the possible former fuel dispenser locations. Field screening of the soils and soil samples collected beside the probable USTs did not indicate a release has occurred. Field screening of the soils and soil samples collected beside the possible former fuel dispenser locations indicated a release had occurred near the former fuel dispenser evaluated by 29-SB-04; however, there was not an indication a release had occurred at the other two fuel dispenser locations. An additional boring, 29-SB-08, was advanced to evaluate the potential extent of contamination identified at 29-SB-04 along the possible fuel line to the USTs. Field screening of soil from 29-SB-08 did not indicate contamination extended along the possible fuel line to the USTs.

The drilling equipment used at the site was decontaminated prior to use and between the advancement of each boring. Non-dedicated sampling equipment was decontaminated using a Liquinox®-water wash followed by a distilled water rinse. Each of the boreholes was backfilled with soil cuttings and bentonite pellets. Surface completion was achieved with either dirt or asphalt cold patch. Remaining investigation derived waste was spread on the site.

Soil generally consisted of silty fine- to coarse-grained sand with some clay. Wet to saturated soils were observed at a depth of approximately 8 feet bls in the majority of the soil borings. The soil boring logs are included in **Appendix C**. Sample locations were measured using a sub-foot Trimble Geo7X GPS unit and are depicted on **Exhibit 3**.

2.3 Groundwater Sampling

Based on the results of the field screening, boring 29-SB-04 was advanced to 13 feet bls on February 2, 2021 and converted to temporary monitoring well 29-TW-01, which was constructed

as follows:

- Installation of a 10-foot section of 1-inch diameter, 0.010-inch machine slotted polyvinyl chloride (PVC) well screen;
- Installation of a 5-foot section of 1-inch diameter, threaded, flush-joint PVC riser pipe to the approximately 2 feet above ground surface; and
- Placement of sand in the borehole annulus to approximately 2 feet above the screened interval, followed by a layer of hydrated bentonite.

After installation, the depth to groundwater in the temporary well was measured at 5.30 feet bls. A groundwater sample was collected from 29-TW-01 using low-flow sampling techniques (i.e., <200 milliliters per minute). Groundwater parameters (pH, specific conductivity, dissolved oxygen, oxidation-reduction potential, and temperature.) were monitored and the well was purged until the parameters stabilized (i.e., three consecutive readings were within approximately 5 percent of one another). After the purging was completed, Terracon collected the sample directly into laboratory supplied-containers and packed the sample in an iced cooler.

The groundwater sample collected from the temporary well was shipped to Pace Analytical, Inc. (Pace) in Columbia, North Carolina for analysis of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) by United States Environmental Protection Agency (USEPA) Method 8260D and USEPA Method 8270E, respectively.

The groundwater sampling log is included in **Appendix D**. The temporary monitory well location is depicted on **Exhibit 3**.

3.0 LABORATORY ANALYSES

Soil samples were submitted to REDLAB for analysis of the following:

- TPH-gasoline range organics (C_5-C_{10}) (TPH-GRO);
- TPH-diesel range organics (C_{10}-C_{35}) (TPH-DRO);
- Total petroleum hydrocarbons (C_5-C_{35}) (TPH);
- Benzene, toluene, ethylbenzene, and xylenes (BTEX);
- Total aromatics (C_{10}-C_{35});
- 16 EPA Polycyclic Aromatic Hydrocarbons (16 EPA PAHs); and
- Benzo(a)pyrene (BaP).

Groundwater samples were submitted to Pace for analysis of the following:

- EPA Method 8260D for VOCs; and
- EPA Method 8270E for SVOCs.

Please refer to **Appendix E** for the laboratory analytical reports.

4.0 DATA EVALUATION

4.1 Soil Analytical Results

Table 2 summarizes the results of the analyses of the soil samples. **Exhibit 3** depicts the boring locations and detected compounds. Laboratory analysis identified the following detections above the laboratory reporting limits in soil samples 29-SB-03, 29-SB-04, and 29-SB-06:

- BTEX was reported within 29-SB-04 at a concentration of 17.6 milligrams per kilogram (mg/kg);
- TPH-GRO was reported within 29-SB-04 and 29-SB-06 at concentrations of 55.3 and 1.3 mg/kg, respectively;
- TPH-DRO was reported within 29-SB-03 and 29-SB-04 at concentrations of 0.90 and 3.6 mg/kg, respectively;
- TPH was reported within the three samples at concentrations ranging from 0.90 to 58.9 mg/kg; and
- Total aromatics (C_{10}-C_{35}) was reported within 29-SB-03 and 29-SB-04 at concentrations of 0.38 and 2.7 mg/kg, respectively.

BTEX, TPH-GRO, TPH-DRO, TPH, and Total aromatics (C_{10}-C_{35}) were not reported above laboratory reporting limits in soil samples 29-SB-01, 29-SB-02, 29-SB-05, and 29-SB-07. Additionally, 16 EPA PAHs and BaP were not reported above laboratory reporting limits in any of the soil samples.

Laboratory analysis identified concentrations of TPH-GRO in excess of the NCDEQ Action Level of 50 mg/kg within 29-SB-04; however, the detected concentration of TPH-DRO did not exceed the NCDEQ Action Level of 100 mg/kg. The concentrations of TPH-GRO and TPH-DRO detected within 29-SB-03 and 29-SB-06 did not exceed NCDEQ Action Levels.

4.2 Groundwater Analytical Results

Table 3 summarizes the results of the analyses of groundwater sample 29-TW-01. **Exhibit 3** depicts the groundwater sample location and detected compounds. Laboratory analysis identified the following detections above the laboratory reporting limits in the groundwater sample collected from 29-TW-01:

- The following VOCs were detected within 29-TW-01: benzene, cyclohexane, ethylbenzene, isopropylbenzene, methylcyclohexane, toluene, and total xylenes. The detected concentrations of benzene, ethylbenzene, isopropylbenzene, toluene, and total xylenes exceeded the Title 15A North Carolina Administrative Code 2L Groundwater Quality Standards (2L Standards).
- The following SVOCs were detected within 29-TW-01: 2-methylnaphthalene and naphthalene. Both constituents exceeded the 2L Standards.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The findings of this investigation are discussed below.

- The geophysical investigation identified two probable metallic USTs located north of the on-site building and within the proposed ROW area. The probable USTs measured approximately 14 and 17 feet long and were located approximately 2.5 feet bls. Fill ports were observed in association with the probable USTs. Additionally, several possible fuel lines were identified extending from the USTs to the southeast and southwest towards possible former fuel dispenser locations located west and north of the on-site building.
- Laboratory analyses reported concentrations of BTEX, TPH-GRO, TPH-DRO, TPH, and Total Aromatics in three soil borings at the site. The detected concentration of TPH-GRO exceeded the NCDEQ Action Level in 29-SB-04 in at least the 6 to 8 feet bls range. The detected concentrations of these compounds did not exceed the NCDEQ Action Levels in 29-SB-03 and 29-SB-06.
- The area of contamination appears to within the vicinity of 29-SB-04 and could be associated with releases from a former on-site fuel line or dispenser. An estimated volume of petroleum impacted soil located within the ROW is 100 cubic yards. This calculation assumes an approximate area of 920 square feet and depths ranging from land surface to 3 feet bls. The actual amount of impacted soil can only be determined after excavation or by advancing additional borings at the site to further delineate the extents of contamination. This area would best be managed as a fill area, to avoid potentially impacted soil and groundwater.
- Laboratory analysis reported concentrations of multiple VOCs and SVOCs within groundwater at the site. The detected concentrations of benzene, ethylbenzene, isopropylbenzene, toluene, total xylenes, 2-methylnaphthalene, and naphthalene exceeded the 2L Standard in the groundwater sample collected from 29-TW-01.
- Terracon recommends NCDOT provide a copy of the results to the owner and/or operator of the site and to NCDEQ.

- Terracon does not recommend further assessment of the ROW at this site. However, based on the identified USTs and the detections of petroleum compounds, USTs and impacted soil and groundwater encountered during NCDOT's project should be managed and/or disposed in accordance with applicable local and State requirements. In addition, construction workers should be alert for potential soil and/or groundwater impacts at the site.

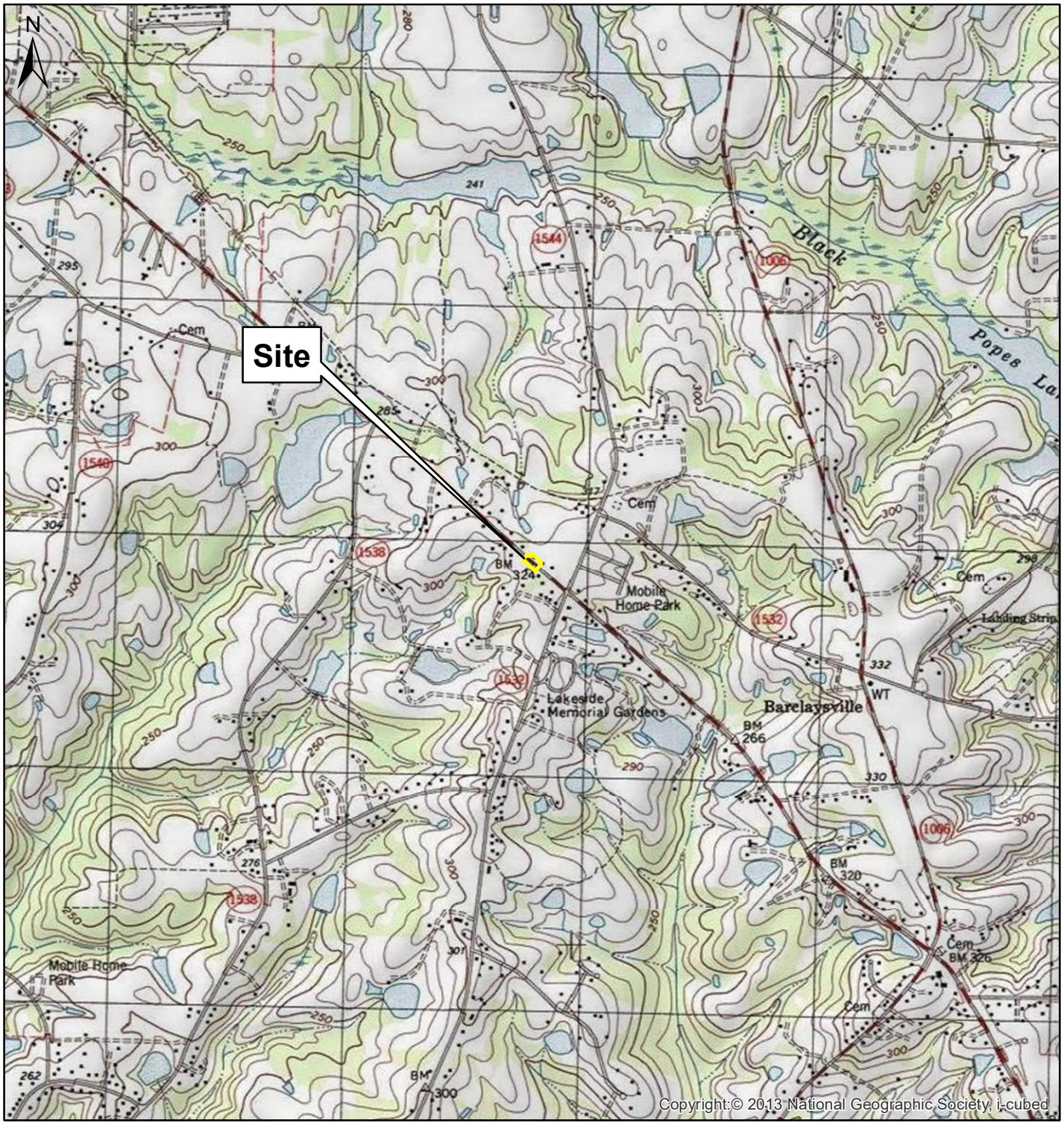
6.0 REFERENCES

North Carolina Department of Environmental Quality, 2021. Guidelines for Site Checks, Tank Closure, and Initial Response and Abatement, January 19. Terracon Consultants, Inc., 2020.

North Carolina Department of Transportation, 2018. GeoEnvironmental Planning Report. September 26.

Revised Proposal for GeoEnvironmental Phase II Site Investigations, NC 55 from South of SR 1532 to North of NC 210. December 8.

EXHIBITS



CONTOUR INTERVAL 10 FEET

USGS TOPOGRAPHIC MAP
Coats, NC Quadrangle (1997)

PM: DRM	Project No. 70207241	Terracon	**Topographic Vicinity Map**	EXHIBIT NO.
Drawn By: ECD	Scale: 1:24,000		**Phase II Preliminary Site Assessment** **Parcel 29 - Carrie Bullard Property** **4798 NC 55** **Angier, Harnett County, North Carolina**	**1**
Checked By: DRM	File Path:			
Approved By: DRM	Date: March 2021			

2401 Brentwood Drive, Suite 107 Raleigh, NC 27604
Phone: (919) 873-2211 Fax: (919) 873-9555

PROJECT REFERENCE NO.	EXHIBIT
R-5705A	2

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale **S.U.E. = Subsurface Utility Engineering*

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin (EIP)
- Computed Property Corner
- Property Monument (ECM)
- Parcel/Sequence Number (123)
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary (WLB)
- Proposed Wetland Boundary (WLB)
- Existing Endangered Animal Boundary (EAB)
- Existing Endangered Plant Boundary (EPB)
- Existing Historic Property Boundary (HPB)
- Known Contamination Area: Soil (S)
- Potential Contamination Area: Soil (S)
- Known Contamination Area: Water (W)
- Potential Contamination Area: Water (W)
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign (S)
- Well (W)
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream (JS)
- Buffer Zone 1 (BZ 1)
- Buffer Zone 2 (BZ 2)
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch (FLOW)
- False Sump

RAILROADS:

- Standard Gauge (CSX TRANSPORTATION)
- RR Signal Milepost (MILEPOST 35)
- Switch (SWITCH)
- RR Abandoned
- RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

- Secondary Horiz and Vert Control Point
- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Exist Permanent Easement 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 (RW)
- New Right of Way Line with Pin and Cap (RW)
- New Right of Way Line with Concrete or Granite R/W Marker (RW)
- New Control of Access Line with Concrete C/A Marker (CA)
- Existing Control of Access (CA)
- New Control of Access (CA)
- Existing Easement Line (E)
- 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 (C)
- Proposed Slope Stakes Fill (F)
- Proposed Curb Ramp (CR)
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- 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 (CB)
- Paved Ditch Gutter
- Storm Sewer Manhole (S)
- Storm Sewer (S)

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole (P)
- Power Line Tower
- 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)

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole (T)
- Telephone Pedestal (T)
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole (HH)
- U/G Telephone Cable LOS B (S.U.E.*) (T)
- 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.*) (TC)
- 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 FO)
- U/G Fiber Optics Cable LOS C (S.U.E.*) (T FO)
- U/G Fiber Optics Cable LOS D (S.U.E.*) (T FO)

WATER:

- Water Manhole (W)
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line LOS B (S.U.E*) (W)
- U/G Water Line LOS C (S.U.E*) (W)
- U/G Water Line LOS D (S.U.E*) (W)
- Above Ground Water Line (A/G Water)

TV:

- TV Pedestal (C)
- TV Tower
- U/G TV Cable Hand Hole (HH)
- 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 (S.U.E.*) (TV)
- U/G Fiber Optic Cable LOS B (S.U.E.*) (TV FO)
- U/G Fiber Optic Cable LOS C (S.U.E.*) (TV FO)
- U/G Fiber Optic Cable LOS D (S.U.E.*) (TV FO)

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line LOS B (S.U.E.*) (G)
- U/G Gas Line LOS C (S.U.E.*) (G)
- U/G Gas Line LOS D (S.U.E.*) (G)
- Above Ground Gas Line (A/G Gas)

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line (SS)
- Above Ground Sanitary Sewer (A/G Sanitary Sewer)
- SS Forced Main Line LOS B (S.U.E.*) (FSS)
- SS Forced Main Line LOS C (S.U.E.*) (FSS)
- SS Forced Main Line LOS D (S.U.E.*) (FSS)

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box (S)
- Utility Unknown U/G Line LOS B (S.U.E.*) (?UTL)
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. (UST)
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole LOS A (S.U.E.*)
- Abandoned According to Utility Records (AATUR)
- End of Information (E.O.I.)

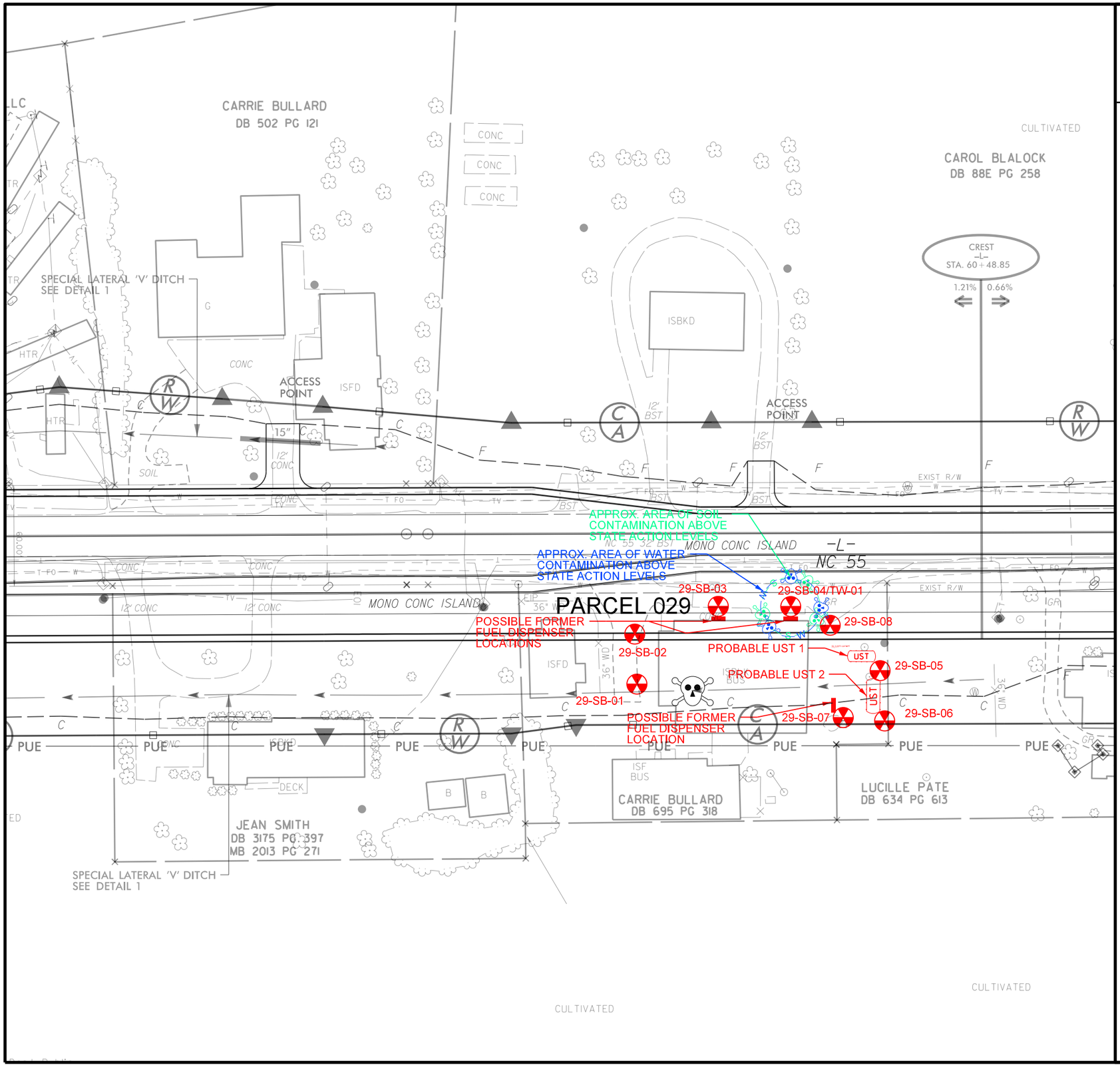
PROJECT DESCRIPTION:

PARCEL 029
CARRIE BULLARD
4798 NC 55
ANGIER, HARNETT COUNTY

PROJECT REFERENCE NO.	EXHIBIT
46377.1.2 (R-5705A)	3

BORING LOCATIONS AND SUMMARIZED SOIL AND GROUNDWATER SAMPLE RESULTS

0 30 60 120
FEET



Sample ID	Date Collected	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)
29-SB-01 (2-4)	2/2/2021	<0.54	<0.54	<0.54	<0.54	<0.11
29-SB-02 (4-6)	2/2/2021	<0.55	<0.55	<0.55	<0.55	<0.11
29-SB-03 (2-4)	2/2/2021	<0.55	<0.55	0.90	0.90	0.38
29-SB-04 (6-8)	2/2/2021	17.6	**55.3**	3.6	58.9	2.7
29-SB-05 (8-10)	2/2/2021	<0.58	<0.58	<0.58	<0.58	<0.12
29-SB-06 (6-8)	2/2/2021	<0.28	1.3	<0.28	1.3	<0.06
29-SB-07 (4-6)	2/2/2021	<1.2	<0.59	<0.59	<0.59	<0.12
29-SB-08	NS	--	--	--	--	--
State Action Levels		**NE**	**50**	**100**	**NE**	**NE**

Sample depth is provided in parentheses as part of the sample ID.
All results are reported in milligrams per kilogram (mg/kg).
Bolded: Concentration exceeds applicable NCDEQ State Action Level.
< Less than laboratory reporting limit.
BTEX - Benzene, Toluene, Ethylbenzene, and Xylenes.
GRO - Gasoline Range Organics.
NS: Not Sampled
NE: Standard Not Established
DRO: Diesel Range Organics.
TPH: Total Petroleum Hydrocarbons.

Sample ID	29-TW-01	GWQS (µg/L)	GCL (µg/L)
Date Collected	2/2/2021		
EPA Method 6200B			
Benzene	**91**	**1**	**5,000**
Cyclohexane	390	**NE**	**NE**
Ethylbenzene	**2,900**	**600**	**84,500**
Isopropylbenzene (Cumene)	**110**	**70**	**25,000**
Methylcyclohexane	220	**NE**	**NE**
Toluene	**14,000**	**600**	**260,000**
Xylenes (Total)	**15,000**	**500**	**85,500**
EPA Method 8270E			
2-Methylnaphthalene	**240**	**30**	**12,500**
Naphthalene	**860 B**	**6**	**6,000**

29-TW-01 installed in 29-SB-04 at approximately 13 feet below land surface with 10 feet of screen
Concentrations are reported in micrograms per liter (µg/L).
GWQS - North Carolina Groundwater Quality Standard (2L Standard, May, 2013).
GCL - Gross Contamination Levels for Groundwater (September, 2014).
NE - Standard Not Established .
Bolded: Concentration exceeds applicable GWQS.
B: Indicates analyte detected in the method blank.

TABLES

Table 1
Summary of PID Field Screening Values
Phase II Preliminary Site Assessment
Parcel 29 - Carrie Bullard Property
4798 NC 55, Angier, Harnett County, North Carolina
Terracon Project No. 70207241

Boring Depth (feet bls)	29-SB-01	29-SB-02	29-SB-03	29-SB-04	29-SB-05	29-SB-06	29-SB-07	29-SB-08*
(0 - 2)	<0.1	<0.1	<0.1	<0.1	0.5	0.4	<0.1	0.3
(2 - 4)	<0.1	<0.1	<0.1	0.5	0.5	0.5	0.2	0.1
(4 - 6)	<0.1	0.1	<0.1	15.8	0.6	0.7	0.3	0.1
(6 - 8)	<0.1	0.1	<0.1	1,052	0.6	0.7	0.5	0.3
(8 - 10)	<0.1	0.2	<0.1	1,697	1.4	0.6	0.7	<0.1

Notes:

Field screening was conducted on February 2, 2021

Values shown are given in parts per million (ppm)

PID - Photo-ionization detector

PID was calibrated using 100 ppm isobutylene gas

ft bls - feet below land surface.

*29-SB-08 was not submitted for laboratory analysis.

Table 2
Summary of Soil Analytical Results
Phase II Preliminary Site Assessment
Parcel 29 - Carrie Bullard Property
4798 NC 55, Angier, Harnett County, North Carolina
Terracon Project No. 70207241

Sample ID: / Sample Depth (ft bls):	29-SB-01 (2-4)	29-SB-02 (4-6)	29-SB-03 (2-4)	29-SB-04 (6-8)	29-SB-05 (8-10)	29-SB-06 (6-8)	29-SB-07 (4-6)	NCDEQ Action Level	MSCC Industrial / Commercial
BTEX (C6 - C9)	<0.54	<0.55	<0.55	17.6	<0.58	<0.28	<1.2	NE	NE
GRO (C5 - C10)	<0.54	<0.55	<0.55	55.3	<0.58	1.3	<0.59	50	NE
DRO (C10 - C35)	<0.54	<0.55	0.90	3.6	<0.58	<0.28	<0.59	100	NE
TPH (C5 - C35)	<0.54	<0.55	0.90	58.9	<0.58	1.3	<0.59	NE	NE
Total Aromatics (C10-C35)	<0.11	<0.11	0.38	2.7	<0.12	<0.060	<0.12	NE	NE
16 EPA PAHs	<0.17	<0.17	<0.17	<0.18	<0.18	<0.090	<0.19	NE	NE
BaP	<0.022	<0.022	<0.022	<0.022	<0.023	<0.011	<0.024	NE	0.78

Notes:

Soil samples were collected on February 2, 2021.

Detected compounds are shown in the table.

Concentrations are reported in milligrams per kilogram (mg/kg).

ft bls - feet below land surface.

GRO - Gasoline Range Organics.

DRO - Diesel Range Organics.

TPH - Total Petroleum Hydrocarbons.

BTEX - Benzene, Toluene, Ethylbenzene, and Xylenes.

16 EPA PAHs - Environmental Protection Agency Polycyclic Aromatic Hydrocarbons (acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[g,h,i]perylene, benzo[a]pyrene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorene, indeno[1,2,3-c,d]pyrene, naphthalene, phenanthrene, pyrene).

NE - Standard not established.

Detections shaded in gray exceed the North Carolina Department of Environmental Quality (NCDEQ) Action Level.

MSCC Industrial/Commercial - Maximum Soil Contaminant Concentration Levels Industrial/Commercial soil cleanup levels.

Bold: Constituent concentration reported above the method detection limit.

Table 3
Summary of Groundwater Analytical Results
Phase II Preliminary Site Assessment
Parcel 29 - Carrie Bullard Property
4798 NC 55, Angier, Harnett County, North Carolina
Terracon Project No. 70207241

Sample ID:	29-TW-01	GWQS	GCL
Dated Collected (mm/dd/yy)	2/2/2021		
Volatile Organic Compounds (Method 8260D)			
Benzene	91	1	5,000
Cyclohexane	390	NE	NE
Ethylbenzene	2,900	600	84,500
Isopropylbenzene (Cumene)	110	70	25,000
Methylcyclohexane	220	NE	NE
Toluene	14,000	600	260,000
Xylenes (Total)	15,000	500	85,500
Semi-volatile Organic Compounds (Method 8270E)			
2-Methylnaphthalene	240	30	12,500
Naphthalene	860 B	6	6,000

Notes:

Detected compounds are shown in the table

Concentrations are reported in micrograms per liter (µg/L)

GWQS - North Carolina Groundwater Quality Standard (2L Standard, May, 2013)

GCL - Gross Contamination Levels for Groundwater (September, 2014)

NE - standard not established

Shading indicates concentration exceeds an applicable standard

Bold: Constituent concentration reported above the method detection limit

B: Indicates analyte detected in the method blank.

Temporary well constructed at total depth of 13 feet below land surface (bls) with 0.010-inch slotted 1-inch PVC from 3 to 13 feet bls.

Depth to groundwater in temporary well was measured at 5.3 feet bls after installation.

APPENDIX A
GEOPHYSICAL SURVEY REPORT

March 9, 2021

John Pilipchuk, L.G., P.E.
North Carolina Department of Transportation
GeoEnvironmental Engineering Unit
1589 Mail Service Center
Raleigh, NC 27699-1589

Re: Report for GeoEnvironmental Phase II Site Investigations
Locate USTs and Utilities using Geophysical Methods
Parcel #29 – Carrie Bullard Property
4798 NC-55, Angier, Harnett County, North Carolina
TIP: R-5705A; WBS Element No. 46377.1.2
Terracon Project No.: 70207241

Dear Mr. Pilipchuk:

On January 21 and 22, 2021, a representative of Terracon Consultants, Inc. (Terracon) performed geophysical exploration services at the above referenced site in general accordance with Terracon Proposal No. P70207241 dated December 8, 2020. This report is presented as a summary of those geophysical services.

1.0 PROJECT DESCRIPTION

Based on the Request for Proposal (RFP) from the North Carolina Department of Transportation (NCDOT), a Phase II Preliminary Site Assessment (PSA) was requested for Parcel #29— Carrie Bullard Property, 4798 NC-55, Angier, North Carolina. The project consisted of the exploration of an approximate 220-foot by 120-foot area along Highway 55 (entire area, not just along the roadways). The purpose of the geophysical exploration was to aid in identifying anomalies consistent with Underground Storage Tanks (USTs) utilizing non-intrusive geophysical methods.

Terracon attempted to define the findings from this survey according to the following NCDOT standard terms:

Geophysical Surveys for Underground Storage Tanks
on NCDOT Projects

High Confidence	Intermediate Confidence	Low Confidence	No Confidence
Known UST Active tank - spatial location, orientation, and approximate depth determined by geophysics.	**Probable UST** Sufficient geophysical data from both magnetic and radar surveys that is characteristic of a tank. Interpretation may be supported by physical evidence such as fill/vent pipe, metal cover plate, asphalt/concrete patch, etc.	**Possible UST** Sufficient geophysical data from either magnetic or radar surveys that is characteristic of a tank. Additional data is not sufficient enough to confirm or deny the presence of a UST.	Anomaly noted but not characteristic of a UST. Should be noted in the text and may be called out in the figures at the geophysicist's discretion.

2.0 EXPLORATION METHODS

Terracon used a frequency domain electromagnetic profiler (EM) consisting of a Geonics EM-31-SH system with data logger to collect EM data. In general, field data collection followed the procedures referenced in ASTM D6639-18. More information on both the general method and collection procedures can be found in the referenced standard. EM collects soil conductivity in millisiemens per meter (mS/m) and magnetic susceptibility in parts per trillion (ppt).

Data was collected on a bi-directional grid at approximately 5-foot spacings in both directions. However, the EM-31 uses a sub-meter GPS system to accurately plot data points of collection, therefore the grid was approximate. Data was post-processed utilizing Trackmaker 31 software engineered by Geomar and Surfer software developed by Golden Software.

Additionally, a Ground Penetrating System (GPR) consisting of a 350 MHz antenna and SIR-4000 system made by Geophysical Survey Systems Inc. (GSSI), was utilized to collect GPR data. Data was collected on a bi-directional grid with spacings of approximately 5 feet in both directions. Following the completion of field data collection, data was post-processed utilizing RADAN software engineered by GSSI.

3.0 FINDINGS

Terracon reviewed the EM and GPR data collected. Based on the EM data, an anomaly consistent with a probable UST was identified on the northwest portion of the site. Additionally, we encountered interference from an above ground propane tank and underground utilities that likely caused "no confidence" anomalies. In general, soil conductivity measurements between 0 to 20 mS/m and magnetic susceptibly measurements between -6 to 2 ppt were considered "background". Measurements outside of these ranges were interpreted to be caused by above or

below ground anomalies. The depth of EM signal penetration is approximately 9 feet below the existing grade; however, the actual depth is not produced from the data collected.

Upon review of the GPR data, two anomalies consistent with probable USTs were identified at the following locations:

UST I.D.	Coordinates [1]	Approximate Depth to Top of UST (ft)	Approximate UST Length (ft)[2]
1	35.473328°, -78.710126°	2.5	17
2	35.473285°, -78.710155°	2.7	14

1. Coordinates are accurate to withing ±1.5 feet to the center of the UST.
2. The length is approximate, and a width cannot be determined utilizing geophysical methods.

The depth of GPR signal penetration across the site was approximately 8 feet below the existing grade. Complete results of our findings can be found in the attached Exhibits.

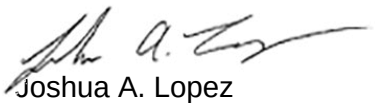
4.0 LIMITATIONS

It should be noted that, as with any geophysical testing method, the processes rely on instrument signals to indicate physical conditions in the field. Signal information can be affected by on-site conditions beyond the control of the operator, such as, but not limited to, ground surface cover, concrete/soil types, concrete/soil moisture, groundwater table depth, and/or reinforcing steel spacing. The depth of penetration and quality of the GPR data cannot be determined until our arrival on site. Interpretation of those signals is based on a combination of known factors combined with the experience of the operator and geophysicist evaluating the results. Additionally, GPR may not be able to identify the diameter of an object such as a pipe or UST. Utilizing conventional observation, sampling, and testing ("truthing") of select areas is recommended to confirm the results from the geophysical surveys. As with all geophysical methods, the geophysical results provide a level of confidence, but should not be considered absolute. We cannot be responsible for the interpretation of geophysical results by others.

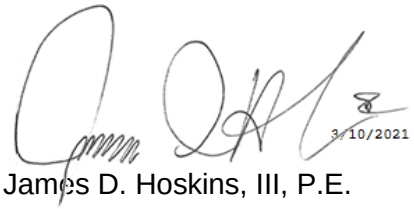
5.0 CLOSURE

We appreciate the opportunity to work with you on this project. Please do not hesitate to contact the undersigned if you have any questions regarding this information or if we can be of further service to you.

Sincerely,
Terracon Consultants, Inc.



Joshua A. Lopez
Geophysicist



James D. Hoskins, III, P.E.
Principal / Greensboro Office Manager

Attachments: Exhibits – Geophysical Exploration Results (6 pages)

Site Location Diagram

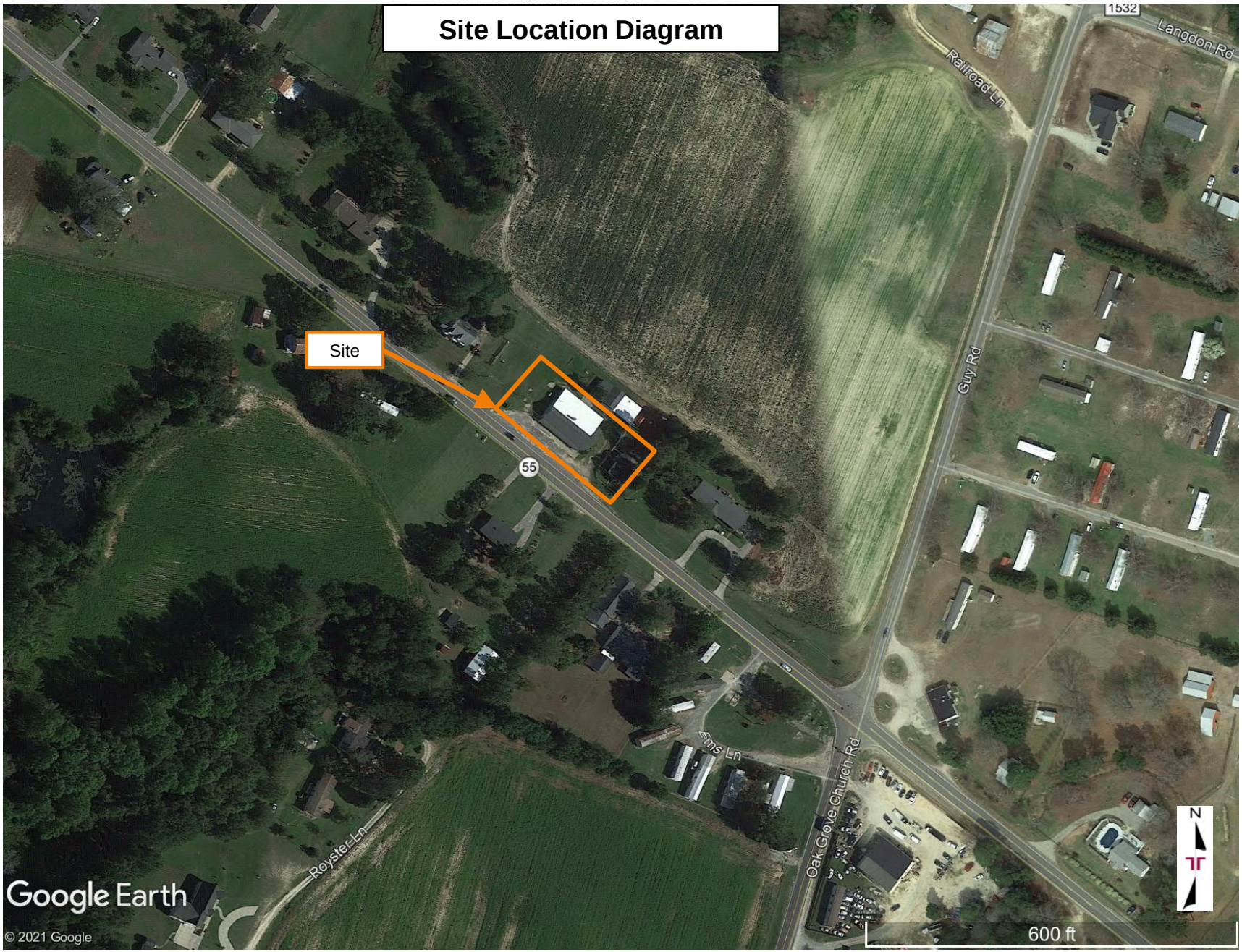


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Exploration Location Diagram

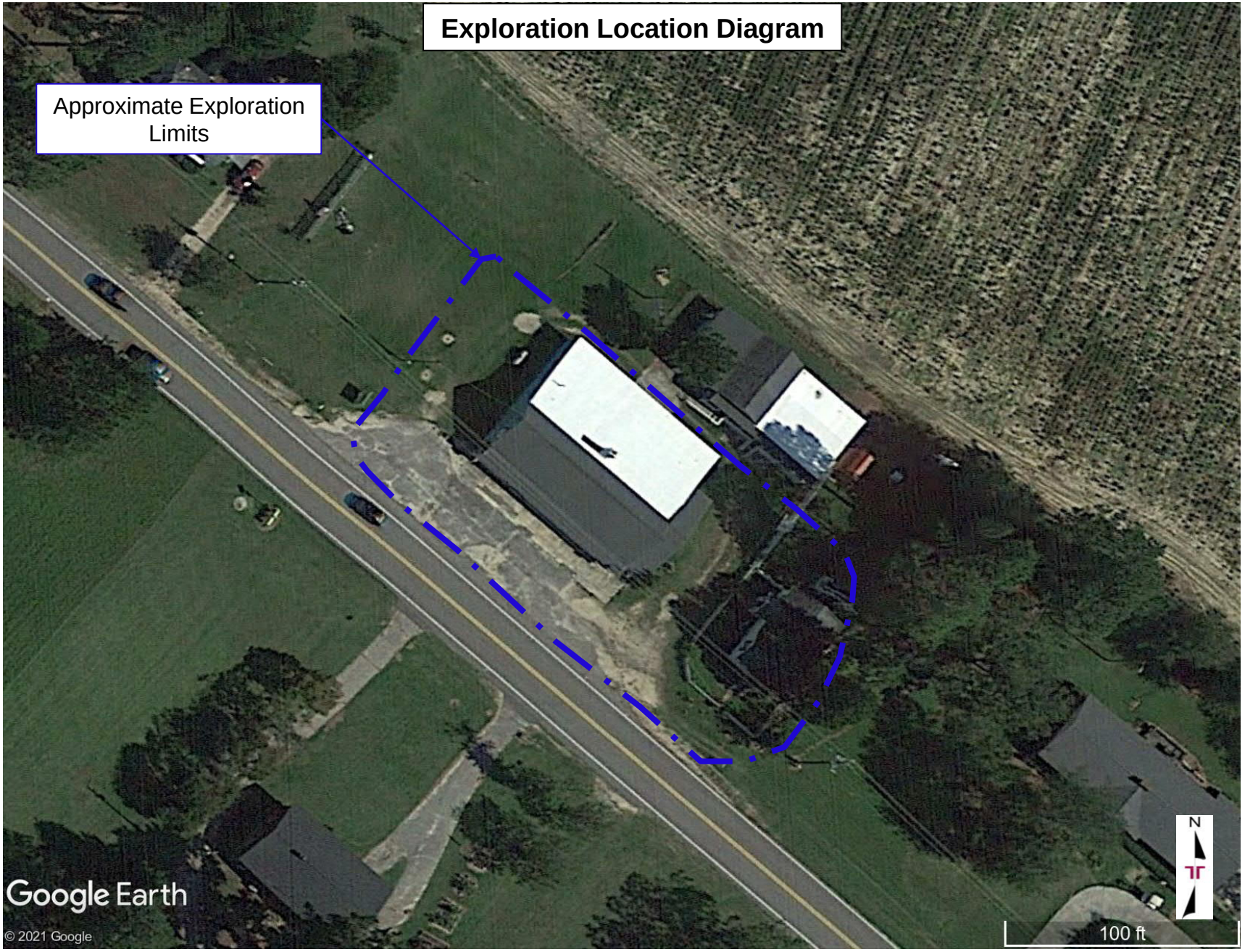
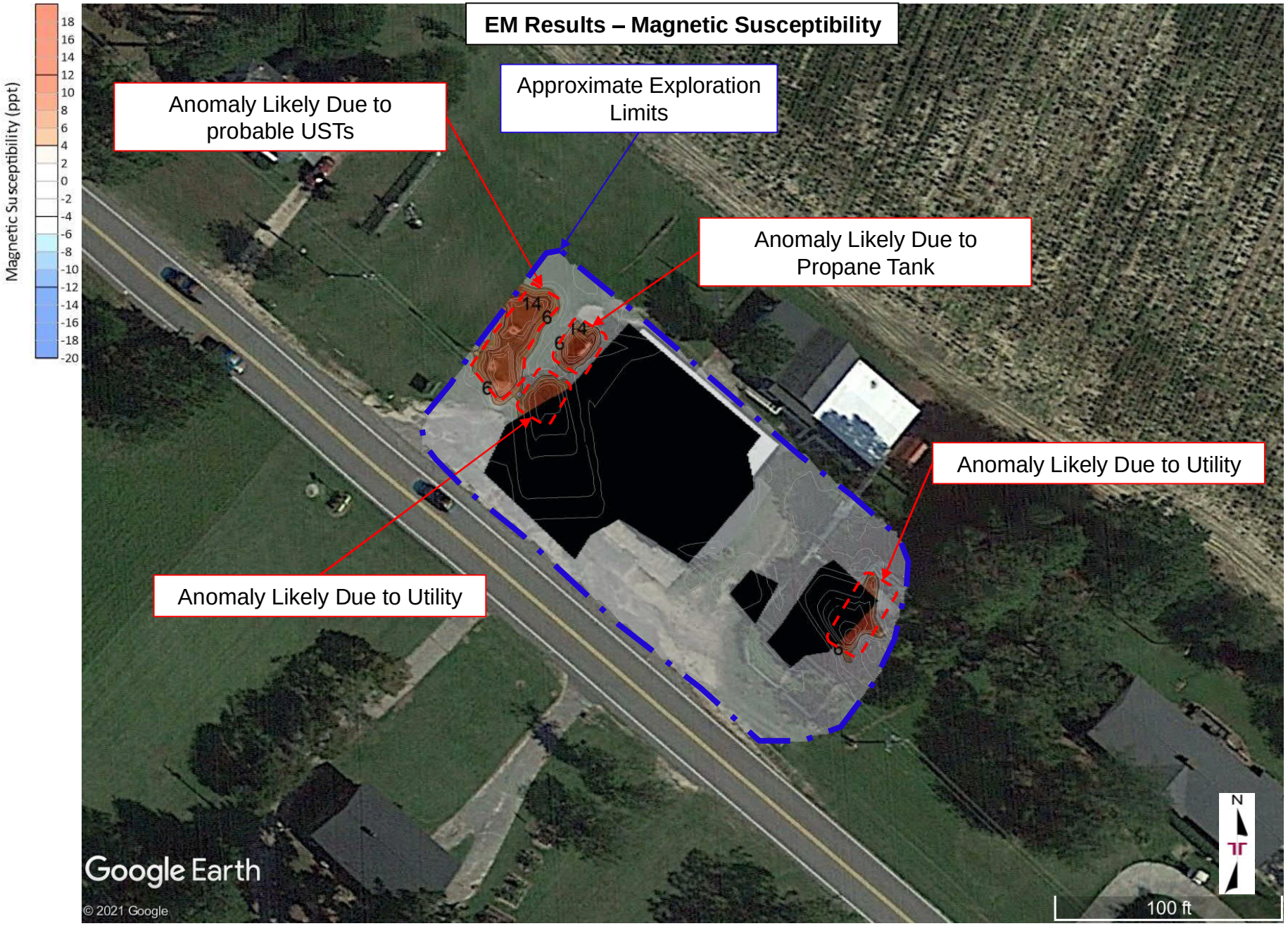
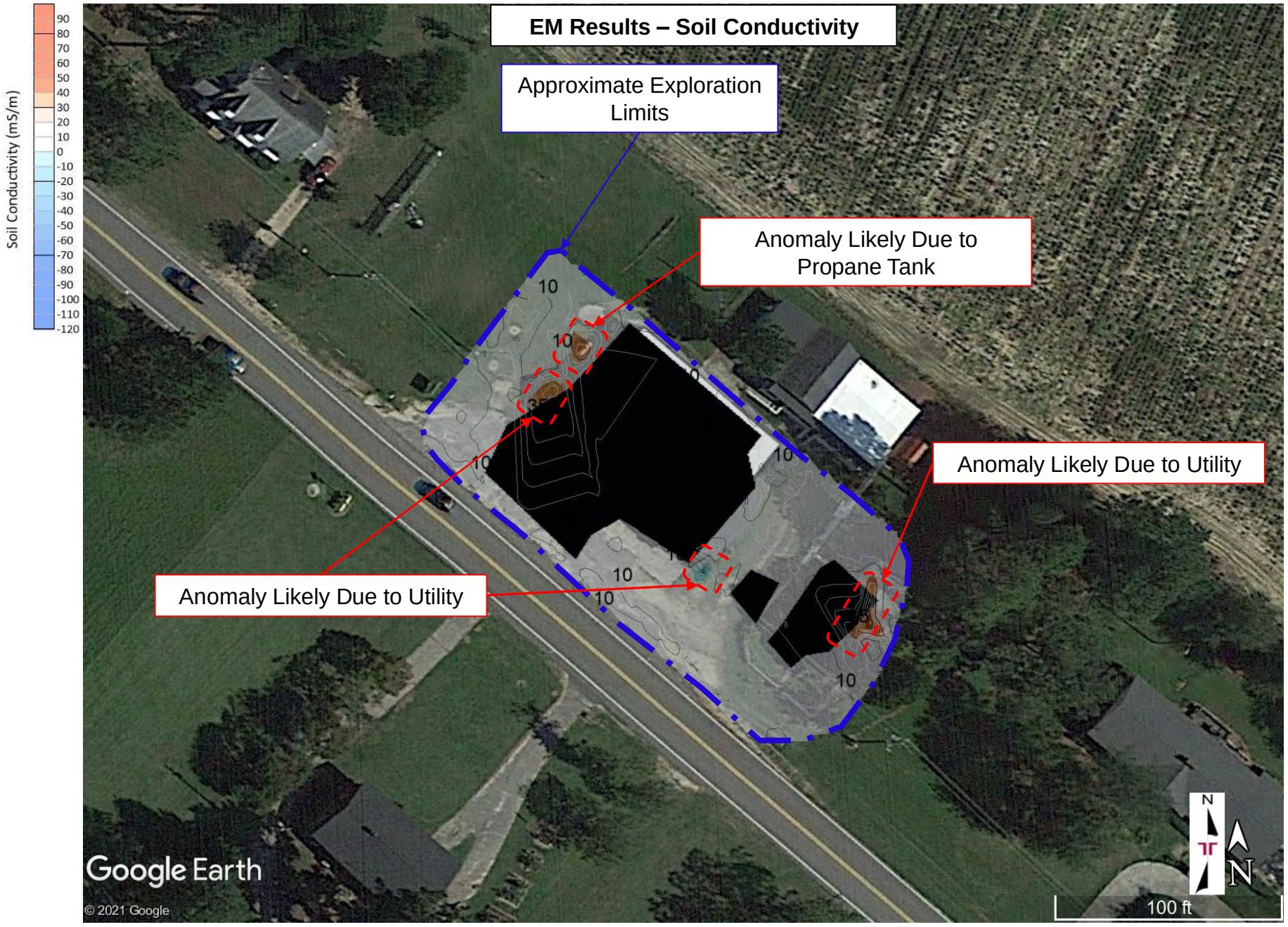


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES


EM Results – Magnetic Susceptibility
Magnetic Susceptibility (ppt)
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
Anomaly Likely Due to probable USTs
Approximate Exploration Limits
Anomaly Likely Due to Propane Tank
Anomaly Likely Due to Utility
Anomaly Likely Due to Utility
14
6
6
14
6
Google Earth
© 2021 Google
N
100 ft


EM Results – Soil Conductivity
Approximate Exploration Limits
Anomaly Likely Due to Propane Tank
Anomaly Likely Due to Utility
Anomaly Likely Due to Utility
Soil Conductivity (mS/m)
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
-110
-120
10
Google Earth
© 2021 Google
N
N
100 ft

GPR Results

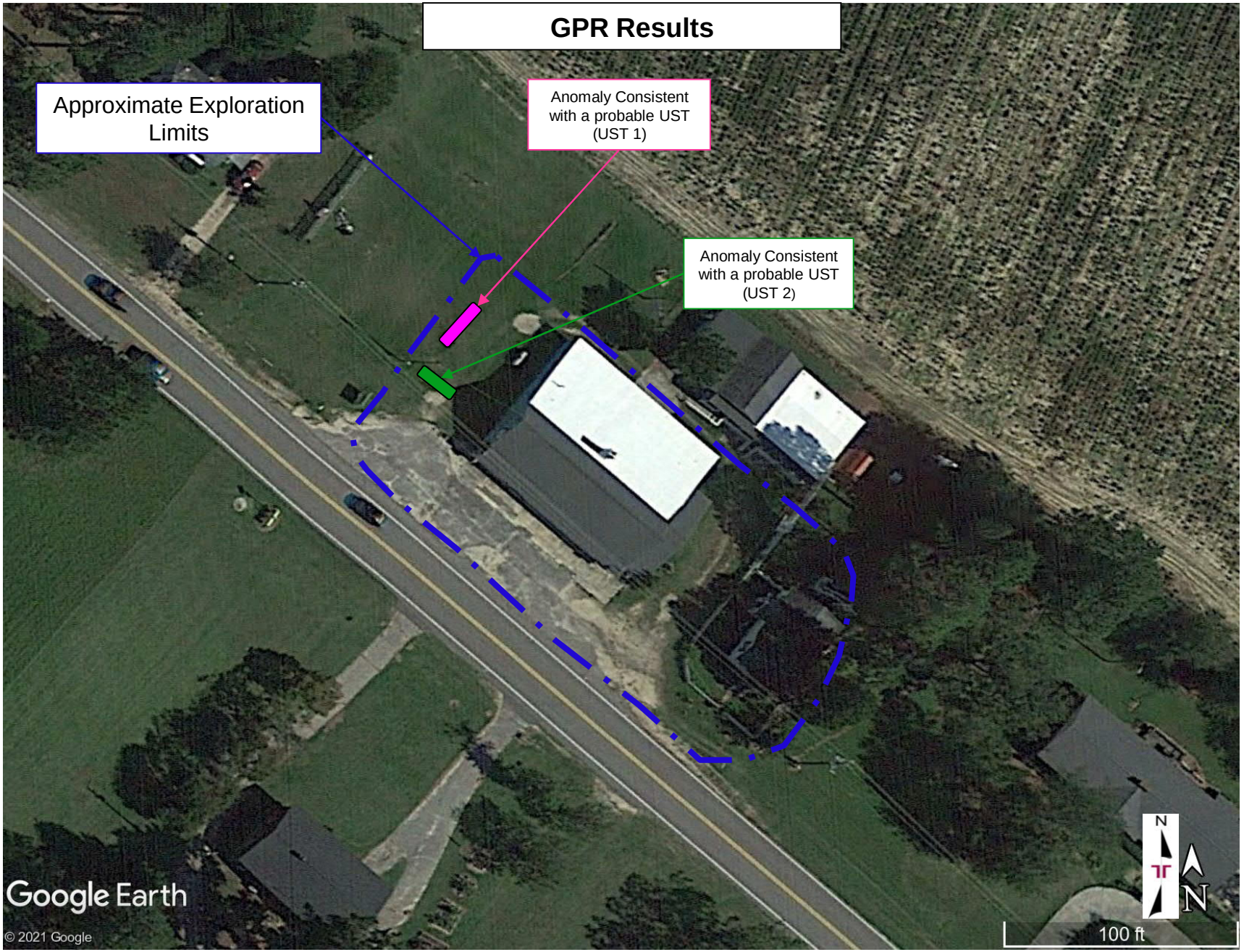
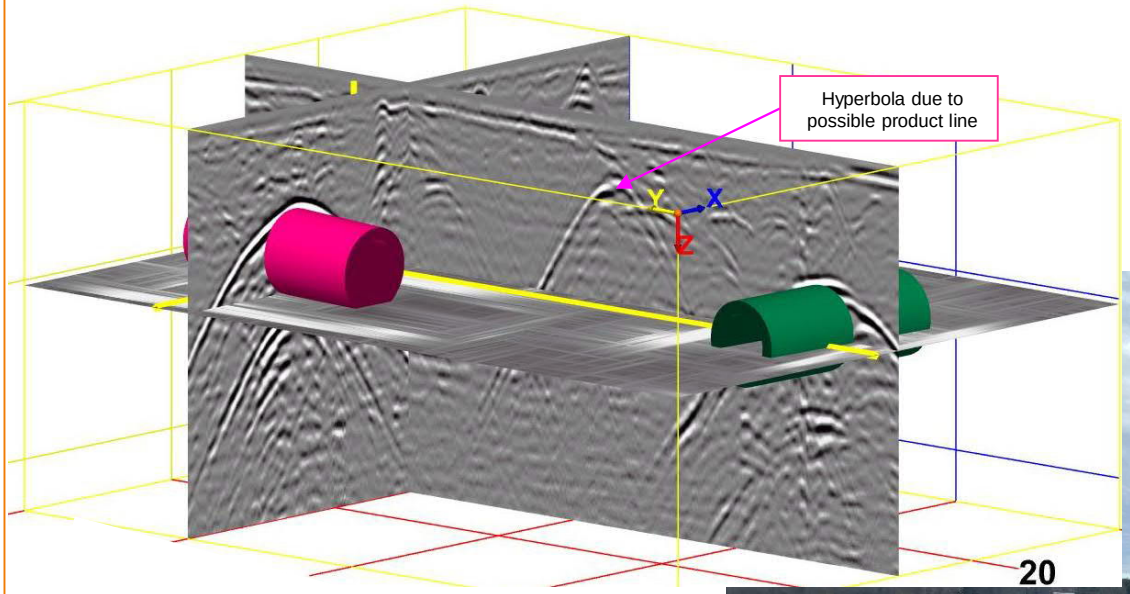
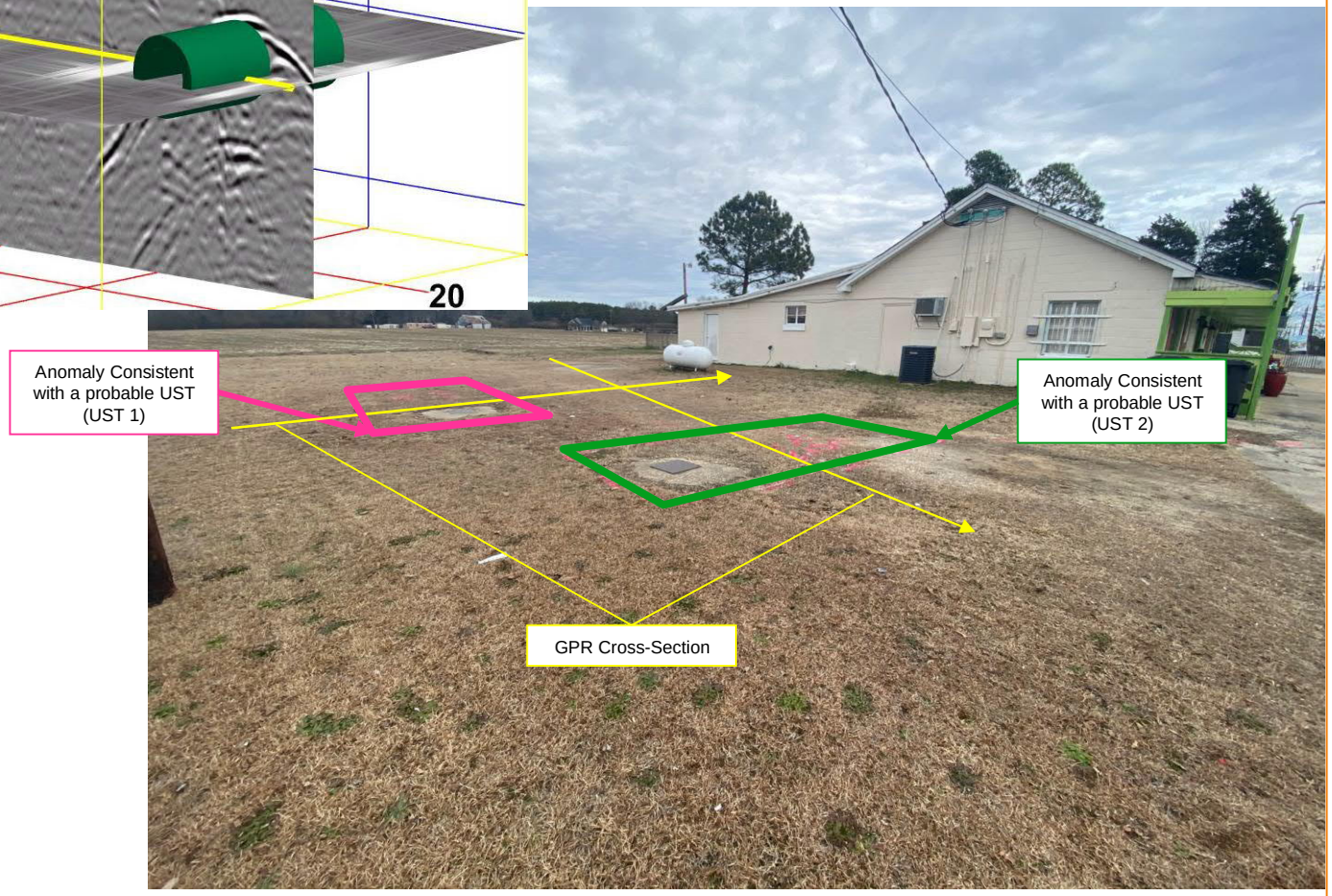


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

GPR Results


Hyperbola due to possible product line
Y
X
Z
20


Anomaly Consistent with a probable UST (UST 1)
Anomaly Consistent with a probable UST (UST 2)
GPR Cross-Section

APPENDIX B
PHOTOGRAPHS

Photo #1 View of the site; facing northwest.

Photo #2 View of the on-site building (4798 NC-55); facing north.

Photo #3 View of the two on-site probable USTs identified north of the on-site building in the geophysical investigation; facing northwest.

Photo #4 View of a typical exposed fill port for the on-site probable USTs; facing southeast.

Photo #5 View of the possible fuel line extending from the probable USTs to western side of the on-site building; facing southeast.

Photo #6 View of a typical possible former on-site fuel dispenser location west of the on-site building; facing east.

Photo #7 View of the possible former on-site fuel dispenser located north of the on-site building; facing east.

APPENDIX C
SOIL BORING LOGS

BORING LOG NO. 29-SB-01

PROJECT: Phase II Preliminary Site Assessment - Parcel 29

CLIENT: NCDOT Raleigh, North Carolina

SITE: Carrie Bullard Property - 4798 NC 55 Angier, North Carolina

LOCATION See Exhibit 3

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	SILTY SAND (SM), trace clay, trace organics, fine to coarse grained, dark brown and light brown, odor and staining not observed, moist					<0.1	
				Grab	60	<0.1	29-SB-01 TPH via QED UVF
4.0	**SILTY SAND (SM)**, trace clay, fine to coarse grained, orangish brown and reddish brown, odor and staining not observed, moist					<0.1	
		5				<0.1	
					60	<0.1	
10.0	***Boring Terminated at 10 Feet***	10					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
2.25-inch DPT

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:

ft bls: feet below land surface
PID: Photoionization detector
TPH: Total petroleum hydrocarbons
UVF: Ultraviolet fluorescence

WATER LEVEL OBSERVATIONS

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 02-02-2021 | Boring Completed: 02-02-2021

Drill Rig: Geoprobe 5410 | Driller: Regional Probing Services

Project No.: 70207241 | Appendix B

BORING LOG NO. 29-SB-02

PROJECT: Phase II Preliminary Site Assessment - Parcel 29

CLIENT: NCDOT Raleigh, North Carolina

SITE: Carrie Bullard Property - 4798 NC 55 Angier, North Carolina

LOCATION See Exhibit 3

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	SILTY SAND (SM), trace clay, trace organics, fine to coarse grained, dark brown and light brown, odor and staining not observed, moist				40	<0.1	
						<0.1	
4.0	**SILTY SAND (SM)**, trace clay, fine to coarse grained, light brown and reddish brown, odor and staining not observed, moist to wet at 8 feet bls	5		Grab	36	0.1	29-SB-02 TPH via QED UVF
						0.1	
					36	0.2	
10.0	***Boring Terminated at 10 Feet***	10					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
2.25-inch DPT

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:

ft bls: feet below land surface
PID: Photoionization detector
TPH: Total petroleum hydrocarbons
UVF: Ultraviolet fluorescence

WATER LEVEL OBSERVATIONS

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 02-02-2021 | Boring Completed: 02-02-2021

Drill Rig: Geoprobe 5410 | Driller: Regional Probing Services

Project No.: 70207241 | Appendix B

BORING LOG NO. 29-SB-03

PROJECT: Phase II Preliminary Site Assessment - Parcel 29

CLIENT: NCDOT
Raleigh, North Carolina

SITE: Carrie Bullard Property - 4798 NC 55
Angier, North Carolina

LOCATION See Exhibit 3

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
0.3	**ASPHALT**						
	SILTY SAND (SM), trace clay, trace organics, fine to coarse grained, light brown, odor and staining not observed, moist					<0.1	
					36		
				Grab		<0.1	29-SB-03 TPH via QED UVF
4.0							
	SILTY SAND (SM), trace clay, fine to coarse grained, orangish brown and reddish brown, odor and staining not observed, moist to wet at 8 feet bls					<0.1	
		5			36		
						<0.1	
					36		
10.0						<0.1	
	Boring Terminated at 10 Feet	10					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
2.25-inch DPT

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:

ft bls: feet below land surface
PID: Photoionization detector
TPH: Total petroleum hydrocarbons
UVF: Ultraviolet fluorescence

WATER LEVEL OBSERVATIONS

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 02-02-2021 | Boring Completed: 02-02-2021
Drill Rig: Geoprobe 5410 | Driller: Regional Probing Services
Project No.: 70207241 | Appendix B

WELL LOG NO. 29-SB-04/29-TW-01

PROJECT: Phase II Preliminary Site Assessment - Parcel 29

CLIENT: NCDOT Raleigh, North Carolina

SITE: Carrie Bullard Property - 4798 NC 55 Angier, North Carolina

LOCATION See Exhibit 3

INSTALLATION DETAILS: Well Completion: Temporary Well

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
0.3	**ASPHALT**						
	SILTY SAND (SM), some clay from 3 to 5 feet bls, fine to coarse grained, light brown, odor and staining not observed, moist				36	<0.1 0.5	
5.0	**SILTY SAND (SM)**, fine to coarse grained, reddish brown and light brown, strong petroleum odor observed and staining observed from 6 to 6.5 feet bls, moist to wet at 8 feet bls	5	▽	Grab	36	15.8 1,052	29-SB-04 TPH via QED UVF 29-TW-01 VOCs via 8260, SVOCs via 8270
10.0	**SAND (SW)**, trace silt and fines, fine to coarse grained, light brown, strong petroleum odor and staining observed, saturated	10			36	1,697 869.9	
13.0	***Boring Terminated at 13 Feet***						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
2.25-inch DPT

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:
ft bls: feet below land surface
PID: Photoionization detector
TPH: Total petroleum hydrocarbons
UVF: Ultraviolet fluorescence

WATER LEVEL OBSERVATIONS

▽ *Depth to groundwater measured in ft bls after temporary well installation.*

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Well Started: 02-02-2021 | Well Completed: 02-02-2021

Drill Rig: Geoprobe 5410 | Driller: Regional Probing Services

Project No.: 70207241 | Appendix B

BORING LOG NO. 29-SB-05

PROJECT: Phase II Preliminary Site Assessment - Parcel 29

CLIENT: NCDOT
Raleigh, North Carolina

SITE: Carrie Bullard Property - 4798 NC 55
Angier, North Carolina

LOCATION See Exhibit 3

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	SILTY SAND (SM), trace organics, fine to coarse grained, light brown, odor and staining not observed, moist					0.5	
					40	0.5	
5.0		5					
	SILTY SAND (SM), trace clay, fine to coarse grained, reddish brown and orangish brown, odor and staining not observed, moist to wet at 8 feet bls				36	0.6	
						0.6	
				Grab	36	1.4	29-SB-05 TPH via QED UVF
10.0		10					
	Boring Terminated at 10 Feet						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
2.25-inch DPT

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:

ft bls: feet below land surface
PID: Photoionization detector
TPH: Total petroleum hydrocarbons
UVF: Ultraviolet fluorescence

WATER LEVEL OBSERVATIONS

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 02-02-2021 | Boring Completed: 02-02-2021
Drill Rig: Geoprobe 5410 | Driller: Regional Probing Services
Project No.: 70207241 | Appendix B

BORING LOG NO. 29-SB-06

PROJECT: Phase II Preliminary Site Assessment - Parcel 29

CLIENT: NCDOT
Raleigh, North Carolina

SITE: Carrie Bullard Property - 4798 NC 55
Angier, North Carolina

LOCATION See Exhibit 3

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	SILTY SAND (SM), some clay from 3 to 5 feet bls, fine to coarse grained, light brown, odor and staining not observed, moist					0.4	
					36	0.5	
5.0							
	SILTY SAND (SM), trace clay, fine to coarse grained, reddish brown and orangish brown, odor and staining not observed, moist to wet at 8 feet bls	5				0.7	
					36		
				Grab		0.7	29-SB-06 TPH via QED UVF
					36		
10.0						0.6	
	Boring Terminated at 10 Feet	10					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
2.25-inch DPT

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:

ft bls: feet below land surface
PID: Photoionization detector
TPH: Total petroleum hydrocarbons
UVF: Ultraviolet fluorescence

WATER LEVEL OBSERVATIONS

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 02-02-2021 | Boring Completed: 02-02-2021
Drill Rig: Geoprobe 5410 | Driller: Regional Probing Services
Project No.: 70207241 | Appendix B

BORING LOG NO. 29-SB-07

PROJECT: Phase II Preliminary Site Assessment - Parcel 29

CLIENT: NCDOT
Raleigh, North Carolina

SITE: Carrie Bullard Property - 4798 NC 55
Angier, North Carolina

LOCATION See Exhibit 3

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	SILTY SAND (SM), some clay from 3 to 5 feet bls, fine to coarse grained, light brown and dark brown, odor and staining not observed, moist to wet from 3 to 4 feet bls				36	<0.1 0.2	
5.0	**SILTY SAND (SM)**, trace clay, fine to coarse grained, reddish brown and light brown, odor and staining not observed, moist to wet at 8 feet bls	5		Grab	36 36	0.3 0.5 0.7	29-SB-07 TPH via QED UVF
10.0	***Boring Terminated at 10 Feet***	10					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
2.25-inch DPT

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:

ft bls: feet below land surface
PID: Photoionization detector
TPH: Total petroleum hydrocarbons
UVF: Ultraviolet fluorescence

WATER LEVEL OBSERVATIONS

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 02-02-2021 | Boring Completed: 02-02-2021
Drill Rig: Geoprobe 5410 | Driller: Regional Probing Services
Project No.: 70207241 | Appendix B

BORING LOG NO. 29-SB-08

PROJECT: Phase II Preliminary Site Assessment - Parcel 29

CLIENT: NCDOT
Raleigh, North Carolina

SITE: Carrie Bullard Property - 4798 NC 55
Angier, North Carolina

LOCATION See Exhibit 3

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
0.3	**ASPHALT**						
	SILTY SAND (SM), some clay from 3 to 4 feet bls, fine to coarse grained, light brown, odor and staining not observed, moist				30	0.3 0.1	
4.0							
	SILTY SAND (SM), trace clay, fine to coarse grained, reddish brown and orangish brown, odor and staining not observed, moist to wet at 8 feet bls	5			36	0.1	NS
						0.3	
					36	<0.1	
10.0		10					
	Boring Terminated at 10 Feet						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
2.25-inch DPT

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:
ft bls: feet below land surface
PID: Photoionization detector
NS: Not sampled

WATER LEVEL OBSERVATIONS

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 02-02-2021
Boring Completed: 02-02-2021
Drill Rig: Geoprobe 5410
Driller: Regional Probing Services
Project No.: 70207241
Appendix B

APPENDIX D
GROUNDWATER SAMPLING LOG

Groundwater Sampling Log

Terracon

Site Name: Parcel #29 | Well ID: 29-TW-01
Project Number: 70207241 | Sample Date: 2/2/21
Site Location: Angier, NC | Sampler Initials: ED
Weather: Partly cloudy, 48s F | Sample Time: 1345

GAUGING DATA

Gauging Date: 2/2/21
Screen Interval (ft bls): 3-13
Total Depth (ft bTOC): 13
Depth to water (ft ~~bTOC~~ bls): 5.3 ft
Stick-up length (ft ags): —
Water column length (ft): 7.7 ft
Well Volume: 0.32 gal

Well Diameter	Gal/ft	L/ft
6"	1.47	5.56
4"	0.653	2.47
[illegible]	0.163	0.618
1"	0.041	0.154
¾"	0.023	0.087

Sample Method
- [x] Peristaltic
- [ ] Bladder
- [ ] Bailer
- [ ] Grundfos
- [ ] Monsoon
- [ ] PDB

Purge Device
- [ ] Dedicated
- [x] Disposable
- [ ] Decontaminated

QA/QC Samples
- [ ] Duplicate
- [ ] MS/MSD
- [ ] Equipment Blank

QA/QC Sample ID

FIELD PARAMETERS

Time	Purge Vol. (gal)	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turbidity (NTU)	ORP (mV)	Flow (ml/min)	Water Depth (ft bTOC)
1325	—	—	—	—	—	—	—	400	—
1330	0.5	16.58	6.22	2.25	145	—	36.6	200	—
1335	0.75	15.50	5.99	0.72	143	—	13.3	200	—
1340	1.0	15.92	5.96	0.74	144	—	16.8	200	—
1345	1.25	16.17	5.98	0.85	140		26.4		

LABORATORY ANALYSIS

Analytical Parameter	Method	Bottle Size/Type	No. Bottles	Preservative	Hold Time
VOCs	~~6200~~ 8260	40ml / VOA	3	HCL	14 days
SVOCs	8270	500mL / Amber	2	—	

Notes: YSI #18462, Total of ~3 gallons purged during well development/sampling

Signature: [signature] Date: 2/2/21

APPENDIX E
LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS

QED REDLAB RAPID ENVIRONMENTAL DIAGNOSTICS QROS

Hydrocarbon Analysis Results

Client: Terracon Consultants
Address: 2401 Brentwood Rd. Suite 107
Raleigh, NC 27604

Samples taken Tuesday, February 2, 2021
Samples extracted Tuesday, February 2, 2021
Samples analysed Wednesday, February 3, 2021

Contact: Ethan Dinwiddie

Operator Tori Kelly

Project: #70207241

U04049

Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	Ratios			HC Fingerprint Match
										% light	% mid	% heavy	
s	29-SB-01 (2-4)	21.7	<0.54	<0.54	<0.54	<0.54	<0.11	<0.17	<0.022	0	100	0	PHC not detected
s	29-SB-02 (4-6)	21.8	<0.55	<0.55	<0.55	<0.55	<0.11	<0.17	<0.022	0	0	0	PHC not detected,(BO)
s	29-SB-03 (2-4)	21.8	<0.55	<0.55	0.9	0.9	0.38	<0.17	<0.022	90.5	7.4	2.1	Deg Fuel 74.8%,(FCM),(BO),(P)
s	29-SB-04 (6-8)	22.2	17.6	55.3	3.6	58.9	2.7	<0.18	<0.022	99.6	0.3	0.1	Deg.Gas 60.6%,(FCM)
s	29-SB-05 (8-10)	23.0	<0.58	<0.58	<0.58	<0.58	<0.12	<0.18	<0.023	0	100	0	PHC not detected
s	29-SB-06 (6-8)	11.2	<0.28	1.3	<0.28	1.3	<0.06	<0.09	<0.011	99.7	0.3	0	PHC not detected 54.6%
s	29-SB-07 (4-6)	23.6	<1.2	<0.59	<0.59	<0.59	<0.12	<0.19	<0.024	100	0	0	Residual HC

Initial Calibrator QC check OK Final FCM QC Check OK 93 %

Results generated by a QED HC-1 analyser. Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values are not corrected for moisture or stone content

Fingerprints provide a tentative hydrocarbon identification. The abbreviations are:- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for sample fingerprint match to library

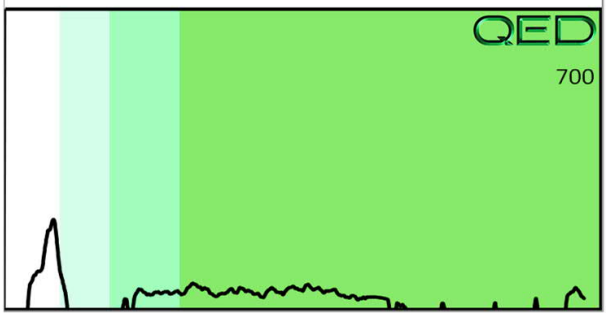
(SBS) or (LBS) = Site Specific or Library Background Subtraction applied to result : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate present

QED Hydrocarbon Fingerprints

Project: #70207241

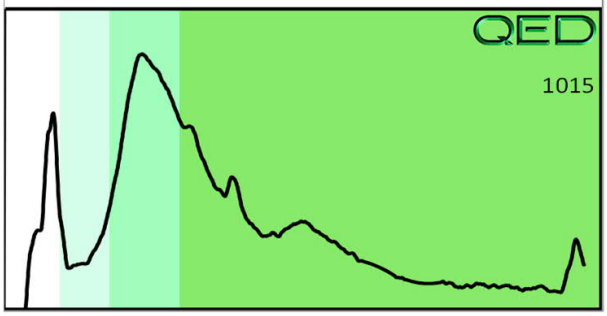
Wednesday, February 3, 2021

29-SB-01 (2-4) : PHC not detected

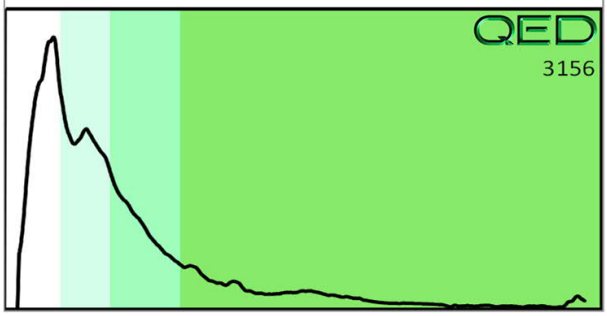


29-SB-02 (4-6) : PHC not detected,(BO)

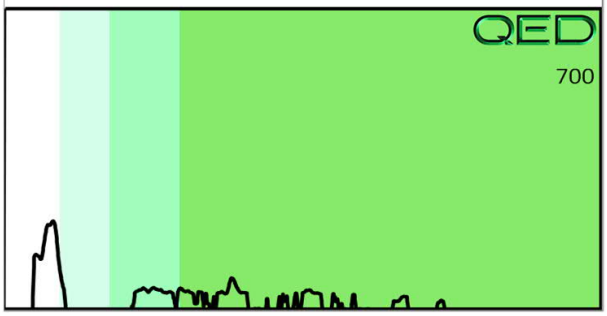
29-SB-03 (2-4) : Deg Fuel 74.8%,(FCM),(BO),(P)



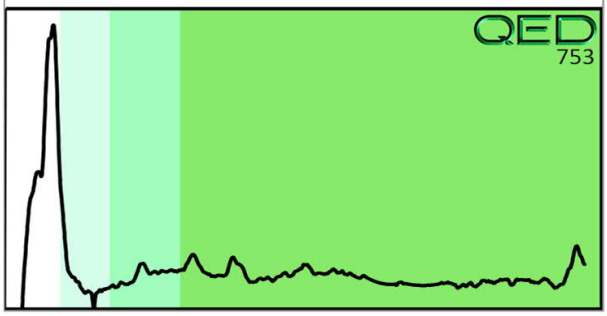
29-SB-04 (6-8) : Deg.Gas 60.6%,(FCM)



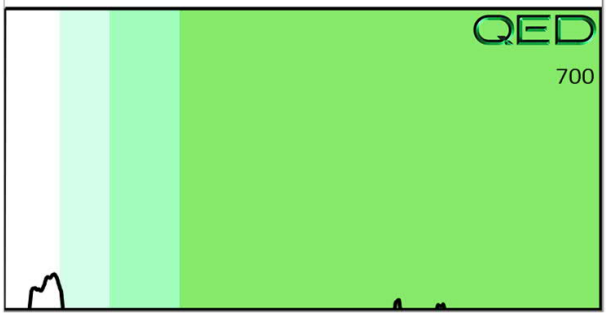
29-SB-05 (8-10) : PHC not detected



29-SB-06 (6-8) : PHC not detected 54.6%



29-SB-07 (4-6) : Residual HC



Client Name:	Terracon Consultants
Address:	2401 Brentwood Rd, Suite 107 ~~Suite 107~~ Raleigh, NC 27604
Contact:	Ethan Dinwiddie
Project Ref.:	70207241
Email:	Ethan.Dinwiddie@Terracon.com
Phone #:	828-550-5502
Collected by:	Ethan Dinwiddie

REDLAB™
RAPID ENVIRONMENTAL DIAGNOSTICS

CHAIN OF CUSTODY AND ANALYTICAL REQUEST FORM

RED Lab, LLC
5598 Marvin K Moss Lane
MARBIONC Bldg, Suite 2003
Wilmington, NC 28409

Each UVF sample will be analyzed for total BTEX, GRO, DRO, TPH, PAH total aromatics and BaP. Standard GC Analyses are for BTEX and Chlorinated Solvents: VC, 1,1 DCE, 1,2 cis DCE, 1,2 trans DCE, TCE, and PCE. Specify target analytes in the space provided below.

Sample Collection	TAT Requested		Analysis Type		Initials	Sample ID	Total Wt.	Tare Wt.	Sample Wt.
Date/Time	24 Hour	48 Hour	UVF	GC					
2/2/21 / 915		X	X		EO	29-SB-01 (2-4)	52.5	40.5	12
2/2/21 / 945		X	X		EO	29-SB-02 (4-6)	52.5	40.6	11.9
2/2/21 / 1015		X	X		EO	29-SB-03 (2-4)	52.3	40.4	11.9
2/2/21 / 1030		X	X		EO	29-SB-04 (6-8)	52.2	40.5	11.7
2/2/21 / 1045		X	X		EO	29-SB-05 (8-10)	51.8	40.5	11.3
2/2/21 / 1115		X	X		EO	29-SB-06 (6-8)	52.9	40.4	12.5
2/2/21 / 1200		X	X		EO	29-SB-07 (4-6)	51.2	40.2	11
2/2/21 / 1500		X	X		EO	23-SB-01 (4-6)	53.4	40.3	13.1
2/2/21 / 1515		X	X		EO	23-SB-02 (4-6)	53.6	40.5	13.1
2/2/21 / 1545		X	X		EO	23-SB-03 (2-4)	54.2	40.3	13.9
2/2/21	ON HOLD		X		EO	TB-01			

COMMENTS/REQUESTS:
Sample (TB-01) contained no soil

TARGET GC/UVF ANALYTES:

Relinquished by	Date/Time	Accepted by	Date/Time
[signature]	2/2/1830	Victoria Kelly	2/3/21 12:30
Relinquished by		Accepted by	Date/Time

RED Lab USE ONLY
10
Ref. No

Report of Analysis

Terracon Consultants, Inc.
2401 Brentwood Road
Suite 107 I
Raleigh, NC 27604
Attention: Don Malone

Project Name: NC 55 PSAs

Project Number: 70207241

Lot Number:**WB03036**

Date Completed:03/06/2021
Revision Date: 03/06/2021

03/08/2021 9:34 PM
Approved and released by:
Project Manager II: **Cathy S. Dover**

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17025
TESTING LABORATORY

Pace Analytical Services, LLC (*formerly Shealy Environmental Services, Inc.*)
106 Vantage Point Drive West Columbia, SC 29172
Tel: 803-791-9700 Fax: 803-791-9111 www.pacelabs.com

Case Narrative
Terracon Consultants, Inc.
Lot Number: WB03036

This Report of Analysis contains the analytical results for the samples listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Per client, this PDF report has been revised to move sample 244-TW01 from this lot/report to a new lot/report. All other sample results are as reported in the original PDF report. This report supersedes and replaces any prior reports issued under this lot number.

SVOA 8270E
Sample WB03036-001 (29TW01) required a 100x dilution due to matrix and naphthalene concentration. Due to the dilution, surrogate 2,4,6-Tribromophenol did not recover and was diluted out. The MS/MSD for batch 81859 associated with this sample, recovered outside control limits due to the dilution. Also, the same surrogate was diluted and failed in the MS/MSD.

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

Sample Summary

Terracon Consultants, Inc.

Lot Number: WB03036

Project Name: NC 55 PSAs

Project Number: 70207241

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	29-TW-01	Aqueous	02/02/2021 1345	02/03/2021
002	TB-01	Aqueous	02/02/2021	02/03/2021

(2 samples)

Detection Summary

Terracon Consultants, Inc.

Lot Number: WB03036

Project Name: NC 55 PSAs

Project Number: 70207241

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	29-TW-01	Aqueous	Benzene	8260D	91		ug/L	5
001	29-TW-01	Aqueous	Cyclohexane	8260D	390		ug/L	5
001	29-TW-01	Aqueous	Ethylbenzene	8260D	2900		ug/L	5
001	29-TW-01	Aqueous	Isopropylbenzene	8260D	110		ug/L	5
001	29-TW-01	Aqueous	Methylcyclohexane	8260D	220		ug/L	5
001	29-TW-01	Aqueous	Toluene	8260D	14000		ug/L	5
001	29-TW-01	Aqueous	Xylenes (total)	8260D	15000		ug/L	6
001	29-TW-01	Aqueous	2-Methylnaphthalene	8270E	240		ug/L	8
001	29-TW-01	Aqueous	Naphthalene	8270E	860	B	ug/L	8

(9 detections)

Volatile Organic Compounds by GC/MS

Client: **Terracon Consultants, Inc.** Laboratory ID: **WB03036-001**

Description: **29-TW-01** Matrix: **Aqueous**

Date Sampled: **02/02/2021 1345** Project Name: **NC 55 PSAs**

Date Received: **02/03/2021** Project Number: **70207241**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	100	02/08/2021 1704	BWS		82167
2	5030B	8260D	10	02/08/2021 1754	BWS		82167

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260D	ND		100	40	ug/L	2
Benzene	**71-43-2**	**8260D**	**91**		**5.0**	**4.0**	**ug/L**	**2**
Bromodichloromethane	75-27-4	8260D	ND		5.0	4.0	ug/L	2
Bromoform	75-25-2	8260D	ND		5.0	4.0	ug/L	2
Bromomethane (Methyl bromide)	74-83-9	8260D	ND		5.0	4.0	ug/L	2
2-Butanone (MEK)	78-93-3	8260D	ND		100	20	ug/L	2
Carbon disulfide	75-15-0	8260D	ND		5.0	4.0	ug/L	2
Carbon tetrachloride	56-23-5	8260D	ND		5.0	4.0	ug/L	2
Chlorobenzene	108-90-7	8260D	ND		5.0	4.0	ug/L	2
Chloroethane	75-00-3	8260D	ND		5.0	4.0	ug/L	2
Chloroform	67-66-3	8260D	ND		5.0	4.0	ug/L	2
Chloromethane (Methyl chloride)	74-87-3	8260D	ND		5.0	4.0	ug/L	2
Cyclohexane	**110-82-7**	**8260D**	**390**		**5.0**	**4.0**	**ug/L**	**2**
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260D	ND		5.0	4.0	ug/L	2
Dibromochloromethane	124-48-1	8260D	ND		5.0	4.0	ug/L	2
1,2-Dibromoethane (EDB)	106-93-4	8260D	ND		5.0	4.0	ug/L	2
1,2-Dichlorobenzene	95-50-1	8260D	ND		5.0	4.0	ug/L	2
1,3-Dichlorobenzene	541-73-1	8260D	ND		5.0	4.0	ug/L	2
1,4-Dichlorobenzene	106-46-7	8260D	ND		5.0	4.0	ug/L	2
Dichlorodifluoromethane	75-71-8	8260D	ND		5.0	4.0	ug/L	2
1,1-Dichloroethane	75-34-3	8260D	ND		5.0	4.0	ug/L	2
1,2-Dichloroethane	107-06-2	8260D	ND		5.0	4.0	ug/L	2
1,1-Dichloroethene	75-35-4	8260D	ND		5.0	4.0	ug/L	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.0	4.0	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.0	4.0	ug/L	2
1,2-Dichloropropane	78-87-5	8260D	ND		5.0	4.0	ug/L	2
cis-1,3-Dichloropropene	10061-01-5	8260D	ND		5.0	4.0	ug/L	2
trans-1,3-Dichloropropene	10061-02-6	8260D	ND		5.0	4.0	ug/L	2
Ethylbenzene	**100-41-4**	**8260D**	**2900**		**50**	**40**	**ug/L**	**1**
2-Hexanone	591-78-6	8260D	ND		100	20	ug/L	2
Isopropylbenzene	**98-82-8**	**8260D**	**110**		**5.0**	**4.0**	**ug/L**	**2**
Methyl acetate	79-20-9	8260D	ND		10	4.0	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260D	ND		5.0	4.0	ug/L	2
4-Methyl-2-pentanone	108-10-1	8260D	ND		100	20	ug/L	2
Methylcyclohexane	**108-87-2**	**8260D**	**220**		**50**	**4.0**	**ug/L**	**2**
Methylene chloride	75-09-2	8260D	ND		5.0	4.0	ug/L	2
Styrene	100-42-5	8260D	ND		5.0	4.1	ug/L	2
1,1,2,2-Tetrachloroethane	79-34-5	8260D	ND		5.0	4.0	ug/L	2
Tetrachloroethene	127-18-4	8260D	ND		5.0	4.0	ug/L	2
Toluene	**108-88-3**	**8260D**	**14000**		**50**	**40**	**ug/L**	**1**
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260D	ND		10	4.2	ug/L	2
1,2,4-Trichlorobenzene	120-82-1	8260D	ND		5.0	4.0	ug/L	2
1,1,1-Trichloroethane	71-55-6	8260D	ND		5.0	4.0	ug/L	2

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Volatile Organic Compounds by GC/MS

Client: **Terracon Consultants, Inc.** Laboratory ID: **WB03036-001**

Description: **29-TW-01** Matrix: **Aqueous**

Date Sampled: **02/02/2021 1345** Project Name: **NC 55 PSAs**

Date Received: **02/03/2021** Project Number: **70207241**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	100	02/08/2021 1704	BWS		82167
2	5030B	8260D	10	02/08/2021 1754	BWS		82167

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260D	ND		5.0	4.0	ug/L	2
Trichloroethene	79-01-6	8260D	ND		5.0	4.0	ug/L	2
Trichlorofluoromethane	75-69-4	8260D	ND		5.0	4.0	ug/L	2
Vinyl chloride	75-01-4	8260D	ND		10	2.5	ug/L	2
Xylenes (total)	**1330-20-7**	**8260D**	**15000**		**100**	**40**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		101	70-130		101	70-130
1,2-Dichloroethane-d4		96	70-130		96	70-130
Toluene-d8		101	70-130		104	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Semivolatile Organic Compounds by GC/MS

Client: **Terracon Consultants, Inc.** Laboratory ID: **WB03036-001**

Description: **29-TW-01** Matrix: **Aqueous**

Date Sampled: **02/02/2021 1345** Project Name: **NC 55 PSAs**

Date Received: **02/03/2021** Project Number: **70207241**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270E	100	02/10/2021 1953	SCD	02/04/2021 1407	81859

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acenaphthene	83-32-9	8270E	ND		16	4.0	ug/L	1
Acenaphthylene	208-96-8	8270E	ND		16	4.0	ug/L	1
Acetophenone	98-86-2	8270E	ND		80	23	ug/L	1
Anthracene	120-12-7	8270E	ND		16	4.0	ug/L	1
Atrazine	1912-24-9	8270E	ND		80	20	ug/L	1
Benzaldehyde	100-52-7	8270E	ND		400	27	ug/L	1
Benzo(a)anthracene	56-55-3	8270E	ND		16	4.0	ug/L	1
Benzo(a)pyrene	50-32-8	8270E	ND		16	4.0	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270E	ND		16	4.0	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270E	ND		16	4.0	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270E	ND		16	4.0	ug/L	1
1,1'-Biphenyl	92-52-4	8270E	ND		80	21	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270E	ND		80	15	ug/L	1
Butyl benzyl phthalate	85-68-7	8270E	ND		400	21	ug/L	1
Caprolactam	105-60-2	8270E	ND		400	71	ug/L	1
Carbazole	86-74-8	8270E	ND		80	4.0	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270E	ND		80	17	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270E	ND		80	26	ug/L	1
4-Chloroaniline	106-47-8	8270E	ND		80	13	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270E	ND		80	6.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270E	ND		80	16	ug/L	1
2-Chloronaphthalene	91-58-7	8270E	ND		80	15	ug/L	1
2-Chlorophenol	95-57-8	8270E	ND		80	15	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270E	ND		80	16	ug/L	1
Chrysene	218-01-9	8270E	ND		16	4.0	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270E	ND		16	4.0	ug/L	1
Dibenzofuran	132-64-9	8270E	ND		80	16	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270E	ND		400	81	ug/L	1
2,4-Dichlorophenol	120-83-2	8270E	ND		80	19	ug/L	1
Diethylphthalate	84-66-2	8270E	ND		400	19	ug/L	1
Dimethyl phthalate	131-11-3	8270E	ND		400	18	ug/L	1
2,4-Dimethylphenol	105-67-9	8270E	ND		80	15	ug/L	1
Di-n-butyl phthalate	84-74-2	8270E	ND		400	42	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270E	ND		400	89	ug/L	1
2,4-Dinitrophenol	51-28-5	8270E	ND		400	130	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270E	ND		160	36	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270E	ND		160	34	ug/L	1
Di-n-octylphthalate	117-84-0	8270E	ND		400	48	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270E	ND		400	38	ug/L	1
Fluoranthene	206-44-0	8270E	ND		16	4.0	ug/L	1
Fluorene	86-73-7	8270E	ND		16	4.0	ug/L	1
Hexachlorobenzene	118-74-1	8270E	ND		80	15	ug/L	1
Hexachlorobutadiene	87-68-3	8270E	ND		80	17	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270E	ND		400	110	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

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Semivolatile Organic Compounds by GC/MS

Client: **Terracon Consultants, Inc.** Laboratory ID: **WB03036-001**

Description: **29-TW-01** Matrix: **Aqueous**

Date Sampled: **02/02/2021 1345** Project Name: **NC 55 PSAs**

Date Received: **02/03/2021** Project Number: **70207241**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270E	100	02/10/2021 1953	SCD	02/04/2021 1407	81859

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Hexachloroethane	67-72-1	8270E	ND		80	17	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270E	ND		16	4.0	ug/L	1
Isophorone	78-59-1	8270E	ND		80	22	ug/L	1
2-Methylnaphthalene	**91-57-6**	**8270E**	**240**		**16**	**4.0**	**ug/L**	**1**
2-Methylphenol	95-48-7	8270E	ND		80	21	ug/L	1
3+4-Methylphenol	106-44-5	8270E	ND		160	46	ug/L	1
Naphthalene	**91-20-3**	**8270E**	**860**	**B**	**16**	**4.0**	**ug/L**	**1**
2-Nitroaniline	88-74-4	8270E	ND		160	66	ug/L	1
3-Nitroaniline	99-09-2	8270E	ND		160	15	ug/L	1
4-Nitroaniline	100-01-6	8270E	ND		160	130	ug/L	1
Nitrobenzene	98-95-3	8270E	ND		80	17	ug/L	1
2-Nitrophenol	88-75-5	8270E	ND		160	44	ug/L	1
4-Nitrophenol	100-02-7	8270E	ND		400	210	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270E	ND		80	28	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270E	ND		80	50	ug/L	1
Pentachlorophenol	87-86-5	8270E	ND		400	130	ug/L	1
Phenanthrene	85-01-8	8270E	ND		16	4.0	ug/L	1
Phenol	108-95-2	8270E	ND		80	19	ug/L	1
Pyrene	129-00-0	8270E	ND		16	4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270E	ND		80	19	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270E	ND		80	22	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		87	37-129
2-Fluorophenol		112	24-127
Nitrobenzene-d5		85	38-127
Phenol-d5		78	28-128
Terphenyl-d14		96	10-148
2,4,6-Tribromophenol	N	0.00	35-144

LOQ = Limit of Quantitation
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QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: WQ82167-001
Batch: 82167
Analytical Method: 8260D
Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	10	4.0	ug/L	02/08/2021 0928
Benzene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Bromodichloromethane	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Bromoform	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Bromomethane (Methyl bromide)	ND		1	0.50	0.40	ug/L	02/08/2021 0928
2-Butanone (MEK)	ND		1	10	2.0	ug/L	02/08/2021 0928
Carbon disulfide	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Carbon tetrachloride	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Chlorobenzene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Chloroethane	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Chloroform	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Chloromethane (Methyl chloride)	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Cyclohexane	ND		1	0.50	0.40	ug/L	02/08/2021 0928
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Dibromochloromethane	ND		1	0.50	0.40	ug/L	02/08/2021 0928
1,2-Dibromoethane (EDB)	ND		1	0.50	0.40	ug/L	02/08/2021 0928
1,2-Dichlorobenzene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
1,3-Dichlorobenzene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
1,4-Dichlorobenzene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Dichlorodifluoromethane	ND		1	0.50	0.40	ug/L	02/08/2021 0928
1,1-Dichloroethane	ND		1	0.50	0.40	ug/L	02/08/2021 0928
1,2-Dichloroethane	ND		1	0.50	0.40	ug/L	02/08/2021 0928
1,1-Dichloroethene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
cis-1,2-Dichloroethene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
trans-1,2-Dichloroethene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
1,2-Dichloropropane	ND		1	0.50	0.40	ug/L	02/08/2021 0928
cis-1,3-Dichloropropene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
trans-1,3-Dichloropropene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Ethylbenzene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
2-Hexanone	ND		1	10	2.0	ug/L	02/08/2021 0928
Isopropylbenzene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Methyl acetate	ND		1	1.0	0.40	ug/L	02/08/2021 0928
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.40	ug/L	02/08/2021 0928
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	02/08/2021 0928
Methylcyclohexane	ND		1	5.0	0.40	ug/L	02/08/2021 0928
Methylene chloride	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Styrene	ND		1	0.50	0.41	ug/L	02/08/2021 0928
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Tetrachloroethene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Toluene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	0.42	ug/L	02/08/2021 0928
1,2,4-Trichlorobenzene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
1,1,1-Trichloroethane	ND		1	0.50	0.40	ug/L	02/08/2021 0928
1,1,2-Trichloroethane	ND		1	0.50	0.40	ug/L	02/08/2021 0928

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: WQ82167-001
Batch: 82167
Analytical Method: 8260D
Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Trichlorofluoromethane	ND		1	0.50	0.40	ug/L	02/08/2021 0928
Vinyl chloride	ND		1	1.0	0.25	ug/L	02/08/2021 0928
Xylenes (total)	ND		1	1.0	0.40	ug/L	02/08/2021 0928

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		102	70-130
1,2-Dichloroethane-d4		97	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: WQ82167-002
Batch: 82167
Analytical Method: 8260D
Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	98		1	98	60-140	02/08/2021 0825
Benzene	50	48		1	97	70-130	02/08/2021 0825
Bromodichloromethane	50	51		1	103	70-130	02/08/2021 0825
Bromoform	50	57		1	114	70-130	02/08/2021 0825
Bromomethane (Methyl bromide)	50	42		1	83	70-130	02/08/2021 0825
2-Butanone (MEK)	100	100		1	100	70-130	02/08/2021 0825
Carbon disulfide	50	50		1	100	70-130	02/08/2021 0825
Carbon tetrachloride	50	50		1	100	70-130	02/08/2021 0825
Chlorobenzene	50	49		1	97	70-130	02/08/2021 0825
Chloroethane	50	42		1	84	70-130	02/08/2021 0825
Chloroform	50	46		1	92	70-130	02/08/2021 0825
Chloromethane (Methyl chloride)	50	35		1	70	60-140	02/08/2021 0825
Cyclohexane	50	46		1	91	70-130	02/08/2021 0825
1,2-Dibromo-3-chloropropane (DBCP)	50	54		1	107	70-130	02/08/2021 0825
Dibromochloromethane	50	52		1	105	70-130	02/08/2021 0825
1,2-Dibromoethane (EDB)	50	50		1	100	70-130	02/08/2021 0825
1,2-Dichlorobenzene	50	48		1	96	70-130	02/08/2021 0825
1,3-Dichlorobenzene	50	49		1	98	70-130	02/08/2021 0825
1,4-Dichlorobenzene	50	48		1	96	70-130	02/08/2021 0825
Dichlorodifluoromethane	50	40		1	79	60-140	02/08/2021 0825
1,1-Dichloroethane	50	47		1	93	70-130	02/08/2021 0825
1,2-Dichloroethane	50	46		1	92	70-130	02/08/2021 0825
1,1-Dichloroethene	50	48		1	96	70-130	02/08/2021 0825
cis-1,2-Dichloroethene	50	47		1	94	70-130	02/08/2021 0825
trans-1,2-Dichloroethene	50	47		1	94	70-130	02/08/2021 0825
1,2-Dichloropropane	50	48		1	97	70-130	02/08/2021 0825
cis-1,3-Dichloropropene	50	53		1	107	70-130	02/08/2021 0825
trans-1,3-Dichloropropene	50	53		1	106	70-130	02/08/2021 0825
Ethylbenzene	50	50		1	99	70-130	02/08/2021 0825
2-Hexanone	100	110		1	109	70-130	02/08/2021 0825
Isopropylbenzene	50	51		1	102	70-130	02/08/2021 0825
Methyl acetate	50	51		1	102	70-130	02/08/2021 0825
Methyl tertiary butyl ether (MTBE)	50	46		1	92	70-130	02/08/2021 0825
4-Methyl-2-pentanone	100	110		1	109	70-130	02/08/2021 0825
Methylcyclohexane	50	48		1	96	70-130	02/08/2021 0825
Methylene chloride	50	47		1	95	70-130	02/08/2021 0825
Styrene	50	53		1	106	70-130	02/08/2021 0825
1,1,2,2-Tetrachloroethane	50	50		1	100	70-130	02/08/2021 0825
Tetrachloroethene	50	48		1	97	70-130	02/08/2021 0825
Toluene	50	48		1	97	70-130	02/08/2021 0825
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	46		1	92	70-130	02/08/2021 0825
1,2,4-Trichlorobenzene	50	50		1	101	70-130	02/08/2021 0825
1,1,1-Trichloroethane	50	48		1	95	70-130	02/08/2021 0825
1,1,2-Trichloroethane	50	48		1	97	70-130	02/08/2021 0825

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: WQ82167-002
Batch: 82167
Analytical Method: 8260D
Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	98	70-130	02/08/2021 0825
Trichlorofluoromethane	50	46		1	93	70-130	02/08/2021 0825
Vinyl chloride	50	40		1	80	70-130	02/08/2021 0825
Xylenes (total)	100	100		1	100	70-130	02/08/2021 0825

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		98	70-130
1,2-Dichloroethane-d4		92	70-130
Toluene-d8		98	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: WB03036-001MS
Batch: 82167
Analytical Method: 8260D

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	10000	8700		100	87	60-140	02/08/2021 1819
Benzene	110	5000	5100		100	100	70-130	02/08/2021 1819
Bromodichloromethane	ND	5000	5100		100	101	70-130	02/08/2021 1819
Bromoform	ND	5000	5100		100	103	70-130	02/08/2021 1819
Bromomethane (Methyl bromide)	ND	5000	4300		100	86	70-130	02/08/2021 1819
2-Butanone (MEK)	ND	10000	9700		100	97	70-130	02/08/2021 1819
Carbon disulfide	ND	5000	4800		100	96	70-130	02/08/2021 1819
Carbon tetrachloride	ND	5000	5200		100	105	70-130	02/08/2021 1819
Chlorobenzene	ND	5000	5100		100	101	70-130	02/08/2021 1819
Chloroethane	ND	5000	4600		100	91	70-130	02/08/2021 1819
Chloroform	ND	5000	4700		100	94	70-130	02/08/2021 1819
Chloromethane (Methyl chloride)	ND	5000	3800		100	75	60-140	02/08/2021 1819
Cyclohexane	440	5000	5600		100	102	70-130	02/08/2021 1819
1,2-Dibromo-3-chloropropane (DBCP)	ND	5000	5200		100	105	70-130	02/08/2021 1819
Dibromochloromethane	ND	5000	5100		100	103	70-130	02/08/2021 1819
1,2-Dibromoethane (EDB)	ND	5000	5100		100	102	70-130	02/08/2021 1819
1,2-Dichlorobenzene	ND	5000	5000		100	100	70-130	02/08/2021 1819
1,3-Dichlorobenzene	ND	5000	5100		100	102	70-130	02/08/2021 1819
1,4-Dichlorobenzene	ND	5000	5100		100	101	70-130	02/08/2021 1819
Dichlorodifluoromethane	ND	5000	4000		100	79	60-140	02/08/2021 1819
1,1-Dichloroethane	ND	5000	4800		100	96	70-130	02/08/2021 1819
1,2-Dichloroethane	ND	5000	4600		100	93	70-130	02/08/2021 1819
1,1-Dichloroethene	ND	5000	4900		100	99	70-130	02/08/2021 1819
cis-1,2-Dichloroethene	ND	5000	4800		100	95	70-130	02/08/2021 1819
trans-1,2-Dichloroethene	ND	5000	4900		100	97	70-130	02/08/2021 1819
1,2-Dichloropropane	ND	5000	5100		100	101	70-130	02/08/2021 1819
cis-1,3-Dichloropropene	ND	5000	5200		100	105	70-130	02/08/2021 1819
trans-1,3-Dichloropropene	ND	5000	5100		100	103	70-130	02/08/2021 1819
Ethylbenzene	2900	5000	8400		100	110	70-130	02/08/2021 1819
2-Hexanone	ND	10000	11000		100	112	70-130	02/08/2021 1819
Isopropylbenzene	130	5000	5500		100	108	70-130	02/08/2021 1819
Methyl acetate	ND	5000	4900		100	98	70-130	02/08/2021 1819
Methyl tertiary butyl ether (MTBE)	ND	5000	4700		100	93	70-130	02/08/2021 1819
4-Methyl-2-pentanone	ND	10000	11000		100	111	70-130	02/08/2021 1819
Methylcyclohexane	250	5000	5700		100	108	70-130	02/08/2021 1819
Methylene chloride	ND	5000	4600		100	92	70-130	02/08/2021 1819
Styrene	ND	5000	5700		100	114	70-130	02/08/2021 1819
1,1,2,2-Tetrachloroethane	ND	5000	5200		100	104	70-130	02/08/2021 1819
Tetrachloroethene	ND	5000	5200		100	104	70-130	02/08/2021 1819
Toluene	14000	5000	19000		100	104	70-130	02/08/2021 1819
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5000	5100		100	102	70-130	02/08/2021 1819
1,2,4-Trichlorobenzene	ND	5000	5200		100	104	70-130	02/08/2021 1819
1,1,1-Trichloroethane	ND	5000	5100		100	102	70-130	02/08/2021 1819
1,1,2-Trichloroethane	ND	5000	5100		100	101	70-130	02/08/2021 1819

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: WB03036-001MS
Batch: 82167
Analytical Method: 8260D

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	ND	5000	5100		100	101	70-130	02/08/2021 1819
Trichlorofluoromethane	ND	5000	5000		100	100	70-130	02/08/2021 1819
Vinyl chloride	ND	5000	4300		100	86	70-130	02/08/2021 1819
Xylenes (total)	15000	10000	26000		100	111	70-130	02/08/2021 1819

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		102	70-130
1,2-Dichloroethane-d4		94	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation
DL = Detection Limit

ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria

N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: WB03036-001MD
Batch: 82167
Analytical Method: 8260D
Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	ND	10000	8700		100	87	0.068	60-140	20	02/08/2021 1844
Benzene	110	5000	5100		100	99	0.36	70-130	20	02/08/2021 1844
Bromodichloromethane	ND	5000	5200		100	103	2.0	70-130	20	02/08/2021 1844
Bromoform	ND	5000	5100		100	102	0.64	70-130	20	02/08/2021 1844
Bromomethane (Methyl bromide)	ND	5000	4200		100	83	3.7	70-130	20	02/08/2021 1844
2-Butanone (MEK)	ND	10000	9700		100	97	0.66	70-130	20	02/08/2021 1844
Carbon disulfide	ND	5000	4800		100	96	0.72	70-130	20	02/08/2021 1844
Carbon tetrachloride	ND	5000	5200		100	104	0.52	70-130	20	02/08/2021 1844
Chlorobenzene	ND	5000	5000		100	100	1.5	70-130	20	02/08/2021 1844
Chloroethane	ND	5000	4300		100	87	5.2	70-130	20	02/08/2021 1844
Chloroform	ND	5000	4700		100	95	0.97	70-130	20	02/08/2021 1844
Chloromethane (Methyl chloride)	ND	5000	3600		100	72	4.9	60-140	20	02/08/2021 1844
Cyclohexane	440	5000	5500		100	102	0.83	70-130	20	02/08/2021 1844
1,2-Dibromo-3-chloropropane (DBCP)	ND	5000	5000		100	100	4.9	70-130	20	02/08/2021 1844
Dibromochloromethane	ND	5000	5100		100	103	0.11	70-130	20	02/08/2021 1844
1,2-Dibromoethane (EDB)	ND	5000	5100		100	101	0.39	70-130	20	02/08/2021 1844
1,2-Dichlorobenzene	ND	5000	4800		100	96	4.5	70-130	20	02/08/2021 1844
1,3-Dichlorobenzene	ND	5000	4900		100	98	4.1	70-130	20	02/08/2021 1844
1,4-Dichlorobenzene	ND	5000	4800		100	97	4.3	70-130	20	02/08/2021 1844
Dichlorodifluoromethane	ND	5000	3900		100	78	1.6	60-140	20	02/08/2021 1844
1,1-Dichloroethane	ND	5000	4800		100	96	0.34	70-130	20	02/08/2021 1844
1,2-Dichloroethane	ND	5000	4600		100	93	0.31	70-130	20	02/08/2021 1844
1,1-Dichloroethene	ND	5000	4900		100	99	0.054	70-130	20	02/08/2021 1844
cis-1,2-Dichloroethene	ND	5000	4800		100	95	0.23	70-130	20	02/08/2021 1844
trans-1,2-Dichloroethene	ND	5000	4900		100	98	0.37	70-130	20	02/08/2021 1844
1,2-Dichloropropane	ND	5000	5100		100	102	1.0	70-130	20	02/08/2021 1844
cis-1,3-Dichloropropene	ND	5000	5300		100	106	1.4	70-130	20	02/08/2021 1844
trans-1,3-Dichloropropene	ND	5000	5100		100	103	0.044	70-130	20	02/08/2021 1844
Ethylbenzene	2900	5000	8200		100	107	1.9	70-130	20	02/08/2021 1844
2-Hexanone	ND	10000	11000		100	111	1.0	70-130	20	02/08/2021 1844
Isopropylbenzene	130	5000	5400		100	105	2.2	70-130	20	02/08/2021 1844
Methyl acetate	ND	5000	4900		100	98	0.25	70-130	20	02/08/2021 1844
Methyl tertiary butyl ether (MTBE)	ND	5000	4600		100	91	2.0	70-130	20	02/08/2021 1844
4-Methyl-2-pentanone	ND	10000	11000		100	111	0.28	70-130	20	02/08/2021 1844
Methylcyclohexane	250	5000	5700		100	109	0.35	70-130	20	02/08/2021 1844
Methylene chloride	ND	5000	4600		100	91	1.1	70-130	20	02/08/2021 1844
Styrene	ND	5000	5600		100	112	1.4	70-130	20	02/08/2021 1844
1,1,2,2-Tetrachloroethane	ND	5000	5000		100	100	4.0	70-130	20	02/08/2021 1844
Tetrachloroethene	ND	5000	5100		100	102	1.6	70-130	20	02/08/2021 1844
Toluene	14000	5000	19000		100	98	1.6	70-130	20	02/08/2021 1844
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5000	5000		100	100	2.1	70-130	20	02/08/2021 1844
1,2,4-Trichlorobenzene	ND	5000	5000		100	99	4.9	70-130	20	02/08/2021 1844
1,1,1-Trichloroethane	ND	5000	5100		100	102	0.53	70-130	20	02/08/2021 1844
1,1,2-Trichloroethane	ND	5000	5000		100	101	0.58	70-130	20	02/08/2021 1844

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: WB03036-001MD
Batch: 82167
Analytical Method: 8260D

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	ND	5000	5100		100	103	1.4	70-130	20	02/08/2021 1844
Trichlorofluoromethane	ND	5000	4800		100	97	3.4	70-130	20	02/08/2021 1844
Vinyl chloride	ND	5000	4200		100	84	3.2	70-130	20	02/08/2021 1844
Xylenes (total)	15000	10000	25000		100	105	2.2	70-130	20	02/08/2021 1844

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		99	70-130
1,2-Dichloroethane-d4		94	70-130
Toluene-d8		104	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: WQ81859-001
Batch: 81859
Analytical Method: 8270E
Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/04/2021 1407

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acenaphthene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
Acenaphthylene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
Acetophenone	ND		1	0.80	0.23	ug/L	02/09/2021 1307
Anthracene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
Atrazine	ND		1	0.80	0.20	ug/L	02/09/2021 1307
Benzaldehyde	ND		1	4.0	0.27	ug/L	02/09/2021 1307
Benzo(a)anthracene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
Benzo(a)pyrene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
Benzo(b)fluoranthene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
Benzo(g,h,i)perylene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
Benzo(k)fluoranthene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
1,1'-Biphenyl	ND		1	0.80	0.21	ug/L	02/09/2021 1307
4-Bromophenyl phenyl ether	ND		1	0.80	0.15	ug/L	02/09/2021 1307
Butyl benzyl phthalate	ND		1	4.0	0.21	ug/L	02/09/2021 1307
Caprolactam	ND		1	4.0	0.71	ug/L	02/09/2021 1307
Carbazole	ND		1	0.80	0.040	ug/L	02/09/2021 1307
bis (2-Chloro-1-methylethyl) ether	ND		1	0.80	0.17	ug/L	02/09/2021 1307
4-Chloro-3-methyl phenol	ND		1	0.80	0.26	ug/L	02/09/2021 1307
4-Chloroaniline	ND		1	0.80	0.13	ug/L	02/09/2021 1307
bis(2-Chloroethoxy)methane	ND		1	0.80	0.060	ug/L	02/09/2021 1307
bis(2-Chloroethyl)ether	ND		1	0.80	0.16	ug/L	02/09/2021 1307
2-Chloronaphthalene	ND		1	0.80	0.15	ug/L	02/09/2021 1307
2-Chlorophenol	ND		1	0.80	0.15	ug/L	02/09/2021 1307
4-Chlorophenyl phenyl ether	ND		1	0.80	0.16	ug/L	02/09/2021 1307
Chrysene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
Dibenzo(a,h)anthracene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
Dibenzofuran	ND		1	0.80	0.16	ug/L	02/09/2021 1307
3,3'-Dichlorobenzidine	ND		1	4.0	0.81	ug/L	02/09/2021 1307
2,4-Dichlorophenol	ND		1	0.80	0.19	ug/L	02/09/2021 1307
Diethylphthalate	ND		1	4.0	0.19	ug/L	02/09/2021 1307
Dimethyl phthalate	ND		1	4.0	0.18	ug/L	02/09/2021 1307
2,4-Dimethylphenol	ND		1	0.80	0.15	ug/L	02/09/2021 1307
Di-n-butyl phthalate	ND		1	4.0	0.42	ug/L	02/09/2021 1307
4,6-Dinitro-2-methylphenol	ND		1	4.0	0.89	ug/L	02/09/2021 1307
2,4-Dinitrophenol	ND		1	4.0	1.3	ug/L	02/09/2021 1307
2,4-Dinitrotoluene	ND		1	1.6	0.36	ug/L	02/09/2021 1307
2,6-Dinitrotoluene	ND		1	1.6	0.34	ug/L	02/09/2021 1307
Di-n-octylphthalate	ND		1	4.0	0.48	ug/L	02/09/2021 1307
bis(2-Ethylhexyl)phthalate	**0.49**	**J**	**1**	**4.0**	**0.38**	**ug/L**	**02/09/2021 1307**
Fluoranthene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
Fluorene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
Hexachlorobenzene	ND		1	0.80	0.15	ug/L	02/09/2021 1307
Hexachlorobutadiene	ND		1	0.80	0.17	ug/L	02/09/2021 1307
Hexachlorocyclopentadiene	ND		1	4.0	1.1	ug/L	02/09/2021 1307

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: WQ81859-001
Batch: 81859
Analytical Method: 8270E
Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/04/2021 1407

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Hexachloroethane	ND		1	0.80	0.17	ug/L	02/09/2021 1307
Indeno(1,2,3-c,d)pyrene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
Isophorone	ND		1	0.80	0.22	ug/L	02/09/2021 1307
2-Methylnaphthalene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
2-Methylphenol	ND		1	0.80	0.21	ug/L	02/09/2021 1307
3+4-Methylphenol	ND		1	1.6	0.46	ug/L	02/09/2021 1307
Naphthalene	**0.15**	**J**	**1**	**0.16**	**0.040**	**ug/L**	**02/09/2021 1307**
2-Nitroaniline	ND		1	1.6	0.66	ug/L	02/09/2021 1307
3-Nitroaniline	ND		1	1.6	0.15	ug/L	02/09/2021 1307
4-Nitroaniline	ND		1	1.6	1.3	ug/L	02/09/2021 1307
Nitrobenzene	ND		1	0.80	0.17	ug/L	02/09/2021 1307
2-Nitrophenol	ND		1	1.6	0.44	ug/L	02/09/2021 1307
4-Nitrophenol	ND		1	4.0	2.1	ug/L	02/09/2021 1307
N-Nitrosodi-n-propylamine	ND		1	0.80	0.28	ug/L	02/09/2021 1307
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	0.80	0.50	ug/L	02/09/2021 1307
Pentachlorophenol	ND		1	4.0	1.3	ug/L	02/09/2021 1307
Phenanthrene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
Phenol	ND		1	0.80	0.19	ug/L	02/09/2021 1307
Pyrene	ND		1	0.16	0.040	ug/L	02/09/2021 1307
2,4,5-Trichlorophenol	ND		1	0.80	0.19	ug/L	02/09/2021 1307
2,4,6-Trichlorophenol	ND		1	0.80	0.22	ug/L	02/09/2021 1307

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		61	37-129
2-Fluorophenol		43	24-127
Nitrobenzene-d5		57	38-127
Phenol-d5		50	28-128
Terphenyl-d14		72	10-148
2,4,6-Tribromophenol		77	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: WQ81859-002
Batch: 81859
Analytical Method: 8270E
Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/04/2021 1407

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	8.0	6.3		1	78	30-122	02/09/2021 1332
Acenaphthylene	8.0	6.3		1	79	30-130	02/09/2021 1332
Acetophenone	8.0	7.6		1	95	52-125	02/09/2021 1332
Anthracene	8.0	6.8		1	86	30-123	02/09/2021 1332
Atrazine	8.0	7.1		1	88	25-121	02/09/2021 1332
Benzaldehyde	8.0	4.1		1	52	20-115	02/09/2021 1332
Benzo(a)anthracene	8.0	6.9		1	86	40-125	02/09/2021 1332
Benzo(a)pyrene	8.0	8.2		1	102	40-128	02/09/2021 1332
Benzo(b)fluoranthene	8.0	7.8		1	98	30-130	02/09/2021 1332
Benzo(g,h,i)perylene	8.0	8.0		1	100	30-130	02/09/2021 1332
Benzo(k)fluoranthene	8.0	7.3		1	92	30-130	02/09/2021 1332
1,1'-Biphenyl	8.0	6.1		1	76	42-120	02/09/2021 1332
4-Bromophenyl phenyl ether	8.0	7.2		1	90	30-124	02/09/2021 1332
Butyl benzyl phthalate	8.0	7.3		1	91	54-135	02/09/2021 1332
Caprolactam	8.0	7.1		1	89	44-152	02/09/2021 1332
Carbazole	8.0	6.8		1	85	45-101	02/09/2021 1332
bis (2-Chloro-1-methylethyl) ether	8.0	5.7		1	71	42-124	02/09/2021 1332
4-Chloro-3-methyl phenol	8.0	5.7		1	71	30-123	02/09/2021 1332
4-Chloroaniline	8.0	3.3		1	42	12-157	02/09/2021 1332
bis(2-Chloroethoxy)methane	8.0	5.7		1	71	44-127	02/09/2021 1332
bis(2-Chloroethyl)ether	8.0	6.3		1	79	46-120	02/09/2021 1332
2-Chloronaphthalene	8.0	5.8		1	73	46-100	02/09/2021 1332
2-Chlorophenol	8.0	6.6		1	82	50-117	02/09/2021 1332
4-Chlorophenyl phenyl ether	8.0	6.4		1	80	30-121	02/09/2021 1332
Chrysene	8.0	7.0		1	87	30-130	02/09/2021 1332
Dibenzo(a,h)anthracene	8.0	7.9		1	99	30-130	02/09/2021 1332
Dibenzofuran	8.0	6.6		1	82	30-118	02/09/2021 1332
3,3'-Dichlorobenzidine	8.0	3.8		1	47	10-126	02/09/2021 1332
2,4-Dichlorophenol	8.0	5.6		1	69	30-121	02/09/2021 1332
Diethylphthalate	8.0	6.6		1	82	40-125	02/09/2021 1332
Dimethyl phthalate	8.0	6.6		1	82	40-127	02/09/2021 1332
2,4-Dimethylphenol	8.0	4.7		1	58	20-125	02/09/2021 1332
Di-n-butyl phthalate	8.0	7.1		1	88	40-127	02/09/2021 1332
4,6-Dinitro-2-methylphenol	8.0	6.3		1	79	56-128	02/09/2021 1332
2,4-Dinitrophenol	16	9.0		1	56	11-126	02/09/2021 1332
2,4-Dinitrotoluene	8.0	7.4		1	92	59-127	02/09/2021 1332
2,6-Dinitrotoluene	8.0	7.2		1	90	59-126	02/09/2021 1332
Di-n-octylphthalate	8.0	7.1		1	88	50-136	02/09/2021 1332
bis(2-Ethylhexyl)phthalate	8.0	6.8		1	85	56-128	02/09/2021 1332
Fluoranthene	8.0	7.0		1	88	40-128	02/09/2021 1332
Fluorene	8.0	6.1		1	76	30-124	02/09/2021 1332
Hexachlorobenzene	8.0	6.7		1	83	30-125	02/09/2021 1332
Hexachlorobutadiene	8.0	4.4		1	55	24-110	02/09/2021 1332
Hexachlorocyclopentadiene	40	16		1	40	16-96	02/09/2021 1332

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: WQ81859-002
Batch: 81859
Analytical Method: 8270E
Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/04/2021 1407

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Hexachloroethane	8.0	6.0		1	75	31-110	02/09/2021 1332
Indeno(1,2,3-c,d)pyrene	8.0	7.5		1	94	30-130	02/09/2021 1332
Isophorone	8.0	6.5		1	81	57-123	02/09/2021 1332
2-Methylnaphthalene	8.0	5.5		1	69	40-132	02/09/2021 1332
2-Methylphenol	8.0	6.9		1	86	56-119	02/09/2021 1332
3+4-Methylphenol	8.0	6.2		1	78	53-119	02/09/2021 1332
Naphthalene	8.0	6.4		1	80	30-130	02/09/2021 1332
2-Nitroaniline	8.0	6.7		1	83	60-124	02/09/2021 1332
3-Nitroaniline	8.0	4.5		1	56	43-123	02/09/2021 1332
4-Nitroaniline	8.0	5.3		1	67	30-135	02/09/2021 1332
Nitrobenzene	8.0	5.6		1	70	51-122	02/09/2021 1332
2-Nitrophenol	8.0	5.9		1	73	51-118	02/09/2021 1332
4-Nitrophenol	16	11		1	71	53-130	02/09/2021 1332
N-Nitrosodi-n-propylamine	8.0	7.1		1	89	54-127	02/09/2021 1332
N-Nitrosodiphenylamine (Diphenylamine)	8.0	6.6		1	83	30-123	02/09/2021 1332
Pentachlorophenol	16	12		1	76	42-131	02/09/2021 1332
Phenanthrene	8.0	6.9		1	86	40-123	02/09/2021 1332
Phenol	8.0	6.4		1	79	49-117	02/09/2021 1332
Pyrene	8.0	7.1		1	89	40-126	02/09/2021 1332
2,4,5-Trichlorophenol	8.0	6.0		1	75	30-123	02/09/2021 1332
2,4,6-Trichlorophenol	8.0	6.0		1	75	30-125	02/09/2021 1332

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		71	37-129
2-Fluorophenol		71	24-127
Nitrobenzene-d5		61	38-127
Phenol-d5		76	28-128
Terphenyl-d14		82	10-148
2,4,6-Tribromophenol		89	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MS

Sample ID: WB03036-001MS
Batch: 81859
Analytical Method: 8270E
Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/04/2021 1407

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	ND	16	17		100	103	30-122	02/10/2021 2018
Acenaphthylene	ND	16	15		100	92	30-130	02/10/2021 2018
Acetophenone	ND	16	ND	N	100	0.00	52-125	02/10/2021 2018
Anthracene	ND	16	15		100	96	30-123	02/10/2021 2018
Atrazine	ND	16	ND	N	100	0.00	25-121	02/10/2021 2018
Benzaldehyde	ND	16	ND	N	100	0.00	20-115	02/10/2021 2018
Benzo(a)anthracene	ND	16	9.1		100	57	40-125	02/10/2021 2018
Benzo(a)pyrene	ND	16	17		100	107	40-128	02/10/2021 2018
Benzo(b)fluoranthene	ND	16	ND	N	100	0.00	30-130	02/10/2021 2018
Benzo(g,h,i)perylene	ND	16	ND	N	100	0.00	30-130	02/10/2021 2018
Benzo(k)fluoranthene	ND	16	22	N	100	137	30-130	02/10/2021 2018
1,1'-Biphenyl	ND	16	ND	N	100	0.00	42-120	02/10/2021 2018
4-Bromophenyl phenyl ether	ND	16	ND	N	100	0.00	30-124	02/10/2021 2018
Butyl benzyl phthalate	ND	16	ND	N	100	0.00	54-135	02/10/2021 2018
Caprolactam	ND	16	ND	N	100	0.00	44-152	02/10/2021 2018
Carbazole	ND	16	20	N	100	124	45-101	02/10/2021 2018
bis (2-Chloro-1-methylethyl) ether	ND	16	ND	N	100	0.00	42-124	02/10/2021 2018
4-Chloro-3-methyl phenol	ND	16	ND	N	100	0.00	30-123	02/10/2021 2018
4-Chloroaniline	ND	16	ND	N	100	0.00	30-130	02/10/2021 2018
bis(2-Chloroethoxy)methane	ND	16	ND	N	100	0.00	44-127	02/10/2021 2018
bis(2-Chloroethyl)ether	ND	16	62	N	100	385	46-120	02/10/2021 2018
2-Chloronaphthalene	ND	16	ND	N	100	0.00	46-100	02/10/2021 2018
2-Chlorophenol	ND	16	ND	N	100	0.00	50-117	02/10/2021 2018
4-Chlorophenyl phenyl ether	ND	16	ND	N	100	0.00	30-121	02/10/2021 2018
Chrysene	ND	16	16		100	100	30-130	02/10/2021 2018
Dibenzo(a,h)anthracene	ND	16	ND	N	100	0.00	30-130	02/10/2021 2018
Dibenzofuran	ND	16	ND	N	100	0.00	30-118	02/10/2021 2018
3,3'-Dichlorobenzidine	ND	16	ND	N	100	0.00	10-126	02/10/2021 2018
2,4-Dichlorophenol	ND	16	ND	N	100	0.00	30-121	02/10/2021 2018
Diethylphthalate	ND	16	ND	N	100	0.00	40-125	02/10/2021 2018
Dimethyl phthalate	ND	16	ND	N	100	0.00	40-127	02/10/2021 2018
2,4-Dimethylphenol	ND	16	ND	N	100	0.00	20-125	02/10/2021 2018
Di-n-butyl phthalate	ND	16	ND	N	100	0.00	40-127	02/10/2021 2018
4,6-Dinitro-2-methylphenol	ND	16	ND	N	100	0.00	56-128	02/10/2021 2018
2,4-Dinitrophenol	ND	32	ND	N	100	0.00	30-130	02/10/2021 2018
2,4-Dinitrotoluene	ND	16	ND	N	100	0.00	59-127	02/10/2021 2018
2,6-Dinitrotoluene	ND	16	ND	N	100	0.00	59-126	02/10/2021 2018
Di-n-octylphthalate	ND	16	ND	N	100	0.00	50-136	02/10/2021 2018
bis(2-Ethylhexyl)phthalate	ND	16	93	N	100	581	56-128	02/10/2021 2018
Fluoranthene	ND	16	20		100	127	40-128	02/10/2021 2018
Fluorene	ND	16	15		100	94	30-124	02/10/2021 2018
Hexachlorobenzene	ND	16	ND	N	100	0.00	30-125	02/10/2021 2018
Hexachlorobutadiene	ND	16	ND	N	100	0.00	30-130	02/10/2021 2018
Hexachlorocyclopentadiene	ND	80	ND	N	100	0.00	16-96	02/10/2021 2018

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MS

Sample ID: WB03036-001MS
Batch: 81859
Analytical Method: 8270E
Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/04/2021 1407

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Hexachloroethane	ND	16	ND	N	100	0.00	31-110	02/10/2021 2018
Indeno(1,2,3-c,d)pyrene	ND	16	8.6		100	54	30-130	02/10/2021 2018
Isophorone	ND	16	ND	N	100	0.00	57-123	02/10/2021 2018
2-Methylnaphthalene	240	16	240	N	100	12	40-132	02/10/2021 2018
2-Methylphenol	ND	16	ND	N	100	0.00	56-119	02/10/2021 2018
3+4-Methylphenol	ND	16	ND	N	100	0.00	53-119	02/10/2021 2018
Naphthalene	860	16	830	N	100	-184	30-130	02/10/2021 2018
2-Nitroaniline	ND	16	ND	N	100	0.00	60-124	02/10/2021 2018
3-Nitroaniline	ND	16	ND	N	100	0.00	43-123	02/10/2021 2018
4-Nitroaniline	ND	16	ND	N	100	0.00	30-135	02/10/2021 2018
Nitrobenzene	ND	16	ND	N	100	0.00	51-122	02/10/2021 2018
2-Nitrophenol	ND	16	ND	N	100	0.00	51-118	02/10/2021 2018
4-Nitrophenol	ND	32	ND	N	100	0.00	53-130	02/10/2021 2018
N-Nitrosodi-n-propylamine	ND	16	ND	N	100	0.00	54-127	02/10/2021 2018
N-Nitrosodiphenylamine (Diphenylamine)	ND	16	ND	N	100	0.00	30-123	02/10/2021 2018
Pentachlorophenol	ND	32	ND	N	100	0.00	42-131	02/10/2021 2018
Phenanthrene	ND	16	18		100	115	40-123	02/10/2021 2018
Phenol	ND	16	ND	N	100	0.00	49-117	02/10/2021 2018
Pyrene	ND	16	14		100	90	40-126	02/10/2021 2018
2,4,5-Trichlorophenol	ND	16	ND	N	100	0.00	30-123	02/10/2021 2018
2,4,6-Trichlorophenol	ND	16	ND	N	100	0.00	30-125	02/10/2021 2018

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		92	37-129
2-Fluorophenol		66	24-127
Nitrobenzene-d5		77	38-127
Phenol-d5		89	28-128
Terphenyl-d14		81	10-148
2,4,6-Tribromophenol	N	0.00	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: WB03036-001MD
Batch: 81859
Analytical Method: 8270E
Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/04/2021 1407

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acenaphthene	ND	16	13		100	82	22	30-122	40	02/10/2021 2042
Acenaphthylene	ND	16	12		100	76	19	30-130	40	02/10/2021 2042
Acetophenone	ND	16	ND	N	100	0.00	0.00	52-125	40	02/10/2021 2042
Anthracene	ND	16	14		100	85	12	30-123	40	02/10/2021 2042
Atrazine	ND	16	ND	N	100	0.00	0.00	25-121	40	02/10/2021 2042
Benzaldehyde	ND	16	ND	N	100	0.00	0.00	20-115	40	02/10/2021 2042
Benzo(a)anthracene	ND	16	20	+	100	124	74	40-125	40	02/10/2021 2042
Benzo(a)pyrene	ND	16	19		100	117	8.8	40-128	40	02/10/2021 2042
Benzo(b)fluoranthene	ND	16	ND	N	100	0.00	0.00	30-130	40	02/10/2021 2042
Benzo(g,h,i)perylene	ND	16	ND	N	100	0.00	0.00	30-130	40	02/10/2021 2042
Benzo(k)fluoranthene	ND	16	19		100	120	13	30-130	40	02/10/2021 2042
1,1'-Biphenyl	ND	16	ND	N	100	0.00	0.00	42-120	40	02/10/2021 2042
4-Bromophenyl phenyl ether	ND	16	ND	N	100	0.00	0.00	30-124	40	02/10/2021 2042
Butyl benzyl phthalate	ND	16	ND	N	100	0.00	0.00	54-135	40	02/10/2021 2042
Caprolactam	ND	16	ND	N	100	0.00	0.00	44-152	40	02/10/2021 2042
Carbazole	ND	16	17	N	100	107	15	45-101	40	02/10/2021 2042
bis (2-Chloro-1-methylethyl) ether	ND	16	ND	N	100	0.00	0.00	42-124	40	02/10/2021 2042
4-Chloro-3-methyl phenol	ND	16	ND	N	100	0.00	0.00	30-123	40	02/10/2021 2042
4-Chloroaniline	ND	16	ND	N	100	0.00	0.00	30-130	40	02/10/2021 2042
bis(2-Chloroethoxy)methane	ND	16	ND	N	100	0.00	0.00	44-127	40	02/10/2021 2042
bis(2-Chloroethyl)ether	ND	16	55	N	100	346	11	46-120	40	02/10/2021 2042
2-Chloronaphthalene	ND	16	ND	N	100	0.00	0.00	46-100	40	02/10/2021 2042
2-Chlorophenol	ND	16	ND	N	100	0.00	0.00	50-117	40	02/10/2021 2042
4-Chlorophenyl phenyl ether	ND	16	ND	N	100	0.00	0.00	30-121	40	02/10/2021 2042
Chrysene	ND	16	14		100	91	9.8	30-130	40	02/10/2021 2042
Dibenzo(a,h)anthracene	ND	16	ND	N	100	0.00	0.00	30-130	40	02/10/2021 2042
Dibenzofuran	ND	16	ND	N	100	0.00	0.00	30-118	40	02/10/2021 2042
3,3'-Dichlorobenzidine	ND	16	ND	N	100	0.00	0.00	10-126	40	02/10/2021 2042
2,4-Dichlorophenol	ND	16	ND	N	100	0.00	0.00	30-121	40	02/10/2021 2042
Diethylphthalate	ND	16	ND	N	100	0.00	0.00	40-125	40	02/10/2021 2042
Dimethyl phthalate	ND	16	ND	N	100	0.00	0.00	40-127	40	02/10/2021 2042
2,4-Dimethylphenol	ND	16	ND	N	100	0.00	0.00	20-125	40	02/10/2021 2042
Di-n-butyl phthalate	ND	16	ND	N	100	0.00	0.00	40-127	40	02/10/2021 2042
4,6-Dinitro-2-methylphenol	ND	16	ND	N	100	0.00	0.00	56-128	40	02/10/2021 2042
2,4-Dinitrophenol	ND	32	ND	N	100	0.00	0.00	30-130	40	02/10/2021 2042
2,4-Dinitrotoluene	ND	16	ND	N	100	0.00	0.00	59-127	40	02/10/2021 2042
2,6-Dinitrotoluene	ND	16	ND	N	100	0.00	0.00	59-126	40	02/10/2021 2042
Di-n-octylphthalate	ND	16	ND	N	100	0.00	0.00	50-136	40	02/10/2021 2042
bis(2-Ethylhexyl)phthalate	ND	16	89	N	100	556	4.4	56-128	40	02/10/2021 2042
Fluoranthene	ND	16	17		100	104	21	40-128	40	02/10/2021 2042
Fluorene	ND	16	14		100	89	5.2	30-124	40	02/10/2021 2042
Hexachlorobenzene	ND	16	ND	N	100	0.00	0.00	30-125	40	02/10/2021 2042
Hexachlorobutadiene	ND	16	ND	N	100	0.00	0.00	30-130	40	02/10/2021 2042
Hexachlorocyclopentadiene	ND	80	ND	N	100	0.00	0.00	16-96	40	02/10/2021 2042

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: WB03036-001MD
Batch: 81859
Analytical Method: 8270E
Matrix: Aqueous
Prep Method: 3520C
Prep Date: 02/04/2021 1407

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Hexachloroethane	ND	16	210	N,+	100	1330	200	31-110	40	02/10/2021 2042
Indeno(1,2,3-c,d)pyrene	ND	16	ND	N,+	100	0.00	200	30-130	40	02/10/2021 2042
Isophorone	ND	16	ND	N	100	0.00	0.00	57-123	40	02/10/2021 2042
2-Methylnaphthalene	240	16	210	N	100	-148	11	40-132	40	02/10/2021 2042
2-Methylphenol	ND	16	ND	N	100	0.00	0.00	56-119	40	02/10/2021 2042
3+4-Methylphenol	ND	16	ND	N	100	0.00	0.00	53-119	40	02/10/2021 2042
Naphthalene	860	16	710	N	100	-951	16	30-130	40	02/10/2021 2042
2-Nitroaniline	ND	16	ND	N	100	0.00	0.00	60-124	40	02/10/2021 2042
3-Nitroaniline	ND	16	ND	N	100	0.00	0.00	43-123	40	02/10/2021 2042
4-Nitroaniline	ND	16	ND	N	100	0.00	0.00	30-135	40	02/10/2021 2042
Nitrobenzene	ND	16	ND	N	100	0.00	0.00	51-122	40	02/10/2021 2042
2-Nitrophenol	ND	16	ND	N	100	0.00	0.00	51-118	40	02/10/2021 2042
4-Nitrophenol	ND	32	ND	N	100	0.00	0.00	53-130	40	02/10/2021 2042
N-Nitrosodi-n-propylamine	ND	16	ND	N	100	0.00	0.00	54-127	40	02/10/2021 2042
N-Nitrosodiphenylamine (Diphenylamine)	ND	16	ND	N	100	0.00	0.00	30-123	40	02/10/2021 2042
Pentachlorophenol	ND	32	ND	N	100	0.00	0.00	42-131	40	02/10/2021 2042
Phenanthrene	ND	16	16		100	98	16	40-123	40	02/10/2021 2042
Phenol	ND	16	ND	N	100	0.00	0.00	49-117	40	02/10/2021 2042
Pyrene	ND	16	14		100	85	5.8	40-126	40	02/10/2021 2042
2,4,5-Trichlorophenol	ND	16	ND	N	100	0.00	0.00	30-123	40	02/10/2021 2042
2,4,6-Trichlorophenol	ND	16	ND	N	100	0.00	0.00	30-125	40	02/10/2021 2042

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		81	37-129
2-Fluorophenol		58	24-127
Nitrobenzene-d5		67	38-127
Phenol-d5		56	28-128
Terphenyl-d14		75	10-148
2,4,6-Tribromophenol	N	0.00	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

Pace Analytical®

PACE ANALYTICAL SERVICES, LLC
106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.pacelabs.com

Number 108461

Client: Terracon Consultants, Inc.	Report to Contact: Ethan Dinwiddie / Dan Malone (828)350-5502	Telephone No. / Email: Ethan.Dinwiddie@terracon.com; Dan.Malone@terracon.com
Address: 2401 Brentwood Rd. Suite 107	Sampler's Signature: X	Analysis (Attach list if more space is needed)
City: Raleigh; State: NC; Zip Code: 27604	Printed Name: Ethan Dinwiddie	Quote No.
Project Name: NC 55 PSA's		Page ___ of ___
Project No.: 70207241	P.O. No.	WB03036

Sample ID / Description (Containers for each sample may be combined on one line.)	Collection Date(s)	Collection Time (Military)	Grab/Composite	Matrix: Aqueous	Soil	Other	Number of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	SAPS #1	Other	VOA 8260D	SVOA 8270E	DI H2O							CSO / Remarks / Cooler I.D.
29-TW-01	2/2/21	1345	G	X			2			3				X	X								
TB-01	2/2/21	-	G	X						2						X							

Turn Around Time Required (Prior lab approval required for expedited TAT.): ☐ Standard ☐ Rush (Specify)	Sample Disposal: ☐ Return to Client ☑ Disposal by Lab	Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☑ Unknown	QC Requirements (Specify)				
1. Relinquished by: Ethan Dinwiddie	Date: 2/2/21	Time:	1. Received by	Date	Time		
2. Relinquished by	Date	Time	2. Received by	Date	Time		
3. Relinquished by	Date	Time	3. Received by	Date	Time		
4. Relinquished by: fedex	Date: 2/3/21	Time: 1000	4. Laboratory received by: [signature]	Date	Time: 2/3/21 1000		
Note: All samples are retained for four weeks from receipt unless other arrangements are made.			LAB USE ONLY Received on ice (Circle): (Yes) No Ice Pack	Receipt Temp: 3.7 °C	Temp Blank: ☑ Y ☐ N		

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: ME003N2-01

Pace Analytical

Samples Receipt Checklist (SRC) (ME0018C-15)
Issuing Authority: Pace ENV - WCOL

Revised:9/29/2020
Page 1 of 1

Sample Receipt Checklist (SRC)

Client: Terracon Consultants Inc Cooler Inspected by/date: MEH / 02/03/2021 Lot #: WD03036

Means of receipt: ☐ Pace ☐ Client ☐ UPS ☑ FedEx ☐ Other: _____

☑ Yes	☐ No		1. Were custody seals present on the cooler?
☑ Yes	☐ No	☐ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

3.7 / 3.7 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☑ No	☐ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☑ Yes	☐ No		21. Was the quote number listed on the container label? If yes, Quote # 26598

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA. Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA _____ were received with bubbles >6 mm in diameter.

Samples(s) NA _____ were received with TRC > 0.5 mg/L. (If #19 is ***no***) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA

SR barcode labels applied by: MEH Date: 02/03/2021

Comments:

Pace Analytical

PACE ANALYTICAL SERVICES, LLC
106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.pacelabs.com

Number 108462

Client: Terracon Consultants, Inc.	Report to Contact: Ethan Dinwiddie/Dan Malone (828)539-5502	Telephone No. / E-mail: Ethan.Dinwiddie@terracon.com Dan.Malone@terracon.com	Quote No.
Address: 2401 Brentwood Rd. Suite 107	Sampler's Signature: X	Analysis (Attach list if more space is needed)	Page 1 of 1
City: Raleigh State: NC Zip Code: 27604	Printed Name: Ethan Dinwiddie		
Project Name: NC-55 PSAs			WB03036 CSD
Project No.: 70207241	P.O. No.		Remarks / Cooler I.D.

Sample ID / Description (Containers for each sample may be combined on one line.)	Collection Date(s)	Collection Time (Military)	# of Containers	Matrix: Aqueous	Matrix: Soil	Matrix: Other	No of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	Na2S2O3	NaHSO4	VOA 8260D	SVOA 8270E	OM Hold							Remarks / Cooler I.D.
244-TW-01	2/3/21	1600	6	X			2			3				X	X								
TB-02	2/3/21	—	5	X						2						X							

Turn Around Time Required (Prior lab approval required for expedited TAT.): ☒ Standard ☐ Rush (Specify)

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished by	2/3/21	1600	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by: fedex	2/4/21	1030	3. Received by		
4. Relinquished by			4. Laboratory received by: M Hamer	2/4/21	1030

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on ice (Circle) (Yes) No Ice Pack
Receipt Temp. 1.8 °C
Temp Blank ☒ Y ☐ N

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: ME003N2-01

PACE ANALYTICAL SERVICES, LLC

Pace Analytical

Samples Receipt Checklist (SRC) (ME0018C-15)
Issuing Authority: Pace ENV - WCOL

Revised:9/29/2020
Page 1 of 1

Sample Receipt Checklist (SRC)

Client: Terracon Cooler Inspected by/date: MEH / 02/04/2021 Lot #: WB63036

Means of receipt: ☐ Pace ☐ Client ☐ UPS ☑ FedEx ☐ Other: _____

☐ Yes	☑ No		1. Were custody seals present on the cooler?
☐ Yes	☐ No	☑ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

1.8 / 1.8 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☐ Yes	☐ No	☑ NA	4. Is the commercial courier's packing slip attached to this form?
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☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
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☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
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SR barcode labels applied by: MEH Date: 02/04/2021

Comments: