

**PROJECT SPECIAL PROVISIONS  
GEOENVIRONMENTAL**

**CONTAMINATED SOIL (6/13/2023)**

The Contractor's attention is directed to the fact that soil contaminated with petroleum hydrocarbon compounds may exist within the project area. Information relating to these contaminated areas, sample locations, and investigation reports will be available at the following web address by navigating to the correct letting year and month then selecting, "Plans and Proposals", "R-5808", "Individual Sheets/520 GeoEnvironmental":

<http://dotw-xfer01.dot.state.nc.us/dsplan/>

Petroleum contaminated soil may be encountered during any earthwork activities on the project. The Contractor shall only excavate those soils that the Engineer designates necessary to complete a particular task. The Engineer shall determine if soil is contaminated based on areas shown on the plans, petroleum odors, and unusual soil staining. Contaminated soil not required to be excavated is to remain in place and undisturbed. Undisturbed soil shall remain in place, whether contaminated or not. The Contractor shall transport all contaminated soil excavated from the project to a facility licensed to accept contaminated soil.

In the event that a stockpile is needed, the stockpile shall be created within the property boundaries of the source material and in accordance with the Diagram for Temporary Containment and Treatment of Petroleum-Contaminated Soil per North Carolina Department of Environmental Quality's (NCDEQ) Division of Waste Management UST Section GUIDELINES FOR EX SITU PETROLEUM CONTAMINATED SOIL REMEDIATION. If the volume of contaminated material exceeds available space on site, the Contractor shall obtain a permit from the NCDEQ UST Section's Regional Office for off-site temporary storage. The Contractor shall provide copies of disposal manifests completed per the disposal facilities requirements and weigh tickets to the Engineer.

**Measurement and Payment:**

The quantity of contaminated soil hauled and disposed of shall be the actual number of tons of material, which has been acceptably transported and weighed with certified scales as documented by disposal manifests and weigh tickets. The quantity of contaminated soil, measured as provided above, shall be paid for at the contract unit price per ton for "Hauling and Disposal of Petroleum Contaminated Soil".

The above price and payment shall be full compensation for all work covered by this section, including, but not limited to stockpiling, loading, transportation, weighing, laboratory testing, disposal, equipment, decontamination of equipment, labor, and personal protective equipment.

Payment shall be made under:

**Pay Item**

Hauling and Disposal of Petroleum Contaminated Soil

**Pay Unit**

Ton

DocuSigned by  
*Ethan J. Caldwell*  
E9A1CFAC49A24  
06/13/2023



# UST CLOSURE AND INITIAL ABATEMENT ACTION REPORT

## **R-5808 UST Closure**

**William Jordon Jr., Carlease Jackson, & Vera Jordan Ball  
Property, Parcel #007, WBS# 46972.1.2  
US HWY 158 and Acorn Hill Road,  
Sunbury, Gates County, North Carolina, 27979**

Schnabel Project No. 23290032.001  
November 28, 2023

November 28, 2023

Ms. Sylvia Hunneke  
North Carolina Department of Environmental Quality  
Washington Regional Office  
Division of Waste Management, UST Section  
943 Washington Square Mall,  
Washington, North Carolina 27889

**Subject: UST Closure and Initial Abatement Action Report  
US Highway 158 and Acorn Hill Road, Sunbury, Gates County, North Carolina  
Schnabel Project No. 23290032.001**

Dear Ms. Hunneke:

**SCHNABEL ENGINEERING SOUTH, P.C.** is pleased to submit the enclosed UST Closure Report for the William Jordon Jr., Carlease Jackson, and Vera Jordan Ball Property located at the intersection of US Highway 158 and Acorn Hill Road in Sunbury, North Carolina. This report includes tables, figures, and appendices with relevant data collected for this study. This study was performed in accordance with our proposal dated September 19, 2023, as authorized by Matt Alexander on September 19, 2023.

We appreciate the opportunity to be of service for this project. Please call us if you have any questions regarding this report.

Sincerely,

**SCHNABEL ENGINEERING SOUTH, P.C.**

Lisa Kowalczyk, EIT  
Senior Staff Engineer

Jacob Wessell, PE  
Associate Engineer

LK: JW

Distribution:

NC DOT Geotechnical Engineering Unit  
Attn: Craig Haden, Geoenvironmental Project Manager

NC Department of Transportation, Geotechnical Engineering Unit  
R5808 UST Closure

**A. Site Information**

1. Site Identification

**Date of Report:** November 17, 2023

**Facility I.D.:** N/A **Incident Number:** N/A

**Site Name:** William Jordon Jr., Carlease Jackson, & Vera Jordan Ball Property

**Site Street Address:** US Highway 158 and Acorn Hill Road

**City/Town:** Sunbury **Zip Code:** 27979 **County:** Gates

**Description of Geographical Data Point (e.g., dispenser):** UST Location

**Location Method (GPS, topographical map, other):** Google Earth

**Latitude (decimal degrees):** 36.442633

**Longitude (decimal degrees):** -76.546536

2. Information about Contacts Associated with the Release (*Addresses must include street, city, state, zip code and mailing address, if different*)

**UST/AST Owner:** William Jordon Jr., Carlease Jackson, & Vera Jordan Ball

**Address:** 5809 47TH AVE NW, Rochester, Minnesota, 55901 **Tel:** N/A

**UST/AST Operator:** Not in Operation

**Address:** N/A **Tel:** N/A

**Property Owner:** William Jordon Jr., Carlease Jackson, & Vera Jordan Ball

**Address:** 5809 47TH AVE NW, Rochester, Minnesota, 55901 **Tel:** N/A

**Property Occupant:** Not Applicable

**Consultant/Contractor:** Schnabel Engineering South, P.C.

**Address:** 1133 Military Cutoff Road, Wilmington, NC 28405 **Tel:** (910) 769-1621

**Analytical Laboratory:** Pace Analytical

**State Certification No.** 5342

**Address:** 9800 Kinsey Ave. Ste 100, Huntersville, NC 28078 **Tel:** (704)875-9092

3. Information about Release

**Date Discovered:** October 17, 2023

**Estimated Quantity of Release:** Unknown

**Cause of Release:** Corrosion


**Source of Release:** USTs

**Sizes and Contents of Tank or Other Containment from which the Release Occurred:**

One (1) approximately 1,000-gallon and two (2) approximately 550-gallon capacity USTs and minimal gas lines.

4. Certification (*The title page must display the seal and signature of the certifying P.E. or L.G. and the name and certification number of the company or corporation [See 15A NCAC 2L .0103(e).]*)

I, Jacob Wessell, a Professional Engineer for Schnabel Engineering South, P.C., do certify that the information contained in this report is correct and accurate to the best of my knowledge.

DocuSigned by:  
  
676F8AF1578B46E...

11/29/2023

Jacob C. Wessell, PE

NC PE License No. 030395



Schnabel Engineering South, P.C. is licensed to practice geology and **engineering** in North Carolina. The certification number of the company or corporation is C-2599.

**UST CLOSURE AND INITIAL ABATEMENT ACTION REPORT**  
**R5808 UST CLOSURE**  
**WILLIAM JORDON JR., CARLEASE JACKSON, & VERA JORDAN BALL PROPERTY**  
**SUNBURY, GATES COUNTY, NORTH CAROLINA**

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## 1.0 SITE HISTORY AND CHARACTERIZATION

### 1.1 Introduction

Schnabel Engineering South, P.C. (Schnabel) has prepared this UST Closure and Initial Abatement Action Report in response to the North Carolina Department of Transportation's (NCDOT) Request for Technical and Cost Proposal (RFP), dated September 7, 2023 and in accordance with Schnabel's "Proposal for UST Closure and Soil Excavation Activities", dated September 19, 2023. Schnabel has performed the UST closure activities for the William Jordon, Jr., Carlease Jackson, and Vera Jordan Ball Property, located at the intersection of US Highway 158 and Acorn Hill Road in Sunbury, Gates County, North Carolina (Figure 1).

Schnabel conducted a geophysical investigation of the subject property on behalf of the NCDOT on July 25, 2023. Schnabel identified multiple anomalies during that investigation which indicated the presence of UST on the subject property. The UST closure activities are required as property acquisition is necessary for NCDOT to conduct roadway improvements along this project. A photo log of UST excavation and closure activities are documented in Appendix F.

No previous documentation is available regarding historic operations related to the USTs removed from the subject property. Three (3) USTs were located on the subject property. Tank 1 is approximately 1000-gallons in capacity and Tank 2 and Tank 3 are each approximately 550-gallons in capacity. It is assumed, given the UST locations on the corner, highway-adjacent property, that a previous small commercial fueling station was once operated at the site. Currently no operations or occupancy occurs at the subject property. None of the USTs at the subject property were listed in the NCDEQ UST database, and no additional information is available on the installation dates of the USTs.

Schnabel has provided this report which presents known site background information, summarizes the UST closure procedures and efforts, soil sampling efforts, laboratory analytical results, and Schnabel's findings, conclusions, and recommendations.

### 1.2 Owner/Operator of the UST

#### UST Owners

William Jordon, Jr., Carlease Jackson, and Vera Jordan Ball  
5809 47<sup>th</sup> Avenue NW  
Rochester, Minnesota, 55901

#### UST Operator

Not in Current Operation – Historic Operator Unknown

### 1.3 Property Owner

William Jordon, Jr., Carlease Jackson, and Vera Jordan Ball  
5809 47<sup>th</sup> Avenue NW  
Rochester, Minnesota, 55901

### 1.4 Facility Information

No facility or structure is currently on the subject property. Documentation and information on historic facilities on the subject property is not available and unknown.

## **1.5 Contacts**

**Primary Contact:** Craig Haden, Geoenvironmental Project Manager  
Geotechnical Engineering Unit  
North Carolina Department of Transportation  
1589 Mail Service Center  
Raleigh, NC 27699-1589  
919-707-6871

**Closure Contractor:** Evo Corporation  
1703 Vargrave Street  
Winston Salem, North Carolina 27107  
Tony Disher  
(877) 725-5844

**Consultant:** Schnabel Engineering South, P.C.  
1133 Military Cutoff Road, Suite 210  
Wilmington, North Carolina 28405  
Lisa Kowalczyk, Project Manager  
(480) 306-1217

**Laboratory:** Pace Environmental  
9800 Kinsey Ave., Suite 100  
Huntersville, NC 28078  
Taylor Cannon  
(704) 875-9092

## **1.6 UST Information**

Schnabel located three USTs in the northwestern portion of Parcel #007, the subject property, south of US Highway 158 and east of Acorn Hill Road in Sunbury, North Carolina (see Figure 1). Minimal piping (less than 8 feet in length) was found extending northwesterly from Tank 1 (Figure 2). Other additional minimal piping was observed to extend from Tanks 2 and 3 directly vertical to the presumed former dispenser location(s). There is no record of historic compliance issues for this site and no incident number has been assigned.

## **1.7 Site Characteristics**

Two single-story, single-room wooden shed-like buildings are located on the subject property. The subject property is mainly grass-covered, with some observed areas of debris and the aforementioned wooden buildings. No utilities cross the site. The ROW of the subject property includes asphalted road way and some grassy areas. Photographs of the Study Area are presented in Appendix F.

The site is located at an approximate ground surface elevation of 37 feet above mean sea level. Topography at the site is a relatively uniform slope toward the east. Based on the proximity to the surface water feature in the eastern portion and vicinity of the Site, groundwater flow is anticipated to flow in an easterly direction toward Jones Pond. Schnabel did not encounter bedrock nor groundwater during the UST removal activities.



The subject property is located in the Coastal Plain physiographic province of North Carolina. According to the NCDEQ *State Geologic Map*, the site is underlain by the Yorktown Formation, characterized by fossiliferous clay with varying amounts of fine-grained sand, bluish gray, and shell material. The North Carolina Coastal Plain is underlain by a thick wedge of sediments that increases in thickness from a thin veneer near the Fall Zone to more than 4,000 meters under the continental shelf. These sediments rest on an eroded surface of Precambrian to early Mesozoic rock. Two-thirds of this wedge is comprised of late Jurassic and Cretaceous clay, sand, and gravel.

## **1.8 Scope of Work**

- Remove the three (3) possible USTs, their contents, and associated piping.
- Only excavate soils necessary for the UST removal. Properly dispose of any petroleum – contaminated soils, assume 50 tons of soil.
- The amount of contents inside the tanks is unknown, for estimating purposes assume 1000 gallons.
- Collect confirmatory samples.
- Backfill and compact with clean fill material.
- On reports and NCDEQ forms attribute UST ownership to former property owner (see subject above).
- Prepare a report documenting your activities sufficient to meet all NCDEQ requirements.

## **2.0 UST CLOSURE PROCEDURES**

### **2.1 Pre-Closure Procedures**

A UST-3 Notice of Intent form was sent to the Regional NCDEQ Office prior to closure activities (Appendix A). Schnabel contacted North Carolina 811 to locate subsurface utilities at the site prior to mobilization and notified the Gates County Fire Marshall of the schedule for closure. Before tank removal activities commenced, onsite personnel convened to review the Site-Specific Health and Safety Plan (HASP) included in Appendix B.

### **2.2 UST System Closure Procedures**

The three (3) USTs were discovered in the NCDOT right-of-way during a geophysical investigation by Schnabel in July of 2023. The closure procedure followed NCDEQ's Underground Storage Tank Section Guidelines for Site Checks, Tank Closure, and Initial Response and Abatement for UST Releases (January 19, 2021). The closure procedures are described in this report.

### **2.3 Excavated Soil Management**

Soil removed from the tank pits was segregated into a clean (non-impacted) soil pile and a dirty (impacted) soil pile. The soils were segregated according to odor, visual observation of staining, and field screening readings with a photo ionization detector (PID). Soil located above each tank (approximately three feet), was placed in the clean pile. Two tank pits remained after the removal of the USTs (Excavation 1 Soils and Excavation 2 Soils), as shown in Figure 3, PID readings indicated that soil impact was present beneath Tank 1, so the soil excavated in this area in order to remove Tank 1 was placed into the dirty pile.

The tank pit for Tank 1 (Excavation 1 Soils area) was approximately 7 feet by 7 feet by 5.5 feet deep, and the tank pit for Tanks 2 and 3 (Excavation 2 Soils area) was approximately 10 feet by 10 feet and 5.5 feet deep.

Approximately 3.29 tons of petroleum impacted soil was removed for proper off site treatment and disposal by EVO Corporation at Triangle Area Earth Corporation in Zebulon, North Carolina. Disposal Manifests and the Truck Scale Certificate for the impacted soils are presented in Appendix E.

The excavation pits were backfilled with a fine to medium grained, light orangish brown, Well-Graded Sand (SW), up to the existing land surface elevation upon the completion of excavation activities. The disturbed area was then compacted by tamping with the bucket on the track-hoe.

## **2.4 Sampling Procedures**

### **2.4.1 Soil Sampling Locations and Sampling Procedures**

Closure samples (T1B1, T1B2, T2B1, T2B2, T3B1, T3B2, and T1P1) were collected by a 24-inch track-hoe bucket from the base of each tank. Grab samples were collected from the track-hoe bucket. One closure sample (T1P1) was collected beneath the product line that extended from Tank 1 at approximately 3 feet below ground surface. No dispensers were onsite and thus no closure samples from beneath dispenser were collected as part of these closure procedures. Samples were collected in laboratory-supplied glassware and were placed on ice in an insulated cooler and analyzed by Pace Analytical, located in Huntersville, North Carolina. Soil samples were analyzed for Total Petroleum Hydrocarbons (TPH) – Gasoline Range Organics (GRO) and TPH – Diesel Range Organics (DRO) by EPA Method 8015 C and SW-846.

Soil sample locations with analytical results are shown on Figure 3.

### **2.4.2 Groundwater Sampling Location and Sampling Procedure**

Groundwater was not encountered during the excavation of Tanks 1 through 3.

## **2.5 Quality Control Measures**

Closure samples were placed in laboratory-supplied containers and stored on ice and driven to Pace Environmental laboratory location in Raleigh, North Carolina. Sample information was recorded on the Chain-of-Custody form. Soil samples were submitted for chemical analysis of TPH-GRO and TPH-GRO using Method 8015 C and SW-846.

## **2.6 Release Description**

Results of the PID scanning of soil samples obtained during the UST removal indicated that petroleum impact was present at various concentrations on the northwestern portion of the subject property beneath the USTs. The impact was focused in an area surrounding the three removed USTs. Analytical results showed that TPH-GRO were detected at concentrations that exceed the TPH-GRO state soil action level of 50 milligrams per kilogram (mg/kg).

## 2.7 Investigative Results

The action level of 50 mg/kg for TPH-GRO was exceeded in closure samples T1B1 (567 mg/kg), T1B2 (936 mg/kg), T2B1 (642 mg/kg), T2B2 (889 mg/kg), T3B1 (661 mg/kg), and T3B2 (1640 mg/kg). The action level of 100 mg/kg for TPH-DRO was not exceeded at any closure sample points analyzed. A summary of the results are presented in Table 1 below. Complete copies of the laboratory analytical reports are provided in Appendix F.

**Table 1: Summary of PID and Analytical Soil Sample Results**

SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (FEET BGS)	PID FIELD SCREENING (PPM)	TPH GRO (C6-C10) (mg/kg)	TPH DRO (C10-C28) (mg/kg)	Percent Moisture (%)
T1-P1	10/17/2023	2.5	2.4	ND	ND	23.1
T1-B1	10/17/2023	7	NS	<b>567</b>	39.4	19.4
T1-B2	10/17/2023	7	NS	<b>936</b>	32.0	24.6
T1-B3*	10/17/2023	7	1035	NT	NT	NT
T2-B1	10/17/2023	6	2574	<b>642</b>	21.0	19.5
T2-B2	10/17/2023	6	1527	<b>889</b>	18.1	20.8
T3-B1	10/17/2023	6	1706	<b>661</b>	13.2	20.2
T3-B2	10/17/2023	6	1528	<b>1640</b>	21.0	21.3
Tank 1 Fill**	10/17/2023	Composite Sample	2.1	NT	NT	NT
Tank 2 Fill**	10/17/2023	Composite Sample	10.5	NT	NT	NT
Tank 3 Fill**	10/17/2023	Composite Sample	5.7	NT	NT	NT
Excavation 1 Soil	10/17/2023	Composite Sample	14.1	NT	NT	NT
Excavation 2 Soil	10/17/2023	Composite Sample	5.1	NT	NT	NT

### NOTES:

BGS = Below Ground Surface

PPM = Parts Per Million

ND = Not Detected

NT = Not Tested

\* = One location below midline of Tank 1 screened with PID in field.

\*\* = Samples collected from area directly surrounding UST fill pipe.

**BOLD** = Exceeds TPH-GRO state (soil) action level of 50 mg/kg -or- TPH-DRO soil action level of 100 mg/kg

## 3.0 SOIL BACKFILL

The excavation pits were backfilled with a fine to medium grained, light orangish brown, Well-Graded Sand (SW), up to the existing land surface elevation upon the completion of excavation activities. The disturbed area was then compacted by tamping with the bucket on the track-hoe.

#### 4.0 REGULATORY STATUS

Schnabel completed and electronically submitted the UST-61 24-Hour Release and Leaking UST Report Form to the NCDEQ. A completed UST-2A form, Site Investigation Report for Permanent Closure or Change in Service of a Registered UST is included in Appendix A of this report for submittal to the NCDEQ.

Per NCDEQ's Underground Storage Tank Section Guidelines for Site Checks, Tank Closure, and Initial Response and Abatement for UST Releases (January 19, 2021), the soil samples collected and analyzed from this site indicate that a potentially minor release from the system has occurred. In order for the site to be eligible for closure, as the analytical results indicate that TPH-GRO state soil action levels are exceeded at this site, further actions (typically a limited site assessment) are required.

#### 5.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

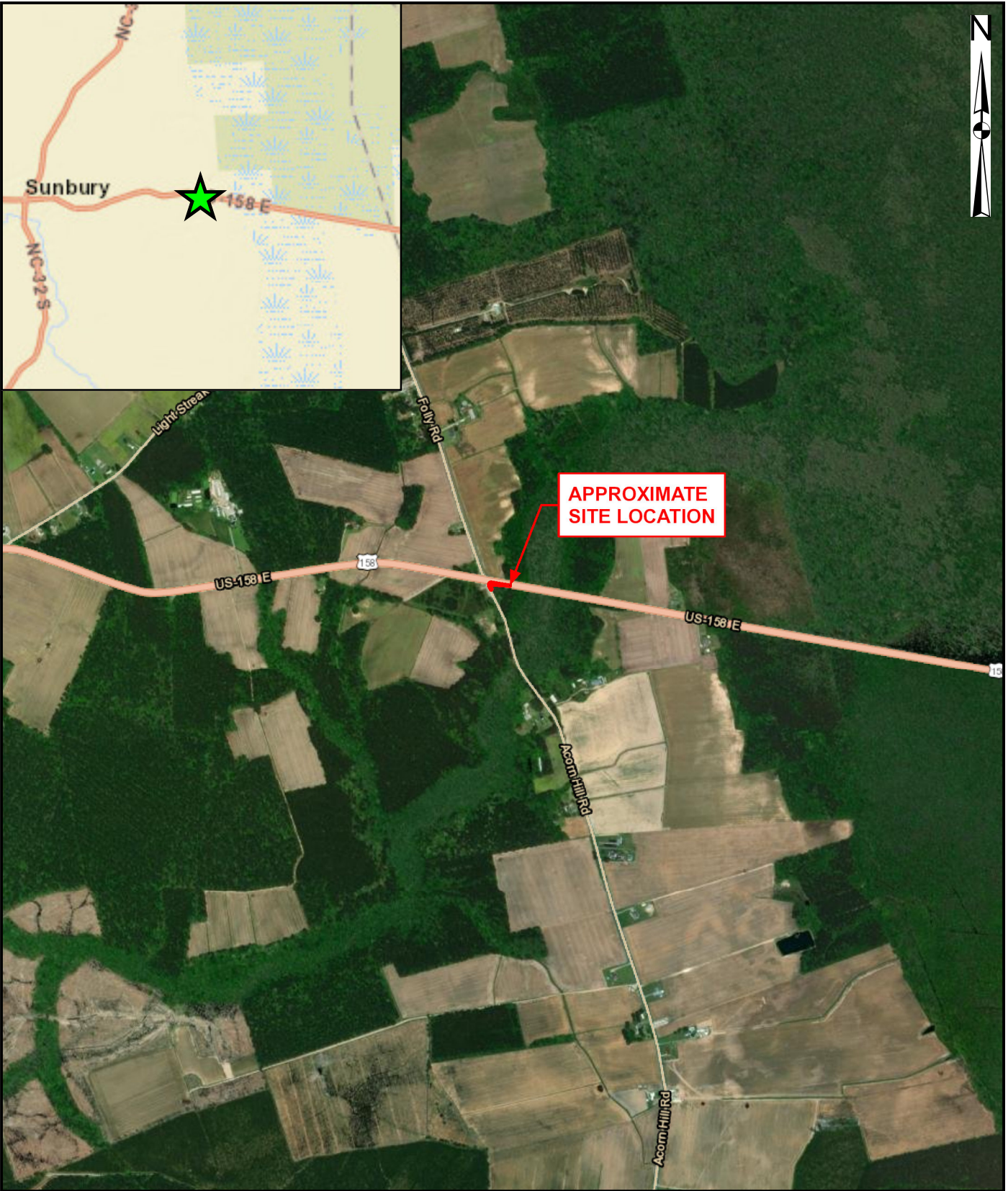
Schnabel observed the removal of three (3) USTs and associated minimal piping on October 17 and 18, 2023 from the subject property in Sunbury, Gates County, North Carolina. Tank 1 had an approximately 1,000-gallon capacity and Tanks 2 and 3 had approximately 550-gallon capacities, respectively.

A PID indicated Volatile Organic Compound (VOC) readings from the midline of Tank 1 of 1035 ppm. Higher VOC readings from the midline samples of Tanks 2 and 3 ranged from 1527 ppm to 2574 ppm. The laboratory results of the soil samples collected from the midline, beneath the UST, indicated the presence of impacted soil beneath all three tanks.

If excavation activities exceed a depth of three feet, impacted soil may be encountered and the NCDOT should properly transport and treat the excavated soil. Groundwater was not encountered during the tank closure. If groundwater is encountered during construction, it should be evaluated for possible impact, including further assessment of the proximity of public and private water supply wells near and downgradient of the site. If impacted soil or groundwater is encountered during construction activities, appropriate measures should be taken to ensure worker safety. In addition, any impacted soil or groundwater disturbed during construction should be handled and disposed of in accordance with applicable regulations. It is recommended that the findings of this closure report be provided to the local NCDEQ office in Washington, North Carolina.

## **6.0 LIMITATIONS**

This UST Closure and Initial Abatement Action Report was prepared for the use of the North Carolina Department of Transportation. The scope of work performed at the site is limited to the tasks described in our cost proposal dated September 19, 2023. This report is not intended to represent an exhaustive research of all potential hazards that may exist. We have endeavored to complete the services identified herein in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality and under similar conditions as this project. No other representation, express or implied, is included or intended, and no warranty or guarantee is included or intended in this report, or other instrument of service.



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community  
 Esri, HERE, Garmin, (c) OpenStreetMap contributors  
 Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community  
 Projection: WGS 1984 Web Mercator Auxiliary Sphere

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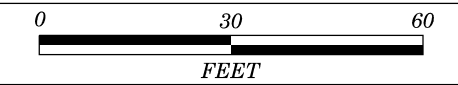


NCDOT PROJECT R-5808  
 US HWY 158 AND ACORN HILL ROAD  
 SUNBURY, NC 27979  
 PROJECT NO. 23290032.001

SITE VICINITY  
 MAP

FIGURE 1

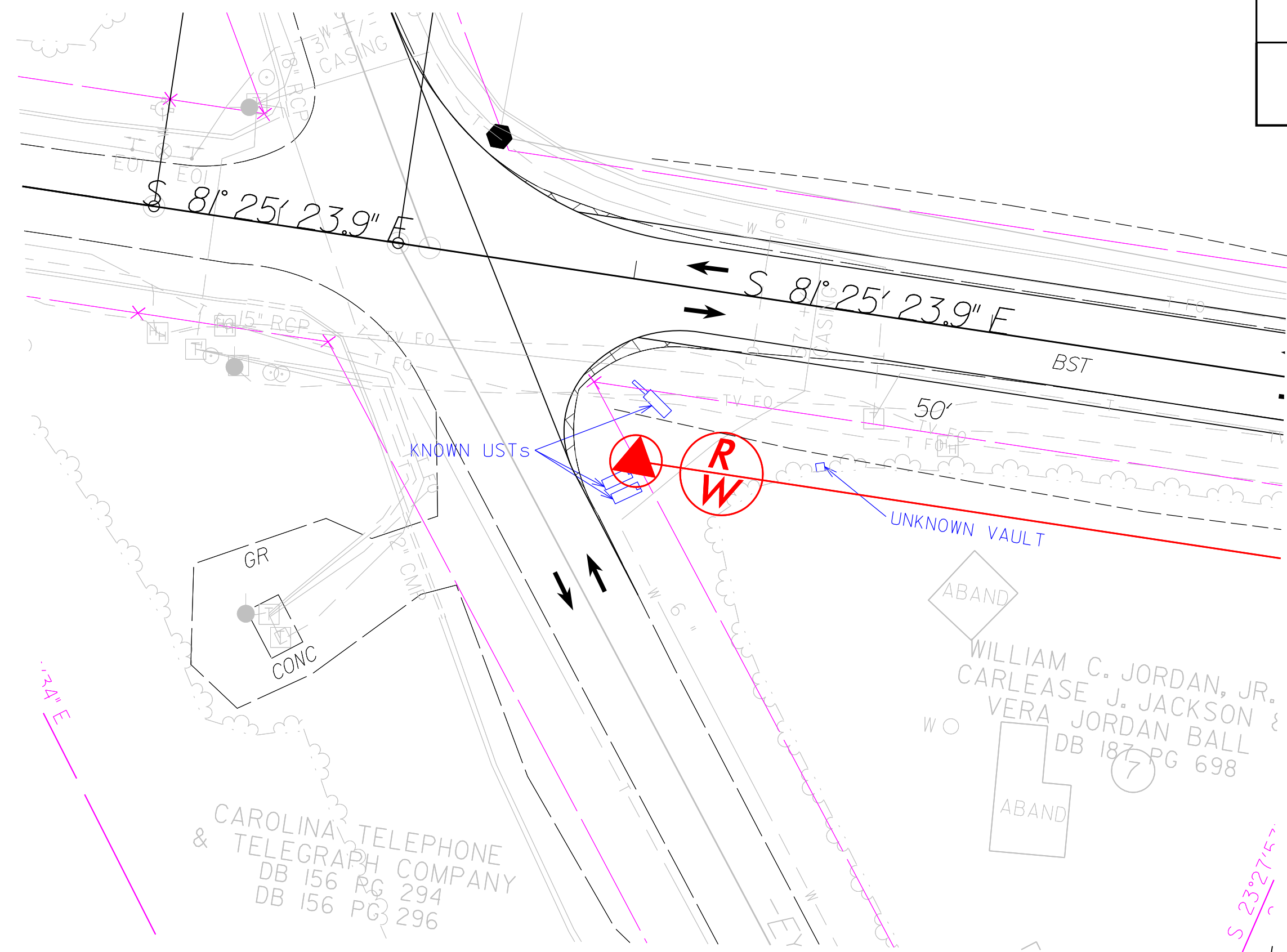
# SITE PLAN



## UST SYSTEM MAP

**LEGEND**

- EXISTING ROW
- EXISTING PROPERTY BOUNDARY
- PROPOSED ROW LINE
- KNOWN UST (REMOVED)

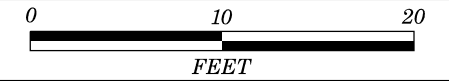


CAROLINA TELEPHONE  
& TELEGRAPH COMPANY  
DB 156 PG 294  
DB 156 PG 296

ABAND  
WILLIAM C. JORDAN, JR.  
CARLEASE J. JACKSON &  
VERA JORDAN BALL  
DB 187 PG 698  
ABAND

S 23°27'57"

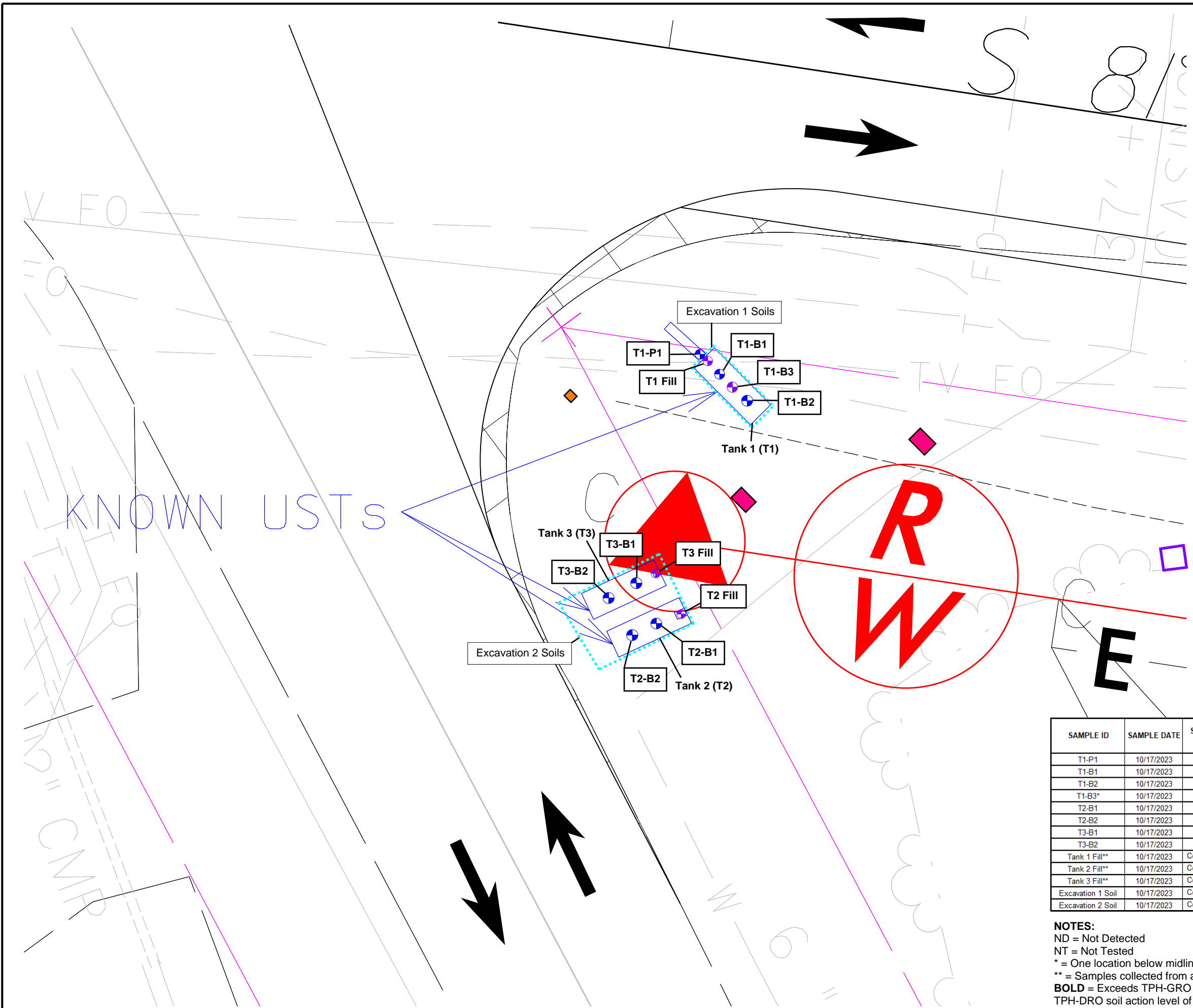
# SITE PLAN



## SAMPLE LOCATIONS MAP WITH TPH-DRO AND TPH-GRO ANALYTICAL RESULTS

### LEGEND

- EXISTING ROW
- EXISTING PROPERTY BOUNDARY
- PROPOSED ROW LINE
- KNOWN USTs
- ANOMALY LOCATION EXCAVATED (NO TANK FOUND)
- ANOMALY LOCATION HAND-AUGERED (NO TANK FOUND)
- UNKNOWN VAULT
- SOIL EXCAVATION EXTENT
- EXCAVATED SOIL AND FILL LINE SAMPLE LOCATION
- UST MIDLINE SOIL SAMPLING LOCATION



SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (FEET BGS)	PID FIELD SCREENING (PPM)	TPH GRO (C6 C10) (mg/kg)	TPH DRO (C10-C28) (mg/kg)	Percent Moisture (%)
T1-P1	10/17/2023	2.5	2.4	ND	ND	23.1
T1-B1	10/17/2023	7	NS	567	39.4	19.4
T1-B2	10/17/2023	7	NS	936	32.0	24.6
T1-B3*	10/17/2023	7	1035	NT	NT	NT
T2-B1	10/17/2023	6	2574	<b>642</b>	21.0	19.5
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T3-B1	10/17/2023	6	1706	<b>661</b>	13.2	20.2
T3-B2	10/17/2023	6	1528	<b>1640</b>	21	21.3
Tank 1 Fill**	10/17/2023	Composite Sample	2.1	NT	NT	NT
Tank 2 Fill**	10/17/2023	Composite Sample	10.5	NT	NT	NT
Tank 3 Fill**	10/17/2023	Composite Sample	5.7	NT	NT	NT
Excavation 1 Soil	10/17/2023	Composite Sample	14.1	NT	NT	NT
Excavation 2 Soil	10/17/2023	Composite Sample	5.1	NT	NT	NT

**NOTES:**  
 ND = Not Detected  
 NT = Not Tested  
 \* = One location below midline of Tank 1 screened with PID in field.  
 \*\* = Samples collected from area directly surrounding UST fill pipe.  
**BOLD** = Exceeds TPH-GRO state (soil) action level of 50 mg/kg -or- TPH-DRO soil action level of 100 mg/kg



## APPENDIX A

# NOTIFICATION OF INTENT UST-3, UST-2A, UST-61

# UST-3 Notice of Intent: UST Permanent Closure or Change-in-Service

**Return completed form to:**

The DWM Regional Office located in the area where the facility is located. Also send a copy to the Central Office in Raleigh.  
Go to the following link for the regional and central office mailing addresses:  
<https://www.deq.nc.gov/about/divisions/waste-management/ust/ro-staff>

STATE USE ONLY

I.D. # \_\_\_\_\_

Date Received \_\_\_\_\_

**INSTRUCTIONS (READ THIS FIRST)**

Complete and return a UST-3 form at least **thirty (30) days** prior to closure or change-in-service activities.

Completed UST closure or change-in-service site assessment reports, along with a copy of the UST-2A and/or 2B forms, should be submitted to the appropriate Division of Waste Management (DWM) Regional Office within thirty (30) days following closure activities. The UST-2 form should also be submitted to the Central Office in Raleigh so that the status of the tanks may be changed to permanently closed and your tank fee account can be closed out. Note: Tank fees may be due for unregistered tanks.

UST closure and change-in-service site assessments must be completed in accordance with the latest version of the *Guidelines for Site Checks, Tank Closure and Initial Response*. The guidelines can be obtained at <https://deq.nc.gov/about/divisions/waste-management/ust>. Note: To close tanks in place you must obtain prior approval from the DWM Regional office located in the region where the facility is located.

You must make sure that USTs removed from your property are disposed of properly. When choosing a closure contractor, ask where the tank(s) will be taken for disposal. Usually, USTs are cleaned and cut up for scrap metal. This is dangerous work and must be performed by a qualified company. Tanks disposed of illegally in fields or other dumpsites can leak petroleum products and sludge into the environment. If your tanks are disposed of improperly, you could be held responsible for the cleanup of any environmental damage that occurs.

**I. OWNERSHIP OF TANKS**

**II. LOCATION**

Owner Name (Corporation, Individual, Public Agency, or Other Entity) William Jordon Jr., Carlease Jackson and Vera Jordan Ball		Facility Name or Company William Jordon Jr., Carlease Jackson and Vera Jordan Ball Property	
Street Address 5809 47TH AVE NW		Facility ID # (If known) N/A	
City Rochester	County Olmsted	Street Address Southeast Quadrant of US 158 & Acorn Hill Rd, Sunbury 27979	
State MN	Zip Code 55901	City Sunbury	County Gates
Phone Number N/A	Email	Zip Code 27979	Phone Number N/A

**III. CONTACT PERSONNEL**

Name: Craig Haden	Company Name: NC Department of Transportation	Job Title: GeoEnvironmental Project Manager	Phone Number: 919-707-6871
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**IV. TANK REMOVAL, CLOSURE IN PLACE, CHANGE-IN SERVICE**

- |  |   |  |
|--|---|--|
| 1. Contact local fire marshal.   | 5. Provide a sketch locating piping, tanks and soil sampling locations.   | a P.E. or L.G., with all closure site assessment reports bearing the signature and seal of the P.E. or L.G. If a release has not occurred, the supervision, signature or seal of a P.E. or L.G. is not required. |
| 2. Plan entire closure event.  | 6. Submit a closure report in the format of UST-12 (including the form UST-2) within thirty (30) days following the site investigation. |  |
| 3. Conduct Site Soil Assessment.   | 7. If a release from the tanks has occurred, the site assessment portion of the tank closure must be conducted under the supervision of |  |
| 4. If removing tanks or closing in place, refer to API Publication 2015 <i>Cleaning Petroleum Storage Tanks</i> and 1604 <i>Removal and Disposal of Used Underground Petroleum Storage Tanks</i> . | 8. Keep closure records for three (3) years.  |  |

**V. WORK TO BE PERFORMED BY**

Contractor Name: Tony Disher		Contractor Company Name: EVO Corporation			
Address: 1703 Vargave Street	City: Winston-Salem	State: NC	Zip Code: 27107	Phone No: 877-725-5844	
Primary Consultant Name: Lisa Kowalczyk		Primary Consultant Company Name: Schnabel Engineering South, PC		Consultant Phone No: 910-769-1621	

**VI. TANKS SCHEDULED FOR CLOSURE OR CHANGE-IN-SERVICE**

Tank ID No.	Size in Gallons	Last Contents	Proposed Activity		
			Removal	Closure Abandonment in Place *	Change-In-Service New Contents Stored
1	275	Gasoline, Gas Mix	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2	275	Gasoline, Gas Mix	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3	550	Diesel/Diesel Mix	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	


\* Prior written approval to abandon a tank in place must be received from a DWM Regional Office.

**VII. OWNER OR OWNER'S AUTHORIZED REPRESENTATIVE**

Has a release from a UST system occurred at this location?  Yes  No  Unknown

I understand that I can be held responsible for environmental damage resulting from the improper disposal of my USTs.

Print name and official title: Lisa Kowalczyk, Project Manager of Schnabel Engineering South, P.C. for NCDOT

Signature  for NCDOT	Date Signed 9/21/2023	SCHEDULED REMOVAL DATE 10/16/2023	<b>Notify your DWM Regional Office 48 hours before this date if scheduled removal date changes</b>
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# UST-2A

## Site Investigation Report for Permanent Closure or Change-in-Service of REGISTERED UST



Return completed form to:

**NC DEQ / DWM / UST SECTION  
1646 MAIL SERVICE CENTER  
RALEIGH, NC 27699-1646  
ATTN: REGISTRATION & PERMITTING**

phone (919) 707-8171 fax (919) 715-1117 <http://www.wastenotnc.org/>

STATE USE ONLY:

Facility ID #

Date Received

### INSTRUCTIONS (READ THIS FIRST)

- UST permanent closure or change in service must be completed in accordance with the latest version of the *Guidelines for Site Checks, Tank Closure and Initial Response and Abatement*. The guidelines can be obtained at <http://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/underground-storage-tanks-section>.
- Permanent closure:** Complete all sections of this form.
- Change-in-service:** Where a UST system will be converted from storing a regulated substance to a non-regulated substance, complete sections I, II, III, IV, and VI
- For more than 5 registered UST systems, attach additional forms as needed
- Tank Fee Refund: An annual tank fee may be refunded for a tank for which a tank fee was not required. An owner or operator must submit a written request and include: (1) contact information, (2) federal identification # or SSN, and (3) a copy of UST-2 form. The annual tank fee will be prorated based on the date of permanent closure.**
- UNREGISTERED USTs use Form UST-2B

I. OWNERSHIP OF TANKS			II. LOCATION OF TANKS		
Owner Name (Corporation, Individual, Public Agency, or Other Entity) William Jordon Jr., Carlease Jackson and Vera Jordan Ball			Facility Name or Company William Jordon Jr., Carlease Jackson and Vera Jordan Ball Pro+		
Street Address 5809 47TH AVE NW			Facility ID # (If known) N/A		
City Rochester	County Olmsted		Street Address Southeast Quadrant of US 158 & Acorn Hill Rd		
State Minnesota	Zip Code 55901		City Sunbury	County Gates	Zip Code 27979
Phone Number N/A			Phone Number		


III. CONTACT PERSONNEL					
Contact for Facility: Craig Haden		Job Title: GeoEnvironmental P+		Phone #: 919-707-6871	
Closure Contractor Name: Tony Disher	Closure Contractor Company: EVO Corporation		Address: 1703 Vargave Street+	Phone # 877-725-5844	
Primary Consultant Name: Lisa Kowalczyk	Primary Consultant Company: Schnabel Engineering South, P.C.		Address: 1133 Military Cutoff R+	Phone # 480-306-1217	

IV. UST INFORMATION FOR REGISTERED UST SYSTEMS UNREGISTERED USTs use Form UST-2B							V. EXCAVATION CONDITION					
Tank ID No.	Size in Gallons	Last Contents	Last Use Date	Permanent Close Date	Method of Permanent Closure: Indicate REMOVED or enter fill material, such as foam/ concrete/ sand	Change-in-Service Date	Water in excavation		Free product		Notable odor or visible soil contamination	
							Yes	No	Yes	No	Yes	No
1	1000	water-g+		10/17/2023	Removed		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	550	water-g+		10/17/2023	Removed		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	550	water-g+		10/17/2023	Removed		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**VI. CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true accurate and complete.

Print name and official title of owner or owner's authorized representative  
Lisa Kowalczyk, Project Manager of Schnabel Engineering South, P.C. for NCDOT

Signature  Date Signed 11/28/2023

# UST-61

# 24-Hour Release and UST Leak Reporting Form.

### For Releases in NC

This form should be completed and submitted to the UST Section's regional office following a known or suspected release from an underground storage tank (UST) system. This form is required to be submitted within 24 hours of discovery of a known or suspected release

(DWM USE ONLY)  
Incident # \_\_\_\_\_ Risk (H,I,L,U) \_\_\_\_\_  
Received On \_\_\_\_\_ Received By \_\_\_\_\_  
Reported by (circle one): Phone, Fax or Report  
Region \_\_\_\_\_

Suspected Contamination? (Y/N) \_\_\_\_\_  
Confirmed GW Contamination? (Y/N) \_\_\_\_\_  
Confirmed Soil Contamination?(Y/N) \_\_\_\_\_  
Samples Taken?(Y/N) \_\_\_\_\_  
Free Product? (Y/N) \_\_\_\_\_ If Yes, State Greatest  
Thickness \_\_\_\_\_

Facility ID Number \_\_\_\_\_  
Date Leak Discovered \_\_\_\_\_  
Comm/Non-Commercial? \_\_\_\_\_  
Reg/Non-regulated? \_\_\_\_\_

### INCIDENT DESCRIPTION

Incident Name: William Jordon Jr., Carlease Jackson and Vera Jordan Ball Property

Address: Southeast Quadrant of US 158 & Acorn Hill Rd, Sunbury, NC 28401

County: Gates

City/Town: Sunbury

Zip Code: 28401

Regional Office (circle one): Asheville, Mooresville, Fayetteville,  
Raleigh, Washington, Wilmington, Winston-Salem

Latitude (decimal degrees): 36.442633

Longitude (decimal degrees) : -76.546536

Obtained by:

Briefly describe suspected or confirmed release: (including but not limited to: nature of release, date of release, amount of release, amount of free product present and recovery efforts, initial responses conducted, impacts to receptors)

Removed 3 underground storage tanks approximately 500 to 1,000 gallons each in size with visible corrosion, pits, and holes on October 17th, 2023. None of the tanks are registered and are believed to be orphaned petroleum tanks. During the excavation and removal of tanks groundwater was not encountered. A petroleum odor was noticeable during excavation activities. Multiple soil samples were taken below the tank midlines and minimal tank piping. Laboratory results of soil sampling showing TPH-GRO concentrations greater than 50 mg/kg were received and reviewed on 10/27/23 - 11/01/23. Contents of tanks were removed with a VAC truck. Soil that was excavated and visibly stained was disposed of in accordance with all applicable guidelines as petroleum-contaminated soil. Clean fill was brought in from off-site and holes filled.

- GPS  
 Topographic map  
 GIS Address matching  
 Other  
 Unknown

Describe location:

### HOW RELEASE WAS DISCOVERED (Release Code)

(Check one)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Release Detection Equipment or Methods | <input type="checkbox"/> Visual/Odor                     | <input type="checkbox"/> Groundwater Contamination   |
| <input checked="" type="checkbox"/> During UST Closure/Removal  | <input type="checkbox"/> Water in Tank                   | <input type="checkbox"/> Surface Water Contamination |
| <input type="checkbox"/> Property Transfer                      | <input type="checkbox"/> Water Supply Well Contamination | <input type="checkbox"/> Other (specify) _____       |

### SOURCE OF CONTAMINATION

#### Source of Release

(Check primary source)

- Tank  
 Piping  
 Dispenser  
 Submersible Turbine Pump  
 Delivery Problem  
 Spill Bucket  
 Other  
 Unknown

#### Cause of Release

(Check primary cause)

- Spill  
 Overfill  
 Corrosion  
 Physical/Mechanical Damage  
 Install Problem  
 Other  
 Unknown

Definitions presented on reverse

#### Type of Release

(Check one)

- Petroleum  
 Non-Petroleum  
 Both
- Location**  
(Check one)
- Facility  
 Residence  
 Other

#### Product Type Released

(Check primary product type released)

- Gasoline/ Diesel/ Kerosene  
 Heating Oil  
 Other Petroleum Products  
 Metals  
 Other Inorganics  
 Other Organics
- Diesel/Veg. Oil Blend  
 Vegetable Oil 100%  
 E10 – E20  
 E21 – E84  
 E85 – E99  
 Ethanol 100%  
 E01 – E09

Definitions presented on reverse

#### Ownership

1. Municipal 2. Military 3. Unknown 4. Private 5. Federal 6. County 7. State

#### Operation Type

1. Public Service 2. Agricultural 3. Residential 4. Education/Relig. 5. Industrial 6. Commercial 7. Mining

## IMPACT ON DRINKING WATER SUPPLIES

Water Supply Wells Affected?    1. Yes            2. No            3. Unknown

Number of Water Supply Wells Affected   N/A  

Water Supply Wells Contaminated: *(Include Users Names, Addresses and Phone Numbers. Attach additional sheet if necessary)*

- 1.
- 2.
- 3.

### UST SYSTEM OWNER

UST Owner/Company

William Jordon Jr., Carlease Jackson and Vera Jordan Ball

Point of Contact

Email

Address

5809 47TH AVE NW

City Rochester

State

Minnesota

Zip Code

55901

Telephone Number

UST Operator/Company

### UST SYSTEM OPERATOR

Email

Address

City

State

Zip Code

Telephone Number

Landowner

### LANDOWNER AT LOCATION OF UST INCIDENT

William Jordon Jr., Carlease Jackson and Vera Jordan Ball

Email

Address

5809 47TH AVE NW

City Rochester

State

Minnesota

Zip Code

55901

Telephone Number

### Draw Sketch of Area (showing two major road intersections) or Attach Map

SEE ATTACHED MAP

Person Reporting Incident Lisa Kowalczyk

Company Schnabel Engineering South, P.C.

Telephone Number 910-769-1621

Title Senior Staff Engineer/PM

Address 1133 Military Cutoff Road, Suite 210

Date 11/3/2023

UST Form 61 (02/19)

Page 2 of 2

#### Definitions of Sources

Tank: means the tank that stores the product and is part of the underground storage tank system

Piping: means the piping and connectors running from the tank or submersible turbine pump to the dispenser or other end-use equipment (Vent, vapor recovery, or fill lines are excluded.)

Dispenser: includes the dispenser and the equipment used to connect the dispenser to the piping (e.g., a release from a suction pump or from components located above the shear valve)

Submersible Turbine Pump (STP) Area includes the submersible turbine pump head (typically located in the tank sump), the line leak detector, and the piping that connects the submersible turbine pump to the tank

Delivery Problem: identifies releases that occurred during product delivery to the tank. (Typical causes associated with this source are spills and overfills.)

Other: serves as the option to use when the release source is known but does not fit into one of the preceding categories (e.g., for releases from vent lines, vapor recovery lines, and fill lines)

Unknown: identifies releases for which the source has not been determined

#### Definitions of Causes

Spill: use this cause when a spill occurs (e.g., when the delivery hose is disconnected from the tank fill pipe or when the nozzle is removed from the dispenser)

Overfill: use when an overfill occurs (e.g., overfills may occur from the fill pipe at the tank or when the nozzle fails to shut off at the dispenser)

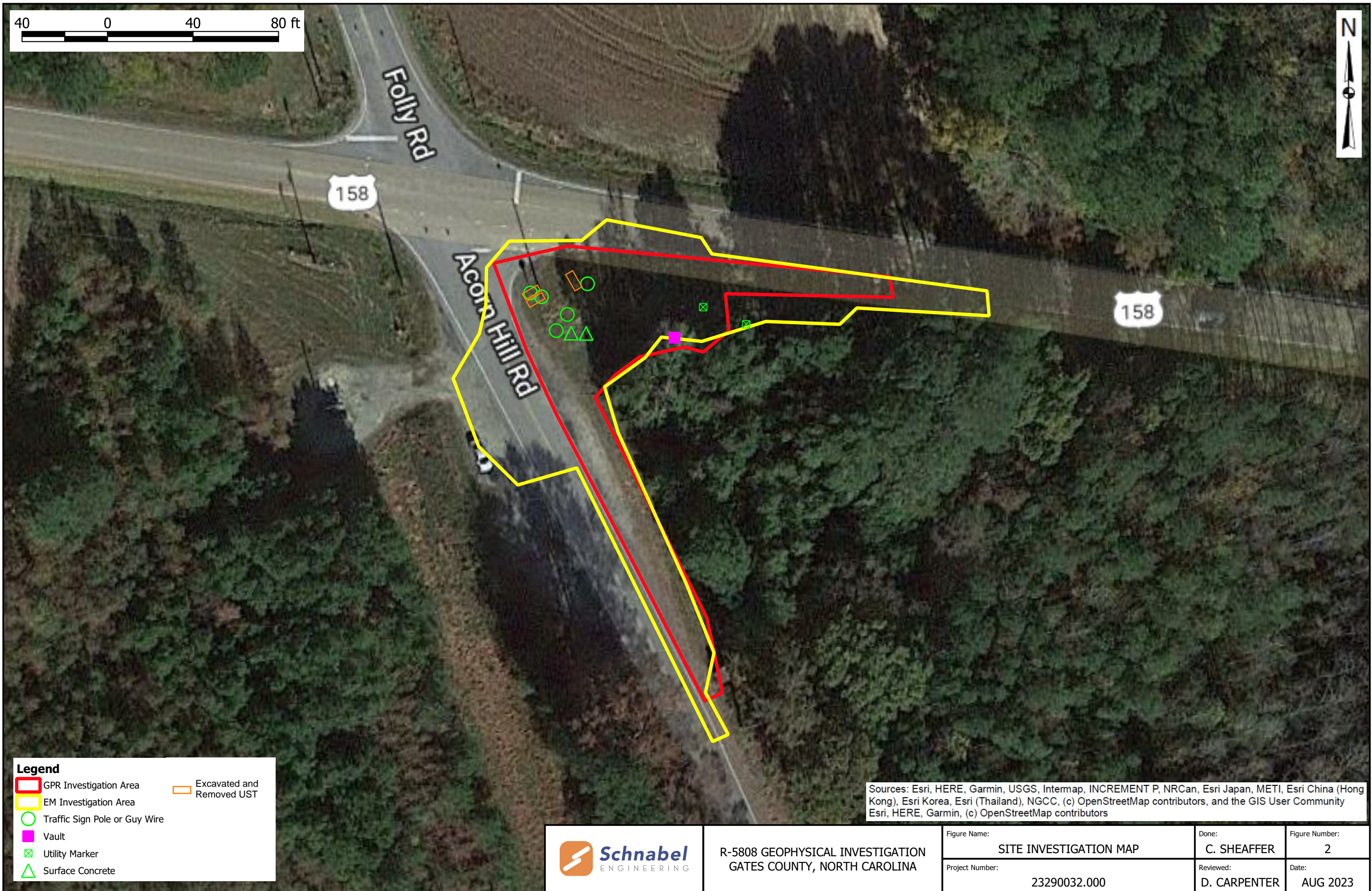
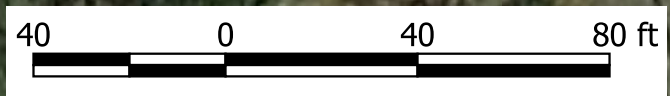
Physical or Mechanical Damage: use for all types of physical or mechanical damage, except corrosion (e.g., puncture of tank or piping, loose fittings, broken components, and components that have changed dimension)

Corrosion: use when a metal tank, piping, or other component has a release due to corrosion (e.g., for steel, corrosion takes the form of rust)

Installation Problem: use when the problem is determined to have occurred specifically because the UST system was not installed properly

Other: use this option when the cause is known but does not fit into one of the preceding categories (e.g., putting regulated substances into monitoring wells)

Unknown: use when the cause has not been determined



**Legend**

GPR Investigation Area	Excavated and Removed UST
EM Investigation Area	
Traffic Sign Pole or Guy Wire	
Vault	
Utility Marker	
Surface Concrete	

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community  
 Esri, HERE, Garmin, (c) OpenStreetMap contributors

	<b>R-5808 GEOPHYSICAL INVESTIGATION</b> <b>GATES COUNTY, NORTH CAROLINA</b>	Figure Name:	Done:	Figure Number:
		Project Number:	Reviewed:	Date:
		SITE INVESTIGATION MAP	C. SHEAFFER	2
		23290032.000	D. CARPENTER	AUG 2023

Revised with approximate UST locations; L. Kowalczyk 11/03/2023

# APPENDIX B

## SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP)



## Health and Safety Plan

UST Closure and Soil Excavation  
Sunbury, NC  
Project No. 23290032.001

October 13<sup>th</sup>, 2023

## INTRODUCTION

Schnabel Engineering, Inc. strives to maintain a safe and healthy work environment, benefitting its employees, clients and the general public. The purpose of this plan is to address specific hazards that may be encountered during Schnabel's UST closure and removal and subsequent soil excavation at the corner of US Highway 158 and Acorn Hill Road in Sunbury, NC 27979. This site – specific plan acts as a companion document to the Schnabel Safety First Manual, available to all employees on the Schnabel intranet. **ALL EMPLOYEES ARE GIVEN STOP WORK AUTHORITY.** All employees and contractors have the authority to stop any task or operation where concerns or questions regarding the control of health and safety risks exist. It is the responsibility of all employees on the site to stop work at any time to protect their respective safety and health, the safety and health of everyone around them, and the environment. No work will resume until all issues and concerns have been adequately addressed. Any form of retribution or intimidation directed at any individual or company for exercising their authority as outlined will not be tolerated.

Unsafe or unhealthy work conditions; practices or procedures shall be corrected in a timely manner based on the severity of the hazards. Hazards shall be corrected according to the following procedures:

- When observed or discovered;
- When an imminent hazard exists which cannot be immediately abated without endangering employees or property, we will remove all exposed workers from the area except those necessary to correct the existing condition. Workers necessary to correct the hazardous condition shall be provided with the necessary protection; and,
- All such actions taken and dates they are completed shall be documented on the appropriate forms.

## **BEFORE LEAVING**

Convey the itinerary to the Project Manager and Program Manager. Include locations, arrival and departure dates and times. Ensure the office has contact information including name and phone number of person to contact in case of emergency. Ensure the Project Manager has a list of activities to be conducted during field investigations. Discuss the conditions of the project site and any potential safety concerns, logistics, site-specific information that might help the inspection, etc.



## **EMERGENCIES**

The following are emergency contact numbers in case of an on-site accident:

Title	Name	Number
Program Manager	Jake Wessell, PE	910 617-5350
Project Manager	Lisa Kowalczyk	276 245-7110
Project Manager		803 626-2910
Schnabel Field	Quinton Hill	603-657-4875
Schnabel Field		
Corporate EHS	Todd Ramkey	804 402-0664
Emergency Services		911
Urgent Care Facility	Sentara Albemarle Medical Center	252-384-4833

Emergency situations can be characterized as fire, explosion, environmental release, accident or injury to field personnel. The Project Manager will be notified immediately in the event of an incident. In the event of an emergency situation, all personnel will evacuate and assemble at a determined safe zone. Local emergency services shall be contacted as soon as possible. In the case of a life-threatening accident, emergency first aid may be applied on site as deemed appropriate. Basic emergency and first aid equipment will be provided to staff, including first aid kits and portable fire extinguishers.

### **Hospital / Emergency Room for the current Work Location:**

1.	Head east on US-158 toward Orchard St.	15.5 mi.
2.	Turn right onto US-158 E/Hwy 17 S	2.6 mil
3.	Continue onto US-17 BYP S (signs for Hertford/Edenton)	187 ft
4.	Use the right 2 lanes to take the ramp to US-158E/Hwy 17 S/N Road St.	0.9 mi
5.	Continue onto US-158 E/ Hwy 17 S/N Road St.	6.1 mi
6.	Turn left onto Medical Dr.	79 ft
7.	Arrive at Sentara Albermarle Medical Center, 110 Medical Dr. #1, Elizabeth City, NC 27909	

## **PERSONAL PROTECTIVE EQUIPMENT**

Personal Protective Equipment (PPE) shall be provided to all employees free of charge. ANSI-approved hardhats, safety glasses, and steel-toe work boots are required at all times on the jobsite. Additional PPE may be required depending on the task or scenario and potential requirements will be reviewed by the On-Site Safety Representative. The safety equipment provided shall be used for employee protection and must be regularly inspected before use. Safety equipment showing signs of mildew, broken fibers, deterioration, excessive wear or

damage which could affect its strength shall be removed from service and destroyed. It is reasonably anticipated equipment may become wet during work activities on this project, and they must be thoroughly dried before storing. Storage shall be in a dry location away from caustics or corrosives.

The purpose of PPE is to provide a barrier, which will shield or isolate individuals from the physical hazards that may be encountered during work activities. The minimum level of PPE to be worn for this project is Level D. The safety equipment shall be used for employee protection and must be regularly inspected before use. Manufacturers' procedures for donning and removing PPE will be followed in order to ensure its integrity and reduce or eliminate contamination of equipment or work zones.

Additional PPE will be stored and maintained on site. Employees are responsible for inspecting PPE prior to use and after work. All equipment showing signs of wear, fatigue or damage shall be removed from service and discarded. The SSHO, along with consultation from Corporate Health and Safety will determine appropriate levels of protective gear to be worn in the event additional hazardous materials are encountered:

**High Visibility Safety Vest** – Workers on site must wear high visibility yellow/lime vest with reflective tape that meets ANSI/ISEA 107 2004, Class II requirements.

**Hardhat** – All team members, subcontractors and visitors on site must wear an ANSI Z89.1 hardhat on the work site 100% of the time. Nothing should come between the user's head and the hard hat's cradle/harness (such as a ball cap). Hard hats should be regularly assessed for efficiency, and discarded if cracked, split, or any other way compromised, including the cradle/harness. Visitors must wear hard hats while on site. Western style hardhats, aluminum hardhats, baseball caps under the hardhats, and bump caps are prohibited on the project site. The brim/bill must always face forward.

**Eye Protection** – Eye protection is required at all times while on the project site. Safety glasses must meet ANSI Z 87.1 requirements. Safety glasses must fit the user snugly and not interfere with movements of the user, be durable, capable of being disinfected and easily cleaned, and should be kept in good condition. Arrangements shall be made prior to commencement of work for field staff that use corrective lenses or contact lenses. ANSI-Z87.1 approved prescription glasses may be used on site.

**Protective Footwear** – ANSI Z 41.1 approved safety boots are required for all employees, subcontractors and visitors on site. Boots must have steel-toes or caps, and must have soles that will prevent slipping on wet, loose or smooth surfaces. Soles should also prevent penetration by sharp objects.

**Hand Protection** – Various types of protective gloves are available and should be selected based on the task at hand. Cloth gloves can be used to provide protection from slivers and abrasions. Leather gloves provide protection from sparks, some heat and from rough materials. Nitrile gloves provide protection from water, solvents and various chemicals. During specimen collection, cuffed nitrile or rubber gloves must be worn to prevent dermal hazards.

With each type of hand protection there are limitations that should be understood. Individual preference of size and style must be considered, but the selection of the most appropriate type of gloves shall be completed for each job performed. There are limitations to consider, including

gloves with large cuffs or material that could become caught near rotating or pinching equipment. All gloves should fit appropriately and should be easily removed.

**Hearing Protection** – Hearing protection is required whenever ambient noise levels equal or exceed 85 decibels (dBs). For instance, operators of equipment with open cabs, including cabs with open doors or windows, employees working around motorized equipment, or pneumatic/hydraulic tools should don hearing protection. All protective devices shall have a noise reduction rating. Noise blocking earmuffs, attached to hard hats, are the recommended method of hearing protection while working in high noise areas. Disposable or multi-use earplugs can be worn in areas when communication between staff is necessary or frequent.

**Clothing Requirements** – All personnel on site must wear clothing appropriate for the task. Minimally, tee shirt with 4 inch sleeves and full length pants are required. Clothing must be in good condition, with no loose or hanging parts that could become entangled in tools or machinery. Long shirt tails should be tucked. Clothing with draw strings at the waist or neck is prohibited.

**Specialized Protection** – Additional body and face protection will be provided should conditions require (e.g., chaps for chainsaw, faceshield).

The Project Manager or SSHO will determine appropriate levels of protective gear to be worn in the event hazardous materials are encountered. Manufacturers' procedures for donning and removing PPE will be followed in order to ensure its integrity and reduce or eliminate contamination of equipment or work zones. PPE will be stored and maintained in Schnabel Engineering's possession. Employees are responsible for inspecting PPE prior to use and after work. All equipment showing signs of wear, fatigue or damage shall be removed from service and discarded.

## **VEHICLES ON PROJECT SITE**

Motor vehicles on site can expose team members to hazardous situations, as well as the general public and nearby regular traffic. All established NCDOT and local traffic laws shall be obeyed implicitly. Team members tasked with driving must be qualified and have a valid driver's license on their person at all times. All vehicles used on the project must be properly registered and insured (with proof) and must be maintained in a safe operable condition in accordance with applicable statutes. Vehicles must be equipped with jack, lug wrench, spare tire, safety belts, first aid kit, and fire extinguisher. Vehicles used to transport team members must have firmly secured seats adequate for the number of passengers. Seatbelt use is required at all times on the project. Prior to operation, the driver should inspect the vehicle routinely to ensure proper condition. Drivers are prohibited from mobile phone use during operation, unless using a hands-free system.

## **CHEMICAL SAFETY**

Potential for exposure exists when sampling, excavating or stockpiling contaminated soil. Excavation and stockpiling activities may result in airborne dust that must be controlled to prevent off-site migration. Work activities will take place in the exclusion zone. A contamination reduction zone (CRZ) will be designated for personnel and equipment decontamination; a support zone (SZ) will be designated for "clean activities." The support zone will be assessed by

observation during site operations where the potential exists for contact with contaminants. Measures must be taken to prevent an uncontrolled release or exposure to vapor, liquid or solid contaminants by workers and/or the general public.

Possible routes of exposure for contaminants on site include:

**Inhalation** - An inhalation exposure to volatile organic compounds through respiratory exposure to dusts and soil particles, fumes, mists, gases, vapors or smoke.

**Contact with Skin and Eyes** – Contaminated soil, groundwater and surface water may come into contact with skin and eyes during work activities. Personal protective equipment as well as utilizing good hygiene/work practices will minimize the potential of exposure by this route.

**Ingestion** - Ingestion of contaminated materials may occur as a result of a hand-to-mouth contact (eating, drinking, smoking) in contaminated areas or prior to appropriate personal decontamination. Frequent and thorough washing of hands and face, prohibition of eating and smoking in the work area, proper use of work clothing and personal decontamination will control the potential for ingestion of contaminated materials.

The project involves inspection, possible excavation and sampling of contaminated soil. Potential hazards posed by acute exposure to contaminants within the soil and groundwater include mucous membrane irritation and skin irritation. Chronic exposure may result in central nervous system effects, GI effects, and reproductive system effects.

## **WEATHER**

When there are warnings or indications of impending severe weather (heavy rains, thunderstorms, damaging winds, tornados, hurricanes, floods, lightning, etc.), weather conditions shall be monitored using a weather station that is part of the National Oceanic and Atmospheric Administration (NOAA) or similar notification system. Appropriate precautions shall be taken to protect personnel and property from the effects of the severe weather. In areas with frequent inclement weather, pre-task discussion shall include the following information specific to the particular work area:

- Training on severe weather precautions and preparations; and
- Identify areas of retreat, preferably substantial structures.

If severe weather occurs that may affect the safety of site workers, the Project Manager or SSHO shall stop affected field operations. The Project Manager or SSHO will resume operations when weather conditions improve.

Various weather conditions are anticipated on this project. During warmer periods, heat stress may be possible. The Project Manager or SSHO will ensure that heat stress programs are implemented and that adequate rest breaks and liquid (i.e., water, Gatorade) consumption occur. Proposed work/rest schedules will be dependent upon the weather conditions encountered and the level of personal protective equipment being utilized by on-site personnel. The Project Manager or SSHO will establish work/rest schedules prior to the commencement of the project tasks and will adjust as needed.

During colder periods, all team members will be aware of weather conditions and will take cover if potentially hazardous weather conditions develop. Dress appropriately for given conditions, including the use of thermal undergarments, layering and water/wind proof outer shells. Be prepared for the possibility of becoming stuck or stranded, particularly if driving on infrequently traveled roads. When riding in a car, be sure to have the appropriate winter clothing and supplies.

## **BRUSH CUTTING / MACHETE USAGE**

It is not anticipated that work on this site will require staff to clear brush. However, if brush cutting is necessary, machetes and high-powered brush cutters will be used to clear when surveying new routes through dense vegetation (typically less than one inch in diameter). Prior to using a machete, ensure the blade is sharpened. The machete shall be kept in a scabbard when not in use. Use extreme care when working around others, allow for adequate clearance of both the swing radius of the blade and falling cuttings. Level D PPE shall be worn including safety glasses.

Dense vegetation will be cleared with brushcutters. Improper use of any brushcutter can cause serious or fatal injury. Read, understand and follow all safety instructions in the instruction manual. Operators shall don hardhats, ear muffs or ear plugs, eye and face protection, and steel toe boots. Work gloves shall be used to protect the hands from debris and vibration. The harness attached to the brushcutter shall be donned by the operator and properly fastened. Upon starting the brushcutter, do not allow others in the work area. The rotating cutting attachment may fling foreign objects directly or by ricochet a great distance. It is imperative that all bystanders or co-workers are at least 50 feet away from the machine. Any co-workers in the restricted area must wear protective equipment. The use of hearing protection will compromise communication, and as such the operator must maintain situational awareness. To cut wild growth, keep cutting mechanism below waist height at all times. The higher the blade, the greater the risk of loss of control. The potential for “kickback” always exists, consult the Owner’s Manual to select the proper blade for the work scenario.

## **SLIPS AND FALLS**

As in any work area, it is expected that the ground may be uneven, the surface may be unreliable due to surface unevenness, debris may be present, wet or muddy areas may exist and some work may be performed on poly sheeting. Therefore, the potential for slips, trips and falls is present. Tools, equipment and supplies must be stored in a suitable location at the site so they can be safely accessed. All work areas shall be reasonably clear of obstructions, grease, mud or any other materials likely to cause a slip, trip or fall.

Special care must be taken around areas of water. A clearly designated area or zone of concern should be established around water hazards. Staff shall watch for hazards while they are walking and not carry objects that obstruct their vision. Staff shall practice proper housekeeping to keep areas free of obstacles which can cause slips and trips in work and walking areas. These areas should never be obstructed by objects of any kind. Walking and working surfaces greater than 4 feet in height must have standard guardrails for protection. When accessing ladders or equipment, always face and maintain 3 points of contact at all times. Keep ladders and equipment free of debris by cleaning boots of mud or dirt when accessing.

## **BIOLOGICAL HAZARDS**

The locations of the project sites are such that biological hazards may be encountered. Biological hazards that may be present include, but are not limited to:

- Ticks and insects;
- Plants such as poison ivy, oak, and sumac; and
- Small animals and snakes, especially near standing water.

All employees with the potential to contact the flora and fauna indicated above should be cautious when working in areas that may support these types of hazards. The SSHO will assess suspect areas and warn workers when there is a possibility of contact with these items. Insect repellent should be worn if allowed per project, and all staff shall dress in light colored clothing and tape seams in heavily infested areas. A thorough post-job inspection should be conducted.

It is recommended that personnel check themselves when in areas that could harbor deer ticks, wear light color clothing and visually check when coming from wooded or vegetated areas. The tick can be removed by pulling gently at the head with tweezers. The affected area should then be disinfected with an antiseptic wipe. The employee will be offered the option for medical treatment by a physician, which typically involves prophylactic antibiotics. If personnel feel sick or have signs similar to those above, they should notify the Project Manager or SSHO immediately.

The potential for contact with poisonous plants exists when performing field work in undeveloped and wooded areas. Poison ivy, sumac, and oak may be present on site. Poison ivy can be found as vines on tree trunks or as upright bushes. Poison ivy consists of three leaflets with notched edges.

Prophylactic application of Tecnu may prevent the occurrence of exposure symptoms. Post exposure over the counter products are available and should be identified at the local pharmacist. Susceptible individuals should be identified by the SSHO. Contact with poison ivy, sumac, or oak may lead to a skin rash, characterized by reddened, itchy, blistering skin which needs first aid treatment. If contact occurs with one of these plants, immediately wash skin thoroughly with soap and water, taking care not to touch the face or other body parts.

Snakes could be present near waterways, shores, and mobilization areas. Field personnel should watch where they place their hands and feet when removing debris. If possible, don't place fingers under debris you are moving. Wear heavy gloves. If you see a snake, step back and allow it to proceed. Wear boots at least 10 inches high. Watch for snakes sunning on fallen trees, limbs or other debris. A snake's striking distance is about 1/2 the total length of the snake. If bitten, note the color and shape of the snake's head to help with treatment. Keep bite victims still and calm to slow the spread of venom in case the snake is poisonous. Seek medical attention as soon as possible. Do not cut the wound or attempt to suck out the venom. Apply first aid by laying the person down so that the bite is below the level of the heart, and cover the bite with a clean, dry dressing.

## **HEAT ILLNESS PREVENTION**

Extreme temperatures are possible on this project. Prepare accordingly and pay special attention to weather conditions. At the site:

- Wear light-colored, breathable clothing such as cotton, and liberally apply sunscreen.
- Gradually build up to heavy work.
- Schedule heavy work during the coolest parts of day.
- Take breaks when doing heavier work, and in high heat and humidity. Look for shade or cooler areas.
- Drink water frequently. Drink enough water that you never become thirsty.
- Be aware that protective clothing or personal protective equipment may increase the risk of heat-related illnesses.

Watch for symptoms of heat-related injury/illness:

**Heat Stroke** - Heat stroke is the most serious heat-related disorder. It occurs when the body becomes unable to control its temperature: the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. When heat stroke occurs, the body temperature can rise to 106 degrees Fahrenheit or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not given.

Symptoms of heat stroke include:

- Hot, dry skin or profuse sweating
- Hallucinations
- Chills
- Throbbing headache
- High body temperature
- Confusion/dizziness
- Slurred speech

### **First Aid**

- Call 911 and notify their supervisor.
- Move the sick worker to a cool shaded area.
- Cool the worker using methods such as:
  - Soaking their clothes with water.
  - Spraying, sponging, or showering them with water.
  - Fanning their body.

**Heat Exhaustion** - Heat exhaustion is the body's response to an excessive loss of the water and salt, usually through excessive sweating. Workers most prone to heat exhaustion are those that are elderly, have high blood pressure, and those working in a hot environment.

Symptoms of Heat Exhaustion Include:

- Heavy sweating
- Extreme weakness or fatigue
- Dizziness, confusion
- Nausea
- Clammy, moist skin
- Pale or flushed complexion
- Muscle cramps

- Slightly elevated body temperature
- Fast and shallow breathing

#### **First Aid**

- Have them rest in a cool, shaded or air-conditioned area.
- Have them drink plenty of water or other cool, nonalcoholic beverages.
- Have them take a cool shower, bath, or sponge bath.

**Heat Cramps** - Heat cramps usually affect workers who sweat a lot during strenuous activity. This sweating depletes the body's salt and moisture levels. Low salt levels in muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion. Symptoms include muscle pain or spasms usually in the abdomen, arms, or legs.

#### **First Aid**

- Stop all activity, and sit in a cool place.
- Drink clear juice or a sports beverage.
- Do not return to strenuous work for a few hours after the cramps subside .
- Seek medical attention if any of the following apply:
  - The worker has heart problems.
  - The worker is on a low-sodium diet.
  - The cramps do not subside within one hour.

## **ENVIRONMENTAL CONTAMINANTS**

Initial air monitoring shall be performed outside the work zone to establish baseline level for chemicals of concern. Perimeter air monitoring shall be performed downwind of soil disturbance activities. Employees likely to have the highest exposure include but are not limited to those involved in excavation and manual digging under or around suspected underground storage tanks, sampling soils, stockpiling of excavated soil, and removal of soil from the site for analysis. Representative air monitoring may also be conducted at the discretion of the Project Manager to identify any areas where site activities may result in significant dust generation. Periodic monitoring shall be conducted when significant dust generation has occurred or when there is indication that exposures may have risen over permissible exposure limits (PEL). Real-time monitoring in work zone areas will be conducted under the following conditions:

Prior to the beginning of any new job task;  
Prior to the beginning of a job task in any new area;  
Periodically for a long-term job task;  
During an activity which would have the highest probability of worker;  
Visible presence of contamination;  
Discretionary decision of the Project Manager or HSO.

### **Air Monitoring Instrumentation & Response**

Photo-ionization Detectors and/or Multi-Gas meters may be used on site to determine the presence of volatile hydrocarbons. Affected staff will be trained as to specific operation of the instruments and know the exposure levels at which protective actions are required. All instruments must be properly calibrated. Background readings shall be taken outside the work zone prior to commencement of work.



Action Level (active construction work area)	Level of Protection	Action to be Taken
Background (BKGD) to 5 units above BKGD – PID measurement	Construction work clothing	Continue working using Good Work practices.
Greater than 5 units above BKGD – PID measurement for greater than 5 minutes duration.	Level C PPE	Personnel must be in Level C PPE. Ventilate to reduce level. Check perimeter.
Visible dust or downwind dust greater than 1 mg/m <sup>3</sup> above upwind dust	Level C PPE	Use dust control (water, plastic sheeting)
Greater than 1 unit above BKGD continuously for 15 minutes.	Construction work clothing	Stop work and take measures to reduce vapors (plastic sheeting, ventilation)

## **Utilities and Preparing the Work Area**

- Before digging the work area must be as clear and level as possible.
- No digging shall begin until the location of all utilities above and below ground are known. Utilities should be confirmed on the boring/drilling location plans.
- Ensure boom clearance on the excavator.
- Assume all wires are live.
- Excavation should not be considered if there are power lines within 10 feet of the boom.
- Remain outside the potential swing radius if possible. Ensure a safe distance in the event a boom or rig tips over or flying debris.
- When checking spoils with PID, ensure clearance with the boom or visually communicate with the operator.
- Establish hand signals before operation.

## **Excavation**

- Before starting the engine, the rig should be inspected. Ensure the brakes are set, the rig has been properly balanced and stabilized, and all other controls are in place.
- Hearing protection should be used.
- Ensure proper exhaust ventilation, especially around a PID taking measurements.
- Entry into excavations deeper than 5ft is not permitted without approved shoring techniques.
- Entry into the excavation is not anticipated by Schnabel Engineering.

## **Spoils**

- Personal Protective Equipment is required at all times.
- Appropriate levels of PPE should be determined at the initial site survey.
- At a minimum, Level D is required.
- Any cores suspected of containing contaminants must be handled wearing chemical resistant gear.
- A Material Safety Data Sheet for gasoline is attached to this document for review.
- The spoil shall be constantly monitored for contamination. All employees shall evacuate the immediate area should the VOC level reach 500 ppm.

## **TRAINING & MEDICAL MONITORING**

All personnel that meet the definition as outlined in 29 CFR 1910.120(f)(1)(i) that are engaged in on-site activities on this project must have baseline physical examinations and be participants in their employer's medical surveillance program. This program must meet the requirements of 29 CFR 1910.120(f). Medical procedures beyond baseline physical and routine medical surveillance are not planned for this project. Medical records for employees are maintained at the corporate office and by the company's contracted medical group, **WorkCare**. Medical records are maintained in accordance with the record keeping requirements of 29 CFR 1910.20. Additionally, any employee required to wear a respirator for Level C PPE or above must be approved by a licensed health care provider for respirator use as defined in the OSHA Respiratory Standard 29 CFR 1910.134. In the unlikely event of an exposure event occurring, the affected employee will be sent for any evaluation and/or treatment at a designated health care facility. Initial site briefing will be provided on-site by the Project Manager or his /her designee for all Project Personnel. Site training will also be provided on an as needed basis to specifically address the activities, procedures, monitoring, and equipment for the site operations. Such training will include site and facility layout, hazards, and emergency services at the site, and will detail all provisions contained within this HASP.

## **SECURITY**

Prior to mobilization, and if applicable, ensure that entry rights to residential properties were secured. Take heed when accessing the properties, and wear Schnabel-logged gear. Observe all potential work areas prior to accessing for signs of dogs or other aggressive pets. Ensure that other members of staff know your work locations and communicate regularly. All vehicles must have adhesive or magnetic logos on each side of vehicles. Address specific concerns to the project manager and/or the Client POC. Do not engage with aggressive neighbors, remain polite and calm and if threatened, cease operations and leave the scene immediately to contact the Schnabel Project Manager or Client liaison.

This document is an augmentation of the Schnabel Engineering Safety First Program found on the company's intranet. For information regarding this operation or any other associated with Schnabel Engineering field services, access the company intranet site, SLICE/Safety, the Project Manager or contact the H&S Officer at (804) 264-3222.

# APPENDIX C

## CERTIFICATE OF UST DISPOSAL

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## TANK DISPOSAL CERTIFICATE

Tank Owner: NC Department of Transportation

Site Address: US Highway 158 and Acorn Hill Road  
Sunbury, NC

Description of Tanks:

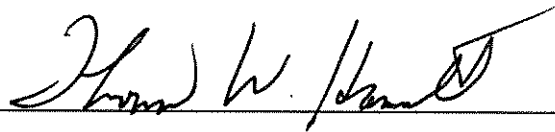
<u>Tank Number</u>	<u>Size of Tank</u>	<u>Contents</u>
1	1,000 Gallons	Gasoline
2	550 Gallons	Gasoline
3	550 Gallons	Gasoline

Transporter: Evo Corporation

EC Project #: 102326

Disposal Certification:

Evo Corporation does hereby certify that the above named storage tanks were transported to Morgan's Corner Recycling, 1576 Millpond Road, Elizabeth City, NC for proper disposal and recycling.



Signature

Thomas W. Hammett  
CEO  
Evo Corporation

# APPENDIX D

## SOIL, WATER, AND SLUDGE DISPOSAL MANIFESTS



1703 Vargrave Street  
Winston-Salem, NC 27107.  
ph 336-725-5844  
fax 336-725-6244

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## CERTIFICATE OF DISPOSAL

Evo Corporation does hereby certify that 1,235 gallons of non-hazardous contaminated water received on 10/17/2023 from:

Generator: NC Department of Transportation

Originating at: US Highway 158 and Acorn Hill Road  
Sunbury, NC

EC Waste ID #: 102326

has been disposed of by Evo Corporation in a manner approved by the North Carolina Department of Environmental Quality.

A handwritten signature in black ink, appearing to read "Thomas W. Hammett", written over a horizontal line.

Signature

Thomas W. Hammett  
CEO  
Evo Corporation

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1703 Vargrave Street  
Winston-Salem, NC 27107  
ph 336-725-5844  
fax 336-725-6244

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## CERTIFICATE OF DISPOSAL

Evo Corporation does hereby certify that 3.29 tons of non-hazardous contaminated material received on 10/19/2023 from:

Generator: NC Department of Transportation

Originating at: US Highway 158 and Acorn Hill Road  
Sunbury, NC

EC Waste ID #: 102326

has been disposed of by Evo Corporation in a manner approved by the North Carolina Department of Environmental Quality.

A handwritten signature in black ink, appearing to read "Thomas W. Hammett", is written over a horizontal line.

Signature

Thomas W. Hammett  
CEO  
Evo Corporation

# EVO CORPORATION

1703 Vargrave Street, Winston-Salem, NC 27107

www.evocorp.net

## NON-HAZARDOUS MATERIALS MANIFEST

Load #

Manifest No. 20761

### GENERATOR INFORMATION

Generator: NCDOT  
Site Address: US Hwy 158 & Acorn Hill Road  
City/State: Sunbury, NC

Phone: 919-707-6871  
Contact: Craig Haden

### MATERIAL DESCRIPTION / QUANTITY / WEIGHT

Gross Weight (lbs): \_\_\_\_\_  
Empty Weight (lbs): \_\_\_\_\_  
Net Weight (lbs): \_\_\_\_\_

Material: Water  
Contaminant: Gasoline/Diesel

Quantity

1235

Tons Drums Pails Sacs Yards Other: \_\_\_\_\_

### TRANSPORTER INFORMATION

Transporter: Evo Corporation  
Truck #: \_\_\_\_\_

Phone: 336-725-5844  
Contact: Tony Disher

As the transporter, I certify that the materials described above being shipped under this non-hazardous materials manifest are properly classified, packaged, labeled, secured and are in proper condition for transport in commerce under the applicable regulations governing transportation, and I hereby receive this material for delivery to the facility designate.

Driver Signature: [Signature]

Date: 10-17-23

### FACILITY INFORMATION

**Evo Corporation**  
**1703 Vargrave Street**  
**Winston-Salem NC 27107**

Evo Project #: 102326  
Phone: 336-725-5844  
Contact: Tony Disher

I certify that the carrier has delivered the materials described above to this facility, and I hereby accept this material for treatment and/or disposal in a manner that has been authorized by the State of North Carolina.

Facility Signature: [Signature]

Date: 10/17/23

White/Facility

Canary/Invoice

Pink/Carrier



# EVO CORPORATION

1703 Vargrave Street, Winston-Salem, NC 27107

www.evocorp.net

## NON-HAZARDOUS MATERIALS MANIFEST

Load #

Manifest No. 18498

### GENERATOR INFORMATION

Generator: NCDOT Phone: 919-707-6871  
Site Address: US Hwy 158 & Acorn Hill Road  
City/State: Sunbury, NC Contact: Craig Haden

### MATERIAL DESCRIPTION / QUANTITY / WEIGHT

Gross Weight (lbs): 34220 Material: Soil  
Empty Weight (lbs): 27640 Contaminant: Gasoline/Diesel  
Net Weight (lbs): 6580

Quantity

3.29

Tons

Drums

Pails

Sacs

Yards

Other: \_\_\_\_\_

### TRANSPORTER INFORMATION

Transporter: Evo Corporation Phone: 336-725-5844  
Truck #: 104 Contact: Tony Disher

As the transporter, I certify that the materials described above being shipped under this non-hazardous materials manifest are properly classified, packaged, labeled, secured and are in proper condition for transport in commerce under the applicable regulations governing transportation, and I hereby receive this material for delivery to the facility designate.

Driver Signature: 

Date: 10-19-23

### FACILITY INFORMATION

**Triangle Area Earth Corporation**

**336 Denton lane**

**Zebulon, NC 27597**

Evo Project #: 102326

Phone: 919-980-6200

Contact: Laura Buchanan

I certify that the carrier has delivered the materials described above to this facility, and I hereby accept this material for treatment and/or disposal in a manner that has been authorized by the State of North Carolina.

Facility Signature: 

Date: 10-19-23

White/Facility

Canary/Invoice

Pink/Carrier

**Foss Recycling Winston Salem**  
3459 Thomasville Road  
Winston-Salem, NC 27107  
Phone : (336) 788-9122

**SCALE TICKET**



PAGE : 1

DISHER TONY  
EVO TRUCKING  
WINSTON SALEM NC

Ticket No. : 17021973    Scale: 88  
In : 19 Oct 2023 1:28 pm  
Supplier-# : DIS040  
Plate No. : EVO  
Vehicle : TRUCK 104  
Served By : rgonzales

Material	Gross	Tare	Wt Adj	Net Weight
CATCH WEIGHTS	34,220			34,220 LBS

Comments: paid \$5

NORTH CAROLINA  
PUBLIC WEIGHMASTER  
LICENSE EXPIRES JUNE 30, 2024  
CHASE ANDREW TILLER 46523  
*[Signature]*  
INVALID UNLESS SIGNED

Mission: Excellence in Recycling  
Core Values: Honesty/Integrity,  
Customer Experience, Hardworking,  
Accountability  
Asperational Value: Glorify God By

18498

# APPENDIX E LABORATORY ANALYTICAL RESULTS AND CHAIN OF CUSTODY



October 27, 2023

Lisa Kowalczyk  
Schnabel Engineering  
1133 Military Cutoff Road  
Suite 210  
Wilmington, NC 28405

RE: Project: 23290032.001  
Pace Project No.: 92694374

Dear Lisa Kowalczyk:

Enclosed are the analytical results for sample(s) received by the laboratory on October 19, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Charlotte

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Taylor M Cannon  
taylor.cannon@pacelabs.com  
704-977-0943  
Project Manager

Enclosures

cc: Jacob Wessell, Schnabel Engineering



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## CERTIFICATIONS

Project: 23290032.001  
Pace Project No.: 92694374

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### **Pace Analytical Services Charlotte**

South Carolina Laboratory ID: 99006  
9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001  
South Carolina Drinking Water Cert. #: 99006003  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Louisiana DoH Drinking Water #: LA029  
Virginia/VELAP Certification #: 460221

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 23290032.001

Pace Project No.: 92694374

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92694374001	T1-B1	EPA 8015C	HH	2	PASI-C
		EPA 8015C	TEG	2	PASI-C
		SW-846	KDF	1	PASI-C
92694374002	T1-B2	EPA 8015C	HH	2	PASI-C
		EPA 8015C	TEG	2	PASI-C
		SW-846	KDF	1	PASI-C
92694374003	T2-B1	EPA 8015C	HH	2	PASI-C
		EPA 8015C	TEG	2	PASI-C
		SW-846	KDF	1	PASI-C
92694374004	T2-B2	EPA 8015C	HH	2	PASI-C
		EPA 8015C	TEG	2	PASI-C
		SW-846	KDF	1	PASI-C
92694374005	T3-B1	EPA 8015C	HH	2	PASI-C
		EPA 8015C	TEG	2	PASI-C
		SW-846	KDF	1	PASI-C
92694374006	T3-B2	EPA 8015C	HH	2	PASI-C
		EPA 8015C	TEG	2	PASI-C
		SW-846	KDF	1	PASI-C
92694374007	T1-P1	EPA 8015C	HH	2	PASI-C
		EPA 8015C	TEG	2	PASI-C
		SW-846	KDF	1	PASI-C

PASI-C = Pace Analytical Services - Charlotte

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 23290032.001

Pace Project No.: 92694374

**Sample: T1-B1**      **Lab ID: 92694374001**      Collected: 10/17/23 14:15      Received: 10/19/23 09:03      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015C    Preparation Method: EPA 3546 Pace Analytical Services - Charlotte						
Diesel Range Organics(C10-C28)	<b>39.4</b>	mg/kg	6.1	1	10/25/23 13:40	10/26/23 11:05		
<b>Surrogates</b>								
n-Pentacosane (S)	89	%	10-133	1	10/25/23 13:40	10/26/23 11:05	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015C    Preparation Method: EPA 5030B Pace Analytical Services - Charlotte						
Gas Range Organics (C6-C10)	<b>567</b>	mg/kg	9.4	1	10/23/23 14:34	10/24/23 00:05		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	178	%	66-130	1	10/23/23 14:34	10/24/23 00:05	460-00-4	S5
<b>Percent Moisture</b>		Analytical Method: SW-846 Pace Analytical Services - Charlotte						
Percent Moisture	<b>19.4</b>	%	0.10	1		10/22/23 19:06		N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 23290032.001

Pace Project No.: 92694374

Sample: T1-B2 Lab ID: 92694374002 Collected: 10/17/23 14:25 Received: 10/19/23 09:03 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015C Preparation Method: EPA 3546 Pace Analytical Services - Charlotte						
Diesel Range Organics(C10-C28)	<b>32.0</b>	mg/kg	6.7	1	10/25/23 13:40	10/26/23 11:21		D6
<b>Surrogates</b>								
n-Pentacosane (S)	82	%	10-133	1	10/25/23 13:40	10/26/23 11:21	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015C Preparation Method: EPA 5030B Pace Analytical Services - Charlotte						
Gas Range Organics (C6-C10)	<b>936</b>	mg/kg	30.7	4	10/24/23 12:02	10/25/23 05:21		D3
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	154	%	66-130	4	10/24/23 12:02	10/25/23 05:21	460-00-4	S2
<b>Percent Moisture</b>		Analytical Method: SW-846 Pace Analytical Services - Charlotte						
Percent Moisture	<b>24.6</b>	%	0.10	1		10/22/23 19:06		N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 23290032.001

Pace Project No.: 92694374

**Sample: T2-B1**      **Lab ID: 92694374003**      Collected: 10/17/23 14:45      Received: 10/19/23 09:03      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015C    Preparation Method: EPA 3546 Pace Analytical Services - Charlotte						
Diesel Range Organics(C10-C28)	<b>21.0</b>	mg/kg	6.2	1	10/25/23 13:40	10/26/23 11:37		
<b>Surrogates</b>								
n-Pentacosane (S)	88	%	10-133	1	10/25/23 13:40	10/26/23 11:37	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015C    Preparation Method: EPA 5030B Pace Analytical Services - Charlotte						
Gas Range Organics (C6-C10)	<b>642</b>	mg/kg	31.5	4	10/24/23 12:02	10/25/23 05:47		D3
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	107	%	66-130	4	10/24/23 12:02	10/25/23 05:47	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SW-846 Pace Analytical Services - Charlotte						
Percent Moisture	<b>19.5</b>	%	0.10	1		10/22/23 19:06		N2

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### ANALYTICAL RESULTS

Project: 23290032.001

Pace Project No.: 92694374

**Sample: T2-B2**      **Lab ID: 92694374004**      Collected: 10/17/23 15:00      Received: 10/19/23 09:03      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015C    Preparation Method: EPA 3546 Pace Analytical Services - Charlotte						
Diesel Range Organics(C10-C28)	<b>18.1</b>	mg/kg	6.2	1	10/25/23 13:40	10/26/23 11:37		
<b>Surrogates</b>								
n-Pentacosane (S)	81	%	10-133	1	10/25/23 13:40	10/26/23 11:37	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015C    Preparation Method: EPA 5030B Pace Analytical Services - Charlotte						
Gas Range Organics (C6-C10)	<b>889</b>	mg/kg	25.2	2.5	10/24/23 12:02	10/25/23 04:55		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	117	%	66-130	2.5	10/24/23 12:02	10/25/23 04:55	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SW-846 Pace Analytical Services - Charlotte						
Percent Moisture	<b>20.8</b>	%	0.10	1		10/22/23 19:06		N2

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### ANALYTICAL RESULTS

Project: 23290032.001

Pace Project No.: 92694374

**Sample: T3-B1**      **Lab ID: 92694374005**      Collected: 10/17/23 15:10      Received: 10/19/23 09:03      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015C    Preparation Method: EPA 3546 Pace Analytical Services - Charlotte						
Diesel Range Organics(C10-C28)	<b>13.2</b>	mg/kg	6.2	1	10/25/23 13:40	10/26/23 11:52		
<b>Surrogates</b>								
n-Pentacosane (S)	90	%	10-133	1	10/25/23 13:40	10/26/23 11:52	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015C    Preparation Method: EPA 5030B Pace Analytical Services - Charlotte						
Gas Range Organics (C6-C10)	<b>661</b>	mg/kg	9.1	1	10/23/23 14:34	10/24/23 01:48		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	130	%	66-130	1	10/23/23 14:34	10/24/23 01:48	460-00-4	S5
<b>Percent Moisture</b>		Analytical Method: SW-846 Pace Analytical Services - Charlotte						
Percent Moisture	<b>20.2</b>	%	0.10	1		10/22/23 19:06		N2

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### ANALYTICAL RESULTS

Project: 23290032.001

Pace Project No.: 92694374

**Sample: T3-B2**      **Lab ID: 92694374006**      Collected: 10/17/23 15:30      Received: 10/19/23 09:03      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015C    Preparation Method: EPA 3546 Pace Analytical Services - Charlotte						
Diesel Range Organics(C10-C28)	<b>21.0</b>	mg/kg	6.4	1	10/25/23 13:40	10/26/23 11:52		
<b>Surrogates</b>								
n-Pentacosane (S)	86	%	10-133	1	10/25/23 13:40	10/26/23 11:52	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015C    Preparation Method: EPA 5030B Pace Analytical Services - Charlotte						
Gas Range Organics (C6-C10)	<b>1640</b>	mg/kg	31.8	4	10/24/23 12:02	10/25/23 06:12		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	126	%	66-130	4	10/24/23 12:02	10/25/23 06:12	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SW-846 Pace Analytical Services - Charlotte						
Percent Moisture	<b>21.3</b>	%	0.10	1		10/22/23 19:07		N2

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### ANALYTICAL RESULTS

Project: 23290032.001

Pace Project No.: 92694374

**Sample: T1-P1**      **Lab ID: 92694374007**      Collected: 10/17/23 15:40      Received: 10/19/23 09:03      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015C    Preparation Method: EPA 3546 Pace Analytical Services - Charlotte						
Diesel Range Organics(C10-C28)	ND	mg/kg	6.5	1	10/25/23 13:40	10/26/23 12:08		
<b>Surrogates</b>								
n-Pentacosane (S)	69	%	10-133	1	10/25/23 13:40	10/26/23 12:08	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015C    Preparation Method: EPA 5030B Pace Analytical Services - Charlotte						
Gas Range Organics (C6-C10)	ND	mg/kg	9.5	1	10/24/23 11:57	10/24/23 16:55		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	90	%	66-130	1	10/24/23 11:57	10/24/23 16:55	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SW-846 Pace Analytical Services - Charlotte						
Percent Moisture	<b>23.1</b>	%	0.10	1		10/22/23 19:07		N2

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**QUALITY CONTROL DATA**

Project: 23290032.001

Pace Project No.: 92694374

QC Batch: 808194

Analysis Method: EPA 8015C

QC Batch Method: EPA 5030B

Analysis Description: Gasoline Range Organics

Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92694374001, 92694374005

METHOD BLANK: 4184672

Matrix: Solid

Associated Lab Samples: 92694374001, 92694374005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	ND	5.9	10/23/23 17:13	
4-Bromofluorobenzene (S)	%	90	66-130	10/23/23 17:13	

LABORATORY CONTROL SAMPLE: 4184673

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	49.5	47.2	95	70-130	
4-Bromofluorobenzene (S)	%			94	66-130	

MATRIX SPIKE SAMPLE: 4184675

Parameter	Units	92694409002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Gas Range Organics (C6-C10)	mg/kg		19.3	68.3	99.0	117	57-154
4-Bromofluorobenzene (S)	%				94	66-130	

SAMPLE DUPLICATE: 4184674

Parameter	Units	92694409001 Result	Dup Result	RPD	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	20.9	21.6	3	
4-Bromofluorobenzene (S)	%	91	92		

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: 23290032.001

Pace Project No.: 92694374

QC Batch: 808422

Analysis Method: EPA 8015C

QC Batch Method: EPA 5030B

Analysis Description: Gasoline Range Organics

Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92694374007

METHOD BLANK: 4185861

Matrix: Solid

Associated Lab Samples: 92694374007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	ND	6.0	10/24/23 15:12	
4-Bromofluorobenzene (S)	%	91	66-130	10/24/23 15:12	

LABORATORY CONTROL SAMPLE: 4185862

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	49.8	46.0	92	70-130	
4-Bromofluorobenzene (S)	%			93	66-130	

MATRIX SPIKE SAMPLE: 4185864

Parameter	Units	92694374007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	ND	78.8	114	144	57-154	
4-Bromofluorobenzene (S)	%				94	66-130	

SAMPLE DUPLICATE: 4185863

Parameter	Units	92694409015 Result	Dup Result	RPD	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	ND	ND		
4-Bromofluorobenzene (S)	%	92	91		

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**QUALITY CONTROL DATA**

Project: 23290032.001

Pace Project No.: 92694374

QC Batch: 808424	Analysis Method: EPA 8015C
QC Batch Method: EPA 5030B	Analysis Description: Gasoline Range Organics
	Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92694374002, 92694374003, 92694374004, 92694374006

METHOD BLANK: 4185898 Matrix: Solid  
 Associated Lab Samples: 92694374002, 92694374003, 92694374004, 92694374006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	ND	6.0	10/24/23 15:38	
4-Bromofluorobenzene (S)	%	92	66-130	10/24/23 15:38	

LABORATORY CONTROL SAMPLE: 4185899

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	49.8	45.4	91	70-130	
4-Bromofluorobenzene (S)	%			94	66-130	

MATRIX SPIKE SAMPLE: 4185901

Parameter	Units	92694377010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	ND	79.7	106	133	57-154	
4-Bromofluorobenzene (S)	%				96	66-130	

SAMPLE DUPLICATE: 4185900

Parameter	Units	92694377009 Result	Dup Result	RPD	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	ND	ND		
4-Bromofluorobenzene (S)	%	90	90		

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**QUALITY CONTROL DATA**

Project: 23290032.001

Pace Project No.: 92694374

QC Batch:	808741	Analysis Method:	EPA 8015C
QC Batch Method:	EPA 3546	Analysis Description:	8015 Solid GCSV
		Laboratory:	Pace Analytical Services - Charlotte

Associated Lab Samples: 92694374001, 92694374002, 92694374003, 92694374004, 92694374005, 92694374006, 92694374007

METHOD BLANK: 4187702 Matrix: Solid  
 Associated Lab Samples: 92694374001, 92694374002, 92694374003, 92694374004, 92694374005, 92694374006, 92694374007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics(C10-C28)	mg/kg	ND	5.0	10/26/23 10:49	
n-Pentacosane (S)	%	93	10-133	10/26/23 10:49	

LABORATORY CONTROL SAMPLE: 4187703

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range Organics(C10-C28)	mg/kg	66.2	52.0	78	43-130	
n-Pentacosane (S)	%			81	10-133	

MATRIX SPIKE SAMPLE: 4187704

Parameter	Units	92694374001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Diesel Range Organics(C10-C28)	mg/kg	39.4	83.5	129	108	15-130	
n-Pentacosane (S)	%				84	10-133	

SAMPLE DUPLICATE: 4187705

Parameter	Units	92694374002 Result	Dup Result	RPD	Qualifiers
Diesel Range Organics(C10-C28)	mg/kg	32.0	19.9	47	D6
n-Pentacosane (S)	%	82	86		

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**QUALITY CONTROL DATA**

Project: 23290032.001  
 Pace Project No.: 92694374

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QC Batch: 808096	Analysis Method: SW-846
QC Batch Method: SW-846	Analysis Description: Dry Weight/Percent Moisture
	Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92694374001, 92694374002, 92694374003, 92694374004, 92694374005, 92694374006, 92694374007

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SAMPLE DUPLICATE: 4184271

Parameter	Units	92694374001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	19.4	19.9	2	N2

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SAMPLE DUPLICATE: 4184272

Parameter	Units	92694481001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	27.8	26.2	6	N2

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## QUALIFIERS

Project: 23290032.001

Pace Project No.: 92694374

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

S2 Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

S5 Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 23290032.001

Pace Project No.: 92694374

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92694374001	T1-B1	EPA 3546	808741	EPA 8015C	808993
92694374002	T1-B2	EPA 3546	808741	EPA 8015C	808993
92694374003	T2-B1	EPA 3546	808741	EPA 8015C	808993
92694374004	T2-B2	EPA 3546	808741	EPA 8015C	808993
92694374005	T3-B1	EPA 3546	808741	EPA 8015C	808993
92694374006	T3-B2	EPA 3546	808741	EPA 8015C	808993
92694374007	T1-P1	EPA 3546	808741	EPA 8015C	808993
92694374001	T1-B1	EPA 5030B	808194	EPA 8015C	808245
92694374002	T1-B2	EPA 5030B	808424	EPA 8015C	808460
92694374003	T2-B1	EPA 5030B	808424	EPA 8015C	808460
92694374004	T2-B2	EPA 5030B	808424	EPA 8015C	808460
92694374005	T3-B1	EPA 5030B	808194	EPA 8015C	808245
92694374006	T3-B2	EPA 5030B	808424	EPA 8015C	808460
92694374007	T1-P1	EPA 5030B	808422	EPA 8015C	808459
92694374001	T1-B1	SW-846	808096		
92694374002	T1-B2	SW-846	808096		
92694374003	T2-B1	SW-846	808096		
92694374004	T2-B2	SW-846	808096		
92694374005	T3-B1	SW-846	808096		
92694374006	T3-B2	SW-846	808096		
92694374007	T1-P1	SW-846	808096		

### REPORT OF LABORATORY ANALYSIS

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Effective Date: 11/14/2022

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: Schnabel-Wilmington

Project #: WO#: 92694374

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other: \_\_\_\_\_



Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: SK 10/19

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  Yes  No  N/A

Thermometer:

IR Gun ID: 92090

Type of Ice:  Wet  Blue  None

Cooler Temp: 3.7 Correction Factor: Add/Subtract (°C) 0

Temp should be above freezing to 6°C

Cooler Temp Corrected (°C): 3.7

Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>SK</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_ Date: \_\_\_\_\_



Effective Date: 11/14/2022

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LUHg

\*\*Bottom half of box is to list number of bottles

\*\*\*Check all unpreserved Nitrates for chlorine

Project #

**WO# : 92694374**

PM: TMC

Due Date: 10/30/23

CLIENT: Schnabel

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGJU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/
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**pH Adjustment Log for Preserved Samples**

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

**CHAIN-OF-CUSTODY Analytical Request Document**  
 Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company Name: Schnabel-Wilmington  
 Street Address: 1133 Military Cutoff Road, Wilmington, NC 28405  
 Contact/Report To: Lisa Kowalczyk  
 Phone #: 910-769-1621  
 E-Mail: lkowalczyk@schnabel-eng.com  
 CC E-Mail:

Customer Project #: 23290032.001  
 Project Name: 23290032.001  
 Invoice To: Jacob Wessell  
 Invoice E-Mail: jwessell@schnabel-eng.com  
 Purchase Order # (if applicable):  
 Quote #:

Site Collection Info/Facility ID (as applicable):  
 h-5808  
 Time Zone Collected:  AK  PT  MT  CT  ET  
 Regulatory Program (DW, RCRA, etc.) as applicable:  
 Rush (Pre-approval required):  
 2 Day  3 day  5 day  Other \_\_\_\_\_  
 Date Results Requested:  
 Analysis:  
 Field Filtered (if applicable):  Yes  No

Data Deliverables:  
 Level II  Level III  Level IV  
 ECUS  
 Other \_\_\_\_\_  
 Country / State origin of sample(s): North Carolina  
 DW PWSID # or WW Permit # as applicable:  
 DWT closure  
 DRO GRO

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res. CL2	Number & Type of Containers	DRO	GRO
			Date	Time	Date	Time				
T1 - B1	SL	6	10/17/23	1415			1	3	X	X
T1 - B2	SL			1425			1	1	X	X
T2 - B1	SL			1445			1	1	X	X
T2 - B2	SL			1505			1	1	X	X
T3 - B1	SL			1510			1	1	X	X
T3 - B2	SL			1530			1	1	X	X
T1 - P1	SL			1540			1	1	X	X
	SL								X	X
	SL								X	X
	SL								X	X

Customer Remarks / Special Conditions / Possible Hazards:  
 Collected By: OSH  
 Printed Name: Quinton Hill  
 Signature: [Signature]  
 Relinquished by Company (Signature): [Signature]  
 Date/Time: 10/18/23 1153  
 Relinquished by Company (Signature): [Signature]  
 Date/Time: 10/19/23 1354  
 Relinquished by Company (Signature): [Signature]  
 Date/Time: 10-19-23 1354



Scan QR Code for Instructions

Specify Container Size \*\*  
 Identify Container Preservative Type \*\*\*  
 Analysis Requested  
 \*\* Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL, (7) 15mL, (8) 10mL, (9) Other  
 \*\*\* Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only  
 Proj. Mgr: Taylor Cannon  
 Account / Client ID:  
 Table #:  
 Profile / Template: 16960  
 Prelog / Bottle Ord. ID: EZ 3012278  
 Sample Comment: 92694374601  
 Preservation non-conformance identified for sample.

Additional Instructions from Pace\*:  
 # Coolers: Thermometer ID: 921090 Correction Factor (C): 0 Obs. Temp. (C) 3.7 Corrected Temp. (C) 3.7  
 Date/Time: 10/18/23 1153  
 Date/Time: 10-19-23 0903  
 Date/Time: 10/19 1354  
 Delivered by:  In-Person  Courier  
 Page: 1 of 2

# APPENDIX F SITE PHOTOS





**Photograph 1: View of site prior to closure activities.**



**Photograph 2: Unoccupied outbuilding on site.**



**Photograph 3: Second unoccupied outbuilding on site.**



**Photograph 4: Anomaly area identified with GPR adjacent to corner pole.**

**Hand- augured, no tank found.**



**Photograph 5: Marked broadband utility services**



**Photograph 6: Marked water services.**



**Photograph 7: Tank 1 excavation pit, showing single pipe from tank**





**Photograph 9: Tank pit 1 post-tank excavation.**



**Photograph 10: Tanks 2 and 3 excavation pit adjacent to Acorn Hill Road.**



**Photograph 11: Tank 2**



**Photograph 12: Tank 3**





**Photograph 14: Excavation filled, brought back to grade, and compacted with excavator.**



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

May 3, 2018

MEMORANDUM TO: John S Abel Jr.  
Division Project Engineer, Division 1

FROM: Dennis G. Li, Ph.D., LG  
GeoEnvironmental Project Manager  
GeoEnvironmental Section  
Geotechnical Engineering Unit

DocuSigned by:  
*Dennis Li*  
3288528EC798426...  
5/3/2018

TIP NO: R-5808  
WBS: 46972.1.1  
COUNTY: GATES  
DIVISION: 1  
DESCRIPTION: TO MODERNIZE US ROUTE 158 BY WIDENING THE EXISTING LANES AND IMPROVING THE SHOULDERS FROM SR 1002 (ACORN HILL RD) INTERSECTION TO THE PASQUOTANK COUNTY LINE IN THE WEST. (4 MILES).

SUBJECT: **GeoEnvironmental Planning Report**

The GeoEnvironmental Section of the Geotechnical Engineering Unit performed a Phase I field investigation on April 18, 2018 for the above referenced project to identify geoenvironmental sites of concern. The purpose of this report is to document sites of concern within the project study area that are or may be contaminated. These sites of concern should be included in the environmental planning document in an effort to assist the project stakeholders in reducing or avoiding impacts to these sites. Sites of concern may include, but are not limited to, underground storage tank (UST) sites, dry cleaning facilities, hazardous waste sites, regulated landfills and unregulated dumpsites.

**Findings**

No Sites of concern were identified within the proposed study area as shown in the figure below. We don't anticipate any monetary or scheduling impacts resulting from geoenvironmental sites of concern.

Please note that discovery of sites not recorded by regulatory agencies and not reasonably discernible during the project reconnaissance may occur. The GeoEnvironmental Section should be notified immediately after discovery of such sites so their potential impact(s) may be assessed.

If there are questions regarding the geoenvironmental issues, please contact me, at (919) 707-6857.

Mailing Address:  
NC DEPARTMENT OF TRANSPORTATION  
GEOTECHNICAL ENGINEERING UNIT  
1589 MAIL SERVICE CENTER  
RALEIGH NC 27699-1589

Telephone: 919-707-6850  
Fax: 919-250-4237  
Customer Service: 1-877-368-4968

Website: [www.ncdot.gov](http://www.ncdot.gov)

Location:  
CENTURY CENTER COMPLEX  
ENTRANCE B-2  
1020 BIRCH RIDGE DRIVE  
RALEIGH NC

cc:

John Pilipchuk, LG, PE, State Geotechnical Engineer

Stephen R. Morgan, PE, State Hydraulics Engineer

Andrew McDaniel, PE, Stormwater NPDES Permit Program - Engineering Supervisor

Brian Hanks, PE, State Structures Engineer

Dale Burton PE, PLS, State Locations and Surveys Engineer

Carl Barclay, PE, State Utilities Manager

Jerry Jennings, PE, Division 1 (Construction) Engineer

Roy "Chris" Sutton, Division 1 Right of Way Agent

Chris Kreider, PE, Geotechnical Regional Manager

Dean Argenbright, LG, Regional Geological Engineer

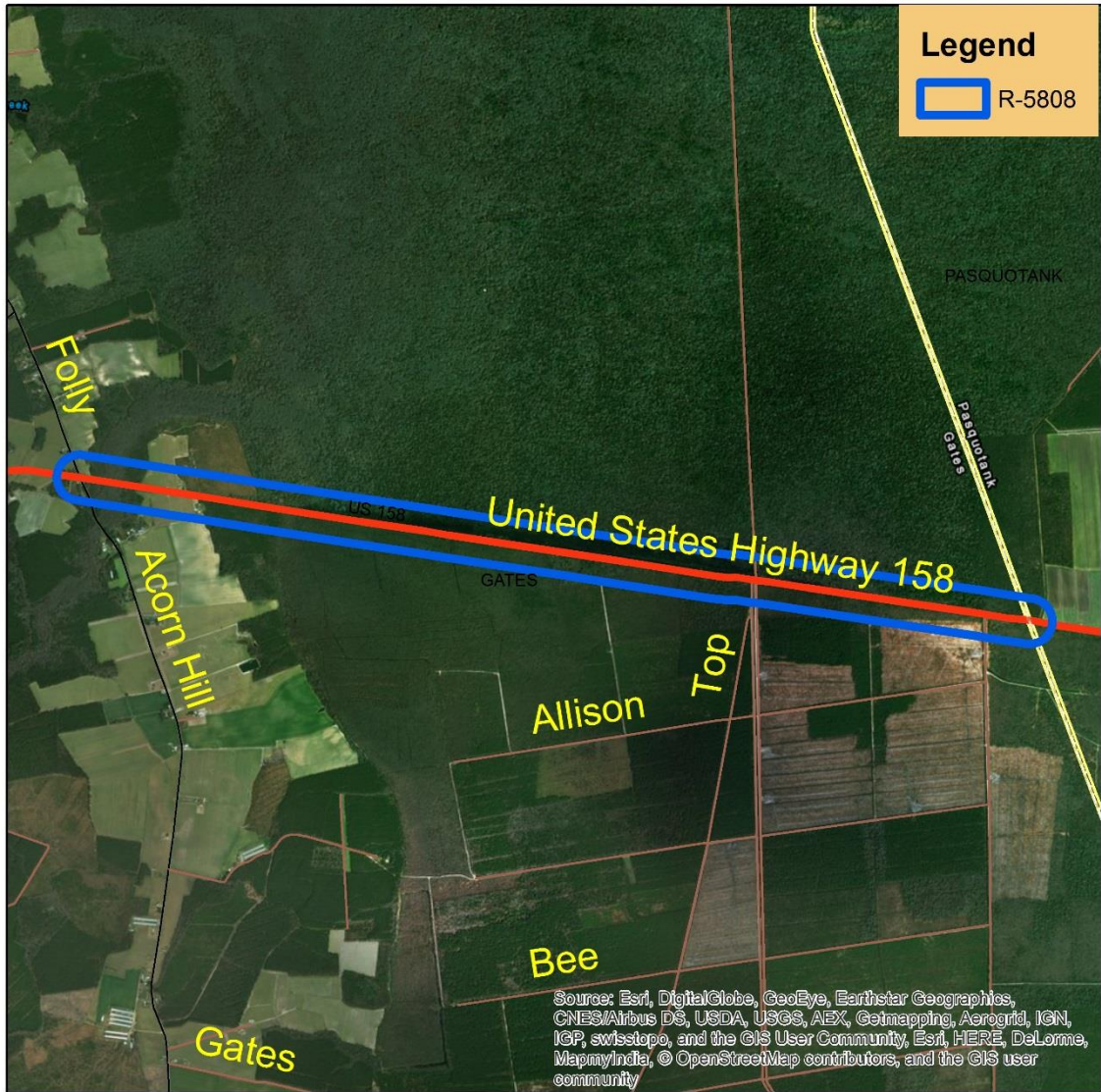
Steve Grimes, ROW Unit, Negotiations, State Negotiator

[row-notify@ncdot.gov](mailto:row-notify@ncdot.gov)

[roadwaydesign@ncdot.gov](mailto:roadwaydesign@ncdot.gov)


File

**Appendix A**  
**Location of GeoEnvironmental Sites of Concern**



Project 46972.1.1 (TIP # R-5808)  
 TO MODERNIZE US ROUTE 158 BY WIDENING  
 THE EXISTING LANES AND IMPROVING THE  
 SHOULDERS FROM SR 1002 (ACORN HILL RD)  
 INTERSECTION TO THE PASQUOTANK  
 COUNTY LINE IN THE WEST (4 MILES).

4,100 2,050 0 4,100 Feet

 NC Department of Transportation  
 Geotechnical Engineering Unit  
 GeoEnvironmental Section

