



UST CLOSURE REPORT

INTERSECTION IMPROVEMENTS – SR 2195 (TORRENCE CHAPEL ROAD) AND SR 5544 (WEST CATAWBA AVENUE) IN CORNELIUS

TIP NO.: U-5906

WBS ELEMENT: 46451.1.1

21001 TORRENCE CHAPEL ROAD

CORNELIUS, MECKLENBURG COUNTY, NORTH CAROLINA

ECS PROJECT 49-14775

PREPARED FOR:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

RALEIGH, NORTH CAROLINA

SEPTEMBER 27, 2021

**ECS SOUTHEAST, LLP**

Geotechnical • Construction Materials • Environmental • Facilities

*"Setting the Standard for Service"*NC Registered Engineering Firm F-1078
NC Registered Geologists Firm C-553
SC Registered Engineering Firm 3239

September 27, 2021

Mr. John L. Pilipchuk, L.G., P.E.
State Geotechnical Engineer
Geotechnical Engineering Unit (GEU)
1589 Mail Service Center
Raleigh, NC. 27699-1589

Reference: Underground Storage Tank Closure Report
TIP No.: U-5906
WBS No.: 46451.1.1
County: Mecklenburg
Description: Intersection Improvements. SR 2195 (Torrence Chapel Road) and SR 5544
 (West Catawba Avenue) in Cornelius
ECS Project No. 49-14775

Dear Mr. Pilipchuk:

As authorized by your acceptance of ECS Proposal 49.25898_Rev1, dated August 10, 2021 and authorized on August 12, 2021, ECS Southeast, LLP (ECS) has completed the UST Closure Report for the above referenced site. Included in this report is a description of the field activities, the results obtained, and our conclusions and recommendations.

ECS appreciates the opportunity to provide our environmental consulting services to you on this project. If you have any questions concerning this report or this project, please contact us at (704) 409-7740.

Sincerely,

ECS SOUTHEAST, LLP

DocuSigned by:

Chris Orrell

7A065B09BBE94DD...

Christopher D. Orrell, P.G.
Environmental Project Manager
704-409-7740

DocuSigned by:

Scott Werley

19AC7EDF99C147E...

Scott M. Werley, P.G.
Environmental Principal
919-861-9846

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Underground Storage Tank Closure Report

Intersection Improvements:

SR 2195 (Torrence Chapel Road) and SR 5544 (West Catawba Avenue) in Cornelius, NC

TIP No.:U-5906

WBS No.:46451.1.1

September 27, 2021

1.0 SITE INFORMATION

Site Name and Location:	Wynee G. Wally Family Trust Residence 21001 Torrence Chapel Road Cornelius, North Carolina
Facility ID#:	N/A
NCDOT WBS Element	46451.1.1
NCDOT TIP Number	U-5906
Latitude and Longitude:	35.488325° North, 80.876244° West
Date of Report:	September 27, 2021
Land Use Category:	Residential (Currently)
UST System Owner:	Wynee G. Wally Family Trust 21001 Torrence Chapel Road Cornelius, North Carolina 28031
Land Owner:	Same as UST System Owner
Consultant:	ECS Southeast, LLP Attention: Randy H. Cavallier 4811 Koger Boulevard Greensboro, North Carolina 27407 (336) 856-7150
Laboratory:	N/A
Closure Contractor:	Contaminant Control, Inc. (CCI) 281 Lane Parkway Salisbury, North Carolina 28146 (704) 273-1500

Release Information: The UST system at the referenced site included one 1,000-gallon non-commercial heating oil underground storage tank (UST). The UST is in an area being developed for roadway expansion by the North Carolina Department of Transportation (NCDOT). On September 2, 2021, the UST was permanently closed by removal. Based on field observations, evidence of a release was not observed, and soil samples were not collected for laboratory analysis.

Underground Storage Tank Closure Report

Intersection Improvements:

SR 2195 (Torrence Chapel Road) and SR 5544 (West Catawba Avenue) in Cornelius, NC

TIP No.: U-5906

WBS No.: 46451.1.1

September 27, 2021

Seal and Signature of Certifying Licensed Geologist

I, Christopher D. Orrell, a Licensed Geologist for ECS Southeast, LLP, do certify that the information contained in this report is correct and accurate to the best of my knowledge.


Christopher D. Orrell, P
NC License No. 2566

ECS Southeast, LLP is permitted to practice geology/engineering in North Carolina. The certification number of the corporation is C-553.

Underground Storage Tank Closure Report

Intersection Improvements:

SR 2195 (Torrence Chapel Road) and SR 5544 (West Catawba Avenue) in Cornelius, NC

TIP No.:U-5906

WBS No.:46451.1.1

September 27, 2021

2.0 SITE HISTORY AND CHARACTERIZATION

2.1 UST Owner and Operator Information

Wynee G. Wally Family Trust
21001 Torrence Chapel Road
Cornelius, North Carolina 28031

2.2 UST Information

One 1,000-gallon non-commercial heating oil single walled steel tank.

2.3 Description of Release

Based on field observations, evidence of a release was not observed, and soil samples were not collected for laboratory analysis.

2.4 Site Characteristics

The site is located at 21001 Torrence Chapel Road in Cornelius, Mecklenburg County, North Carolina (**Figure 1** and **Figure 2**) (Parcel #00117605). The site consists of a single-family home, outbuildings, and undeveloped grass and wooded acreage. A non-commercial heating oil UST was located southeast of the house (**Figure 3**). The project consisted of the removal of the non-commercial heating oil UST located at the above referenced site as part of overall NCDOT intersection improvements.

As determined from the Mecklenburg County GIS topographic map, elevations at the site range from approximately 818 feet above mean sea level (amsl) near the northeastern boundary to 808 feet amsl near the southwestern boundary of the site. An unnamed tributary (UT) to Lake Norman is located approximately 850 feet southwest of the UST. Surface runoff at the site is generally to the southwest.

According to the Geologic Map of North Carolina (1985), the subject property is situated in the Charlotte and Milton Belts. The soils encountered in this area are the residual product of in-place chemical weathering of rock presently underlying the site. In general, shallow unconfined groundwater movement within the overlying soils is controlled largely by topographic gradients. However, as the groundwater percolates downward to the bedrock, it becomes controlled by the orientation of the rock fracture systems. Thus, the direction of groundwater movement may not be consistent with the reflecting topography. Recharge occurs primarily by infiltration along higher elevations and typically discharges into streams or other surface water bodies. The elevation of the shallow water table is transient and can vary with seasonal fluctuations in precipitation. Movement of groundwater under water table conditions is generally from higher to lower elevations. As such, shallow groundwater would be expected to flow to the southwest beneath the site.

*Underground Storage Tank Closure Report**Intersection Improvements:**SR 2195 (Torrence Chapel Road) and SR 5544 (West Catawba Avenue) in Cornelius, NC**TIP No.:U-5906**WBS No.:46451.1.1**September 27, 2021*

3.0 UST CLOSURE

On September 2, 2021, ECS personnel met Contaminant Control, Inc. (CCI) of Salisbury, North Carolina at the site to begin UST closure activities. Closure activities included the permanent closure by removal of the one 1,000-gallon non-commercial heating oil UST system. A photographic log of the removal activities is included in **Appendix A**.

A tracked excavator was used to complete the UST removal activities. Overlying soil was removed with the excavator to expose the top of the UST. The top of the UST was measured to be approximately 1.5 feet below the ground surface (bgs). The UST was a single-walled steel UST. The product lines from the UST ran from the UST northeast approximately 6 feet to the foundation of the the single home residence. The lines were removed to the foundation wall of the residence. It was originally reported that the UST had historically been filled with sand. CCI used the excavator to tear open the top of the UST in order to remove the sand. It was determined that the UST was not filled with sand, as the UST was filled with water. CCI used a vacuum truck to remove 738 gallons of liquid from the UST. The liquid was transported offsite for disposal at CCI's facility in Salisbury, North Carolina. A copy of the liquid material disposal manifest is included in **Appendix B**.

The Mecklenburg County Fire Marshall was on-site for the removal of the UST. The lower explosive limit (LEL) of the inside of the UST was measured by CCI using a LEL meter. Once the Fire Marshall deemed the LEL of the inside of the UST acceptable, the UST was removed from the excavation and loaded on a truck for off-site disposal. Several holes were observed in the UST. The UST measured 48 inches in diameter and 112 inches in length. The UST was transported by CCI to their facility in Salisbury, North Carolina for disposal. The tank disposal manifest is included in Appendix B. Following closure activities, ECS completed a GW/UST-2B Form: *Site Investigation Report for Permanent Closure or Change-in-Service of UN-Registered UST* is included in **Appendix C**.

The locations of the UST center and ends, product lines, and excavation limits were located using a Trimble Geo 7X global positioning system (GPS) device. The points located with the GPS device are illustrated on **Figure 3** and **Figure 4**.

4.0 SITE INVESTIGATION

4.1 Field Screening

Following removal of the USTs, representative samples of soil from beneath the UST were collected and screened using a Thermo Model 2020 flame ionization detector (FID). The ECS personnel on site manually collected the samples from the bucket of the excavator using caution to collect soil not in contact with the excavator bucket. The samples were collected from an approximate depth of 6 to 7 feet bgs. A portion of soil from each location was placed in a re-sealable plastic bag for the purpose of field screening. Each re-sealable plastic bag was allowed to equilibrate for approximately ten minutes prior to field screening with the FID. The probe of the FID was then inserted into the bag, and the bag was immediately resealed. The FID meter was monitored, and the readings recorded. The readings are summarized on **Table 1**.

Underground Storage Tank Closure Report

Intersection Improvements:

SR 2195 (Torrence Chapel Road) and SR 5544 (West Catawba Avenue) in Cornelius, NC

TIP No.:U-5906

WBS No.:46451.1.1

September 27, 2021

4.2 Sample Collection and Analysis

Based on the results of field screening including visual, olfactory, and FID screening methods, soil samples were not collected for laboratory analysis. Neither groundwater nor bedrock was encountered during UST closure activities. Upon completion of closure activities, the excavation measured approximately 14 feet long by 9 feet wide by 6 feet deep (**Figure 3 & 4**). Following the removal of the UST, the excavation was filled with the overburden and clean fill material obtained from a local source.

5.0 CONCLUSIONS AND RECOMMENDATIONS

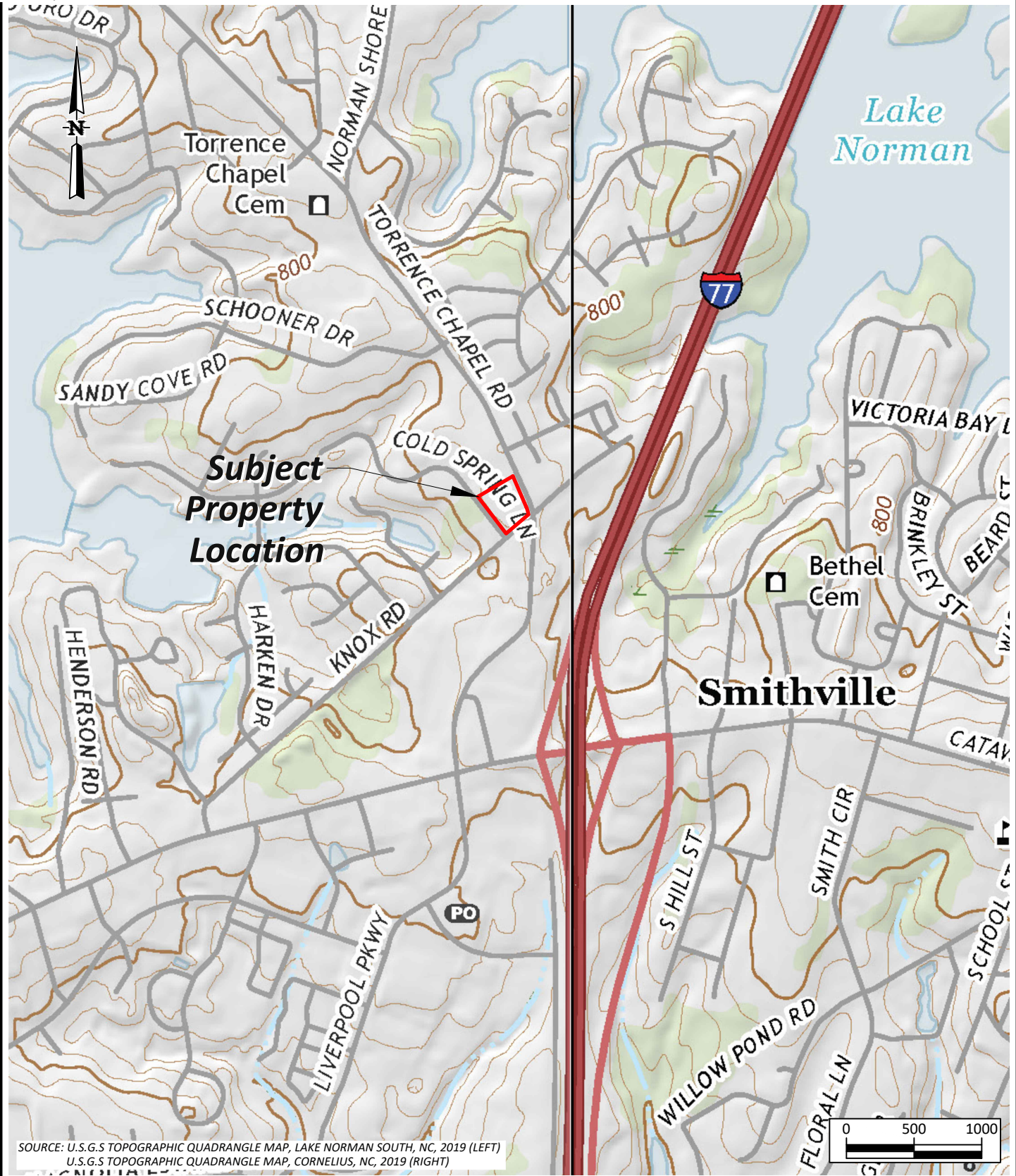
An ECS professional observed the closure by removal of one 1,000-gallon non-commercial heating oil UST. Based on the field screening observations including visual, olfactory, and FID screening results, it is ECS' opinion that a release did not occur from the UST.

ECS recommends that a copy of this report be submitted for review to the North Carolina Department of Environmental Quality (NCDEQ) Mooresville Regional Office. ECS does not recommend further assessment at this time.

6.0 QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assessment are consistent with those normally employed in UST closure projects of this type. Our evaluation of site conditions has been based on our understanding of the site project information and the data obtained during our field activities. This report was prepared for the express use of the North Carolina Department of Transportation. Use of this report by any other individual or company implies their acceptance of the General Conditions of Service of the original contract.

FIGURES

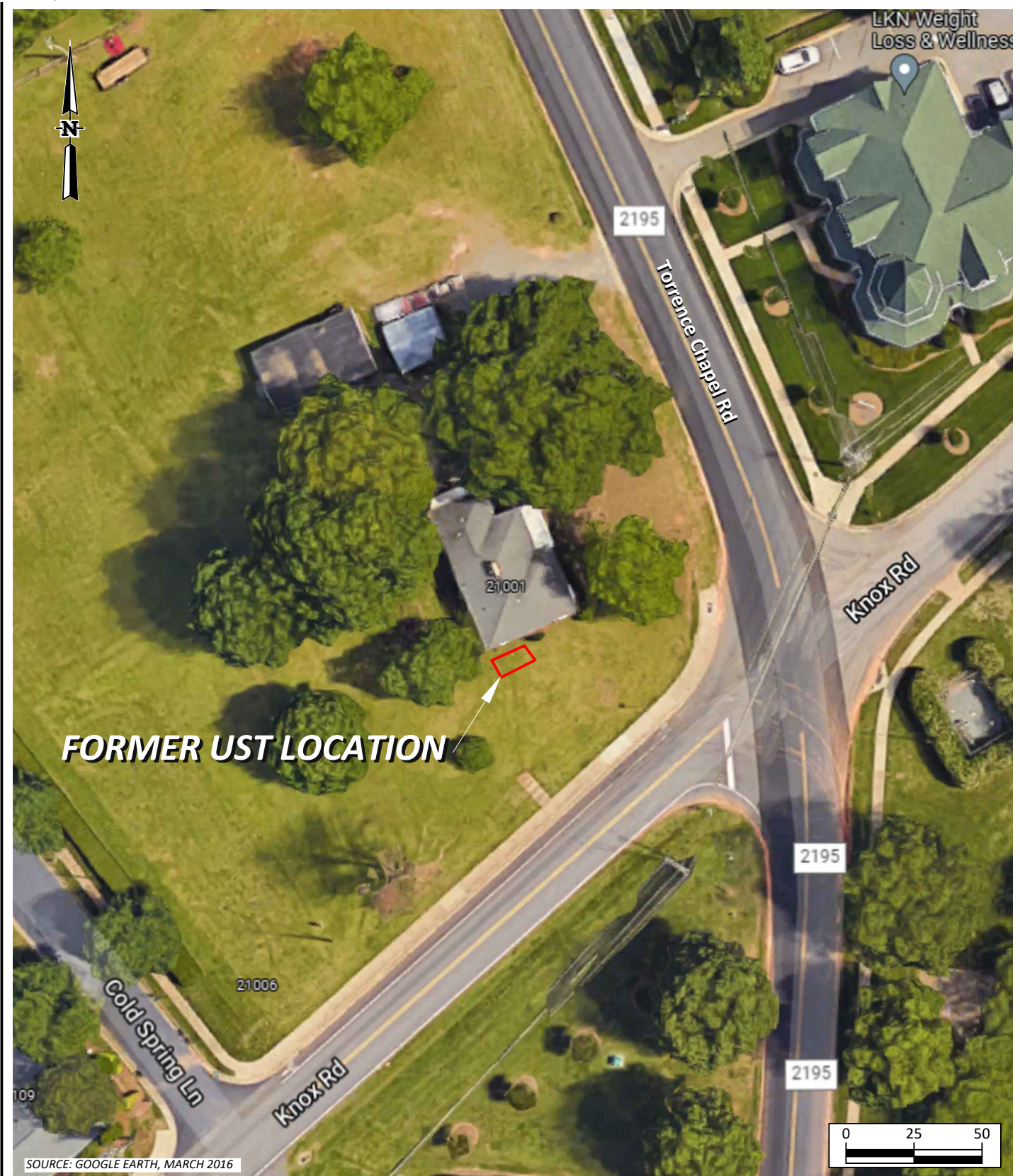


PROJECT #:	49-14775
DRAWN BY:	TLONGO
CHECKED BY:	CORRELL
PROJECT MGR:	SWERLEY
DATE:	9/17/2021
REVISED:	----
SCALE:	1:1000
PRINTED:	9/17/2021 1:16 PM

CLIENT: NCDOT-GEOTECHNICAL ENGINEERING UNIT
SITE LOCATION: NCDOT TIP U-5906
21001 TORRENCE CHAPEL RD
CORNELIUS, MECKLENBURG COUNTY, NC 28031

TOPOGRAPHIC MAP

FIGURE
1



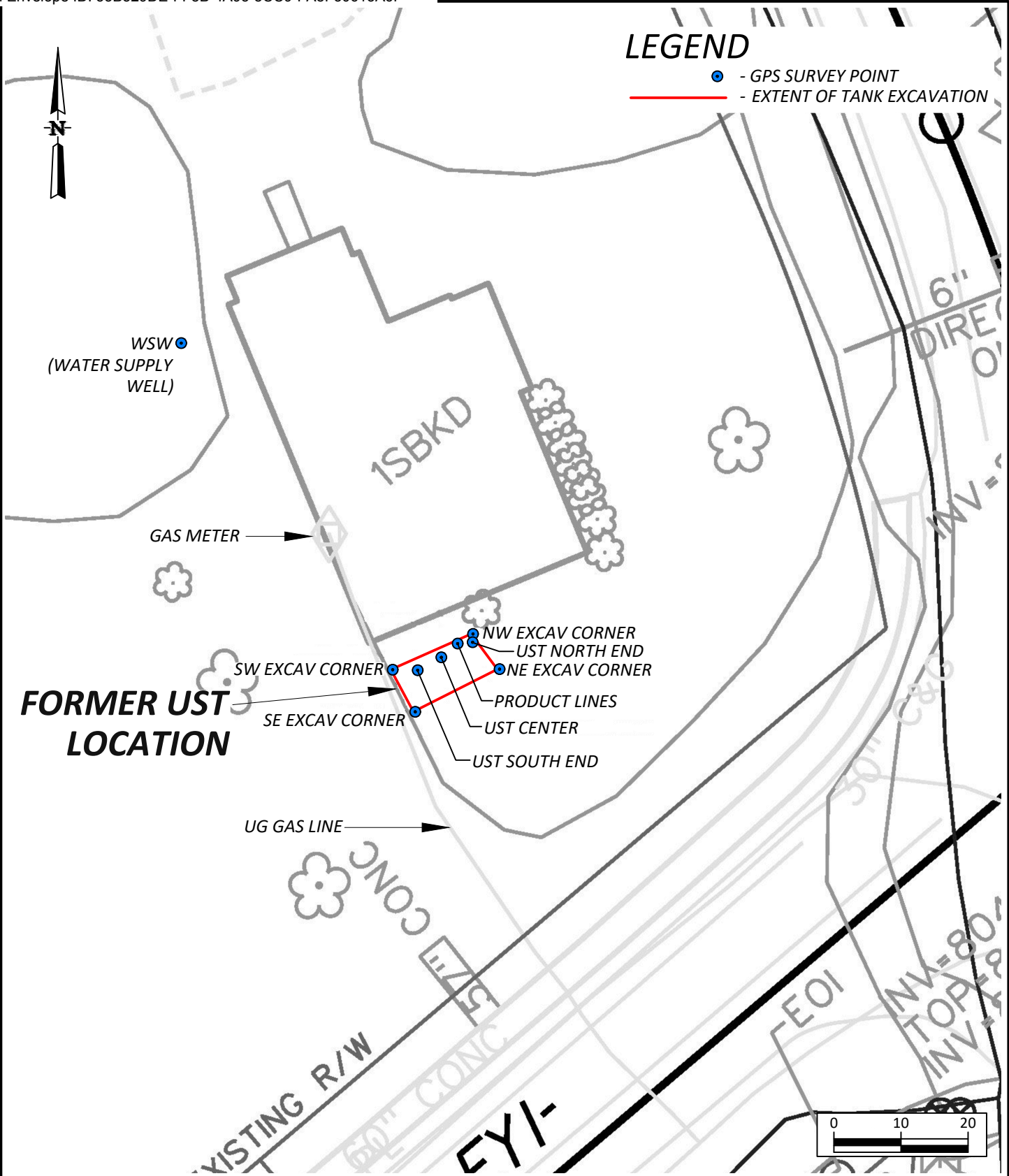
PROJECT #:	49-14775
DRAWN BY:	TLONGO
CHECKED BY:	CORRELL
PROJECT MGR:	SWERLEY
DATE:	9/17/2021
REVISED:	----
SCALE:	1:50
PRINTED:	9/17/2021 1:16 PM

CLIENT: NCDOT-GEOTECHNICAL ENGINEERING UNIT
 SITE LOCATION: NCDOT TIP U-5906
 21001 TORRENCE CHAPEL RD
 CORNELIUS, MECKLENBURG COUNTY, NC 28031

SITE LOCATION

FIGURE

2

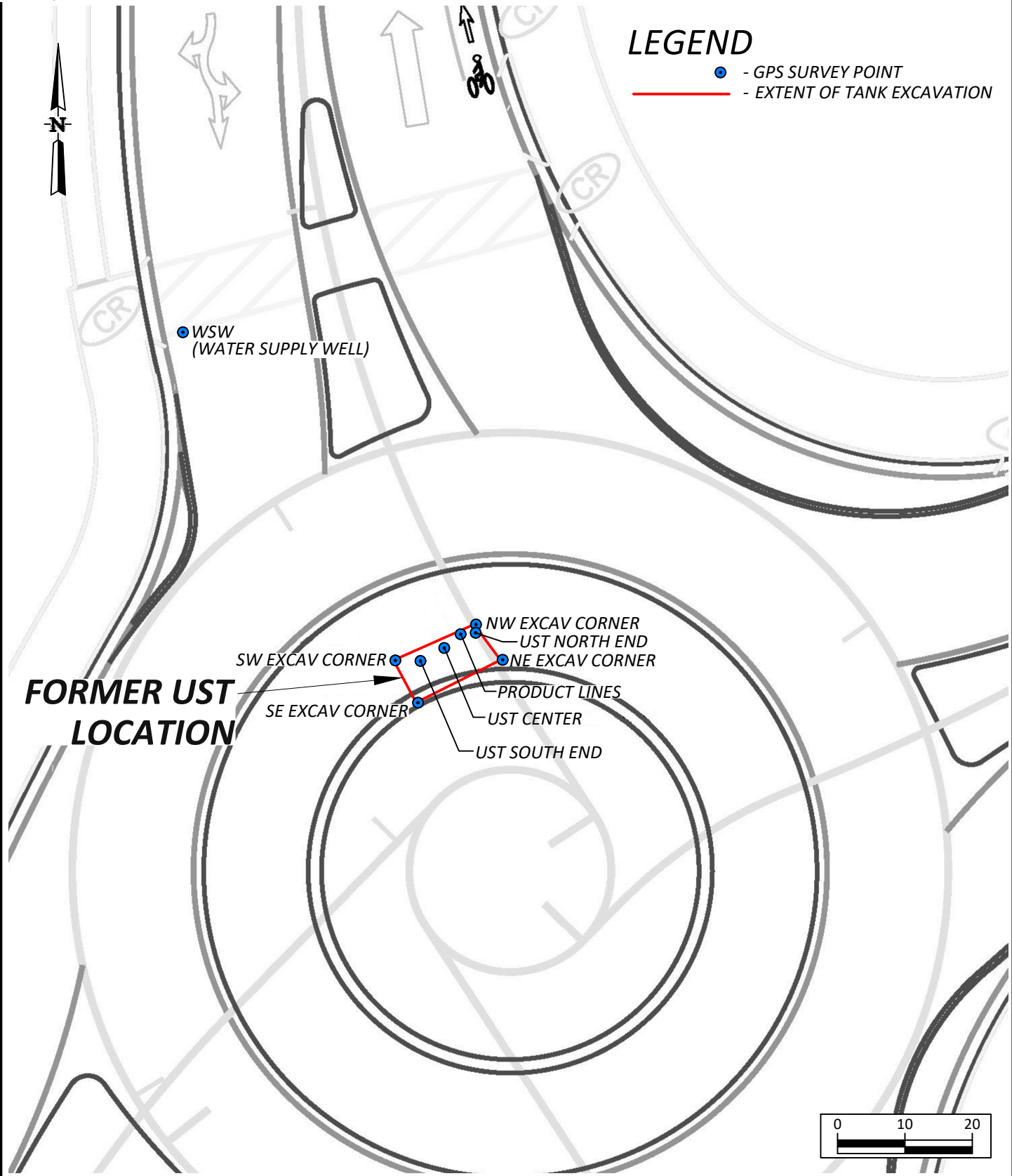


PROJECT #:	49-14775
DRAWN BY:	TLONGO
CHECKED BY:	CORRELL
PROJECT MGR:	SWERLEY
DATE:	9/17/2021
REVISED:	----
SCALE:	1:20
PRINTED:	9/17/2021 1:16 PM

Client: NCDOT-GEOTECHNICAL ENGINEERING UNIT
Site Location: NCDOT TIP U-5906
21001 TORRENCE CHAPEL RD
CORNELIUS, MECKLENBURG COUNTY, NC 28031

EXISTING CONDITIONS

FIGURE
3



PROJECT #:	49-14775
DRAWN BY:	TLONGO
CHECKED BY:	CORRELL
PROJECT MGR:	SWERLEY
DATE:	9/17/2021
REVISED:	----
SCALE:	1:20
PRINTED:	9/17/2021 1:16 PM

Client: NCDOT-GEOTECHNICAL ENGINEERING UNIT
Site Location: NCDOT TIP U-5906
21001 TORRENCE CHAPEL RD
CORNELIUS, MECKLENBURG COUNTY, NC 28031

PROPOSED CONDITIONS

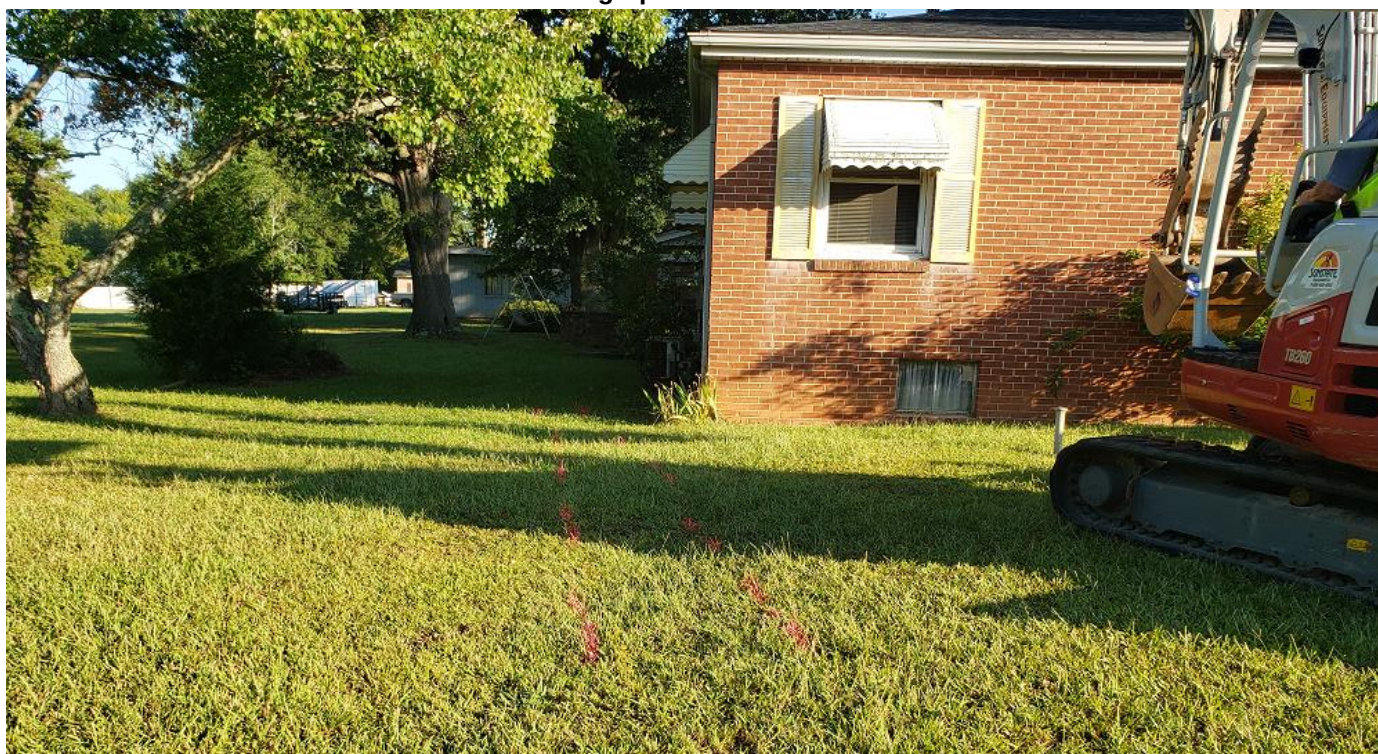
FIGURE
4

APPENDIX A

(Site Photographs)



Photograph 1: UST Area



Photograph 2: Utilities Marked in Vicinity of UST



PHOTOGRAPH LOG

21001 TORRENCE CHAPEL ROAD
CORNELIUS, MECKLENBURG COUNTY,
NORTH CAROLINA
ECS PROJECT NO. 49-14775



Photograph 3: Uncovering UST with Tracked Excavator



Photograph 4: Uncovered UST



PHOTOGRAPH LOG

21001 TORRENCE CHAPEL ROAD
CORNELIUS, MECKLENBURG COUNTY,
NORTH CAROLINA
ECS PROJECT NO. 49-14775



Photograph 5: Removal of Residual Liquids Using a Vacuum Truck



Photograph 6: Removal of UST from Excavation



PHOTOGRAPH LOG

21001 TORRENCE CHAPEL ROAD
CORNELIUS, MECKLENBURG COUNTY,
NORTH CAROLINA
ECS PROJECT NO. 49-14775



Photograph 7: UST Removed and Ready for Transportation Off-Site



Photograph 8: Holes Observed in UST



PHOTOGRAPH LOG

21001 TORRENCE CHAPEL ROAD
CORNELIUS, MECKLENBURG COUNTY,
NORTH CAROLINA
ECS PROJECT NO. 49-14775



Photograph 9: Compaction of UST Excavation



Photograph 10: Final UST Site Restoration



PHOTOGRAPH LOG

21001 TORRENCE CHAPEL ROAD
CORNELIUS, MECKLENBURG COUNTY,
NORTH CAROLINA
ECS PROJECT NO. 49-14775

APPENDIX B

(Manifests)

PRINTED ON RECYCLED PAPER
USING SOYBEAN INK

AMERICAN LABELMARK CO. - CHICAGO, IL 60646 299592-DQ

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No. <u>24211</u>	2. Page 1 of
3. Generator's Name and Mailing Address <u>Residents</u> <u>21001 Torrence Chapel</u> <u>Cornellius NC</u>				
4. Generator's Phone ()				
5. Transporter 1 Company Name	6. US EPA ID Number	A. State Transporter's ID		
		B. Transporter 1 Phone		
7. Transporter 2 Company Name	8. US EPA ID Number	C. State Transporter's ID		
		D. Transporter 2 Phone		
9. Designated Facility Name and Site Address	10. US EPA ID Number	E. State Facility's ID		
		F. Facility's Phone		
11. WASTE DESCRIPTION		12. Containers	13. Total Quantity	14. Unit Wt./Vol.
		No.	Type	
a. <u>non hazardous liquids n.o.s</u> <u>Petroleum contact water</u>		<u>1</u>	<u>TT</u>	<u>738</u>
				<u>G</u>
b.				
c.				
d.				
G. Additional Descriptions for Materials Listed Above		H. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information				
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.				
Printed/Typed Name <u>Nancy Cavallin</u> <u>As Asst</u>		Signature <u>[Signature]</u>		Date <u>9/2/21</u>
17. Transporter 1 Acknowledgement of Receipt of Materials		Date		
Printed/Typed Name <u>Zach Hunt</u>		Signature <u>[Signature]</u>		Month Day Year <u>9</u> <u>2</u> <u>21</u>
18. Transporter 2 Acknowledgement of Receipt of Materials		Date		
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator, Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.				
Printed/Typed Name <u>[Signature]</u>		Signature <u>[Signature]</u>		Date <u>9/2/21</u>

PRINTED ON RECYCLED PAPER
USING SOYBEAN INK

PRINTED ON RECYCLED PAPER
USING SOYBEAN INK

AMERICAN LABELMARK CO. - CHICAGO, IL 60646 299592-DQ

TANK manifest
NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No. 24211	2. Page 1 of
3. Generator's Name and Mailing Address Residents 21001 Torrence Chapel Cornellius NC					
4. Generator's Phone ()		6. US EPA ID Number		A. State Transporter's ID	
5. Transporter 1 Company Name				B. Transporter 1 Phone	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID	
				D. Transporter 2 Phone	
9. Designated Facility Name and Site Address		10. US EPA ID Number		E. State Facility's ID	
				F. Facility's Phone	
11. WASTE DESCRIPTION		12. Containers	13. Total Quantity	14. Unit	
		No.	Type	Wt./Vol.	
a. 1- Empty steel tank # 400 G		1			
b.					
c.					
d.					
G. Additional Descriptions for Materials Listed Above		H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name		Signature		Date	
Randy Cuellar As Ast				Month Day Year 9 12 21	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature		Date	
Printed/Typed Name				Month Day Year	
JASON G FREEMAN				9 12 21	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Date	
Printed/Typed Name				Month Day Year	
				1 1	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name		Signature		Date	
Jason Tarf				Month Day Year 9 12 21	

PRINTED ON RECYCLED PAPER
USING SOYBEAN INK

APPENDIX C

(UST-2B Form)

UST-2B

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



Return completed form to:

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

Facility ID #

STATE USE ONLY:

Date Received

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

INSTRUCTIONS (READ THIS FIRST)

1. 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>.
2. Permanent closure: Complete all sections of this form.
3. Change-in-service: Where UST systems will be converted from storing a regulated substance to a non-regulated substance, complete sections I, II, III, IV, and VI.
4. For more than 5 un-registered UST systems, attach additional forms as needed.
5. **Un-Registered USTs may be subject to unpaid fees and late penalties.**
6. REGISTERED USTs use Form UST-2A.

I. OWNERSHIP OF TANKS

Owner Name (Corporation, Individual, Public Agency, or Other Entity)

Wynee G Wally Family Trust

Street Address

21001 Torrence Chapel Road

City

Cornelius

County

Mecklenburg

State

NC

Zip Code

28031

Phone Number

II. LOCATION OF TANKS

Facility Name or Company

Same

Facility ID # (If known)

Street Address

City

County

Zip Code

Phone Number

III. CONTACT PERSONNEL

Contact for Facility:

Cindy Robinette

Job Title:

Owner

Phone #:

Closure Contractor Name:

Scott Pearce

Closure Contractor Company:

CCI

Address:

281 Lane Parkway
28416

Phone #

336 803 1783

Primary Consultant Name:

Chris Orrell

Primary Consultant Company:

ECS Southeast, LLP

Address:

1900 Center Park Dr
28217

Phone #

704 525 5152

IV. UST INFORMATION FOR UN-REGISTERED UST SYSTEMS

REGISTERED USTs use Form UST-2A.

V. EXCAVATION CONDITION

Tank ID No.	Size in Gallons	Last Contents	Last Use Date	Permanent Close Date	Method of 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	Fuel Oil	???	9-2-21	Removed		☐	☒	☐	☒	☐	☒
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐

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

Randy H. Cavallier As Agent

Signature

Date Signed

9-15-2021

NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WASTE MANAGEMENT, UST SECTION