

January 30, 2015

State of North Carolina
Department of Environment and Natural Resources
Federal & State Lead Program
Division of Waste Management-Underground Storage Tank Section
1637 Mail Service Center
Raleigh, North Carolina 27699-1637

Attn: Ms. Sharon Ghiold

Reference: **GPR/Supply Well Sampling/Water Line Inquiries Letter Report**
LWY Groometown Eckerd
3611 Groometown Road
Greensboro, Guilford County, North Carolina
Groundwater Incident #30687
W&R Project Number: 02140214.81

Dear Ms. Ghiold:

Withers & Ravenel, Inc. (W&R) has prepared this report documenting completion of a ground-penetrating radar (GPR) survey, attempts to sample three supply wells (WSW-2, WSW-3 and WSW-4) and inquiries pertaining to the connection of properties serviced by the supply wells to municipal water and abandonment of the wells. These activities were performed in response to a suspected release from one or more USTs reportedly located or formerly located on the LWY Groometown property at 3611 Groometown Road in Greensboro, Guilford County, NC. The property is currently owned by LWY Groometown, LLC, and identified as Guilford County Parcel # 0048707.

Soil contamination at the facility was confirmed through the collection and analysis of soil samples by Solutions Industrial & Environmental Services (Solutions-IES) during the performance of a preliminary site assessment (PSA) on behalf of the NCDOT conducted in February 2005 in preparation for right of way expansion along Groometown Road. Data for samples analyzed for TPH indicated GRO and DRO in one or more soil samples at levels exceeding the minimum reportable concentrations (RCs) for TPH. A GPR survey conducted at the property by Schnabel Engineering indicated the presence of several magnetic “anomalies” located near the southwestern corner of the property, possibly indicative of a UST within the area of proposed right of way expansion. Subsequent soil and groundwater sampling performed by ECS Carolinas, LLP (ECS) during January and April 2006 revealed several soil contaminants at levels exceeding their Soil to Water Maximum Soil Contaminant Concentrations (MSCCs). Data for groundwater samples obtained from temporary monitoring wells (TW-1, TW-2 TW-3 and TW-4) showed several petroleum related compounds at levels above their respective 2L Standards in TW-1. Data for groundwater samples collected from temporary wells TW-2, TW-3 and TW-4 did not indicate the presence of contaminants at levels above the laboratory method detection limit(s). ECS also identified as many as ten (10) water supply wells within 1,500 feet of the site. The nearest of these wells, formerly located approximately 300 feet west of the site, was reportedly either abandoned or is inactive (based on verbal communication between Ms. Edith Collins, property owner and Ms. Sharon Ghiold, NCDENR Incident Manager on or

about July 22, 2009). W&R did not observe any evidence of this well on the property during our December 2014 site visit.

Crawford Environmental Services, Inc. (CES) performed a receptor survey and obtained samples from supply wells on April 11, 2013. In performing the receptor survey, CES confirmed the presence of three active, potable supply wells, WSW-2, WSW-3 and WSW-4, located within 1,000 feet of the site. Analytical data for samples from these wells did not indicate the presence of targeted compounds at levels above the method detection limit (MDL) for SM 6200B. CES also confirmed that potable water was available through the City of Greensboro municipal supply system to the entire area, and that the site was not located within a wellhead protection area or the Coastal Plain Physiographic Province of the State. W&R has not performed an updated receptor survey in association with the site, but has confirmed property ownership information for the supply wells. This information is included in **Table B-5**.

The following paragraphs provide the results of the December 2014 activities performed at the site by W&R.

GPR Survey

W&R mobilized to the site on December 12, 2014 for the purposes of overseeing the performance of a GPR survey at locations in which the possible presence of one or more USTs had been tentatively identified on the site. The GPR survey was conducted by Stantec, Inc. (Stantec) of Raleigh, NC, utilizing an EM61 GPR unit. The EM61 GPR unit was pushed over the suspect area(s) on the site to determine whether anomalies were still present after the expansion of the NCDOT right of way and widening of Groometown Road and W. Vandalia Road. No specific anomalies were detected at the location which would be indicative of buried metallic tanks or USTs. Several underground utilities including traffic signal lines and fiber optic phone line(s) are present in the area. Based on a February 1993 aerial photograph of the property, it is likely that any tanks located on the property prior to its development as a drug store in the late 1990's and subsequent roadway expansion were situated in what are now the travel lanes of Groometown Road and W. Vandalia Road. See the utility location report and map in **Attachment C**.

Supply Well Sampling & Well Abandonment Inquiries

Despite attempts by W&R personnel to contact property owners/residents through phone calls and notices prior to our site visit; W&R was unable to obtain permission for the sampling of WSW-2, WSW-3, or WSW-4.

W&R ultimately contacted the owners of WSW-2 (Edith Collins) & WSW-3 (Susan Rodgers) to determine the owners' willingness to have their properties connected to municipal water supply and have their supply wells abandoned at state expense. Both owners stated they are willing to have the municipal service connected, however; Ms. Rodgers (WSW-3) indicated her desire to retain the supply well for irrigation use only. W&R also contacted Mr. Jeff Thomas, brother of Brooks Thomas, who manages the LLC Trust for the property on which WSW-4 is located. Mr. Thomas stated that he did not envision any problem in connection of the property to municipal service and abandonment of the supply well, but has to confer with his brother prior to committing. As of the date of this letter report, W&R has not been contacted by Mr. Brooks Thomas.

Possible Contribution of Off-Site Source

In reviewing information for the site and surrounding properties, W&R noted the presence of a release on the Circle K #7930 property, located at 3700 Groometown Road (NCDENR Incident # 15707). This property is located at the corner of the Groometown Road / Wayne Road intersection, approximately 220 feet southwest of the LWY Groometown Eckerd site. W&R has not performed a file review to determine what, if any, relationship exists between the LWY Groometown Eckerd site and the Circle K facility.

Current site conditions are documented in the photographs that are included in **Attachment A**. CES' site location, water supply well locations and map showing the southwestern corner of the site (including ECS' temporary well locations from 2006) are included as **Attachment B**.

Conclusions and Recommendations

Data obtained in the performance of a GPR survey at the site did not indicate the presence of specific anomalies indicative of buried metallic tanks or USTs. Several underground utilities including traffic signal lines and fiber optic phone line(s) are present in the area. Based on a February 1993 aerial photograph of the property, it is likely that any tanks located on the property prior to its development as a drug store in the late 1990's and subsequent roadway expansion were situated in what are now the travel lanes of Groometown Road and W. Vandalia Road.

Based on a receptor survey conducted by CES during April 2013, supply wells WSW-2, WSW-3 and WSW-4 remain active potable wells. Also based on CES' findings from April 2013, the site is not located within a wellhead protection area or in the Coastal Plain Physiographic Province. Municipal water is available to the site and surrounding properties. W&R was unable to sample water supply wells WSW-2, WSW-3 or WSW-4 as W&R personnel could not obtain permission to conduct the sampling of the wells. In subsequent contact with the owners of the supply wells, W&R was informed that two of the three owners are open to the connection of their properties to municipal water service, and the remaining owners (WSW-4) may be open to connection of their property.

The Circle K #7930 is located approximately 220 feet southwest of the LWY Groometown Eckerd site. W&R has not performed a file review determine what, if any relationship exists between the LWY Groometown Eckerd site and the Circle K facility.

As no data exists for determining groundwater flow through the site, and past data have shown impact to the groundwater by petroleum compounds at levels exceeding their respective 2L Standards, W&R recommends the following:

- Installation and sampling of a Type II monitoring well near the southwestern corner of the property to verify contaminant levels in the groundwater of the site,
- Review of the Incident file for the Circle K # 7930,
- Obtain signed agreements with owners of supply wells WSW-2, WSW-3 and WSW-4 for the abandonment of their wells and installation of water taps/lines to connect to the municipal water supply system, followed by the performance of these tasks,
- Based on abandonment of WSW-2, WSW-3, and WSW-4, connection of these properties to the municipal water service and findings of appropriate risk-based soil and groundwater data, reduction of the site risk to allow for the preparation of a Notice of Residual Petroleum (NORP) for the site.

If you have any questions or concerns regarding this report, please contact us at (919) 469-3340.

Sincerely,

WITHERS & RAVENEL, INC.



Kevin B. Buchanan.
Environmental Scientist



K. Ty Colwell
Senior Project Manager



C. Chan Bryant, P.E.
Vice President – Environmental Services

Attachments: *Table, Photographic Documentation (Attachment A), Site Location Map, Water Supply Well Locations Map and Site Map from CES (Attachment B), Utility Location Report (Attachment C).*

TABLE

**TABLE B-5
PUBLIC & PRIVATE WATER SUPPLY WELL INFORMATION**

**LWY Groometown Eckerd
Incident Number: 30687
3611 Groometown Road
Greensboro, Guilford County, North Carolina**

Well ID	Guilford County Parcel Number	Property Address	Property Owner	Property Owner Address & Phone Number	Well Use	Well Depth (feet)	Well Screen Interval (feet)	Well Distance from Source Area (feet)	Location Relative to Groundwater Flow	Well Coordinates (NC State Plane NAD 83 Feet)	
										Easting	Northing
WSW-2	0141053	4206 Wayne Road Greensboro, NC 27407	Edith K. Collins	6016 Rocky Valley Road Greensboro, NC 27407 (336) 299-1406	Potable Supply	Unknown	Unknown	600	Not Determined	NM	NM
WSW-3	0141052	4208 Wayne Road Greensboro, NC 27407	Susan J. Rodgers	4208 Wayne Road Greensboro, NC 27407 (336) 521-3833	Potable Supply	Unknown	Unknown	700	Not Determined	NM	NM
WSW-4	0141051	4210 Wayne Road Greensboro, NC 27407	Barbara H. Thomas c/o Brooks Thomas, LLC Trust Manager	328 Centre Drive, Randleman, NC 27317 (336) 674-3702	Potable Supply	Unknown	Unknown	800	Not Determined	NM	NM

Notes:

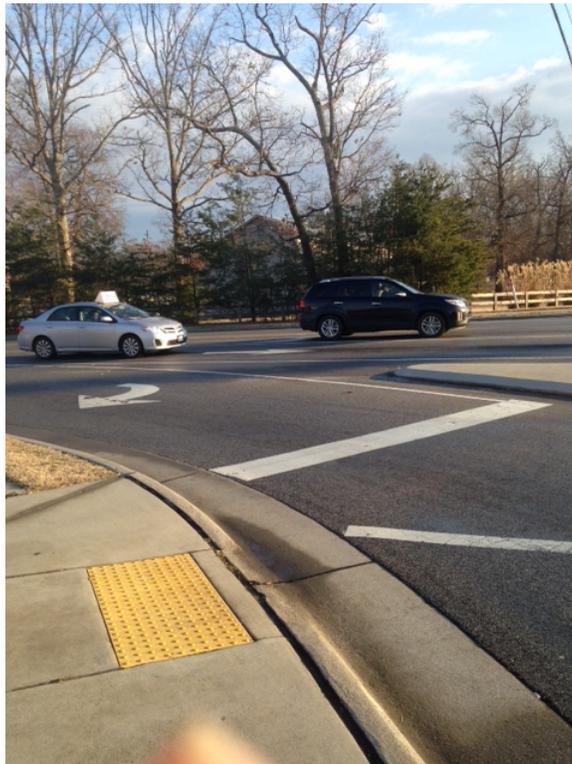
- 1.) Well location addresses and property owner information was obtained from the Guilford County GIS Department.
- 2.) Information regarding the water supply well's use and location was obtained from previous consultant's reports.
- 3.) Well distance from source area values based on information provided in previous consultants reports.
- 4.) W&R has not performed a receptor survey associated with the subject release.
- 5.) NM Denotes "Not Measured".

ATTACHMENT A
PHOTOGRAPHIC DOCUMENTATION



Photograph 1

View of Site Structure from Groometown Rd. & Vandalia Rd. Intersection

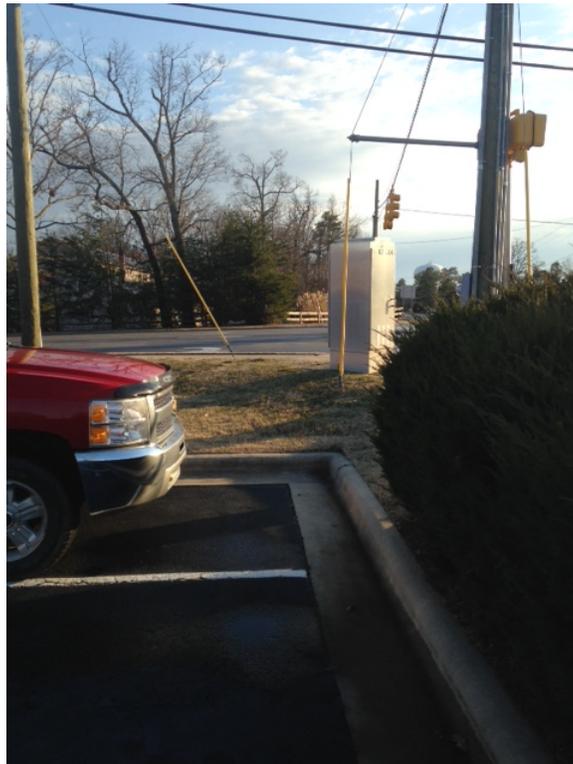


Photograph 2

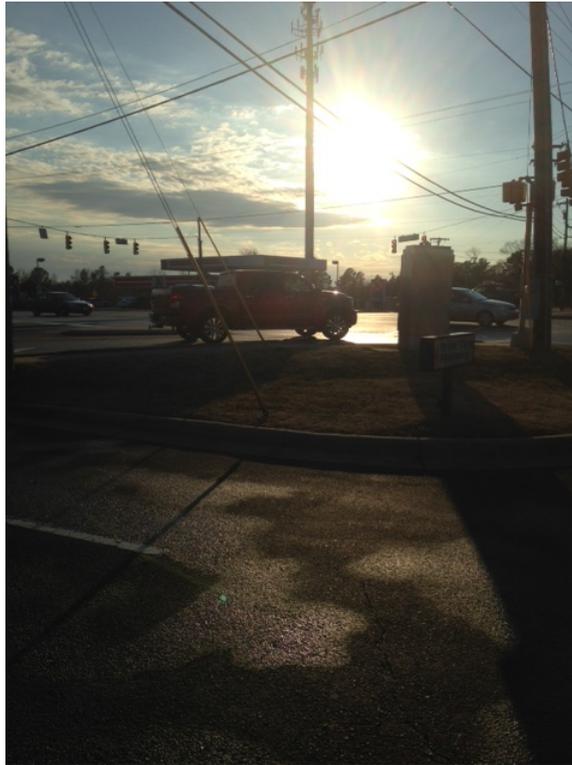
Suspected Anomaly Area
(View from Southwest to Northeast, Vandalia Rd. at Left)



Photograph 3
Suspected Anomaly Area
(View from Northeast to Southwest, Groometown Rd. in Background)



Photograph 4
Suspected Anomaly Area & Traffic Control Box
(View from West to East, Vandalia Rd. in Background)



Photograph 5

Suspected Anomaly Area & Traffic Control Box
(View from North to South, Groometown Rd. / Vandalia Rd. Intersection in Background)

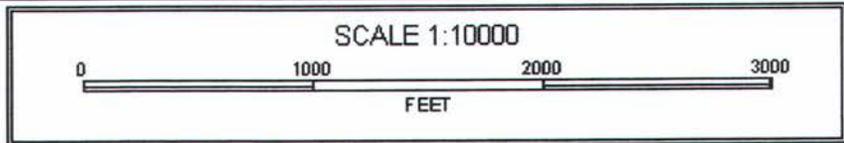
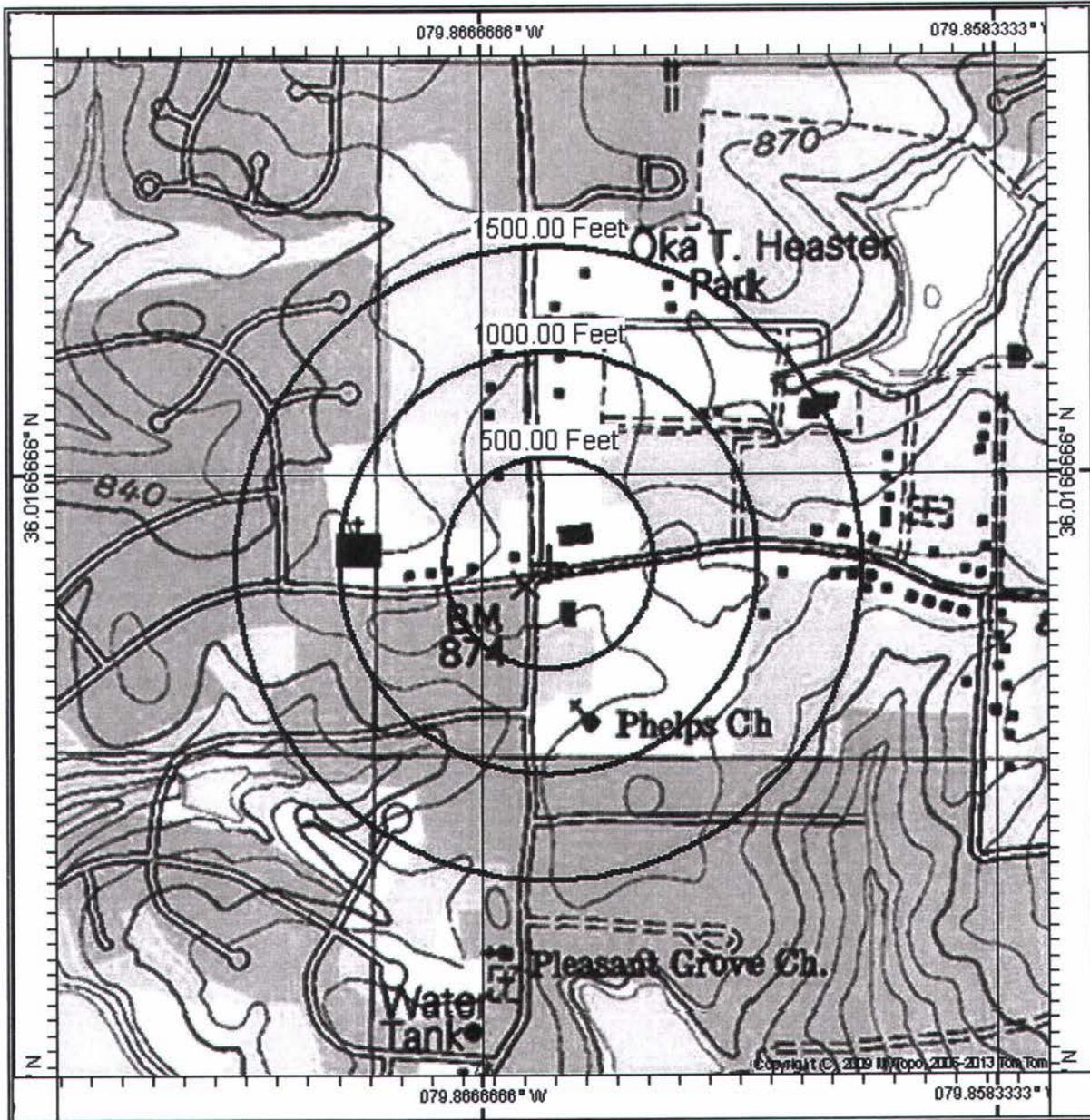


Photograph 6

Site Structure Viewed from Southwest to Northeast

ATTACHMENT B

**SITE LOCATION MAP, WATER SUPPLY WELL LOCATIONS MAP AND SITE MAP
(Crawford Environmental Services, Inc.)**



Reference: Terrain Navigator Pro, Ver. 9.1, USGS 7.5 Minute Series Quadrangle, Greensboro NC, 2001.
 Contour interval = 10 feet.

DR: KBB	11/05/13
CK: DPK	
APPD:	
SCALE: As Shown	
CES PROJ. NO.: 3600.0488	



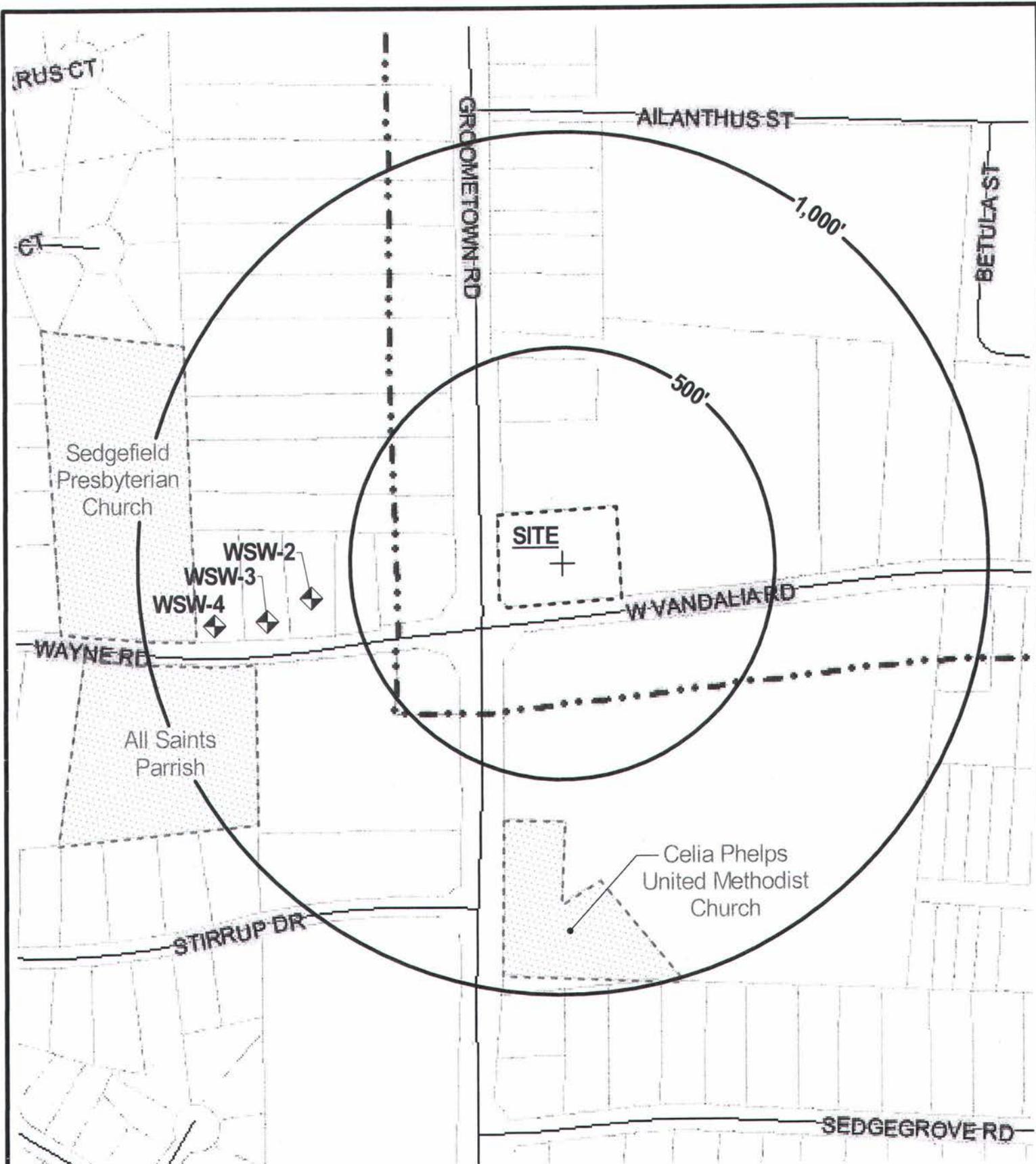
INCIDENT # 30687

CRAWFORD
ENVIRONMENTAL
SERVICES

515 S. NewHope Rd., Suite 104
 Raleigh, NC 27610
 919-235-3335 (office)
 919-235-3345 (fax)

Site Location
LWY Groometown Eckerd
 3611 Groometown Road
 Greensboro, Guilford County, North Carolina

Figure 1



Map Reference: Guilford County, NC Geographic Information System

DR: KSB 11/05/13
 CK: DPK
 APPD:
 SCALE: 1" = Approx. 300'
 CES PROJ. NO: 3600 0488



INCIDENT # 30687

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Receptor Locations Map
LWY Groometown Eckerd
 3611 Groometown Road
 Greensboro, Guilford County, North Carolina

Figure 2



Image Reference: City of Greensboro, NC GIS

Legend

TW-1  Approximate Temporary Monitoring Well Location

DR.: KBB	11/05/13
CK.: DPK	
APP'D.:	
SCALE: 1" = Approx. 12'	
CES PROJ. NO.: 3000.0488	



INCIDENT # 30687

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Site Map
LWY Groometown Eckerd
3611 Groometown Road
Greensboro, Guilford County, North Carolina

Figure 4

ATTACHMENT C
UTILITY LOCATION REPORT



February 13, 2015
File: 178450003

Kevin Buchanan
Environmental Scientist
Withers & Ravenel
115 MacKenan Dr.
Cary NC 27511

Reference: Groometown Rd Eckerd SUE Analysis.

On December 12, 2014 Eric Williams met with Billy at the Eckerd site in Greensboro, NC. After reviewing old site plans it looked like the proposed UST was out in the existing roadway. We utilized Electromagnetic induction along with Ground Penetrating Radar and were not able to find any trace of an existing UST.

On January 12, 2014 Brian Green designated the underground utilities in the same area. We utilized Electromagnetic induction along with Ground Penetrating Radar to mark the location of the underground utilities.

The site sketch and along with the utilities found are shown on page two as an attachment.

Equipment used-
Mala Easy Locator GPR
3M Dynatel Locator
RD8000
Magnetic locator

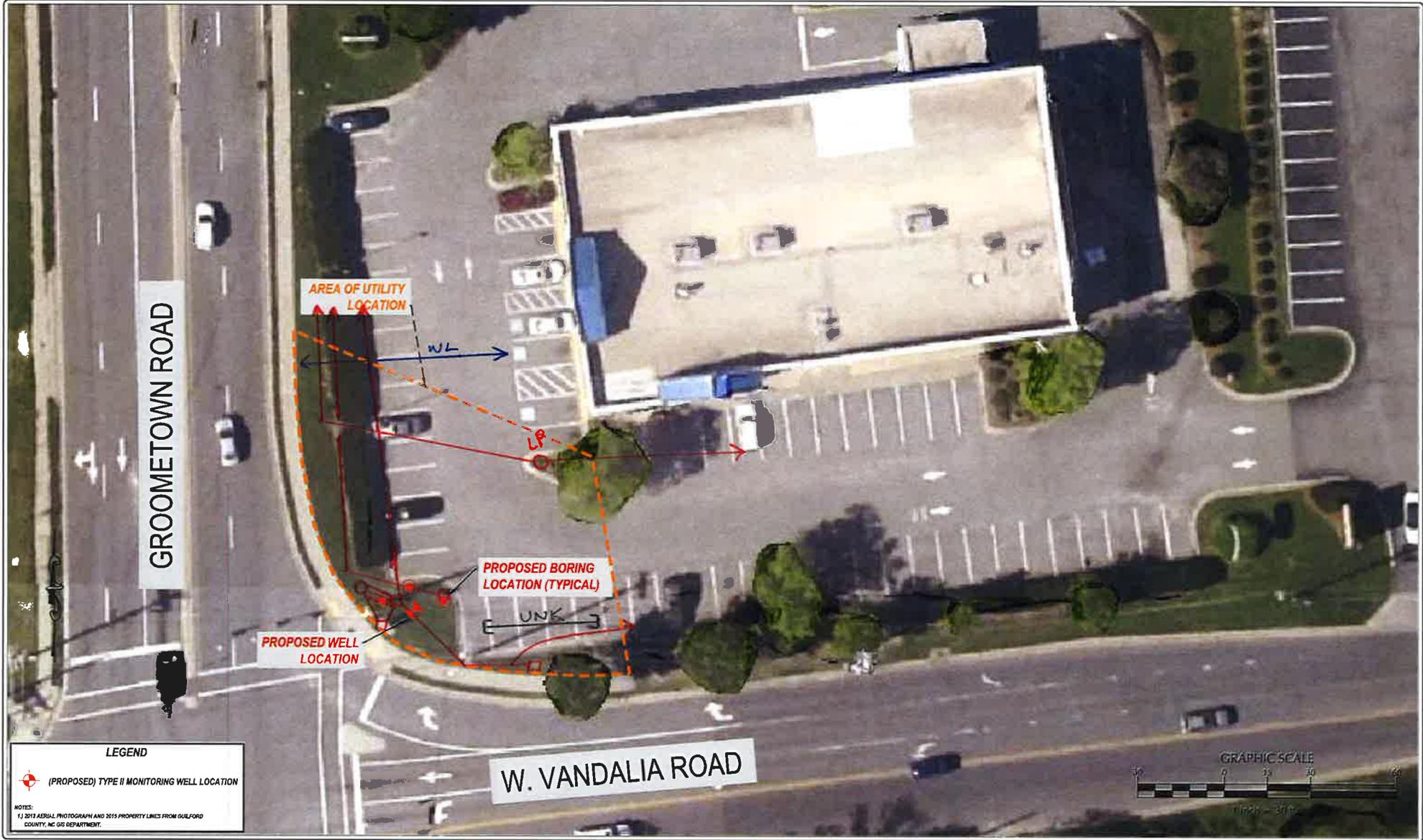
Regards,

Stantec Consulting Services Inc.

A handwritten signature in black ink that reads "Bruce Beavers".

Bruce Beavers, PLS
Survey Manager
Phone: (919) 865-7361
Fax: (919) 851-7024
bruce.beavers@stantec.com

Design with community in mind



GROOMTOWN ROAD

W. VANDALIA ROAD

AREA OF UTILITY LOCATION

PROPOSED BORING LOCATION (TYPICAL)

PROPOSED WELL LOCATION

WL

UNK

LEGEND

(PROPOSED) TYPE II MONITORING WELL LOCATION

NOTES:
1.) 2013 AERIAL PHOTOGRAPH AND 2015 PROPERTY LINES FROM GULFORD COUNTY, NC GIS DEPARTMENT.



Revisions			
No.	Description	Date	By

LWY-GROOMTOWN ECKERD (INCIDENT # TF30687)
3611 GROOMTOWN ROAD
GREENSBORO, GULFORD COUNTY, NC

SITE MAP

Drawn By WRC	Scale 1"=30'	Job No. 0214024.01
Checked By KTC	Date 02/10/15	Sheet No. 1

WITHERS & RAVENEL
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111 South Dixie City, North Carolina 27111 | 336.733.8100 | www.witherandsurveyors.com | License No. C0017

EXHIBIT SHEET # 1 - 3611 GROOMTOWN ROAD, GREENSBORO, NC. BASE MAP SOURCE: GULFORD COUNTY GIS DEPARTMENT. PHOTOGRAPHY BY: J. W. BROWN, 2013.