



ECS CAROLINAS, LLP
Geotechnical • Construction Materials • Environmental

September 3, 2008

Mr. Chip Mark
MarkPiercePoole Properties
1001 Morehead Square Drive - Suite 195
Charlotte, North Carolina 28203

Reference: Report of UST and Surficial Staining Assessment Services
6219 Lake Brandt Road and 1020 NC Highway 150
Summerfield, Guilford County, North Carolina
ECS Project 09.16064C

Dear Mr. Mark:

As authorized by your acceptance of our Proposal 09.13911-P dated August 5, 2008, ECS Carolinas, LLP (ECS) has completed the Report of Underground Storage Tank (UST) and Surficial Staining Assessment Services for the above referenced site. Included in this report is a description of the field activities, the results obtained, and our conclusions and recommendations.

We appreciate the opportunity to provide our services to you. If there are questions regarding this report, or a need for further information, please contact us at (336) 856-7150.

Respectfully Submitted,

ECS CAROLINAS, LLP

Toby S. Benfield
Staff Scientist

James D. Hoskins III, P.E.
Chief Engineer
NC License #18493

*Report of UST and Surficial Staining Assessment Services
6219 Lake Brandt Road and 1020 NC Highway 150
Summerfield, North Carolina
ECS Project 09.16064C
September 3, 2008*

1.0 BACKGROUND INFORMATION

The site is located at 6219 Lake Brandt Road and 1020 NC Highway 150 in Summerfield, North Carolina (Figures 1 and 2). ECS recently completed a Phase I Environmental Site Assessment (ESA) for the site (ECS Project 09.16064, report dated February 1, 2008) and a Report of Environmental Services (ECS Project 09.15548E dated June 3, 2008). The Phase I ESA identified the following recognized environmental conditions of the site:

- A heating oil underground storage tank (UST) associated with the residence located at 6219 Lake Brandt Road was identified at the site; and,
- an oil stain was observed on the southern portion of the site at the residence located at 1020 NC Highway 150.

Additional assessment was performed to help determine if the site has been adversely impacted by a release from the former UST or by the oil stains observed at the site.

Mr. Chip Mark with MarkPiercePoole Properties, Inc. contracted ECS to provide assessment services to determine if an undocumented release from the UST or the oil stained area has impacted the site. Project information is based on information obtained during the Phase I Assessment and conversations between Mr. Chip Mark and Mr. Jason Ricks with ECS.

2.0 FIELD ACTIVITIES

The field activities consisted of collecting one soil sample from the vicinity of the UST and two soil samples from the oil stained area using a hand auger.

2.1 Soil Assessment and Sampling

On August 20, 2008, ECS personnel advanced one hand-auger soil boring (UST-1, Figure 2A) at the western end of the former UST to a depth of approximately 6 feet below ground surface (bgs). One soil boring (S1, Figure 2B) was advanced to a depth of approximately 2 feet below ground surface in the oil stained area at 1020 NC Highway 150. Soil samples were screened using the probe of a Foxboro Model 1000B toxic vapor analyzer (TVA) which is a flame ionization detector (FID). The soil from the boring was placed in resealable plastic bags for the purpose of field screening. Each plastic bag was placed in a warm location for approximately ten minutes to allow the headspace in the bag to equilibrate with the soil. The probe of the FID was then inserted into the bag, and the bag was immediately resealed using finger pressure. The sample from the boring with the highest reading on the FID was submitted for laboratory analysis.

A positive stop approach was used to reduce analytical costs. Because the soil boring advanced in the vicinity of the former UST exhibited obvious signs of petroleum impact (petroleum odors and elevated readings on the TVA), additional soil samples were not collected from this area. Soil samples were collected at the surface and at a depth of 2 feet below ground surface in the oil stained area in an effort to delineate the vertical extent of the impacted soil. Prior to initiating the first boring, the hand auger was decontaminated by washing in a solution of Alconox[®] detergent and potable water, followed by a rinse with the potable water. A boring log, which includes FID readings, was prepared for the soil borings and is included in the Appendix.

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2.2 Sample Collection and Transportation

The soil samples were placed in laboratory prepared containers using a new pair of disposable nitrile gloves. Each container was labeled and placed in a cooler containing ice to maintain the samples at approximately 4° Celsius. The sample containers were then delivered to Research & Analytical Laboratories, Inc. (R&A) in Kernersville, North Carolina for chemical analysis. A *Chain of Custody Record* was maintained and is included in the Appendix.

3.0 LABORATORY ANALYSIS

The soil sample UST 1-6 was analyzed for gasoline and diesel range total petroleum hydrocarbons (TPH) using EPA Methods 8015/5035 and 8015/3550, respectively. Gasoline and diesel range total petroleum hydrocarbons (TPH) were detected at concentrations that exceed the North Carolina Action Levels of 10 parts per million (ppm). Soil samples S1-surf and S1-2 were analyzed for oil and grease using EPA Method 8015/9071. Oil and grease were detected at concentrations exceeding the North Carolina Action Level of 250 ppm. A summary of soil analytical results is included in Table 1. The laboratory data sheet is included in the Appendix.

4.0 CONCLUSIONS AND RECOMMENDATIONS

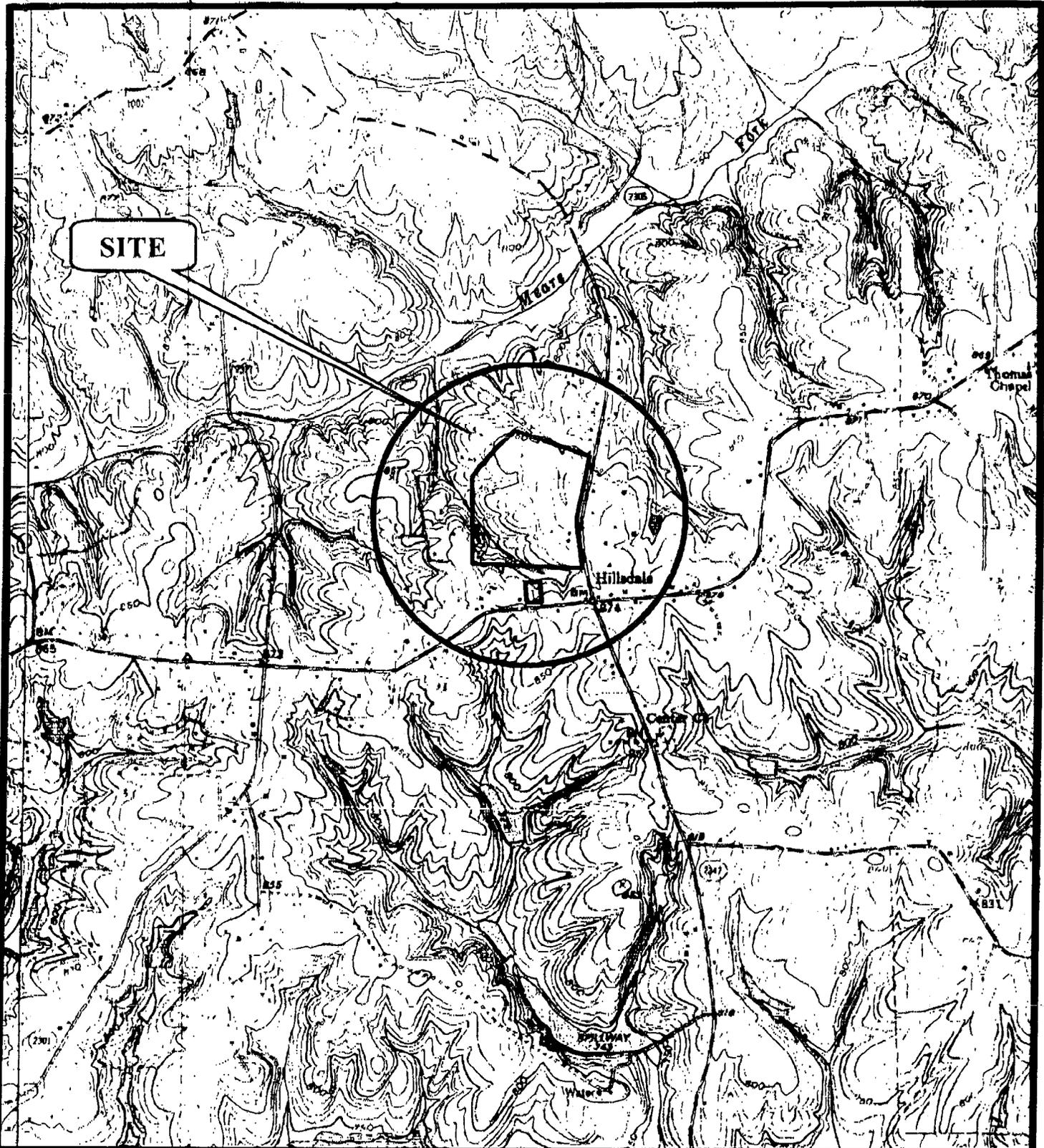
The field activities consisted of collecting one soil sample in the vicinity of the former UST at 6219 Lake Brandt Road and two soil samples (surface and 2 feet below ground surface) in the oil stained area at 1020 NC Highway 150. Based on laboratory analysis, ECS concludes that the soil in the vicinity of the UST has been impacted by petroleum-related compounds. The soil in the vicinity of the oil stain is impacted above the North Carolina Action Levels but appears localized.

Based on the laboratory analytical results, ECS recommends that the impacted soil be removed and properly disposed. If the impacted soil cannot be removed to below the soil-to-groundwater Maximum Soil Contaminant Concentrations (MSCCs) in the vicinity of the former UST, a Phase I Limited Site Assessment (LSA) will be required.

ECS recommends that the current property owner be notified and that they submit a copy of this report to the North Carolina Department of the Environment and Natural Resources (NCDENR).

5.0 QUALIFICATIONS OF REPORT

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



SOURCE:

USGS TOPOGRAPHIC MAP
LAKE BRANDT,
NORTH CAROLINA QUADRANGLE
DATED 1951 AND REVISED 1994

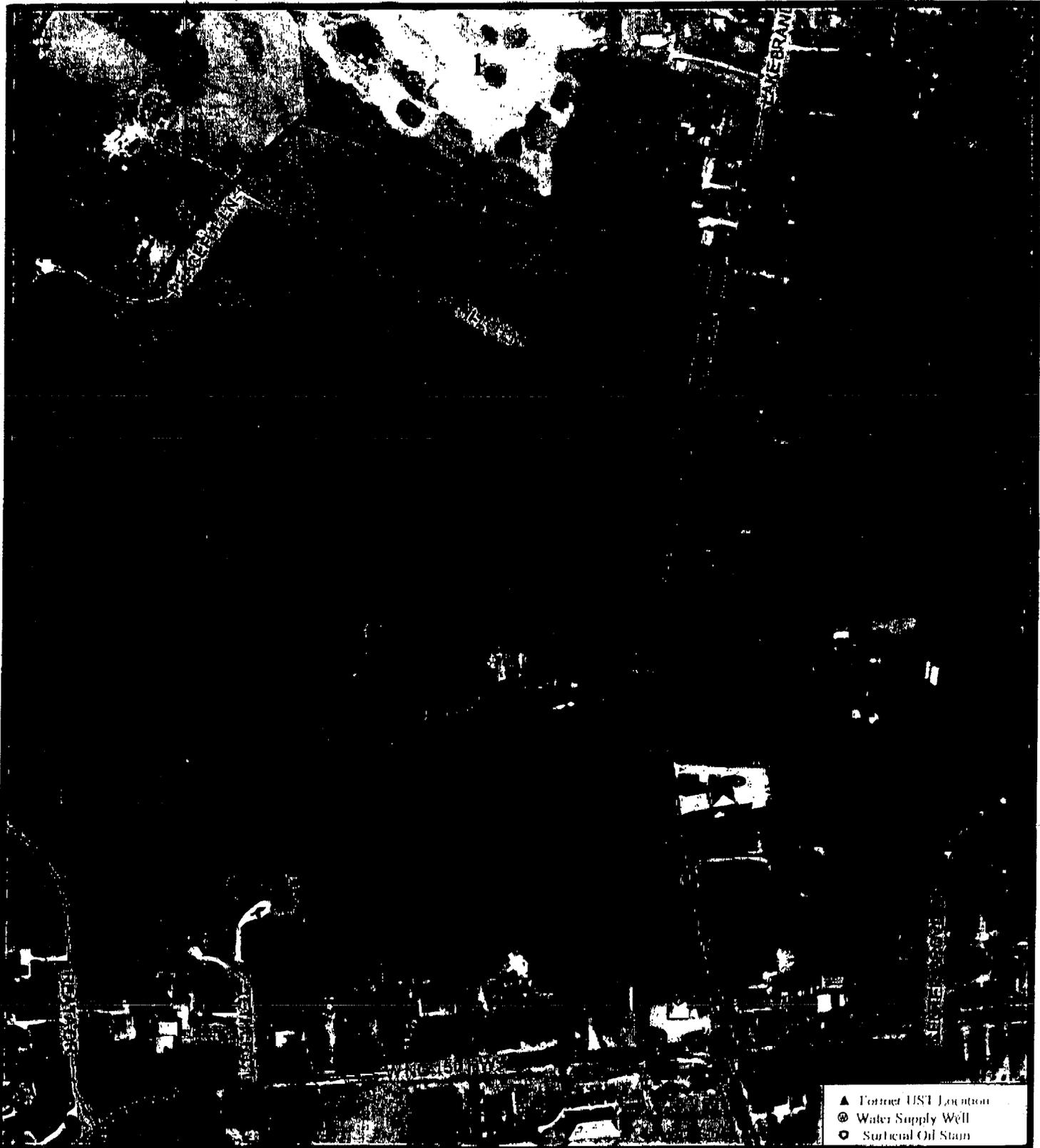
SCALE: 1"=2,000'



FIGURE 1

SITE LOCATION MAP
6219 LAKE BRANDT ROAD AND
1020 NC HIGHWAY 150 WEST
SUMMERFIELD, NORTH CAROLINA

ECS PROJECT NO. 09-16064C



- ▲ Former UST Location
- ⊗ Water Supply Well
- Surface Oil Spill

SOURCE:

GUILFORD COUNTY
GIS DEPARTMENT
AERIAL PHOTOGRAPH, DATED 2007

SCALE: 1"=400'

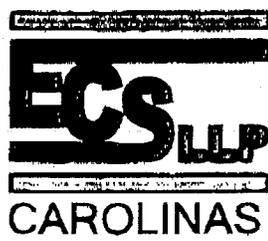
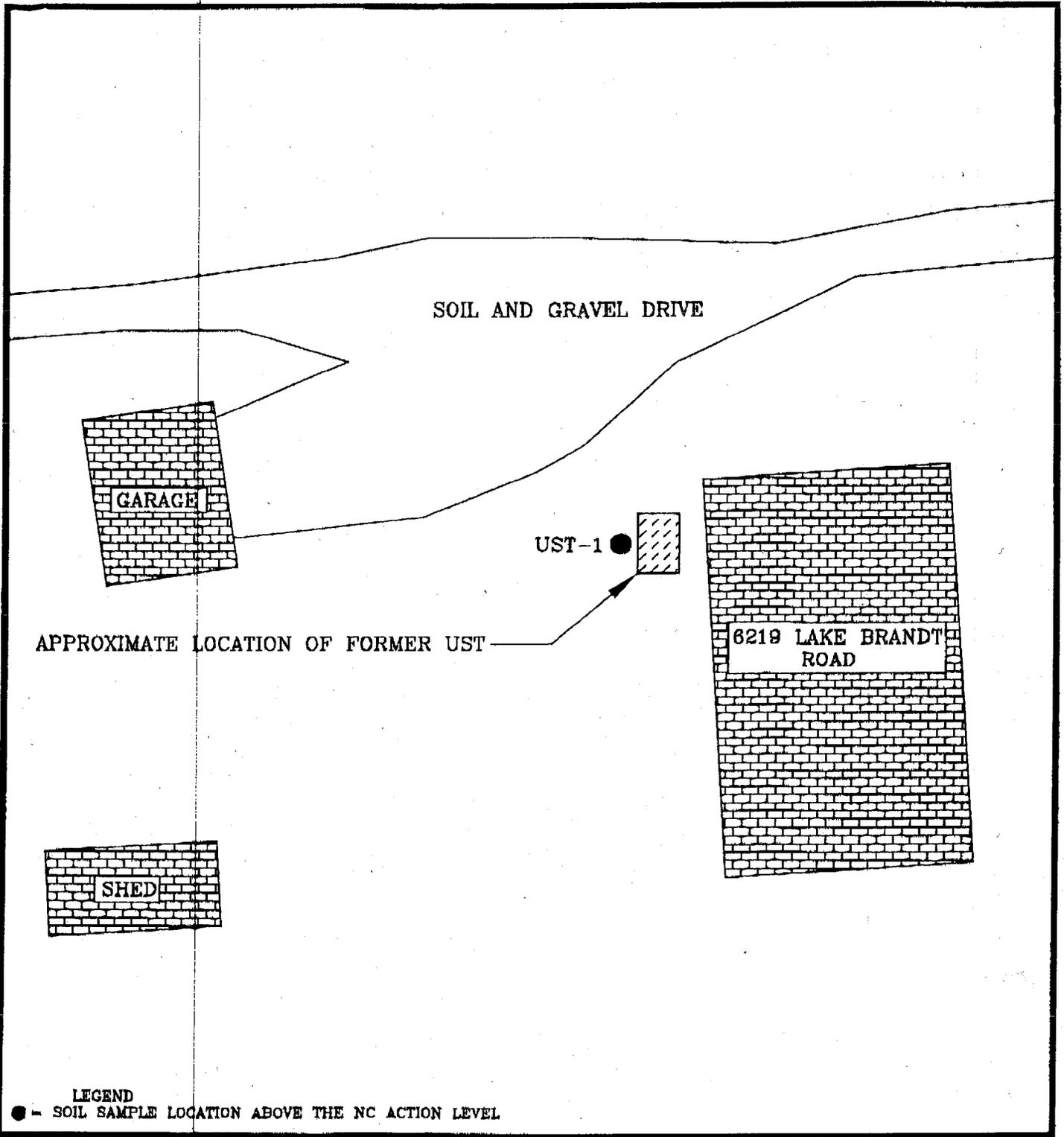


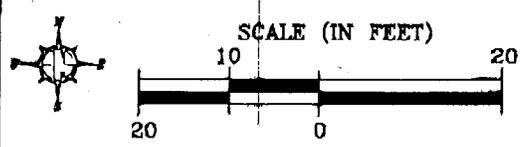
FIGURE 2

2007 AERIAL PHOTOGRAPH
6219 LAKE BRADT ROAD AND
1020 NC HIGHWAY 150 WEST
SUMMERFIELD, NORTH CAROLINA

ECS PROJECT NO. 09-16064C



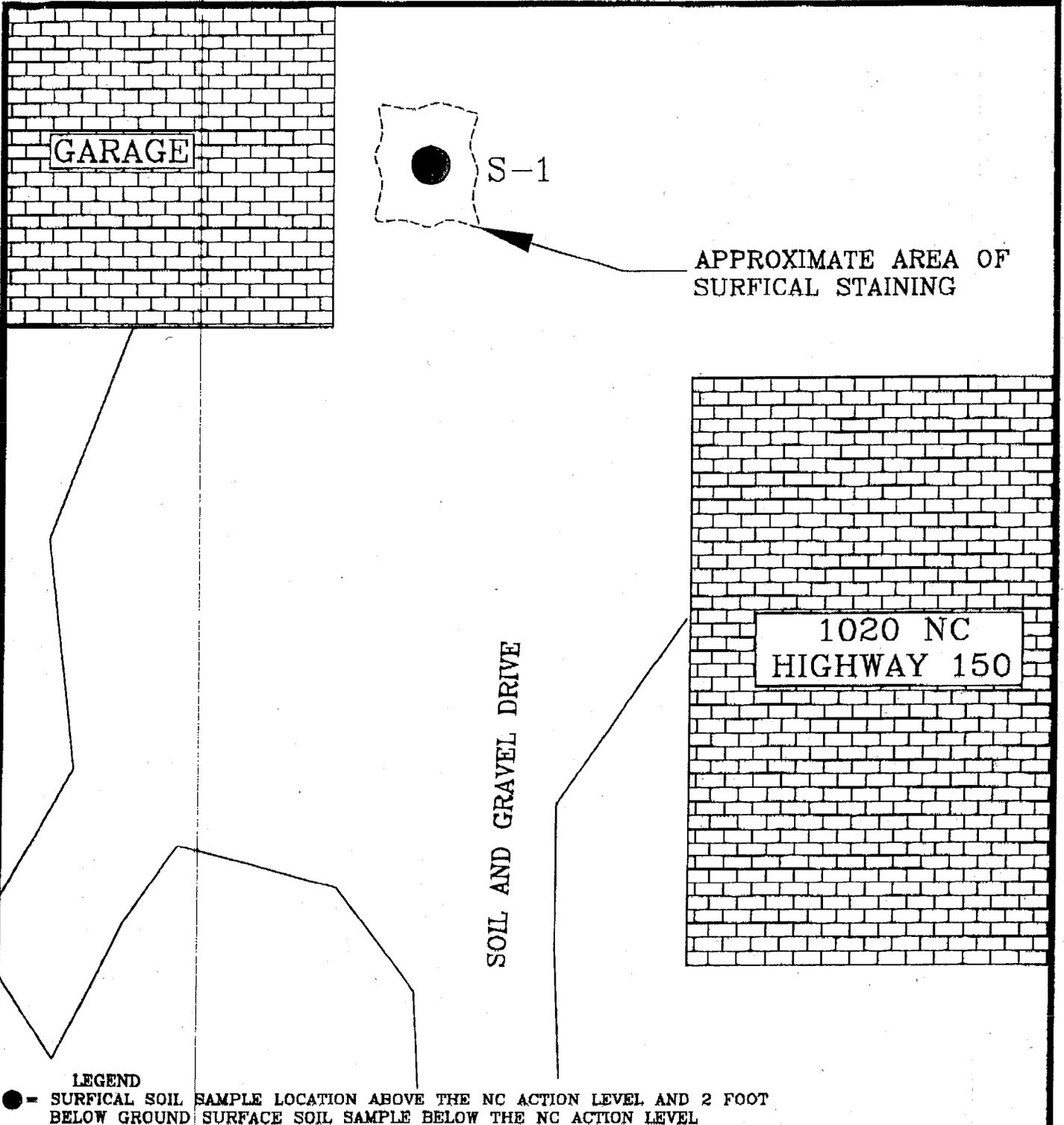
LEGEND
 ● - SOIL SAMPLE LOCATION ABOVE THE NC ACTION LEVEL



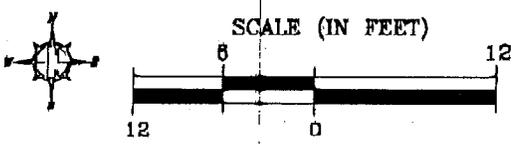
REFERENCE:
 FIELD NOTES BY ECS PERSONNEL



FIGURE 2A
 SOIL SAMPLE LOCATION MAP
 6219 LAKE BRANDT ROAD
 SUMMERFIELD, GUILFORD COUNTY
 NORTH CAROLINA
 ECS PROJECT 09.18084C



LEGEND
 ● - SURFICAL SOIL SAMPLE LOCATION ABOVE THE NC ACTION LEVEL AND 2 FOOT BELOW GROUND SURFACE SOIL SAMPLE BELOW THE NC ACTION LEVEL



REFERENCE:
 2007 AERIAL PHOTOGRAPH PROVIDED BY
 GUILFORD COUNTY NORTH CAROLINA
 GIS DEPARTMENT



FIGURE 2B
 SOIL SAMPLE LOCATION MAP
 1020 NC HIGHWAY 150 WEST
 SUMMERFIELD, GUILFORD COUNTY
 NORTH CAROLINA
 ECS PROJECT 09:16064C

TABLE 1 SUMMARY OF SOIL ANALYTICAL RESULTS

Project Name: Lake Brandt Road and Highway 150, Greensboro, North Carolina
ECS Project Number: 09.16064C

Analytical Method			8015/5035	8015/3550	8015/5030	9071 w/ silica gel extraction
Location of Sample			Gasoline Range TPH	Diesel Range TPH	Gasoline Range TPH	Oil and Grease
Site ID	Date	Depth (ft. bgs)				
UST1-6	08/20/2008	6	NSF	NSF	NSF	NSF
S1-surf	08/20/2008	Ground Surface	NSF	NSF	NSF	NSF
S1-2	08/20/2008	2	NSF	NSF	BQL	BQL
Standard Concentration (North Carolina)			10	10	10	250

██████████ = Concentration Exceeds the North Carolina Action Level
 mg/kg = milligrams per kilograms = ppm
 ft. bgs = feet below ground surface
 NSF = Not Sampled For

