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PRELIMINARY SITE ASSESSMENT REPORT

Parcel #9
Alhobishi Convenience Store Property
5102 U.S Highway 301
State Project I-4413
WBS Element # 35901.2.1
Robeson County

North Carolina Department of Transportation
Geotechnical Engineering Unit
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

January 7, 2011

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PRELIMINARY SITE ASSESSMENT REPORT

Parcel #9, 5102 North Fayetteville Road (U.S. Highway 301)
Alhobishi Convenience Store Property
Bridge 36 Over I-95 (Exit 22) on U. S. Highway 301
State Project I-4413
WBS Element # 35901.2.1
Robeson County

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Signature Page

This document, entitled "Preliminary Site Assessment Report," has been prepared for Parcel #9, located at 5102 North Fayetteville Road in Robeson County, North Carolina (State Project I-4413, WBS Element # 35901.2.1). It has been prepared by GEL Engineering of NC, Inc. in accordance with the Notice to Proceed provided by the North Carolina Department of Transportation-GeoEnvironmental Section, Geotechnical Engineering Unit for the exclusive use of the North Carolina Department of Transportation. It has been prepared in accordance with accepted quality control practices and has been reviewed by the undersigned.

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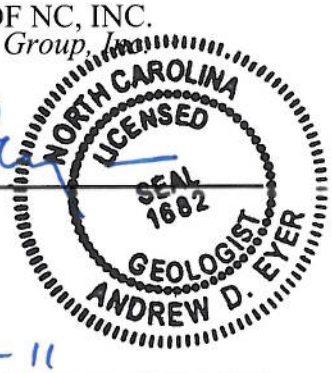

Andrew D. Eyer, L.G.
Senior Project Manager

01 - 07 - 11
Date

PRELIMINARY SITE ASSESSMENT REPORT

Parcel #9, 5102 North Fayetteville Road (U.S. Highway 301)
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Executive Summary

The subject site is Parcel #9, located at 5102 North Fayetteville Road in Robeson County, North Carolina. The primary purpose of this investigation was to determine the presence or absence of underground storage tanks (USTs) and constituents of concern in soil and groundwater within the North Carolina Department of Transportation (NCDOT) proposed northeasterly Right-of-Way (ROW) of U.S. Highway 301. This document presents the details of a preliminary site assessment performed within the NCDOT proposed northeasterly ROW adjacent to and within Parcel #9.

GEL Engineering of NC, Inc. (GEL) performed a preliminary site assessment that included a geophysical survey, and the collection and analysis of soil samples and one groundwater sample. The results of the geophysical investigation at the site did not identify any "Known USTs," "Probable USTs," or "Possible USTs" in the subsurface of the investigation area.

Four existing onsite at-grade groundwater monitoring wells were identified adjacent to the proposed ROW. Several other onsite monitoring wells were also observed upgradient from (northeast of) the proposed ROW.

Soil samples were collected for analysis from five borings constructed within the NCDOT proposed northeasterly ROW of U.S. Highway 301. The soil samples were analyzed for Diesel Range Organics (DRO) and Gasoline Range Organics (GRO). The analytical results indicate that DRO and/or GRO were detected in all five collected soil samples at concentrations exceeding the NCDENR action level of 10 milligrams per kilogram (mg/kg).

Based on the detection of elevated DRO and GRO concentrations in the soil samples, it is estimated that there is a volume of 5,007 cubic yards of impacted soil within and adjacent to the proposed ROW at Parcel #9.

Executive Summary (continued)

One groundwater sample was collected from boring SB-5102-3 and analyzed for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). Four VOCs were detected in the groundwater sample, and two of the detected VOC concentrations exceed the respective North Carolina Department of Environment and Natural Resources (NCDENR) 2L groundwater standards. Two SVOCs were detected in the groundwater sample, and both concentrations exceed the respective NCDENR 2L groundwater standards.

Based on the soil and groundwater data generated from this investigation and the documented previous petroleum releases at Parcel #9, there is evidence that petroleum impacted soil and groundwater underlie the proposed NCDOT ROW at the subject site, and will most likely be encountered during excavation associated with planned drainage and roadway modifications. No additional environmental investigation of potential impact to the site soil is recommended at this time; however, it is recommended that soil excavated within and adjacent to the proposed ROW be evaluated if offsite disposal is a consideration.

Although VOCs and SVOCs exceeding regulatory standards were detected in the groundwater sample collected during the preliminary site assessment, no additional assessment of groundwater is recommended at this time since the impacted groundwater beneath Parcel #9 is currently being addressed through corrective action under the NCDENR Leaking UST Program.

GEL Engineering of NC, Inc.
an Affiliate of The GEL Group, Inc.

fc: ncdt00610

PRELIMINARY SITE ASSESSMENT REPORT

Parcel #9, 5102 North Fayetteville Road (U.S. Highway 301)
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State Project I-4413
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Robeson County

1.0 Introduction

This document presents the details of a preliminary site assessment performed within the North Carolina Department of Transportation (NCDOT) proposed northeasterly Right-of-Way (ROW) of U.S. Highway 301 at 5102 North Fayetteville Road (Parcel #9) in Robeson County, North Carolina. Currently, Parcel #9 houses an active convenience store with gasoline dispensers. The site location is shown on Figure 1, an excerpt from the United States Geological Survey (USGS) 7.5-minute quadrangle map of Northwest Lumberton, North Carolina. The preliminary site assessment, which included a geophysical survey, was conducted by GEL Engineering of NC, Inc. (GEL) in accordance with the Notice to Proceed issued by NCDOT on November 15, 2010.

The primary purpose of this investigation was to determine the presence or absence of USTs and on-site constituents of concern in soil and groundwater within the NCDOT proposed northeasterly ROW of U.S. Highway 301 at the subject site as a result of current and/or former operations.

2.0 Background

NCDOT is planning road improvements to U.S. Highway 301 near Interstate 95 Exit 22 in Lumberton, North Carolina. NCDOT wanted to assess the proposed ROW adjacent to Parcel #9 to evaluate the presence or absence of USTs, and soil and groundwater contamination related to the current and/or former on-site operations, and the impact (if any) of these operations on the proposed road improvements, especially the proposed routing for a planned storm water drainage system within the proposed ROW. Figures 2 and 3 show the general site layout for Parcel #9 and its location on U.S. Highway 301, respectively**.**

Parcel #9 is currently undergoing corrective action under the North Carolina Department of Environment and Natural Resources (NCDENR) UST Program. Several groundwater monitoring wells are located at the site, including wells AMW-6 through AMW-9, which are located adjacent to the NCDOT proposed northeasterly ROW, as

shown in Figure 2. The measured longitude and latitude coordinates for these four wells are summarized below.

Summary of Location Data for Existing Onsite Groundwater Monitoring Wells Located Adjacent to NCDOT Proposed ROW

Soil Boring	Latitude/Longitude (NAD83)
AMW-6	34º40'19.68"N / 79º00'26.94"W
AMW-7	34º40'19.62"N / 79º00'27.00"W
AMW-8	34º40'19.62"N / 79º00'26.94"W
AMW-9	34º40'19.56"N / 79º00'26.88"W

Notes:
1) Coordinates are based on North American Datum of 1983 (NAD83) and were measured on site using a handheld map grade GPS.

A *Free Product System Specification Report* submitted to NCDENR by Geological Resources, Inc. on May 18, 2010 for the site indicate that no free product has been encountered in wells AMW-6 through AMW-9 since 2004, but two isolated free product plumes were identified east of the four wells. No recent groundwater quality data for the four wells were found during a review of NCDENR's files for the site in November 2010, but groundwater in the vicinity of the wells is most likely impacted by released petroleum based on the measurement of free product in well AMW-9 in 2004, as well as the analytical results for groundwater sample MW-5102-3, as discussed below.

3.0 Local Geology and Surroundings

Parcel #9 is located within a commercially developed area of Robeson County, near Exit 22 for Interstate 95. The site is approximately 4 miles north of the center of Lumberton, North Carolina. This area is located in the Coastal Plain physiographic province of North Carolina. The land surface of the area is characterized by nearly level, loamy soils. Coastal Plain geology in the vicinity of the site is typically undifferentiated post-Miocene interbedded sand and clay stream terrace deposits (USGS, 1955). The Cretaceous Black Creek Formation, a regional aquifer, underlies the area.

The United States Department of Agriculture's *Soil Survey of Gates County, North Carolina* (1978) maps the area as Udorthents, loamy (Ud), which is characterized by soil that is typically composed of moderately well-drained loamy mine spoil or earthy fill. The soils encountered at the site during the preliminary site assessment consisted

predominantly of brown/tan sandy loam to depths of approximately 4 feet below land surface (bls) and grey sandy clay from 4 to 8 feet bls, as shown in Appendix I.

January 2010 groundwater elevation data collected at the site by Geological Resources, Inc. indicated that the water table was encountered at a depth of approximately 5 feet bls in the vicinity of the NCDOT proposed ROW. Depth to groundwater measured within the proposed ROW during the preliminary site assessment was 6.5 feet bls. Based on the USGS topographic map presented as Figure 1, the site is located approximately 130 feet above mean sea level. The Geological Resources, Inc May 2010 *Free Product System Specification Report* indicates that groundwater in the vicinity of Parcel #9 flows in a westerly/southwesterly direction towards the Saddletree Swamp.

4.0 Subsurface Investigation

To determine the presence or absence of USTs and impact to subsurface soil within the NCDOT proposed ROW at Parcel #9, GEL performed a limited site assessment that consisted of the following tasks:

- A geophysical investigation to identify the presence or absence of USTs and associated appurtenances within the proposed northeasterly ROW of U.S. Highway 301 within and adjacent to Parcel #9.
- Soil vapor screening of soil samples collected from subsurface soil borings at Parcel #9 within the proposed northeasterly ROW of U.S. Highway 301 to determine the potential presence or absence of soil impact from petroleum constituents of concern.
- Collection and laboratory analysis of soil samples from the proposed northeasterly ROW of U.S. Highway 301 at Parcel #9.
- Collection and laboratory analysis of one groundwater sample from the proposed northeasterly ROW of U.S. Highway 301 at Parcel #9.

The details of these tasks are discussed in the following sections.

4.1 Geophysical Evaluation at Parcel #9

The geophysical investigation included the deployment of ground penetrating radar (GPR) technology and time domain electromagnetic technology (TDEM) to the site. These technologies were used in concert with one another in order to identify subsurface metallic anomalies and, more specifically, to identify the potential presence of USTs on

site. A brief description of each technology is presented in the following paragraphs followed by a discussion of the results of the geophysical investigation.

4.1.1 Ground Penetrating Radar Methodology

A RAMAC digital radar control system configured with a 250 Megahertz (MHz) antenna array was used in this investigation. GPR is an electromagnetic geophysical method that detects interfaces between subsurface materials with differing dielectric constants. The GPR system consists of an antenna that houses the transmitter and receiver, a digital control unit that both generates and digitally records the GPR data, and a color video monitor to view data as they are collected in the field.

The transmitter radiates repetitive short-duration electromagnetic waves (at radar frequencies) into the earth from an antenna moving across the ground surface. These radar waves are reflected back to the receiver from the interface of materials with different dielectric constants. The intensity of the reflected signal is a function of the contrast in the dielectric constant between the materials, the conductivity of the material through which the wave is traveling, and the frequency of the signal. Subsurface features that commonly cause such reflections are: 1) natural geologic conditions, such as changes in sediment composition, bedding, and cementation horizons and voids; or 2) unnatural changes to the subsurface, such as disturbed soils, soil backfill, buried debris, tanks, pipelines, and utilities. The digital control unit processes the signal from the receiver and produces a continuous cross-section of the subsurface interface reflection events.

GPR data profiles are collected along transects, which are measured paths along which the GPR antenna is moved. During a survey, marks are placed in the data by the operator at designated points along the GPR transects or with a survey wheel odometer. These marks allow for a correlation between the GPR data and the position of the GPR antenna on the ground.

Depth of investigation of the GPR signal is highly site-specific and is limited by signal attenuation (absorption) in the subsurface materials. Signal attenuation is dependent on the electrical conductivity of the subsurface materials. Signal attenuation is greatest in materials with relatively high electrical conductivities, such as clays, brackish groundwater, or groundwater with a high dissolved solid content from natural or man-made sources. Signal attenuation is lowest in relatively low-conductivity materials, such as dry sand or rock. Depth of investigation is also dependent on the antenna's transmitting frequency. Depth of investigation generally increases as transmitting

frequency decreases; however, the ability to resolve smaller subsurface features is diminished as frequency is decreased.

The GPR antenna used at this site is internally shielded from aboveground interference sources. Accordingly, the GPR response is not affected by overhead power lines, metallic buildings, or nearby objects.

4.1.2 Time Domain Electromagnetic Methodology

The TDEM methods measure the electrical conductivity of subsurface materials. The conductivity is determined by inducing (from a transmitter) a time or frequency-varying magnetic field and measuring (with a receiver) the amplitude and phase shift of an induced secondary magnetic field. The secondary magnetic field is created by subsurface conductive materials behaving as an inductor as the primary magnetic field is passed through them.

The Geonics EM-61 system used in this investigation operates within these principles. However, the EM-61 TDEM system can discriminate between moderately conductive earth materials and very conductive metallic targets. The EM-61 consists of a portable coincident loop time domain transmitter and receiver with a 0.5-meter by 1.0-meter coil system. The EM-61 generates 150 pulses per second and measures the response from the ground after transmission or between pulses. The secondary EM responses from metallic targets are of longer duration than those created by conductive earth materials. By recording the later time EM arrivals, only the response from metallic targets is measured, rather than the field generated by the earth material.

4.1.3 Field Procedures

The GPR and TDEM field investigation was performed at Parcel #9 on November 21-22, 2010, as shown in Figure 4.

A GPR system time range setting of 90 nanoseconds (ns) was used during the entire investigation. This range was determined after a series of test lines were conducted to evaluate the GPR response in the local geologic section. A preliminary interpretation of the GPR data was conducted in the field and potential subsurface anomalies were marked on the ground. Following the completion of the fieldwork, the data were post-processed and analyzed in more detail. GPR data processing typically included band pass filtering, background removal, horizontal smoothing, and gain adjustments.

TDEM was also used to scan the project site. Electromagnetic anomalies indicative of buried metallic objects were marked in the field. TDEM was also used to scan the project site. Electromagnetic anomalies indicative of buried metallic objects were marked in the field.

It should be noted that "One Call" underground utility locations had been performed within the northeasterly ROW of U.S. Highway 301 at Parcel #9 prior to the initiation of the preliminary site assessment field activities at the site. No underground utilities were marked by "One Call" within the ROW at Parcel #9.

As shown on Figure 4, no EM or GPR anomalies were identified that indicated the potential presence of USTs; therefore, no USTs are suspected to be present in the subsurface within the investigation area.

4.2 Subsurface Soil Investigation at Parcel #9

To determine the presence or absence of impact to subsurface soil by constituents of concern, GEL collected soil samples from five subsurface soil borings, SB-5102-1 through SB-5102-5, at Parcel #9 on December 1, 2010, for analysis of total petroleum hydrocarbon indicator parameters. The soil borings were constructed within the proposed NCDOT northeasterly ROW of U.S. Highway 301, as shown on Figure 2 and in the photographs in Appendix II. The locations of all five of the soil borings were biased towards the proposed routing for the planned storm water drainage system within the NCDOT proposed ROW adjacent to Parcel #9, as shown in Figure 2. The longitude and latitude coordinates for the boring locations are listed in the table below.

All borings were advanced to a total depth of 8 feet bls except boring SB-5102-5, which was advanced to a depth of 6 feet bls due to the shallow depth at which the water table was encountered in the boring (6 feet bls). Soil samples were collected at depths of 3-4 feet bls and 7-8 feet bls in borings SB-5102-1 through SB-5102-4, and immediately above the water table at 5-6 feet bls from boring SB-5102-5. All soil samples were inspected for indications of impact by constituents of concern, including petroleum hydrocarbons, such as odors, discoloration, or visible sheen. This sampling was accomplished using direct push technology (DPT) provided by Regional Probing Services of Wake Forest, North Carolina (Regional Probing). Soil boring lithologic logs are attached as Appendix I of this document. Groundwater was encountered at 6 feet bls in boring SB-5102-5. Although the soil was moist at the termination depth of SB-5102-3, there was no indication that the water table had been encountered. However, when the

boring was converted to a temporary monitoring well, as discussed in Section 4.3 below, the depth to groundwater was measured at 6.5 feet bls.

The soil samples were screened for the presence of organic vapors using a portable photoionization detector (PID). The PID measures the concentration of organic compounds in the vapor space above a soil sample resulting from volatilization of organic compounds contained in the soil. To screen the soils, each sample was placed in a clean, resealable polyethylene bag. The bag was sealed, and the sample was allowed to equilibrate for approximately 5 minutes, after which time a small opening was made in the bag. The probe of the PID was then inserted into the bag, and the airspace above the soil was screened for organic vapors.

To assess the subsurface soil quality, the soil sample from each soil boring was submitted for laboratory analysis. The depth intervals and PID measurements of the collected soil samples submitted to the laboratory for analysis are listed below. As shown in the table, elevated levels of organic vapors were observed in all of the soil samples except SB-5102-1.

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Summary of Location Data and PID Measurements for Soil Samples Collected for Analysis at Parcel #9

Soil Boring	Depth Interval of Soil Sample Collected for Analysis (feet bls)	PID Reading (ppm)	Latitude/Longitude (NAD83)
SB-5102-1	7-8	0.0	34º40’18.90”N / 79º00’26.04”W
SB-5102-2	7-8	500	34º40’19.08”N / 79º00’26.52”W
SB-5102-3	7-8	1575	34º40’19.62”N / 79º00’27.00”W
SB-5102-4	7-8	125	34º40’20.16”N / 79º00’27.42”W
SB-5102-5	5-6	215	34º40’20.70”N / 79º00’28.02”W

Notes:
1) Coordinates are based on North American Datum of 1983 (NAD83)
2) bls = below land surface
3) PID = photoionization detector
4) ppm = parts per million

Following completion of the soil sampling activities (and groundwater sampling activities discussed in Section 4.3 below), all borings were abandoned by filling the boreholes with soil cuttings and hydrated bentonite. Soil samples were submitted to SGS Laboratories, Inc. in Wilmington, North Carolina (North Carolina Certification No. 481) for analysis of diesel range organics (DRO) by EPA Method 8015 with EPA Method

3545 sample preparation, and gasoline range organics (GRO) by EPA Method 8015 with EPA Method 5035A/5030B sample preparation. The analytical results are summarized in the following table and are included on the Certificates of Analysis provided in Appendix III.

Summary of Analytical Results for Soil Samples

Soil Sample	Depth Interval of Soil Sample Collected for Analysis (feet bls)	DRO	GRO
SB-5102-1	7-8	**10.6**	BQL
SB-5102-2	7-8	**45.7**	**11.0**
SB-5102-3	7-8	**573**	**695**
SB-5102-4	7-8	**29.3**	**33.9**
SB-5102-5	5-6	**211**	**40.0**
NCDENR Action Level		**10***	**10**

Notes:
1) BQL = Below Quantitation Limit
2) Concentrations shown are in milligram per kilogram (mg/kg).
3) **Bold** = detected concentration above the NCDENR action level
4) * = Recommended action level for DRO. Currently the enforced NCDENR action level is 40 mg/kg.

Potential soil impact is indicated by GRO and/or DRO concentrations that were detected in all five soil samples collected from borings SB-5102-1 through SB-5102-5. All detected levels DRO and GRO exceed the respective North Carolina Department of Environment and Natural Resources (NCDENR) action levels for DRO and GRO. The potentially impacted soil is most likely associated with previous petroleum releases that have been documented at the site, east and upgradient from the borings. Analysis of the soil for NCDENR's risk-based petroleum hydrocarbon parameters would be needed to confirm the presence or absence of soil impact from the previous releases.

It is estimated that there is an approximate total volume of 5,007 cubic yards of impacted soil (DRO >10 milligrams per kilogram (mg/kg) and/or GRO >10 mg/kg) within the NCDOT proposed northeasterly ROW of U.S. Highway 301 at Parcel #9, based on the following assumed area (as shown on Figure 2) and depth of impacted soil:

- 20,800 sq. feet x 6.5 feet (measured water table depth) = 135,200 cubic feet = 5,007 cubic yards

It should be noted that petroleum impacted soil most likely extends outside the NCDOT proposed ROW, based on the known history of released petroleum at the site.

4.3 Groundwater Investigation at Parcel #9

To determine the presence or absence of impact to groundwater by constituents of concern, groundwater sample MW-5102-3 was collected after soil boring location SB-5102-3 was converted to a temporary groundwater monitoring well, as shown in Figure 2. Groundwater sample MW-5102-3 was collected at this location because the PID measurement of the soil sample collected from SB-5102-3 was the highest of all soil samples collected at the site during the PSA, as indicated in the table above.

Regional Probing collected the groundwater sample using DPT. To collect the groundwater sample, the DPT probe was advanced to a depth of approximately 12 feet bls. The DPT probe was then retracted while an internal PVC slotted screen was released from the bottom of the probe. The groundwater sample was collected from within the slotted screen using new Teflon® tubing and a peristaltic pump. The collected groundwater sample was submitted to SGS Laboratories, Inc. for analysis of volatile organic compounds (VOCs) by EPA Method 8260B and semi-volatile organic compounds (SVOCs) by EPA method 8270D.

The analytical results are included on the Certificate of Analysis provided in Appendix III. The results for MW-5102-3 indicate that four VOCs and two SVOCs were detected, most of which had detected concentrations exceeding the respective NCDENR 2L standards, as shown in the table below.

Summary of VOCs and SVOCs Detected in Groundwater

Constituent	MW-5102-3	NCDENR 15A NCAC 2L .0115 GWQS
VOCs		
Benzene	**582**	1
Ethylbenzene	130	600
Isopropylbenzene	51.0	70
n-Propylbenzene	**109**	70
SVOCs		
2-Methylnaphthalene	**85.4**	30
Naphthalene	**36.6**	6

Notes:
1) All concentrations shown are in micrograms per liter (µg/L)
2) Detected concentrations exceeding the NCDENR 2L standards (January 2010) are shown in **bold.**

5.0 Conclusions and Recommendations

GEL performed a preliminary site assessment within the NCDOT proposed northeasterly ROW of U.S. Highway 301 adjacent to and within Parcel #9 that included a geophysical survey, and the collection and analysis of soil samples and one groundwater sample. The results of the geophysical investigation at the site did not identify any "Known USTs," "Probable USTs," or "Possible USTs" in the subsurface of the investigation area.

Four existing onsite at-grade groundwater monitoring wells were identified adjacent to the proposed ROW. Several other onsite monitoring wells were also observed upgradient from (northeast of) the proposed ROW.

Soil samples were collected for analysis from five borings constructed within the NCDOT proposed ROW of U.S. Highway 301. The soil samples were analyzed for DRO and GRO. The analytical results indicate that DRO and/or GRO were detected in all five collected soil samples at concentrations exceeding the NCDENR action level of 10 mg/kg.

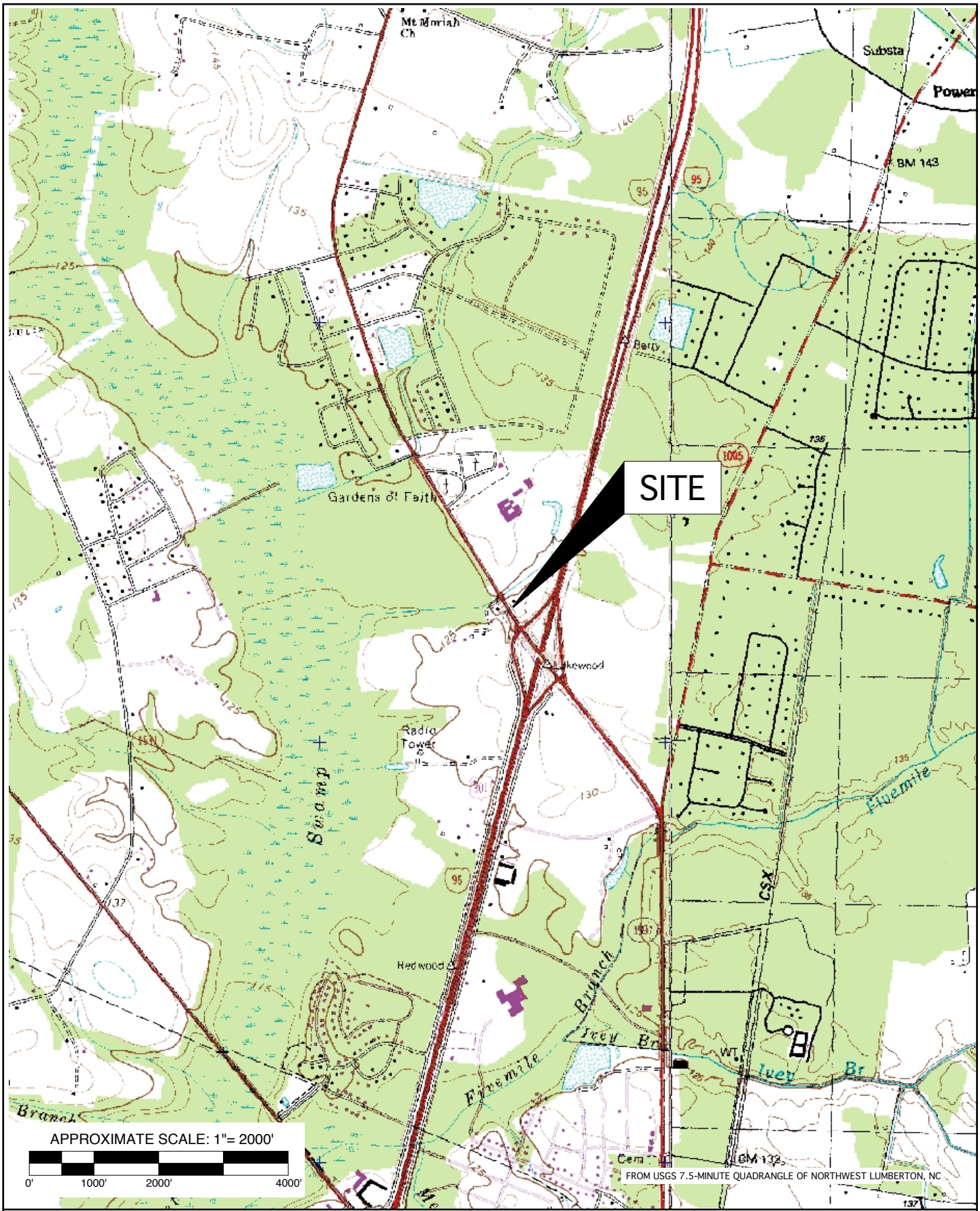
Based on the detection of elevated DRO and GRO concentrations in the soil samples, it is estimated that there is a volume of 5,007 cubic yards of impacted soil within and adjacent to the proposed ROW at Parcel #9.

One groundwater sample was collected from boring SB-5102-3 and analyzed for VOCs and SVOCs. Four VOCs were detected in the groundwater sample, and two of the detected concentrations exceed the respective NCDENR 2L groundwater standards. Two SVOCs were detected in the groundwater sample, and both exceed their respective NCDENR 2L groundwater standard.

Based on the soil and groundwater data generated from this investigation and the documented previous petroleum releases at Parcel #9, there is evidence that petroleum impacted soil and groundwater underlie the proposed NCDOT ROW at the subject site, and will most likely be encountered during excavation associated with planned drainage and roadway modifications. No additional environmental investigation of potential impact to the site soil is recommended at this time; however, it is recommended that soil excavated within and adjacent to the proposed ROW be evaluated if offsite disposal is a consideration.

Although VOCs and SVOCs exceeding regulatory standards were detected in the groundwater sample collected during the preliminary site assessment, no additional assessment of groundwater is recommended at this time since the impacted groundwater

beneath Parcel #9 is currently being addressed through corrective action under the NCDENR Leaking UST Program.



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PROJECT: ncdt00610		
PRELIMINARY SITE ASSESSMENT REPORT PARCEL #9 5102 NORTH FAYETTEVILLE ROAD LUMBERTON, NORTH CAROLINA STATE PROJECT I-4413, WBS #35901.2.1	TOPOGRAPHIC MAP SHOWING LOCATION OF SITE	FIGURE 1
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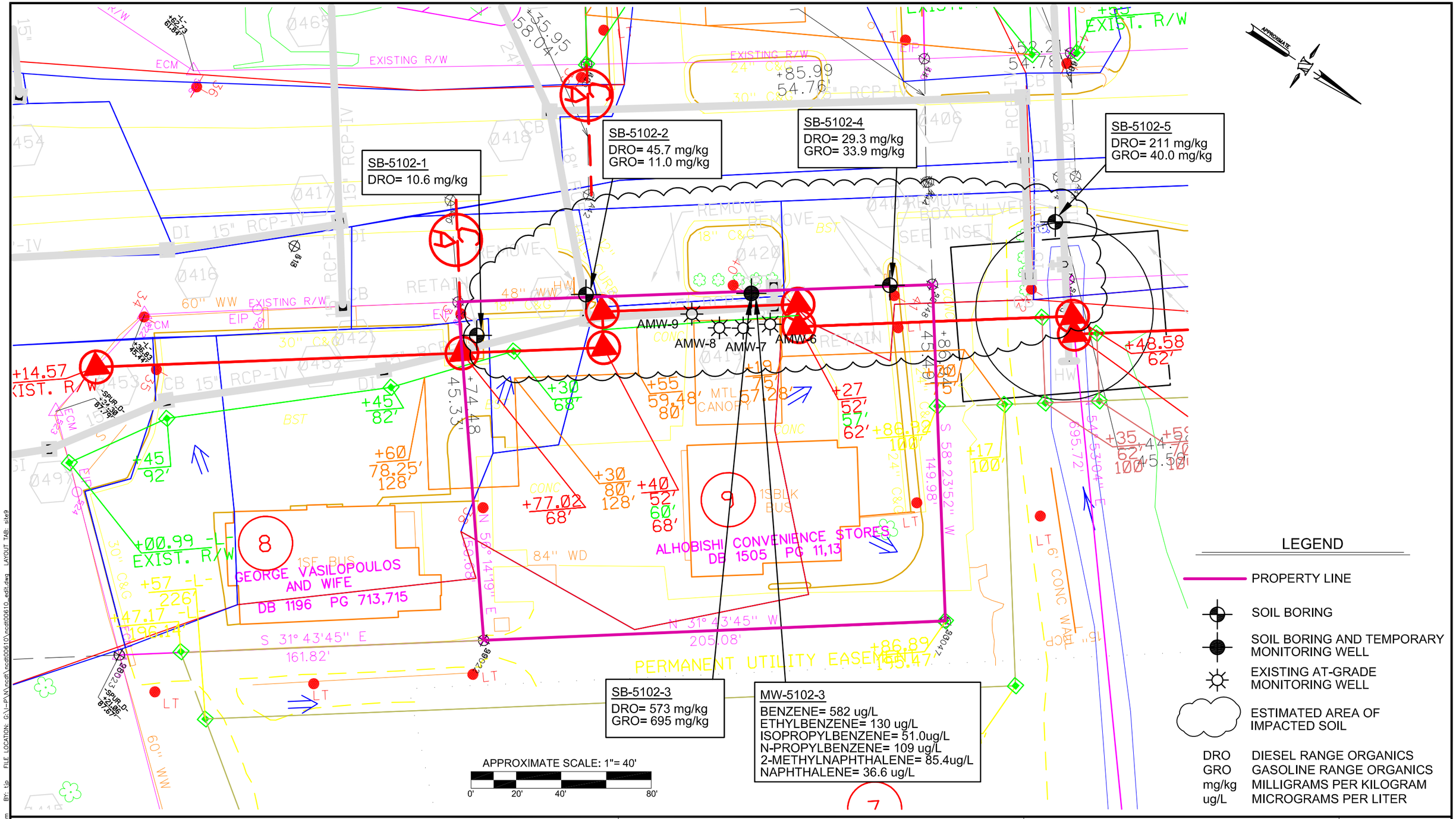

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PRELIMINARY SITE ASSESSMENT REPORT
PARCEL #9, 5102 N. FAYETTEVILLE RD.
ALHOBISHI CONVENIENCE STORE PROPERTY
ROBESON COUNTY, NORTH CAROLINA
STATE PROJECT I-4413, WBS ELEMENT NO. 235901.2.1

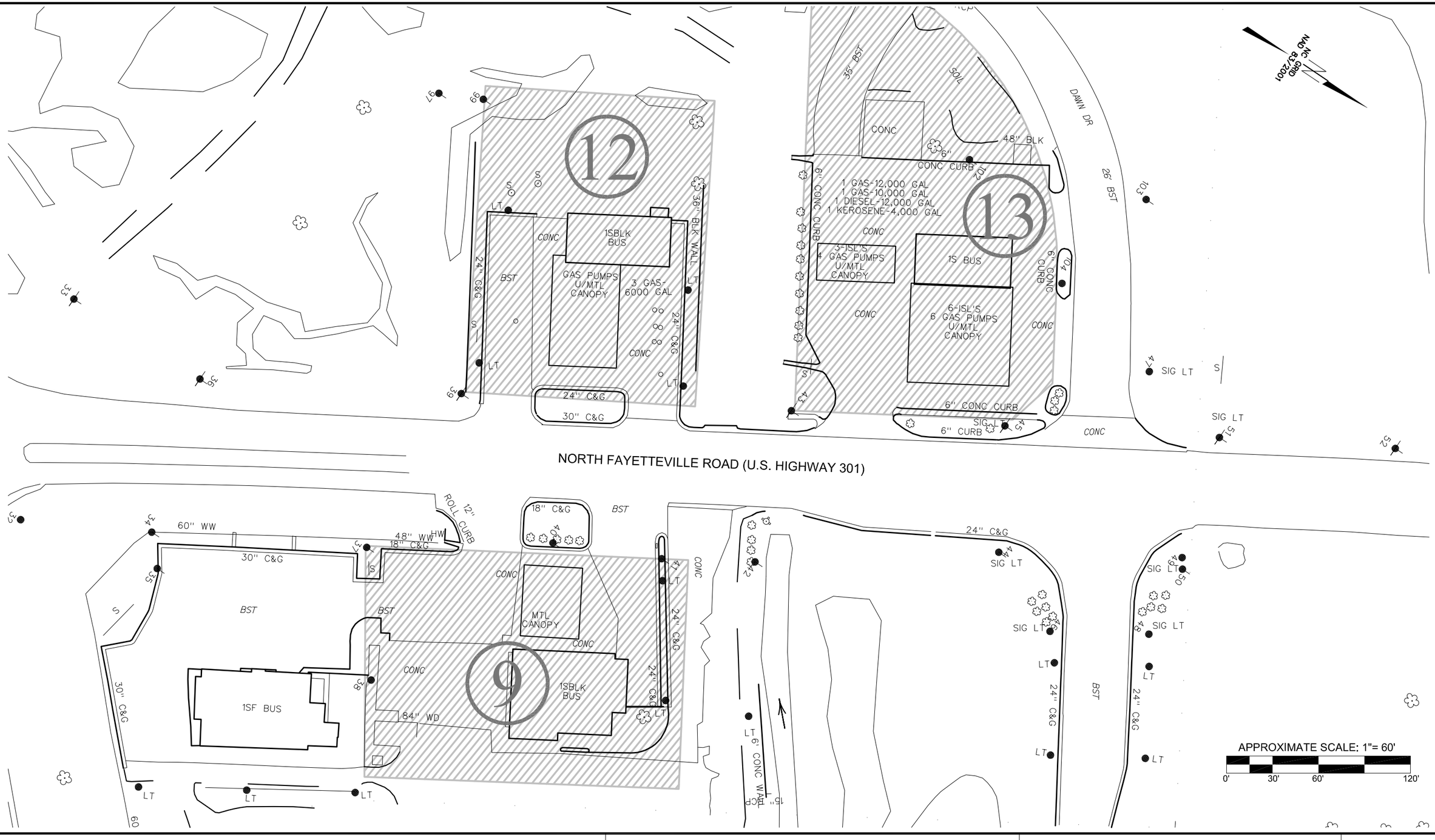
SITE MAP SHOWING LOCATIONS OF SOIL BORINGS AND TEMPORARY GROUNDWATER MONITORING WELL

FIGURE 2

DATE: January 4, 2011

DRAWN BY: EJA/TJP

APPRV. BY: ADE



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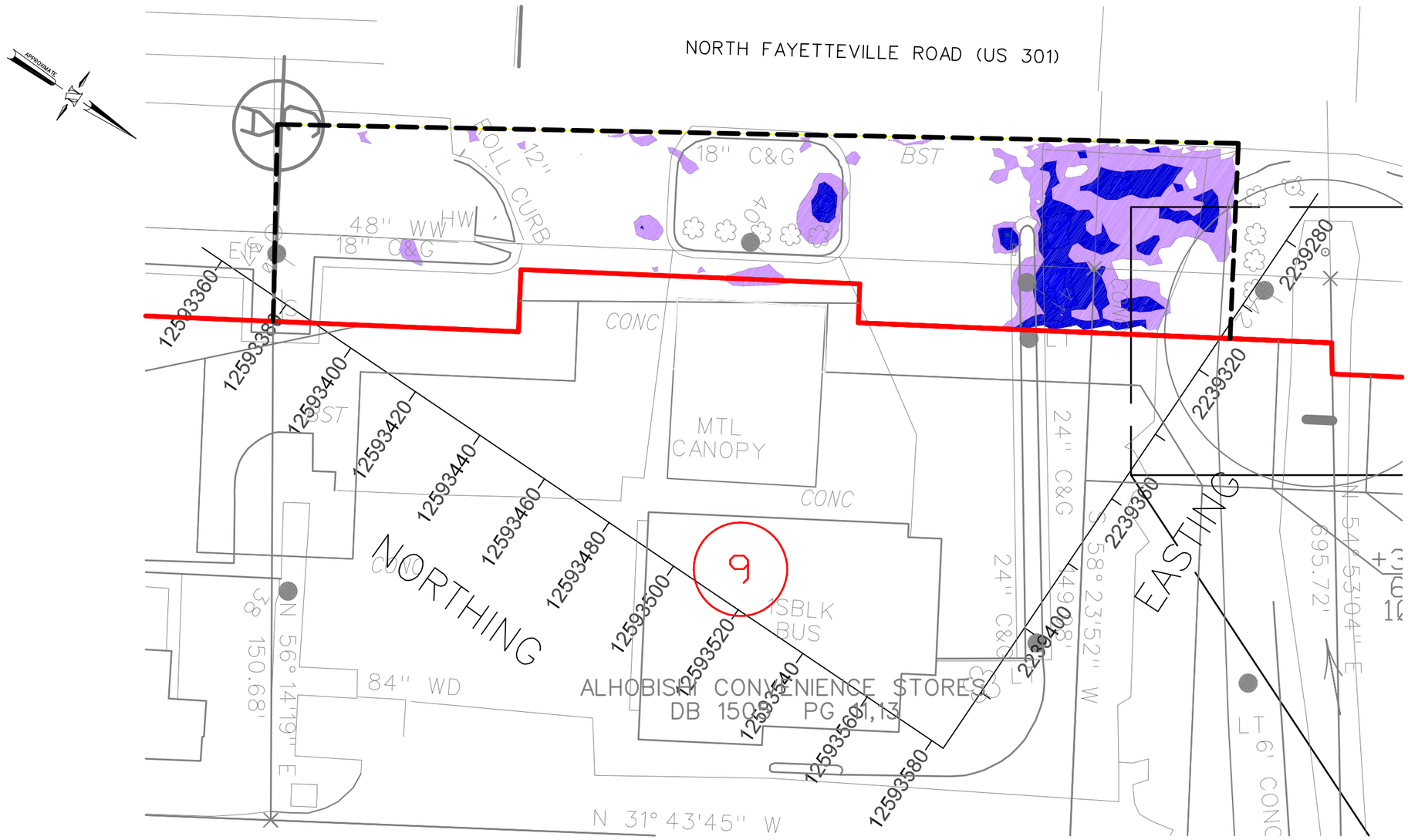
PROJECT: ncdt00610		
PRELIMINARY SITE ASSESSMENT REPORT PARCELS #9, #12, AND #13 NORTH FAYETTEVILLE ROAD ROBESON COUNTY, NORTH CAROLINA STATE PROJECT I-4413, WBS ELEMENT NO. 235901.2.1	KEY MAP SHOWING LOCATIONS OF PARCEL #9, PARCEL #12, AND PARCEL #13	FIGURE 3
DATE: January 4, 2011	DRAWN BY: TJP / APPRV. BY: ADE	



NOTES

1. UNDERGROUND FEATURES WERE LOCATED USING VISUAL EVIDENCE, GROUND PENETRATING RADAR (GPR), AND TIME DOMAIN ELECTROMAGNETIC (TDEM) METHODS. OTHER BURIED UTILITIES AND STRUCTURES MAY EXIST BUT WERE NOT DETECTED DUE TO LIMITATIONS OF THE GEOPHYSICAL METHODS, SITE ACCESS, AND/OR HIGH TARGET CONGESTION. THEREFORE, DUE CAUTION SHOULD BE USED WHEN PERFORMING SUBSURFACE EXCAVATION ACTIVITIES WHERE POTENTIAL CONFLICTS EXIST. GEL ENGINEERING OF NC, INC. IS NOT RESPONSIBLE FOR DAMAGES THAT MAY OCCUR. IDENTIFYING THE LOCATION OF SOME UTILITIES MAY ONLY BE POSSIBLE WITH VACUUM OR OTHER EXCAVATION METHODS.
2. FIELD SURVEY CONDUCTED ON 11.22.10
3. DATA FROM GEONICS, LTD. EM-61 MKII AND MALA GEOSCIENCE GROUND PENETRATING RADAR.
4. COORDINATES IN US STATE PLANE NAD 1983 DATUM.
5. FIGURE BASE FROM NCDOT DESIGN DRAWINGS FOR I-4413
6. NO UNKNOWN UNDERGROUND STORAGE TANKS FOUND UNLESS NOTED IN DRAWING

LEGEND

PROPOSED RIGHT-OF-WAY

SURVEY AREA

APPROXIMATE SCALE: 1"= 30'

0' 15' 30' 60'

PLOTTED: Dec 14, 2010 - 10:28am BY: tjp FILE LOCATION: G:_PW\ncdt\ncdt00610\ncdt00610_working_2004.dwg LAYOUT TAB: site9

GEL ENGINEERING of NC, Inc.
an Affiliate of THE GEL GROUP, INC.
Post Office Box 14262
Research Triangle Park, NC 27709
(919) 544-1100

PROJECT: ncdt00610

PRELIMINARY SITE ASSESSMENT REPORT
PARCEL #9, 5102 N. FAYETTEVILLE ROAD
ALHOBISHI CONVENIENCE STORES PROPERTY
ROBESON COUNTY, NORTH CAROLINA
STATE PROJECT I-4413, WBS ELEMENT NO.35901.2.1

SITE MAP SHOWING RESULTS OF GEOPHYSICS INVESTIGATION

FIGURE 4

DATE: December 3, 2010

DRAWN BY: WSD/TJP

APPRV. BY: ADE

APPENDIX I

SOIL BORING LITHOLOGIC LOGS

SOIL BORING LOG

Boring/Well No.: **SB-5102-1**
Date Started: 12/01/10
Date Completed: 12/01/10

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' - 4.0'	--	0.0	Brown/tan loamy, silty fine-grained sand; damp; no odor	SM
2	4.0' - 8.0'	--	0.0	Same, becoming more grey/black with depth; moist; no odor	SM
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					
11					
12					

Notes:

1) 4-foot continuous cores using DPT.

2) PID readings shown are for discrete samples collected at 3.0' to 4.0' and 7.0' to 8.0'.

SOIL BORING LOG

Boring/Well No.: **SB-5102-2**
Date Started: 12/01/10
Date Completed: 12/01/10

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' - 4.0'	--	0.0	Grey/brown loamy, silty fine-grained sand; damp; no odor	SM
2	4.0' - 8.0'	--	500	Same; moist; moderate petroleum odor	SM
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					
11					
12					

Notes:

1) 4-foot continuous cores using DPT.

2) PID readings shown are for discrete samples collected at 3.0' to 4.0' and 7.0' to 8.0'.

SOIL BORING LOG

Boring/Well No.: **SB-5102-3**
Date Started: 12/01/10
Date Completed: 12/01/10

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' - 4.0'	--	40.0	Tan/brown loamy, silty fine to coarse-grained sand; damp; no odor	SM
2	4.0' - 8.0'	--	1575	Same, becoming more grey and clayey with depth; moist; strong petroleum odor	SM/ML
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					
11					
12					

Notes:

1) 4-foot continuous cores using DPT.

2) PID readings shown are for discrete samples collected at 3.0' to 4.0' and 7.0' to 8.0'.

SOIL BORING LOG

Boring/Well No.: **SB-5102-4**
Date Started: 12/01/10
Date Completed: 12/01/10

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' - 4.0'	--	0.0	Tan/brown loamy, silty fine-grained sand; damp; no odor	SM
2	4.0' - 8.0'	--	125	Same, becoming more grey and clayey with depth; wet at 8'; strong petroleum odor	SM/ML
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					
11					
12					

Notes:

1) 4-foot continuous cores using DPT.

2) PID readings shown are for discrete samples collected at 3.0' to 4.0' and 7.0' to 8.0'.

SOIL BORING LOG

Boring/Well No.: **SB-5102-5**
Date Started: 12/01/10
Date Completed: 12/01/10

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' - 4.0'	--	--	Tan/brown loamy, silty fine-grained sand; damp; no odor	SM
2	4.0' - 6.0'	--	215	Same; wet at 6'; moderate petroleum odor	SM
3					
4				Total depth = 6 feet below land surface	
5					
6					
7					
8					
9					
10					
11					
12					

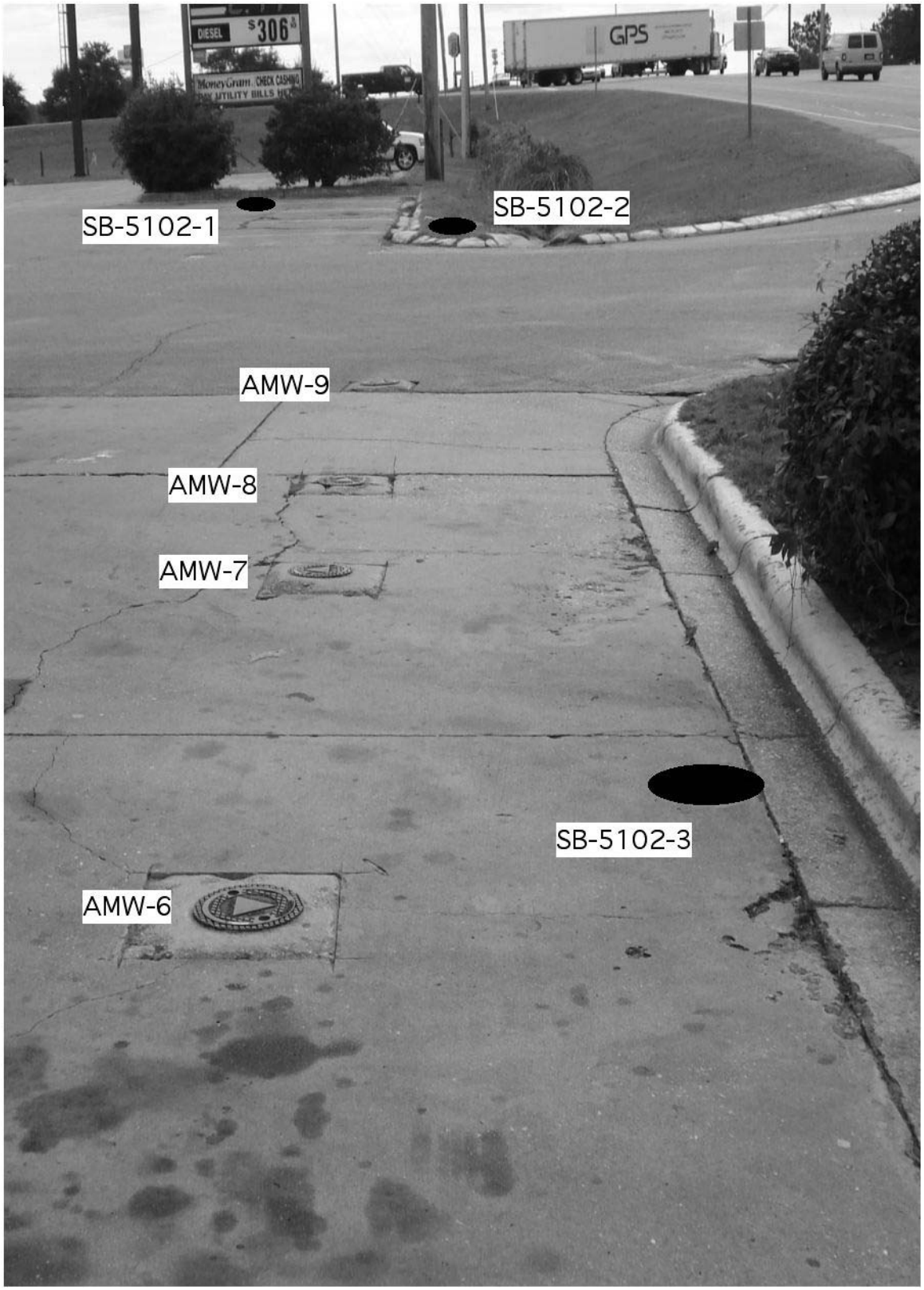
Notes:

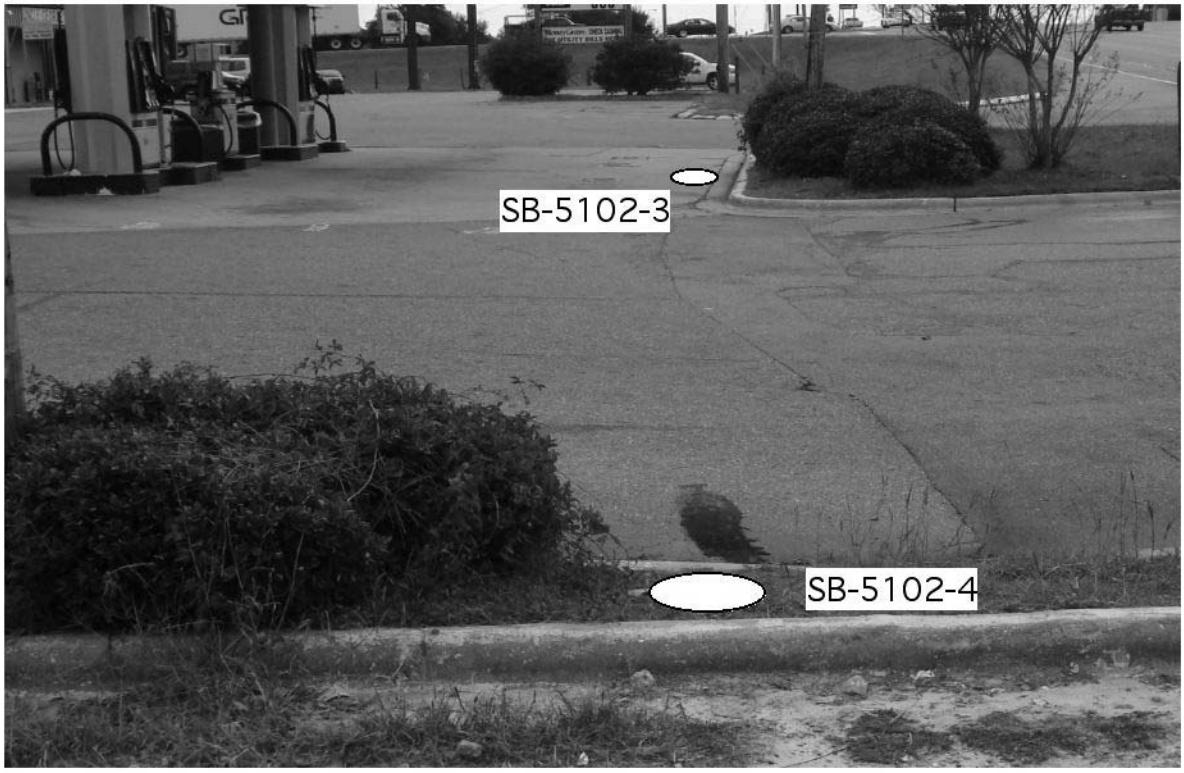
1) 4-foot continuous cores using DPT.

2) PID reading shown is for discrete sample collected at 5.0' to 6.0'.

APPENDIX II

PHOTOGRAPHS SHOWING SOIL BORING LOCATIONS


DIESEL
$3.06
GPS
SB-5102-1
SB-5102-2
AMW-9
AMW-8
AMW-7
SB-5102-3
AMW-6


SB-5102-3
SB-5102-4


DISCOUNT CIGARETTES & CIGARS
SB-5102-5

APPENDIX III

CERTIFICATES OF ANALYSIS AND CHAIN OF CUSTODY RECORD FOR SOIL SAMPLES AND GROUNDWATER SAMPLE

Andrew Eyer
GEL Engineering of NC, Inc.
PO Box 14262
RTP, NC 27709

Report Number: G341-632

Client Project: Robeson Co. PSAs/I-4413

Dear Andrew Eyer,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or services performed during this project, please call Lori Lockamy at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America, Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America, Inc.

Project Manager Date
Lori Lockamy

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:

1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.

2) Uncertainty for all reported data is less than or equal to 30 percent.

Print Date: 12/16/2010

Client Sample ID: **SB-5102-1**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-1D
Lab Project ID: G341-632

Collection Date: 01-Dec-10 9:00
Received Date: 01-Dec-10
Matrix: SOIL
Solids: 89.0
Basis: Dry

Results by 8015DRO

Parameter	Result	RL/CL	Units	DF	Date Analyzed
Diesel Range Organics	**10.6**	6.94	MG/KG	1	11-Dec-10 2:10

Surrogates

OTP	68.6	40-140	%	1	11-Dec-10 2:10

Batch Information

Analytical Batch: EP121010
Analytical Method: 8015DRO
Instrument: GC6
Analyst: DTF

Prep Batch:
Prep Method: 3541
Prep Date/Time:
Initial Prep Wt./Vol.: 32.38
Prep Extract Vol: 10

Print Date: 12/16/2010

Client Sample ID: **SB-5102-2**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-2D
Lab Project ID: G341-632

Collection Date: 01-Dec-10 9:20
Received Date: 01-Dec-10
Matrix: SOIL
Solids: 88.6
Basis: Dry

Results by 8015DRO

Parameter	Result	RL/CL	Units	DF	Date Analyzed
Diesel Range Organics	**45.7**	6.98	MG/KG	1	11-Dec-10 2:38

Surrogates

OTP	72.8	40-140	%	1	11-Dec-10 2:38

Batch Information

Analytical Batch: EP121010
Analytical Method: 8015DRO
Instrument: GC6
Analyst: DTF

Prep Batch:
Prep Method: 3541
Prep Date/Time:
Initial Prep Wt./Vol.: 32.33
Prep Extract Vol: 10

Print Date: 12/16/2010

Client Sample ID: **SB-5102-3**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-3D
Lab Project ID: G341-632

Collection Date: 01-Dec-10 9:40
Received Date: 01-Dec-10
Matrix: SOIL
Solids: 87.9
Basis: Dry

Results by 8015DRO

Parameter	Result	RL/CL	Units	DF	Date Analyzed
Diesel Range Organics	**573**	69.9	MG/KG	10	13-Dec-10 13:04

Surrogates

OTP	NA *	40-140	%	10	13-Dec-10 13:04

Batch Information

Analytical Batch: EP121310
Analytical Method: 8015DRO
Instrument: GC6
Analyst: DTF

Prep Batch:
Prep Method: 3541
Prep Date/Time:
Initial Prep Wt./Vol.: 32.57
Prep Extract Vol: 10

Print Date: 12/16/2010

Client Sample ID: **SB-5102-4**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-4D
Lab Project ID: G341-632

Collection Date: 01-Dec-10 10:10
Received Date: 01-Dec-10
Matrix: SOIL
Solids: 86.8
Basis: Dry

Results by 8015DRO

Parameter	Result	RL/CL	Units	DF	Date Analyzed
Diesel Range Organics	**29.3**	7.03	MG/KG	1	11-Dec-10 3:34

Surrogates

OTP	65.1	40-140	%	1	11-Dec-10 3:34

Batch Information

Analytical Batch: EP121010
Analytical Method: 8015DRO
Instrument: GC6
Analyst: DTF

Prep Batch:
Prep Method: 3541
Prep Date/Time:
Initial Prep Wt./Vol.: 32.75
Prep Extract Vol: 10

Print Date: 12/16/2010

Client Sample ID: **SB-5102-5**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-5D
Lab Project ID: G341-632

Collection Date: 01-Dec-10 10:40
Received Date: 01-Dec-10
Matrix: SOIL
Solids: 90.5
Basis: Dry

Results by 8015DRO

Parameter	Result	RL/CL	Units	DF	Date Analyzed
Diesel Range Organics	**211**	6.67	MG/KG	1	11-Dec-10 4:01

Surrogates

OTP	72.2	40-140	%	1	11-Dec-10 4:01

Batch Information

Analytical Batch: EP121010
Analytical Method: 8015DRO
Instrument: GC6
Analyst: DTF

Prep Batch:
Prep Method: 3541
Prep Date/Time:
Initial Prep Wt./Vol.: 33.15
Prep Extract Vol: 10

Print Date: 12/16/2010

Client Sample ID: **SB-5102-1**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-1A
Lab Project ID: G341-632

Collection Date: 01-Dec-10 9:00
Received Date: 01-Dec-10
Matrix: SOIL
Solids: 89.0
Basis: Dry

Results by 8015GRO

Parameter	Result	RL/CL	Units	DF	Date Analyzed
Gasoline Range Organics	BQL	4.77	MG/KG	1	14-Dec-10 17:27

Surrogates

BFB	83.3	70-130	%	1	14-Dec-10 17:27

Batch Information

Analytical Batch: VP121410
Analytical Method: 8015GRO
Instrument: GC4
Analyst: LMC

Prep Batch:
Prep Method: 5035
Prep Date/Time:
Initial Prep Wt./Vol.: 7.07
Prep Extract Vol: 5

Print Date: 12/16/2010

Client Sample ID: **SB-5102-2**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-2A
Lab Project ID: G341-632

Collection Date: 01-Dec-10 9:20
Received Date: 01-Dec-10
Matrix: SOIL
Solids: 88.6
Basis: Dry

Results by 8015GRO

Parameter	Result	RL/CL	Units	DF	Date Analyzed
Gasoline Range Organics	**11.0**	4.55	MG/KG	1	14-Dec-10 17:54

Surrogates

BFB	86.6	70-130	%	1	14-Dec-10 17:54

Batch Information

Analytical Batch: VP121410
Analytical Method: 8015GRO
Instrument: GC4
Analyst: LMC

Prep Batch:
Prep Method: 5035
Prep Date/Time:
Initial Prep Wt./Vol.: 7.44
Prep Extract Vol: 5

Print Date: 12/16/2010

Client Sample ID: **SB-5102-3**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-3A
Lab Project ID: G341-632

Collection Date: 01-Dec-10 9:40
Received Date: 01-Dec-10
Matrix: SOIL
Solids: 87.9
Basis: Dry

Results by 8015GRO

Parameter	Result	RL/CL	Units	DF	Date Analyzed
Gasoline Range Organics	**695**	148	MG/KG	50	14-Dec-10 18:21

Surrogates

BFB	84.4	70-130	%	50	14-Dec-10 18:21

Batch Information

Analytical Batch: VP121410
Analytical Method: 8015GRO
Instrument: GC4
Analyst: LMC

Prep Batch:
Prep Method: 5035
Prep Date/Time:
Initial Prep Wt./Vol.: 7.68
Prep Extract Vol: 5

Print Date: 12/16/2010

Client Sample ID: **SB-5102-4**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-4A
Lab Project ID: G341-632

Collection Date: 01-Dec-10 10:10
Received Date: 01-Dec-10
Matrix: SOIL
Solids: 86.8
Basis: Dry

Results by 8015GRO

Parameter	Result	RL/CL	Units	DF	Date Analyzed
Gasoline Range Organics	**33.9**	4.55	MG/KG	4	14-Dec-10 18:47

Surrogates

BFB	83.8	70-130	%	4	14-Dec-10 18:47

Batch Information

Analytical Batch: VP121410
Analytical Method: 8015GRO
Instrument: GC4
Analyst: LMC

Prep Batch:
Prep Method: 5035
Prep Date/Time:
Initial Prep Wt./Vol.: 7.59
Prep Extract Vol: 5

Print Date: 12/16/2010

Client Sample ID: **SB-5102-5**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-5A
Lab Project ID: G341-632

Collection Date: 01-Dec-10 10:40
Received Date: 01-Dec-10
Matrix: SOIL
Solids: 90.5
Basis: Dry

Results by 8015GRO

Parameter	Result	RL/CL	Units	DF	Date Analyzed
Gasoline Range Organics	**40.0**	4.57	MG/KG	4	14-Dec-10 19:14

Surrogates

BFB	84.4	70-130	%	4	14-Dec-10 19:14

Batch Information

Analytical Batch: VP121410
Analytical Method: 8015GRO
Instrument: GC4
Analyst: LMC

Prep Batch:
Prep Method: 5035
Prep Date/Time:
Initial Prep Wt./Vol.: 7.26
Prep Extract Vol: 5

Print Date: 12/16/2010

Client Sample ID: **MW-5102-3**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-6A
Lab Project ID: G341-632

Collection Date: 01-Dec-10 11:15
Received Date: 01-Dec-10
Matrix: WATER

Results by 8260

Parameter	Result	RL/CL	Units	DF	Date Analyzed
Acetone	BQL	1250	UG/L	50	06-Dec-10 16:16
Benzene	**582**	50.0	UG/L	50	06-Dec-10 16:16
Bromobenzene	BQL	50.0	UG/L	50	06-Dec-10 16:16
Bromochloromethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
Bromodichloromethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
Bromoform	BQL	50.0	UG/L	50	06-Dec-10 16:16
Bromomethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
2-Butanone	BQL	1250	UG/L	50	06-Dec-10 16:16
n-Butylbenzene	BQL	50.0	UG/L	50	06-Dec-10 16:16
sec-Butylbenzene	BQL	50.0	UG/L	50	06-Dec-10 16:16
tert-Butylbenzene	BQL	50.0	UG/L	50	06-Dec-10 16:16
Carbon disulfide	BQL	50.0	UG/L	50	06-Dec-10 16:16
Carbon tetrachloride	BQL	50.0	UG/L	50	06-Dec-10 16:16
Chlorobenzene	BQL	50.0	UG/L	50	06-Dec-10 16:16
Chloroethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
Chloroform	BQL	50.0	UG/L	50	06-Dec-10 16:16
Chloromethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
2-Chlorotoluene	BQL	50.0	UG/L	50	06-Dec-10 16:16
4-Chlorotoluene	BQL	50.0	UG/L	50	06-Dec-10 16:16
Dibromochloromethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,2-Dibromo-3-chloropropane	BQL	250	UG/L	50	06-Dec-10 16:16
Dibromomethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,2-Dibromoethane (EDB)	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,2-Dichlorobenzene	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,3-Dichlorobenzene	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,4-Dichlorobenzene	BQL	50.0	UG/L	50	06-Dec-10 16:16
trans-1,4-Dichloro-2-butene	BQL	250	UG/L	50	06-Dec-10 16:16
1,1-Dichloroethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,1-Dichloroethene	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,2-Dichloroethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
cis-1,2-Dichloroethene	BQL	50.0	UG/L	50	06-Dec-10 16:16
trans-1,2-dichloroethene	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,2-Dichloropropane	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,3-Dichloropropane	BQL	50.0	UG/L	50	06-Dec-10 16:16
2,2-Dichloropropane	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,1-Dichloropropene	BQL	50.0	UG/L	50	06-Dec-10 16:16
cis-1,3-Dichloropropene	BQL	50.0	UG/L	50	06-Dec-10 16:16
trans-1,3-Dichloropropene	BQL	50.0	UG/L	50	06-Dec-10 16:16
Dichlorodifluoromethane	BQL	250	UG/L	50	06-Dec-10 16:16
Diisopropyl ether (DIPE)	BQL	50.0	UG/L	50	06-Dec-10 16:16
Ethylbenzene	**130**	50.0	UG/L	50	06-Dec-10 16:16
Hexachlorobutadiene	BQL	50.0	UG/L	50	06-Dec-10 16:16
2-Hexanone	BQL	250	UG/L	50	06-Dec-10 16:16
Iodomethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
Isopropylbenzene	**51.0**	50.0	UG/L	50	06-Dec-10 16:16
4-Isopropyltoluene	BQL	50.0	UG/L	50	06-Dec-10 16:16

Print Date: 12/16/2010

Client Sample ID: **MW-5102-3**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-6A
Lab Project ID: G341-632

Collection Date: 01-Dec-10 11:15
Received Date: 01-Dec-10
Matrix: WATER

Results by 8260

Parameter	Result	RL/CL	Units	DF	Date Analyzed
Methylene chloride	BQL	250	UG/L	50	06-Dec-10 16:16
4-Methyl-2-pentanone	BQL	250	UG/L	50	06-Dec-10 16:16
Methyl-tert-butyl ether (MTBE)	BQL	50.0	UG/L	50	06-Dec-10 16:16
Naphthalene	BQL	50.0	UG/L	50	06-Dec-10 16:16
n-Propyl benzene	**109**	50.0	UG/L	50	06-Dec-10 16:16
Styrene	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,1,1,2-Tetrachloroethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,1,2,2-Tetrachloroethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
Tetrachloroethene	BQL	50.0	UG/L	50	06-Dec-10 16:16
Toluene	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,2,3-Trichlorobenzene	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,2,4-Trichlorobenzene	BQL	50.0	UG/L	50	06-Dec-10 16:16
Trichloroethene	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,1,1-Trichloroethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,1,2-Trichloroethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
Trichlorofluoromethane	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,2,3-Trichloropropane	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,2,4-Trimethylbenzene	BQL	50.0	UG/L	50	06-Dec-10 16:16
1,3,5-Trimethylbenzene	BQL	50.0	UG/L	50	06-Dec-10 16:16
Vinyl chloride	BQL	50.0	UG/L	50	06-Dec-10 16:16
m-,p-Xylene	BQL	100	UG/L	50	06-Dec-10 16:16
o-Xylene	BQL	50.0	UG/L	50	06-Dec-10 16:16

Surrogates

1,2-Dichloroethane-d4	98	64-140	%	50	06-Dec-10 16:16
Toluene-d8	100	82-117	%	50	06-Dec-10 16:16
4-Bromofluorobenzene	103	85-115	%	50	06-Dec-10 16:16

Batch Information

Analytical Batch: 3120610
Analytical Method: 8260
Instrument: MSD3
Analyst: BWS

Prep Batch:
Prep Method:
Prep Date/Time:
Initial Prep Wt./Vol.: 5
Prep Extract Vol: 5

Print Date: 12/16/2010

Client Sample ID: **MW-5102-3**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-6F
Lab Project ID: G341-632

Collection Date: 01-Dec-10 11:15
Received Date: 01-Dec-10
Matrix: WATER

Results by 8270

Parameter	Result	RL/CL	Units	DF	Date Analyzed
Acenaphthene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Acenaphthylene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Anthracene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Benzo[a]anthracene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Benzo[a]pyrene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Benzo[b]fluoranthene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Benzo[g,h,i]perylene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Benzo[k]fluoranthene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Benzoic Acid	BQL	26.3	UG/L	1	03-Dec-10 21:03
Bis(2-chloroethoxy)methane	BQL	5.26	UG/L	1	03-Dec-10 21:03
Bis(2-chloroethyl)ether	BQL	5.26	UG/L	1	03-Dec-10 21:03
Bis(2-chloroisopropyl)ether	BQL	5.26	UG/L	1	03-Dec-10 21:03
Bis(2-ethylhexyl)phthalate	BQL	5.26	UG/L	1	03-Dec-10 21:03
4-bromophenyl phenyl ether	BQL	5.26	UG/L	1	03-Dec-10 21:03
Butylbenzylphthalate	BQL	5.26	UG/L	1	03-Dec-10 21:03
2-Chloronaphthalene	BQL	5.26	UG/L	1	03-Dec-10 21:03
2-Chlorophenol	BQL	5.26	UG/L	1	03-Dec-10 21:03
4-Chloro-3-methylphenol	BQL	5.26	UG/L	1	03-Dec-10 21:03
4-Chloroaniline	BQL	26.3	UG/L	1	03-Dec-10 21:03
4-Chlorophenyl phenyl ether	BQL	5.26	UG/L	1	03-Dec-10 21:03
Chrysene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Dibenzo[a,h]anthracene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Dibenzofuran	BQL	5.26	UG/L	1	03-Dec-10 21:03
Di-n-Butylphthalate	BQL	5.26	UG/L	1	03-Dec-10 21:03
1,2-Dichlorobenzene	BQL	5.26	UG/L	1	03-Dec-10 21:03
1,3-Dichlorobenzene	BQL	5.26	UG/L	1	03-Dec-10 21:03
1,4-Dichlorobenzene	BQL	5.26	UG/L	1	03-Dec-10 21:03
3,3'-Dichlorobenzidine	BQL	10.5	UG/L	1	03-Dec-10 21:03
2,4-Dichlorophenol	BQL	5.26	UG/L	1	03-Dec-10 21:03
Diethylphthalate	BQL	5.26	UG/L	1	03-Dec-10 21:03
Dimethylphthalate	BQL	5.26	UG/L	1	03-Dec-10 21:03
2,4-Dimethylphenol	BQL	5.26	UG/L	1	03-Dec-10 21:03
Di-n-octylphthalate	BQL	5.26	UG/L	1	03-Dec-10 21:03
4,6-Dinitro-2-methylphenol	BQL	26.3	UG/L	1	03-Dec-10 21:03
2,4-Dinitrophenol	BQL	26.3	UG/L	1	03-Dec-10 21:03
2,4-Dinitrotoluene	BQL	5.26	UG/L	1	03-Dec-10 21:03
2,6-Dinitrotoluene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Diphenylamine *	BQL	5.26	UG/L	1	03-Dec-10 21:03
Fluoranthene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Fluorene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Hexachlorobenzene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Hexachlorobutadiene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Hexachlorocyclopentadiene	BQL	10.5	UG/L	1	03-Dec-10 21:03
Hexachloroethane	BQL	5.26	UG/L	1	03-Dec-10 21:03
Indeno(1,2,3-c,d)pyrene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Isophorone	BQL	5.26	UG/L	1	03-Dec-10 21:03

Print Date: 12/16/2010

Client Sample ID: **MW-5102-3**
Client Project ID: Robeson Co. PSAs/I-4413
Lab Sample ID: G341-632-6F
Lab Project ID: G341-632

Collection Date: 01-Dec-10 11:15
Received Date: 01-Dec-10
Matrix: WATER

Results by 8270

Parameter	Result	RL/CL	Units	DF	Date Analyzed
2-Methylnaphthalene	**85.4**	5.26	UG/L	1	03-Dec-10 21:03
2-Methylphenol	BQL	5.26	UG/L	1	03-Dec-10 21:03
3- & 4-Methylphenol	BQL	5.26	UG/L	1	03-Dec-10 21:03
Naphthalene	**36.6**	5.26	UG/L	1	03-Dec-10 21:03
2-Nitroaniline	BQL	5.26	UG/L	1	03-Dec-10 21:03
3-Nitroaniline	BQL	26.3	UG/L	1	03-Dec-10 21:03
4-Nitroaniline	BQL	26.3	UG/L	1	03-Dec-10 21:03
Nitrobenzene	BQL	5.26	UG/L	1	03-Dec-10 21:03
2-Nitrophenol	BQL	5.26	UG/L	1	03-Dec-10 21:03
4-Nitrophenol	BQL	26.3	UG/L	1	03-Dec-10 21:03
N-Nitrosodi-n-propylamine	BQL	5.26	UG/L	1	03-Dec-10 21:03
Pentachlorophenol	BQL	26.3	UG/L	1	03-Dec-10 21:03
Phenanthrene	BQL	5.26	UG/L	1	03-Dec-10 21:03
Phenol	BQL	5.26	UG/L	1	03-Dec-10 21:03
Pyrene	BQL	5.26	UG/L	1	03-Dec-10 21:03
1,2,4-Trichlorobenzene	BQL	5.26	UG/L	1	03-Dec-10 21:03
2,4,5-Trichlorophenol	BQL	5.26	UG/L	1	03-Dec-10 21:03
2,4,6-Trichlorophenol	BQL	5.26	UG/L	1	03-Dec-10 21:03
Surrogates					
2-Fluorobiphenyl	72	-	%	1	03-Dec-10 21:03
2-Fluorophenol	82	-	%	1	03-Dec-10 21:03
Nitrobenzene-d5	74	-	%	1	03-Dec-10 21:03
Phenol-d6	84	-	%	1	03-Dec-10 21:03
2,4,6-Tribromophenol	101	-	%	1	03-Dec-10 21:03
4-Terphenyl-d14	72	-	%	1	03-Dec-10 21:03

Batch Information

Analytical Batch: 6120310
Analytical Method: 8270
Instrument: MSD6
Analyst: CMP

Prep Batch: 17856
Prep Method: 3520
Prep Date/Time: 02-Dec-10 11:45
Initial Prep Wt./Vol.: 951
Prep Extract Vol: 5.0

Page: _____ of _____
Project #: I-4413
GEL Quote #: _____
COC Number (1): _____
PO Number:

GEL Chain of Custody and Analytical Request

6341632

General Engineering Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: GEL Eng of NC — Phone #: 919-323-4823
Project/Site Name: Robeson Co. PSAs / I-4413 — Fax #: 919-237-9153
Address: GEL Eng. of NC PO Box 14262 RTP, NC 27709
Collected by: — Send Results To: Andrew Eyer

Sample ID	Date Collected (mm-dd-yy)	Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	DRO	GRO	VOCs	SVOCs							<-- Preservative Type (6)
										HCl	HCl								
SB-5102-1	12/1/10	0900	G	N	SO			3	1	2									
SB-5102-2		0920	G	N	SO			3	1	2									
SB-5102-3		0940	G	N	SO			3	1	2									
SB-5102-4		1010	G	N	SO			3	1	2									
SB-5102-5		1040	G	N	SO			3	1	2									
MW-5102-3	↓	1115	G	N	GW			5			3	2							

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: _____ Rush: _____ Specify: _____ (Subject to Surcharge) | Fax Results: Yes / No | Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Invoice to: NCDOT WBS # 35901.2.1

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	Matt Dlugosz	12/1/10	1210	NBeam	12/1/10	1210
2	NBeam				12/1/10	15:00
3				4.6, 4.8 hoseal		

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: — Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
4.) Matrix Codes: DW = Drinking Water, GW = Groundwater, SW = Surface Water, WW = Waste Water, W = Water, SO = Soil, SD = Sediment, SL = Sludge, SS = Solid Waste, O = Oil, F = Filter, P = Wipe, U = Urine, F = Fecal, N = Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. *8260B* - 3, *6010B/7470A* - 1).
6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: _____ C

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT