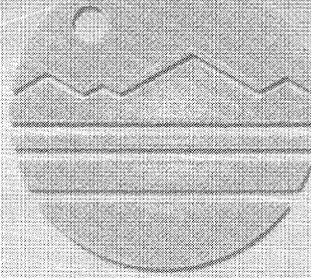
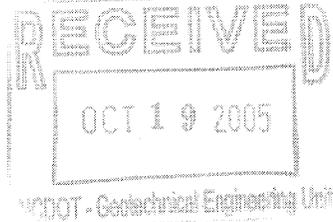


ENVIRONMENTAL



EI

**LIMITED PRELIMINARY SITE ASSESSMENT**



**Parcel #007  
City of Winston-Salem Property  
(Liberty North Fire Station #3)  
2995 North Liberty Street  
Winston-Salem, NC 27105**

**WBS Element # 34871.1.1  
TIP # U-2826A  
EI Project No. ENMO050015.00**

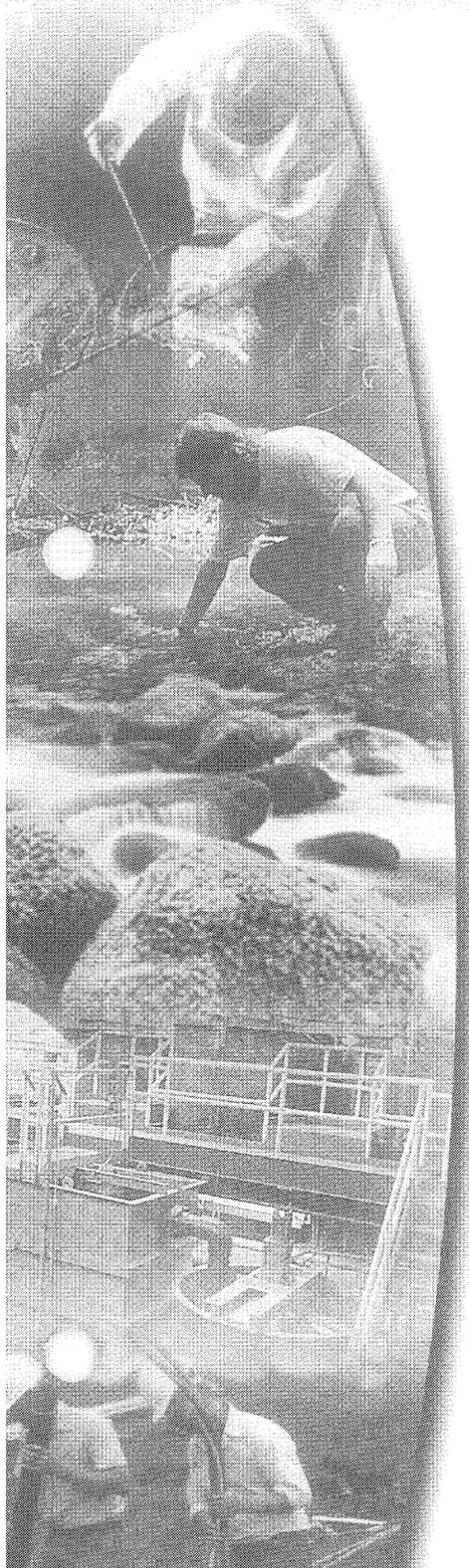
**Prepared For:**

**Gregory A. Smith  
State of North Carolina  
Department of Transportation  
Geotechnical Unit  
GeoEnvironmental Section  
1589 Mail Service Center  
Raleigh, NC 27699-1589**

**Prepared by:**

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October 18, 2005



**LIMITED PRELIMINARY SITE ASSESSMENT**

**Conducted on**

**Parcel #007**  
**City of Winston-Salem Property**  
**(Liberty North Fire Station #3)**  
**2995 North Liberty Street**  
**Winston-Salem, NC 27105**  
**NCDOT TIP #U-2826A**  
**WBS Element # 34871.1.1**  
**EI Project No. ENMO050015.00**

For

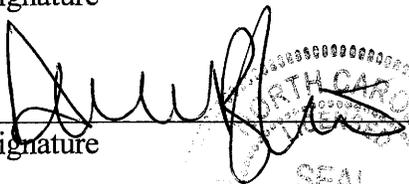
Mr. Gregory A. Smith  
State of North Carolina  
Department of Transportation  
Geotechnical Engineering Unit  
GeoEnvironmental Section  
1589 Mail Service Center  
Raleigh, NC 27699-1589

Issue Date: October 18, 2005

Robert M. Shaut  
Project Geologist/Manager

  
\_\_\_\_\_  
Signature

David C. Brewster, P.G.  
Principal Geologist

  
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Signature

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## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION</b> .....	<b>1</b>
<b>1.1</b>	<b>Report Organization</b> .....	<b>1</b>
<b>1.2</b>	<b>Background</b> .....	<b>1</b>
<b>1.3</b>	<b>Objectives</b> .....	<b>1</b>
<b>1.4</b>	<b>Site History</b> .....	<b>2</b>
<b>2.0</b>	<b>SCOPE OF WORK &amp; ENVIORNMENTAL SERVICES</b> .....	<b>3</b>
<b>2.1</b>	<b>Requested Scope of Work</b> .....	<b>3</b>
<b>2.2</b>	<b>Scope of Services</b> .....	<b>3</b>
<b>3.0</b>	<b>SITE CHARACTERIZATION</b> .....	<b>5</b>
<b>3.1</b>	<b>Site Location</b> .....	<b>5</b>
<b>3.2</b>	<b>Property Ownership</b> .....	<b>5</b>
<b>3.3</b>	<b>Physical Setting</b> .....	<b>5</b>
<b>3.3.1</b>	<b>Number and UST Capacities</b> .....	<b>6</b>
<b>3.4</b>	<b>Site Topography</b> .....	<b>6</b>
<b>3.5</b>	<b>Land Use &amp; Surrounding Properties</b> .....	<b>6</b>
<b>4.0</b>	<b>SUBSURFACE INVESTIGATION</b> .....	<b>7</b>
<b>4.1</b>	<b>Subsurface Soils Investigation</b> .....	<b>7</b>
<b>4.1.1</b>	<b>Soil Sample Collection Procedures</b> .....	<b>7</b>
<b>4.1.2</b>	<b>Backfill Activities</b> .....	<b>7</b>
<b>4.1.3</b>	<b>Subsurface Soil Lithology</b> .....	<b>7</b>
<b>4.2</b>	<b>Groundwater Investigation</b> .....	<b>8</b>
<b>4.2.1</b>	<b>Temporary Monitoring Well Installation</b> .....	<b>8</b>
<b>4.2.2</b>	<b>Groundwater Sampling Activities</b> .....	<b>8</b>
<b>4.2.3</b>	<b>Groundwater Laboratory Analyses</b> .....	<b>8</b>
<b>4.2.4</b>	<b>Monitoring Well Abandonment Activities</b> .....	<b>8</b>
<b>5.0</b>	<b>LABORATORY TESTING AND RESULTS</b> .....	<b>9</b>
<b>5.1</b>	<b>Subsurface Soil Analytical Methods</b> .....	<b>9</b>
<b>5.2</b>	<b>Soil Laboratory Analyses Results</b> .....	<b>9</b>
<b>5.3</b>	<b>Groundwater Laboratory Analyses Results</b> .....	<b>9</b>
<b>6.0</b>	<b>SUMMARY OF FINDINGS</b> .....	<b>10</b>
<b>7.0</b>	<b>CONCLUSIONS AND RECOMMENDATIONS</b> .....	<b>11</b>

## **LIST OF TABLES**

- Table 1: Summary of Soil Analytical Results**  
**Table 2: Summary of Groundwater Analytical Results**

## **LIST OF FIGURES**

- Figure 1: Site Location Map**  
**Figure 1A: Site Location Map**  
**Figure 2: Aerial Photograph**  
**Figure 3: Site Map**

## **LIST OF APPENDICES**

- Appendix A: Site Photographs**  
**Appendix B: Soil Boring Logs**  
**Appendix C: Analytical Laboratory Report**  
**Appendix D: Former Site Investigations**

## 1.0 INTRODUCTION

Environmental Investigations, Inc. (EI) conducted a *Limited Preliminary Site Assessment* (PSA) on a parcel identified by the North Carolina Department of Transportation (NCDOT) as *Parcel # 007 within the proposed and existing right-of-way (ROW)*. The subject parcel is located at 2995 North Liberty Street, Winston-Salem, North Carolina. The *proposed and exiting* ROW only was identified by the NCDOT as the prescribed area of study for this project.

A fire station (Liberty North Fire Station #3) is currently located on the subject parcel (adjacent to ROW). A report presented herein documents the findings of the PSA that was conducted within the prescribed area of study. For purposes of this report, the terms “subject property” and/or “site” include the *existing* NCDOT ROW and the *proposed* ROW.

### 1.1 Report Organization

Mr. Robert Michael Shaut, an Environmental Geologist with EI conducted field activities on August 22, 2005. The report presented herein summarizes the scope of work conducted, discusses sampling activities, and presents findings, conclusions and our recommendations. Two (2) tables entitled “Summary of Soil Analytical Results” and “Summary of Groundwater Analytical Results” are presented in “**Table 1**” and “**Table 2**”, respectively. A “Site Location Map”, an “Aerial Photograph”, and “Site Map” are presented in **Figures 1, 2, and 3**, respectively. A compilation of “Site Photographs” are presented in **Appendix A**, “Soil Boring Logs” are included in **Appendix B**, an “Analytical Laboratory Report” is presented in **Appendix C**, while copies of UST closure documentation (“Historical Site Investigations”) are presented in **Appendix D**.

### 1.2 Background

EI received a “*Request for Technical and Cost Proposal*” (RFP), dated July 7, 2005 signed by Cyrus F. Parker, LG, GeoEnvironmental Project Manager with the NCDOT GeoTechnical Engineering Unit. The RFP solicited a technical and cost proposal to perform PSAs on a total of 10 Parcels located within a NCDOT Highway Project, identified as WBS Element 34871.1.1, TIP # U-2826A, located in Winston-Salem, NC. The RFP outlined site information on each of the 10 parcels and NCDOT Figures (Plan Sheets) were attached to the RFP. Mr. Gregory A. Smith, LG, PE, GeoEnvironmental Supervisor with the NCDOT, GeoTechnical Engineering Unit, GeoEnvironmental Section authorized EI to perform the PSAs, as documented in a “Notice to Proceed” dated July 28, 2005.

### 1.3 Objectives

The objective of performing the PSAs was to investigate parcel histories, locate potential underground storage tanks (USTs), and determine if these systems or sources have impacted the subsurface within the area of study.

October 18, 2005

NCDOT – Tip # U-2826A  
Limited Preliminary Site Assessment  
Parcel #007 – City of Winston-Salem Property (North Fire Station #3)  
2995 North Liberty Street, Winston-Salem, NC

The study conducted on the referenced parcel (Parcel #007 – Liberty North Fire Station #3) was performed with a reasonable effort to investigate and quantify potentially petroleum-hydrocarbon residual impacted subsurface soils. However, findings documented in the report do not constitute a guarantee that all potential sources of environmental contamination have been assessed and subsequently analyzed.

This report is provided for the sole use of the NCDOT on the project for which it was prepared. All materials and information used for this project were obtained or provided to EI, Inc. Use of this report by any third parties other than the NCDOT will be at such party's sole risk. EI Inc. disclaims liability for any use of or reliance on this report by third parties.

#### 1.4 Site History

The North Carolina Department of Environmental Health and Natural Resources (NCDENR), Division of Waste Management (DWM), Underground Storage Tank Section and the Division of Water Quality (DWQ), Aquifer Protection Section (APS) maintain environmental records of known and reported subsurface environmental incidents throughout the state of North Carolina. Based on research conducted by EI personnel, an environmental incident related to the subject parcel was on file with the UST Section with NCDENR.

According to public record, a summary of the incident file is presented as follows:

- On January 4, 1990, Hardin's Pump & Compressor, Inc. permanently closed one (1) 1,500-gallon diesel UST.
- Reportedly, results of the UST closure did not indicate a release of petroleum into the subsurface.

Copies of the UST closure documentation are presented in **Appendix D**.

## **2.0 SCOPE OF WORK & ENVIRONMENTAL SERVICES**

### **2.1 Requested Scope of Work**

Documented in the *RFA*, the NCDOT requested the following scope of work:

- Investigate site histories.
- Locate USTs and determine approximate size and contents, if any.
- Determine if contaminated soils are present.
- Investigate all proposed drainage areas on the project.
- If contamination is evident, estimate the quantity of impacted soils and indicate the approximate area of soil contamination on a site map.
- If groundwater is encountered and the project manager suspects the possibility of groundwater contamination, obtain a sample for analysis by converting one of the soil borings to a temporary monitoring well.
- Prepare a set of NCDOT plansheets (11” x 17”) as a separate deliverable showing a summary of suspected impacted areas of contamination.
- Prepare a report including field activities, findings, and recommendations for each site and submit and submit to this office in triplicate.

### **2.2 Scope of Services**

To perform the requested scope-of-services, a field reconnaissance was performed to identify general site conditions, and Direct Push Technology (DPT) was utilized to collect soil samples and install a temporary groundwater well (piezometer) and collect subsequent groundwater samples on the subject property.

To complete the study on the subject parcel, EI performed the following scope of services:

- Supervision, direction and oversight for the advancement of 14 soil test borings utilizing DPT methods to a total depth ranging between 15.0 and 20.0 feet below the land surface (bls).

October 18, 2005

NCDOT – Tip # U-2826A  
Limited Preliminary Site Assessment  
Parcel #007 – City of Winston-Salem Property (North Fire Station #3)  
2995 North Liberty Street, Winston-Salem, NC

- Collection and submittal of 13 soil samples for laboratory analyses of total petroleum hydrocarbons (TPH) in the gasoline and diesel ranges.
- Supervised and directed the installation of one (1) temporary monitoring well (piezometer) on the subject site.
- Collected a groundwater sample from the temporary monitoring well for laboratory analyses of volatile organic compounds (VOCs) and semivolatile compounds (SVOCs).
- Photo documentation of pertinent site features.
- Preparation of this report in triplicate format, presenting our findings and conclusions along with our recommendations.

### 3.0 SITE CHARACTERIZATION

#### 3.1 Site Location

A fire station is currently located at 2995 North Liberty Street, Winston-Salem, (Forsyth County), North Carolina (**Figures 1 and 2**). The subject property is currently located immediately adjacent to the DOT ROW as identified in DOT's U-2826A Plan Sheet 5 and 6. Digital site photographs are presented in **Appendix A**.

#### 3.2 Property Ownership

According to the Forsyth County, North Carolina Tax Office Geo-Data Explorer web site, the abutting subject property is currently owned by the City of Winston-Salem. The owners address is listed as the same address (2821 North Liberty Street). The parcel ID was listed on the web site as #6836-57-9456. The size of the parcel was listed as 0.56 acres. According to the NCDOT, the property owner is listed as the same.

#### 3.3 Physical Setting

The subject site parcel has been improved to facilitate a fire station. The parcel consists of a building surrounded by either grass, landscaped shrubbery or a parking lot which is located to the rear (east) of the facility. A shallow grassy ditch is located along both the western and northern property boundaries between the subject parcel and Liberty Street, and West 30<sup>th</sup> Street, respectively. See **Figure 3** for pertinent site features.

### 3.3.1 Number and Capacities of USTs

Remnants of UST systems or USTs **were not observed** within the *existing* or *proposed* NCDOT ROW. According to the property occupant, a heating oil UST is located adjacent to the southwestern building corner of the Rescue Squad. The UST is located approximately 30 feet outside of the *existing* ROW.

### 3.4 Site Topography

Site observations and review of the Walkertown, NC United States Geological Survey (USGS) Topographic Quadrangle Map (1980) revealed that the subject site elevation ranges between approximately 956 feet and 961 feet above mean sea level (msl) (**Figure 1**). Topographically, the site slopes gently to the north/northeast as surface water runoff appears to flow directly north/northeast in the direction of Brushy Fork Creek located approximately 1,125 feet (375 yards) from the parcel.

### 3.5 Land Use & Surrounding Properties

The subject property is located inside the city limits of Winston-Salem, NC. Land use in the immediate vicinity of the site is characterized by commercial and/or industrial properties. The site is bounded on the north by 31<sup>st</sup> Street, to the south by DOT ROW and US 52, to the east by a parcel owned by the City of Winston-Salem, and to the west by Liberty Street.

## 4.0 SUBSURFACE INVESTIAGTION

### 4.1 Subsurface Soils Investigation

Subsurface Environmental Investigations, Inc., based in Statesville, North Carolina, was selected and subcontracted to provide Direct Push Technology (DPT) services. An EI Geologist directed and supervised the advancement of 14 soil test borings (GP-1 through GP-14) in the vicinity of either the NCDOT identified proposed drainage, and/or the DOT *existing and proposed* ROW.

The borings were advanced in order to evaluate the absence/presence of potential subsurface soil (vadose zone) impact and/or potential subsurface groundwater (petroleum smearing) impact associated with potential former petroleum releases. The soil borings were advanced to investigative total depths ranging from 15.0 feet to a depth of 20.0 feet bls.

#### 4.1.1 Soil Sample Collection Procedures

Based on the results of site conditions (i.e., presence of former UST system location on adjacent subject parcel), one (1) soil sample each was collected for laboratory retention from 13 of 14 soil test borings.

Soil samples retained for laboratory analyses were shipped, via overnight courier service (Federal Express) to Paradigm Analytical Laboratory, for laboratory analytical testing. Dates and times of sample shipment may be referenced in the analytical Chain-of Custodies (COC) presented in **Appendix C**.

#### 4.1.2 Backfill Activities

At the completion of the exploratory subsurface advancement activities, the test borings were backfilled to surface grade and capped with bentonite.

#### 4.1.3 Subsurface Soil Lithology

During boring advancement activities, soil samples were classified in the field by an EI geologist utilizing the Unified Soil Classification System (USCS). Subsurface soils encountered in the area of study were fairly consistent. A surface layer of grass was encountered overlying either reddish brown fine to medium sandy SILT (ML), with little clay or reddish brown, silty CLAY (CL) to a layer of approximately 4.0 to 6.0 feet bls. This lithologic layer was underlain by a layer of either tan, orange, light brown CLAY (CL), with some silt or tan, orange, light brown SILT (ML), with trace sand to approximate depths of 14.0 to 16.0 feet bls, underlain by tan, orange, fine to medium SAND (SM) to the investigated depth of 20.0 feet bls. Detailed descriptions are

presented in Soil Boring Logs included in **Appendix B**. The boring logs include an interpretation of subsurface conditions based on field samples.

## **4.2 Groundwater Investigation**

### **4.2.1 Temporary Monitoring Well Installation**

On August 27, 2005, soil test boring GP-12 was converted into a Type I (temporary) 1.0-inch diameter groundwater monitoring well (piezometer). The approximate location of the groundwater monitoring well is depicted in **Figure 3**. The well location was selected in the field based on site conditions and field indicators noted from adjacent soil borings and/or site conditions, and/or probable potentially suspect locations. The well was advanced to the approximate investigated depth of 20.0 feet bls. Groundwater was measured from GP-12 on 9-2-05 at 13.45 feet below the top of casing (flush-mount with ground surface).

### **4.2.2 Groundwater Sampling Activities**

EI personnel collected a groundwater sample from the temporary well (GP-6) on September 2, 2005 for purposes of analytical testing. On September 6, 2005, the samples were submitted via overnight courier service to Paradigm Analytical Laboratories, for analytical laboratory testing.

### **4.2.3 Groundwater Laboratory Analyses**

A groundwater sample identified as “TW-1” (Boring GP-12) were submitted for VOCs analysis by EPA Method 6230D + IPE & MTBE and SVOCs by GCMS 625 methods.

### **4.2.4 Monitoring Well Abandonment Activities**

On September 8, 2005, a DPT subcontractor, (EnviroProbing, Inc.) abandoned the aforementioned temporary monitoring well.

## 5.0 LABORATORY TESTING AND RESULTS

### 5.1 Subsurface Soil Analytical Methods

A total of 13 soil samples (“P7GP1-20”, “P7GP2-12”, “P7GP3-10”, “P7GP4-8”, “P7GP5-10”, “P7GP6-11”, “P7GP7-8”, “P7GP8-6”, “P7GP9-10”, “P7GP10-6”, “P7GP11-7”, “P7GP12-20”, and “P7GP-14-”) were submitted for total petroleum hydrocarbons (TPH) analyses by GC/FID 8015 analyzing for the analytes: Gasoline Range Organics (GRO), and Diesel Range Organics (DRO). The analytes in the GRO range are utilized to extract volatile fuels such as gasoline, while the DRO range is utilized to extract less volatile petroleum products such as diesel fuel, #2 fuel oil, kerosene, and varsol.

### 5.2 Soil Laboratory Analyses Results

Diesel range organics were detected at 20.6 mg/kg in soil sample identified as “P7GP6-11”. Concentrations were not detected at or above the method laboratory detection limit in the gasoline or diesel ranges from the remaining 12 soil samples. The results of the analytical testing of the soil samples are tabulated and presented in **Table 1**. The complete laboratory results and COC Records are presented in **Appendix C**.

### 5.3 Groundwater Laboratory Analyses Results

No VOCs or SVOCs analytes were detected at or above the method laboratory detection limits. Specific results are tabulated in **Table 2** and the complete laboratory report along with COC records is presented in **Appendix C**.

## 6.0 SUMMARY OF FINDINGS

EI has reviewed information gathered for the Limited PSA study including site reconnaissance, review of DOT plan sheets, review of former site investigations, review of site investigations including soil and groundwater collection activities, and review of the laboratory analyses report. Compiled below is a summarized list of the significant findings.

- Petroleum product dispensers, parts or neither portions of UST systems, nor remnants of concrete pump islands were observed within the prescribed area of study (DOT *existing* and *proposed* ROW).
- Analysis of one (1) subsurface soil sample (“P7GP6-11”), collected southwest of the subject parcel building (fire station) within the *existing* ROW, showed concentrations (20.6 mg/kg) of DRO, which is above the NCDENR action (reportable) limits (10.0 mg/kg). None of the remaining (12) soil samples collected for TPH analyses detected concentrations of DRO or GRO at or above the method laboratory detection limits.
- The groundwater level was measured at 13.45 feet from piezometer GP-12 below the top of casing (flush-mount casing).
- Review of the groundwater analytical data collected from piezometer GP-12 installed in the vicinity of the *proposed* ROW in the northern portion of the property (cross-gradient from former UST) did not detect concentrations of VOCs or SVOCs above the 15A NCAC 2L .0202 (g) Groundwater Quality Standards.

## 7.0 CONCLUSIONS AND RECOMMENDATIONS

EI personnel have reviewed information obtained during the Limited PSA at the site (within prescribed area of study) and present the following conclusions and recommendations.

### CONCLUSIONS

#### Presence and Source of Contaminants

Minor residual petroleum hydrocarbon impact has been discovered within the vadose zone (unsaturated zone - beneath the subject property) situated within the *existing* DOT ROW. The source of impact is unknown; however, the impact may have been attributed to the heating oil UST located adjacent to the Rescue Squad building (outside of ROW) or other former USTs, former aboveground storage tanks (ASTs), located on or near the subject parcel.

#### Quantity or Volume of Contaminants

It appears that the extent of residual petroleum hydrocarbon impact has affected a limited area *within the DOT ROW*. We estimate that the projected area (within DOT ROW) is confined to an areal extent of approximately 15.0 feet by 10.0 feet or less and the contaminants likely would be present at shallow depths from approximately 5.0 feet to 15.0 feet bls. Based on these projections, EI estimates that a volume of approximately **25 to 75 cubic yards** of soil impacted by low levels of petroleum residuals may be present within the *existing* ROW.

#### Groundwater Impact

Although a groundwater sample obtained from the area of investigation **did not** reveal dissolved concentrations of petroleum constituents, since minor residual hydrocarbons were detected in the vadose zone (GP-6), the groundwater could have been impacted by dissolved residual hydrocarbons in various parts of the property.

*Note: This report does not constitute a guarantee that all potential sources of environmental contamination have been assessed and subsequently analyzed.*

October 18, 2005

NCDOT – Tip # U-2826A  
Limited Preliminary Site Assessment  
Parcel #007 – City of Winston-Salem Property (North Fire Station #3)  
2995 North Liberty Street, Winston-Salem, NC

## **RECOMMENDATIONS**

Based on the results of this study, EI recommends the following:

- Based on the detection of TPH concentrations above regulatory (DENR) reportable levels (10.0 mg/kg), the property owner should be notified and the detection of TPH concentrations are reportable.
- Removal of the secondary source contaminants (residual petroleum hydrocarbon impacted soils) within the DOT ROW.

**TABLES**

TABLE 1

Summary of Soil Analytical Results  
 Parcel #007 - Winston-Salem Property  
 NCDOT - Forsyth  
 TIP#: U-2826A - WBS Element #34871.1.1  
 Winston-Salem, North Carolina  
 EI Project No. ENMO050015.00

Sample Point Identification	P7GP1-20	P7GP2-12	P7GP3-10	P8GP4-8	P6GP5-10	P7GP6-11	P7GP7-8	P7GP8-6	P7GP9-10	P7GP10-6	P7GP11-7	P7GP12-20	P7GP14-
Sample Boring Location	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6	GP-7	GP-7	GP-7	GP-7	GP-10	GP-10	GP-14
Sample Depth - Feet	18-20	10-12	8-10	6-8	8-10	9-11	6-8	5-6	8-10	5-6	6-7	18-20	18-20
Sample Date													
Field Screening Results-PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Laboratory Analysis	NCDENR (Volume II) Reportable Concentration (mg/kg)												
Prep Method 5035 - Gasoline Range Organics	10.0	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Prep Method 3545 - Diesel Range Organics	10.0	BQL	BQL	BQL	BQL	<b>20.6</b>	BQL	BQL	BQL	BQL	BQL	BQL	BQL
VOCs (8260B - 5035)	Laboratory Analytical Results (UO:KG)												
All Analytes	NA	NA	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
SVOCs (8270)	Laboratory Analytical Results (UO:KG)												
All Analytes	NA	NA	BQL	BQL	BQL	NA	NA	NA	NA	NA	NA	NA	BQL

LEGEND:  
**Bold & italics Font** = In Excess of NCDENR Reportable Concentrations

**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**Parcel #007 - Winston-Salem Property**  
**NCDOT - Forsyth County**  
**TIP# U-2826A**  
**WBS# 34871.1.1**

Sample Identification		TW1
Sample Date		8/27/2005
Groundwater Depth		29.75
<b>Volatile Organic Compounds</b> <b>EPA Method 6230D</b>	2L Groundwater Standards (ug/L)	<b>LABORATORY RESULTS (ug/L)</b>
Benzene	1	BQL
Chloromethane	2.6	BQL
Diisopropyl ether (DIPE)	NS	BQL
Ethylbenzene	29	BQL
naphthalene	21	BQL
MTBE	200	BQL
Toluene	1000	BQL
Xylenes	530	BQL
All Remaining Analytes	NA	BQL
<b>Semi-Volatile Organic Compounds</b> <b>EPA Method 625</b>	2L Groundwater Standards (ug/L)	<b>LABORATORY RESULTS (ug/L)</b>
All Analytes	NA	BQL

**Legend:**

*Italics* / **Bold Font** = In Excess of NCAC 2L Class GA Standards

BQL = Below Quantitation Limit

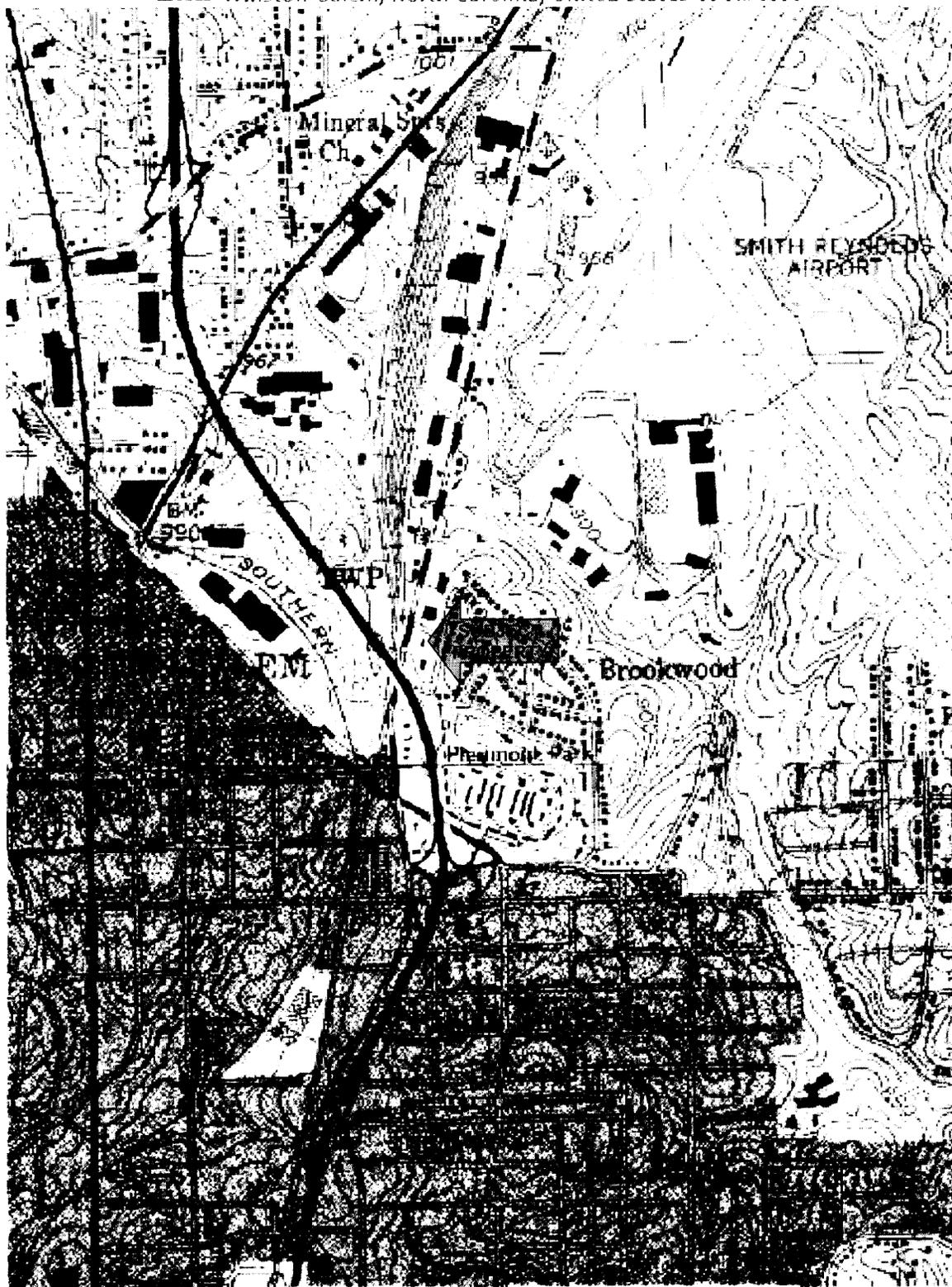
NA = Not Applicable

NS = No Standard

Groundwater Depth measured from top of casing (flush-mount temporary well)

**FIGURES**

USGS Winston-Salem, North Carolina, United States 01 Jul 1991



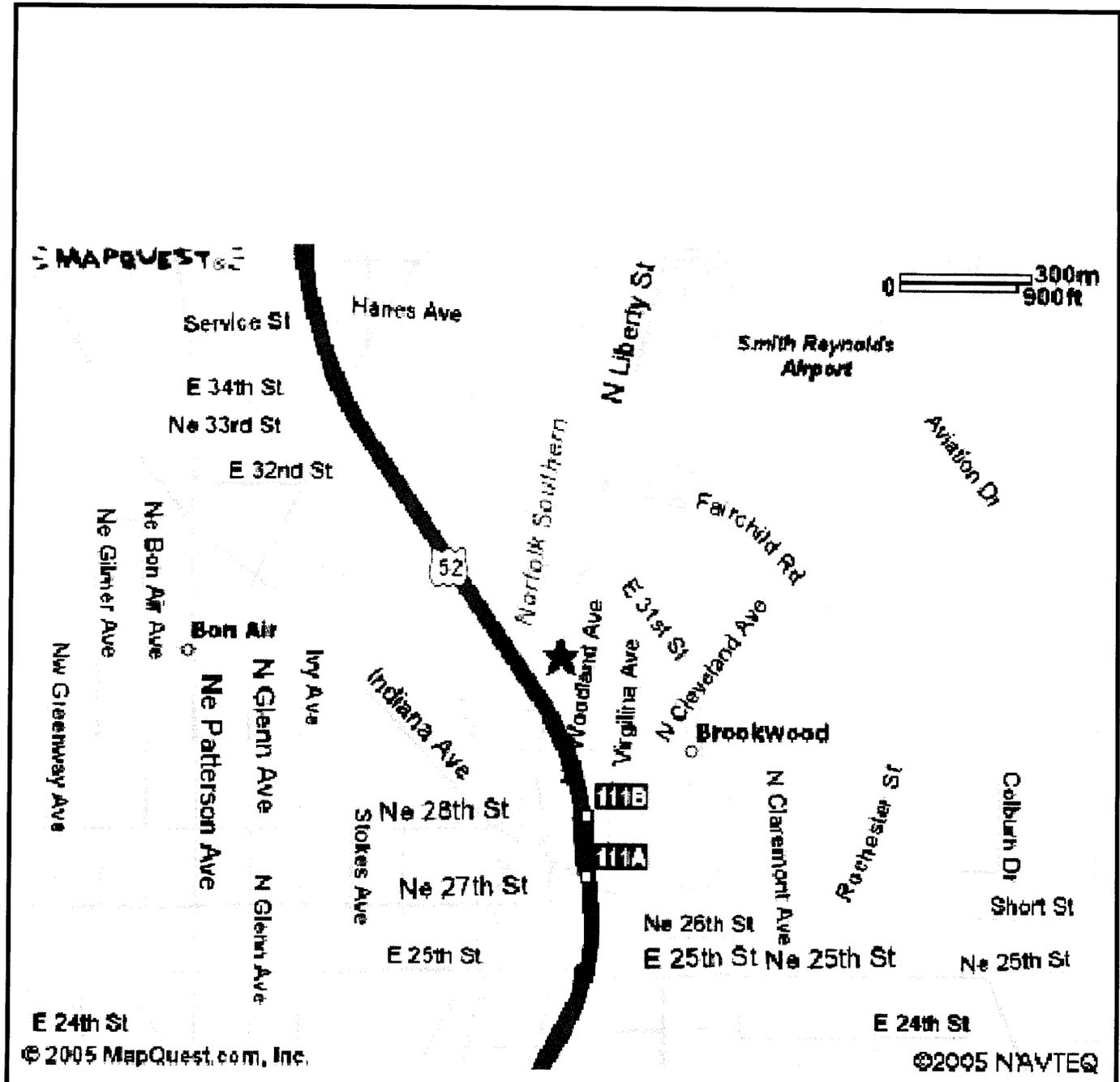
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FIGURE NUMBER:	1
QUAD:	1980 Winston-Salem
PROJECT NUMBER:	ENMO050015.00
SCALE:	As Shown

**SITE LOCATION MAP**  
Parcel # 007 – City of Winston-Salem  
Property  
(Liberty North Fire Station)  
2995 North Liberty Street  
Winston-Salem, North Carolina





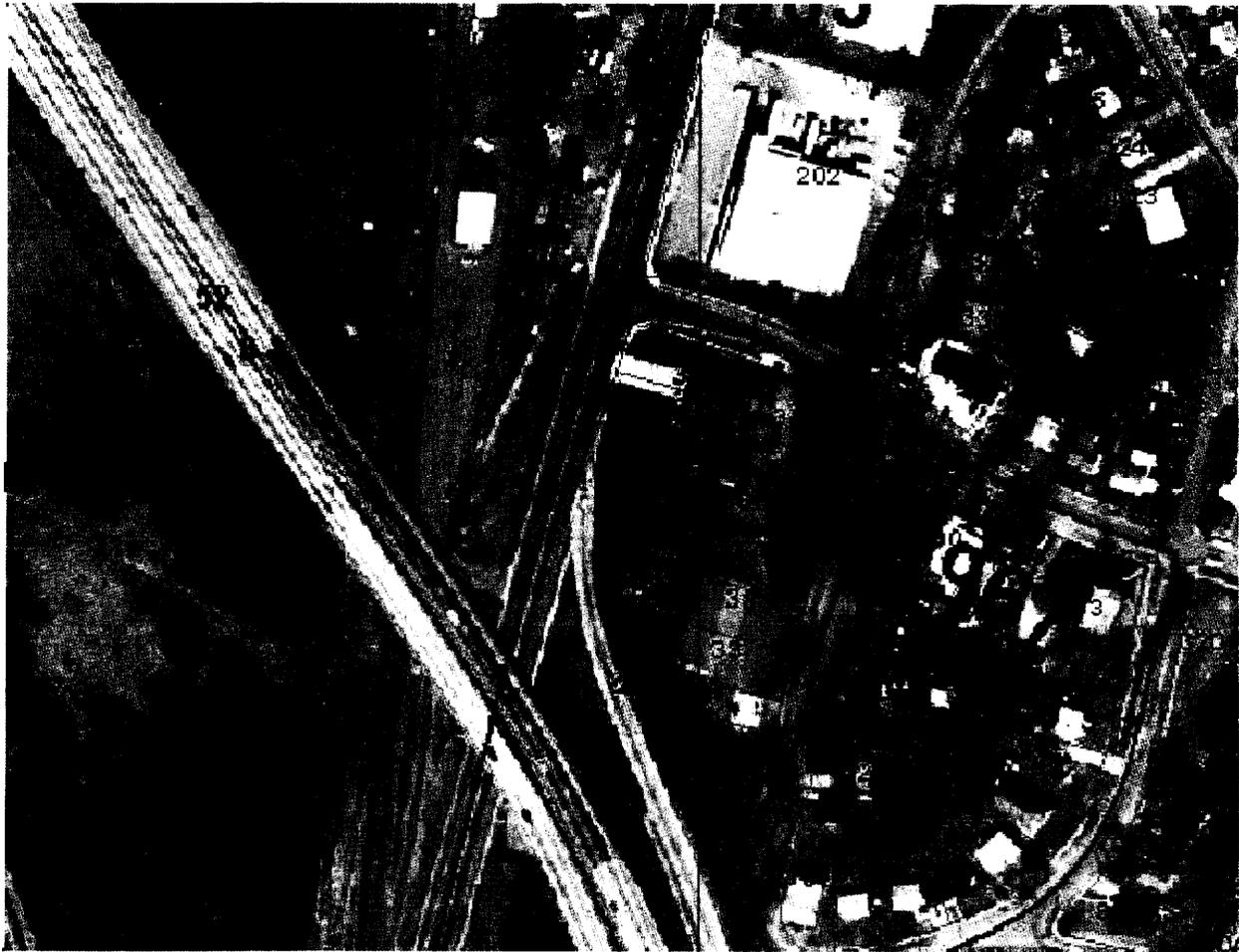
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FIGURE NUMBER:	1A
QUAD:	1980 Winston-Salem
PROJECT NUMBER:	ENMO050015.00
SCALE:	As Shown

**SITE LOCATION MAP**  
 Parcel # 007 – City of Winston-Salem  
 Property  
 (Liberty North Fire Station)  
 2995 North Liberty Street  
 Winston-Salem, North Carolina

**EI**  
 ENVIRONMENTAL INVESTIGATIONS, INC



0 Feet 227

SCALE 1 : 2733

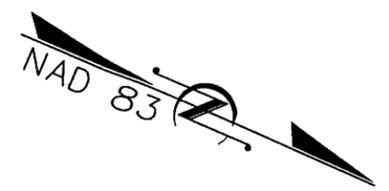


FIGURE NUMBER:	2
QUAD:	1991 Winston-Salem
PROJECT NUMBER:	ENMO050015.00
SCALE:	NTS

**AERIAL PHOTOGRAPH**  
Parcel 007—City of Winston Salem  
Property (North Fire Station)  
2995 North Liberty Street  
Winston-Salem, North Carolina



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**LEGEND:**

-  Building
-  Property Border
-  Chain Link Fence
-  Approx. Right-of-Way To Be Acquired
-  Approx. Existing Right-of-Way
-  Proposed Piping
-  DPT Soil Test Boring
-  Type I Monitoring Well
-  Estimated Extent of Petroleum Impact

Note: Borings GP-13 & GP-14 are illustrated on Parcel #005 Figure 3

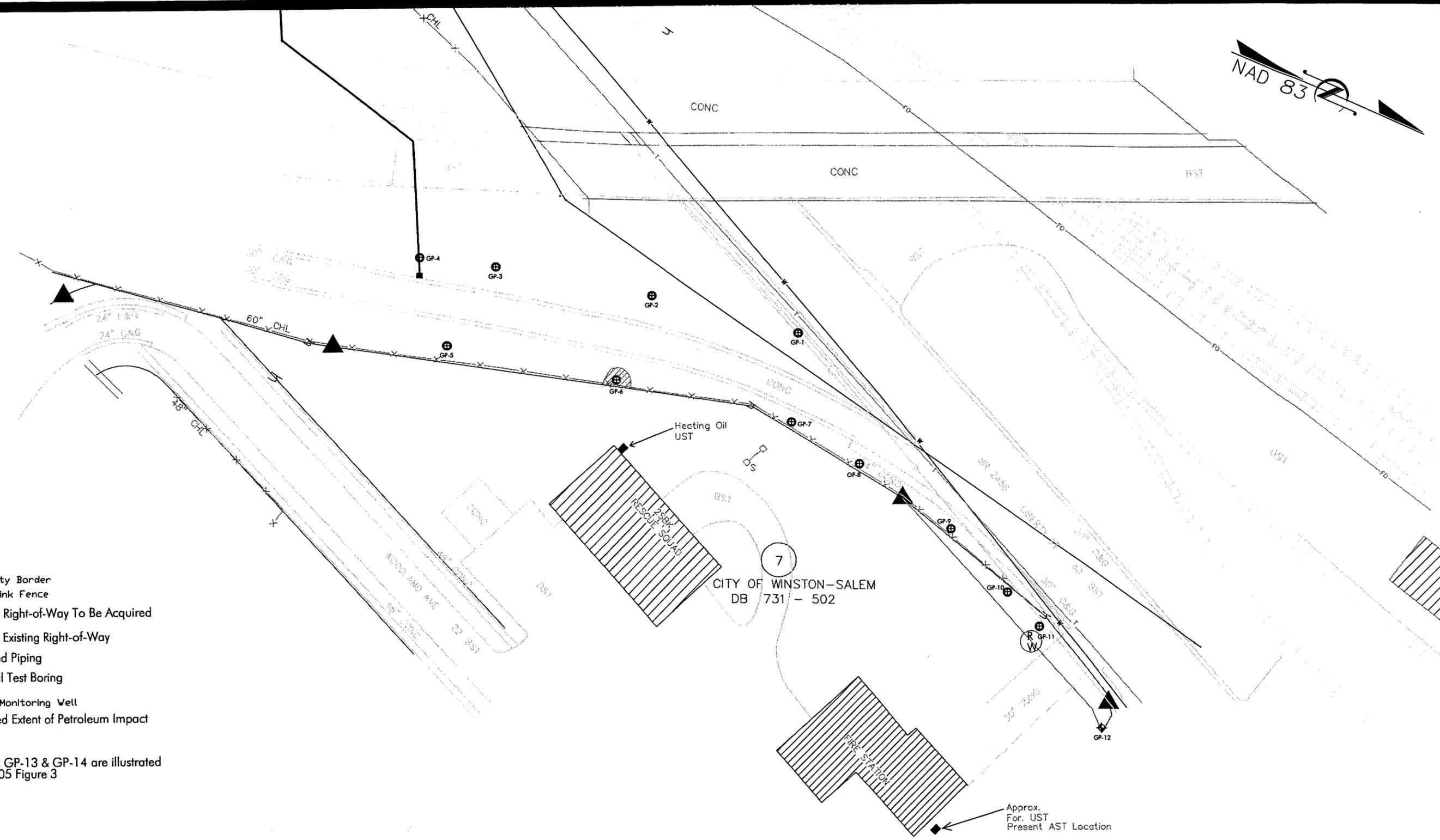
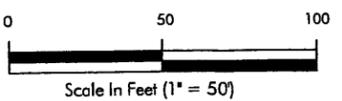


FIGURE:	3
DRN BY:	DOT/RMS
CHK BY:	DCB
DATE:	8/2005
REVISED:	N/A
SCALE:	1" = 60'

**SITE MAP**

Parcel #007  
City of Winston-Salem Property  
2995 North Liberty Street  
Winston-Salem, North Carolina



**APPENDIX A**  
**SITE PHOTOGRAPHS**



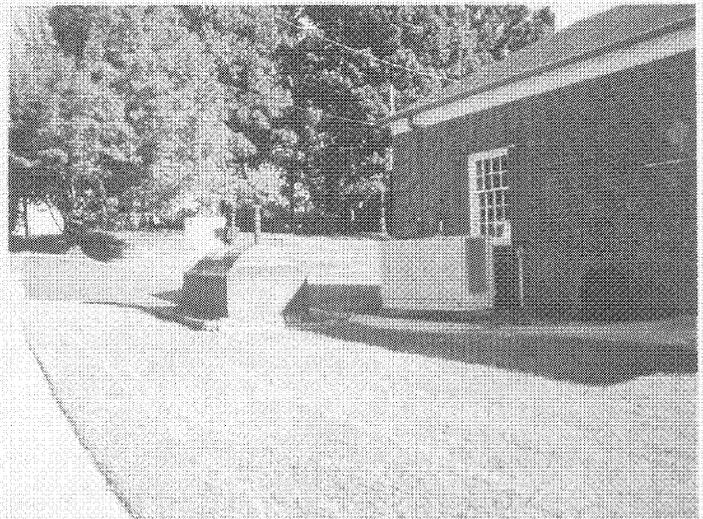
Photograph 1: View of subject property.



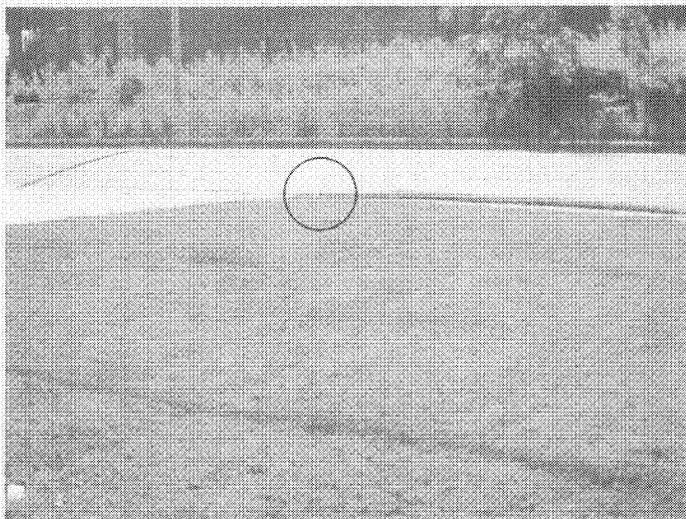
Photograph 2: Looking north of the subject parcel.



Photograph 3: Looking south of subject parcel.



Photograph 4: Former UST location. Note view of current generator.

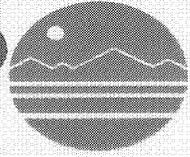


Photograph 5: View (center of photo – orange flag) of temporary well location.



Photograph 6: Zoomed in view of referenced well.

**APPENDIX B**  
**SOIL BORING LOGS**



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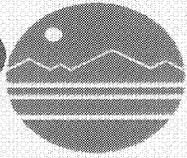
## SOIL BORING LOG

Boring No. GP-1  
Date Drilled: 08/12/05

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #007 - City of Winston-Salem Property</u>	Drilling Company:	<u>SEI</u>
Project/Site Location:	<u>2995 North Liberty Street, Winston-Salem, NC</u>	Drill Device:	<u>GeoProbe® 5400</u>
Project Number:	<u>ENMO050015.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 20.0'      Weather Conditions: Very Hot      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 4.0"      Boring Location: East of Liberty Road

Depth (Feet) (Meters)		Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%	(ML)	Reddish brown, fine to medium sandy SILT (ML), with clay, dry.	0.0
4.00	1.22						
6.00	1.83			100%	(CL)	Tan, orange, light brown CLAY (CL), with some silt, moist at 10'-12'.	0.0
8.00	2.44						
10.00	3.05			100%	(CL)		0.0
12.00	3.66						
14.00	4.27			100%	(SM)	Tan, orange, fine to medium SAND (SM), with little silt.	0.0
16.00	4.88						
18.00	5.49			100%	(SM)		0.0
20.00	6.10		x				
						Boring terminated at 20.0' bls. X denotes interval collected for laboratory testing.	



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## SOIL BORING LOG

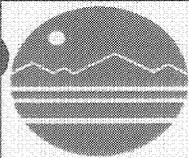
Boring No. GP-2  
Date Drilled: 08/12/05

Client: NCDOT  
Project Name: Parcel #007 - City of Winston-Salem Property  
Project/Site Location: 2995 North Liberty Street, Winston-Salem, NC  
Project Number: ENMO050015.00

Logged By: RMS  
Drilling Company: SEI  
Drill Device: GeoProbe® 5400  
Drill Method: DPT

Total Boring Depth: 20.0'      Weather Conditions: Very Hot      Surface Elevation: \_\_\_\_\_  
Boring Diameter: 4.0"      Boring Location: East of Liberty Road

Depth (Feet) (Meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00 0.61			100%	(ML)	Reddish brown, fine to medium sandy SILT (ML), with clay, dry.	0.0
4.00 1.22						
6.00 1.83			100%	(CL)	Tan, orange, light brown CLAY (CL), with some silt, moist to very moist at 10'-12'.	0.0
8.00 2.44						
10.00 3.05						
12.00 3.66		x	100%			0.0
14.00 4.27						
16.00 4.88						
18.00 5.49			100%	(SM)	Tan, orange, fine to medium SAND (SM), with little silt.	0.0
20.00 6.10						
					Boring terminated at 20.0' bls. X denotes interval collected for laboratory testing.	



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## SOIL BORING LOG

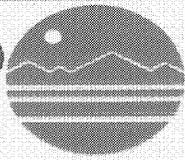
Boring No. GP-3  
Date Drilled: 08/12/05

Client: NCDOT  
Project Name: Parcel #007 - City of Winston-Salem Property  
Project/Site Location: 2995 North Liberty Street, Winston-Salem, NC  
Project Number: ENMO050015.00

Logged By: RMS  
Drilling Company: SEI  
Drill Device: GeoProbe® 5400  
Drill Method: DPT

Total Boring Depth: 20.0' Weather Conditions: Very Hot Surface Elevation: \_\_\_\_\_  
Boring Diameter: 4.0" Boring Location: East of Liberty Road

Depth (Feet) (Meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00 0.61			100%	(ML)	Reddish brown, fine to medium sandy SILT (ML), with clay, dry.	0.0
4.00 1.22						
6.00 1.83			100%	(CL)	Tan, orange, light brown CLAY (CL), with some silt, moist to very moist at 10'-12'.	0.0
8.00 2.44						
10.00 3.05		x				
12.00 3.66			100%			0.0
14.00 4.27						
16.00 4.88			100%	(SM)	Tan, orange, fine to medium SAND (SM), with little silt.	0.0
18.00 5.49						
20.00 6.10						
					Boring terminated at 20.0' bls. X denotes interval collected for laboratory testing.	



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## SOIL BORING LOG

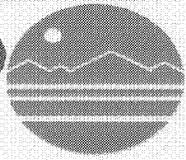
Boring No. GP-4  
Date Drilled: 08/12/05

Client: NCDOT  
Project Name: Parcel #007 - City of Winston-Salem Property  
Project/Site Location: 2995 North Liberty Street, Winston-Salem, NC  
Project Number: ENMO050015.00

Logged By: RMS  
Drilling Company: SEI  
Drill Device: GeoProbe® 5400  
Drill Method: DPT

Total Boring Depth: 20.0' Weather Conditions: Very Hot Surface Elevation: \_\_\_\_\_  
Boring Diameter: 4.0" Boring Location: Proposed Piping Location

Depth (Feet)	Depth (Meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%	(ML)	Reddish brown, fine to medium sandy SILT (ML), with clay, dry.	0.0
4.00	1.22						
6.00	1.83						
8.00	2.44		x	100%	(CL)	Tan, orange, light brown CLAY (CL), with some silt, moist to very moist at 10'-12'.	0.0
10.00	3.05						
12.00	3.66			100%			0.0
14.00	4.27						
16.00	4.88						
18.00	5.49			100%	(SM)	Tan, orange, fine to medium SAND (SM), with little silt.	0.0
20.00	6.10						
						Boring terminated at 20.0' bls. X denotes interval collected for laboratory testing.	



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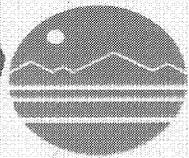
## SOIL BORING LOG

Boring No. GP-5  
Date Drilled: 08/12/05

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #007 - City of Winston-Salem Property</u>	Drilling Company:	<u>SEI</u>
Project/Site Location:	<u>2995 North Liberty Street, Winston-Salem, NC</u>	Drill Device:	<u>GeoProbe® 5400</u>
Project Number:	<u>ENMO050015.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth:	<u>20.0'</u>	Weather Conditions:	<u>Very Hot</u>	Surface Elevation:	<u>          </u>
Boring Diameter:	<u>4.0"</u>	Boring Location:	<u>East of Liberty Road</u>		

Depth (Feet)	Depth (Meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%	(ML)	Reddish brown, fine to medium sandy SILT (ML), with clay, dry.	0.0
4.00	1.22						
6.00	1.83			100%	(CL)	Tan, orange, light brown CLAY (CL), with some silt, moist to very moist at 10'-12'.	0.0
8.00	2.44						
10.00	3.05		x				
12.00	3.66			100%			0.0
14.00	4.27						
16.00	4.88				(SM)	Tan, orange, fine to medium SAND (SM), with little silt.	0.0
18.00	5.49			100%			
20.00	6.10						
						Boring terminated at 20.0' bls. X denotes interval collected for laboratory testing.	



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## SOIL BORING LOG

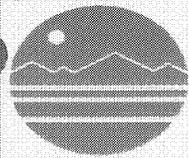
Boring No. GP-6  
Date Drilled: 08/12/05

Client: NCDOT  
Project Name: Parcel #007 - City of Winston-Salem Property  
Project/Site Location: 2995 North Liberty Street, Winston-Salem, NC  
Project Number: ENMO050015.00

Logged By: RMS  
Drilling Company: SEI  
Drill Device: GeoProbe® 5400  
Drill Method: DPT

Total Boring Depth: 20.0' Weather Conditions: Very Hot Surface Elevation: \_\_\_\_\_  
Boring Diameter: 4.0" Boring Location: East of Liberty Road

Depth (Feet) (Meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00 0.61			100%	(ML)	Reddish brown, fine to medium sandy SILT (ML), with clay, dry.	0.0
4.00 1.22						
6.00 1.83			100%	(CL)	Tan, orange, light brown CLAY (CL), with some silt, moist to very moist at 10'-12'.	0.0
8.00 2.44						
10.00 3.05		x				
12.00 3.66			100%			0.0
14.00 4.27						
16.00 4.88			100%	(SM)	Tan, orange, fine to medium SAND (SM), with little silt.	0.0
18.00 5.49						
20.00 6.10						
					Boring terminated at 20.0' bls. X denotes interval collected for laboratory testing.	



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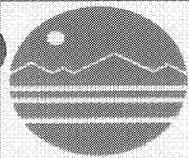
Boring No. GP-7  
Date Drilled: 08/12/05

Client: NCDOT  
Project Name: Parcel #006 - GPI Properties, LLC Property  
Project/Site Location: 2853 North Liberty Street, Winston-Salem, NC  
Project Number: ENMO050015.00

Logged By: RMS  
Drilling Company: SEI  
Drill Device: GeoProbe® 5400  
Drill Method: DPT

Total Boring Depth: 15.0' Weather Conditions: Very Hot Surface Elevation: \_\_\_\_\_  
Boring Diameter: 4.0" Boring Location: East of Liberty Road

Depth (Feet) (Meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00 0.61			100%	(CL)	Reddish brown, silty CLAY (CL), dry.	0.0
4.00 1.22						
6.00 1.83				(ML)	Tan, orange, light brown SILT (ML) with trace sand, dry.	
8.00 2.44		x	100%			0.0
10.00 3.05						
12.00 3.66			100%	(SM)	Tan, orange, fine to medium SAND (SM), with little silt.	0.0
14.00 4.27						
Boring terminated at 15.0' bls.						
X denotes interval collected for laboratory testing.						



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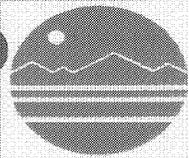
## SOIL BORING LOG

Boring No. GP-8  
Date Drilled: 08/12/05

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #006 - GPI Properties, LLC Property</u>	Drilling Company:	<u>SEI</u>
Project/Site Location:	<u>2853 North Liberty Street, Winston-Salem, NC</u>	Drill Device:	<u>GeoProbe® 5400</u>
Project Number:	<u>ENMO050015.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 15.0'      Weather Conditions: Very Hot      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 4.0"      Boring Location: East of Liberty Road

Depth (Feet) (Meters)		Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%	(CL)	Reddish brown, silty CLAY (CL), dry.	0.0
4.00	1.22						
6.00	1.83		x		(ML)	Tan, orange, light brown SILT (ML) with trace sand, dry.	
8.00	2.44			100%			0.0
10.00	3.05						
12.00	3.66			100%	(SM)	Tan, orange, fine to medium SAND (SM), with little silt.	0.0
14.00	4.27						
						Boring terminated at 15.0' bls.	
						X denotes interval collected for laboratory testing.	



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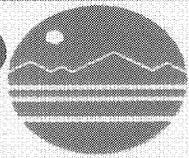
## SOIL BORING LOG

Boring No. GP-9  
Date Drilled: 08/12/05

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #006 - GPI Properties, LLC Property</u>	Drilling Company:	<u>SEI</u>
Project/Site Location:	<u>2853 North Liberty Street, Winston-Salem, NC</u>	Drill Device:	<u>GeoProbe® 5400</u>
Project Number:	<u>ENMO050015.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 15.0'      Weather Conditions: Very Hot      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 4.0"      Boring Location: East of Liberty Road

Depth (Feet) (Meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00 0.61			100%	(CL)	Reddish brown, silty CLAY (CL), dry.	0.0
4.00 1.22					Tan, orange, light brown SILT (ML) with trace sand, dry.	0.0
6.00 1.83			100%	(ML)		
8.00 2.44					Tan, orange, fine to medium SAND (SM), with little silt.	0.0
10.00 3.05		x				
12.00 3.66			100%	(SM)		0.0
14.00 4.27						
					Boring terminated at 15.0' bls.	
					X denotes interval collected for laboratory testing.	



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## SOIL BORING LOG

Boring No. GP-10  
Date Drilled: 08/12/05

Client: NCDOT  
Project Name: Parcel #006 - GPI Properties, LLC Property  
Project/Site Location: 2853 North Liberty Street, Winston-Salem, NC  
Project Number: ENMO050015.00

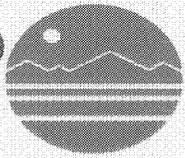
Logged By: RMS  
Drilling Company: SEI  
Drill Device: GeoProbe® 5400  
Drill Method: DPT

Total Boring Depth: 15.0'  
Boring Diameter: 4.0"

Weather Conditions: Very Hot  
Boring Location: East of Liberty Road

Surface Elevation: \_\_\_\_\_

Depth (Feet) (Meters)		Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%	(CL)	Reddish brown, silty CLAY (CL), dry.	0.0
4.00	1.22						
6.00	1.83		x		(ML)	Tan, orange, light brown SILT (ML) with trace sand, dry.	
8.00	2.44			100%			0.0
10.00	3.05						
12.00	3.66			100%	(SM)	Tan, orange, fine to medium SAND (SM), with little silt.	0.0
14.00	4.27						
						Boring terminated at 15.0' bls.	
						X denotes interval collected for laboratory testing.	



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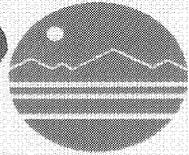
## SOIL BORING LOG

Boring No. GP-11  
Date Drilled: 08/12/05

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #006 - GPI Properties, LLC Property</u>	Drilling Company:	<u>SEI</u>
Project/Site Location:	<u>2853 North Liberty Street, Winston-Salem, NC</u>	Drill Device:	<u>GeoProbe® 5400</u>
Project Number:	<u>ENMO050015.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 15.0'      Weather Conditions: Very Hot      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 4.0"      Boring Location: East of Liberty Road

Depth (Feet) (Meters)		Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%	(CL)	Reddish brown, silty CLAY (CL), dry.	0.0
4.00	1.22						
6.00	1.83		x		(ML)	Tan, orange, light brown SILT (ML) with trace sand, dry.	
8.00	2.44			100%			0.0
10.00	3.05						
12.00	3.66			100%	(SM)	Tan, orange, fine to medium SAND (SM), with little silt.	0.0
14.00	4.27						
						Boring terminated at 15.0' bls.	
						X denotes interval collected for laboratory testing.	



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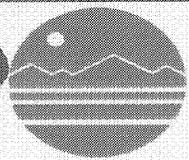
## SOIL BORING LOG

Boring No. GP-12  
Date Drilled: 08/12/05

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #007 - City of Winston-Salem Property</u>	Drilling Company:	<u>SEI</u>
Project/Site Location:	<u>2995 North Liberty Street, Winston-Salem, NC</u>	Drill Device:	<u>GeoProbe® 5400</u>
Project Number:	<u>ENMO050015.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 20.0'      Weather Conditions: Very Hot      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 4.0"      Boring Location: East of Liberty Road

Depth (Feet) (Meters)		Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%	(ML)	Reddish brown, fine to medium sandy SILT (ML), with clay, dry.	0.0
4.00	1.22						
6.00	1.83			100%	(CL)	Tan, orange, light brown CLAY (CL), with some silt, moist at 10'-12'.	0.0
8.00	2.44						
10.00	3.05			100%	(CL)		0.0
12.00	3.66						
14.00	4.27			100%	(SM)	Tan, orange, fine to medium SAND (SM), with little silt.	0.0
16.00	4.88						
18.00	5.49			100%	(SM)		0.0
20.00	6.10		x				
						Boring terminated at 20.0' bls. X denotes interval collected for laboratory testing. Boring converted into 1" Temporary Well (Piezometer) Groundwater sample collected on 8-19-05 for laboratory analysis.	



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## SOIL BORING LOG

Boring No. GP-13  
Date Drilled: 08/12/05

Client: NCDOT  
Project Name: Parcel #007 - City of Winston-Salem Property  
Project/Site Location: 2995 North Liberty Street, Winston-Salem, NC  
Project Number: ENMO050015.00

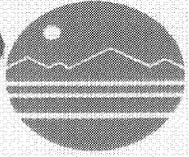
Logged By: RMS  
Drilling Company: SEI  
Drill Device: GeoProbe® 5400  
Drill Method: DPT

Total Boring Depth: 20.0'  
Boring Diameter: 4.0"

Weather Conditions: Very Hot  
Boring Location: Proposed Piping Location

Surface Elevation: \_\_\_\_\_

Depth (Feet) (Meters)		Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%	(ML)	Reddish brown, fine to medium sandy SILT (ML), with clay, dry.	0.0
4.00	1.22						
6.00	1.83			100%	(CL)	Tan, orange, light brown CLAY (CL), with some silt, moist at 10'-12'.	0.0
8.00	2.44						
10.00	3.05			100%	(CL)		0.0
12.00	3.66						
14.00	4.27			100%	(SM)	Tan, orange, fine to medium SAND (SM), with little silt.	0.0
16.00	4.88						
18.00	5.49			100%	(SM)		0.0
20.00	6.10						
						Boring terminated at 20.0' bls.	



# E.I.

ENVIRONMENTAL INVESTIGATIONS, INC.

2101 Gateway Centre Boulevard, Suite 200  
Morrisville, North Carolina  
919-544-7500

## SOIL BORING LOG

Boring No. GP-14  
Date Drilled: 08/12/05

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #007 - City of Winston-Salem Property</u>	Drilling Company:	<u>SEI</u>
Project/Site Location:	<u>2995 North Liberty Street, Winston-Salem, NC</u>	Drill Device:	<u>GeoProbe® 5400</u>
Project Number:	<u>ENMO050015.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 20.0'      Weather Conditions: Very Hot      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 4.0"      Boring Location: Proposed Piping Location

Depth (Feet) (Meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00    0.61			100%	(ML)	Reddish brown, fine to medium sandy SILT (ML), with clay, dry.	0.0
4.00    1.22						
6.00    1.83			100%	(CL)	Tan, orange, light brown CLAY (CL), with some silt, moist at 10'-12'.	0.0
8.00    2.44						
10.00   3.05			100%	(CL)		0.0
12.00   3.66						
14.00   4.27			100%	(SM)	Tan, orange, fine to medium SAND (SM), with little silt.	0.0
16.00   4.88						
18.00   5.49			100%	(SM)		0.0
20.00   6.10		x				
					Boring terminated at 20.0' bls. X denotes interval collected for laboratory testing.	

**APPENDIX C**

**LABORATORY ANALYTICAL REPORT**

**PARADIGM ANALYTICAL LABORATORIES, INC.**

5500 Business Drive  
Wilmington, North Carolina 28405  
(910) 350-1903  
Fax (910) 350-1557

Mr. Darren Lockhart  
Environmental Investigations  
2101 Gateway Centre Boulevard  
Suite 200  
Morrisville NC 27560  
Report Number: G106-535  
Client Project: Parcel 7 Tip#U-2826A

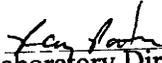
Dear Mr. Lockhart:

Enclosed are the results of the analytical services performed under the referenced project. 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 the services performed during this project, please call Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,  
Paradigm Analytical Laboratories, Inc.

  
Laboratory Director  
J. Patrick Weaver

8/30/2005  
Date

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: P7GP4-8  
Client Project ID: Parcel 7 Tip#U-2826A  
Lab Sample ID G106-535-4A  
Lab Project ID: G106-535  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 08-12-2005 10:55  
Date Received: 8/13/05  
Matrix: Soil  
%Solids: 81.3

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	51.0	1	8/17/05
Benzene	BQL	5.10	1	8/17/05
Bromobenzene	BQL	5.10	1	8/17/05
Bromochloromethane	BQL	5.10	1	8/17/05
Bromodichloromethane	BQL	5.10	1	8/17/05
Bromoform	BQL	5.10	1	8/17/05
Bromomethane	BQL	5.10	1	8/17/05
2-Butanone	BQL	25.5	1	8/17/05
n-Butylbenzene	BQL	5.10	1	8/17/05
sec-Butylbenzene	BQL	5.10	1	8/17/05
tert-Butylbenzene	BQL	5.10	1	8/17/05
Carbon disulfide	BQL	5.10	1	8/17/05
Carbon tetrachloride	BQL	5.10	1	8/17/05
Chlorobenzene	BQL	5.10	1	8/17/05
Chloroethane	BQL	5.10	1	8/17/05
Chloroform	BQL	5.10	1	8/17/05
Chloromethane	BQL	5.10	1	8/17/05
2-Chlorotoluene	BQL	5.10	1	8/17/05
4-Chlorotoluene	BQL	5.10	1	8/17/05
Dibromochloromethane	BQL	5.10	1	8/17/05
1,2-Dibromo-3-chloropropane	BQL	5.10	1	8/17/05
Dibromomethane	BQL	5.10	1	8/17/05
1,2-Dibromoethane (EDB)	BQL	5.10	1	8/17/05
1,2-Dichlorobenzene	BQL	5.10	1	8/17/05
1,3-Dichlorobenzene	BQL	5.10	1	8/17/05
1,4-Dichlorobenzene	BQL	5.10	1	8/17/05
trans-1,4-Dichloro-2-butene	BQL	5.10	1	8/17/05
1,1-Dichloroethane	BQL	5.10	1	8/17/05
1,1-Dichloroethene	BQL	5.10	1	8/17/05
1,2-Dichloroethane	BQL	5.10	1	8/17/05
cis-1,2-Dichloroethene	BQL	5.10	1	8/17/05
trans-1,2-dichloroethene	BQL	5.10	1	8/17/05
1,2-Dichloropropane	BQL	5.10	1	8/17/05
1,3-Dichloropropane	BQL	5.10	1	8/17/05
2,2-Dichloropropane	BQL	5.10	1	8/17/05
1,1-Dichloropropene	BQL	5.10	1	8/17/05
cis-1,3-Dichloropropene	BQL	5.10	1	8/17/05
trans-1,3-Dichloropropene	BQL	5.10	1	8/17/05
Dichlorodifluoromethane	BQL	5.10	1	8/17/05
Diisopropyl ether (DIPE)	BQL	5.10	1	8/17/05
Ethylbenzene	BQL	5.10	1	8/17/05
Hexachlorobutadiene	BQL	5.10	1	8/17/05

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: P7GP4-8  
Client Project ID: Parcel 7 Tip#U-2826A  
Lab Sample ID G106-535-4A  
Lab Project ID: G106-535  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 08-12-2005 10:55  
Date Received: 8/13/05  
Matrix: Soil  
%Solids: 81.3

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	5.10	1	8/17/05
Iodomethane	BQL	5.10	1	8/17/05
Isopropylbenzene	BQL	5.10	1	8/17/05
4-Isopropyltoluene	BQL	5.10	1	8/17/05
Methylene chloride	BQL	20.4	1	8/17/05
4-Methyl-2-pentanone	BQL	5.10	1	8/17/05
Methyl-tert-butyl ether (MTBE)	BQL	5.10	1	8/17/05
Naphthalene	BQL	5.10	1	8/17/05
n-Propyl benzene	BQL	5.10	1	8/17/05
Styrene	BQL	5.10	1	8/17/05
1,1,1,2-Tetrachloroethane	BQL	5.10	1	8/17/05
1,1,2,2-Tetrachloroethane	BQL	5.10	1	8/17/05
Tetrachloroethene	BQL	5.10	1	8/17/05
Toluene	BQL	5.10	1	8/17/05
1,2,3-Trichlorobenzene	BQL	5.10	1	8/17/05
1,2,4-Trichlorobenzene	BQL	5.10	1	8/17/05
Trichloroethene	BQL	5.10	1	8/17/05
1,1,1-Trichloroethane	BQL	5.10	1	8/17/05
1,1,2-Trichloroethane	BQL	5.10	1	8/17/05
Trichlorofluoromethane	BQL	5.10	1	8/17/05
1,2,3-Trichloropropane	BQL	5.10	1	8/17/05
1,2,4-Trimethylbenzene	BQL	5.10	1	8/17/05
1,3,5-Trimethylbenzene	BQL	5.10	1	8/17/05
Vinyl chloride	BQL	5.10	1	8/17/05
m-,p-Xylene	BQL	10.2	1	8/17/05
o-Xylene	BQL	5.10	1	8/17/05

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	58	116
1,2-Dichloroethane-d4	50	64.4	129
Toluene-d8	50	54	108

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: Me

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: P7GP14-  
Client Project ID: Parcel 7 Tip#U-2826A  
Lab Sample ID G106-535-13A  
Lab Project ID: G106-535  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 08-12-2005 15:30  
Date Received: 8/13/2005  
Matrix: Soil  
%Solids: 90.3

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	58.0	1	8/17/2005
Benzene	BQL	5.80	1	8/17/2005
Bromobenzene	BQL	5.80	1	8/17/2005
Bromochloromethane	BQL	5.80	1	8/17/2005
Bromodichloromethane	BQL	5.80	1	8/17/2005
Bromoform	BQL	5.80	1	8/17/2005
Bromomethane	BQL	5.80	1	8/17/2005
2-Butanone	BQL	29.0	1	8/17/2005
n-Butylbenzene	BQL	5.80	1	8/17/2005
sec-Butylbenzene	BQL	5.80	1	8/17/2005
tert-Butylbenzene	BQL	5.80	1	8/17/2005
Carbon disulfide	BQL	5.80	1	8/17/2005
Carbon tetrachloride	BQL	5.80	1	8/17/2005
Chlorobenzene	BQL	5.80	1	8/17/2005
Chloroethane	BQL	5.80	1	8/17/2005
Chloroform	BQL	5.80	1	8/17/2005
Chloromethane	BQL	5.80	1	8/17/2005
2-Chlorotoluene	BQL	5.80	1	8/17/2005
4-Chlorotoluene	BQL	5.80	1	8/17/2005
Dibromochloromethane	BQL	5.80	1	8/17/2005
1,2-Dibromo-3-chloropropane	BQL	5.80	1	8/17/2005
Dibromomethane	BQL	5.80	1	8/17/2005
1,2-Dibromoethane (EDB)	BQL	5.80	1	8/17/2005
1,2-Dichlorobenzene	BQL	5.80	1	8/17/2005
1,3-Dichlorobenzene	BQL	5.80	1	8/17/2005
1,4-Dichlorobenzene	BQL	5.80	1	8/17/2005
trans-1,4-Dichloro-2-butene	BQL	5.80	1	8/17/2005
1,1-Dichloroethane	BQL	5.80	1	8/17/2005
1,1-Dichloroethene	BQL	5.80	1	8/17/2005
1,2-Dichloroethane	BQL	5.80	1	8/17/2005
cis-1,2-Dichloroethene	BQL	5.80	1	8/17/2005
trans-1,2-dichloroethene	BQL	5.80	1	8/17/2005
1,2-Dichloropropane	BQL	5.80	1	8/17/2005
1,3-Dichloropropane	BQL	5.80	1	8/17/2005
2,2-Dichloropropane	BQL	5.80	1	8/17/2005
1,1-Dichloropropene	BQL	5.80	1	8/17/2005
cis-1,3-Dichloropropene	BQL	5.80	1	8/17/2005
trans-1,3-Dichloropropene	BQL	5.80	1	8/17/2005
Dichlorodifluoromethane	BQL	5.80	1	8/17/2005
Diisopropyl ether (DIPE)	BQL	5.80	1	8/17/2005
Ethylbenzene	BQL	5.80	1	8/17/2005
Hexachlorobutadiene	BQL	5.80	1	8/17/2005
2-Hexanone	BQL	5.80	1	8/17/2005
Iodomethane	BQL	5.80	1	8/17/2005

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: P7GP14-  
Client Project ID: Parcel 7 Tip#U-2826A  
Lab Sample ID G106-535-13A  
Lab Project ID: G106-535  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 08-12-2005 15:30  
Date Received: 8/13/2005  
Matrix: Soil  
%Solids: 90.3

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	5.80	1	8/17/2005
4-Isopropyltoluene	BQL	5.80	1	8/17/2005
Methylene chloride	BQL	23.2	1	8/17/2005
4-Methyl-2-pentanone	BQL	5.80	1	8/17/2005
Methyl-tert-butyl ether (MTBE)	BQL	5.80	1	8/17/2005
Naphthalene	BQL	5.80	1	8/17/2005
n-Propyl benzene	BQL	5.80	1	8/17/2005
Styrene	BQL	5.80	1	8/17/2005
1,1,1,2-Tetrachloroethane	BQL	5.80	1	8/17/2005
1,1,2,2-Tetrachloroethane	BQL	5.80	1	8/17/2005
Tetrachloroethane	BQL	5.80	1	8/17/2005
Toluene	BQL	5.80	1	8/17/2005
1,2,3-Trichlorobenzene	BQL	5.80	1	8/17/2005
1,2,4-Trichlorobenzene	BQL	5.80	1	8/17/2005
Trichloroethene	BQL	5.80	1	8/17/2005
1,1,1-Trichloroethane	BQL	5.80	1	8/17/2005
1,1,2-Trichloroethane	BQL	5.80	1	8/17/2005
Trichlorofluoromethane	BQL	5.80	1	8/17/2005
1,2,3-Trichloropropane	BQL	5.80	1	8/17/2005
1,2,4-Trimethylbenzene	BQL	5.80	1	8/17/2005
1,3,5-Trimethylbenzene	BQL	5.80	1	8/17/2005
Vinyl chloride	BQL	5.80	1	8/17/2005
m-,p-Xylene	BQL	11.6	1	8/17/2005
o-Xylene	BQL	5.80	1	8/17/2005

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	59.6	119
1,2-Dichloroethane-d4	50	62.2	124
Toluene-d8	50	52.7	105

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: MM

**Results for Semivolatiles  
by GCMS 8270**

Client Sample ID: P7GP4-8  
 Client Project ID: Parcel 7 Tip#U-2826A  
 Lab Sample ID: G106-535-4I  
 Lab Project ID: G106-535  
 Report Basis: Dry weight

Analyzed By: MRC  
 Date Collected: 8/12/2005 10:55  
 Date Received: 8/13/2005  
 Date Extracted: 8/16/2005  
 Matrix: Soil  
 % Solids: 81.28

Compound	Result ug/Kg	Quantitation Limit ug/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	380	1	8/20/2005
Acenaphthylene	BQL	380	1	8/20/2005
Anthracene	BQL	380	1	8/20/2005
Benzo[a]anthracene	BQL	380	1	8/20/2005
Benzo[a]pyrene	BQL	380	1	8/20/2005
Benzo[b]fluoranthene	BQL	380	1	8/20/2005
Benzo[g,h,i]perylene	BQL	380	1	8/20/2005
Benzo[k]fluoranthene	BQL	380	1	8/20/2005
Benzoic Acid	BQL	759	1	8/20/2005
Bis(2-chloroethoxy)methane	BQL	380	1	8/20/2005
Bis(2-chloroethyl)ether	BQL	380	1	8/20/2005
Bis(2-chloroisopropyl)ether	BQL	380	1	8/20/2005
Bis(2-ethylhexyl)phthalate	BQL	380	1	8/20/2005
4-bromophenyl phenyl ether	BQL	380	1	8/20/2005
Butylbenzylphthalate	BQL	380	1	8/20/2005
2-Chloronaphthalene	BQL	380	1	8/20/2005
2-Chlorophenol	BQL	380	1	8/20/2005
4-Chloro-3-methylphenol	BQL	380	1	8/20/2005
4-Chloroaniline	BQL	1900	1	8/20/2005
4-Chlorophenyl phenyl ether	BQL	380	1	8/20/2005
Chrysene	BQL	380	1	8/20/2005
Dibenzo[a,h]anthracene	BQL	380	1	8/20/2005
Dibenzofuran	BQL	380	1	8/20/2005
Di-n-Butylphthalate	BQL	380	1	8/20/2005
1,2-Dichlorobenzene	BQL	380	1	8/20/2005
1,3-Dichlorobenzene	BQL	380	1	8/20/2005
1,4-Dichlorobenzene	BQL	380	1	8/20/2005
3,3'-Dichlorobenzidine	BQL	759	1	8/20/2005
2,4-Dichlorophenol	BQL	380	1	8/20/2005
Diethylphthalate	BQL	380	1	8/20/2005
Dimethylphthalate	BQL	380	1	8/20/2005
2,4-Dimethylphenol	BQL	380	1	8/20/2005
Di-n-octylphthalate	BQL	380	1	8/20/2005
4,6-Dinitro-2-methylphenol	BQL	1900	1	8/20/2005
2,4-Dinitrophenol	BQL	1900	1	8/20/2005
2,4-Dinitrotoluene	BQL	380	1	8/20/2005
2,6-Dinitrotoluene	BQL	380	1	8/20/2005
Diphenylamine *	BQL	380	1	8/20/2005
Fluoranthene	BQL	380	1	8/20/2005
Fluorene	BQL	380	1	8/20/2005
Hexachlorobenzene	BQL	380	1	8/20/2005
Hexachlorobutadiene	BQL	380	1	8/20/2005

**Results for Semivolatiles  
by GCMS 8270**

Client Sample ID: P7GP4-8  
 Client Project ID: Parcel 7 Tip#U-2826A  
 Lab Sample ID: G106-535-41  
 Lab Project ID: G106-535  
 Report Basis: Dry weight

Analyzed By: MRC  
 Date Collected: 8/12/2005 10:55  
 Date Received: 8/13/2005  
 Date Extracted: 8/16/2005  
 Matrix: Soil  
 % Solids: 81.28

Compound	Result ug/Kg	Quantitation Limit ug/Kg	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	BQL	759	1	8/20/2005
Hexachloroethane	BQL	380	1	8/20/2005
Indeno(1,2,3-c,d)pyrene	BQL	380	1	8/20/2005
Isophorone	BQL	380	1	8/20/2005
2-Methylnaphthalene	BQL	380	1	8/20/2005
2-Methylphenol	BQL	380	1	8/20/2005
3- & 4-Methylphenol	BQL	380	1	8/20/2005
Naphthalene	BQL	380	1	8/20/2005
2-Nitroaniline	BQL	380	1	8/20/2005
3-Nitroaniline	BQL	1900	1	8/20/2005
4-Nitroaniline	BQL	1900	1	8/20/2005
Nitrobenzene	BQL	380	1	8/20/2005
2-Nitrophenol	BQL	380	1	8/20/2005
4-Nitrophenol	BQL	1900	1	8/20/2005
N-Nitrosodi-n-propylamine	BQL	380	1	8/20/2005
Pentachlorophenol	BQL	1900	1	8/20/2005
Phenanthrene	BQL	380	1	8/20/2005
Phenol	BQL	380	1	8/20/2005
Pyrene	BQL	380	1	8/20/2005
1,2,4-Trichlorobenzene	BQL	380	1	8/20/2005
2,4,5-Trichlorophenol	BQL	380	1	8/20/2005
2,4,6-Trichlorophenol	BQL	380	1	8/20/2005

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.7	87
2-Fluorophenol	10	10.6	106
Nitrobenzene-d5	10	9.6	96
Phenol-d6	10	10.2	102
2,4,6-Tribromophenol	10	7.7	77
4-Terphenyl-d14	10	11.6	116

**Comments:**

\* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By: Mr

**Results for Semivolatiles  
by GCMS 8270**

Client Sample ID: P7GP14-  
Client Project ID: Parcel 7 Tip#U-2826A  
Lab Sample ID: G106-535-13H  
Lab Project ID: G106-535  
Report Basis: Dry weight

Analyzed By: MRC  
Date Collected: 8/12/2005 15:30  
Date Received: 8/13/2005  
Date Extracted: 8/24/2005  
Matrix: Soil  
% Solids: 90.29

Compound	Result ug/Kg	Quantitation Limit ug/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	343	1	8/25/2005
Acenaphthylene	BQL	343	1	8/25/2005
Anthracene	BQL	343	1	8/25/2005
Benzo[a]anthracene	BQL	343	1	8/25/2005
Benzo[a]pyrene	BQL	343	1	8/25/2005
Benzo[b]fluoranthene	BQL	343	1	8/25/2005
Benzo[g,h,i]perylene	BQL	343	1	8/25/2005
Benzo[k]fluoranthene	BQL	343	1	8/25/2005
Benzoic Acid	BQL	686	1	8/25/2005
Bis(2-chloroethoxy)methane	BQL	343	1	8/25/2005
Bis(2-chloroethyl)ether	BQL	343	1	8/25/2005
Bis(2-chloroisopropyl)ether	BQL	343	1	8/25/2005
Bis(2-ethylhexyl)phthalate	BQL	343	1	8/25/2005
4-bromophenyl phenyl ether	BQL	343	1	8/25/2005
Butylbenzylphthalate	BQL	343	1	8/25/2005
2-Chloronaphthalene	BQL	343	1	8/25/2005
2-Chlorophenol	BQL	343	1	8/25/2005
4-Chloro-3-methylphenol	BQL	343	1	8/25/2005
4-Chloroaniline	BQL	1720	1	8/25/2005
4-Chlorophenyl phenyl ether	BQL	343	1	8/25/2005
Chrysene	BQL	343	1	8/25/2005
Dibenzo[a,h]anthracene	BQL	343	1	8/25/2005
Dibenzofuran	BQL	343	1	8/25/2005
Di-n-Butylphthalate	BQL	343	1	8/25/2005
1,2-Dichlorobenzene	BQL	343	1	8/25/2005
1,3-Dichlorobenzene	BQL	343	1	8/25/2005
1,4-Dichlorobenzene	BQL	343	1	8/25/2005
3,3'-Dichlorobenzidine	BQL	686	1	8/25/2005
2,4-Dichlorophenol	BQL	343	1	8/25/2005
Diethylphthalate	BQL	343	1	8/25/2005
Dimethylphthalate	BQL	343	1	8/25/2005
2,4-Dimethylphenol	BQL	343	1	8/25/2005
Di-n-octylphthalate	BQL	343	1	8/25/2005
4,6-Dinitro-2-methylphenol	BQL	1720	1	8/25/2005
2,4-Dinitrophenol	BQL	1720	1	8/25/2005
2,4-Dinitrotoluene	BQL	343	1	8/25/2005
2,6-Dinitrotoluene	BQL	343	1	8/25/2005
Diphenylamine *	BQL	343	1	8/25/2005
Fluoranthene	BQL	343	1	8/25/2005
Fluorene	BQL	343	1	8/25/2005
Hexachlorobenzene	BQL	343	1	8/25/2005
Hexachlorobutadiene	BQL	343	1	8/25/2005

**Results for Semivolatiles  
by GCMS 8270**

Client Sample ID: P7GP14-  
Client Project ID: Parcel 7 Tip#U-2826A  
Lab Sample ID: G106-535-13H  
Lab Project ID: G106-535  
Report Basis: Dry weight

Analyzed By: MRC  
Date Collected: 8/12/2005 15:30  
Date Received: 8/13/2005  
Date Extracted: 8/24/2005  
Matrix: Soil  
% Solids: 90.29

Compound	Result ug/Kg	Quantitation Limit ug/Kg	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	BQL	686	1	8/25/2005
Hexachloroethane	BQL	343	1	8/25/2005
Indeno(1,2,3-c,d)pyrene	BQL	343	1	8/25/2005
Isophorone	BQL	343	1	8/25/2005
2-Methylnaphthalene	BQL	343	1	8/25/2005
2-Methylphenol	BQL	343	1	8/25/2005
3- & 4-Methylphenol	BQL	343	1	8/25/2005
Naphthalene	BQL	343	1	8/25/2005
2-Nitroaniline	BQL	343	1	8/25/2005
3-Nitroaniline	BQL	1720	1	8/25/2005
4-Nitroaniline	BQL	1720	1	8/25/2005
Nitrobenzene	BQL	343	1	8/25/2005
2-Nitrophenol	BQL	343	1	8/25/2005
4-Nitrophenol	BQL	1720	1	8/25/2005
N-Nitrosodi-n-propylamine	BQL	343	1	8/25/2005
Pentachlorophenol	BQL	1720	1	8/25/2005
Phenanthrene	BQL	343	1	8/25/2005
Phenol	BQL	343	1	8/25/2005
Pyrene	BQL	343	1	8/25/2005
1,2,4-Trichlorobenzene	BQL	343	1	8/25/2005
2,4,5-Trichlorophenol	BQL	343	1	8/25/2005
2,4,6-Trichlorophenol	BQL	343	1	8/25/2005

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	10.7	107
2-Fluorophenol	10	10.5	105
Nitrobenzene-d5	10	10	100
Phenol-d6	10	10.1	101
2,4,6-Tribromophenol	10	9.1	91
4-Terphenyl-d14	10	12.7	127

**Comments:**

\* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By: MRC

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: P7GP1-20  
Client Project ID: Parcel 7 Tip#U-2826A  
Lab Sample ID: G106-535-1  
Lab Project ID: G106-535  
Report Basis: Dry Weight

Analyzed By: DCS  
Date Collected: 8/12/05 10:20  
Date Received: 8/13/05  
Matrix: Soil  
Solids 80.17

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	8.62	5035	1	08/18/05
Diesel Range Organics	BQL	7.56	3545	1	08/29/05

Comments:

**Results for Total Petroleum Hydrocarbons**

by GC/FID 8015

Client Sample ID: P7GP2-12

Client Project ID: Parcel 7 Tip#U-2826A

Lab Sample ID: G106-535-2

Lab Project ID: G106-535

Report Basis: Dry Weight

Analyzed By: DCS

Date Collected: 8/12/05 10:40

Date Received: 8/13/05

Matrix: Soil

Solids 81.91

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.53	5035	1	08/18/05
Diesel Range Organics	BQL	7.54	3545	1	08/29/05

Comments:

Reviewed By: Mr  
TPH\_LIMS\_v1.82.XLS

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: P7GP3-10  
 Client Project ID: Parcel 7 Tip#U-2826A  
 Lab Sample ID: G106-535-3  
 Lab Project ID: G106-535  
 Report Basis: Dry Weight

Analyzed By: DCS  
 Date Collected: 8/12/05 10:45  
 Date Received: 8/13/05  
 Matrix: Soil  
 Solids 81.32

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7	5035	1	08/18/05
Diesel Range Organics	BQL	7.26	3545	1	08/29/05

Comments:

Reviewed By: ML  
 TPH\_LIMS\_v1.82.XLS

**Results for Total Petroleum Hydrocarbons**

by GC/FID 8015

Client Sample ID: P7GP4-8

Client Project ID: Parcel 7 Tip#U-2826A

Lab Sample ID: G106-535-4

Lab Project ID: G106-535

Report Basis: Dry Weight

Analyzed By: DCS

Date Collected: 8/12/05 10:55

Date Received: 8/13/05

Matrix: Soil

Solids 81.28

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.12	5035	1	08/18/05
Diesel Range Organics	BQL	7.49	3545	1	08/29/05

Comments:

Reviewed By: Wm  
TPH\_LIMS\_v1.02.XLS

**Results for Total Petroleum Hydrocarbons**

by GC/FID 8015

Client Sample ID: P7GP5-10

Analyzed By: DCS

Client Project ID: Parcel 7 Tip#U-2826A

Date Collected: 8/12/05 11:15

Lab Sample ID: G106-535-5

Date Received: 8/13/05

Lab Project ID: G106-535

Matrix: Soil

Report Basis: Dry Weight

Solids 80.04

<b>Analyte</b>	<b>Result MG/KG</b>	<b>Report Limit MG/KG</b>	<b>Prep Method</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>
Gasoline Range Organics	BQL	7.06	5035	1	08/18/05
Diesel Range Organics	BQL	7.6	3545	1	08/29/05

Comments:

Reviewed By: Mh  
TPH\_LIMS\_v1 82.XLS

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: P7GP6-11  
 Client Project ID: Parcel 7 Tip#U-2826A  
 Lab Sample ID: G106-535-6  
 Lab Project ID: G106-535  
 Report Basis: Dry Weight

Analyzed By: DCS  
 Date Collected: 8/12/05 11:30  
 Date Received: 8/13/05  
 Matrix: Soil  
 Solids 87.77

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.66	5035	1	08/18/05
Diesel Range Organics	20.6	6.73	3545	1	08/29/05

Comments:

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: P7GP7-8  
Client Project ID: Parcel 7 Tip#U-2826A  
Lab Sample ID: G106-535-7  
Lab Project ID: G106-535  
Report Basis: Dry Weight

Analyzed By: DCS  
Date Collected: 8/12/05 11:55  
Date Received: 8/13/05  
Matrix: Soil  
Solids 84.41

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.88	5035	1	08/18/05
Diesel Range Organics	BQL	7.16	3545	1	08/29/05

Comments:

**Results for Total Petroleum Hydrocarbons**

by GC/FID 8015

Client Sample ID: P7GP8-6

Analyzed By: DCS

Client Project ID: Parcel 7 Tip#U-2826A

Date Collected: 8/12/05 12:15

Lab Sample ID: G106-535-8

Date Received: 8/13/05

Lab Project ID: G106-535

Matrix: Soil

Report Basis: Dry Weight

Solids 70.15

<b>Analyte</b>	<b>Result MG/KG</b>	<b>Report Limit MG/KG</b>	<b>Prep Method</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>
Gasoline Range Organics	BQL	7.93	5035	1	08/18/05
Diesel Range Organics	BQL	8.44	3545	1	08/29/05

Comments:

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: P7GP9-10  
Client Project ID: Parcel 7 Tip#U-2826A  
Lab Sample ID: G106-535-9  
Lab Project ID: G106-535  
Report Basis: Dry Weight

Analyzed By: DCS  
Date Collected: 8/12/05 12:20  
Date Received: 8/13/05  
Matrix: Soil  
Solids 85.96

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.48	5035	1	08/18/05
Diesel Range Organics	BQL	7.19	3545	1	08/29/05

Comments:

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: P7GP10-6  
Client Project ID: Parcel 7 Tip#U-2826A  
Lab Sample ID: G106-535-10  
Lab Project ID: G106-535  
Report Basis: Dry Weight

Analyzed By: DCS  
Date Collected: 8/12/05 14:15  
Date Received: 8/13/05  
Matrix: Soil  
Solids 81.50

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.48	5035	1	08/18/05
Diesel Range Organics	BQL	7.69	3545	1	08/30/05

Comments:

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: P7GP11-7  
Client Project ID: Parcel 7 Tip#U-2826A  
Lab Sample ID: G106-535-11  
Lab Project ID: G106-535  
Report Basis: Dry Weight

Analyzed By: DCS  
Date Collected: 8/12/05 14:00  
Date Received: 8/13/05  
Matrix: Soil  
Solids 71.86

<b>Analyte</b>	<b>Result MG/KG</b>	<b>Report Limit MG/KG</b>	<b>Prep Method</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>
Gasoline Range Organics	BQL	7.66	5035	1	08/18/05
Diesel Range Organics	BQL	8.9	3545	1	08/30/05

Comments:

Reviewed By:   
TPH\_LIMS\_v1 B2 XLS

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: P7GP12-20

Analyzed By: DCS

Client Project ID: Parcel 7 Tip#U-2826A

Date Collected: 8/12/05 14:30

Lab Sample ID: G106-535-12

Date Received: 8/13/05

Lab Project ID: G106-535

Matrix: Soil

Report Basis: Dry Weight

Solids 73.28

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	10.1	5035	1	08/18/05
Diesel Range Organics	BQL	8.77	3545	1	08/30/05

Comments:

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: P7GP14-

Analyzed By: DCS

Client Project ID: Parcel 7 Tip#U-2826A

Date Collected: 8/12/05 15:30

Lab Sample ID: G106-535-13

Date Received: 8/13/05

Lab Project ID: G106-535

Matrix: Soil

Report Basis: Dry Weight

Solids 90.29

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.97	5035	1	08/19/05
Diesel Range Organics	BQL	6.92	3545	1	08/30/05

Comments:

List of Reporting Abbreviations  
and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

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 = Reporting 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

% solids = 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.



**PARADIGM ANALYTICAL LABORATORIES, INC.**

5500 Business Drive, Wilmington, NC 28405  
 Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 48831

TIP # U-2826A

WBS: 34871.1.1

Page 1 of 2

Client: ELI, INC. Project ID: PARCEL 7  
 Address: 201 GATSBY CENTER RD Contact: DARREN COOPER  
 Address: SUITE 200 MONSIEUR, NC Phone: 919-544-7500  
 Quote #: \_\_\_\_\_ Fax: 919-544-2179

Date: 8-12-05  
 Turnaround: STRADA  
 Job Number: ENMO050015.00

Report To: DARREN COOPER  
FE

Invoice To: NCDEP (TIP# U-2826A)

Sample ID	Date	Time	Matrix	Preservatives		Analyses		Date	Time	Temperature	State Certification Requested
				TRH 690	TRH DR0	8260	8270				
P76P1-20	8-12-05	1020	Soil	X	X	X	X				
P76P2-12		1040		X	X	X	X				
P76P3-10		1045		X	X	X	X				
P76P4-8		1055		X	X	X	X				
P76P5-10		1115		X	X	X	X				
P76P6-11		1130		X	X	X	X				
P76P7-8		1155		X	X	X	X				
P76P8-6		1215		X	X	X	X				
P76P9-10		1220		X	X	X	X				
P76P10-76		1415		X	X	X	X				
Signature: <u>Darren Cooper</u>				Received By: <u>L. Lockamy</u>		Date: <u>8/12/05 7:16</u>		Time: <u>10:30</u>		Temperature: <u>ON ICE</u>	
Signature: <u>Darren Cooper</u>				Received By: <u>L. Lockamy</u>		Date: <u>8/12/05 10:30</u>		Time: <u>10:30</u>		Temperature: <u>3.8</u>	

Comments:  
 Please specify any special reporting requirements

G106-535

State Certification Requested  
 NC  SC  Other

SEE REVERSE FOR  
 TERMS AND CONDITIONS

ORIGINAL

**PARADIGM ANALYTICAL LABORATORIES, INC.**

5500 Business Drive  
Wilmington, North Carolina 28405  
(910) 350-1903  
Fax (910) 350-1557

Mr. Darren Lockhart  
Environmental Investigations  
2101 Gateway Centre Boulevard  
Suite 200  
Morrisville NC 27560  
Report Number: G106-545

Client Project: Parcel 7-NCDOT Forsyth Tip#U-2826A

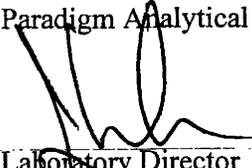
Dear Mr. Lockhart:

Enclosed are the results of the analytical services performed under the referenced project. 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 the services performed during this project, please call Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,  
Paradigm Analytical Laboratories, Inc.

  
\_\_\_\_\_  
Laboratory Director  
J. Patrick Weaver

9/9/05  
\_\_\_\_\_  
Date

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles

by GC 6230D

Client Sample ID: TW-1

Analyzed By: MJC

Client Project ID: Parcel 7-NCDOT Forsyth Tip#U-2826A Date Collected: 8/27/05 18:30

Lab Sample ID: G106-545-1A

Date Received: 9/1/05

Lab Project ID: G106-545

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	0.500	1	9/2/05
Bromobenzene	BQL	0.500	1	9/2/05
Bromochloromethane	BQL	0.500	1	9/2/05
Bromodichloromethane	BQL	0.500	1	9/2/05
Bromoform	BQL	0.500	1	9/2/05
Bromomethane	BQL	0.500	1	9/2/05
n-Butylbenzene	BQL	0.500	1	9/2/05
sec-Butylbenzene	BQL	0.500	1	9/2/05
tert-Butylbenzene	BQL	0.500	1	9/2/05
Carbon tetrachloride	BQL	0.500	1	9/2/05
Chlorobenzene	BQL	0.500	1	9/2/05
Chloroethane	BQL	0.500	1	9/2/05
Chloroform	BQL	0.500	1	9/2/05
Chloromethane	BQL	0.500	1	9/2/05
2-Chlorotoluene	BQL	0.500	1	9/2/05
4-Chlorotoluene	BQL	0.500	1	9/2/05
Dibromochloromethane	BQL	0.500	1	9/2/05
1,2-Dibromo-3-chloropropane	BQL	0.500	1	9/2/05
1,2-Dibromoethane (EDB)	BQL	0.500	1	9/2/05
Dibromomethane	BQL	0.500	1	9/2/05
1,2-Dichlorobenzene	BQL	0.500	1	9/2/05
1,3-Dichlorobenzene	BQL	0.500	1	9/2/05
1,4-Dichlorobenzene	BQL	0.500	1	9/2/05
Dichlorodifluoromethane	BQL	0.500	1	9/2/05
1,1-Dichloroethane	BQL	0.500	1	9/2/05
1,2-Dichloroethane	BQL	0.500	1	9/2/05
1,1-Dichloroethene	BQL	0.500	1	9/2/05
cis-1,2-Dichloroethene	BQL	0.500	1	9/2/05
trans-1,2-Dichloroethene	BQL	0.500	1	9/2/05
1,2-Dichloropropane	BQL	0.500	1	9/2/05
2,2-Dichloropropane	BQL	0.500	1	9/2/05
cis-1,3-Dichloropropene	BQL	0.500	1	9/2/05
trans-1,3-Dichloropropene	BQL	0.500	1	9/2/05
Diisopropyl ether (DIPE)	BQL	0.500	1	9/2/05
Ethylbenzene	BQL	0.500	1	9/2/05
Hexachlorobutadiene	BQL	0.500	1	9/2/05
Isopropylbenzene	BQL	0.500	1	9/2/05
p-Isopropyltoluene	BQL	0.500	1	9/2/05
Methyl-tert butyl ether (MTBE)	BQL	0.500	1	9/2/05

Reviewed By:         

GC\_LIMS\_v2.0.XLS 2 of 8

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles

by GC 6230D

Client Sample ID: TW-1

Analyzed By: MJC

Client Project ID: Parcel 7-NCDOT Forsyth Tip#U-2826A

Date Collected: 8/27/05 18:30

Lab Sample ID: G106-545-1A

Date Received: 9/1/05

Lab Project ID: G106-545

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Methylene Chloride	BQL	5.00	1	9/2/05
Naphthalene	BQL	0.500	1	9/2/05
n-Propylbenzene	BQL	0.500	1	9/2/05
Styrene	BQL	1.00	1	9/2/05
1,1,1,2-Tetrachloroethane	BQL	0.500	1	9/2/05
1,1,2,2-Tetrachloroethane	BQL	0.500	1	9/2/05
Tetrachloroethene	BQL	0.500	1	9/2/05
Toluene	BQL	0.500	1	9/2/05
1,2,3-Trichlorobenzene	BQL	0.500	1	9/2/05
1,2,4-Trichlorobenzene	BQL	0.500	1	9/2/05
1,1,1-Trichloroethane	BQL	0.500	1	9/2/05
1,1,2-Trichloroethane	BQL	0.500	1	9/2/05
Trichloroethene	BQL	0.500	1	9/2/05
Trichlorofluoromethane	BQL	0.500	1	9/2/05
1,2,3-Trichloropropane	BQL	0.500	1	9/2/05
1,2,4-Trimethylbenzene	BQL	0.500	1	9/2/05
1,3,5-Trimethylbenzene	BQL	0.500	1	9/2/05
Vinyl Chloride	BQL	0.500	1	9/2/05
m/p-Xylene	BQL	1.00	1	9/2/05
o-Xylene	BQL	1.00	1	9/2/05

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.9	102
1,4-Dichlorobutane	40	40.3	101

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By:   *h*  

GC\_LIMS\_v2.0.XLS 3 of 8

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Semivolatiles  
by GCMS 625

Client Sample ID: TW-1  
Client Project ID: Parcel 7-NCDOT Forsyth Tip#U-2826A  
Lab Sample ID: G106-545-1H  
Lab Project ID: G106-545

Analyzed By: MRC  
Date Collected: 8/27/2005 18:30  
Date Received: 9/1/2005  
Date Extracted: 9/2/2005  
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Acenaphthene	BQL	10.0	1	9/6/2005
Acenaphthylene	BQL	10.0	1	9/6/2005
Anthracene	BQL	10.0	1	9/6/2005
Benzo[a]anthracene	BQL	10.0	1	9/6/2005
Benzo[a]pyrene	BQL	10.0	1	9/6/2005
Benzo[b]fluoranthene	BQL	10.0	1	9/6/2005
Benzo[g,h,i]perylene	BQL	10.0	1	9/6/2005
Benzo[k]fluoranthene	BQL	10.0	1	9/6/2005
Bis(2-chloroethoxy)methane	BQL	10.0	1	9/6/2005
Bis(2-chloroethyl)ether	BQL	10.0	1	9/6/2005
Bis(2-chloroisopropyl)ether	BQL	10.0	1	9/6/2005
Bis(2-ethylhexyl)phthalate	BQL	10.0	1	9/6/2005
4-bromophenyl phenyl ether	BQL	10.0	1	9/6/2005
Butylbenzylphthalate	BQL	10.0	1	9/6/2005
2-Chloronaphthalene	BQL	10.0	1	9/6/2005
2-Chlorophenol	BQL	10.0	1	9/6/2005
4-Chloro-3-methylphenol	BQL	10.0	1	9/6/2005
4-Chlorophenyl phenyl ether	BQL	10.0	1	9/6/2005
Chrysene	BQL	10.0	1	9/6/2005
Dibenzo[a,h]anthracene	BQL	10.0	1	9/6/2005
Di-n-Butylphthalate	BQL	10.0	1	9/6/2005
1,2-Dichlorobenzene	BQL	10.0	1	9/6/2005
1,3-Dichlorobenzene	BQL	10.0	1	9/6/2005
1,4-Dichlorobenzene	BQL	10.0	1	9/6/2005
3,3'-Dichlorobenzidine	BQL	20.0	1	9/6/2005
2,4-Dichlorophenol	BQL	10.0	1	9/6/2005
Diethylphthalate	BQL	10.0	1	9/6/2005
Dimethylphthalate	BQL	10.0	1	9/6/2005
2,4-Dimethylphenol	BQL	10.0	1	9/6/2005
Di-n-octylphthalate	BQL	10.0	1	9/6/2005
4,6-Dinitro-2-methylphenol	BQL	50.0	1	9/6/2005
2,4-Dinitrophenol	BQL	50.0	1	9/6/2005
2,4-Dinitrotoluene	BQL	10.0	1	9/6/2005
2,6-Dinitrotoluene	BQL	10.0	1	9/6/2005
Diphenylamine *	BQL	10.0	1	9/6/2005
Fluoranthene	BQL	10.0	1	9/6/2005
Fluorene	BQL	10.0	1	9/6/2005
Hexachlorobenzene	BQL	10.0	1	9/6/2005
Hexachlorobutadiene	BQL	10.0	1	9/6/2005
Hexachlorocyclopentadiene	BQL	20.0	1	9/6/2005
Hexachloroethane	BQL	10.0	1	9/6/2005
Indeno(1,2,3-c,d)pyrene	BQL	10.0	1	9/6/2005

Results for Semivolatiles  
by GCMS 625

Client Sample ID: TW-1  
 Client Project ID: Parcel 7-NCDOT Forsyth Tip#U-2826A  
 Lab Sample ID: G106-545-1H  
 Lab Project ID: G106-545

Analyzed By: MRC  
 Date Collected: 8/27/2005 18:30  
 Date Received: 9/1/2005  
 Date Extracted: 9/2/2005  
 Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Isophorone	BQL	10.0	1	9/6/2005
Naphthalene	BQL	10.0	1	9/6/2005
Nitrobenzene	BQL	10.0	1	9/6/2005
2-Nitrophenol	BQL	10.0	1	9/6/2005
4-Nitrophenol	BQL	50.0	1	9/6/2005
N-Nitrosodi-n-propylamine	BQL	10.0	1	9/6/2005
Pentachlorophenol	BQL	50.0	1	9/6/2005
Phenanthrene	BQL	10.0	1	9/6/2005
Phenol	BQL	10.0	1	9/6/2005
Pyrene	BQL	10.0	1	9/6/2005
1,2,4-Trichlorobenzene	BQL	10.0	1	9/6/2005
2,4,6-Trichlorophenol	BQL	10.0	1	9/6/2005

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.6	86
2-Fluorophenol	10	8.1	81
Nitrobenzene-d5	10	8	80
Phenol-d6	10	8	80
2,4,6-Tribromophenol	10	6.6	66
4-Terphenyl-d14	10	10.5	105

Comments:

\* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By:

Results for Metals

Client Sample ID:	TW-1	Analyzed By:	RML
Client Project ID:	Parcel 7-NCDOT Forsyth Tip#U-2826A	Date Collected:	8/27/2005 18:30
Lab Sample ID:	G106-545-1	Date Received:	9/1/05
Lab Project ID:	G106-545	Matrix:	WATER
Batch ID:	3579		

Metals	Result	RL	DF	Units	Method	Date Analyzed
Lead	BQL	5.00	25	UG/L	6020	9/7/05

Comments

BQL = Below Quantitation Limits  
 DF = Dilution Factor  
 J = Between MDL and RL  
 B= Amount in Prep Blank > RL  
 Samples Prepared by 3030C

Reviewed By:     *RML*      
 MET\_LIMS\_3.3

List of Reporting Abbreviations  
and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

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 = Reporting 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

% solids = 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.



**APPENDIX D**  
**HISTORICAL SITE INVESTIGATIONS**

It is the intent of the tank(s) owner, to Permanently Close the tank(s) listed below in the manner indicated.  
All tanks will be empty and clean, free of all liquids and sludges as required in 40 CFR, Part 280.71 [b].

## NOTIFICATION OF TANK CLOSURE

Done  
 12/21/89  
 Attached

OWNERSHIP OF TANK(S)	LOCATION OF TANK(S)
Name: <u>City of Winston-Salem</u>	Site Name: <u>( Fire Station # 3 )</u>
Address: <u>P. O. Box 2511</u> <u>Winston-Salem, NC 27102</u>	Address: <u>2995 N. Liberty Street</u> <u>Winston-Salem, NC</u>
Phone Number: <u>919-727-2119</u>	County: <u>Forsyth</u>

TANKS FOR CLOSURE			
TANK NUMBER	TANK CAPACITY	LAST CONTENTS	CLOSURE METHOD
Tank 1	<u>1,500</u>	<u>In Use</u>	<del>To Be Filled</del> <u>To Be Filled</u>
Tank 2	_____	_____	<u>To Be Filled</u>
Tank 3	_____	_____	<u>To Be Filled</u>
Tank 4	_____	_____	<u>To Be Filled</u>
Tank 5	_____	_____	<u>To Be Filled</u>

TANK(S) CLOSURE OPERATIONS TO BE PERFORMED BY:	
(Contractor) Name: <u>Hardin Pump and Compressor Company</u>	
Address: <u>Rt. 16, Box 519</u> State <u>Winston-Salem, NC</u> Zip <u>27107</u>	
Contact: <u>John Hardin</u>	Phone: <u>919-769-9128</u>
<input checked="" type="checkbox"/> Yes	Is this operator knowledgeable of the requirements for the removal/filling of underground storage tanks ?
<input checked="" type="checkbox"/> Yes	Is this operator and employees medically monitored as required by OSHA 29 CFR, Part 1910.120 [f] ?
<input checked="" type="checkbox"/> Yes	Is this operator and employees specifically trained as required by OSHA 29 CFR, Part 1910.120 [e] ?

TANK(S) CLOSURE ASSESSMENT TO BE PERFORMED BY:	
(Contractor) Name: _____	
Address: _____ State _____ Zip _____	
Contact: _____	Phone: _____
_____	Is this operator knowledgeable of requirements for the closure assessment in 40 CFR, Part 280.72 ?
_____	Is this operator and employees medically monitored as required by OSHA 29 CFR, Part 1910.120 [f] ?
_____	Is this operator and employees specifically trained as required by OSHA 29 CFR, Part 1910.120 [e] ?

NOTIFICATION SUBMITTAL / NOTIFICATION DATE	
Name: _____	Scheduled Removal Date: <u>3-90</u>
Signature: <u>Leon R. Kendall</u>	Date Submitted: <u>12-21-89</u>

Tank owners are required to notify the implementing state agency at least 30 days before a Permanent Tank Closure as required in 40 CFR, Part 280.71 [a]. For further information contact the U. S. Environmental Protection Agency RCRA / Superfund Hotline at 800-424-9346

It is the intent of the tank(s) owner, to Permanently Close the tank(s) listed below in the manner indicated. All tanks will be empty and clean, free of all liquids and sludges as required in 40 CFR, Part 280.71 [b].

## NOTIFICATION OF TANK CLOSURE

**RECEIVED**  
N.C. Dept. NRCD

APR 4 1990

OWNERSHIP OF TANK(S)	LOCATION OF TANK(S)
Name: <u>City of Winston-Salem</u>	Site Name: <u>( Fire Station # 3 )</u>
Address: <u>P. O. Box 2511</u> <u>Winston-Salem, NC 27102</u>	Address: <u>2995 N. Liberty Street</u> <u>Winston-Salem, NC</u>
Phone Number: <u>919-727-2119</u>	County: <u>Forsyth</u>

**Winston-Salem  
Regional Office**

TANKS FOR CLOSURE			
TANK NUMBER	TANK CAPACITY	LAST CONTENTS	CLOSURE METHOD
Tank 1	<u>1,500</u>	<u>In Use</u>	<del>To Be Removed</del> <del>To Be Filled</del> <b>Removed</b>
Tank 2	_____	_____	To Be Removed To Be Filled
Tank 3	_____	_____	To Be Removed To Be Filled
Tank 4	_____	_____	To Be Removed To Be Filled
Tank 5	_____	_____	To Be Removed To Be Filled

TANK(S) CLOSURE OPERATIONS TO BE PERFORMED BY:	
(Contractor) Name: <u>Hardin Pump and Compressor Company</u>	
Address: <u>Rt. 16, Box 519</u> State <u>Winston-Salem, NC</u> Zip <u>27107</u>	
Contact: <u>John Hardin</u> Phone: <u>919-769-9128</u>	
<input checked="" type="checkbox"/> Yes	Is this operator knowledgeable of the requirements for the removal/filling of underground storage tanks ?
<input checked="" type="checkbox"/> Yes	Is this operator and employees medically monitored as required by OSHA 29 CFR, Part 1910.120 [f] ?
<input checked="" type="checkbox"/> Yes	Is this operator and employees specifically trained as required by OSHA 29 CFR, Part 1910.120 [e] ?

TANK(S) CLOSURE ASSESSMENT TO BE PERFORMED BY:	
(Contractor) Name: _____	
Address: _____ State _____ Zip _____	
Contact: _____ Phone: _____	
_____	Is this operator knowledgeable of requirements for the closure assessment in 40 CFR, Part 280.72 ?
_____	Is this operator and employees medically monitored as required by OSHA 29 CFR, Part 1910.120 [f] ?
_____	Is this operator and employees specifically trained as required by OSHA 29 CFR, Part 1910.120 [e] ?

NOTIFICATION SUBMITTAL / NOTIFICATION DATE	
Name: _____	Scheduled Removal Date: <u>3-90</u>
Signature: <u>Leon R. Kershner</u>	Date Submitted: <u>12-21-89</u>

Tank owners are required to notify the implementing state at least 30 days before a Permanent Tank Closure as required in 40 CFR, Part 280.71 [a]. For further information contact the U. S.

Environmental Protection Agency RCRA / Superfund Hotline at 800-424-9346



# HARDIN'S PUMP & COMPRESSOR, INC.



PETROLEUM EQUIPMENT SPECIALISTS

## SITE ASSESSMENT DATA SHEET

DATE 1-4-90

### TANK INFORMATION

LOCATION OF TANK FIRE STATION # 3 DATE TANK INSTALLED 1964  
ADDRESS 2995 N. LIBERTY ST. WS NC  
STREET CITY STATE ZIP

SIZE OF TANK 1500 GALS. DIAMETER 64" LENGTH 9'  
PRODUCT STORED IN TANK DIESEL  
TYPE OF CLOSURE:  ABANDONMENT IN PLACE  REMOVAL

### SITE INFORMATION

DO INVENTORY RECORDS INDICATE LEAKAGE? No  
IS THERE ANY PRODUCT ABOVE GRADE OR SEEPING FROM GROUND? No  
ARE THERE DRINKING WELLS LOCATED IN THE AREA? No  
IF YES, DO THESE WELLS INDICATE LEAKAGE?  
ARE MONITORING WELLS OR OTHER LEAK DETECTION METHOD BEING USED AT THIS SITE? No IF NO, SOIL SAMPLE MUST BE TAKEN.  
IF MONITORING WELLS ARE BEING USED, ARE VAPORS OR HYDROCARBONS PRESENT N/A

### SOIL SAMPLE INFORMATION

DATE SAMPLE TAKEN 1-4-90 TIME OF DAY 9:00 A.M.  
WEATHER CONDITIONS: 50° Cloudy w/ LIGHT RAIN  
PERSON TAKING SAMPLE: JOHN HARDIN  
DEPTH FROM GRADE TO BOTTOM OF TANK 100" DEPTH OF SAMPLE 112"  
GIVE DETAILED LOCATION OF SAMPLE: SEE SKETCH ATTACHED

ATTACH SKETCH SHOWING EXACT LOCATION OF TANK, FILLPIPE AND WHERE SAMPLE WAS TAKEN FROM.

NAME OF LAB TESTING SAMPLE R & A LABS  
ADDRESS OF LAB KERNERSVILLE, NC  
TELEPHONE 996-2841  
TESTS PERFORMED ON SAMPLE: TPH AS DIESEL  
TEST RESULTS: SEE ATTACHED

ATTACH LAB REPORT.



# HARDIN'S PUMP & COMPRESSOR, INC.



PETROLEUM EQUIPMENT SPECIALISTS

## TANK CLOSURE DATA SHEET

DATE 1-4-90  
 TANK OWNER CITY OF WS  
 ADDRESS PO. Box 2511 WINSTON-SALEM NC 27102  
 STREET OR BOX CITY STATE ZIP  
 TELEPHONE \_\_\_\_\_

**TANK INFORMATION**  
 LOCATION OF TANK FIRE STATION #3 DATE TANK INSTALLED 1964  
 ADDRESS 2995 N. LIBERTY ST. WS NC \_\_\_\_\_  
 STREET CITY STATE ZIP

SIZE OF TANK 1500 GALS. DIAMETER 64" LENGTH 9'  
 PRODUCT STORED IN TANK DIESEL  
 CONTENTS OF TANK PRIOR TO CLEANING: \_\_\_\_\_ IN. WATER \_\_\_\_\_ IN. PETROLEUM  
 CONTENTS OF TANK AFTER CLEANING: \_\_\_\_\_ IN. LIQUID \_\_\_\_\_ IN. SOLIDS

TYPE OF CLOSURE: \_\_\_\_\_ ABANDONMENT IN PLACE  REMOVAL

DATE OF EPA NOTIFICATION: 12-21-89

**ABANDONMENT INFORMATION:**  
 TYPE OF INERT MATERIAL USED: \_\_\_\_\_  
 QUANTITY OF MATERIAL USED: \_\_\_\_\_  
 DATE OF TANK CLOSURE: \_\_\_\_\_  
 LIST EPA EMPLOYEE OR OTHER AGENCY INSPECTING TANK: \_\_\_\_\_

\*ATTACH SOIL SAMPLE - SITE ASSESSMENT SHEET

**REMOVAL INFORMATION:**  
 LOCATION OF TANK DISPOSAL: SAFENWAY TANK DISPOSAL (SEE ATTACHED)  
 CONDITION OF SOIL IN EXCAVATION: \_\_\_\_\_

DATE OF TANK REMOVAL: 2/28/90  
 LIST EPA EMPLOYEE OR OTHER AGENCY INSPECTING TANK AREA: \_\_\_\_\_

\*ATTACH SOIL SAMPLE - SITE ASSESSMENT SHEET

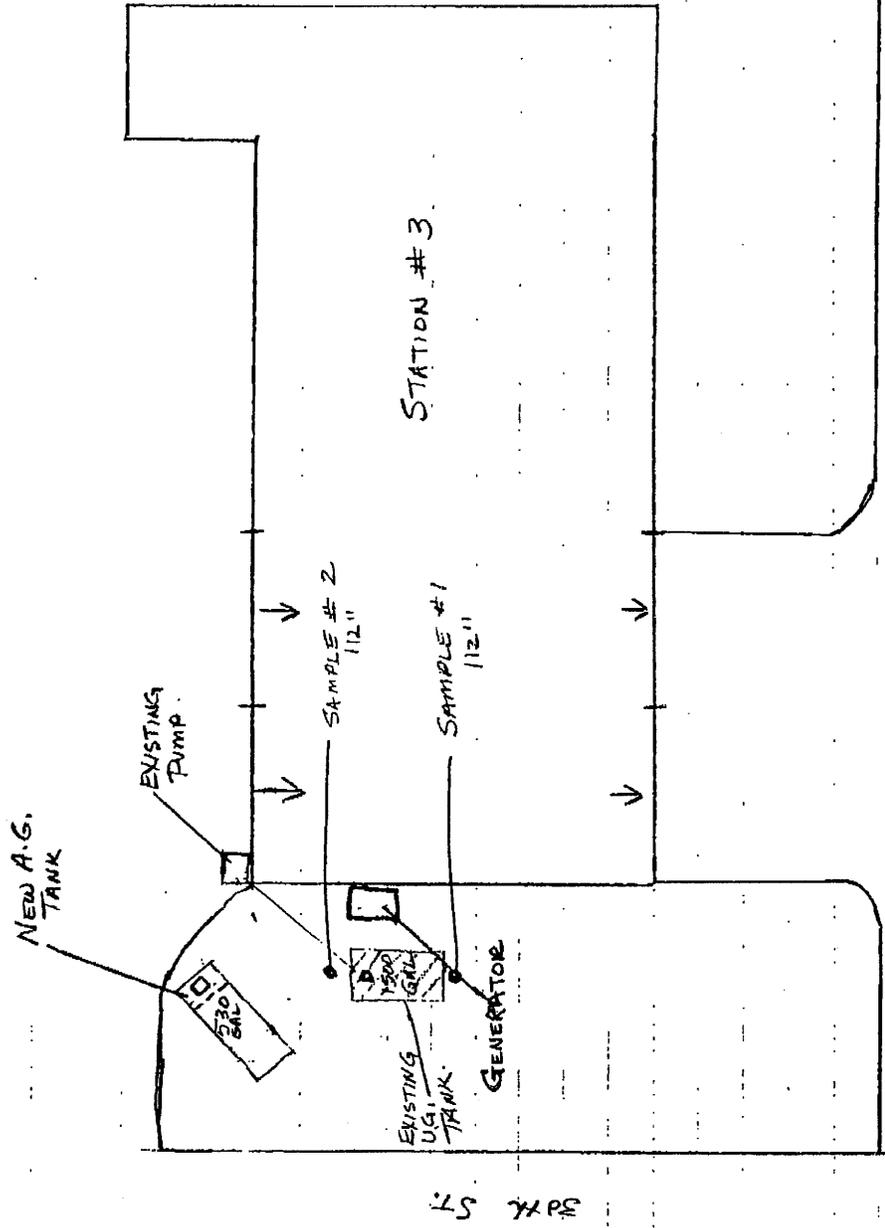
SIGNED: \_\_\_\_\_ TANK OWNER REPRESENTATIVE DATE \_\_\_\_\_

SIGNED: J. T. Hardin, Pres. DATE 3/29/90  
 FOR HARDIN'S PUMP & COMPRESSOR INC. DATE

NOTE: - PUMP NEEDS TO BE REPLACED  
 - U.G. TANK LOCATED IN LANDSCAPED AREA (CONSURE OF EXACT LOCATION)  
 - NEW A.G. TANK LOCATED IN LANDSCAPED AREA OVER EXISTING TANK.  
 - A LEVEL AREA NEEDS TO BE BUILT

TO FACILITATE PLACEMENT OF TANK.  
 - RUN ELECTRICAL FROM EXISTING PUMP TO NEW PUMP REDESTAL  
 - RUN FUEL SUPPLY TO EXISTING GENERATOR.

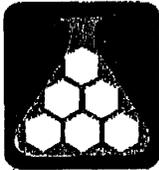
ASPHALT



JTH  
 12-18-89

US FIRE STATION #3  
 2995 N. LIBERTY ST.

1071



# RESEARCH & ANALYTICAL LABORATORIES, INC.

Analytical/Process Consultations

16 March 1990

Hardins Pump & Compressors  
Rt. 16, Box 519  
Winston-Salem, North Carolina 27107  
Attn: Mr. John Hardin

FIRESTATION # 3 SAMPLE # 1

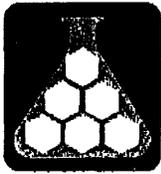
2/28/90

Parameters

Results

Hydrocarbons, Total Diesel

<5.0 ppm



# RESEARCH & ANALYTICAL LABORATORIES, INC.

Analytical/Process Consultations

16 March 1990

Hardins Pump & Compressors  
Rt. 16, Box 519  
Winston-Salem, North Carolina 27107  
Attn: Mr. John Hardin

---

Sample Collected: 02/27/90    Sample Received: 02/28/90    Job Number: 03866  
Sample Source: Firestation # 3    Sample # 2    Sample Number: 75824

---

Parameter

Results

Hydrocarbons, Total Diesel

<5.0 ppm





RECEIVED  
N.C. Dept. NRCD

APR 4 1990

Winston-Salem  
Regional Office

State of North Carolina  
Department of Natural Resources and Community Development  
Winston-Salem Regional Office

James G. Martin, Governor

William W. Cobey, Jr., Secretary

DIVISION OF ENVIRONMENTAL MANAGEMENT  
GROUNDWATER SECTION

Jan. 17, 1990

STATION #3

Leon R. Kendrick  
City of Winston Salem  
Box 2511  
Winston Salem NC 27102

Dear Mr Kendrick:

This letter is to acknowledge your Notification of Tank Closure as received Dec. 22, 1989.

The results of the required assessment (40 CFR, Part 280.72) should be submitted to this office no later than thirty (30) days after the tank is closed. If there is evidence of a release or suspected release, it must be reported within twenty-four (24) hours.

Groundwater Section staff will be conducting random site visits to ensure that underground storage tank closures are conducted as required in 40 CFR 280.71. Any violations will be submitted to EPA with a request for enforcement. Enclosed is an attachment that is to be used for the information required for closure assessment.

You may contact Larry Lucas, Stephen Williams or me at the letterhead address or telephone number if you have any questions concerning these requirements.

Sincerely,

Steve A. Kay

Steve A. Kay  
Hydrogeological Technician

SAK/ahl  
Enclosure  
cc: WSRO  
City/County Inspections Division



State of North Carolina  
Department of Environment, Health and Natural Resources  
Winston-Salem Regional Office

James G. Martin, Governor  
William W. Cobey, Jr., Secretary

Division of Environmental Management  
Groundwater Section

Margaret Plemmons Foster  
Regional Manager

July 31, 1992

Mr. Leon Kendrick  
City of Winston-Salem  
P. O. Box 2511  
Winston-Salem, NC 27102

Subject: Underground Storage Tank Closure, Fire Station #3  
2995 N. Liberty Street, Winston-Salem, NC 27102

Dear Mr. Kendrick:

On March 16, 1990, we received the soil sample results and closure assessment from the underground storage tank closure at the subject location. As the implementing agency for the Federal Underground Storage Tank Program for the State of North Carolina, we have determined from review of your assessment that the UST system has been closed in accordance with NCAC Title 15A Subchapter 2N Section .0802 and .0803 and 40 CFR 280.71 and 280.72. However, this does not absolve you of any responsibility for contamination that may not have been detected or noted during the site assessment.

If you have any questions, please feel free to contact Steve Kay or me at the letterhead address or telephone number between the hours of 9:00 a.m. - 10:00 a.m. and 1:30 - 2:30 p.m.

Sincerely,

A handwritten signature in cursive script that reads "W. Waddell Watters".

W. Waddell Watters  
Hydrogeologist II

WWW/dh

cc: ~~MSRO~~

Central Files - Forsyth County

Fire Station # 3

UNDERGROUND STORAGE TANKS LIST'S

(CHECK APPROPRIATE RESPONSE)

REGULATED

NONREGULATED

RELEASE CONFIRMED ?

YES

NO

CLEAN-UP INITIATED ?

YES

NO

TANKS REMOVED ?

YES

NO

RELEASE UNDER CONTROL ?

YES

NO

CLEAN-UP COMPLETED ?

YES

NO