

GEOTECHNICAL NOV 06 2001

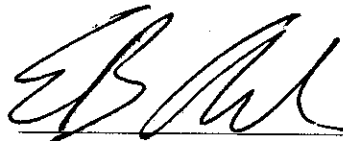
**INITIAL ABATEMENT MEASURES (20-DAY) REPORT
NON-REGULATED, FORMER HEATING OIL UST
PARCEL NO. 5, FORMER NIXON PROPERTY
511, 513, 515 WEST TRADE STREET
CHARLOTTE, NORTH CAROLINA
STATE PROJECT NO. 9.9081000 (P-3800)**

parcel 5A

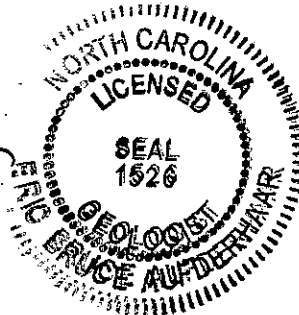
**Prepared for:
GeoEnvironmental Section
NCDOT Geotechnical Unit
PO Box 25201
Raleigh, North Carolina 27611-5201**

**Prepared by:
Solutions Industrial & Environmental Services, Inc.
3722 Benson Drive
Raleigh, North Carolina 27609**

Solutions-IES Project No. 0930.01A3.NDOT


Eric B. Aufderhaar, P.G.
Project Hydrogeologist

November 6, 2001



Initial Abatement Measures Report (20-Day Report)

1. Site Identification

DATE OF REPORT: 11/06/01
Facility I.D.: _____ UST Incident Number (if known): Pending
Site Name: Parcel 5, Former Nixon Property
Site Location: 511, 513, 515 West Trade Street
Nearest City/Town: Charlotte County: Mecklenburg

UST Owner: Not Known, UST Abandoned in NCDOT Right-of-Way
Address: Not Applicable (N/A) Phone: Not Known

UST Operator: Not Known, Former Property Owners were Nixon, Tom & Laura K.
Address: Not Known Phone: Not Known

Property Owner: North Carolina Department of Transportation
Address: 716 West Main Street, Albemarle, NC 28001 Phone: Not Known

Property Occupant: Vacant Site Under Construction
Address: 511, 513, 515 West Trade Street Phone: N/A

Consultant/Contractor: Solutions Industrial & Environmental Services, Inc.
Address: 3722 Benson Drive, Raleigh, NC 27609 Phone: (919) 873-1060

Release Information

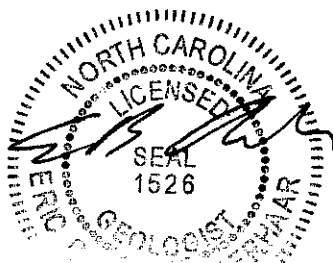
Date Discovered: October 18, 2001
Latitude: 35.23049 North Longitude: 80.84729 West
Estimated Quantity of Release: Not Known
Cause of Release: Not Known
Source of Release (Piping/UST): Not Known

Sizes and contents of UST system(s) from which the release occurred): 550 gallon, heating oil

Complete and include as Attachments the following items B through G in the order listed.

I, ERIC AUFOERHAR a Professional Engineer Licensed Geologist (circle one) for
(firm or company of employment), do certify that the information
contained in this report is correct and accurate to the best of my
knowledge.

(Please Affix Seal and Signature)



2. Initial Abatement Activities

Solutions-IES was retained by the North Carolina Department of Transportation to supervise removal of a 550-gallon capacity heating oil underground storage tank (UST) and associated contaminated soils from the former Nixon property, located at 511, 513 and 515 West Trade Street in downtown Charlotte, North Carolina (Figure 1). An NCDOT contractor discovered the heating oil tank during site preparation work when the tank was accidentally unearthed. This tank was located approximately 124 feet (37.7 meters) from the intersection of South Graham and West Trade Street in the southwestern quadrant of the intersection. The former Nixon property, and the surrounding city block bounded by West Trade, South Graham, West Fourth Street and the Norfolk Southern railroad, is planned for construction of a new AMTRAK railroad station in downtown Charlotte.

On October 18, 2001, Solutions-IES retained the services of A&D Environmental and Industrial Services, Inc., (A&D) to remove the liquids remaining in the tank, excavate the UST and associated petroleum-contaminated soils, and to transport the liquids, soils and UST to recycling and disposal facilities approved by the Division of Waste Management (DWM), North Carolina Department of Environment and Natural Resources (DENR). Solutions-IES personnel were on-site during excavation and removal activities and collected soil samples from the base of excavation (Section 4).

The 550-gallon UST contained heating oil at the time of removal and is a non-regulated tank, based upon our review of 15A NCAC 2N. The history of the property and use for the tank is not well known. Available data is presented in Section 3 below.

We have utilized the report format suggested by the DWM for preparation of an Initial Abatement Measures (20-Day) Report. Details regarding the UST closure and preliminary environmental sampling activities are presented below. Some elements of the DENR suggested outline are not applicable to this project and are therefore not addressed.

2.1. Removal of regulated substance from UST

Approximately 273 gallons of a water/No. 2 fuel oil mixture were removed by A&D prior to being transported to A&D's facility in Archdale, North Carolina for recycling. A non-hazardous waste material manifest is included in Appendix A.

2.2. Source Control Actions

The UST and affected soils were removed from the property on October 18, 2001.

2.3. Contaminant migration control measures (sorbants, berms, etc.)

An unknown quantity of an oil/water mixture could have spilled during the accidental unearthing of the tank by an NCDOT contractor prior to Solutions-IES involvement with closure activities. Upon arrival at the job site, the UST was already staged on the ground and a portion of the tank appeared to have been ripped open. Remaining liquids in the tank were removed by A&D (Section 2.1).

2.4. Measures taken to mitigate fire/safety hazards;

Solutions-IES contacted the Mecklenburg County Fire Marshall's office prior to our site work. A representative of the Fire Marshall's Office visited the site prior to movement of the tank onto a transport vehicle for off-site disposal. The airspace within the tank was monitored for explosive concentration levels by measurement of the Lower Explosive Limit (LEL) prior to manipulation of the tank.

Air at the work site was periodically monitored with an Organic Vapor Analyzer (OVA) instrument, in accordance with our Site Health and Safety Plan (HASP). The site HASP is contained as Appendix B.

2.5. Contaminated soil storage, treatment, and/or disposal

Approximately 11.3 tons of petroleum-contaminated soils were removed from the site by A&D. The soils were transported to SoilWorks, Inc. in Jordan, North Carolina for disposal. SoilWorks, Inc. is a DWM-permitted dedicated soil remediation facility. The certificate of disposal is contained in Appendix C.

2.6. Status of free product investigation and associated removal (if applicable)

Free product was not identified in the UST excavation.

3. Site History

Table 1 lists the UST system formerly in operation at this site. Little is known about the use of this UST other than the tank last contained heating oil to most likely service a structure/structures formerly located on the property. The owner of the UST is not known (Table 2), however, Mr. Tom Nixon and his wife, Laura K. Nixon, reportedly owned the property from approximately 1965 to June 21, 2000. Mecklenburg County tax records indicate that a two-story building of approximately 2,900 square feet was formerly located on the property. The tax record lists a building construction date of 1920 and "forced air-ducted" as its heating source. The building had been demolished by the date of our first site visit on October 18, 2001.

Historical records indicated that three street level storefronts had been located on the north side of the property fronting West Trade Street. These first floor storefronts had street addresses of 511, 513 and 515 West Trade Street. Upstairs there were four residential apartments. Businesses that resided on the first floor included "Dirty Laundry Cleaners & Laundromat", a shoe service shop and the "Star Restaurant" (AG&M, 2000)¹. Table 3 lists the two most recent owners of the property, known occupants of the site and past land usage on the property, as shown on historical Sanborn Fire Insurance Maps (Sanborn MapTM).

The NCDOT Geotechnical Unit provided Sanborn maps from 1890, 1900, 1911, 1929, 1959 and 1963 to Solutions-IES. These maps were originally purchased by AG&M from EDR Sanborn, Inc. for preparation of their Phase I ESA report. The 1911, 1929, 1950 and 1963 Sanborn Maps depict the building on the subject site with three storefronts. The street addresses change as development along West Trade Street occurs. An extension of the southwest corner of the building shown in the 1929, 1959 and 1963 Sanborn maps and was also observed by AG&M personnel during their August 2000 site reconnaissance. The use of this addition was not identified by AG&M. Based upon our site measurements from the recent UST closure activities, the heating oil UST was formerly located adjacent to the south wall of the building near the addition to the southwest corner (Figure 2).

The 1890 and 1900 Sanborn maps depict a two-story private residence in the center of the property. Based upon our site measurements, if the heating oil UST was present during this period it would have been located approximately 20 to 30 feet east of the dwelling.

¹ Arcadis Geraghty & Miller (AG&M), 2000, Phase I Limited Environmental Site Assessment Report, State Project 9.9080178 (Amtrak), Proposed Amtrak Rail Station, Downtown Charlotte, NC, September 2000.

4. Source Investigation

Fieldwork at the site on October 18, 2001, included both source removal activities (i.e., removal of UST, associated liquids, and petroleum-contaminated soils) and environmental sampling activities. Source removal activities were summarized in Section 2. After excavation activities were completed, soil samples were collected from the base of excavation below the former UST. A UST closure report was not required for this heating oil tank because it was non-regulated, however, officials at the NCDENR Mooresville Regional Office (MRO) requested that soil samples be collected if physical indicators of a release (odor, staining) were noted.

Solutions-IES noted visual and olfactory evidence of petroleum-contaminated soil shortly after excavation activities commenced. We then contacted officials at the NCDOT Geotechnical Unit, the Mecklenburg Department of Environmental Protection (DEP), and the MRO. Solutions-IES provided notification of an apparent release from the UST system to the MRO within 24 hours of discovery, as required by 15A NCAC 2N 280.50. Verbal notification was provided to Ms. Stephanie Graham at the MRO on October 18, 2001. Written notification, through the filing of UST Form 61 "24-Hour Release and UST Leak Reporting Form", was provided to Mr. Allen Schiff of the MRO on October 22, 2001.

The following sections pertain to sampling completed during our post-excavation environmental assessment activities. An official at the MRO suggested that we perform laboratory analyses on the soil samples for volatile and extractable petroleum hydrocarbons (VPH and EPH) by the MADEP methods and semi-volatile organic compounds (semi-VOCs) by EPA method 8270C.

4.1. Soil Sample Locations, Date and Sample Designations

One soil samples was collected from each end of the UST excavation, as shown in Figure 3. The samples were collected on October 18, 2001 and designated "S-1" and "S-2."

4.2. Type of Soil Samples and Depths

Soil was retrieved from a depth of approximately 13 to 15 feet below ground surface (bgs) with the bucket of a backhoe excavator. Soils from a portion of the backhoe bucket were immediately split into laboratory-provided glass containers and a resealable plastic bag. The bag was used for field screening of total volatile organic compounds (VOCs) within the headspace above the bagged soil sample.

4.3. Sample Analysis and Results

OVA measurements for soil samples S-1 and S-2 were 60 parts per million (ppm) and 80 ppm, respectively.

Samples S-1 and S-2 were placed on ice and transported to Prism Laboratories, Inc. in Charlotte, North Carolina. Each sample was tested for VPH and EPH by the MADEP methods and semi-VOCs by EPA Method 8270C. The results of the laboratory testing are summarized in Table 4 and included as Appendix D. Specific semi-VOC compounds and petroleum hydrocarbon fraction classes identified above applicable maximum soil contaminant concentrations (MSCCs) are presented on Figure 3. The concentrations for C9 to C22 range aromatic petroleum hydrocarbons, naphthalene and 2-methylnaphthalene exceeded the applicable soil to groundwater MSCCs, but were below the residential and industrial/commercial MSCCs (Table 4).

4.4. Groundwater Sampling

Solutions-IES collected a groundwater sample from the source area on November 1, 2001. This was accomplished by opening a small diameter boring with a Geoprobe[®] to a depth of 24 feet bgs. We then temporarily inserted 1-inch diameter PVC well screen and casing into the annular space of the hollow Geoprobe drilling rods and collected a groundwater sample with a small diameter disposable polyethylene bailer. At the time of sample collection, shortly after the boring was opened, groundwater was measured at a depth of approximately 22 feet bgs. This was not a static water level, however, because groundwater was noted to be slowly rising.

Collected groundwater was placed into laboratory-provided containers and transported to Prism Laboratories, Inc. in Charlotte, North Carolina. Laboratory analyses are currently being conducted for VOCs by EPA method 6230D (with isopropyl ether and methyl-tert-butyl ether) and semi-volatile organic compounds by EPA method 625 (including the ten largest tentatively identified compounds). Laboratory results are expected by November 9, 2001. We will issue an addendum to NCDOT and the MRO once the laboratory results are received.

5. Figures

| | |
|----------|--|
| Figure 1 | Project Location Map and Vicinity |
| Figure 2 | Former UST Location Map |
| Figure 3 | Soil and Groundwater Sample Location Map |

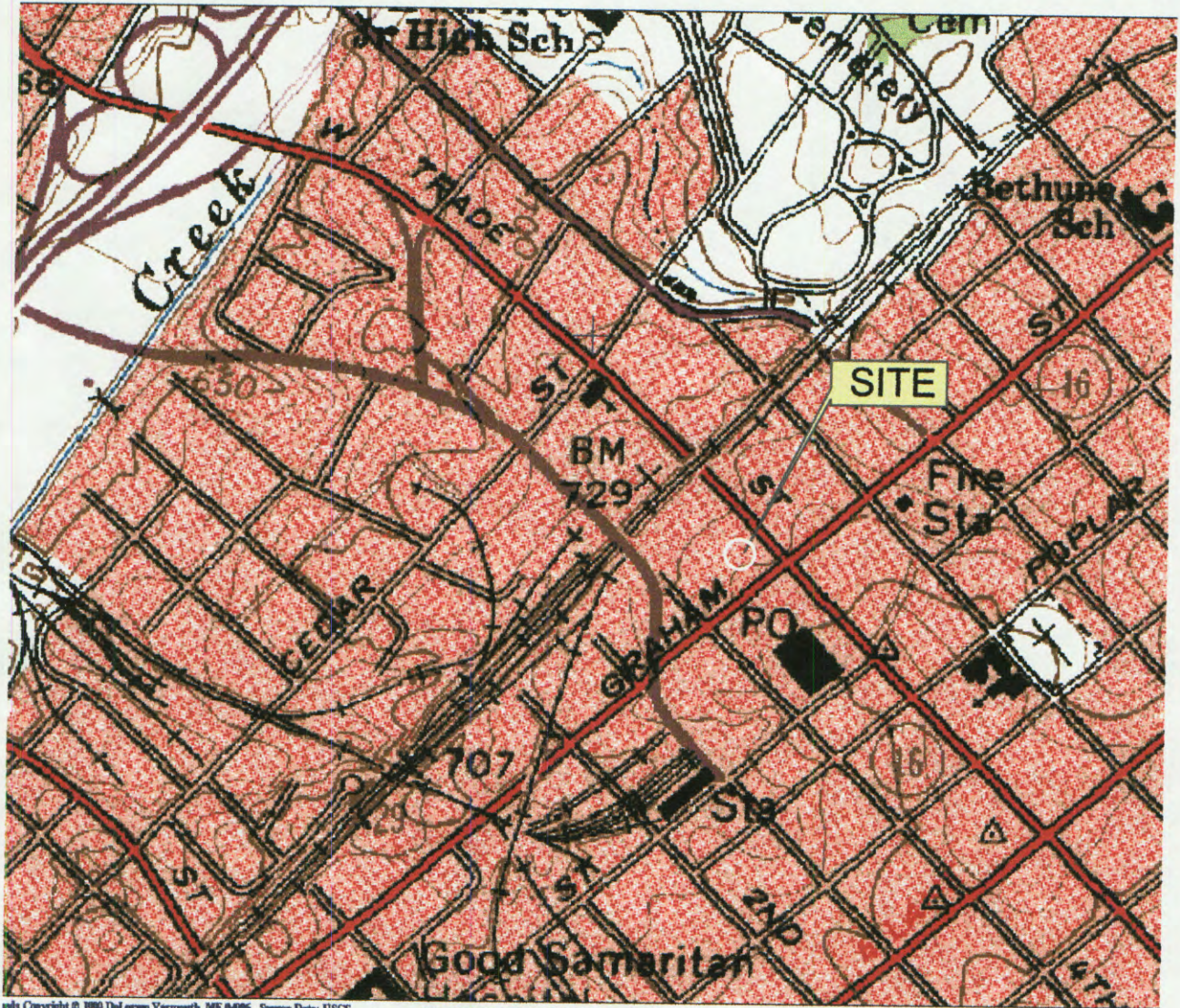
6. Tables

| | |
|---------|--|
| Table 1 | Site History: UST System Information |
| Table 2 | Site History: UST Owner/Operator Information |
| Table 3 | Property Owners/Occupants |
| Table 4 | Summary of Soil Sampling Results |

7. Appendices

| | |
|------------|---|
| Appendix A | Material Manifests/Tank Disposal Manifest |
| Appendix B | Site Health and Safety Plan |
| Appendix C | Certificate of Disposal, Petroleum Contaminated Soils |
| Appendix D | Laboratory Report, Soil Samples |

FIGURES



Copyright © 1999 DeLorme, Yorktown, ME 04096 Source Data: USGS 1:25000 Scale: 1:7,200 Detail: 14-7 Datum: WGS84

REFERENCE:
 Charlotte East (NC) 7.5 Minute Topographic Quadrangle,
 U.S. Geological Survey, 1991
 (From 3-D Topoquads, DeLorme, 1999)
 Contour Interval = 10 Feet

SCALE: 1 inch = ~ 800 feet

PROJECT LOCATION MAP & VICINITY
PARCEL 5, FORMER NIXON PROPERTY
511, 513, 515 WEST TRADE STREET
CHARLOTTE, NORTH CAROLINA
STATE PROJECT NO. 9.9081000 (P-3800)

 **Solutions**
 Industrial & Environmental Services

3722 BENSON DRIVE, RALEIGH, NC 27609
 PHONE (919) 873-1060, FAX (919) 874-1074

| | | | |
|-------------|--------------------------------|------------------|------------------|
| FILE: | VicMapFmNixon.mxd | PROJECT NO.: | 0810.01A3.NCDOT |
| CREATED BY: | E. Auferhaar | DATE: | August-01 |
| CHECKED BY: | | GIS Soft., Vers. | ESRI ArcView 8.1 |
| DIRECTORY: | Project Files/ NCDOT\0930.1 | FIGURE | 1 |

TABLES

TABLE 2: SITE HISTORY

UST Owner/Operator Information (most recent first)

| UST ID Number | Name of Owner or Operator | Dates of Ownership / Operation [(m/dd/yy) to (m/dd/yy)] | Owner or Operator? |
|--|---------------------------|---|-------------------------|
| 1 | Not Known | to | |
| Address | | | Telephone Number |
| Comment: Orphan UST discovered on-site in October 2001 by NCDOT Contractor | | | |
| UST ID Number | Name of Owner or Operator | Dates of Ownership / Operation [(m/dd/yy) to (m/dd/yy)] | Owner or Operator? |
| | | to | |
| Address | | | Telephone Number |
| | | | |
| UST ID Number | Name of Owner or Operator | Dates of Ownership / Operation [(m/dd/yy) to (m/dd/yy)] | Owner or Operator? |
| | | to | |
| Address | | | Telephone Number |
| | | | |
| UST ID Number | Name of Owner or Operator | Dates of Ownership / Operation [(m/dd/yy) to (m/dd/yy)] | Owner or Operator? |
| | | to | |
| Address | | | Telephone Number |
| | | | |
| UST ID Number | Name of Owner or Operator | Dates of Ownership / Operation [(m/dd/yy) to (m/dd/yy)] | Owner or Operator? |
| | | to | |
| Address | | | Telephone Number |
| | | | |

TABLE 3: PROPERTY OWNERS/ OCCUPANTS

Date: 11/06/01 Incident No. and Name: Pending, Parcel 5, Former Dixon Property Facility ID#:

| Tax Parcel Number/ Map ID | Owner/ Occupant Name (Last, First MI) | Address |
|--|---|--|
| 0731-151-20 | Current Owner: NC Dept. of Transportation | 716 West Main Street Albemarle, NC 28001 |
| | Current Occupant: Vacant | Comment: 2-Story building removed. (See Figure 2) |
| 073-151-20 | Nixon, Tom & Laura K. (1965 to June 21, 2000) | Address of Former Owner Not Know |
| | Past Occupants (Reported in AG&M, 2000): 1 st Floor = 3 store fronts | Comment: Occupants included "Dirty Laundry" Cleaners & Laundry*, a shoe service shop, and "Star" restaurant |
| | Past Occupants (AG&M, 2000): 2 nd Floor = 4 Residential apartments | Comment: Apartments occupied in August 2000 (AG&M, 2000) |
| Property Land Usage from Sanborn Fire Insurance Map (Maps in AG&M, 2000) | | |
| | 1963 Sanborn Map | Building with 3 stores, one labeled as a restaurant |
| | 1950 Sanborn Map | Building with 3 stores, occupant use not labeled Addresses 511, 513, 515 W. Trade St. Building in rear, but occupant type illegible |
| | 1929 Sanborn Map | Same land usage as 1911. Vacant in rear (South end of property) |
| | 1911 Sanborn Map | Building with 3 stores on first floor, lodging on second. Restaurant and "Hall" comprise 2 of 3 store spaces on first floor. |
| | 1900 Sanborn Map | Two-story private residence |
| | 1890 Sanborn Map | Two-story private residence |

Notes: AG&M, 2000, Phase I Limited Environmental Site Assessment Report, State Project 9.9080178 (Amtrak), Proposed Amtrak Rail Station, Downtown Charlotte, NC, September 2000.

*Mr. Tom Nixon reported to AG&M that the former "Dirty Laundry Cleaners" facility was not operated as a dry cleaning facility during his 35 years of ownership, and that dry cleaning solvents had not been used at the site during the 35 year period.

Sanborn Map = Sanborn Fire Insurance Maps produced by EDR Sanborn, Inc. under contract to AG&M. NCDOT provided Solutions-IES with the maps.

TABLE 4: SUMMARY OF SOIL SAMPLING RESULTS (mg/kg)

Date: 11/06/01

Incident Number and Name: Pending, Parcel 5, Former Nixon Property

Facility ID#: N/A

| Sample ID | Analytical Method (e.g., VOC by EPA 8260) → | Contaminant of Concern → | MADEP V/EPH* | Aliphatics C9 to C18 | Aliphatics C19 to C36 | MADEP EPH | Aromatics C9 to C22 | SVOC 8270C | Dibenzo-Furan | SVOC 8270C | Fluorene | SVOC 8270C | Naphthalene | SVOC 8270C | 2-Methyl naphthalene | SVOC 8270C | Phenanthrene | SVOC 8270C |
|---|---|--------------------------|--------------|----------------------|-----------------------|-----------|---------------------|------------|---------------|------------|----------|------------|-------------|------------|----------------------|------------|--------------|------------|
| | | | | | | | | | | | | | | | | | | |
| S-1 | | | 518.3 | 160 | 412.3 | .52 | .66 | 2.4 | 6.4 | 2.1 | | | | | | | | |
| S-2 | | | <40* | <20 | <20* | <.42 | <.42 | .43 | 1.2 | .47 | | | | | | | | |
| Soil to groundwater MSCC (mg/kg) | | | 3,255 | Imm. | 34 | 4.7 | 44 | .580 | 3 | 60 | | | | | | | | |
| Residential MSCC (mg/kg) | | | 9,386 | 93,860 | 469 | 62 | 620 | 63 | 63 | 469 | | | | | | | | |
| Industrial/Commercial MSCC (mg/kg) | | | 245,280 | H>100% | 12,264 | 1,635 | 16,400 | 1,635 | 1,635 | 12,264 | | | | | | | | |

• Imm. = Immobile

• MSCC = maximum soil contamination concentration

• ft. bgs = feet below ground surface

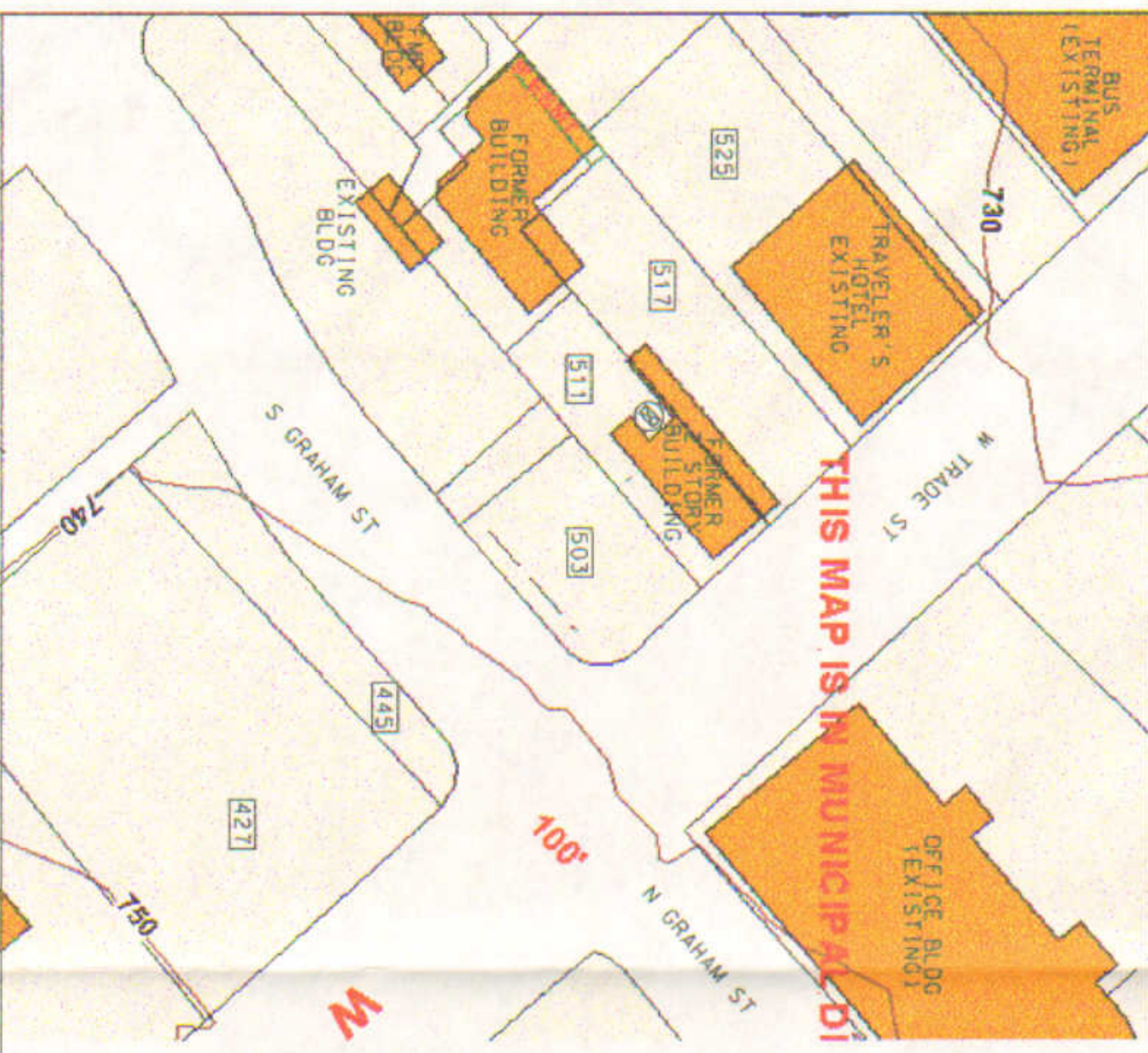
• mg/kg = milligrams per kilogram

• H>100% = Health based level >100%

* Reporting limit (RL) for EPH listed. This concentration is higher than the VPH reporting limit.

+ Laboratory results from carbon fraction classes for VPH and EPH have been combined in order to compare with established MSCC values.

| | | | | | | | | | | | |
|------|----------|------|----------------|-----------------|-----|------------|-----|---------|-----|----------------|-----------------|
| FILE | FIG2.DGN | DATE | NOVEMBER, 2001 | PROJECT MANAGER | WJB | CHECKED BY | ERA | DRAFTER | RLT | PROJECT NUMBER | 0930.01A3.NC001 |
|------|----------|------|----------------|-----------------|-----|------------|-----|---------|-----|----------------|-----------------|



THIS MAP IS IN MUNICIPAL BLD

SCALE: 1" = 72 FT APPROX



REFERENCE:

1. BASE MAP FROM MECKLENBURG COUNTY GIS REAL ESTATE SYSTEM. MAP WAS COMPILED FROM RECORDED DEEDS, PLATS, TAX MAPS, SURVEYS, PLANIMETRIC MAPS, AND OTHER PUBLIC RECORDS AND DATA.
2. USERS OF MAP SHOULD CONSULT PRIMARY DATA SOURCES LISTED ABOVE FOR VERIFICATION. MECKLENBURG COUNTY, ITS MAPPING CONTRACTORS, AND SOLUTIONS-IES ASSUME NO LEGAL RESPONSIBILITY FOR THE INFORMATION CONTAINED HEREIN.

LEGEND

- UTILITY EXCAVATION LOCATION (SEE FIGURE 3 FOR DIMENSIONS)
- BUILDING FOOTPRINTS
- TOPOGRAPHIC CONTOUR LINES
FT MSL 10FT CONTOURS
- STREET ADDRESS FROM TAX INFORMATION SYSTEM

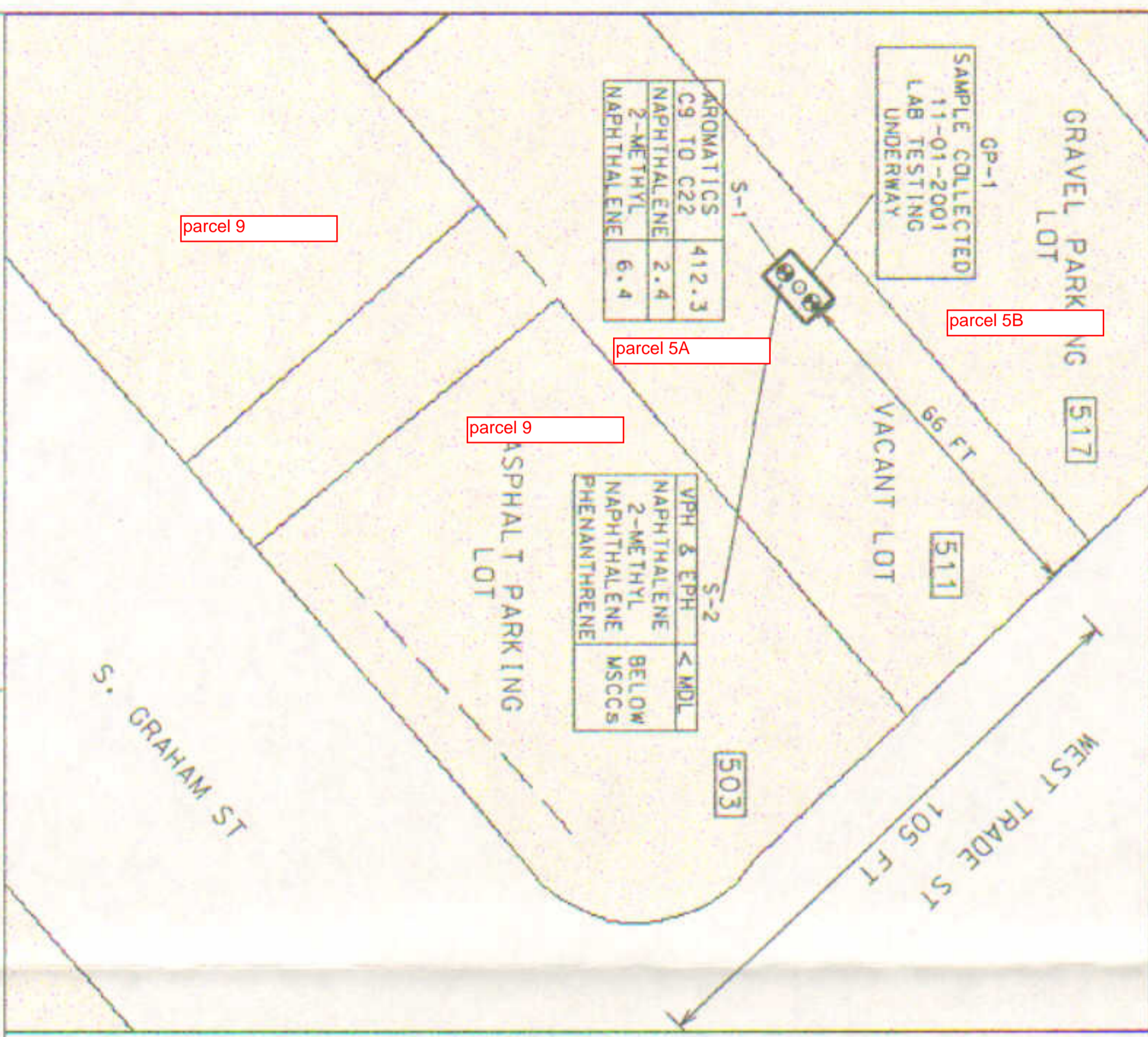
Solutions
 Industrial & Environmental Services
 3722 BENSON DRIVE
 RALEIGH, NORTH CAROLINA 27609
 TEL.: (919) 873-1060 FAX: (919) 873-1074

FORMER UT LOCATION MAP
 PARCEL 5, FORMER NIXON PROPERTY
 511, 513, 515 WEST TRADE ST
 CHARLOTTE, NC
 STATE PROJECT NO. 9.9081000(P-3800)

FIGURE:

2

FILE FIG301XON.DGN DATE NOVEMBER, 2001 PROJECT MANAGER WJB CHECKED BY ERA DRAFTER RLT PROJECT NUMBER 0930.01A3.NC001



SCALE 1' = 30 FT APPROX

LEGEND

| | | | |
|---------------|--|----------------------|-----------------|
| ● | SOIL SAMPLE LOCATIONS | COMPOUND ABOVE MSCCS | RESULT IN MG/KG |
| ○ | GROUNDWATER SAMPLE LOCATION | | |
| [511] | STREET ADDRESS OF PROPERTY | | |
| [Hatched Box] | PROPERTY LINES FROM GIS REAL ESTATE SYSTEM LAND USAGE BASED ON NOV. 1, 2001 OBSERVATIONS | | |

Solutions
 Industrial & Environmental Services
 3722 BENSON DRIVE
 RALEIGH, NORTH CAROLINA 27609
 TEL.: (919) 873-1060 FAX.: (919) 873-1074

SOIL & GROUNDWATER SAMPLE LOCATION MAP
 SOIL CONTAMINANT CONCENTRATIONS ABOVE MSCCS
 PARCEL 5, FORMER NIXON PROPERTY
 511, 513, 515 WEST TRADE ST, CHARLOTTE, NC
 STATE PROJECT NO. 9.9081000(P-3800)

FIGURE:

APPENDIX A

MATERIAL MANIFESTS/
TANK DISPOSAL MANIFEST

November 2, 2001

A&D Environmental and Industrial Services
P.O. Box 484
High Point, NC 27262

Attention: Mr. Dave Farmer

Reference: **Underground Storage Tank Closure
Former Nixon Property
Trade and Graham Streets
Charlotte, NC
Solutions-IES Job No. : 0930.01A3.NDOT
A&D Job No.: 12009**

Dear Mr. Farmer:

Please attach a copy of this letter to the two material manifests dated 10/18/2001 and the tank disposal manifest dated the same day and forward a copy to the D.H. Griffin Scrap Metal Company.

The owner of the tank is incorrectly stated on the forms. The owner should be shown as "Abandoned in North Carolina Department of Transportation (NCDOT) Right-of-Way" and not Solutions-IES as indicated. Solutions-IES was acting as an agent of NCDOT by overseeing your removal of an orphan tank discovered at the referenced property. Mr. Crotwell's signature should have reflected that he was acting as an agent of NCDOT.

Please contact us if you have any questions or if we may be of further assistance.

Sincerely,
Solutions Industrial & Environmental Services, Inc.



Walter J. Beckwith, P.G.
Senior Hydrogeologist

MATERIAL MANIFEST

A & D Environmental and Industrial Services, Inc.

A&D 10/95

Manifest Document No. _____

Page 1 of 1

A & D Job No. 12009

EMERGENCY PHONE NO.
(800) 434-7750

POST OFFICE BOX 484
HIGH POINT, NC 27262

TEL (336) 434-7750
FAX (336) 434-7752

GENERATOR INFORMATION

| | |
|---|---------------|
| Name <u>Solutions Ind. Env. Services</u> | US EPA ID No. |
| Street Address <u>Preferred Parking Graham Trade St Charlotte NC</u> | Phone No. |
| Mailing Address | Contact |

DESCRIPTION OF MATERIALS

| a. | HM | USDOT Proper Shipping Name (Complete All Items for Hazardous Materials) | Hazard Class or Div. | UN / NA ID No. | Packing Group | Containers | | Total Quantity | Unit Wt./ Vol. |
|----|----|--|----------------------|----------------|---------------|------------|-----------|----------------|----------------|
| | | | | | | Qty. | Type | | |
| | | <u>Non Regulated Liquids N.O.S</u> | <u>NA</u> | <u>NA</u> | <u>NA</u> | <u>1</u> | <u>TT</u> | <u>273</u> | <u>G</u> |
| b. | | | | | | | | | |
| c. | | | | | | | | | |

| ADDITIONAL INFORMATION | | ERG No. | A & D Profile Code | Facility Use |
|------------------------|----------------------|---------|--------------------|--------------|
| a. | <u>water, #2 oil</u> | | | |
| b. | <u>For Recycle</u> | | | |

GENERATOR'S CERTIFICATION

This is to certify that the above-described materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. I further certify that none of the materials described above are a hazardous waste as defined by EPA 40 CFR Part 261 or any applicable state law, and unless specifically identified above, the materials contain less than 1,000 ppm total halogens and do not contain quantifiable levels (2 ppm) of PCBs as defined by EPA 40 CFR Parts 279 and 761.

| | | |
|---|--------------------------------------|------------------------------------|
| Printed / Typed Name <u>Terry J. Crowley</u> | Signature <u>Terry J. Crowley</u> | Mo. / Day / Yr. <u>10/18/01</u> |
|---|--------------------------------------|------------------------------------|

TRANSPORTER INFORMATION

| | | |
|---|--|----------------------------------|
| Transporter A & D ENVIRONMENTAL AND INDUSTRIAL SERVICES | I hereby acknowledge receipt of the above-described materials for transport from the generator site listed above. | |
| Address 2718 UWHARRIE ROAD ARCHDALE, NC 27263 | Signature <u>Wesley Clark</u> | Shipment Date <u>10/18/01</u> |
| Transporter or EPA ID No. <u>NCD986232221</u> | I hereby acknowledge that the above described materials were received from the generator site and were transported to the facility listed below. | |
| Unit No. <u>V-1-9</u> | Signature <u>Wesley Clark</u> | Delivery Date <u>10/18/01</u> |
| Phone (336) 434-7750 | | |

FACILITY INFORMATION

| | | |
|--|--|---------------------------------|
| Facility A & D ENVIRONMENTAL AND INDUSTRIAL SERVICES | I hereby acknowledge receipt of the materials covered by this manifest except for any discrepancy noted below. | |
| Address 2718 UWHARRIE ROAD ARCHDALE, NC 27263 | Signature <u>Eric McManuss</u> | Receipt Date <u>10/18/01</u> |
| Facility or EPA ID No. <u>NCD986232221</u> | Discrepancies / Routing Codes / Handling Methods | |
| Phone (336) 434-7750 | a. | |
| Contact <u>ERIC McMANUSS</u> | b. | |
| | c. | |

MATERIAL MANIFEST

A Environmental and
&
D Industrial Services, Inc.

EMERGENCY PHONE NO.
(800) 434-7750

POST OFFICE BOX 484
HIGH POINT, NC 27262

TEL (336) 434-7750
FAX (336) 434-7752

| |
|---------------------------|
| Manifest Document No. |
| Page <u>1</u> of <u>1</u> |
| A & D Job No. |

GENERATOR INFORMATION

| | |
|---|-----------------|
| Name | US EPA ID No. |
| Street Address <i>Redwood Park Columbia Trail Charlotte NC</i> | Mailing Address |
| | Phone No. |
| | Contact |

DESCRIPTION OF MATERIALS

| HM | USDOT Proper Shipping Name (Complete All Items for Hazardous Materials) | Hazard Class or Div. | UN / NA ID No. | Packing Group | Containers Qty. | Containers Type | Total Quantity | Unit Wt./ Vol. |
|----|--|----------------------|----------------|---------------|-----------------|-----------------|----------------|----------------|
| a. | <i>NON RECYCLED SOLIDS NOS</i> | <i>NA</i> | <i>NA</i> | <i>NA</i> | <i>1</i> | <i>DT</i> | <i>11.28</i> | <i>T</i> |
| b. | | | | | | | | |
| c. | | | | | | | | |

ADDITIONAL INFORMATION

| a. | ERG No. | A & D Profile Code | Facility Use |
|-------------------------|---------|--------------------|--------------|
| <i>Particulate Sol.</i> | | | |
| b. | | | |

GENERATOR'S CERTIFICATION

This is to certify that the above-described materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. I further certify that none of the materials described above are a hazardous waste as defined by EPA 40 CFR Part 261 or any applicable state law, and unless specifically identified above, the materials contain less than 1,000 ppm total halogens and do not contain quantifiable levels (2 ppm) of PCBs as defined by EPA 40 CFR Parts 279 and 761.

| | | |
|---|---------------------------------|------------------------------------|
| Printed / Typed Name <i>TERRY S. CROWELL</i> | Signature <i>[Signature]</i> | Mo. / Day / Yr. <i>10/18/01</i> |
|---|---------------------------------|------------------------------------|

TRANSPORTER INFORMATION

| | | |
|---|---|--|
| Transporter <i>A&D Environmental</i> | I hereby acknowledge receipt of the above-described materials for transport from the generator site listed above. | |
| Address <i>2718 U... N...</i> | Signature <i>[Signature]</i> | Shipment Date <i>10-18-01</i> |
| Transporter or EPA ID No. <i>11CD968</i> | Unit No. <i>0-2</i> | I hereby acknowledge that the above-described materials were received from the generator site and were transported to the facility listed below. |
| Phone <i>336-434-7750</i> | Signature <i>[Signature]</i> | Delivery Date <i>10-18-01</i> |

FACILITY INFORMATION

| | | |
|------------------------|--|---------------------------------|
| Facility | I hereby acknowledge receipt of the materials covered by this manifest except for any discrepancy noted below. | |
| Address | Signature <i>[Signature]</i> | Receipt Date <i>10/18/01</i> |
| Facility or EPA ID No. | Discrepancies / Routing Codes / Handling Methods | |
| Phone | a. | |
| Contact | b. | |
| | c. | |



Environmental and Industrial Services

P.O. Box 484 • High Point, NC • Phone (336) 434-7750 • FAX (336) 434-7752

TANK DISPOSAL MANIFEST

1) Tank Owner/Authorized Representative: Name and Mailing Address _____
Solutions Ind & Env Services
Preferred Parking Graham & Trade St Charlotte NC

2) Tank Owner/Authorized Representative: Contact Mr Beckwith
Phone#: (919) 573-1060

3) Description Of Tanks:

| <u>Tank No.</u> | <u>Capacity</u> | <u>Previous Contents</u> | <u>Comments</u> |
|-----------------|-----------------|--------------------------|-----------------|
| <u>#1</u> | <u>5506</u> | <u>#2 oil</u> | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

4) Tank Owner/Authorized Representative Certification: The undersigned certifies that the above listed storage tanks have been removed from the premises of the tank owner.

TERRY J. CROFTWELL [Signature] 10/18/01
Printed/Typed Name Signature Month/Day/Year

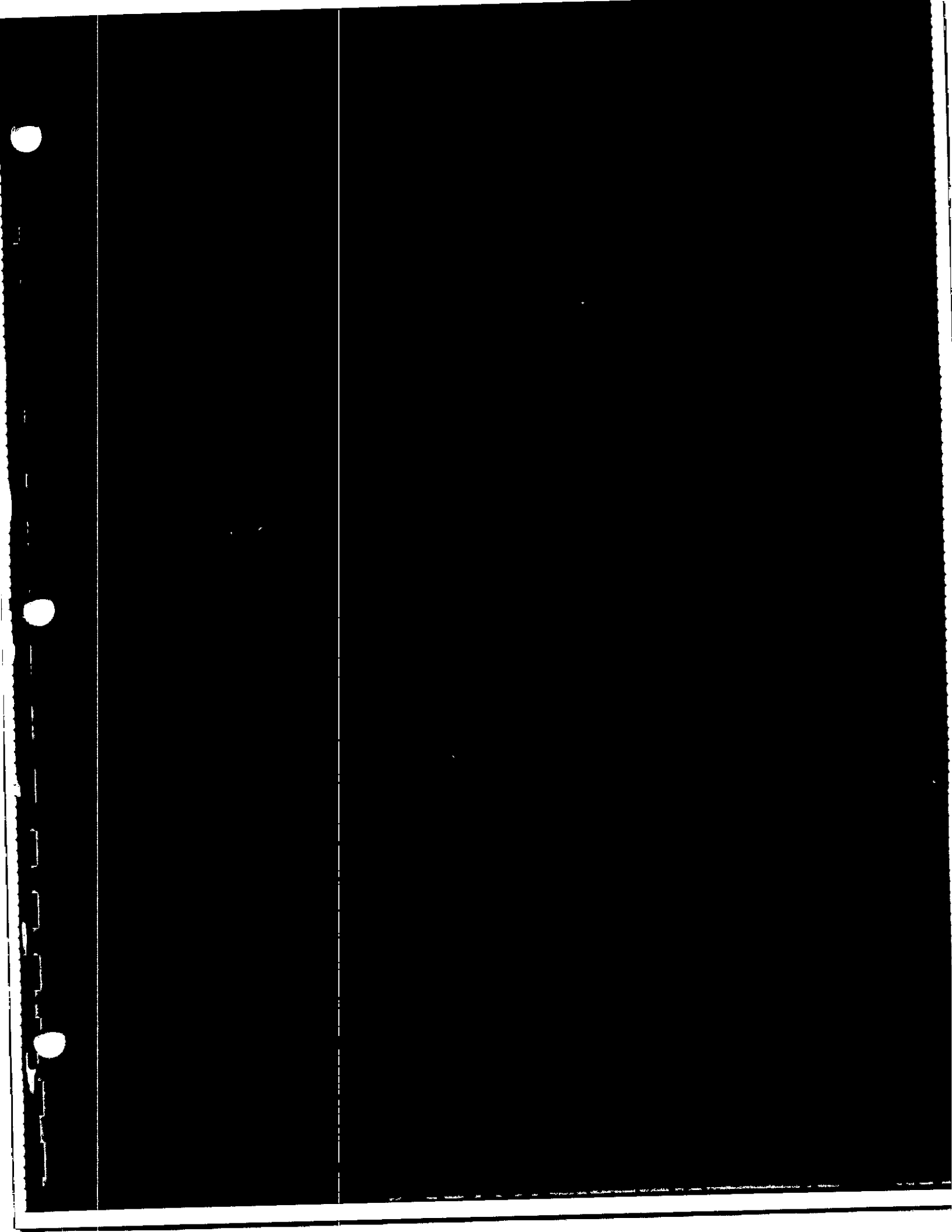
5) Transporter: The undersigned certifies that the above listed storage tanks have been transported to A&D Environmental and Industrial Services, 2718 Uwharrie Road, Archdale, N.C. 27263.

MAT RIFE [Signature] 10-18-01
Printed/Typed Name Signature Month/Day/Year

6) Disposal Certification: The undersigned certifies that the above-named storage tank(s) have been cut into scrap pieces and accepted by the metal recycling facility.

Recycling Facility: D. H. Guffin Scrap Metals
ERIC D. McMANUS [Signature] 10-19-01
Printed/Typed Name Signature Month/Day/Year

APPENDIX B
SITE HEALTH & SAFETY PLAN



HEALTH AND SAFETY PLAN

**Underground Storage Tank Removal and Closure Assessment
Mecklenburg County, North Carolina**

**SUBJECT PETROLEUM STORAGE TANKS
Parcel #5 – Former Nixon Property
City of Charlotte
Mecklenburg, North Carolina**

Issued: October 15, 2001
Solutions-IES Project No. 0930.01A3.NDOT
NCDOT Project 9.9081000

Solutions-IES
3722 Benson Drive
Raleigh, North Carolina 27609

**HEALTH AND SAFETY PLAN
SOIL SAMPLING ACTIVITIES**

PROJECT: NCDOT Project 9.9081000
UST Removal/Closure Assessment
LOCATION OF SITE: Mecklenburg County, North Carolina
SOLUTIONS-IES JOB NO.: 0930.01A3.NCDOT
CLIENT: North Carolina Department of Transportation

REVIEW AND APPROVAL

Health and Safety Officer Walter J. Beckwith, P.G. _____

DATE OF PLAN PREPARATION

October 15, 2001

DATES OF PLANNED FIELD ACTIVITIES:

October 18, 2001

SAFETY MEETING CONDUCTED: (LOCATION) Jobsite
DATE: 10/18/01 TIME: 1000
[Completed by
EHS, per
field notes of
T. Croftwell
dated 10/18/01]

EMERGENCY CONTACT INFORMATION:

Hospital: Carolinas Medical Center
1000 Blythe Boulevard
Charlotte, NC 28203 (704) 355-2000

Directions: Take W Trade St towards Wilkes PL. Turn Left onto W Trade St followed by a right turn onto S McDowell St. Turn Left onto E Stonewall St. E Stonewall becomes Kenilworth Ave. Turn left onto Baxter St. Turn right onto Kings Dr. Turn right onto Medical Center Boulevard. Turn right onto Blythe Boulevard.

EMS: 911
FIRE: 911
POLICE: 911

Site Specific Health and Safety Plan

UST Closure and Removal, Charlotte, North Carolina (Site name)

0930.01A3.NDOT (Project number)

Mecklenburg County (Location)

October 15, 2001 (Date)

I. Site History and Description

A. Site Classification: (i.e. plant, landfill, etc.)

The UST is located on a parcel of land that is managed by NCDOT, and is currently covered by gravel with a stake marking the location of the UST to be closed and removed. This parcel is located in downtown Charlotte, and is in an area developed for commercial use.

B. Activities performed prior to investigation: (i.e. groundwater sampling, tank removal, spill, fire, etc.)

Contractors for NCDOT have reportedly demolished structures and reworked the site for new development. The UST was found during site activities.

C. Unusual Features: (i.e. lakes, streams, utilities, dikes, drum storage, etc.)

No unusual features are known.

D. Results of previous surveys:

The UST is believed to have been used for the storage of heating oil for use on site.

E. Waste Classification: Solid Liquid Gas Sludge
F. Waste Characterization: Toxic Corrosive Radioactive

Flammable/Volatile Reactive

Other (Specify)

| G. Substance(s) | Quantity | Toxicity (PEL/TLV) |
|----------------------|----------------|--------------------|
| <u>Gasoline</u> | <u>UNKNOWN</u> | _____ |
| <u>No 2 Fuel oil</u> | <u>UNKNOWN</u> | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

H. Physical Hazards: Heat Cold Noise Radiation

Other (Specify)

Vehicular Traffic in the work area. The work site is located within downtown Charlotte, an area of high traffic.

I. Weather: The weather is expected to be typical for Fall.
Temperature range 35° F to 80° F

II. Site Organization and Control

A. Work area identified as:

Area marked by traffic cones and work signs.

B. Decontamination area identified as:

Area surrounding A&D's equipment, which will be maintained upwind of UST (if possible).

C. Support area identified as:

Area surrounding Solutions-IES' vehicle, which will be maintained upwind of UST (if possible).

D. Site security maintained by:

There is no security at the site. Care will be exercised to minimize public hazards.

E. Site sketch:

The site is shown on the attached figure.

III. Job Activities and Work Plans

A. Type of Activity: _____

1. Well installation _____ Temporary _____ Permanent _____

2. Boring installation _____

3. Water: ___ pumping ___ bailing ___ sampling

4. Soil: X excavation ___ treatment X sampling

F. Other (specify): ___ Boring and well abandonment.

Comments:

All decon water will be disposed on site, within an area of soil.

B. Work Plan Description:

The UST will be located within the area marked by the NCDOT's contractor, and excavation of the tank will be preceded by the removal of tank contents. Measurements of the LEL will be made, and once deemed safe, excavation of soil will begin. Once the tank is removed it will be visually inspected and taken for proper disposal. Confirmatory samples will be collected (if needed) and the excavation will be backfilled with clean soil.

IV. Levels of Protection

| <u>Job Activity</u> | <u>Personal Protective Equipment (PPE)</u> | <u>Level</u> |
|--|---|--------------|
| A. <u>SUPERVISION</u> <u>OF EXCAVATING/</u> <u>UST REMOVAL</u> | <u>STEEL TOED BOOTS</u> <u>WORK CLOTHES</u> <u>HEARING PROTECTION (AS NECESSARY)</u> <u>EYE PROTECTION</u> <u>HARD HAT</u> <u>NITRILE GLOVES</u> | <u>"D"</u> |
| B. <u>SAMPLE</u> <u>COLLECTION</u> | <u>SAME AS ABOVE</u> | <u>"D"</u> |
| C. <u>EXCAVATION</u> <u>BACKFILL</u> <u>DECON</u> | <u>SAME AS ABOVE</u> | <u>"D"</u> |

Attach additional sheets if necessary

V. Ambient Field Monitoring

A. Equipment required: Monitor soil samples with an OVA for evidence of hydrocarbons.

IF CONTAMINATION FOUND, SAMPLES WILL
BE SUBMITTED TO LAB

B. Monitoring

Protocol: SCAN EXCAVATION AREA WITH OVA. IF
READING SPKY CONTINUOUSLY, STOP WORK AND WAIT
FOR READINGS TO RETURN TO BACKGROUND LEVELS

VI. Safety Equipment List

A. First-Aid kit Yes ___ No Location: Solutions-IES' Vehicles

B. Fire Extinguisher: Yes ___ No Location: Back Door of Geoprobe

C. Communication: Buddy ___ Radio ___ Hand Signals

D. Personal Protective Equipment List: Level D
___ Tyvek ___ Chemical Resistant Suit ___ Fully Encapsulated Suit

Steel Toed Boots

Hard Hat

Safety Glasses

Ear Plugs

Gloves, inner (specify) either nitrile or latex _____

___ Gloves, outer (specify) leather work gloves _____

N/E ___ Respirator, Type: ___ Half-face ___ Full-face ___ SCBA

N/E ___ Respirator Cartridge Type: Organic vapors, Acids, mists _____

Water Cooler

Telephone: Solutions-IES mobile phone

Other NCDOT work Vest

(specify) _____

*Verify location and condition and
Are you taking the Geoprobe?
Pick up one from shop. AKE should also have one!*

E. Decontamination Equipment

- Pressure Washer
 - Steam Ginny
 - Water
 - Alconox/Liquinox
 - Distilled Water
- Solvent Rinse
 Other (specify) _____

F. Sanitation

Restrooms/Hand Washing Personnel: There are no dedicated restrooms. There are several convenience stores nearby that have public restroom facilities.

Shower_ There are no shower facilities available.

*Are you sure?
This?*

G. Comments

A&D WILL BE RESPONSIBLE FOR THEIR OWN EQUIPMENT DECON.

VII. Decontamination Procedures

| <u>Activity</u> | <u>Level</u> | <u>Materials</u> |
|---|--------------|---|
| A. <u>DECON</u> <u>SAMPLES</u> <u>TOOLS</u> | <u>"D"</u> | <u>Water, Distilled Water, DI Water</u> <u>Liquinox/Alconox,</u> |
| Procedure: <u>WASH OFF EXCESS SOIL. CLEAN WITH LIQUINOX/ALCONOX</u> <u>AND RINSE WITH DI WATER</u> | | |
| B. _____ | _____ | _____ |
| Procedure: _____ | | |

VIII. Education, Training, and Medical Surveillance

A. Special Training Beyond OSHA 40 Hour Requirement?

No

Yes (specify) _____

B. Special Medical Monitoring beyond standard OSHA program required?

No

Yes (specify) _____

SEARCH THE SYSTEM:



Home: Care Locations : Hospitals : Carolinas Medical Center : Directions

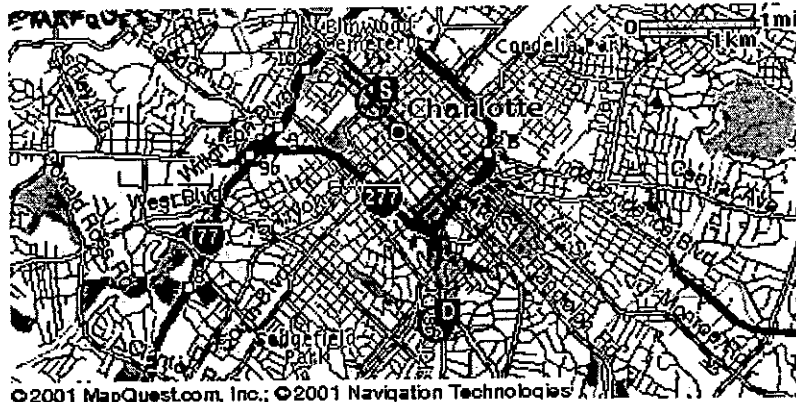
CARE LOCATIONS

Directions

Direction Results For Carolinas Medical Center

Total Distance:
3.0 miles (4.9 km)





Total Estimated Time:
9 minutes

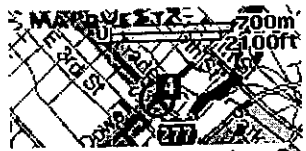


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Turn by Turn Results

From: 500 W Trade Street
Charlotte NC
To: 1000 Blythe Boulevard
Charlotte NC

| Map | Directions | Distance |
|---|---|--------------------|
|  | 1: Start out going Northwest on W TRADE ST towards WILKES PL by turning left. | 0.2 miles (0.4 km) |
|  | 2: Turn LEFT. | 0.0 miles (0.0 km) |
|  | 3: Turn LEFT onto W TRADE ST. | 1.2 miles (1.9 km) |
|  | 4: Turn RIGHT onto S MCDOWELL ST. | 0.4 miles (0.7 km) |



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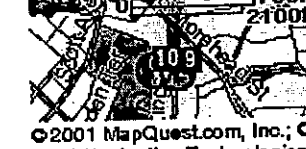
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5: Turn LEFT onto E STONEWALL ST. 0.2 miles (0.3 km)

6: E STONEWALL ST becomes KENILWORTH AVE. 0.2 miles (0.3 km)

7: Turn LEFT onto BAXTER ST. 0.1 miles (0.1 km)

8: Turn RIGHT onto S KINGS DR. 0.6 miles (0.9 km)

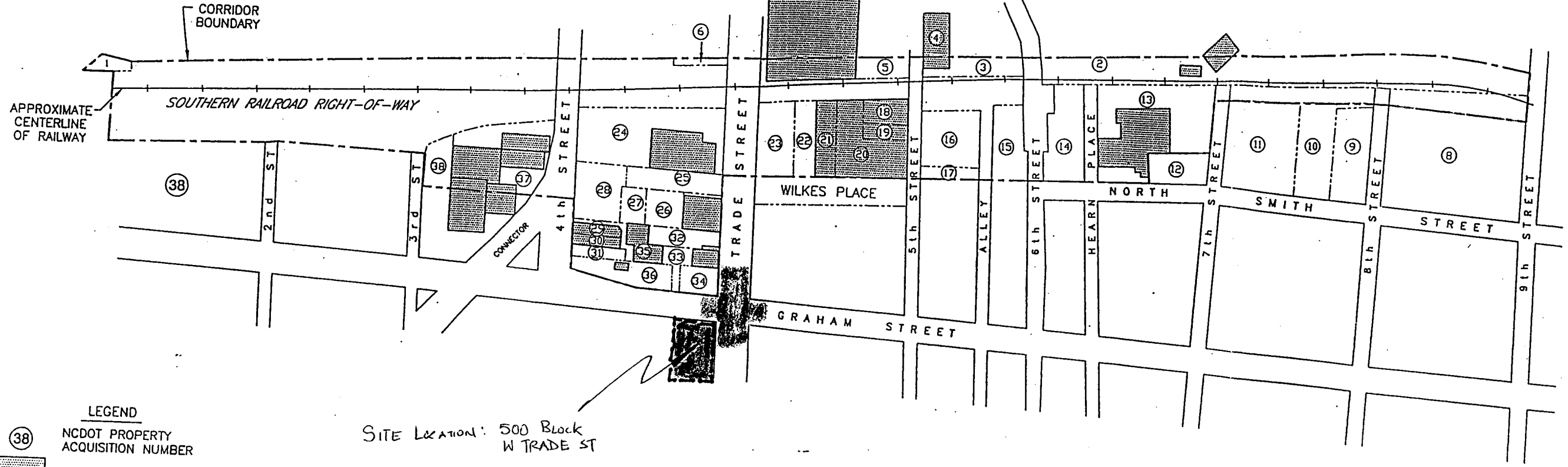
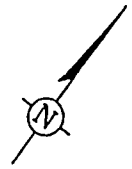
9: Turn RIGHT onto MEDICAL CENTER DR. 0.1 miles (0.1 km)

10: Turn RIGHT onto BLYTHE BLVD. 0.0 miles (0.0 km)

- Text Only
- With Text
- Turn-by-Turn Maps With Text

Redisplay Results

Change Origin Address



LEGEND

- 38 NCDOT PROPERTY ACQUISITION NUMBER
- BUILDING
- PROPERTY BOUNDARY
- CORRIDOR BOUNDARY
- 39 PARCEL NUMBER

SCALE IN FEET
0 300 600

MAP SUPPLIED FROM NCDOT

ARCADIS GERAGHTY & MILLER
of North Carolina, Inc.
 2301 Rexwoods Drive
 Suite 102 RALEIGH, NC 27607
 Tel: 919/782-5511 Fax: 919/782-5905

PRJT MANAGER:
R. ELLIS

CHECKED BY:
H. BRADY

NOTES: PROPERTIES 8, 9, 10, 11, AND 12 WERE NOT COVERED IN THIS REPORT.

SOURCE: MECKLENBERG COUNTY TAX RECORDS.

DRAFTER:
A. NORTON

DRAWING:
AMTRAK-SL

DATE:
15SEPT00

PROJECT NUMBER: NC000657.0001

NORTH CAROLINA DEPT. OF TRANSPORTATION
 STATE PROJECT NUMBER 9.9080178 (AMTRAK)
 CHARLOTTE, NORTH CAROLINA

SITE LOCATION

FIGURE:
1

APPENDIX C

CERTIFICATE OF DISPOSAL
PETROLEUM-CONTAMINATED SOILS

CERTIFICATE OF DISPOSAL

ISSUED BY:

A&D ENVIRONMENTAL AND INDUSTRIAL SERVICES, INC.
2718 UWHARRIE ROAD
ARCHDALE, NC 27263

ISSUED TO:

SOLUTIONS INDUSTRIAL & ENVIRONMENTAL SERVICES
3722 BENSON DRIVE
RALEIGH, NC

THIS IS TO CERTIFY THAT NON-HAZARDOUS MATERIAL REMOVED FROM THE FORMER NIXON PROPERTY LOCATED AT THE INTERSECTION OF WEST TRADE AND GRAHAM STREET IN CHARLOTTE, NORTH CAROLINA HAS BEEN DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS IN THE FOLLOWING MANNER.

| <u>DATE</u> | <u>MANIFEST #</u> | <u>WASTE STREAM</u> | <u>QUANTITY</u> | <u>FINAL DISPOSITION</u> | <u>METHOD</u> |
|-------------|-------------------|---------------------|-----------------|--------------------------|---------------|
| 10-18-2001 | AD12009-1 | Non-Reg. Soil | 11.28 Tons | SOILWORKS, ZEBULON, NC | BIOTREATMENT |

DISPOSAL APPROVAL SIGNATURE: E. D. McManus

DATE: 11-5-01

APPENDIX D
LABORATORY REPORT
SOIL SAMPLES

Lab Report

10/31/01

Page 1 of 9

Solutions - IES
Attn: Walt Beckwith
3722 Benson Dr.
Raleigh, NC 27609

Customer Project ID: UST- W Trade St
Customer Sample ID: S-1
Prism Sample ID: AC23891
Login Group: 4506H3
Sample Collection Date/Time: 10/18/01 12:15
Lab Submittal Date/Time: 10/19/01 16:15

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

| TEST PARAMETER | TEST RESULT | UNITS | REPORTING LIMIT | METHOD REFERENCE | DATE/TIME STARTED | ANALYST |
|--------------------------------|--------------|-----------|-----------------|------------------|-------------------|---------|
| C5-C8 Aliphatics | Not detected | mg/kg | 7 | MADEP VPH | 10/26/01 03:59 | JYS |
| C9-C12 Aliphatics | 8.3 | mg/kg | 6 | MADEP VPH | 10/26/01 03:59 | JYS |
| C9-C10 Aromatics | 2.3 | mg/kg | 2 | MADEP VPH | 10/26/01 03:59 | JYS |
| Surrogate % Recovery - PID | 74 | % | (70-130) | MADEP VPH | 10/26/01 03:59 | JYS |
| Surrogate % Recovery - FID | 76 | % | (70-130) | MADEP VPH | 10/26/01 03:59 | JYS |
| Dilution Factor | 1 | mg/kg | | MADEP VPH | 10/26/01 03:59 | JYS |
| Dry Weight Received | 15.16 g | mg/kg | | MADEP VPH | 10/26/01 03:59 | JYS |
| ----- | | | | | | |
| EXTRACTION FOR EPH | Completed | | | MADEP-EPH | 10/22/01 10:15 | JMV |
| C9-C18 ALIPHATICS | 510 | mg/kg | 40 | MADEP-EPH | 10/28/01 20:15 | KTE |
| C19-C36 ALIPHATICS | 160 | mg/kg | 20 | MADEP-EPH | 10/28/01 20:15 | KTE |
| C11-C22 AROMATICS | 410 | mg/kg | 20 | MADEP-EPH | 10/28/01 20:15 | KTE |
| SURROGATE RECOVERY - ALIPHATIC | 86 | % | (40-140) | MADEP-EPH | 10/28/01 20:15 | KTE |
| SURROGATE RECOVERY - AROMATIC | 63 | % | (40-140) | MADEP-EPH | 10/28/01 20:15 | KTE |
| SURR:2-BROMONAPHTHALENE | 90 | % | (40-140) | MADEP-EPH | 10/28/01 20:15 | KTE |
| SURR:2-FLUOROBIPHENYL | 80 | % | (40-140) | MADEP-EPH | 10/28/01 20:15 | KTE |
| DILUTION FACTOR | 1 | mg/kg | | MADEP-EPH | 10/28/01 20:15 | KTE |
| DRY WEIGHT | 7.5 g | mg/kg | | MADEP-EPH | 10/28/01 20:15 | KTE |
| ----- | | | | | | |
| CALCULATIONS BASED ON DRY WT. | 75 | % DRY WT. | 0.01 | SM 2540 G | 10/22/01 16:00 | JLW |
| PREP. METHOD 3550 | Completed | | | SW846-3550B | 10/22/01 19:00 | JLW |
| ACENAPHTHENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| ACENAPHTHYLENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| ANTHRACENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| BENZO(A)ANTHRACENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| BENZO(B)FLUORANTHENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| BENZO(K)FLUORANTHENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| BENZO(A)PYRENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| BENZO(GHI)PERYLENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| BIS(2-CHLOROETHOXY)METHANE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

Lab Report



10/31/01

Page 2 of 9

Solutions - IES
Attn: Walt Beckwith
3722 Benson Dr.
Raleigh, NC 27609

Customer Project ID: UST- W Trade St
Customer Sample ID: S-1
Prism Sample ID: AC23891
Login Group: 4506H3
Sample Collection Date/Time: 10/18/01 12:15
Lab Submittal Date/Time: 10/19/01 16:15

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

| TEST PARAMETER | TEST RESULT | UNITS | REPORTING LIMIT | METHOD REFERENCE | DATE/TIME STARTED | ANALYST |
|-----------------------------|--------------|-------|-----------------|------------------|-------------------|---------|
| BIS(2-CHLOROETHYL)ETHER | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| BIS(2-CHLOROISOPROPYL)ETHER | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| BIS(2-ETHYLHEXYL)PHTHALATE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 4-BROMOPHENYL PHENYL ETHER | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| BUTYL BENZYL PHTHALATE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 4-CHLORO-3-METHYLPHENOL | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 2-CHLORONAPHTHALENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 2-CHLOROPHENOL | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 4-CHLOROPHENYL PHENYL ETHER | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| CHRYSENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| DIBENZO(A,H)ANTHRACENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| DIBENZOFURAN | 520 | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| DI-N-BUTYLPHTHALATE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 1,2-DICHLOROBENZENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 1,3-DICHLOROBENZENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 1,4-DICHLOROBENZENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 2,4-DICHLOROPHENOL | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| DIETHYL PHTHALATE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 2,4-DIMETHYLPHENOL | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| DIMETHYL PHTHALATE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 2,4-DINITROPHENOL | Not detected | ug/kg | 2200 | SW846-8270C | 10/29/01 12:51 | HWC |
| 2,4-DINITROTOLUENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 2,6-DINITROTOLUENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| DI-N-OCTYLPHTHALATE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| FLUORANTHENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| FLUORENE | 660 | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| HEXACHLOROBENZENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| HEXACHLOROBUTADIENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| HEXACHLOROCYCLOPENTADIENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| HEXACHLOROETHANE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

Lab Report

10/31/01

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Solutions - IES
Attn: Walt Beckwith
3722 Benson Dr.
Raleigh, NC 27609

Customer Project ID: UST- W Trade St
Customer Sample ID: S-1
Prism Sample ID: AC23891
Login Group: 4506H3
Sample Collection Date/Time: 10/18/01 12:15
Lab Submittal Date/Time: 10/19/01 16:15

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

| TEST PARAMETER | TEST RESULT | UNITS | REPORTING LIMIT | METHOD REFERENCE | DATE/TIME STARTED | ANALYST |
|----------------------------|--------------|-------|-----------------|------------------|-------------------|---------|
| INDENO(1,2,3-CD)PYRENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| ISOPHORONE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 2-METHYL-4,6-DINITROPHENOL | Not detected | ug/kg | 2200 | SW846-8270C | 10/29/01 12:51 | HWC |
| 2-METHYL NAPHTHALENE | 6400 | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 2-METHYL-PHENOL | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 4-METHYL-PHENOL | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| NAPHTHALENE | 2400 | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| NITROBENZENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 2-NITROPHENOL | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 4-NITROPHENOL | Not detected | ug/kg | 2200 | SW846-8270C | 10/29/01 12:51 | HWC |
| N-NITROSODIPHENYLAMINE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| N-NITROSODI-N-PROPYLAMINE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| PENTACHLOROPHENOL | Not detected | ug/kg | 2200 | SW846-8270C | 10/29/01 12:51 | HWC |
| PHENANTHRENE | 2100 | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| PHENOL | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| PYRENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 1,2,4-TRICHLOROBENZENE | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 2,4,5-TRICHLOROPHENOL | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |
| 2,4,6-TRICHLOROPHENOL | Not detected | ug/kg | 440 | SW846-8270C | 10/29/01 12:51 | HWC |

Lab Report



10/31/01

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Solutions - IES
Attn: Walt Beckwith
3722 Benson Dr.
Raleigh, NC 27609

Customer Project ID: UST- W Trade St
Customer Sample ID: S-1
Prism Sample ID: AC23891
Login Group: 4506H3
Sample Collection Date/Time: 10/18/01 12:15
Lab Submittal Date/Time: 10/19/01 16:15

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

| TEST PARAMETER | TEST RESULT | UNITS | REPORTING LIMIT | METHOD REFERENCE | DATE/TIME STARTED | ANALYST |
|-------------------|----------------|-------|--------------------|---------------------|----------------------|---------|
|-------------------|----------------|-------|--------------------|---------------------|----------------------|---------|

Sample Comments:

Analysis note for 8270: RPDs for 4-Nitrophenol and 2,4-Dinitrotoluene were above acceptance criteria for this analysis. Matrix interference suspected.

Angela D. Overcash, V.P. Laboratory Services

Lab Report



10/31/01

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Solutions - IES
 Attn: Walt Beckwith
 3722 Benson Dr.
 Raleigh, NC 27609

Customer Project ID: UST- W Trade St
Customer Sample ID: S-2
Prism Sample ID: AC23892
 Login Group: 4506H3
 Sample Collection Date/Time: 10/18/01 12:30
 Lab Submittal Date/Time: 10/19/01 16:15

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

| TEST PARAMETER | TEST RESULT | UNITS | REPORTING LIMIT | METHOD REFERENCE | DATE/TIME STARTED | ANALYST |
|--------------------------------|--------------|-----------|-----------------|------------------|-------------------|---------|
| C5-C8 Aliphatics | Not detected | mg/kg | 7 | MADEP VPH | 10/26/01 04:59 | JYS |
| C9-C12 Aliphatics | Not detected | mg/kg | 6 | MADEP VPH | 10/26/01 04:59 | JYS |
| C9-C10 Aromatics | Not detected | mg/kg | 2 | MADEP VPH | 10/26/01 04:59 | JYS |
| Surrogate % Recovery - PID | 72 | % | (70-130) | MADEP VPH | 10/26/01 04:59 | JYS |
| Surrogate % Recovery - FID | 77 | % | (70-130) | MADEP VPH | 10/26/01 04:59 | JYS |
| Dilution Factor | 1 | mg/kg | | MADEP VPH | 10/26/01 04:59 | JYS |
| Dry Weight Received | 14.54 g | mg/kg | | MADEP VPH | 10/26/01 04:59 | JYS |
| ----- | | | | | | |
| EXTRACTION FOR EPH | Completed | | | MADEP-EPH | 10/22/01 10:15 | JMV |
| C9-C18 ALIPHATICS | Not detected | mg/kg | 40 | MADEP-EPH | 10/28/01 21:58 | KTE |
| C19-C36 ALIPHATICS | Not detected | mg/kg | 20 | MADEP-EPH | 10/28/01 21:58 | KTE |
| C11-C22 AROMATICS | Not detected | mg/kg | 20 | MADEP-EPH | 10/28/01 21:58 | KTE |
| SURROGATE RECOVERY - ALIPHATIC | 76 | % | (40-140) | MADEP-EPH | 10/28/01 21:58 | KTE |
| SURROGATE RECOVERY - AROMATIC | 75 | % | (40-140) | MADEP-EPH | 10/28/01 21:58 | KTE |
| SURR:2-BROMONAPHTHALENE | 84 | % | (40-140) | MADEP-EPH | 10/28/01 21:58 | KTE |
| SURR:2-FLUOROBIPHENYL | 70 | % | (40-140) | MADEP-EPH | 10/28/01 21:58 | KTE |
| DILUTION FACTOR | 1 | mg/kg | | MADEP-EPH | 10/28/01 21:58 | KTE |
| DRY WEIGHT | 8.0 g | mg/kg | | MADEP-EPH | 10/28/01 21:58 | KTE |
| ----- | | | | | | |
| CALCULATIONS BASED ON DRY WT. | 80 | % DRY WT. | 0.01 | SM 2540 G | 10/22/01 16:00 | JLW |
| PREP. METHOD 3550 | Completed | | | SW846-3550B | 10/22/01 19:00 | JLW |
| ACENAPHTHENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| ACENAPHTHYLENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| ANTHRACENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| BENZO(A)ANTHRACENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| BENZO(B)FLUORANTHENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| BENZO(K)FLUORANTHENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| BENZO(A)PYRENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| BENZO(GHI)PERYLENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| BIS(2-CHLOROETHOXY)METHANE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

Lab Report



10/31/01

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Solutions - IES
Attn: Walt Beckwith
3722 Benson Dr.
Raleigh, NC 27609

Customer Project ID: UST- W Trade St
Customer Sample ID: S-2
Prism Sample ID: AC23892
Login Group: 4506H3
Sample Collection Date/Time: 10/18/01 12:30
Lab Submittal Date/Time: 10/19/01 16:15

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

| TEST PARAMETER | TEST RESULT | UNITS | REPORTING LIMIT | METHOD REFERENCE | DATE/TIME STARTED | ANALYST |
|-----------------------------|--------------|-------|-----------------|------------------|-------------------|---------|
| BIS(2-CHLOROETHYL)ETHER | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| BIS(2-CHLOROISOPROPYL)ETHER | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| BIS(2-ETHYLHEXYL)PHTHALATE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 4-BROMOPHENYL PHENYL ETHER | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| BUTYL BENZYL PHTHALATE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 4-CHLORO-3-METHYLPHENOL | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 2-CHLORONAPHTHALENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 2-CHLOROPHENOL | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 4-CHLOROPHENYL PHENYL ETHER | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| CHRYSENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| DIBENZO(A,H)ANTHRACENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| DIBENZOFURAN | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| DI-N-BUTYLPHTHALATE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 1,2-DICHLOROENZENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 1,3-DICHLOROENZENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 1,4-DICHLOROENZENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 2,4-DICHLOROPHENOL | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| DIETHYL PHTHALATE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 2,4-DIMETHYLPHENOL | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| DIMETHYL PHTHALATE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 2,4-DINITROPHENOL | Not detected | ug/kg | 2100 | SW846-8270C | 10/29/01 17:31 | HWC |
| 2,4-DINITROTOLUENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 2,6-DINITROTOLUENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| DI-N-OCTYLPHTHALATE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| FLUORANTHENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| FLUORENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| HEXACHLOROENZENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| HEXACHLOROBUTADIENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| HEXACHLOROCYCLOPENTADIENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| HEXACHLOROETHANE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |

NC Certification No. 402 - SC Certification No. 99012 - NC Drinking Water Cert. No. 37735 - FL Certification No. E87519

Lab Report



10/31/01

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Solutions - IES
Attn: Walt Beckwith
3722 Benson Dr.
Raleigh, NC 27609

Customer Project ID: **UST- W Trade St**
Customer Sample ID: **S-2**
Prism Sample ID: **AC23892**
Login Group: **4506H3**
Sample Collection Date/Time: **10/18/01 12:30**
Lab Submittal Date/Time: **10/19/01 16:15**

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

| TEST PARAMETER | TEST RESULT | UNITS | REPORTING LIMIT | METHOD REFERENCE | DATE/TIME STARTED | ANALYST |
|----------------------------|--------------|-------|-----------------|------------------|-------------------|---------|
| INDENO(1,2,3-CD)PYRENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| ISOPHORONE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 2-METHYL-4,6-DINITROPHENOL | Not detected | ug/kg | 2100 | SW846-8270C | 10/29/01 17:31 | HWC |
| 2-METHYL NAPHTHALENE | 1200 | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 2-METHYL-PHENOL | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 4-METHYL-PHENOL | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| NAPHTHALENE | 430 | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| NITROBENZENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 2-NITROPHENOL | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 4-NITROPHENOL | Not detected | ug/kg | 2100 | SW846-8270C | 10/29/01 17:31 | HWC |
| N-NITROSODIPHENYLAMINE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| N-NITROSODI-N-PROPYLAMINE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| PENTACHLOROPHENOL | Not detected | ug/kg | 2100 | SW846-8270C | 10/29/01 17:31 | HWC |
| PHENANTHRENE | 470 | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| PHENOL | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| PYRENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 1,2,4-TRICHLOROBENZENE | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 2,4,5-TRICHLOROPHENOL | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |
| 2,4,6-TRICHLOROPHENOL | Not detected | ug/kg | 420 | SW846-8270C | 10/29/01 17:31 | HWC |

Lab Report



10/31/01

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Solutions - IES
Attn: Walt Beckwith
3722 Benson Dr.
Raleigh, NC 27609

Customer Project ID: UST- W Trade St
Customer Sample ID: S-2
Prism Sample ID: AC23892
Login Group: 4506H3
Sample Collection Date/Time: 10/18/01 12:30
Lab Submittal Date/Time: 10/19/01 16:15

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

| TEST PARAMETER | TEST RESULT | UNITS | REPORTING LIMIT | METHOD REFERENCE | DATE/TIME STARTED | ANALYST |
|-------------------|----------------|-------|--------------------|---------------------|----------------------|---------|
|-------------------|----------------|-------|--------------------|---------------------|----------------------|---------|

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

Lab Report



10/31/01

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Solutions - IES
Attn: Walt Beckwith
3722 Benson Dr.
Raleigh, NC 27609

Customer Project ID: UST- W Trade St
Customer Sample ID: TRIP BLANK
Prism Sample ID: AC23893
Login Group: 4506H3
Sample Collection Date/Time: 10/18/01
Lab Submittal Date/Time: 10/19/01 16:15

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

| TEST PARAMETER | TEST RESULT | UNITS | REPORTING LIMIT | METHOD REFERENCE | DATE/TIME STARTED | ANALYST |
|----------------------------|--------------|-------|-----------------|------------------|-------------------|---------|
| C5-C8 Aliphatics | Not detected | mg/L | 7 | MADEP VPH | 10/25/01 19:06 | JYS |
| C9-C12 Aliphatics | Not detected | mg/L | 6 | MADEP VPH | 10/25/01 19:06 | JYS |
| C9-C10 Aromatics | Not detected | mg/L | 2 | MADEP VPH | 10/25/01 19:06 | JYS |
| Surrogate % Recovery - PID | 87 | % | (70-130) | MADEP VPH | 10/25/01 19:06 | JYS |
| Surrogate % Recovery - FID | 86 | % | (70-130) | MADEP VPH | 10/25/01 19:06 | JYS |
| Dilution Factor | 1 | mg/L | | MADEP VPH | 10/25/01 19:06 | JYS |

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name Solutions - IES Laboratory Name Prism Laboratories, Inc
 Project Name UST - W. Trade St. NC Certification # (Lab) 402
 Site Location 500 W. Trade St. Sample Matrix Soil

| Sample Information and Analytical Results | | | | | | | | | |
|---|------------------|-------------------------------|-----|----------|----------------|----------|---------|------------|-----------|
| Method for Ranges: MADEP VPH | | Sample Identification | | AC23891 | | AC23892 | | AC23893 | |
| VPH Surrogate Standards | | Collection Option (for soil)* | | 1 | | 1 | | TRIP BLANK | |
| Aliphatic: 2,5-Dibromotoluene | | Date Collected | | 10/18/01 | | 10/18/01 | | 10/18/01 | |
| Aromatic: 2,5-Dibromotoluene | | Date Received | | 10/19/01 | | 10/19/01 | | 10/19/01 | |
| | | Date Extracted | | 10/24/01 | | 10/24/01 | | 10/24/01 | |
| | | Date Analyzed | | 10/26/01 | | 10/26/01 | | 10/26/01 | |
| | | % Dry Solids | | 75% | | 80% | | NA | |
| | | Dilution Factor | | 1 | | 1 | | 1 | |
| Hydrocarbon Ranges | Units of Measure | MDL | RL | Blank | Sample Results | | | | |
| C5 - C8 Aliphatics** | mg/kg | 2.0 | 7.0 | <7.0 | <7.0 | <7.0 | <7.0 | <7.0 | <7.0 mg/L |
| C9 - C12 Aliphatics** | mg/kg | 1.3 | 6.0 | <6.0 | 8.3 | <6.0 | <6.0 | <6.0 | <6.0 mg/L |
| C9 - C10 Aromatics** | mg/kg | 0.4 | 2.0 | <2.0 | 2.3 | <2.0 | <2.0 | <2.0 | <2.0 mg/L |
| Sample Surrogate Acceptance Range | | | | | 70-130% | 70-130% | 70-130% | 70-130% | 70-130% |
| Aliphatic Surrogate % Recovery - FID | | | | 123% | 76% | 77% | 77% | 77% | 86% |
| Aromatic Surrogate % Recovery - PID | | | | 117% | 74% | 72% | 72% | 72% | 87% |

* Option 1 = Established fill line on vial Option 2 = Sampling Device (indicate brand, e.g. EnCore™) Option 3 = Field weight of soil
 ** Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.
 MDL = Method Detection Limit RL = Reporting Limit Blank = Laboratory Method Blank or Trip Blank whichever is higher (indicate type)

VPH rev. 11/00

Yes **No - Details Attached**
 No **Yes - Details Attached**

Were all performance/acceptance standards for required QA/QC procedures achieved? Yes No
 Were any significant modifications to the VPH method made? Yes No

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name Solutions - IES
 Project Name UST - W. Trade St.
 Site Location 500 W. Trade St.

Laboratory Name Prism Laboratories, Inc.
 NC Certification # (Lab) 402
 Sample Matrix Soil

Sample Information and Analytical Results

| Method for Ranges: MADEP EPH | Sample Identification | | | |
|--|-----------------------|----------|----|---------|
| EPH Surrogate Standards | AC23891 | AC23892 | | |
| Aliphatic: 1-Chloro-octadecane | 10/18/01 | 10/18/01 | | |
| Aromatic: o-Terphenyl | 10/19/01 | 10/19/01 | | |
| EPH Fractionation Surrogates | 10/22/01 | 10/22/01 | | |
| #1: 2-Bromonaphthalene | 10/28/01 | 10/28/01 | | |
| #2: 2-Fluorobiphenyl | 75% | 80% | | |
| | Dilution Factor | 1 | | |
| Hydrocarbon Ranges | Units of Measure | MDL | RL | Blank |
| C9 - C18 Aliphatics* | mg/kg | 10 | 40 | <40 |
| C19 - C36 Aliphatics* | mg/kg | 5.7 | 20 | <20 |
| C11 - C22 Aromatics* | mg/kg | 16 | 20 | <20 |
| Sample Surrogate Acceptance Range | | | | |
| Aliphatic Surrogate % Recovery | | | | 40-140% |
| Aromatic Surrogate % Recovery | | | | 72% |
| Fractionation Surrogate Acceptance Range | | | | 69% |
| Fractionation Surrogate #1 % Recovery | | | | 40-140% |
| Fractionation Surrogate #2 % Recovery | | | | 70% |
| * Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range. | | | | |
| MDL = Method Detection Limit RL = Reporting Limit Blank = Laboratory Method Blank | | | | |

EPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved?

Was blank correction applied as a significant modification of the method?

Were any significant modifications to the EPH method made?

Yes No - Details Attached
 Yes No
 No Yes - Details Attached



Full Service Analytical & Environmental Solutions
 449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543

Client Company Name: SOLUTIONS - IES
 Report To/Contact Name: M. KALT BECKWITH
 Reporting Address: 2722 REASON DRIVE
 RALEIGH, NC 27609

Phone: (919) 813-1060 Fax (Yes) (No): (919) 843-0714
 Site Location Name: UST - W TRADE ST
 Site Location Physical Address: 500 W TRADE ST

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1 QUOTE # TO ENSURE PROPER BILLING:
 Project Name: UST CLOSURE - W TRADE ST
 Short Hold Analysis: (Yes) (No) UST Project: (Yes) (No)
 *Please ATTACH any project specific reporting provisions and/or QC Requirements
 Invoice To: NCDOT
 Address: GEOTECH UNIT - GEOTECHNICAL SECTION

Purchase Order No./Billing Reference: NCDOT PROJ. 99081000
 Requested Due Date: 1 Day 2 Days 3 Days 4 Days 5 Days
 6-9 Days Standard 10 days
 Samples received after 15:00 will be processed next business day.
 Turnaround time is based on business days, excluding weekends and holidays.
 (SEE REVERSE SIDE FOR RUSH TURNAROUND FEES)

LAB USE ONLY
 Samples INTACT upon arrival? YES NO N/A
 Received ON WET ICE? Temp. 1.0
 PROPER PRESERVATIVES indicated?
 RECEIVED WITHIN HOLDING TIMES?
 CUSTODY SEALS INTACT?
 VOLATILES rec'd W/OUT HEADSPACE?
 PROPER CONTAINERS used?

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
 Certification: NELAC USACE FL NC
 SC OTHER N/A
 Water Chlorinated: YES NO
 Sample Iced Upon Collection: YES NO

| CLIENT SAMPLE DESCRIPTION | DATE COLLECTED | TIME COLLECTED MILITARY HOURS | MATRIX (SOIL, WATER OR SLUDGE) | SAMPLE CONTAINER | | PRESERVATIVES | ANALYSES REQUESTED | | REMARKS | SUB LAB CERT. ID NO. | PRISM LAB ID NO. |
|---------------------------|----------------|-------------------------------|--------------------------------|------------------|----------|---------------|--------------------|-------|---------|----------------------|------------------|
| | | | | *TYPE SEE BELOW | NO. SIZE | | MAJOR | MINOR | | | |
| S-1 | 10/13/01 | 12:15 | SOIL | 4 | | NONE/METHANOL | X | X | | 23891 | |
| S-2 | 10/18/01 | 12:30 | SOIL | 4 | | NONE/METHANOL | X | X | | 23892 | |
| TAP BLANK | | | NIN | 2 | | METHANOL | X | | | 23893 | |

Sampler's Signature: *Suey Placks* Received By (Print Name): Terry J. Crabell Affiliation: Solutions-IES
 Relinquished By (Signature): *[Signature]* Received By (Signature): *[Signature]* Military/Hours: 11:00
 Relinquished By (Signature): *[Signature]* Received By (Signature): *[Signature]* Date: 10/19/01
 Relinquished By (Signature): *[Signature]* Received For (Print Name): *[Signature]* Date: 10/19/01
 Method of Shipment: Fed Ex UPS Hand-delivered Prism Field Service Other
 NPDES: NC SC UST: NC SC GROUNDWATER: NC SC DRINKING WATER: NC SC SOLID WASTE: NC SC RCRA: NC SC CERCLA: NC SC LANDFILL: NC SC OTHER: NC SC SC

PRISM USE ONLY
 Additional Comments: NCDOT PROJ. No. 99081000
 UST CLOSURE W. TRADE / 15 GRAMM
 Site Arrival Time:
 Site Departure Time:
 Field Tech Fee:
 Mileage:

PRESS DOWN FIRMLY - 3 COPIES

*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)
 SEE REVERSE FOR TERMS & CONDITIONS ORIGINAL