# AT&T COMMUNICATIONS INC.

#20489

UNDERGROUND FUEL TANK

REPLACEMENT DOCUMENTATION

AT&T RADIO RELAY STATION

SILK HOPE, NORTH CAROLINA

# TABLE OF CONTENTS

AT&T RADIO RELAY STATION
Silk Hope, North Carolina
96JS36-B

# EXECUTIVE SUMMARY

One 560 gallon diesel Underground Storage Tank (UST) was removed and replaced with a new 650 gallon Aboveground Storage Tank at the AT&T Radio Relay Station located in Silk Hope, North Carolina on September 13, 1996. The facility is located on Clark Road / SR 2352 in Silk Hope, North Carolina in Chatham County. Tank removal and installation activities were performed by Unger Construction Company of Muskogee, Oklahoma. Representatives from TRC Environmental Corporation of Chapel Hill, North Carolina conducted the environmental analysis for this location.

Prior to removal, 377 gallons of diesel were pumped from the fuel storage tank and disposed of by S&H Oil Company, Inc. of Siler City, North Carolina. After removal, the tank was inspected and no sign of deterioration was evident. The tank was then transported to MMM, Inc. of LaGrange, North Carolina where it was sold as scrap.

During the removal activities, a representative from TRC Environmental Corporation was on site to observe the removal and to perform soil analysis. Soil samples were collected and laboratory tested for Total Petroleum Hydrocarbons, Diesel Range Organics (TPH-DRO) and Gasoline Range Organics (TPH-GRO) by Hydrologic, Inc. of Morrisville, North Carolina. Groundwater was encountered during the removal. A water sample was taken and tested for benzene, toluene, ethylbenzene and total xylenes (BTEX). TRC Environmental Corporation recommended that further investigation be done at this site.

A North Carolina Site Investigation Report for Permanent Closure of UST has been included with the documentation.

## ENGINEER/CONTRACTOR INFORMATION

UNDERGROUND FUEL TANK REPLACEMENT
AT&T RADIO RELAY STATION
SILK HOPE, NORTH CAROLINA

OWNER'S REPRESENTATIVES

Mr. Larry McKelvey, Supervisor
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SOUTHERN REGION
1200 Peachtree Street
Promenade-2, Location 7S12
Atlanta, GA 30309
(404) 810-4505

CONSULTANT

JOHNSON, SPELLMAN & ASSOCIATES, INC.
6991 Peachtree Industrial Blvd. Building 700
Norcross, GA 30092
(770) 447-4555

ENVIRONMENTAL

TRC Environmental Corporation
6340 Quadrangle Drive, Suite 200
Chapel Hill, NC 27514
(919) 419-7500

REMOVAL & INSTALLATION CONTRACTOR

Unger Construction Company
7210 Old Taft Road
Muskogee, OK 74401
(918) 638-5028

Job No. 96JS36-B

March 19, 1998

## DISTRIBUTION

STATE AGENCY-STATE OFFICE

North Carolina-Department of Environment, Health, & Natural Resources
Division of Environmental Management
Groundwater Section - Pollution Control
2728 Capital Boulevard
Raleigh, NC 27604

STATE AGENCY- REGIONAL OFFICE

Raleigh Regional Office
3800 Barrett Drive
Raleigh, NC 27609
919-571-4700

AT&T SITE SUPERVISOR

AT&T Communications Inc.
Kathy Furr
4701 Barclay Downs Drive
Charlotte, NC 28210

AT&T ARCHIVE RECORD CENTER

Hanson Engineers, Inc.
47 Perimeter Center Avenue, East
Suite 280
Atlanta, GA 30346
(770) 901-9777

AT&T, BUILDING & CONSTRUCTION

Larry McKelvey, Supervisor Southern Region
1200 Peachtree Street
Promenade-2
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(404) 810-4505

CONSULTING ENGINEERS

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6991 Peachtree Industrial Boulevard, Building 700
Norcross, GA 30096
(770) 447-4555

# ENGINEERING DATA

UNDERGROUND FUEL TANK REPLACEMENT
AT&T RADIO RELAY STATION
SILK HOPE, NORTH CAROLINA

CONSULTING ENGINEER

JOHNSON, SPELLMAN & ASSOCIATES, INC.
6991 Peachtree Industrial Blvd. Building 700
Norcross, GA 30092

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SECTION 1

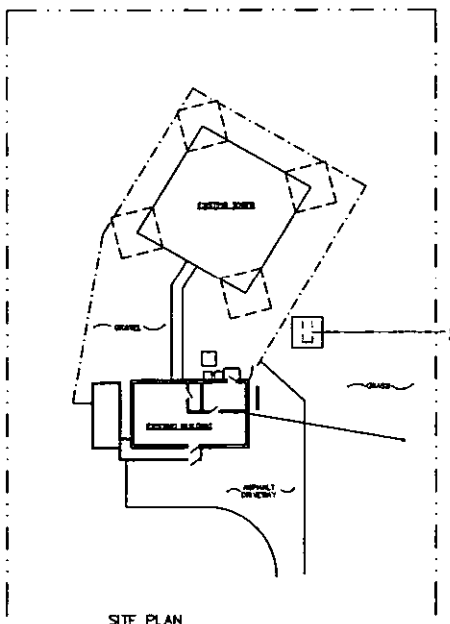
REPLACEMENT DRAWINGS

(Johnson, Spellman & Associates)

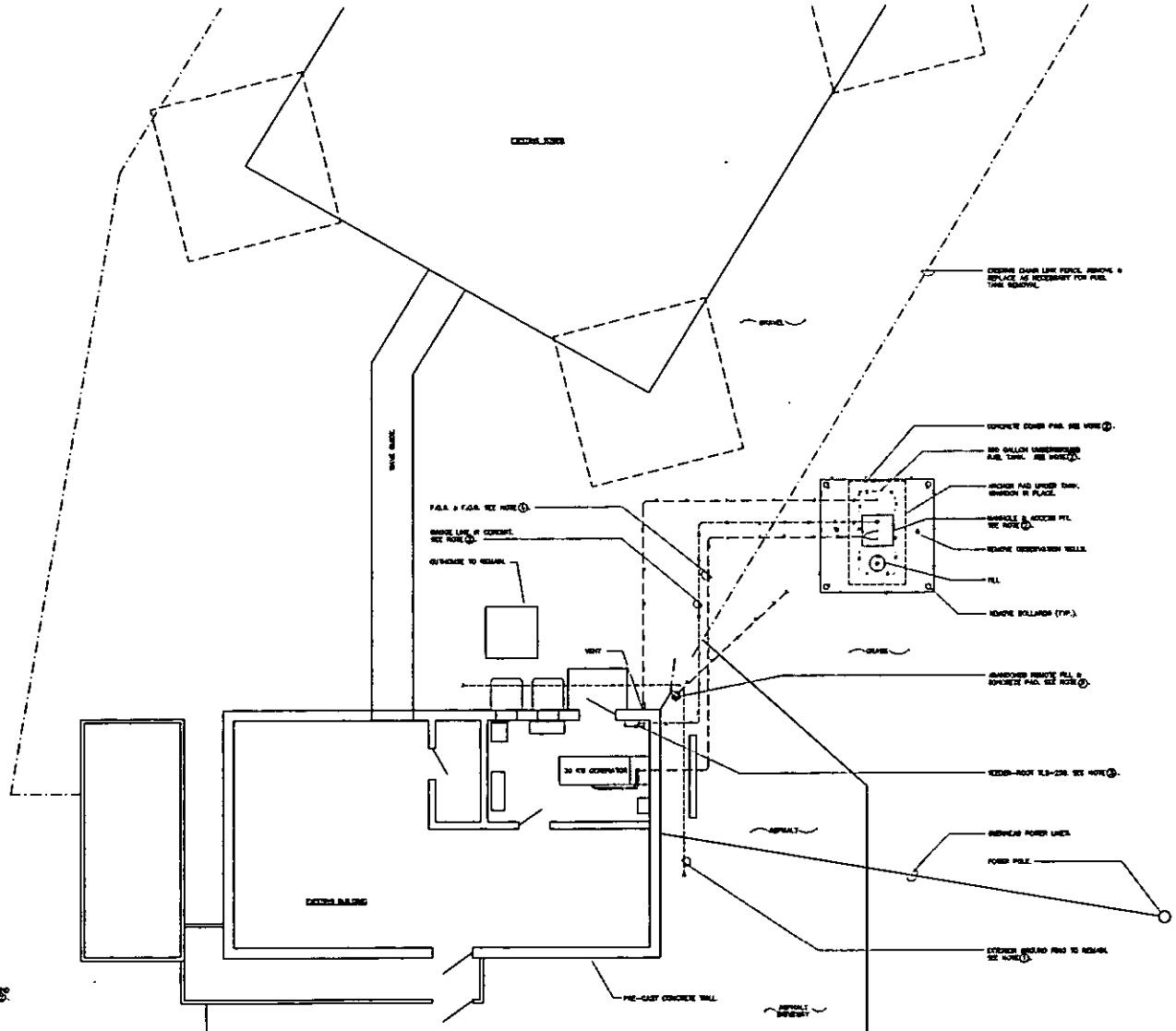
| EXISTING TANK SCHEDULE | | | | | |
|---|---|---|---|---|---|
| SITE | TANK | APPROXIMATE TANK CAPACITY | APPROXIMATE TANK SIZE | APPROX. DEPTH TO TOP OF TANK | APPROX. CURRENT TANK CONTENTS |
| SILK HOPE | 1 | 500 GALLONS | 4'Ø x 6'-0" | 48" | 500 GAL DIESEL |

NOTES

1. VERIFY EXACT LOCATION OF ALL UTILITIES BEFORE DIGGING.
2. REMOVE EXISTING UNDERGROUND STORAGE TANK, ANCHOR STRAPS, MANHOLE AND ACCESS FILL CONCRETE COVER PAD, PIPING (F.O.S., F.O.A., VENT, FILL), ABANDONED REMOTE FILL CAPPED AND ALL APPURTENANCES. SEE SPECIFICATIONS FOR REMOVAL REQUIREMENTS.
3. REMOVE WEDER-ROOF ELS-250 MONITOR PANEL, TANK PROBE CONDUIT & WIRING. REMOVE WIRING FROM TANK MONITOR PANEL. REMOVE CAPPED CONDUIT FROM TANK TO BUILDING WALL. CONDUIT AND WIRING MAY BE REUSED IF FOUND TO BE IN GOOD CONDITION.
4. REMOVE F.O.S. & F.O.R. FROM TANK TO CONNECTION WITH ABOVEGROUND. REMOVE SECONDARY CONTAINMENT CONDUIT FROM TANK TO BUILDING WALL. PULL REMAINING CONDUIT WITH NON-SHRINK GROUT.




SITE PLAN
SILK HOPE, NORTH CAROLINA
SCALE 1/64"=1'-0"




DEMOLITION
SILK HOPE, NORTH CAROLINA
SCALE 1/8"=1'-0"

FUEL TANK REPALCEMENT
STATE ROAD 2352
SILK HOPE, NORTH CAROLINA

RFQ# 96-23-TLS

0-024105

AS SHOWN

96JS36-A

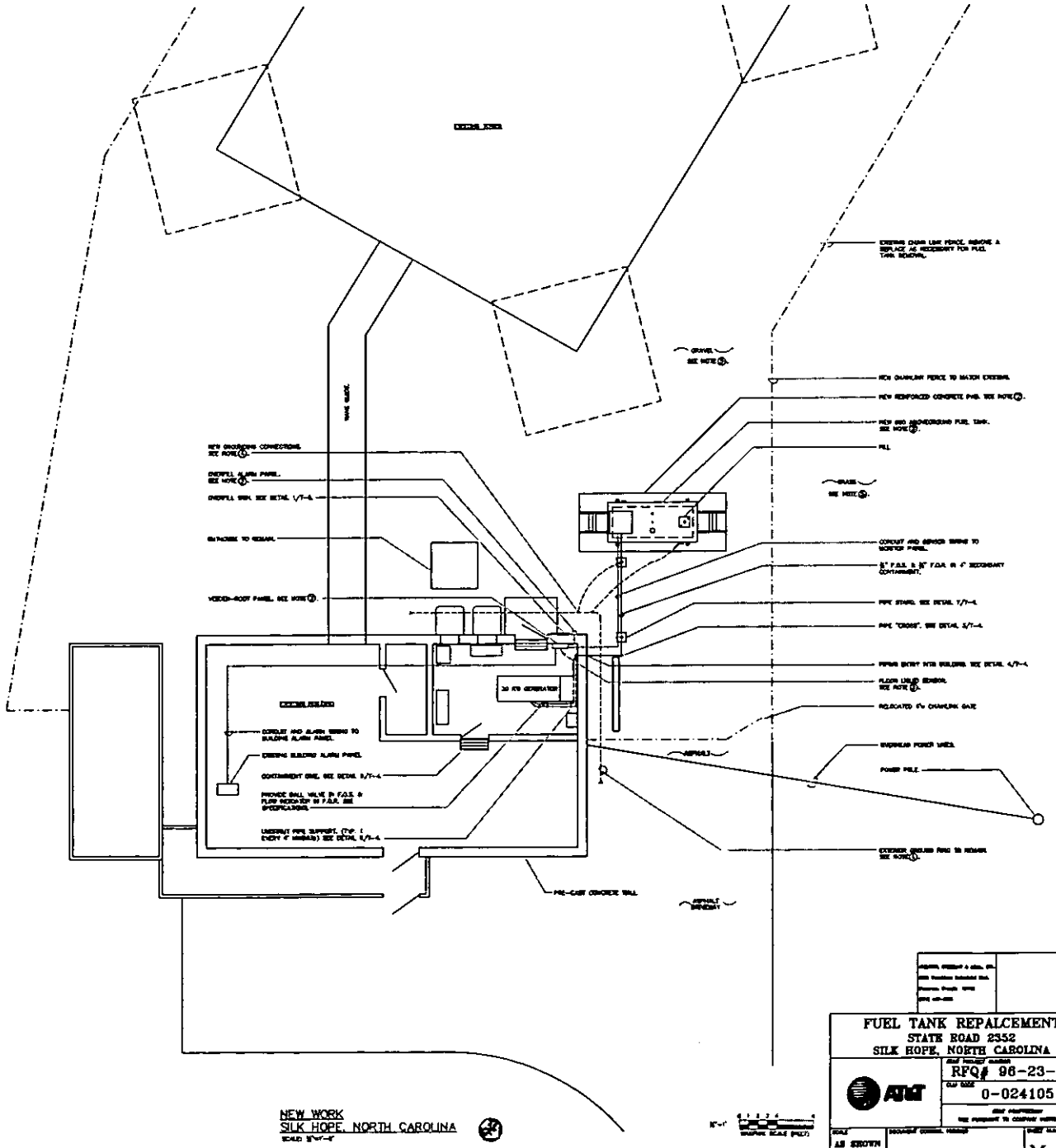
9 x 11

1

M-9

NOTES

1. VERIFY EXACT LOCATION OF ALL STRUCTURES BEFORE DIGGING.
2. INSTALL NEW TANK SYSTEM. SEE SHEET T-1. REFER TO SPECIFICATIONS SECTION 13611 FOR DESCRIPTION OF WORK/EQUIPMENT PROVIDED UNDER THIS CONTRACT AND WORK/EQUIPMENT PROVIDED BY OTHERS.
3. PROVIDE NEW VEEDER-ROOT FUEL TANK MONITOR SYSTEM. PROVIDE CONDUIT AND POWER WIRING FROM THE ELECTRICAL PANEL TO THE VEEDER-ROOT PANEL AND OVERFILL ALARM. PROVIDE CONDUIT PER WIRING TO FUEL LEVEL PROBE AND LEAK SENSORS. GROUND NEW CONTROLS AND PROVIDE EXTERNAL SURGE PROTECTION. SEE SHEET T-4 AND NOTE (2).
4. PROVIDE NEW #6 THWN COPPER GROUND WIRE FROM THE TANK CAP, AND THE FUEL PIPING RISERS, TO THE EXISTING GROUND ROD. IF GROUND ROD CAN NOT BE FOUND, PROVIDE THREE 8' LONG GROUND RODS ARRANGED IN A TRIANGULAR PATTERN, AND CLOSED TWO 10' TO EACH OTHER. CAD WELD AT ALL CONNECTIONS.
5. PROVIDE NEW SOD TO MATCH EXISTING GRASS DAMAGED DURING CONSTRUCTION. REPLACE 3-INCHES DAMAGED RUBBER CONTAINMENT. REMOVE MUD FROM AREA ENCLOSED BY NEW FENCE (AROUND TANK). PROVIDE SAND BLOCK FABRIC AND STAKES. RETRACH FUEL TANK AND PIPING.




NEW WORK
SILK HOPE, NORTH CAROLINA
SCALE 1/8"=1'-0"

1/8"=1'

FUEL TANK REPALCEMENT
STATE ROAD 2352
SILK HOPE, NORTH CAROLINA

RFQ# 96-23-TLS
0-024105

AS SHOWN
96JS36-A
10-11
1
M-10

SECTION 2

SITE SURVEY

(AT&T Surveyor)

Mike Locklear

SUP Howard Bridges #919-821-6329
Tech Andy Vice #919-220-7493 #3-919-682-5470

UNDERGROUND STORAGE TANK
SITE EVALUATION SURVEY FORM

SITE DESCRIPTION

SITE LOCATION - CITY Silk Hope STATE NC AREA NUMBER L262150

TYPE OF SITE Radio Relay SIZE OF SITE 57'x24' CONSTRUCTION DATE 1963

SITE DESCRIPTION pasture & forest

DESCRIPTION OF SURROUNDING PROPERTY pasture + forest

SOIL AND GROUND WATER CONDITIONS high water table

SURFACE WATER PROXIMITY TO SITE none

TANK DESCRIPTION

TANK LOCATION external & buried TANK SIZE 42"x8' AGE 4 years

PRODUCT STORED diesel IN SERVICE OR ABANDONED in service

TYPE OF TANK bullhide MATERIAL steel COATING fiberglass

CATHODIC PROTECTION ? n/a SECONDARY CONTAINMENT NO

MONITORING SYSTEMS - OBSERVATION WELLS yes AUTO OR MANUAL manual

LIQUID LEVEL MEASURING GAUGE Veeder-Root TLS-250 LEAK DETECTOR SYSTEM yes
453 gals

PIPING SYSTEMS

TYPE OF PRODUCT PUMPING SYSTEM (PRESSURE/SUCTION) suction

PIPING MATERIALS ½" copper SECONDARY CONTAINMENT yes ?

OBSERVATIONS AND RECOMMENDATIONS

SURFACE CONTAMINATION NOTED none

NEAR TANK FILL none OTHER none EXTENT none

OTHER OBSERVATIONS OR PROBLEMS DETECTED "remote fill for removed tank still in place, was not removed + piping"

ACTION RECOMMENDED up grade containment manhole and piping install a AST

LOCATION

ADDRESS 3 miles E of Snow Camp N.C.

COUNTY Alamance

LONGITUDE 079 24 27W

LATITUDE 35 51 17N

SECTION

TOWNSHIP

RANGE

TANK # 1

TANK VOLUME 560 GALS.

TANK SIZE 42" DIA. 8' LGTH.

TANK CONTENTS diesel

AMOUNT OF FUEL 38" 548

AMOUNT OF WATER 0

TOP OF TANK 48"

ENGINE ROOM DETAILS

SIZE 16'7" X 9'10"

ROOM FOR INSIDE TANK Y/N no

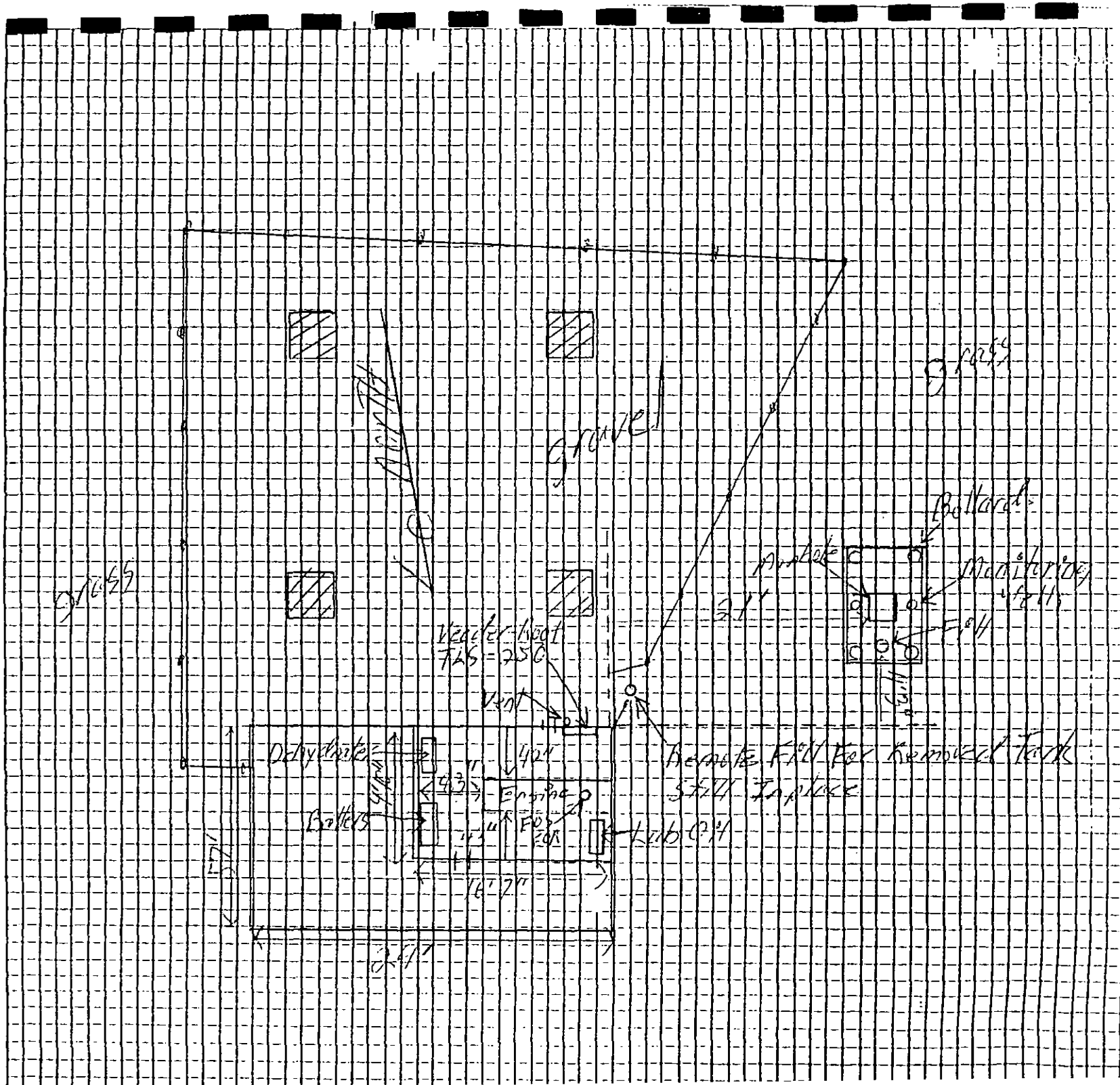
ENGINE DETAILS

ENGINE SIZE 30 KH

ENGINE RUN HRS. 806

CONSMPTN. FUEL RATE n/a /HR.

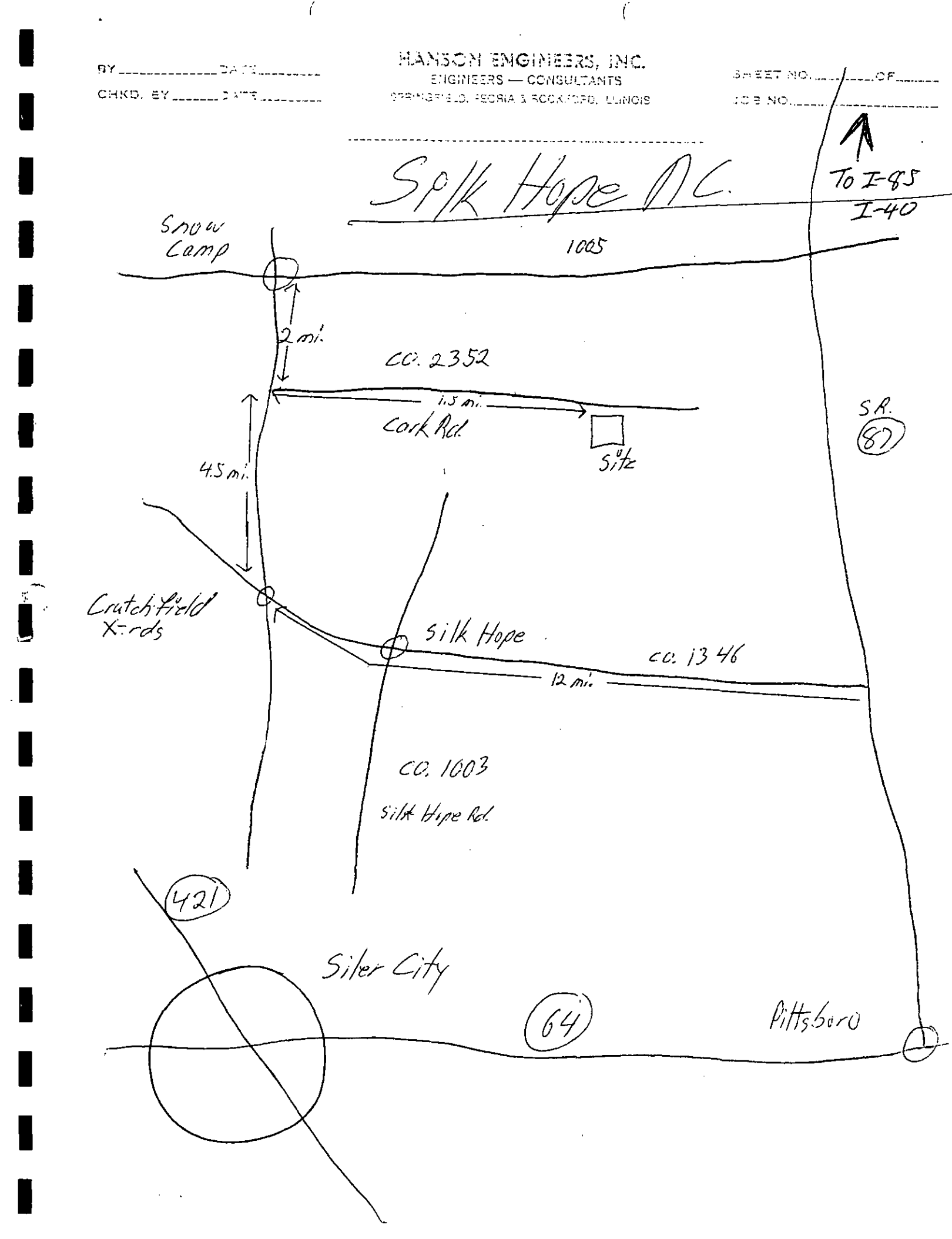
COMMENTS



BY _____ DATE _____
CHKD. BY _____ DATE _____

HANSON ENGINEERS, INC.
ENGINEERS — CONSULTANTS
SPRINGFIELD, PEORIA & ROCKFORD, ILLINOIS

SHEET NO. ____ OF ____
JOB NO. _____



SECTION 3

REPLACEMENT SPECIFICATIONS

(Johnson, Spellman & Associates)

# SECTION 15613
# ABOVEGROUND DIESEL GENERATOR FUEL TANK AND ACCESSORIES

## PART 1 - GENERAL

1.01 WORK INCLUDED: Provide all materials, labor and services as specified and shown on the drawings.

1.02 CODES: The latest amended editions of the codes applicable to the work of the State and municipality having jurisdiction.

1.03 RECORD DRAWINGS: See Section 01320.

1.04 MAINTENANCE AND OPERATING MANUALS: See Section 01320.

1.05 INVENTORY LOG BOOK: Provide an Inventory Log Book at each site. The log book shall consist of a three-ring binder and log forms to include spaces for tank inventory reconciliation information and generator run time information. The notebooks shall include pockets for storage of printouts from the tank gauging system.

1.06 QUALITY ASSURANCE

A. Install complete and satisfactorily functioning systems, furnishing necessary materials and labor to provide systems in accordance with drawings, specifications and all codes and regulations.

B. The fuel tank and associated piping systems shall meet all requirements of the most current Environmental Protection Agency Publications and local and State requirements. The fuel tank shall be installed in accordance with the manufacturer's recommendations and NFPA 30, NFPA 31, NFPA 37, and local requirements.

C. The Contractor shall comply with the provisions of all Federal and State regulations pertaining to the removal or modification of existing systems or installation of the new systems.

D. The Contractor shall notify the State or the appropriate District office of the work to be performed (including removal and modification of existing systems and installation of new systems) within the times required.

E. The Contractor shall obtain all permits and pay all fees required by the State and local jurisdictions.

F. New aboveground tanks shall be constructed according to the standards required for tanks with Underwriter Laboratories UL 142 label.

PART 2 - PRODUCTS

2.01 DIESEL OIL STORAGE TANK

A. The diesel oil storage tank shall have the capacity as indicated on the drawings, be an "Envirovault" manufactured by Phoenix Products, Inc. or an "EcoVault" manufacutured by the Reinforced Earth Company or approved equivalent; installed as recommended by manufacturer and in accordance with the codes and regulations indicated above and the drawing details. **The tank will be purchased by Hanson Engineers, received and installed by the Contractor.** The various accessory systems shall be as manufactured by the companies indicated.

B. The inner steel tank shall be a single wall tank constructed of minimum 7 gauge carbon steel, all welded construction. The concrete encasement shall be 6" thick concrete, precast/poured at the factory. An interstitial space shall be provided between the inner and outer tank. The tanks shall be designed to allow free flow of liquids in the interstitial space.

C. Tank shall be furnished with openings as indicated on the drawings. Provide bushings and unions at all connections to reduce to size required.

D. Exterior of the tank shall be primed with paint and painted with 1 finish coat of oil base paint.

E. The tank shall come equipped with an emergency vent from the manufacturer.

F. The Phoenix Products, Envirovault tank shall come equipped with a containment box as shown on the drawings. The containment box for the EcoVault tank shall be provided by the Contractor.

2.02 TANK GAUGING AND LEAK MONITORING SYSTEM: The tank gauging and leak monitoring system shall be the following:

A. Veeder Root TLS-350 with modules as required for monitoring leaking in the interstitial space.

B. The system provided shall include the TLS-350 control unit, printer with takeup reel, Series 8473 Magnetostrictive probe (0.1 GPH) with fuel level and water sensors and temperature sensors, riser cap. Modules and sensors shall be provided for the interstitial space, probe and sump sensor.

C. The normal mode for the system shall be "Leak Detect". The system shall automatically "sense" the emergency engine or transfer pump running and prevent a false leak alarm from being sent. The interstitial monitor and sump systems shall remain active at all times.

D. After the engine or pump has stopped, the system shall automatically provide an inventory printout and then revert to the normal leak detect mode. The system shall also be programmed to automatically provide an inventory printout every 30 days.

E. Provide relay or contact for transfer pump or lube oil pressure or fuel flow switch for engine to provide "RUN" signal. Provide conduit and wiring to the panel.

F. The system shall provide the following alarms:

1. Leak alarm.

2. Low fuel alarm.

3. High fuel alarm.

4. Water fuel alarm.

5. Liquid sensor alarm.

6. An 8 output relay module shall be installed in the V/R panel for future connection of the individual alarms and extension of wiring by others.

G. The alarms wiring shall be pulled to the Owner's monitoring panel and connected to the existing set of dry contacts currently used for "Low Fuel Alarm". Conduit and wiring may be extended from the location of the existing liquidometer gauge to the new gauge panel, where applicable.

H. The system shall include provisions for future installation of a modem and RS232 interface for remote data retrieval.

I. Rigid PVC or metallic conduit and wiring, as recommended by the system manufacturer, shall be provided from the tank to the new panel.

J. The Veeder Root TLS-350 setup data form is included in Veeder Root documentation. Fill-in the blank lines left for tank diameter and the four volumes and program the Veeder Root per the setup data. Mount a framed copy of the setup form with all blanks filled in adjacent to the Veeder Root system.

K. The system shall include a Veeder Root TLS Overfill Alarm and Alarm Acknowledgment Switch. This alarm shall activate when the fuel level exceeds 90% capacity of the tank.

2.03 PIPING AND ACCESSORIES

A. Vent piping shall be Schedule 40 steel, ASTM A-53, Gr. A or B seamless, with forged steel, screwed fitting conforming to ASTM A-105 Gr.2, ANSI B 16.11 and ANSI B 2.1.

B. Fuel oil supply and return piping shall be Schedule 40 steel, ASTM A-53, Gr. A or B seamless. Support piping using brackets secured to walls or as indicated on drawings. Secondary containment piping shall be black iron (steel) pipe with sizes as indicated on drawings. Joints/connections shall be welded unless noted otherwise, or couplings are required. See specification section 15060.

C. Thread sealant compound shall be suitable for use with oils and solvents; Quigley "Q-Seal" or equal.

D. Provide polyethylene piece to isolate fuel piping from black iron secondary containment piping.

E. The fuel fill shall be tight fill type (A30-014). The cap (A97-002) shall included provisions for a padlock. Cap shall be securely fastened to fill line to prevent removal of entire cap.

F. "Victaulic" fittings shall be manufactured by the Victaulic Company of America, (215) 252-6400. Installed per manufacturers recommendations.

2.04 OVERFILL PROTECTION VALVE: The overfill protection valve shall be a Guillotine Fill Limiter (1-800-824-1394) or approved equal.

2.05 An Adapter Assembly shall be provided with each fuel tank. The assembly shall consist of a

female camlock coupler, 1.5" spout, 1.5" x 1.25" reducer, and a 1.25" spout. Adapter Assemblies may be obtained from Miller Tank and Pipe Co. (fax 812/246-5144). Adapter kits shall be left in the fill bucket, unattached until needed for filling AST.

2.06 SIGHT FLOW INDICATORS: Sight Flow Indicators shall be W. E. Anderson Model 100 or Model 300, or equal, sized to match the piping it is connected to.

PART 3 - EXECUTION

3.01 CONTINUITY OF SERVICE: Fuel oil shall be provided continuously to the generator during the construction period. The Contractor will provide a doublewall steel temporary tank or a single wall tank with containment basin and piping as required. The Contractor shall contact the Owner no less then five (5) working days prior to disconnecting the existing fuel system.

3.02 TANK AND PIPING

A. Protect the tank finish from damage during installation or modification. Any damaged finish areas of the tank shall be repaired to match factory finish.

B. Fuel oil piping shall be installed from the tank to the existing generator as indicated on the drawings. Provide shut-off and solenoid valves in the supply line as indicated on the drawings.

C. Vent piping shall extend vertically out of tank and terminate a minimum of 10' above grade. Vent shall be terminated with an OPW 23 or Emco-Wheaton A4103 vapor vent cap. Emergency vent shall be Morrison Model No. 244.

D. Fuel oil piping shall be hydrostatically tested to 100 psig for 1 hour with no readable pressure drop on a ½ of 1" accuracy gauge.

E. The tanks shall be pressure tested to 5 psig for 2 hours with no readable pressure drop, in strict accordance with manufacturer's instructions and drawing details.

F. Install tank accessories in accordance with manufacturers' instructions and drawing details.

3.03 PIPING

A. Each piping system shall, after all testing is satisfactorily completed, be flushed, blown out or otherwise cleaned in accordance with the requirements of the Pipe Fabrication Standard ES 5.

B. All exposed fuel piping, vent piping, and steel secondary containment shall be thoroughly cleaned and painted as specified for ferrous metal.

3.04 TANK GAUGING AND LEAK MONITORING SYSTEM

A. The tank gauging and leak monitoring shall be installed per manufacturers instructions and drawing details. The system shall be programmed as required for the components installed.

B. The alarms shall be individually tested to assure that each alarm is detected as an open conduit at the cross connect panel.

3.05 MONITORING SYSTEM TRAINING: The Contractor shall provide on site training on the Veeder Root system for AT&T personnel at each site. Training shall be by factory trained Veeder Root personnel. Training shall be for a minimum of four (4) hours at each site and shall cover programming, operation and maintenance of the equipment at each site.

3.06 FUEL: The contractor shall dispose of all existing fuel. The contractor shall provide new fuel to fill the tank to 90% capacity.

3.07 PRESSURE TESTING/CERTIFICATION:

A. Fuel piping shall be tested to 100 psig for 1 hour with no readable pressure drop on a ½ of 1% accuracy gauge. All primary supply and return piping, welded and soldered joints, and mechanical joints shall be tested.

B. Secondary containment piping shall be tested to 5 psig for 2 hours with no readable pressure drop on a ½ of 1% accuracy gauge.

C. The fuel tank shall be pressure tested to 5 psig for 2 hours with no readable pressure drop, in strict accordance with manufacturers instructions/recommendations.

D. The contractor shall provide written certification, signed by the Owner's representative, that the piping passed the pressure test. This certification shall be included with the Contractor's final documentation provided to the Owner. See Documentation Section (01320, 01325, or 01326) for the Leak Testing Certificate form

END OF SECTION 15613

# SECTION 15620
# REMOVAL OF UNDERGROUND DIESEL FUEL TANKS AND PIPING

## PART 1 - GENERAL

### 1.01 DESCRIPTION

A. This section specifies the procedures to be used for the removal of the underground diesel fuel storage tank, piping and accessories.

B. Provide all materials, labor and equipment necessary to remove the existing tanks and piping, assist the Environmental firm in testing the soil for contamination and backfill the excavations to existing grade, in accordance with all applicable codes and regulations.

### 1.02 CODES AND STANDARDS

A. The following codes and standards shall be used in the removal and disposal of the tanks and the testing of the tank excavation for contaminants:

1. EPA 40 CPR Parts 280 and 281, "Underground Storage Tanks, Federal Regulations".

2. API Recommended Practice 1604, December 1987, "Removal and Disposal of Used Underground Petroleum Storage Tanks".

3. NFPA 30, 1981, "Flammable and Combustible Liquids Code".

4. Applicable State and Local Regulations.

B. The Contractor shall comply with the provisions of State regulations pertaining to the removal of existing systems. The Contractor shall notify the State of the work to be performed (including removal and modification of existing systems) within the times required. The Contractor shall submit copies of plans and specifications and provide additional data or procedures required by the State.

## PART 2 - PRODUCTS

### 2.01 MATERIALS

A. Materials shall be provided as required for the excavation of the tank, removal of the tank, testing of the soil and ground water in the excavation, and backfilling of the excavation.

B. All materials shall meet requirements set forth below and applicable requirements of the codes and standards above.

## 2.02 SOIL TESTING PRIOR TO EXCAVATION

A. Testing of the soil at the tank site prior to excavation is not required.

B. Visual inspection of the site has been made and visible contamination has not been found. If any contamination is found at the site during the excavation, stop excavating and report the signs of contamination to AT&T building design and construction, immediately. Soils testing may then be authorized by AT&T.

C. If required, sampling of the soil around the tank site shall be done by testing split spoon samples taken at 2 foot intervals from 6 inches below the surface to a depth of 1 foot below the bottom of the tank. Sampling locations should be a maximum of 20 feet apart around the perimeter of the tank and piping system. A minimum of 4 sampling points should be used, with one located directly down gradient from the tank in the direction of presumed water flow.

D. The perimeter of the tank shall be determined by estimating the location of the tank and piping and adding a safety area approximately four feet wide to assure that the drill rig does not hit the tank or piping.

E. If ground water is found in the boring, water samples should be taken and analyzed for contamination.

F. If soil contamination is confirmed, work shall be halted and AT&T shall be contacted immediately.

## 2.03 REMOVAL OF TANKS

A. The procedures outlined below should be followed, along with those required by applicable state and local regulations.

B. Fuel shall be removed from the site by a Certified hauler. A certificate of removal shall be provided for the product. All product shall be removed from the tank. Excavate to top of tank. Drain and flush all piping into the tank. Disconnect all piping and cap at both ends, remove from the site and properly dispose of.

C. All sludge should be removed from the bottom of the tank, stored in suitable containers, and disposed of properly. The sludge shall be removed by a Certified hauler. A vacuum truck shall be used to remove sludge and cleaning residue from the tank.

D. The tank shall then be purged of product vapors by forcing inert gas (carbon dioxide or nitrogen) through the tank or by adding carbon dioxide (dry ice) in the amount of 1.5 pounds per 100 gallons of tank capacity. Inert gas should be introduced near the bottom of the tank at the opposite end of the tank from the vent.

E. Care must be taken to avoid pressurizing the tank or causing a static charge build-up in the system resulting in a possible discharge and explosion. Gas should be introduced under low pressure (maximum 5 psig). An explosimeter shall be used to monitor the level of explosive vapors to ensure safe levels throughout the operation. All meters shall be routinely calibrated per manufacturer's instructions prior to use on the jobsite.

F. Clean the tank using a triple rinse or other method approved by AT&T and the authorities having jurisdiction. The cleaning shall be accomplished prior to removal from the site. Use a liquid appropriate for the contents of the tank. A vacuum truck shall be used to remove residue and rinse products from the tank. All residue and rinse products should be disposed of at an AT&T approved disposal site.

G. Temporarily plug all tank openings, complete the excavation and remove the tank, placing it in a secure location, blocking the tank to prevent movement.

H. Before the tank is removed from the site it must be cut in half. Once the tank has been removed, cleaned and cut, the tank shall be disposed of as scrap metal or landfilled. Take proper precautions in cutting the tank to prevent explosion during the process.

I. A Certificate of Disposal must be required from the receiving party. This document should detail the method and location of the destruction and disposal of the tank. A Certificate of Disposal must be provided to AT&T. Tanks may not be sold for reuse.

2.04 POST-REMOVAL SOILS TESTING

A. Analytical soils reports shall be obtained for the site of each removed tank. These reports will document that the site is free from contamination from the removed tank system. Soil samples will be taken by the Independent Environmental Firm. The cost of testing will be paid by the testing firm. The Contractor shall assist the firm in taking the samples.

B. After the tank is removed and before any backfill is placed, soil samples shall be taken one to two feet below the tank excavation in the suspected worst case locations. These include the areas with the highest readings on vapor monitoring equipment, areas around the tank or piping location which appear to be stained or discolored, the lowest points of the tank, and the points where the piping connected to the tank. A minimum of four samples should be taken, one at each corner of the tank excavation. Water samples should also be taken if the ground water is above the level of the bottom of the original excavation.

C. Soil sample should be taken where possible from undisturbed soil, such as at the bottom of the excavation. Care should be taken to ensure the safety of personnel when samples are taken.

D. A portable lab should be used to analyze the soil samples on site or a preliminary field screening test should be used to confirm the absence of contamination before the site is backfilled. The field screening does not replace the laboratory soils reports.

E. When the soil samples are transported to a laboratory, chain of custody procedures should be followed to ensure the validity of the samples in the event of a legal challenge.

F. The soils reports indicating that the site is free from contamination shall be provided to AT&T. Samples shall be tested for, as a minimum, BTEX and TPH.

G. If significant contamination is found, do not backfill the site. Contact AT&T for direction. The excavation shall be covered with an impermeable material such as plastic and cordoned off to prevent access until a remediation plan can be approved. Provisions such as diking or temporary backfilling may be required to prevent entry of surface or ground water into the excavation.

H. Minor contamination shall be removed before samples are taken. The contaminated soil can be spread on plastic sheeting and aerated on site if permitted by the local authorities or can be transported in barrels to an AT&T approved disposal site.

2.05 BACKFILLING

A. All imported backfill materials must be analyzed for VOC's and petroleum hydrocarbons to prevent contamination of the site. Documentation of the methods and results of the analysis shall be provided to AT&T.

B. Backfill materials should not be significantly different from the background soils. Backfill shall be placed in 6" layers and compacted to at least 95% of the standard proctor maximum dry density (ADTM D698).

C. The top 12" of the excavation shall be finished to match the adjacent areas. The final 12" shall be backfilled with topsoil and reseeded in grassed areas. Paved or graveled areas shall be repaved to match the adjacent paving.

D. The entire work area shall be cleaned of debris.

2.06 SUMMARY OF DOCUMENTATION: See Section 01310.

END OF SECTION 15620

SECTION 4

STATE FORM

(Johnson Spellman & Associates)

# GW/UST-2 Site Investigation Report For Permanent Closure or Change-in-Service of U.S.T.

FOR TANKS IN NC

**Return Completed Form To:**
The appropriate DEM Regional Office according to the county of the facility's location. [SEE MAP ON REVERSE SIDE OF OWNER'S COPY (PINK) FOR REGIONAL OFFICE ADDRESS].

State Use Only
I.D. Number _____
Date Received _____

**INSTRUCTIONS**

Complete and return within (30) days following completion of site investigation.

## I. Ownership of Tank(s)

Owner Name: AT&T COMMUNICATIONS, INC.
(Corporation, Individual, Public Agency, or Other Entity)
Street Address: 1200 PEACHTREE ST. PROMENADE II
County: FULTON
City: ATLANTA State: GA Zip Code: 30309
Telephone Number: ( 404 ) 810-4505
(Area Code)

## II. Location of Tank(s)

Facility Name: SILK HOPE RADIO RELAY STATION (NC2150)
(or Company)
Facility ID # (if available): 0-024105
Street Address SR 2352 (CLARK RD)
(or State Road)
County: CHATHAM City: SILK HOPE Zip Code:
Telephone Number: ( )
(Area Code)

## III. Contact Person

Name: LARRY MCKELVY Job Title: SUPERVISOR - BUILDING & CONSTR. Tel. No.: (404) 810-4505
Closure Contractor: UNGER CONSTRUCTION Co. Address: 7210 OLD TAFT RD.; MUSKOGEE OK 74401 Tel. No.: 918-683-5028
Primary Consultant: JOHNSON, SPELLMAN & ASSOC Address: 6991 PEACHTREE IND. BLVD. Tel. No.: (770) 447-4555
Soil: HYDROLOGIC, INC. Address: 2500 GATEWAY CENTRE BLVD; MORRISVILLE, NC Tel. No.: 919-460-8093

## IV. U.S.T. Information / V. Excavation Condition

| Tank No. | Size in Gallons | Tank Dimensions | Last Contents | Water in Excavation Yes | Water in Excavation No | Free Product Yes | Free Product No | Notable Odor or Visible Soil Contamination Yes | Notable Odor or Visible Soil Contamination No |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 560 | 48" x 64" | DIESEL | X | | | X | X | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

## VI. Additional Information Required

See reverse side of pink copy (owner's copy) for additional information required by N.C. - DEM in the written report and sketch.

NOTE: The site assessment portion of the tank closure must be conducted under the supervision of a Professional Engineer or Licensed Geologist. After Jan.1, 1994, all closure site assessment reports must be signed and sealed by a P.E. or L.G.

## VII. Check List (Check the activities completed)

PERMANENT CLOSURE (For Removing or Abandoning-in-place)

- [X] Contact local fire marshal.
- [X] Notify DEM Regional Office before abandonment.
- [X] Drain & flush piping into tank.
- [X] Remove all product and residuals from tank.
- [X] Excavate down to tank.
- [X] Clean and inspect tank.
- [X] Remove drop tube, fill pipe, gauge pipe, vapor recovery tank connections, submersible pumps and other tank fixtures.
- [X] Cap or plug all lines except the vent and fill lines.
- [X] Purge tank of all product & flammable vapors.
- [X] Cut one or more large holes in the tanks.
- [X] Backfill the area.

Date Tank(s) Permanently closed: 9-13-96
Date of Change-in-Service: _____

ABANDONMENT IN PLACE

- [ ] Fill tank until material overflows tank opening.
- [ ] Plug or cap all openings.
- [ ] Disconnect and cap or remove vent line.
- [ ] Solid inert material used - specify: _____

REMOVAL

- [X] Create vent hole.
- [X] Label tank.
- [X] Dispose of tank in approved manner.

Final tank destination: MMM, INC. OF LAGRANGE, NC

## VIII. Certification (Read and Sign)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

| Print name and official title of owner or owner's authorized representative | Signature | Date Signed |
|---|---|---|
| LARRY MCKELVY - SUPERVISOR - BUILDING & CONSTRUCTION | Gene McKelvy | 3-23-98 |

**ENVIRONMENTAL CONSULTANT'S DATA**

Underground Fuel Tank Replacement
AT&T RADIO RELAY STATION
Silk Hope, North Carolina

ENVIRONMENTAL ENGINEERS

TRC Environmental Corporation
6340 Quadrangle Drive, Suite 200
Chapel Hill, NC 27514
(919) 419-7500

**TRC Environmental Corporation**

6340 Quadrangle Drive, Suite 200
Chapel Hill, North Carolina 27514
Telephone 919-419-7500
Facsimile 919-419-7501

April 10, 1997

Mr. Ron Baxley, Building Engineer
AT&T NSTAP
C/O Hanson Engineers Incorporated
47 Perimeter Center East, Suite 280
Atlanta, Georgia 30346

Subject: Submittal of AT&T Underground Storage Tank Final Closure Report on Silk Hope, North Carolina Site: TRC Project # 21284-0030-00005

Dear Mr. Baxley:

We are in receipt of your written confirmation dated March 31, 1997 which acknowledges completion of AT&T's review of our draft reports submitted in December 1996 on each of the sites referenced above. This authorization directs TRC Environmental Corporation (TRC) to prepare the final closure reports on the referenced sites. In accordance with our proposal dated July 3, 1996, enclosed are three final copies of each report for use by AT&T, and one additional copy for submittal to the North Carolina Division of Water Quality (previously called the Division of Environmental Management). Based on instructions given to us during our conference call with you and Mr. Ferguson on February 28, 1997 it is our understanding that AT&T/Hanson will forward one copy of each report to the DWQ. A supplemental appendix is included at the end of this report pertaining to the additional efforts performed at the Silk Hope site related to installation and sampling of the ground water monitoring well.

Please call me at (919) 419-7578 if you have any questions or comments.

Sincerely,

Michael L. Babuin, P.G.
Solid & Hazardous Waste Program Manager

NORTH CAROLINA LICENSED SEAL 651 GEOLOGIST MICHAEL L. BABUIN
4/10/97

Attachments
j:\projects\at&t\ncust\nc11sites\fin2.ltr

cc: Tom Barbee

## TABLE OF CONTENTS



## LIST OF APPENDICES

**Appendix**

## LIST OF TABLES



## LIST OF FIGURES

# I. GENERAL INFORMATION

## A. Ownership of UST(s)

### 1. Name of UST Owner:

*AT&T Communications, Inc.*

### 2. Owner address and telephone number:

*1200 Peachtree Street, Promenade II*
*Atlanta, Georgia 30309*
*(404) 810-4505*

## B. Facility Information

### 1. Facility Name:

*Silk Hope Radio Relay Station*

### 2. Facility ID #:

*0-024105*

### 3. Facility address, telephone number and county:

*SR 2352 (Clark Road)*
*Silk Hope, North Carolina*
*Chatham County (Figure 1)*
*Telephone - Unknown/Unavailable*

## C. Contacts

### 1. Name, address/telephone number/job title of primary contact person:

*Mr. Larry McKelvey*
*1200 Peachtree Street, Promenade II, 7S12*
*Atlanta, Georgia 30309*
*(404) 810-4505*

### 2. Name, address and telephone number of closure contractor:

*Unger Construction Company*
*7210 Old Taft Road*
*Muskogee, Oklahoma 74401*
*(918) 683-5028*
*(918) 683-8761 Fax*

3. **Name/address/telephone number of primary environmental consultant:**

*TRC Environmental Corporation*
*6340 Quadrangle Drive, Suite 200*
*Chapel Hill, North Carolina 27514*
*(919) 419-7500*
*(919) 419-7501 Fax*

4. **Name, address, telephone number, and State certification number of laboratory:**

*HydroLogic, Inc.*
*2500 Gateway Centre Boulevard, Suite 900*
*Morrisville, North Carolina 27560*
*(919) 380-9699*
*(919) 380-9717 Fax*
*N.C. Certification Numbers - Drinking Water 47, Wastewater 399*

## D. UST Information

**TABLE 1. CHARACTERISTICS OF OLD TANK**

| Tank Number | Installation Dates | Size in Gallons | Tank Dimensions | Last Contents | Previous Contents (if any) |
|---|---|---|---|---|---|
| *1* | *1989* | *560* | *48" x 64"* | *Diesel* | *n/a* |

## E. Site Characteristics

1. **Describe any past releases at the site:**

*There are no known releases at the site from the tank system. In 1989, a previous UST was removed from the site. Reportedly, the former tank was removed because water regularly collected in the tank. The former tank was reportedly located in the same approximate location as the tank that is the subject of this report.*

2. **Is the facility active or inactive at this time? If the facility is inactive note the last time the USTs were in operation.**

*The facility is currently active.*

3. **Describe surrounding property use (for example, residential, commercial, farming, etc.):**

*North:* *The property is bordered to the north by S.R. 2352. Wooded undeveloped property is located north of the road.*

*East:* *Properties to the east of the site are open, grassed fields.*

*South:* *Properties to the south of the site are open, grassed fields.*

*West:* *Properties to the west of the site are open, grassed fields.*

4. **Describe site geology/hydrogeology:**

*The Silk Hope site is located in the Piedmont Physiographic Province of North Carolina as observed from a review of the Geologic Map of North Carolina and is underlain by felsic metavolcanic rock. Soils in the trench consisted of greenish-grey silts and clays to about six feet. What appeared to be shallow ground water was encountered approximately six feet below ground surface.*

## II. CLOSURE PROCEDURES

**A. Describe preparations for closure including the steps taken to notify authorities, permits obtained and the steps taken to clean and purge the tanks:**

*Prior to closure, the closure contractor submitted form GW/UST-3 to the Raleigh Regional Office of the North Carolina Department of Environment, Health and Natural Resources (DEHNR). A copy of GW/UST-3 is included in Appendix A.*

*Residual fuel was removed from the tank. Immediately prior to implementation of excavation, vapors within the tank were checked for oxygen content and lower explosive limit (LEL). Based on results of this evaluation, no purging of tank vapors was deemed necessary.*

**B. Note the amount of residual material pumped from the tank(s):**

*It is reported that approximately 377 gallons of diesel fuel were pumped from the 560 gallon tank prior to the removal off-site.*

**C. Describe the storage, sampling, and disposal of the residual material:**

*Residual fuel was pumped into a tanker truck and transported off-site by S&H Oil Company Inc., of Siler City, North Carolina. The fuel was reportedly transported to a large quantity bulk storage tank located at the S&H facility for temporary storage until it could be subsequently sold for recycling purposes*

*or allocated for commercial use once the bulk tank is filled. A waste fuel manifest is included as Appendix C.*

**D. Excavation**

**1. Describe excavation procedures noting the condition of the soils and the dimensions of the excavation in relation to the tanks, piping, and/or pumps:**

*Excavation was conducted using a John Deere 310-D backhoe. Soils in the excavation were characterized as gray-brown silts and clays from the surface to a depth of approximately six feet. Gray felsic metavolcanic rock was encountered below a depth of six feet. Following removal of the tank, piping, and other equipment associated with the UST, the excavation was roughly circular in shape with a diameter of approximately 13 feet, 16 feet long, eight feet deep, generally centered around the UST.*

**2. Note the depth of tank burial(s) (from land surface to top of tank):**

*The top of the tank was buried approximately 4' 6" below the surface.*

**3. Quantity of soil removed:**

*In order to remove the tank, approximately 40 yds$^3$ of soil were removed from above and along side of the UST. Staining of the soils was observed in several localities, and the soil was field screened with an OVA. The OVA displayed readings above background levels in several samples (see Table 2).*

**4. Describe soil type(s):**

*Soils are described in Section D. 1. above.*

**5. Type and source of backfill used:**

*Approximately 40 yds$^3$ of soil excavated from above and along side of the UST was spread out along the surface of the ground adjacent to the excavation pit. Approximately 45 yds$^3$ of crusher-run gravel was used to bring the excavation up to grade.*

**E. Contaminated Soil**

**1. Describe how the extent of soil excavation was determined:**

*Other than the soil excavated to remove the UST, no additional soil was removed from the excavation. However, excessive water in the soils surrounding the UST caused the soils to cave in extensively; therefore, more*

*soils than normal were removed during the UST removal process. Observations coupled with OVA field testing assisted in this determination.*

2. **Describe method of temporary storage, sampling, and treatment/disposal of soil:**

*Soils collected from beneath the fuel lines were collected by a decontaminated stainless steel hand spade and placed into a glass sample container prior to performance of sample labeling and storage on ice. Soils collected from beneath the corners of the excavation pit were accessed by the bucket on the front-end loader. Samples within the bucket were collected by hand with a stainless steel hand-spade as described above.*

*Soils excavated and collected via the front-end loader were temporarily stored on-site and placed on plastic sheeting. Stockpiled soils were spread on-site, fertilized, seeded, and covered with straw.*

## III. SITE INVESTIGATION

**A. Provide information on field screening and observations, include methods used to calibrate field screening instrument(s):**

*Soil samples from the excavation were evaluated to identify the presence and/or absence of petroleum products using a combination of field head-space screening with an OVA and confirmatory laboratory analyses.*

*The samples were field-screened using a head-space method modified from a procedure described by Robbins and others (1989). The head-space method involves placing a measured amount of a representative soil sample in a zip-lock plastic bag and then inflating the bag with air. After a five-minute waiting period at an ambient temperature greater than 70° F, as necessary in order to allow volatile organic compounds to vaporize into the head space of the bag, a Foxboro Model 128 organic vapor analyzer (OVA) was used to analyze the air within the bag for the presence of compounds that were within the detection limits of the OVA. Results of field screening of soils are included in Table 2.*

*Prior to implementation of field screening, the OVA 128 was calibrated using 10 and 100 ppm span gases.*

**B. Describe soil sampling points and sampling procedures used:**

*The sampling locations are shown on Figure 2. Table 2 provides information relative to the sample identification and depth of sample below the ground surface, sampling location, sampling method, field-screening results, analyses conducted, and results.*

## TABLE 2. SAMPLE CHARACTERISTICS AND RESULTS

| Sample I.D. and Depth (Below Ground Surface) | Sample Location | Sampling Method | Field Screening Results (ppm) | Method 8015M High Fraction (mg/kg) | Method 8015M Low Fraction (mg/kg) |
|---|---|---|---|---|---|
| *AT&T SILK-1 n/a* | *Sample of Excavated Soils* | *Grab* | *150* | *53.7* | *<2.0* |
| *AT&T SILK-2 6'* | *Excavation Floor Northwest Corner* | *Grab* | *80* | *<10.0* | *<2.0* |
| *AT&T SILK-3 6'* | *Excavation Floor Northeast Corner* | *Grab* | *200* | *<10.0* | *<2.0* |
| *AT&T SILK-4 6'* | *Excavation Floor Southeast Corner* | *Grab* | *300* | *<10.0* | *<2.0* |
| *AT&T SILK-5 6'* | *Excavation Floor Southwest Corner* | *Grab* | *250* | *34.8* | *<2.0* |
| *AT&T SILK-6 Stockpile* | *Sample of Excavated Soils* | *Composite* | *n/a* | *<10.0* | *<2.0* |
| *AT&T SILK-7 2'* | *20' Lateral Line Sample* | *Grab* | *230* | *52.8* | *<2.0* |
| *AT&T SILK-8 2'* | *10' Lateral Line Sample* | *Grab* | *115* | *27.9* | *<2.0* |
| *AT&T SILK-9 2'* | *Confirmatory Sample of AT&T SILK-8* | *Grab* | *n/a* | *261* | *<2.0* |

**C. Describe ground water or surface water sampling procedures used**

*Shallow ground water was encountered during the tank removal at approximately six feet below ground surface. A water sample was collected in a large stainless-steel bowl directly from the excavation.*

*The ground water sample was analyzed for benzene, toluene, ethylbenzene and total xylenes using EPA Method 602 and semi-volatile compounds (base/neutral) using*

*EPA Method 8270, including evaluation of tentatively identified compounds (TICs). Table 3 lists the compounds identified in the sample as well as established standards.*

**TABLE 3. GROUND WATER SAMPLING RESULTS**

| *Method/Compound* | *DEHNR 2L Standard (ug/L)* | *Concentration (ug/L)* |
|---|---|---|
| *EPA Method 602* | | |
| *Toluene* | *1000* | *1.12* |
| *Ethylbenzene* | *29* | *7.81* |
| *Xylenes (Total)* | *530* | *6.45* |
| *EPA Method 8270* | | |
| *2-Methylnaphthalene* | - | *28.4* |
| *1H-Idene, 1-Ethylidene (TIC)* | - | *50.0* |
| *Napthalene, 1,8-Dimethyl (TIC)* | - | *96.0* |
| *Heptadecane, 2,6-Dimethyl (TIC)* | - | *27.0* |

## D. Quality control measures

- Describe sample handling procedures including sample preservation and transportation:

*Samples were collected in accordance with DEHNR and EPA procedures. To summarize these procedures, samples were collected via hand-spade for the fuel line samples following the any pre-requisite digging via a shovel or front- end loader as needed to access the specific sample location beneath the fuel lines. Grab samples such as those collected in the pit at the four corners beneath the old tank, were accessed by the bucket of the front-end loader and specific samples were collected via a hand-spade and subsequently placed in glass containers. Composite samples were also accessed by the front-end loader bucket and subsequently collected by a decontaminated hand-spade, placed in a decontaminated stainless steel mixing bowl, and homogenized prior to placement in the sample containers. Sample labels were completed at the time of sampling and affixed to each container to identify the sample number, collector's name, date, and time of collection, location of sampling point, and requested analysis.*

*A chain-of-custody record (COC) was completed and accompanied each shipping cooler to provide documentation and to trace sample possession (see Appendix D). After the sample bottles for a given sample site were filled, they were placed in a*

*shipping cooler and covered with ice packs or crushed ice contained in plastic bags. Each sample container was cushioned and sealed in a cooler container for hand delivery to the laboratory.*

*All information pertinent to sampling (including field-instrument calibration data) was recorded in a field log book, with consecutively numbered pages.*

*Entries in the project log book were made in ink and included, as a minimum, a description of all activities, individuals involved, date and time of sampling, weather conditions, any problems, and all field measurements.*

- Decontamination procedures:

*Equipment used for sampling was decontaminated prior to use at the site. Smaller equipment such as stainless steel or teflon spatulas and spoons, stainless steel mixing pans, and other implements that come into contact with samples were decontaminated prior to use at each sampling location using the following procedure:*

*Step 1 —* *Wash and scrub with low phosphate detergent in tap water*

*Step 2 —* *Rinse with tap water*

*Step 3 —* *Rinse with acetone*

*Step 4 —* *Rinse with distilled water*

*Step 5 —* *Air-dry on clean polyethylene sheeting*

*Step 6 —* *Wrap in aluminum foil, shiny side out for transport to sampling location, as needed*

- Describe time and date samples were collected and date submitted to lab:

*As shown on the attached COC, all of the soil samples were collected on September 13, 1996. The samples were stored in an iced cooler immediately following collection and maintained in this fashion until they were submitted to the laboratory. The samples were delivered to Hydrologic Laboratories on Monday September 16, 1996 by Mr. Larry Daw/TRC where they were received by Mr.C.W. Sweatman/Hydrologic Laboratories at 5:30 pm.*

- Describe samples collected for quality control purposes:

*One confirmatory sample was collected for quality control purposes. The sample, AT&T SILK-9, was a confirmation of sample AT&T SILK-8. Soil for the sample was collected and placed in a glass sample jar.*

- Discuss how results of quality control samples may have affected the interpretation of soil, ground water, or surface water sample results:

*Confirmatory soil samples analyzed obtained dissimilar results (i.e., 27.9 ppm high fraction in AT&T-SILK-8 and 261 ppm high fraction in AT&T-SILK-9). This sample displayed a very dense composition with a high clay content, thus the difference in these results is likely due to insufficient mixing prior to sample splitting. These results do not significantly affect interpretation of other soil samples collected. No quality control samples were collected for water analyses. Analytical results for samples collected and subsequently transported to the analytical laboratory are shown in Appendix E.*

## E. Investigation Results

- Describe results of Site Sensitivity Evaluation (SSE)

*The site met the criteria for performance of a Site Sensitivity Evaluation (SSE) as defined in Section 6.0 of the North Carolina Groundwater Section's Guidelines for the Investigation and Remediation of Soils and Groundwater. Results of the SSE suggest that the site is classified as a Category B site. The total Site Characteristics Score for this site was 100 yielding a low boiling point (gasoline) cleanup level of 40 ppm and a high boiling point clean-up level of 160 ppm (Appendix F).*

- Describe methods of analyses used (include U.S. EPA method number)

*As shown on Table 2 and the laboratory data sheets included in Appendix E, soils samples collected from the site were analyzed for total petroleum hydrocarbon using EPA Method 8015M. Sample preparation used California Method 5030 for low boiling point fuels and California Method 3550 for high boiling point fuels. Ground water samples were analyzed for BTEX using EPA Method 602 and semi-volatile compounds (base/neutral) using EPA Method 8270, including TICs.*

- Describe analytical results for samples; discuss in relation to site specific cleanup levels or action level, as appropriate:

*As shown in Table 2, nine soil samples were collected at the site. Four soil samples were collected within the tank excavation area. Two additional samples (and one confirmatory sample) were collected along the fuel supply/return line routes, and two samples of excavated soils were collected.*

*None of the soil samples contained concentrations of low fraction parameters above detection limits. Several samples including: AT&T-SILK-1; AT&T-SILK-5; AT&T-SILK-7, AT&T-SILK-8, and AT&T-SILK-9 contained concentrations of high fraction parameters above detection limits (see Table 2). Of these, AT&T-SILK-9 displayed the highest concentrations at 261 ppm. This result was discounted*

*however due to potential laboratory errors or, very localized "micro-variances" within the confines of the hand-spade sample used to collect the grab sample.*

*In comparing the analytical results to the SSE clean-up levels required by the North Carolina Groundwater Section's Guidelines for the Investigation and Remediation of Soils and Groundwater, it appears that one sample (AT&T-SILK-9) a confirmatory sample of AT&T-SILK-8, displayed concentrations of high fraction constituents which are in excess of the SSE specific clean-up levels (i.e., 160 ppm). AT&T-SILK-8, a confirmatory sample which was collected in the same general location, contained lower concentrations well beneath the designated SSE clean-up level.*

*The water sample collected from the excavation contained toluene, ethylbenzene, xylenes, and several semi-volatile compounds above the laboratory detection limits. None of the concentrations of compounds identified in the ground water sample exceeded established 2L Standards.*

## IV. CONCLUSIONS AND RECOMMENDATIONS

*The results of this investigation identified petroleum contamination at the site in several soil samples as well as in a shallow ground water sample. Soil samples were collected in the areas most likely to have petroleum contamination (i.e., below the tank and directly below the supply lines) and as a result, the sampling confirmed an apparent release.*

*As referenced, there was evidence that suggests ground water may be impacted by petroleum. Additional investigation and/or remediation is recommended at the site to: (1) better define the nature of the shallow ground water; (2) define the potential vertical and lateral extent of contamination, and; (3) to implement corrective measures, as needed. TRC recommends that a copy of this report be forwarded to the Raleigh Regional Office** of the DEHNR for their review.*

*** Although the site is located within the Winston-Salem Regional District the Raleigh Regional Office was initially contacted by Johnson, Spellman & Associates, Inc., prior to commencement of the project for required State notification requirements. Based on discussions with the RRO, and for continuity, it was suggested that TRC continue to forward correspondence to the office which initiated the documentation.*

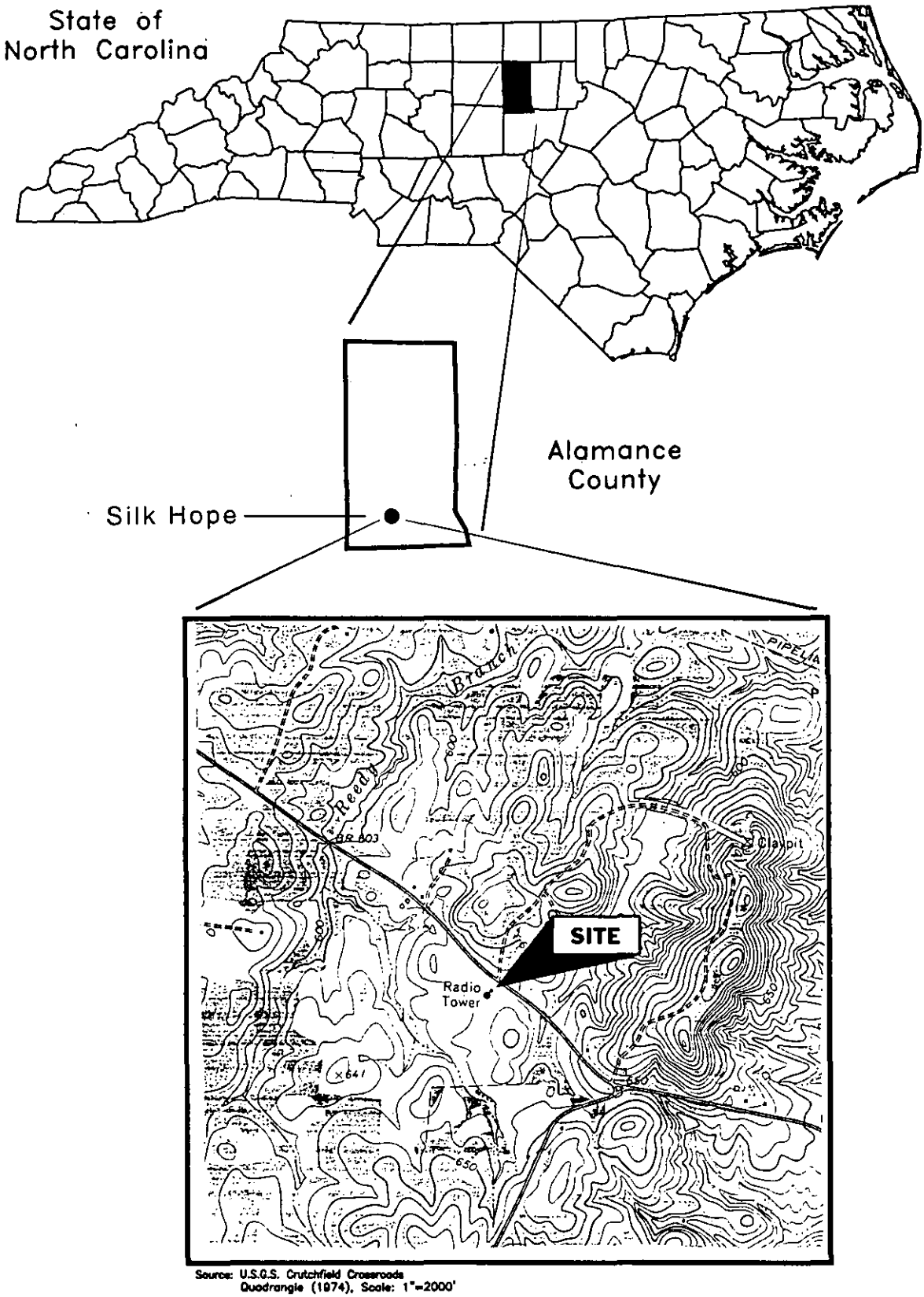
## V. SIGNATURE OF LICENSED PROFESSIONAL GEOLOGIST OR PROFESSIONAL ENGINEER

☒ Professional Geologist License #: M.J. Babuin

☐ Professional Engineer Registration #:

*M.L. Babuin, P.G.*
*North Carolina License No. 651*
*AIPG Certified Professional Geologist No. 9295*

NORTH CAROLINA LICENSED SEAL 651 12/17/96 GEOLOGIST MICHAEL L BABUIN




Source: U.S.G.S. Crutchfield Crossroads
Quadrangle (1974), Scale: 1"=2000'

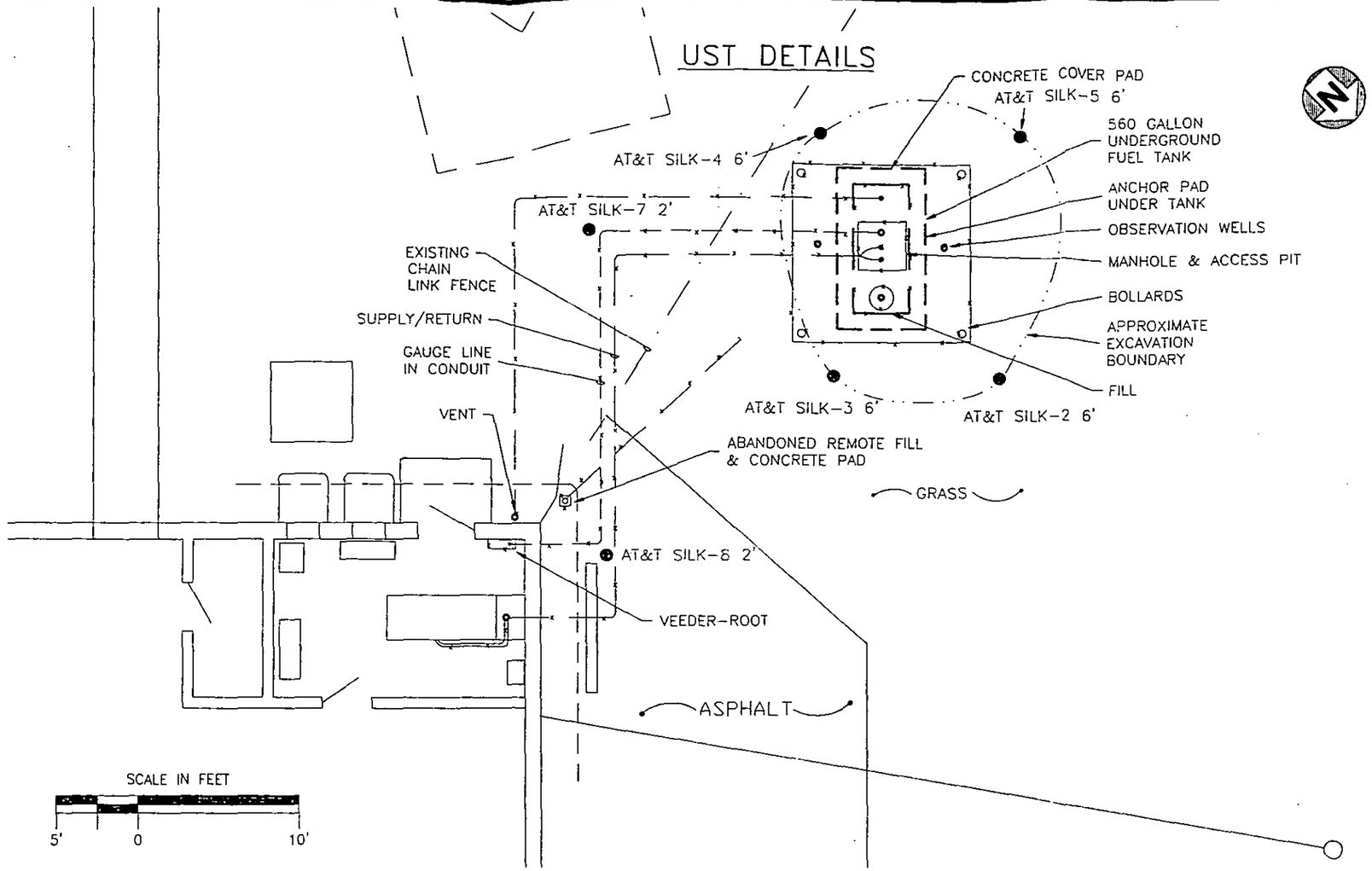
TRC Environmental Corporation

6340 Quadrangle Drive, Suite 200
Chapel Hill, NC 27514
Telephone 919-419-7500
Facsimile 919-419-7501

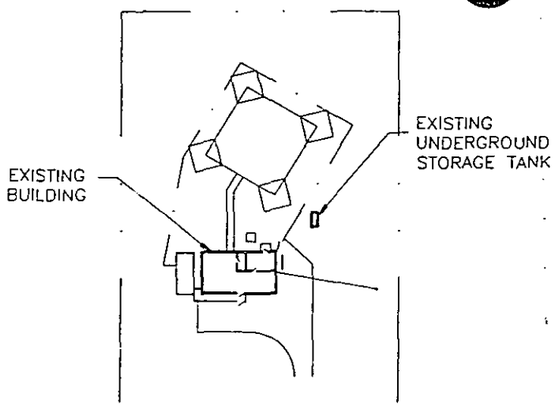
Figure 1
SITE LOCATION

| | | | |
|---|---|---|---|
| A T & T Communications, Inc.<br>Silk Hope, North Carolina | Drawn: B. Newman<br>Date: 10-18-96 | Project No. 21284-0030-00005<br>Drawing No. V60016A | Rev.<br>0 |

## UST DETAILS




## SITE PLAN




SCALE IN FEET

5' 0 10'

TRC Environmental Corporation

6340 Quadrangle Drive, Suite 200
Chapel Hill, NC 27514
(919) 419-7500

Figure 2

SITE DETAILS

A T & T Communications, Inc.
Silk Hope, NC

| Project Manager: | Project Number: | | Initial Release Date: |
|---|---|---|---|
| Mike Babuin | 21284-0030-00005 | | 10/96 |
| Designed by: MB | Drawn by: B.L.Newman | Checked by: MB | Drawing Number: A60054B | Rev 0 |

# Appendix A

# Notification of Intent to Close (GW/UST-3)

# GW/UST-3 Notice of Intent: UST Permanent Closure or Change-In-Service

FOR TANKS IN NC

**Return Completed Form To:**
The appropriate DEM Regional Office according to the county of the facility's location. [SEE REVERSE SIDE OF OWNER'S COPY (PINK) FOR REGIONAL OFFICE ADDRESS].

State Use Only
I. D. Number _____
Date Received _____

**INSTRUCTIONS**
Complete and return five (5) working days prior to closure or change-in-service.

## I. OWNERSHIP OF TANK(S)

Tank Owner Name: AT&T Communications, Inc.
(Corporation, Individual, Public Agency, or Other Entity)
Street Address: 1200 Peachtree, PromenadeII
County: Fulton
City: Atlanta State: GA Zip Code: 30309
Tele. No. (Area Code): 404-810-4505

## II. LOCATION OF TANK(S)

Facility Name or Company: SILK HOPE RADIO RELAY STATION
Facility ID # (if available): 0-024105
Street Address or State Road: S.R. 2352
County: CHATHAM City: SILK HOPE Zip Code: _____
Tele. No. (Area Code): 404-810-4505

## III. CONTACT PERSON

Name: Larry McKelvy Job Title: Supervisor-Bldg. Telephone Number: ( 404 ) 810-4505

## IV. TANK REMOVAL, CLOSURE IN PLACE, CHANGE-IN-SERVICE

1. Contact Local Fire Marshall.
2. Plan the entire closure event.
3. Conduct Site Soil Assessments.
4. If Removing Tanks or Closing in Place refer to API Publications 2015 "Cleaning Petroleum Storage Tanks" & 1604 "Removal & Disposal of Used Underground Petroleum Storage Tanks".
5. Provide a sketch locating piping, tanks and soil sampling locations.
6. Fill out form GW/UST-2 "Site Investigation Report for Permanent Closure" and return within 30 days following the site investigation.
7. The site assessment portion of the tank closure must be conducted under the supervision of a Professional Engineer or Licensed Geologist. After January 1, 1994, all closure site assessment reports must be signed and sealed by a P.E. or L.G.
8. Keep closure records for 3 years.

## V. WORK TO BE PERFORMED BY:

(Contractor) Name: Unger Construction, Co.
Address: 7210 Old Taft Rd. State: Oklahoma Zip Code: 74402
Contact: Greg Adkins Phone: 918-683-5028
Primary Consultant: Johnson, Spellman & Assoc. Phone: 770-447-4555

## VI. TANK(S) SCHEDULED FOR CLOSURE OR CHANGE-IN-SERVICE

| TANK ID# | TANK CAPACITY | LAST CONTENTS | PROPOSED ACTIVITY: CLOSURE – Removal | CLOSURE – Abandonment In Place | CHANGE-IN-SERVICE – New Contents Stored |
|---|---|---|---|---|---|
| 1 | 560 | DIESEL | X | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

## VII. OWNER OR OWNER'S AUTHORIZED REPRESENTATIVE

Print name and official title
Larry E. McKelvey - Supervisor Building Engineering Scheduled Removal Date: 08/20/96
Signature: Larry E McKelvy Date Submitted: 7-29-96

If scheduled work date changes, notify your appropriate DEM Regional Office 48 hours prior to originally scheduled date.

GW/UST-3 (Rev. 05/94) White Copy - Regional Office Yellow Copy - Central Office Pink Copy - Owner

# Appendix B

# Site Investigation Report for Permanent Closure or Change-in-Service of UST (GW/UST-2)

Not Provided or Included

# Appendix C

# Soil, Water, and Sludge Disposal Manifests

S&H OIL COMPANY, INC.
119 A West Dolphin St.
Siler City, N.C. 27344
742-4165
"You Ring — We Bring"

Mr. or Mrs. _____

Address _____

**This Is The Only Itemized Statement You Will Receive**

**Our charge sale terms will be Net, payable thirty days from date of purchase. Charges over thirty days old will be subject to a service charge of 1½% interest per month, which is an ANNUAL INTEREST RATE OF EIGHTEEN (18) percent.**

| OPERATOR | | | TRUCK NO. | TIME |
|---|---|---|---|---|
| J | Cash | | | A.M. |
| | Charge | | | P.M. |

GALLONS DELIVERED →

KEROSENE ☐ FUEL OIL NO. ____ ☐

| PREVIOUS SALE NO. | CODE | GALLON READING—START |
|---|---|---|
| THIS PRODUCT IS DYED DIESEL FUEL | | |
| PENALTY FOR TAXABLE USE | | |
| YOUR SALE NO. | | GALLON READING—FINISH |

CUSTOMER SIGNATURE

Date 9-12 19 96

INVOICE NO. → 34302

| | |
|---|---|
| GALS. READING — START | 000000.0 |
| GALS. READING — FINISH | 000376.7 |
| SALES SEQUENCE NUMBER | 00000001 |
| PRICE PER GALLON — CENTS | 000000.0 |
| PRODUCT COST | 00000.00 |
| TAX | 00000.00 |
| TOTAL PRICE | 00000.00 |

FORM MID COM 3

# Appendix D

# Chain-of-Custody Records

# HYDROLOGIC, INC.

*Chain of Custody Record*

Page 1 of 2

96-2884


☐ 122 Lyman Street, Asheville, NC 28801, (704)254-5169, FAX (704) 252-9711
☐ 410 New Salem Highway #106, Murfreesboro, TN 37129, (615) 848-6810, FAX (615) 848-6805
☐ 1491 Twilight Trail, Frankfort, KY 40601, (502) 223-0251, FAX (502) 875-8016
☐ 2003 North Pine Street, Lumberton, NC 28358, (910) 738-6190, FAX (910) 671-8837
☐ 263 Brandview Drive SE, Concord, NC 28025, (704) 786-3122, FAX (704) 786-2990
☒ Mc (91 FA #103


| | |
|---|---|
| Client: TRC Environmental Corp | Project No.: 21284-0030-00005 |
| Report Address: 6340 Quadrangle Dr, Suite 200 Chapel Hill NC 27514 | Invoice Address: Same |
| Attn: Larry Drew | Attn: |
| Phone No.: (919) 419-7583 | |
| Fax No.: (919) 419-7501 | P.O. Nr: |

**TURNAROUND TIME**

☐ 24 Hours ☐ 48 Hours Date Needed: _____

☒ 5 Days ☐ 10 Days ☐ Other _____

**REQUESTED I**

TPH (8030/3550)

FL96146611

**LAB CODE I.D.**

A = Asheville, NC
C = Concord, NC
D = Denver, CO
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Naples, FL
S = Subcontracted
T = Murfreesboro, TN

| Sample ID | Date | Time | Comp/ Grab | Matrix | Preserv. | Containers | | REMARKS |
|---|---|---|---|---|---|---|---|---|
| T&T-SILK-1 Dark Fill | 9-13-96 | 1245 | Grab | Soil | – | 1 | X | |
| T&T-SILK-2 5' | " | 1430 | " | " | – | 1 | X | |
| T&T-SILK-3 6' | " | 1440 | " | " | – | 1 | X | |
| T&T-SILK-4 6' | " | 1445 | " | " | – | 1 | X | |
| T&T-SILK-5 6' | | 1500 | " | " | – | 1 | X | |
| ~~T&T-SILK-6 6'~~ | | | | DUP | – | 1 | | |
| T&T-SILK-7 2' | | 1710 | " | " | – | 1 | X | |
| T&T-SILK-8 2' | | 1725 | " | " | – | 1 | X | |
| T&T-SILK-9 2' | | 1730 | " | " | – | 1 | X | |

Lab Use Only: Custody Seal ☐ Yes ☐ No ☐ N/A | Cooler Temp. | Init. Lab Temp. | Rec. Lab. Temp.

COMMENTS:

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| Relinquished By: | | | Received By: | 9-14-96 | 1215 |
| Relinquished By: | 9/16/96 | 5300 | Received By: | | |
| Relinquished By: | | | Received By: | | |
| Relinquished By: | | | Received By: | | |

Lab Use Only: Received Intact ☐ Yes ☐ No ☐ N/A | Cooler Temp. | Init. Lab Temp. | Rec. Lab. Temp.

P.01/04 919 380 9717 HYDROLOGIC-MORRISVILLE SEP-16-1996 19:19

*hain of Custody Record*

# HYDROLOGIC, INC.

96-2884

Page 2 of 2


☐ 122 Lynn Street, Asheville, NC 28801, (704)254-5169, FAX (704) 252-9711
☐ 410 New Salem Highway #106, Murfreesboro, TN 37129, (615) 848-6810, FAX (615) 848-6805
☐ 1491 Twilgis Trail, Frankfort, KY 40601, (502) 223-0251, FAX (502) 875-8046
☐ 2003 North Pine Street, Lumberton, NC 28358, (910) 738-6190, FAX (910) 671-8837
☐ 263 Branchview Drive SE, Concord, NC 28025, (704) 786-3322, FAX (704) 786-2999
☒ 2500 Gateway Centre, Morrisville, NC 27560, (919) 380-9699, FAX (919) 380-9717
☐ 4875 Riverside Drive, Macon, GA 31210, (912) 757-0811, FAX (912) 757-0149
☐ 2002 Trade Ctr Way #103, Naples, FL 33942, (813) 597-6050, FAX (813) 597-7056


| | |
|---|---|
| Client: TRC Environmental Corp. | Project No.: 21284-0030-00005 |
| Report Address: 6340 Quadrangle Dr. | Invoice Address: Same |
| Suite 200, Chapel Hill, NC 27514 | |
| Attn: Larry Daw | Attn: |
| Phone No.: (919) 484-7583 | |
| Fax No.: (919) 484-7501 | P.O. No: |

**TURNAROUND TIME**

☐ 24 Hours ☐ 48 Hours Date Needed: _____

☒ 5 Days ☐ 10 Days ☐ Other _____

**REQUESTED PARAMETERS**

**LAB CODE I.D.**
A = Asheville, NC
C = Concord, NC
D = Denver, CO
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Naples, FL
S = Subcontracted
T = Murfreesboro, TN

| Sample ID | Date | Time | Comp/ Grab | Matrix | Preserv. | Containers | TPH (5030/3550) | BTEX | 8240 (BW) + TICS | Lead (3050C) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TRT-SILK-Stock Pile | 9-13-96 | 1700 | Comp | Soil | - | 1 | X | | | | |
| TRT-SILK-water | " | 1505 | Grab | water | - | 6 | | X | X | X | |

Lab Use Only: Custody Seal Intact? Yes No N/A | Init. Lab Temp. | Rec. Lab Temp.

COMMENTS:

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| Relinquished By: Larry Daw | | | Received By: | 9/14 | 1211 |
| Relinquished By: | 9/16 | 1530 | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | Date | Time |

Lab Use Only

P.02/04 919 390 9717 HYDROLOGIC-MORRISVILLE SEP-16-1996 19:20

# Appendix E

# Laboratory Analytical Records

# HYDROLOGIC, INC.

September 20, 1996

**REPORTING:**

HydroLogic-Morris., Inc.
2500 Gateway Centre
Suite #900
Morrisville, NC 27560

**INVOICING:**

HydroLogic-Morris., Inc.
2500 Gateway Centre
Suite #900
Morrisville, NC 27560

**PROJECT NUMBER: FL9614611**

**DATE COMPLETED:** September 20, 1996
**DATE RECEIVED:** September 17, 1996

**PROJECT DESCRIPTION:**

**TRC Env. Corp./21284-0030-00005**-- 9 soil samples analyzed for TPH 3550/5030 and 1 water sample analyzed for 602 BTEX/8270BN + TIC.

Enclosed is the laboratory report for the project described above. If you have any questions or if we can be of further assistance, please feel free to **contact Beate Lynn at 1-800-728-2251.** We appreciate your business and look forward to serving you again soon.

Respectfully,

Walter Hogg
QA/QC Officer

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | HydroLogic-Morris., Inc. |
| COMPANY PROJECT NUMBER: | TRC Env. Corp 121284-0030-00005 |
| HYDROLOGIC PROJECT NUMBER: | FL9614611 |
| HYDROLOGIC LAB I.D.#: | 399 |
| HYDROLOGIC SAMPLE NUMBER: | 9614611 |
| SAMPLE IDENTIFICATION: | AT&T-SILK-1 |
| DATE SAMPLED: | 9/13/96 |
| DATE EXTRACTED: | 9/18/96 |
| DATE/TIME ANALYZED: | 9/18/96 9/18/96 |

**METHOD TPH 3550/5030**

| ANALYSIS | CAS NO. | SDL (mg/kg) | RESULT (mg/kg) |
|---|---|---|---|
| **Diesel** | | **10.0** | **53.7** |
| Surrogate Recoveries: Nonane | | | 73% |
| Gasoline | | 2.0 | BDL |
| Surrogate Recovery: BFB | | | 104% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | HydroLogic-Morris., Inc. |
| COMPANY PROJECT NUMBER: | TRC Env. Corp 121284-0030-00005 |
| HYDROLOGIC PROJECT NUMBER: | FL9614611 |
| HYDROLOGIC LAB I.D.#: | 399 |
| HYDROLOGIC SAMPLE NUMBER: | 9614612 |
| SAMPLE IDENTIFICATION: | AT&T-SILK-2 |
| DATE SAMPLED: | 9/13/96 |
| DATE EXTRACTED: | 9/18/96 |
| DATE/TIME ANALYZED: | 9/18/96 9/18/96 |

**METHOD TPH 3550/5030**

| ANALYSIS | CAS NO. | SDL (mg/kg) | RESULT (mg/kg) |
|---|---|---|---|
| Diesel | | 10.0 | BDL |
| Surrogate Recoveries: Nonane | | | 77% |
| Gasoline | | 2.0 | BDL |
| Surrogate Recovery: BFB | | | 101% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER: TRC Env. Corp 121284-0030-00005

HYDROLOGIC PROJECT NUMBER: FL9614611
HYDROLOGIC LAB I.D.#: 399
HYDROLOGIC SAMPLE NUMBER: 9614613
SAMPLE IDENTIFICATION: AT&T-SILK-3
DATE SAMPLED: 9/13/96
DATE EXTRACTED: 9/18/96
DATE/TIME ANALYZED: 9/18/96 9/18/96

**METHOD TPH 3550/5030**

| ANALYSIS | CAS NO. | SDL (mg/kg) | RESULT (mg/kg) |
|---|---|---|---|
| Diesel | | 10.0 | BDL |
| Surrogate Recoveries: Nonane | | | 76% |
| Gasoline | | 2.0 | BDL |
| Surrogate Recovery: BFB | | | 107% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | HydroLogic-Morris., Inc. |
| COMPANY PROJECT NUMBER: | TRC Env. Corp 121284-0030-00005 |
| HYDROLOGIC PROJECT NUMBER: | FL9614611 |
| HYDROLOGIC LAB I.D.#: | 399 |
| HYDROLOGIC SAMPLE NUMBER: | 9614614 |
| SAMPLE IDENTIFICATION: | AT&T-SILK-4 |
| DATE SAMPLED: | 9/13/96 |
| DATE EXTRACTED: | 9/18/96 |
| DATE/TIME ANALYZED: | 9/19/96 9/18/96 |

**METHOD TPH 3550/5030**

| ANALYSIS | CAS NO. | SDL (mg/kg) | RESULT (mg/kg) |
|---|---|---|---|
| Diesel | | 10.0 | BDL |
| Surrogate Recoveries: Nonane | | | 78% |
| Gasoline | | 2.0 | BDL |
| Surrogate Recovery: BFB | | | 107% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER: TRC Env. Corp 121284-0030-00005

HYDROLOGIC PROJECT NUMBER: FL9614611
HYDROLOGIC LAB I.D.#: 399
HYDROLOGIC SAMPLE NUMBER: 9614615
SAMPLE IDENTIFICATION: AT&T-SILK-5
DATE SAMPLED: 9/13/96
DATE EXTRACTED: 9/18/96
DATE/TIME ANALYZED: 9/19/96 8/18/96

**METHOD TPH 3550/5030**

| ANALYSIS | CAS NO. | SDL (mg/kg) | RESULT (mg/kg) |
|---|---|---|---|
| **Diesel** | | **10.0** | **34.8** |
| Surrogate Recoveries: Nonane | | | 99% |
| Gasoline | | 2.0 | BDL |
| Surrogate Recovery: BFB | | | 100% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | HydroLogic-Morris., Inc. |
| COMPANY PROJECT NUMBER: | TRC Env. Corp 121284-0030-00005 |
| HYDROLOGIC PROJECT NUMBER: | FL9614611 |
| HYDROLOGIC LAB I.D.#: | 399 |
| HYDROLOGIC SAMPLE NUMBER: | 9614616 |
| SAMPLE IDENTIFICATION: | AT&T-SILK-7 |
| DATE SAMPLED: | 9/13/96 |
| DATE EXTRACTED: | 9/18/96 |
| DATE/TIME ANALYZED: | 9/19/96 9/18/96 |

**METHOD TPH 3550/5030**

| ANALYSIS | CAS NO. | SDL (mg/kg) | RESULT (mg/kg) |
|---|---|---|---|
| **Diesel** | | **10.0** | **52.8** |
| Surrogate Recoveries: | | | |
| Nonane | | | 89% |
| Gasoline | | 2.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 97% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER: TRC Env. Corp 121284-0030-00005

HYDROLOGIC PROJECT NUMBER: FL9614611
HYDROLOGIC LAB I.D.#: 399
HYDROLOGIC SAMPLE NUMBER: 9614617
SAMPLE IDENTIFICATION: AT&T-SILK-8
DATE SAMPLED: 9/13/96
DATE EXTRACTED: 9/18/96
DATE/TIME ANALYZED: 9/19/96 9/18/96

**METHOD TPH 3550/5030**

| ANALYSIS | CAS NO. | SDL (mg/kg) | RESULT (mg/kg) |
|---|---|---|---|
| **Diesel** | | **10.0** | **27.9** |
| Surrogate Recoveries: Nonane | | | 76% |
| Gasoline | | 2.0 | BDL |
| Surrogate Recovery: BFB | | | 101% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | HydroLogic-Morris., Inc. |
| COMPANY PROJECT NUMBER: | TRC Env. Corp 121284-0030-00005 |
| HYDROLOGIC PROJECT NUMBER: | FL9614611 |
| HYDROLOGIC LAB I.D.#: | 399 |
| HYDROLOGIC SAMPLE NUMBER: | 9614618 |
| SAMPLE IDENTIFICATION: | AT&T-SILK-9 |
| DATE SAMPLED: | 9/13/96 |
| DATE EXTRACTED: | 9/18/96 |
| DATE/TIME ANALYZED: | 9/19/96 9/18/96 |

**METHOD TPH 3550/5030**

| ANALYSIS | CAS NO. | SDL (mg/kg) | RESULT (mg/kg) |
|---|---|---|---|
| **Diesel** | | **10.0** | **261** |
| Surrogate Recoveries: Nonane | | | 82% |
| Gasoline | | 2.0 | BDL |
| Surrogate Recovery: BFB | | | 107% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | HydroLogic-Morris., Inc. |
| COMPANY PROJECT NUMBER: | TRC Env. Corp 121284-0030-00005 |
| HYDROLOGIC PROJECT NUMBER: | FL9614611 |
| HYDROLOGIC LAB I.D.#: | 399 |
| HYDROLOGIC SAMPLE NUMBER: | 9614619 |
| SAMPLE IDENTIFICATION: | AT&T-SILK-STOCKPILE |
| DATE SAMPLED: | 9/13/96 |
| DATE EXTRACTED: | 9/18/96 |
| DATE/TIME ANALYZED: | 9/19/96 |

AT&T-SILK-6

**METHOD TPH 3550/5030**

| ANALYSIS | CAS NO. | SDL (mg/kg) | RESULT (mg/kg) |
|---|---|---|---|
| Diesel | | 10.0 | BDL |
| Surrogate Recoveries: Nonane | | | 87% |
| Gasoline | | 2.0 | BDL |
| Surrogate Recovery: BFB | | | 93% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | HydroLogic-Morris., Inc. |
| COMPANY PROJECT NUMBER: | TRC Env. Corp 121284-0030-00005 |
| HYDROLOGIC PROJECT NUMBER: | FL9614611 |
| HYDROLOGIC LAB I.D.#: | 399 |
| HYDROLOGIC SAMPLE NUMBER: | 9614620 |
| SAMPLE IDENTIFICATION: | AT&T-SILK-WATER |
| DATE SAMPLED: | 9/13/96 |
| DATE EXTRACTED: | N/A |
| DATE/TIME ANALYZED: | 9/19/96 |

**METHOD EPA 602**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| Benzene | 71-43-2 | 1.0 | BDL |
| **Toluene** | **108-88-3** | **1.0** | **1.12** |
| **Ethylbenzene** | **100-41-4** | **1.0** | **7.81** |
| **Xylenes (Total)** | **1330-20-7** | **1.0** | **6.45** |
| Surrogate Recovery: | | | |
| Bromofluorobenzene | | | 108% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER: TRC Env. Corp 121284-0030-00005

HYDROLOGIC PROJECT NUMBER: FL9614611
HYDROLOGIC LAB I.D.#: 399
HYDROLOGIC SAMPLE NUMBER: 9614620
SAMPLE IDENTIFICATION: AT&T-SILK-WATER
DATE SAMPLED: 9/13/96
DATE EXTRACTED: 9/18/96
DATE/TIME ANALYZED: 9/19/96

**METHOD EPA 8270**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| Acenaphthene | 83-32-9 | 10.0 | BDL |
| Acenaphthylene | 208-96-8 | 10.0 | BDL |
| Aniline | 62-53-3 | 10.0 | BDL |
| Anthracene | 120-12-7 | 10.0 | BDL |
| Benzidine | 92-87-5 | 10.0 | BDL |
| Benzoic Acid | 65-85-0 | 50.0 | BDL |
| Benzo(a)Anthracene | 56-55-3 | 10.0 | BDL |
| Benzo(b)Fluoranthene | 205-99-2 | 10.0 | BDL |
| Benzo(k)Fluoranthene | 207-08-9 | 10.0 | BDL |
| Benzo(g,h,i)Perylene | 191-24-2 | 10.0 | BDL |
| Benzo(a)Pyrene | 50-32-8 | 10.0 | BDL |
| Benzyl Alcohol | 100-51-6 | 20.0 | BDL |
| Bis(2-Chloroethoxy)Methane | 111-91-1 | 10.0 | BDL |
| Bis(2-Chloroethyl)Ether | 111-44-4 | 10.0 | BDL |
| Bis(2-Chloroisopropyl)Ether | 39638-32-9 | 10.0 | BDL |
| Bis(2-Ethylhexyl)Phthalate | 117-81-7 | 10.0 | BDL |
| 4-Bromophenyl Phenyl Ether | 101-55-3 | 10.0 | BDL |
| Butyl Benzyl Phthalate | 85-68-7 | 10.0 | BDL |
| 4-Chloroaniline | 106-47-8 | 20.0 | BDL |
| 2-Chloronaphthalene | 91-58-7 | 10.0 | BDL |
| 4-Chlorophenyl Phenyl Ether | 7005-72-3 | 10.0 | BDL |
| Chrysene | 218-01-9 | 10.0 | BDL |
| Dibenz(a,h)Anthracene | 53-70-3 | 10.0 | BDL |
| Dibenzofuran | 132-64-9 | 10.0 | BDL |
| Di-N-Butylphthalate | 84-74-2 | 10.0 | BDL |

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

COMPANY NAME: HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER: TRC Env. Corp.121284-0030-00005

HYDROLOGIC PROJECT NUMBER: FL9614611
HYDROLOGIC SAMPLE NUMBER: 9614620
SAMPLE IDENTIFICATION: AT&T-SILK-WATER
DATE SAMPLED: 9/13/96

**METHOD EPA 8270**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| 1,3-Dichlorobenzene | 541-73-1 | 10.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 10.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 10.0 | BDL |
| 3,3'-Dichlorobenzidine | 91-94-1 | 20.0 | BDL |
| Diethylphthalate | 84-66-2 | 10.0 | BDL |
| Dimethylphthalate | 131-11-3 | 10.0 | BDL |
| 2,4-Dinitrotoluene | 121-14-2 | 10.0 | BDL |
| 2,6-Dinitrotoluene | 606-20-2 | 10.0 | BDL |
| Diphenylamine | 122-39-4 | 20.0 | BDL |
| Di-N-Octylphthalate | 117-84-0 | 10.0 | BDL |
| Fluoranthene | 206-44-0 | 10.0 | BDL |
| Fluorene | 86-73-7 | 10.0 | BDL |
| Hexachlorobenzene | 118-74-1 | 10.0 | BDL |
| Hexachlorobutadiene | 87-68-3 | 10.0 | BDL |
| Hexachlorocyclopentadiene | 77-47-4 | 10.0 | BDL |
| Hexachloroethane | 67-72-1 | 10.0 | BDL |
| Indeno(1,2,3-cd)Pyrene | 193-39-5 | 10.0 | BDL |
| Isophorone | 78-59-1 | 10.0 | BDL |
| **2-Methylnaphthalene** | **91-57-6** | **10.0** | **28.4** |
| Naphthalene | 91-20-3 | 10.0 | BDL |
| 2-Nitroaniline | 88-74-4 | 50.0 | BDL |
| 3-Nitroaniline | 99-09-2 | 50.0 | BDL |
| 4-Nitroaniline | 100-01-6 | 50.0 | BDL |
| Nitrobenzene | 98-95-3 | 10.0 | BDL |

COMPANY NAME: HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER: TRC Env. Corp.121284-0030-00005

HYDROLOGIC PROJECT NUMBER: FL9614611
HYDROLOGIC SAMPLE NUMBER: 9614620
SAMPLE IDENTIFICATION: AT&T-SILK-WATER
DATE SAMPLED: 9/13/96

**METHOD EPA 8270**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| N-Nitroso-Di-N-Butylamine | 924-16-3 | 50.0 | BDL |
| N-Nitrosodimethylamine | 62-75-9 | 10.0 | BDL |
| N-Nitrosodiphenylamine | 86-30-6 | 10.0 | BDL |
| N-Nitrosodipropylamine | 621-64-7 | 10.0 | BDL |
| Pentachlorobenzene | 608-93-5 | 10.0 | BDL |
| Phenacetin | 62-44-2 | 50.0 | BDL |
| Phenanthrene | 85-01-8 | 10.0 | BDL |
| Pyrene | 129-00-0 | 10.0 | BDL |
| 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 10.0 | BDL |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10.0 | BDL |
| Surrogate Recovery: | | | |
| 2-Fluorobiphenyl | | | 70% |
| Nitrobenzene-d5 | | | 80% |
| 4-Terphenyl-D14 | | | 79% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | HydroLogic-Morris., Inc. |
| COMPANY PROJECT NUMBER: | TRC Env. Corp 121284-0030-00005 |
| HYDROLOGIC PROJECT NUMBER: | FL9614611 |
| HYDROLOGIC LAB I.D.#: | 399 |
| HYDROLOGIC SAMPLE NUMBER: | 9614620 |
| SAMPLE IDENTIFICATION: | AT&T-SILK-WATER |
| DATE SAMPLED: | 9/13/96 |
| DATE EXTRACTED: | 9/18/96 |
| DATE/TIME ANALYZED: | 9/19/96 |

**TENTATIVELY IDENTIFIED COMPOUNDS**
**(water samples)**

| COMPOUND NAME | ESTIMATED SDL (ug/L ) | ESTIMATED CONCENTRATION (ug/L ) |
|---|---|---|
| 1H-INDENE, 1-ETHYLIDENE | 5.0 | 50.0 |
| NAPTHALENE, 1,8,-DIMETHYL | 5.0 | 96.0 |
| HEPTADECANE, 2,6-DIMETHYL | 5.0 | 27.0 |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# Appendix F

# Site Sensitivity Evaluation (SSE)

SILK HOPE

## 6.0 SITE SENSITIVITY EVALUATION FOR PETROLEUM CONTAMINATED SOIL

The purpose of the Site Sensitivity Evaluation (SSE) is to evaluate the sensitivity of groundwater to contamination by the release of petroleum related substances from the unsaturated zone. The "in-situ" soil cleanup levels, based on total petroleum fuel hydrocarbons (TPFH) and/or oil and grease (O&G), is determined by the SSE score; i.e., a higher SSE score requires a lower TPFH or O&G soil cleanup level. The SSE is only applicable for petroleum contaminated sites. (For cleanup procedures for soil contaminated by non-petroleum products, see Section 7).

If groundwater levels at the site are generally known or can be determined from field observations, one boring may be sufficient to obtain information necessary to complete the SSE. Also, if a release is discovered during a tank excavation, field investigations such as test pits, soil borings, or deeper excavation into the tank pit may provide pertinent information.

An SSE must be performed on **all** sites that meet the following criteria and must be conducted by a "qualified person" as described on the next page:

1. For sites in categories A and B (Table 3), where contaminated soils are located 5 feet or greater from the water table, top of bedrock or transmissive indurated sediments (shell limestone, fractured shale or sandstone, etc.). For sites in categories C, D, and E, (Table 3) an SSE must be performed in all cases, and

2. Contaminated soil does not create a human exposure pathway via ingestion, absorption, or inhalation.

**NOTE:** ***For sites where the criteria in 1 and 2 above are not met****, the cleanup levels will be 10 ppm TPFH (EPA Method 5030), 40 ppm TPFH (EPA Method 3550), or 250 ppm O&G (EPA Method 9071) (unless DEM specifies otherwise). The references to EPA methods 5030 and 3550 throughout this document include the use of the California GC-FID method for TPFH and are referred to only as 5030 and 3550 for brevity.*

The Site Sensitivity Evaluation will determine the soil cleanup levels that must be achieved for each site. Depending on the SSE scores, the final cleanup level for site soils may range between 10 to 300 ppm TPFH (for EPA Method 5030), 40 to 1200 ppm TPFH (for EPA Method 3550), and 250 to 3000 ppm O&G (for EPA Method 9071). Soils exhibiting contamination levels **greater than** (>) 300 ppm TPFH (for EPA Method 5030) or > 1200 ppm TPFH (for EPA Method 3550) , or > 3000 ppm O&G (for EPA Method 9071) **must** be remediated (unless otherwise directed by DEM).

"Contaminated soil" in this document refers to soils containing greater than 10 ppm TPFH, as detected by EPA method 5030, greater than 40 ppm TPFH, as detected by EPA method 3550,

and greater than 250 ppm oil & grease, as detected by EPA method 9071. Remedial activities will generally not be required on soil exhibiting TPFH levels of less than or equal to (≤) 10 ppm TPFH (EPA Method 5030), levels of ≤ 40 ppm TPFH (EPA method 3550), or O&G levels of ≤ 250 ppm (EPA Method 9071). However, in cases where groundwater has been contaminated or other special site conditions exist, a lower cleanup level and/or additional investigation may be required by the DEM.

**In any case, whenever soil remediation is necessary, the treatment/disposal technologies that are used should be cost effective and provide adequate protection of human health and the environment.**

## 6.1 SITE SENSITIVITY EVALUATION (SSE)

**STEP 1: Site Characteristics Evaluation (See Table 1)**

The sensitivity of groundwater to contamination from petroleum contaminated soils is evaluated by assessing five specific site characteristics. These characteristics are rated in accordance with their potential for contributing to the contamination of groundwater; the greater the potential contribution, the higher the score. The overall sensitivity of a site is determined by a numerical value representing the sum of values for each site characteristic.

Complete the SSE score sheet (Table 1) and proceed to step 2.

### EXPLANATION OF SITE CHARACTERISTICS

Grain Size - The main objective of this analysis is to estimate soil permeability, potential for contaminant attenuation, and the presence of zones which restrict contaminant migration.

> Sample Collection and Location: The sample collected for determination of grain size should be **representative** of the **predominant** soil type found in the area of the deepest contaminated soils located beneath the source, or in proximity to the source (in the apparent downgradient direction). Retaining this soil sample for future reference is advisable.
>
> Sample Classification: The soil sample collected as described above should be classified according to the Unified Soil Classification System (ASTM designation D-2487) or the U.S. Department of Agriculture's method of soil classification. (A visual and textural field inspection will suffice.)

**NOTE**: *SSE's and sample collection and classification should be performed by a qualified person, who through a combination of training and experience is competent to evaluate the conditions existing at the contamination site, including the physical and chemical conditions of the subsurface. A geologist, soil scientist, or engineer experienced and active in the environmental field will be considered qualified.*

**Relict structures, sedimentary structures, and/or textures present in the zone of contamination and underlying "soils"**- These include structures in soils that may significantly increase the permeability such as quartz veins, fractures, or textures with coarse grained sandy beds in clays and silts, weathered coarse grained igneous intrusions, etc.

**Distance from location of deepest contaminated soil to seasonal high water table** - The determination may be based upon water levels in shallow water table wells in the immediate vicinity, mottling of the soil, an auger hole in the area of contamination or immediate vicinity, or specific knowledge of an area. If an auger hole penetrating the water table is made, it shall immediately be grouted with neat cement. Compaction of soil located on the ground surface is acceptable for borings that do not penetrate the water table as long as the compaction of the borehole soils has the same (or lower) permeability as the original soil.

**Location of the water table relative to bedrock or transmissive indurated sediments** - Is the top of bedrock or top of transmissive indurated sediments (shell limestone, fractured shale or sandstone, etc.) located closer to the surface than the water table?

**Artificial conduits present within the zone of contamination** - Are there water lines, sewer lines, telephone cables, product dispensing piping, etc., in the area of contamination?

**STEP 2: Initial Cleanup Level (See Table 2)**

Once the SSE score has been obtained, select the corresponding initial cleanup level based on the test method(s) (i.e. 5030, 3550 or 9071) for determining the type of fuel product (low or high boiling point, or heavy fuels) released on site. Proceed to step 3.

**STEP 3: Final Cleanup Level (See Table 2, Table 3 [SSE Site Category Descriptions])**

Determine and document the site category (A, B, C, D, or E) based on field evaluations. Use Tables 2 and 3 (SSE Site Category Descriptions), to select the final cleanup level. Based on the final cleanup level, determine the quantity of soil that requires remediation. Evaluate several treatment/disposal technologies and their associated costs.*

Submit data and other evidence used in the determination of the final cleanup level to the appropriate regional office. They will verify the site's final cleanup level upon review of the information provided. However, the responsible party should begin soil remediation without waiting for regional office verification. Upon completion of the SSE, the responsible party should immediately begin remediation of soils containing TPFH or O&G concentrations in excess of the final proposed cleanup level, utilizing cost effective treatment/disposal technologies that will provide protection of human health and the environment. **The responsible party should maintain accurate records of the remediation process and be prepared to justify all remediation activities and costs.**

*NOTE:*See Section 8 "Limiting Quantities and Costs of Soil Treatment/Disposal."*

# Site Sensitivity Evaluation (SSE)

Site Characteristics Evaluation (Step 1)

| Characteristic | Condition | Rating | |
|---|---|---|---|
| Grain Size* | Gravel<br>Sand<br>Silt<br>Clay | 150<br>100<br>50<br>0 ? | 50 |
| Are relict structures, sedimentary structures, and/or textures present in the zone of contamination and underlying "soils"? | Present and intersecting the water table.<br>Present but not intersecting the water table.<br>None present. | 10<br>5<br>0 | 10 |
| Distance from location of deepest contaminated soil** to water table. | 0 -5 feet<br>(C, D & E sites only)<br>5 - 10 feet<br>>10 - 40 feet<br>> 40 feet | 20<br>20<br>10<br>0 | 20 |
| Is the top of bedrock or transmissive indurated sediments located above the water table? | Yes<br>No | 20<br>0 | 20 |
| Artificial conduits present within the zone of contamination. | Present and intersecting the water table.<br>Present but not intersecting the water table.<br>Not present. | 10<br>5<br>0 | 0 |

**Total Site Characteristics Score:** 100

* **Predominant** grain size based on Unified Soil Classification System or U.S. Dept. of Agriculture's Soil Classification Method.

** (>10 ppm TPFH by Method 5030; >40 ppm TPFH by Method 3550; >250 ppm O&G by Method 9071)

Table 2

# Site Sensitivity Evaluation (SSE)

Initial Cleanup Level (Step 2) — Final Cleanup Level (Step 3)

## EPA Method 5030 for Low Boiling Point Hydrocarbons such as Gasoline, Aviation Fuels, Gasohol

| Total Site Characteristics Score | Initial Cleanup Level TPFH (ppm) |
|---|---|
| >150 | ≤10 |
| 121-150 | 20 |
| 91-120 | (40) |
| 61-90 | 60 |
| 31-60 | 80 |
| 0-30 | 100 |

Select Site Category* →

| Site Category | Final Cleanup Level |
|---|---|
| Category A & (B) (Multiply initial cleanup level by 1) | 1 x 40 = 40 ppm |
| Category C & D (Multiply initial cleanup level by 2) | 2 x ____ = ____ ppm |
| Category E (Multiply initial cleanup level by 3) | 3 x ____ = ____ ppm |

## EPA Method 3550 for High Boiling Point Hydrocarbons such as Kerosene, Diesel, Varsol, Mineral Spirits, Naphtha

| Total Site Characteristics Score | Initial Cleanup Level TPFH (ppm) |
|---|---|
| >150 | ≤40 |
| 121-150 | 80 |
| 91-120 | (160) |
| 61-90 | 240 |
| 31-60 | 320 |
| 0-30 | 400 |

Select Site Category* →

| Site Category | Final Cleanup Level |
|---|---|
| Category A & (B) (Multiply initial cleanup level by 1) | 1 x 160 = 160 ppm |
| Category C & D (Multiply initial cleanup level by 2) | 2 x ____ = ____ ppm |
| Category E (Multiply initial cleanup level by 3) | 3 x ____ = ____ ppm |

## EPA Method 9071 for Heavy Fuels - Oil & Grease (O&G) such as Fuel Oil #4, #5, #6, Motor Oil, Hydraulic Fluid

| Total Site Characteristics Score | Initial Cleanup Level O&G (ppm) |
|---|---|
| >150 | ≤250 |
| 121-150 | 400 |
| 91-120 | (550) |
| 61-90 | 700 |
| 31-60 | 850 |
| 0-30 | 1000 |

Select Site Category* →

| Site Category | Final Cleanup Level |
|---|---|
| Category A & B (Multiply initial cleanup level by 1) | 1 x ____ = ____ ppm |
| Category C & D (Multiply initial cleanup level by 2) | 2 x ____ = ____ ppm |
| Category E (Multiply initial cleanup level by 3) | 3 x ____ = ____ ppm |

* See Site Category Descriptions, Table 3

## TABLE 3

## SSE SITE CATEGORY DESCRIPTIONS

**CATEGORY A** (*Site meets any <u>one</u> of the criteria*)

1. Water supply well(s) contaminated and <u>not served</u> by accessible public water supply.
2. Vapors present in confined areas at explosive or health concern levels.
3. Treated surface water supply in violation of the safe drinking water standards.

**CATEGORY B** (*Site meets any <u>one</u> of the criteria*)

1. Water supply well(s) contaminated, but served by accessible public water supply.
2. Water supply well(s) within 1500 feet of site, but not contaminated and not served by accessible public water supply.
3. Vapors present in confined areas but not at explosive or health concern levels.

**CATEGORY C** (*Site meets <u>both</u> of the criteria*)

1. No known water supply well(s) contaminated.
2. Water supply well(s) greater than 1500 feet from site but not served by accessible public water supply.

**CATEGORY D** (*Site meets <u>both</u> of the criteria*)

1. No known water supply well(s) contaminated.
2. Water supply well(s) within 1500 feet of site but served by accessible public water supply.

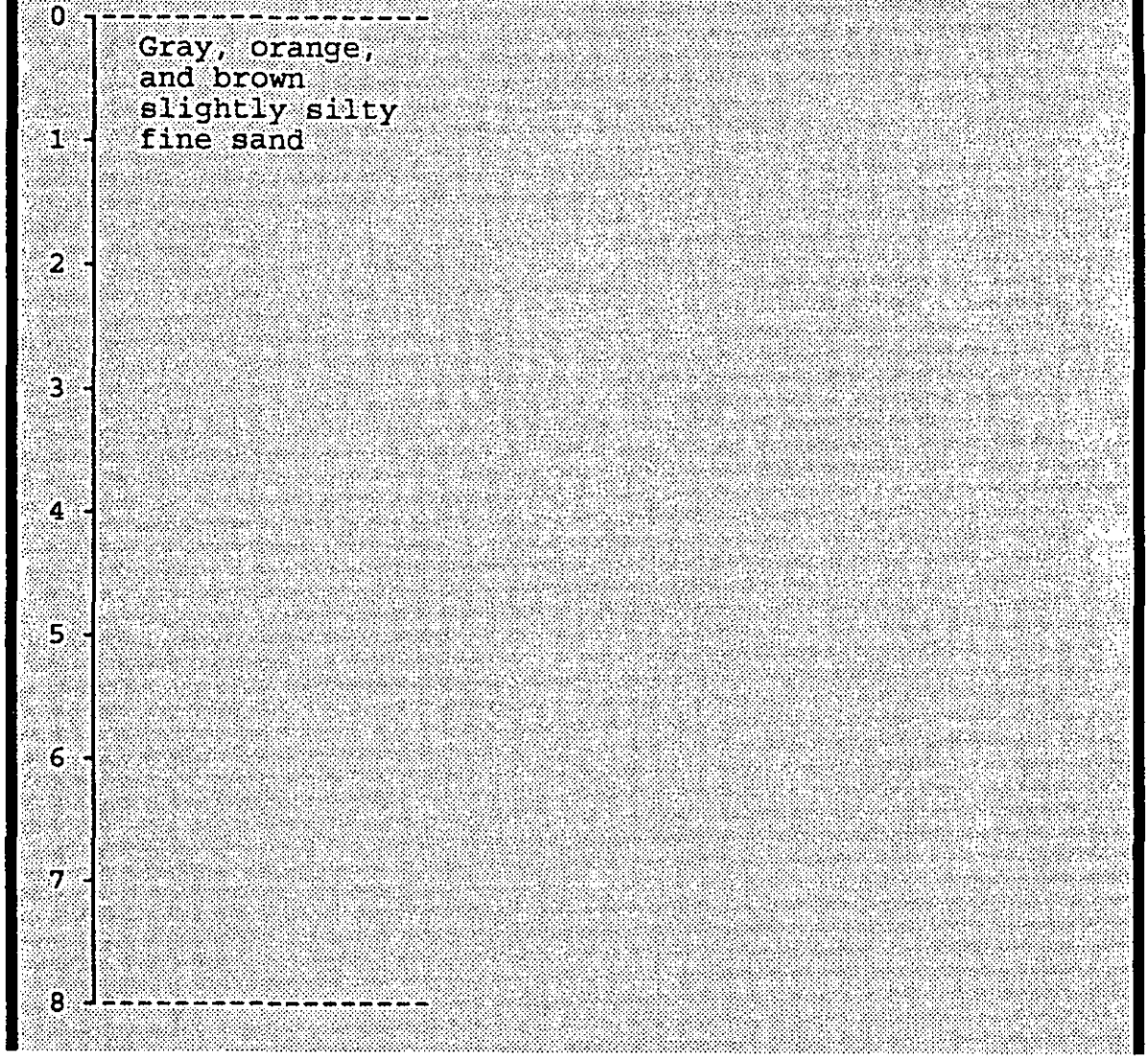
**CATEGORY E** (*Site meets <u>both</u> of the criteria*)

1. No known water supply well(s) contaminated or within 1500 feet of site.
2. Area served by accessible public water supply.

# Appendix G

# Geologic Log for Excavation

Project #: 21284-0010-00001
Site: Silk Hope, North Carolina
TRC Inspector: J. Laurence Daw
Date: September 9, 1996



# Appendix H

# Certificate of Tank Disposal

## Certificate Of Tank Disposal

Tank Location: CLARK ROAD SILK HOPE, N.C.

Site Address: CLARK RD

City/State: SILK HOPE, N.C.

Tank Serial # or Manufacturer's #:

Tank Size: 560 Type: FIBERGLASS COATED STEEL

Original Tank Contents: DIESEL

Tank Owner: AT&T Attn:

Owner Address: PO Box 188, LAGRANGE, N.C. 28551

Project #: Date Of Disposal:

Disposal Facility Address: 501 WEST RAILROAD ST.

City/State: LAGRANGE, N.C. 28551

Method Of Disposal: (Describe Cleaning, Destruction, & Disposal)

CUT BOTH ENDS OUT & CLEAN WITH BIO-SOLVE

The Above Will Certify That The Structure Noted Above Was Disposed Of In The Manner Prescribed Under EPA Regulations.

Verified By: M. Chris McKee

Company Name: Unger Construction Company

Title: SUPERINTENDENT Date: 9-18-96

# *MMM, Inc.*

P.O. Box 188
La Grange, N.C. 28551
Phone 919-527-0229
Fax 919-523-7211


**TO:** UNGER CONST. CO.
MUSKOGEE, OK. 74401
GREENSBORO 7210 OLD TAFT Rd 918-683-5028

| QTY | ITEM NO. | DESCRIPTION | WEIGHT | PRICE | AMOUNT |
|---|---|---|---|---|---|
| | | | | | |
| 1 | Expense | Rental Fee for Clark Hydraulic Excavator | Rental | | |
| | | CLARK HANEY SILK HOPE, N.C. | | | |
| | | DISC DISPOSAL NOT | | | |
| | | | | | |
| | | | | TOTAL | |

PLEASE INSPECT MERCHANDISE UPON RECEIPT. MMM, INC. MUST BE NOTIFIED WITHIN 60 DAYS OF SHIPMENT OF ANY DAMAGED MERCHANDISE. ANY RETURNS MUST BE APPROVED BY MMM, INC IN WRITING PRIOR TO THEIR RETURN. PURCHASER MUST FILE CLAIM FOR FREIGHT DAMAGE.

Received and Checked

By _____

Thank You

Driver: _____

# Appendix I

# Additional Site Efforts

**TRC Environmental Corporation**

6340 Quadrangle Drive, Suite 200
Chapel Hill, North Carolina 27514
Telephone 919-419-7500
Facsimile 919-419-7501

January 15, 1997

Mr. Ron Baxley/AT&T Companies
c/o Mr. John Ferguson, Regional Programs Manager
Hanson Engineers
47 Perimeter Ctr. East, Suite 280
Atlanta, Georgia 30346

RE: Summary Report of Well Installation and Sampling Activities at AT&T Silk Hope, North Carolina, Radio Relay Station Site

Dear Mr. Baxley:

On November 27,1996 TRC Environmental Corporation (TRC) mobilized on the referenced site for the purpose of installing a groundwater monitoring well to assess whether the former underground storage tank (UST) may have leaked and potentially impacted the surficial groundwaters. TRC utilized the services of a local drilling firm, Froehling & Robertson, Inc., (F&R) to install the monitoring well. The well was constructed per standard North Carolina Division of Water Quality (DWQ) well construction specifications following drilling activities. The borehole was constructed via a 4" hollow stem auger mounted on a CME 75 all terrain Vehicular (ATV) rig.

Strata encountered from ground surface to the basal depth of the borehole (10.5') included a light-brown colored sandy silt (0' - 3'); light-grey rhyolitic saprolite (3' - 10'); and a highly competent, light grey (unweathered) meta-igneous rock at 10' - 10.5' at borehole termination. No groundwater was encountered during drilling operations. The well was subsequently completed utilizing a two foot bentonite seal and a neat cement grout slurry as necessary to fill in the annular space adjacent to the polyvinyl chloride (PVC) inner well casing. An outer flush-mount protective casing and locking mechanism was installed at the surface.

Upon allowing the well to set-up (approximately one week), TRC remobilized at the site on December 2, 1996 in order to purge and subsequently sample the monitoring well. TRC proceeded to purge the well (in this instance) dry. Because the monitoring well recharged very slowly, it was not possible to extract a sample on this date. TRC re-mobilized early in the day on December 16, 1996 and was subsequently able to purge the well dry, wait several hours for it to recharge, and subsequently extract a sample of fresh formational waters accordingly. Following this, TRC submitted the samples to a certified laboratory for analysis.

Monitoring well groundwater samples were tested for the following parameters:

| Parameter Limits | Method | Results | Det. |
|---|---|---|---|
| Lead | Method SM18/3113B | *BDL* | 0.001 mg/L |
| Metals - Digestion | Method SM18/3030C | *BDL* | 0.001 mg/L |
| Purgeable Aromatics | Method 602 | *BDL* | 1 µg/L* |
| Semi-volatile Organic Compounds | Method 625 | *BDL* | 10 µg/L |
| Semi-volatile Extraction (Acid/Base Neutral) | Method 625 | *BDL* | 10 µg/L |

*(except for Total xylenes which had a detection limit of 3 µg/L)

---

Based on these results found in Appendix A, it appears that no impact to the groundwaters currently exists at this site, and no further investigation is recommended at this time. *

* See 2/28/97 LTR FOLLOWING MLB.

Please call if you have any questions or if I may be of further assistance.

Sincerely,

Michael L. Babuin, P.G.
Manager, Solid and Hazardous Waste Services

Attachment

# APPENDIX A

# LABORATORY RESULTS

SINCE
1881

**FROEHLING & ROBERTSON, INC.**
GEOTECHNICAL • ENVIRONMENTAL • MATERIALS
ENGINEERS • LABORATORIES
*"OVER ONE HUNDRED YEARS OF SERVICE"*

## CERTIFICATE OF ANALYSIS

December 20, 1996



**LAB #:** 9612127
**CLIENT:** TRC Environmental Corporation
6340 Quadrangle Dr., Suite 200
Chapel Hill, NC 27514
Attn: Mike Babuin

**SAMPLES COLLECTED BY:** TRC Personnel
**LAB RECEIPT:** 12/17/96, 0955

| PARAMETER | ANALYSIS DATE/TIME | METHOD | ANALYST |
|---|---|---|---|
| Lead | 12/18/96, 1100 | SM18/3113 B | RHS |
| Metals-Digestion | 12/18/96, 0840 | SM18/3030 C | TS |
| Purgeable Aromatics | 12/18/96, 0845 & | EPA 602 | DP |
| | 12/19/96, 0927 | EPA 602 | DP |
| Semivolatile Organic Compounds | 12/19/96, 1116 | EPA 625 | EVY |
| Semivolatile Extraction A/BN | 12/18/96, 1620 | EPA 625 | DG |
| Library Search | 12/19/96, 1116 | | EVY |

Results appear on the following pages.

**Audrey N. Brubeck**
**Laboratory Manager**

AB/psg

HEADQUARTERS: 3015 DUMBARTON ROAD • BOX 27524 • RICHMOND, VA 23261-7524
TELEPHONE (804) 264-2701 • FAX (804) 264-1202

BRANCHES: ASHEVILLE, NC • BALTIMORE, MD • CHARLOTTE, NC • CHESAPEAKE, VA
CROZET, VA • FAYETTEVILLE, NC • FREDERICKSBURG, VA • GREENVILLE, SC
MOREHEAD CITY, N.C. • RALEIGH, NC • ROANOKE, VA • STERLING, VA

**RESULTS:**

| | | |
|---|---|---|
| **F&R #:** | **9612127-01** | |
| **SAMPLE ID:** | **MW-1** | |
| **DATE/TIME:** | **12/16/96, 1130** | |
| **TYPE:** | **Water/Grab** | |
| | | **Det'n Limit:** |
| Lead (mg/L) | BDL | 0.001 |
| **Purgeable Aromatics (µg/L)** | | |
| Benzene | 2 | 1 |
| Toluene | BDL | 1 |
| Ethylbenzene | BDL | 1 |
| Total Xylenes | BDL | 3 |
| Chlorobenzene | BDL | 1 |
| 1,2-Dichlorobenzene | BDL | 1 |
| 1,3-Dichlorobenzene | BDL | 1 |
| 1,4-Dichlorobenzene | BDL | 1 |
| **Semivolatile Organic Compounds (µg/L)** | | |
| Acenaphthene | BDL | 10 |
| Acenaphthylene | BDL | 10 |
| Anthracene | BDL | 10 |
| Benzidine | BDL | 10 |
| Benzo[a]anthracene | BDL | 10 |
| Benzo[a]pyrene | BDL | 10 |
| Benzo[b]fluoranthene | BDL | 10 |
| Benzo[g,h,i]perylene | BDL | 10 |
| Benzo[k]fluoranthene | BDL | 10 |
| bis(2-Chloroethoxy)methane | BDL | 10 |
| bis(2-Chloroethyl)ether | BDL | 10 |
| bis(2-Chloroisopropyl)ether | BDL | 10 |
| bis(2-Ethylhexyl)phthalate | BDL | 10 |
| 4-Bromophenyl-phenylether | BDL | 10 |
| Butylbenzylphthalate | BDL | 10 |
| 4-Chloro-3-methylphenol | BDL | 10 |
| 2-Chloronaphthalene | BDL | 10 |
| 2-Chlorophenol | BDL | 10 |
| 4-Chlorophenyl-phenylether | BDL | 10 |
| Chrysene | BDL | 10 |
| Dibenz[a,h]anthracene | BDL | 10 |
| 1,2-Dichlorobenzene | BDL | 10 |

**mg/L** = milligram per Liter **µg/L** = microgram per Liter **BDL** = Below Detection Limit

**RESULTS:**

| | |
|---|---|
| **F&R #:** | **9612127-01** |
| **SAMPLE ID:** | **MW-1** |
| **DATE/TIME:** | **12/16/96, 1130** |
| **TYPE:** | **Water/Grab** |

| **Semivolatile Organic Compounds (µg/L) (cont.)** | | **Det'n Limit:** |
|---|---|---|
| 1,3-Dichlorobenzene | BDL | 10 |
| 1,4-Dichlorobenzene | BDL | 10 |
| 3,3'-Dichlorobenzidine | BDL | 10 |
| 2,4-Dichlorophenol | BDL | 10 |
| Diethylphthalate | BDL | 10 |
| 2,4-Dimethylphenol | BDL | 10 |
| Dimethylphthalate | BDL | 10 |
| Di-n-butylphthalate | BDL | 10 |
| 2,4-Dinitrophenol | BDL | 10 |
| 2,4-Dinitrotoluene | BDL | 10 |
| 2,6-Dinitrotoluene | BDL | 10 |
| Di-n-octylphthalate | BDL | 10 |
| Fluoranthene | BDL | 10 |
| Fluorene | BDL | 10 |
| Hexachlorobenzene | BDL | 10 |
| Hexachlorobutadiene | BDL | 10 |
| Hexachlorocyclopentadiene | BDL | 10 |
| Hexachloroethane | BDL | 10 |
| Indeno[1,2,3-cd]pyrene | BDL | 10 |
| Isophorone | BDL | 10 |
| 4,6-Dinitro-2-methylphenol | BDL | 10 |
| Naphthalene | BDL | 10 |
| Nitrobenzene | BDL | 10 |
| 2-Nitrophenol | BDL | 10 |
| 4-Nitrophenol | BDL | 10 |
| n-Nitroso-di-n-propylamine | BDL | 10 |
| n-Nitrosodiphenylamine | BDL | 10 |
| Pentachlorophenol | BDL | 10 |
| Phenanthrene | BDL | 10 |
| Phenol | BDL | 10 |
| Pyrene | BDL | 10 |
| 1,2,4-Trichlorobenzene | BDL | 10 |
| 2,4,6-Trichlorophenol | BDL | 10 |

**mg/L** = milligram per Liter  **µg/L** = microgram per Liter  **BDL** = Below Detection Limit

No non-target compounds were detected in the library search.

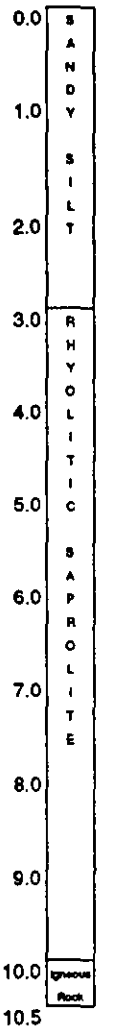
# APPENDIX B

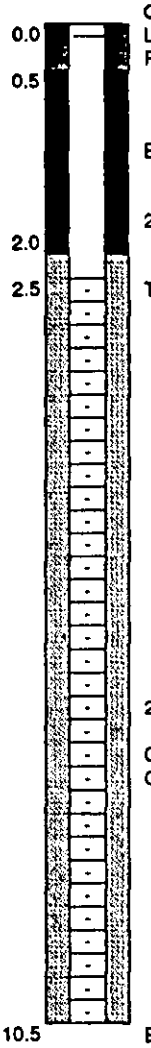
# BORING LOG AND WELL COMPLETION RECORD

MONITORING WELL: MW-1
AT&T
SILK HOPE NC RADIO RELAY STATION
DATE STARTED: NOVEMBER 27, 1996
DATE COMPLETED: NOVEMBER 27, 1996

DRILLING COMPANY: FROEHLING & ROBERTSON, INC.
TRC INSPECTOR: MIKE BABUIN, P.G.
DRILLING METHOD: HOLLOW STEM AUGER
TOTAL WELL DEPTH: 10.5 FEET
DEPTH TO WATER: 6.70 FEET 12-16-96

| DEPTH (FEET) | SOIL/BEDROCK DESCRIPTION |
|---|---|
| 0-3 | Light brown sandy silt |
| 3-10 | Light grey rhyolitic saprolite |
| 10-10.5 | Light grey meta igneous rock |




WELL CONSTRUCTION

Flush-Mount Curb Box
Locking Cap
Portland Cement Grout
Bentonite Seal
2" PVC Riser
Top of Screen
2" 20-Slot PVC Screen
Coarse Sand Gravel Pack
Bottom of Well/8-inch Diameter Borehole

**TRC Environmental Corporation**

6340 Quadrangle Drive, Suite 200
Chapel Hill, North Carolina 27514
Telephone 919-419-7500
Facsimile 919-419-7501

February 28, 1997

MEMORANDUM

**TO:** Ron Baxley/John Ferguson

**FROM:** Mike Babuin

**RE:** Conversation of February 28, 1997 with Mr. John Ferguson Regarding North Carolina AT&T Radio Relay Station UST Removal Project (TRC Project #21284)

I wanted to take a moment and summarize today's telephone discussion with John today regarding the referenced project. We recently reviewed our reports with a "fresh set of eyes" one more time (since it has been about two months since we prepared the drafts) prior to receiving any AT&T comments which may need to be incorporated into the final reports. As a result, we found a discrepancy in our January 15, 1997 letter report pertaining to the installation of the monitoring well at the Silk Hope site, specifically, related to the reported value of benzene as compared to the minimum detection limits. Because the value reported by the lab was 2 parts per billion (ppb) and the detection limit is 1 ppb, a small exceedance of the established standard for benzene exists by this data, which we inadvertently overlooked. As reported however, remaining constituents were all reported to be below the detection limit.

In order to determine if the benzene value is representative, we are in the process of resampling the well (at no further cost to AT&T) to verify this value and we should have the results by March 10, 1997. As we obtain these results, we will forward a revised copy of the report to you.

Please contact me if I may provide additional information on this.

TRC Environmental Corporation

6340 Quadrangle Drive, Suite 200
Chapel Hill, North Carolina 27514
Telephone 919-419-7500
Facsimile 919-419-7501

March 5, 1997

MEMORANDUM

**TO:** Ron Baxley/John Ferguson

**FROM:** Mike Babuin

**RE:** Results of Re-Sampling of Ground-Water Monitoring Well at the Silk Hope, North Carolina Radio Relay Station Site

Based on the information provided in my February 28, 1997 memo, please be advised that TRC recently re-sampled the referenced ground-water monitoring well and submitted the sample to the analytical laboratory. Results of this analysis were received by TRC today (attached) and showed that benzene concentrations were below detection limits. Upon receipt of any comments from AT&T regarding this report, TRC will incorporate this new information into the final letter report on the Silk Hope well installation and sampling efforts.

Please do not hesitate to call me if I may be of further assistance.

SINCE
1881

**FROEHLING & ROBERTSON, INC.**
GEOTECHNICAL • ENVIRONMENTAL • MATERIALS
ENGINEERS • LABORATORIES
*"OVER ONE HUNDRED YEARS OF SERVICE"*

## CERTIFICATE OF ANALYSIS

March 5, 1997



**LAB #:** 9703009
**CLIENT:** TRC
6340 Quadrangle Drive, Suite 200
Chapel Hill, NC 27514
Attn: Mike Babuin

**PO #:** 21284

**SAMPLES COLLECTED BY:** M. Babuin
**LAB RECEIPT:** 03/04/97, 1100

| PARAMETER | ANALYSIS DATE/TIME | METHOD | ANALYST |
|---|---|---|---|
| Benzene | 03/05/97, 0830 | EPA 602 | DP |

**RESULTS:**

**F&R #:** **9703009-01**
**SAMPLE ID:** **S1**
**DATE/TIME:** **03/01/97, 1602**
**TYPE:** **Groundwater/Grab**

| | | **Det'n Limit:** |
|---|---|---|
| Benzene (µg/L) | BDL | 1 |

µg/L = microgram per Liter  **BDL** = Below Detection Limit

**Audrey N. Brubeck**
**Laboratory Manager**

AB/psg

| | |
|---|---|
| Client: TRC | Project No.: 21284 |
| Report Address: 6340 Quadrangle Drive Suite 200 27514 Chapel Hill, NC | Invoice Address: same |
| Attn: mike RABUN | Attn: M. BABUIN |
| Phone No.: (919)419-7500 | Sampled By: M. BABUIN |
| Fax No.: (919)419-7501 | P.O. No: |

TURNAROUND TIME

☐ 24 Hours ☐ 48 Hours Date Needed: ON or BEFORE 3/10/97

☑ 5 Days ☐ 10 Days ☐ Other FAX RESULTS ASAP TO TRC

**REQUESTED PARAMETERS**

BENZENE

LAB CODE I.D.
A = Asheville, NC
C = Concord, NC
D = Denver, CO
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Naples, FL
S = Subcontracted
T = Murfreesboro, TN

| Sample ID | Date | Time | Comp/ Grab | Matrix | Preserv. | Containers | | | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~S1 m/s~~ | | | | | | | | | | | | | | | |
| S1 | 3/1/97 | 4:02PM | GRAB | GROUND WATER | | 2 VOAS | X | | 9703009-01 | | | | | | SAMPLE WATER FOR BENZENE |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Lab Use Only Custody Seal: ☐ Yes ☐ No ☐ N/A Init. Lab Temp. Rec. Lab Temp.

COMMENTS:

Rec'd on ice

| | | | | | |
|---|---|---|---|---|---|
| Relinquished By: M. J. Babuin | Date: 3/3/97 | Time: 4:40pm | Received By: | Date: 3/5 | Time: 4:40pm |
| Relinquished By: | Date: | Time: | Received By: | Date: 3/4/97 | Time: 1100 |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| Relinquished By: | Date: | Time: | Received By: | Date | Time |

State Samples Collected: NC

Lab Use Only

# CONTRACTOR'S REMOVAL DATA

Underground Fuel Tank Replacement
AT&T RADIO RELAY STATION
Silk Hope, North Carolina

CONTRACTOR

UNGER CONSTRUCTION COMPANY
7210 Old Taft Road
Muskogee, OK 74401
(918) 638-5028

UNGER CONSTRUCTION COMPANY
7210 Old Taft Road - Muskogee, OK 74401 (918) 683-5028

# UNDERGROUND FUEL TANK REMOVAL

## AT&T FACILITY

## SILK HOPE, NORTH CAROLINA

REMOVAL By
UNGER CONSTRUCTION COMPANY
SEPTEMBER 1996

# CONTENTS

Photo No. 1

Photo No. 1 photos not available.

DAILY WORK LOG

Job # 387 Date: 9-12-96

Job: SILK HOPE INC.

Weather Conditions: COOL, CLOUDY & RAINY

Subcontractors on Job:

Visitors:

Inspectors:

Problems/Delays:

Materials (needs, receipts, delays): FUEL LINE & FITTING FOR TEMP. TANK FUEL TRANSFER PUMP, FUEL REMOVAL

Work done: PUMP WATER OUT OF SUMP WHILE GROUND WATER RUNNING IN; SET, FILL & HOOK UP TEMP TANK, GET PRIMARY TANK PUMPED OUT

Change Orders:

Miscellaneous Information:

Superintendent: M. Chris Miller

DAILY WORK LOG

Job # 383 Date: 9-13-96

Job: SILK HOPE, N.C.

Weather Conditions: SUNNY + WARM

Subcontractors on Job: _____

Visitors: _____

Inspectors: _____

Problems/Delays: ENVIRONMENTALIST SAYS DIRT IS HOT, GOT BACK FROM GETTING PLASTIC ENVIRONMENTALIST WAS GONE, GROUNDWATER 2' DOWN

Materials (needs, receipts, delays): LUMBER FOR FORMS, 3 ROLLS PLASTIC, REBAR FOR ANCHOR PAD

Work done: BUST UP COVER PAD, PULL BOLLARDS, START DIGGING UP TANK, GO GET PLASTIC, WAIT ON ENVIRONMENTALIST TO GET BACK, PULL TANK, ASSIST IN COLLECTING SAMPLES, PICK UP REBAR

Change Orders: _____

Miscellaneous Information: _____

Superintendent: M. Chris Mack

DAILY WORK LOG

Job # 383 Date: 9-14-96

Job: SILK HOPE, N.C.

Weather Conditions: SUNNY & WARM

Subcontractors on Job:

Visitors:

Inspectors:

Problems/Delays: DIRT TOO WET TO HANDLE

Materials (needs, receipts, delays):

Work done: START STOCKPILING DIRT, CUT & CLEAN TANK, GET ROCK DELIVERED, START BACKFILLING, TAKE DOWN FENCE, DIG & FIND GROUND RING

Change Orders:

Miscellaneous Information:

Superintendent: M. Chris McLee

DAILY WORK LOG

Job # 383 Date: 9-15-96

Job: SILK HOPE, N.C.

Weather Conditions: CLOUDY & RAINY

Subcontractors on Job:

Visitors:

Inspectors:

Problems/Delays:

Materials (needs, receipts, delays):

Work done: SET GRADE FOR ANCHOR PAD, CADWELD GROUNDS, BUILD FORM FOR ANCHOR PAD.

Change Orders:

Miscellaneous Information:

Superintendent: M. Chris McTee

DAILY WORK LOG

Job # 383 Date: 9-16-96

Job: SILK HOPE, N.C.

Weather Conditions: RAIN & COOL

Subcontractors on Job:

Visitors:

Inspectors:

Problems/Delays: RAIN ALL DAY, HARD TO FINISH CONCRETE IN RAIN

Materials (needs, receipts, delays): BACKFILL, CONCRETE 4 YARDS

Work done: TIE DOUBLE REBAR MATS, POUR ANCHOR PAD & PIPESTAND PADS, FIGHT RAIN TO FINISH CONCRETE

Change Orders:

Miscellaneous Information:

Superintendent: [signature]

DAILY WORK LOG

Job # 383 Date: 9-17-96

Job: SILK HOPE, N.C.

Weather Conditions: SUNNY & COOL

Subcontractors on Job: BUFFALO FENCE

Visitors:

Inspectors:

Problems/Delays: GROUND VERY WET

Materials (needs, receipts, delays): CRANE SERVICE, QUOTE ON FENCE

Work done: PULL FORMS, START GRADING INSIDE NEW FENCED AREA, SET NEW TANK, TRY TO DRESS UP BUT TO WET, SET PIPESTAND PADS, PICK UP & LOAD TRASH, TRY TO FIND A PLACE TO TAKE TRASH

Change Orders:

Miscellaneous Information:

Superintendent: M Chris Mills

DAILY WORK LOG

Job # 383 Date: 9-18-96

Job: SILK HOPE, INC.

Weather Conditions: SUNNY & WARM

Subcontractors on Job: _____

Visitors: _____

Inspectors: _____

Problems/Delays: _____

Materials (needs, receipts, delays): FUEL FOR NEW TANK, TANK DISPOSAL, GRASS SEED, ~~4~~ 40 BALES STRAW

Work done: HAUL OFF TRASH, HAUL OFF & DISPOSE OF TANK, ANCHOR NEW TANK & FILL WITH FUEL, FINISH GRADING

Change Orders: _____

Miscellaneous Information: _____

Superintendent: Jm. Chris McKee

DAILY WORK LOG

Job # 383 Date: 9-19-96

Job: SILK HOPE, NC.

Weather Conditions: SUNNY & WARM

Subcontractors on Job:

Visitors:

Inspectors:

Problems/Delays: TOP SOIL 1½ HRS LATE

Materials (needs, receipts, delays): TOP SOIL

Work done: GET TOP SOIL DELIVERED, SPREAD TOPSOIL, SPREAD SEED & STRAW

Change Orders:

Miscellaneous Information:

Superintendent: M. Chris McKee

DAILY WORK LOG

Job # _____ Date: 9-29-82

Job: Silk Hope NC

Weather Conditions: Rain off + on

Subcontractors on Job: _____

Visitors: _____

Inspectors: _____

Problems/Delays: _____

Materials (needs, receipts, delays): _____

Work done: Cleaned up trash around job - full front bucket on hoe. Had to remove almost everything from trailer just to get a lane to walk in. Rearranged trailer + put everything in place. Jump started the KW, gauges show

Change Orders: that it isn't charging, appears to have a new alternator on it. Removed 180' ⅞ rebar for use at silacity.

Miscellaneous Information: tried to wash red clay off of white truck.

Superintendent: Dee Dee Lamm

DAILY WORK LOG

Job #: _____ Date: 10-6-96

Job: Silk Hope, Siler City NC

Weather Conditions: _____

Subcontractors on Job: _____

_____

Visitors: _____

_____

Inspectors: _____

_____

Problems/Delays: _____

_____

_____

Materials (needs, receipts, delays): _____

_____

Work done: Removed + Disposed of Visqueen, Remove 20 bales of hay, left the rest for future use, Spread dirt to let it dry out, Cleaned battery connections on KW Took KW, Backhoe, + Job trailer to Mountrose.

Change Orders: painted vent pipe + Fill lid Siler City

_____

Miscellaneous Information: _____

_____

_____

Superintendent: [signature]

# Chandler inc.
CONCRETE COMPANY

Chandler Concrete Co., Inc. / Central Concrete Company
Post Office Box 1239 • Burlington, North Carolina 27216
Telephone: 910-226-1181 / Fax 910-570-0557

To order, call:

| | | | |
|---|---|---|---|
| Asheboro | (910) 625-1070 | Hillsborough | (919) 732-8121 |
| Burlington | (910) 226-6365 | Pittsboro | (919) 542-4242 |
| Chapel Hill | (919) 942-0200 | Rockingham Co. | (910) 342-5771 |
| Durham | (919) 598-1424 | Roxboro | (910) 599-8343 |
| Greensboro | (910) 294-3488 | Siler City | (919) 742-2627 |

**CAUTION: CONCRETE BURNS! • READ THIS WARNING BEFORE USING**

CONTACT WITH WET (UNHARDENED) CONCRETE, CAN CAUSE SKIN IRRITATION, SEVERE CHEMICAL BURNS, OR SERIOUS EYE DAMAGE. Avoid all contact with eyes. Wear rubber boots and gloves and avoid contact directly with skin or through porous materials. In case of contact with eyes or skin, FLUSH THOROUGHLY WITH WATER. If irritation persists, get medical attention promptly. KEEP CHILDREN AWAY.

| CUSTOMER NAME | DELIVERY INSTRUCTIONS |
|---|---|
| COD UNGER CONST. TAXED | CLSRK ROAD<br>87 S. T/R SNOW CAMP RD.<br>CROSS GRS. C. HILL RD. T/L<br>CLARK ROAD |

| DATE | TICKET # | SLUMP | TIME |
|---|---|---|---|
| 09/16/96 | 0022945 | 4.0 | 10:29 |

| CUSTOMER # | PURCHASE ORDER NUMBER | ORDER # | TAX CODE | PLANT | ZONE | TRUCK # | DRIVER NAME |
|---|---|---|---|---|---|---|---|
| 609999 | | 0011 | 06 | 601 | CR15 | 143 | MCADAMS, BILL |

| LOAD QUANTITY | CUMULATIVE QUANTITY | ORDERED QUANTITY | PRODUCT CODE | PRODUCT DESCRIPTION | UNIT OF MEASURE | UNIT PRICE | AMOUNT |
|---|---|---|---|---|---|---|---|
| 4.00 | 4.00 | 4.00 | 41 | 4000 PSI | | | |
| 1.00 | | | 067 | FREIGHT | | | |

| LV. PLANT | ARR. JOB | START POUR | END POUR | LV. JOB | ARR. PLANT |
|---|---|---|---|---|---|
| 10:38 | 11:25 | | | | |

| SUBTOTAL |
|---|
| TAX |
| TOTAL |
| PREV. BALANCE |
| GRAND TOTAL |

| WATER ADDED | SLUMP POURED | TEST CYLINDERS MADE |
|---|---|---|
| | | YES ☐ NO ☐ |

Customer acknowledges receipt of the concrete in good condition. Customer agrees to purchase and pay for the concrete at the price stated and upon the terms and conditions described on the reverse side of this ticket. Customer expressly agrees to convey the above warning to all persons who come in contact with wet (unhardened) concrete.

UNUSUAL INCIDENT OF NOTE ON THIS DELIVERY

[signature] — AUTHORIZED REPRESENTATIVE OF CUSTOMER

11:30AM — TIME

FORM NO. 6010004048

LUCK STONE Corporation

LUCK STONE CORPORATION
BURLINGTON PLANT
P.O. BOX 99
HAW RIVER NC 27258-
Phone: (910)578-5420 Fax: (910)578-5410

TICKET NO. 168557
07:14 09/16/1996

| CUSTOMER | CUST ACCT # | ORDER ID | P.O. # |
|---|---|---|---|
| J E LONG SAND & STONE<br>1216 RAUHUT STREET<br>BURLINGTON NC 27217-1445<br>00 | 212127 | LONGF08 | |
| | PROJECT # | PROJECT DESCRIPTION | |
| | JE LONG SA | J.E. LONG SAND & STONE | |

DELIVERY INSTRUCTIONS
J.E. LONG SAND & STONE

Unger Const.

SPECIAL INSTRUCTIONS

| PRODUCT | PRODUCT DESCRIPTION |
|---|---|
| 11 | AGGREGATE BASE COURSE |

13.98-Metric

| MAX GROSS | GROSS SCALE WT | TARE WT | NET WT | NET TONS | STONE RATE | STONE PRICE |
|---|---|---|---|---|---|---|
| 55.000 LBS. | 53.320 LBS. | 22.500 LBS. | 30.820 LBS. | 15.41-Short | | |

| TRUCK # | HAULER # | HAULER NAME | HAUL RATE | HAUL CHARGE |
|---|---|---|---|---|
| 114 | | | | |
| J.E. LONG | | | | |

| | | | | |
|---|---|---|---|---|
| TOTAL QTY ORDERED | 0.00 | TONS | | SALES TAX |
| TOTAL QTY DELIVERED | 742.35 | SHORT TONS | 673.45 METRIC TONS | |
| DELIVERED TODAY | 15.41 | SHORT TONS | 13.98 METRIC TONS | TOTAL |
| LOADS TODAY | 1 | LOADS | | |

N.C. Public Weighmaster Licenses expire 6/30/97-Tommy Reed, Lic.#
2383;Shawn Boswell, #9073

WEIGHMASTER
TOMMY REED

RECEIVED BY _____
CUSTOMER

FC # [redacted]

13

LUCK STONE Corporation

LUCK STONE CORPORATION
BURLINGTON PLANT
P.O. BOX 99
HAW RIVER NC 27258-
Phone: (910)578-5420 Fax: (910)578-5410

TICKET NO. 188550
11:48 09/14/1998

| CUSTOMER | CUST ACCT # | ORDER ID | P.O. # |
|---|---|---|---|
| J E LONG SAND & STONE<br>1216 RAUBUT STREET<br>BURLINGTON NC 27217-1445 | 212127 | LONGFOB | |

| PROJECT # | PROJECT DESCRIPTION |
|---|---|
| JE LONG SA | J.E. LONG SAND & STONE |

DELIVERY INSTRUCTIONS
J.E. LONG SAND & STONE

SPECIAL INSTRUCTIONS

Unger Const.
M. Chris Mosley

| PRODUCT | PRODUCT DESCRIPTION |
|---|---|
| 11 | AGGREGATE BASE COURSE |

14.5l-Metric

| MAX GROSS | GROSS SCALE WT. | TARE WT. | NET WT. | NET TONS | STONE RATE | STONE PRICE |
|---|---|---|---|---|---|---|
| 55.000 LBS. | 54.480 LBS. | 22.500 LBS. | 31.980 LBS. | 15.99-Short | | |

| TRUCK # | HAULER # | HAULER NAME | HAUL RATE | HAUL CHARGE |
|---|---|---|---|---|
| 114 | | J.E. LONG | | |

| | | | | |
|---|---|---|---|---|
| TOTAL QTY ORDERED | 0.00 | TONS | | SALES TAX |
| TOTAL QTY DELIVERED | 726.94 | SHORT TONS | 659.47 METRIC TONS | |
| DELIVERED TODAY | 46.02 | SHORT TONS | 43.56 METRIC TONS | TOTAL |
| LOADS TODAY | 3 | LOADS | | |

N.C. Public weighmaster licenses expire 6/30/97-Tommy Redd. LIC.# 2363-Shawn Boswell. #9073

WEIGHMASTER
TOMMY REDD

RECEIVED BY Earl Overman
CUSTOMER

FC # [redacted]

LUCK STONE Corporation

LUCK STONE CORPORATION
BURLINGTON PLANT
P.O. BOX 99
HAW RIVER NC 27258-
Phone: (910)578-5400 Fax: (910)578-5410

TICKET NO. 188921
19:06 09/14/1998

| CUSTOMER | CUST ACCT # | ORDER ID | P.O. # |
|---|---|---|---|
| J E LONG SAND & STONE<br>1210 RAGHUT STREET<br>BURLINGTON NC 27217-1445 00 | 212127 | LONGFOB | |
| | PROJECT # | PROJECT DESCRIPTION | |
| | JE LONG SA | J.E. LONG SAND & STONE | |

DELIVERY INSTRUCTIONS
J.E. LONG SAND & STONE

SPECIAL INSTRUCTIONS

Unger Coast
M. Chris McKee

| PRODUCT | PRODUCT DESCRIPTION |
|---|---|
| 11 | AGGREGATE BASE COURSE |

14.56-Metric

| MAX GROSS | GROSS SCALE WT | TARE WT | NET WT | NET TONS | STONE RATE | STONE PRICE |
|---|---|---|---|---|---|---|
| 55.000 LBS. | 54.600 LBS. | 22.500 LBS. | 32.100 LBS. | 16.05-Short | | |

| TRUCK # | HAULER # | HAULER NAME | HAUL RATE | HAUL CHARGE |
|---|---|---|---|---|
| 114 | | | | |
| J.E. LONG | | | | |

| | | | | |
|---|---|---|---|---|
| TOTAL QTY ORDERED | 0.00 | TONS | | SALES TAX |
| TOTAL QTY DELIVERED | 710.95 | SHORT TONS | 644.96 METRIC TONS | |
| DELIVERED TODAY | 32.03 | SHORT TONS | 29.06 METRIC TONS | TOTAL |
| LOADS TODAY | 2 | LOADS | | |

N.C. Public Weighmaster licenses expire 6/30/97-Tommy Redd. Lic.#
2585;Shawn Boswell, 89077

WEIGHMASTER
TOMMY REDD

RECEIVED BY
CUSTOMER

FC # [redacted]

LUCK STONE Corporation

LUCK STONE CORPORATION
BURLINGTON PLANT
P.O. BOX 99
HAW RIVER NC 27258-
Phone: (910)578-5420 Fax: (910)578-5419

TICKET NO. 188612
02:47 07/14/97

| CUSTOMER | CUST ACCT # | ORDER ID | P.O. # |
|---|---|---|---|
| J E LONG SAND & STONE<br>1216 RAILROAD STREET<br>BURLINGTON NC 27217-1445 | 212127 | LONGFOR | |
| | PROJECT # | PROJECT DESCRIPTION | |
| | JE LONG SA | J.E. LONG SAND & STONE | |

DELIVERY INSTRUCTIONS
J.E. LONG SAND & STONE

Unger Const.
M. Chrismon

SPECIAL INSTRUCTIONS

| PRODUCT | PRODUCT DESCRIPTION |
|---|---|
| 11 | AGGREGATE BASE COURSE |

14.50-Metric

| MAX GROSS | GROSS SCALE WT. | TARE WT. | NET WT. | NET TONS | STONE RATE | STONE PRICE |
|---|---|---|---|---|---|---|
| 99,000 LBS. | 54,460 LBS. | 22,500 LBS. | 31,960 LBS. | 15.98-Short | | |

| TRUCK # | HAULER # | HAULER NAME | HAUL RATE | HAUL CHARGE |
|---|---|---|---|---|
| 114 | | J.E. LONG | | |

| | | | | |
|---|---|---|---|---|
| TOTAL QTY ORDERED | 0.00 | TONS | | SALES TAX |
| TOTAL QTY DELIVERED | 634.90 | SHORT TONS | 630.40 METRIC TONS | |
| DELIVERED TODAY | 15.98 | SHORT TONS | 14.50 METRIC TONS | TOTAL |
| LOADS TODAY | 1 | LOADS | | |

N.C. Public Weighmaster licenses expire 6/30/97-Tommy Reid. LIC.# 2363;Shawn Boswell. #9073

WEIGHTMASTER
TOMMY REID

RECEIVED BY Paul Overman

CUSTOMER

FC # [redacted]

16

**J. E. Long, Inc.**
Sand & Stone
1216 Rauhut St.
Burlington, N.C. 27217
910-228-9706

26002

Thurs. 8:30 A.M.

Date: SEP 19 1996 P.O.#

Name: Unger Construction

Job: A.T. & T.

Delivery Address: Clarke Rd - Snow Camp

Billing Address:

Ph.#

Mortar Sand - Shale -

White Sand - Topsoil - Hand Ld.

# Stone - Sandy Topsoil -

Screenings - Filldirt -

White Stone - Brick Chips -

Directions:

$

C.O.D ~ Account - Cash - Check #

Rec'd By: THANK YOU Delv. By: Earl

UNGER
CONSTRUCTION
COMPANY

# FUEL RECEIPT CERTIFICATE

Date: 9-12-96

Approximately 126 gallons of DIESEL

was received this date by S+H OIL CO. from

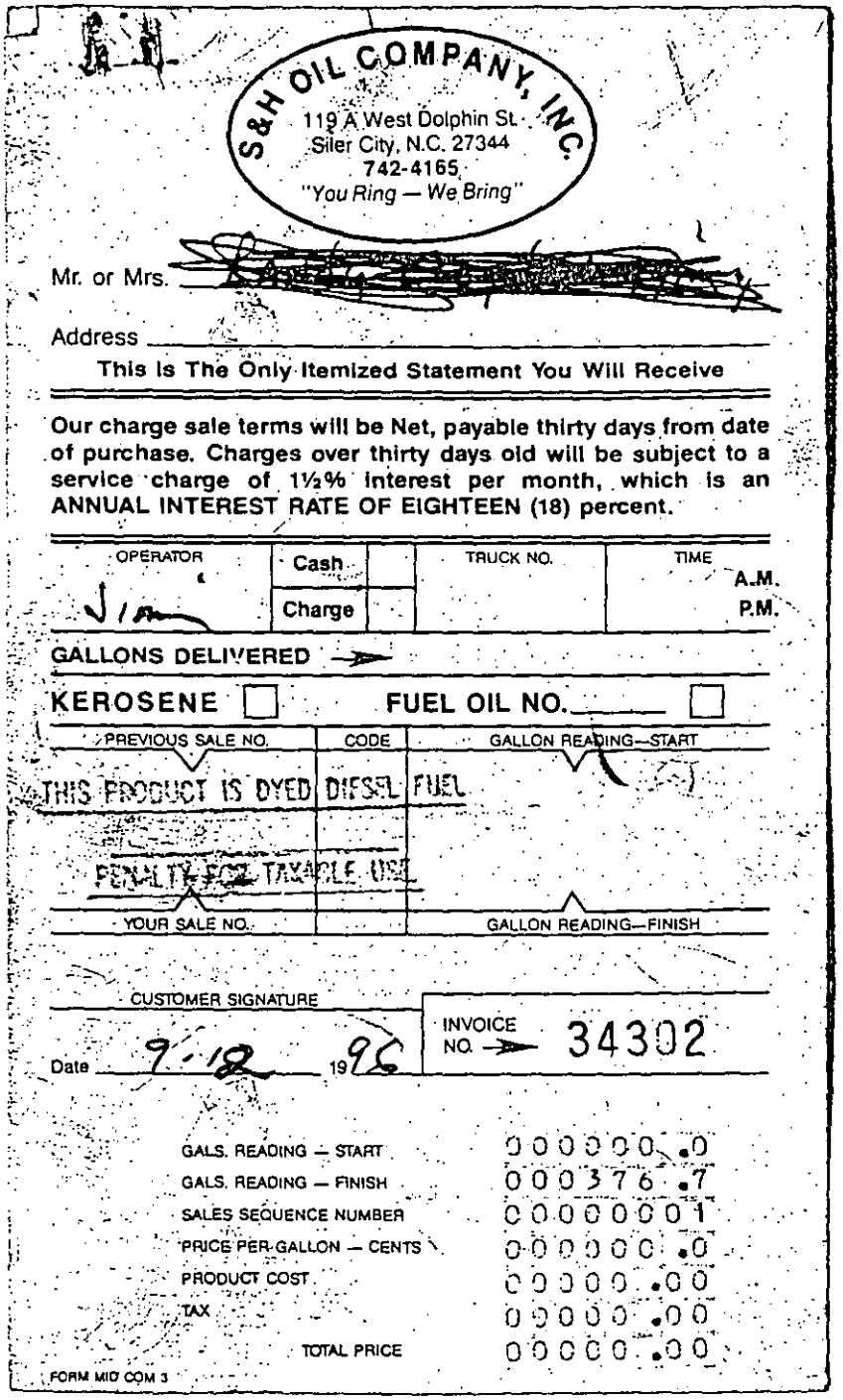
AT & T Facility located at SILK HOPE, N.C..

UNGER CONSTRUCTION CO.

M. Chris McKee

Superintendent

7210 Old Taft Road • Muskogee, OK 74401 • (918) 683-5028 • FAX (918) 683-8761



S&H OIL COMPANY, INC.
119 A West Dolphin St.
Siler City, N.C. 27344
742-4165
"You Ring — We Bring"

Mr. or Mrs. [redacted]

Address

**This Is The Only Itemized Statement You Will Receive**

**Our charge sale terms will be Net, payable thirty days from date of purchase. Charges over thirty days old will be subject to a service charge of 1½% interest per month, which is an ANNUAL INTEREST RATE OF EIGHTEEN (18) percent.**

| OPERATOR | | | TRUCK NO. | TIME |
|---|---|---|---|---|
| Jim | Cash | | | A.M. |
| | Charge | | | P.M. |

GALLONS DELIVERED →

KEROSENE ☐ FUEL OIL NO.____ ☐

| PREVIOUS SALE NO. | CODE | GALLON READING—START |
|---|---|---|
| THIS PRODUCT IS DYED | DIESEL | FUEL |
| PENALTY FOR TAXABLE USE | | |
| YOUR SALE NO. | | GALLON READING—FINISH |

CUSTOMER SIGNATURE

Date 9-12 19 96

INVOICE NO. → 34302

| | |
|---|---|
| GALS. READING — START | 000000.0 |
| GALS. READING — FINISH | 000376.7 |
| SALES SEQUENCE NUMBER | 00000001 |
| PRICE PER GALLON — CENTS | 000000.0 |
| PRODUCT COST | 00000.00 |
| TAX | 00000.00 |
| TOTAL PRICE | 00000.00 |

FORM MID COM 3

Certificate Of Tank Disposal

Tank Location: CLARK ROAD SILK HOPE, N.C.

Site Address: CLARK RD

City/State: SILK HOPE, N.C.

Tank Serial # or Manufacturer's #:

Tank Size: 560 Type: FIBERGLASS COATED STEEL

Original Tank Contents: DIESEL

Tank Owner: AT&T Attn:

Owner Address: PO Box 188, LAGRANGE, N.C. 28551

Project #: Date Of Disposal:

Disposal Facility Address: 501 WEST RAILROAD ST.

City/State: LAGRANGE, N.C. 28551

Method Of Disposal: (Describe Cleaning, Destruction, & Disposal)

CUT BOTH ENDS OUT & CLEAN WITH B/O-SOLVE

The Above Will Certify That The Structure Noted Above Was Disposed Of In The Manner Prescribed Under EPA Regulations.

Verified By: M. Chris McKee

Company Name: Unger Construction Company

Title: SUPERINTENDENT Date: 9-18-96

MEMBER STI STEEL TANK INSTITUTE

# *MMM, Inc.*

P.O. Box 188
La Grange, N.C. 28551
Phone 919-527-0229
Fax 919-523-7211

**TO:** UNGER CONST. CO.
MUSKOGEE, OK. 74401
GREENSBORO 7210 OLD TAFT Road 918-683-5028

| QTY | ITEM NO. | DESCRIPTION | WEIGHT | PRICE | AMOUNT |
|---|---|---|---|---|---|
| | | | | | |
| 1 | Disposal | Delivery Only of Tank | Holding | | |
| | | | | | |
| | | CLARK Hwy, | | | |
| | | SILK HOPE, N.C. | | | |
| | | | | | |
| | | DISC Disposal | | | |
| | | ONLY | | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| | | | | | |
| | | | | TOTAL | |

PLEASE INSPECT MERCHANDISE UPON RECEIPT. MMM, INC. MUST BE NOTIFIED WITHIN 60 DAYS OF SHIPMENT OF ANY DAMAGED MERCHANDISE. ANY RETURNS MUST BE APPROVED BY MMM, INC IN WRITING PRIOR TO THEIR RETURN. PURCHASER MUST FILE CLAIM FOR FREIGHT DAMAGE.

Received and Checked

By _____

Thank You

Driver: _____

UNGER
CONSTRUCTION
COMPANY

Date: October 11, 1996

Hanson Engineers
47 Perimeter Center East
Suite 280
Atlanta, GA 30346

Attention: Mr. John Ferguson

Dear Mr. Ferguson

UNGER CONSTRUCTION COMPANY warrants the underground/aboveground storage tank removal and installation per specifications at the AT&T site at Silk Hope, NC to be free from defects in workmanship and materials for a period of one year from the date of this letter.

Sincerely,

UNGER CONSTRUCTION COMPANY

Wesley Seabolt
Project Manager

7210 Old Taft Road • Muskogee, OK 74401 • (918) 683-5028 • FAX (918) 683-8761

27

# CONTRACTOR'S INSTALLATION DATA

Underground Fuel Tank Replacement
AT&T RADIO RELAY STATION
Silk Hope, North Carolina

CONTRACTOR

UNGER CONSTRUCTION COMPANY
7210 Old Taft Road
Muskogee, OK 74401
(918) 638-5028

UNGER CONSTRUCTION COMPANY
7210 Old Taft Road - Muskogee, OK 74401 (918) 683-5028

# ABOVEGROUND FUEL TANK INSTALLATION

## AT&T FACILITY

## SILK HOPE, NORTH CAROLINA

INSTALLATION By
UNGER CONSTRUCTION COMPANY
SEPTEMBER 1996

# CONTENTS

Photo No. 1

Photo No. 1 photos not available.

DAILY WORK LOG

Job # 387 Date: 9-12-96

Job: SILK HOPE, INC.

Weather Conditions: COOL, CLOUDY & RAINY

Subcontractors on Job:

Visitors:

Inspectors:

Problems/Delays:

Materials (needs, receipts, delays): FUEL LINE & FITTING FOR TEMP. TANK FUEL TRANSFER PUMP, FUEL REMOVAL

Work done: PUMP WATER OUT OF SUMP WHILE GROUND WATER RUNNING IN; SET, FILL & HOOK UP TEMP TANK, GET PRIMARY TANKS PUMPED OUT

Change Orders:

Miscellaneous Information:

Superintendent: M. Chris Miller

DAILY WORK LOG

Job # 383 Date: 9-13-96

Job: SILK HOPE, N.C.

Weather Conditions: SUNNY + WARM

Subcontractors on Job:

Visitors:

Inspectors:

Problems/Delays: ENVIRONMENTALIST SAYS DIRT IS HOT, GOT BACK FROM GETTING PLASTIC ENVIRONMENTALIST WAS GONE, GROUNDWATER 2' DOWN

Materials (needs, receipts, delays): LUMBER FOR FORMS, 3 ROLLS PLASTIC, REBAR FOR ANCHOR PAD

Work done: BUST UP COVER PAD, PULL BOLLARDS, START DIGGING UP TANK, GO GET PLASTIC, WAIT ON ENVIRONMENTALIST TO GET BACK, PULL TANK, ASSIST IN COLLECTING SAMPLES, PICK UP REBAR

Change Orders:

Miscellaneous Information:

Superintendent: M. Ohm Brooks

DAILY WORK LOG

Job # 383 Date: 9-14-96

Job: SILIS HOPE, N.C.

Weather Conditions: SUNNY & WARM

Subcontractors on Job:

Visitors:

Inspectors:

Problems/Delays: DIRT TOO WET TO HANDLE

Materials (needs, receipts, delays):

Work done: START STOCKPILING DIRT, CUT & CLEAN TANK, GET ROCK DELIVERED, START BACKFILLING, TAKE DOWN FENCE, DIG & FIND GROUND RING

Change Orders:

Miscellaneous Information:

Superintendent: M. Chris Miller

DAILY WORK LOG

Job # 383 Date: 9-15-96

Job: SILK HOPE, N.C.

Weather Conditions: CLOUDY & RAINY

Subcontractors on Job:

Visitors:

Inspectors:

Problems/Delays:

Materials (needs, receipts, delays):

Work done: SET GRADE FOR ANCHOR PAD, CADWELD GROUNDS, BUILD FORM FOR ANCHOR PAD

Change Orders:

Miscellaneous Information:

Superintendent: M. Chris McIver

DAILY WORK LOG

Job # 383 Date: 9-16-96

Job: SILK HOPE, N.C.

Weather Conditions: RAIN & COOL

Subcontractors on Job:

Visitors:

Inspectors:

Problems/Delays: RAIN ALL DAY, HARD TO FINISH CONCRETE IN RAIN

Materials (needs, receipts, delays): BACKFILL, CONCRETE 4 YRDS

Work done: TIE DOUBLE REBAR MATS, POUR ANCHOR PAD & PIPE STAND PADS, FIGHT RAIN TO FINISH CONCRETE

Change Orders:

Miscellaneous Information:

Superintendent: [signature]

DAILY WORK LOG

Job # 383 Date: 9-17-96

Job: SILK HOPE, N.C.

Weather Conditions: SUNNY & COOL

Subcontractors on Job: BUFFALO FENCE

Visitors:

Inspectors:

Problems/Delays: GROUND VERY WET

Materials (needs, receipts, delays): CRANE SERVICE, QUOTE ON FENCE

Work done: PULL FORMS, START GRADING INSIDE NEW FENCED AREA, SET NEW TANK, TRY TO DRESS UP BUT TO WET, SET PIPESTAND PADS, PICK UP & LOAD TRASH, TRY TO FIND A PLACE TO TAKE TRASH

Change Orders:

Miscellaneous Information:

Superintendent: M. Chris Mejia

DAILY WORK LOG

Job # 383 Date: 9-18-96

Job: SILK HOPE, INC.

Weather Conditions: SUNNY & WARM

Subcontractors on Job:

Visitors:

Inspectors:

Problems/Delays:

Materials (needs, receipts, delays): FUEL FOR NEW TANK, TANK DISPOSAL, GRASS SEED, ~~STRAW~~ BALES STRAW

Work done: HAUL OFF TRASH, HAUL OFF & DISPOSE OF TANK, ANCHOR NEW TANK & FILL WITH FUEL, FINISH GRADING

Change Orders:

Miscellaneous Information:

Superintendent: Jim Chris McKee

DAILY WORK LOG

Job # 383 Date: 9-19-96

Job: SILK HOPE, N.C.

Weather Conditions: SUNNY & WARM

Subcontractors on Job: _____

Visitors: _____

Inspectors: _____

Problems/Delays: TOP SOIL 1½ HRS LATE

Materials (needs, receipts, delays): TOP SOIL

Work done: GET TOP SOIL DELIVERED, SPREAD TOPSOIL, SPREAD SEED & STRAW

Change Orders: _____

Miscellaneous Information: _____

Superintendent: M. Chris McKee

# Chandler inc.
CONCRETE COMPANY

Chandler Concrete Co., Inc. / Central Concrete Company
Post Office Box 1239 • Burlington, North Carolina 27216
Telephone: 910-226-1181 / Fax 910-570-0557

To order, call:

| | | | |
|---|---|---|---|
| Asheboro | (910) 625-1070 | Hillsborough | (919) 732-8121 |
| Burlington | (910) 226-6365 | Pittsboro | (919) 542-4242 |
| Chapel Hill | (919) 942-0200 | Rockingham Co. | (910) 342-5771 |
| Durham | (919) 598-1424 | Roxboro | (910) 599-8343 |
| Greensboro | (910) 294-3488 | Siler City | (919) 742-2627 |

**CAUTION: CONCRETE BURNS! • READ THIS WARNING BEFORE USING**

CONTACT WITH WET (UNHARDENED) CONCRETE, CAN CAUSE SKIN IRRITATION, SEVERE CHEMICAL BURNS, OR SERIOUS EYE DAMAGE. Avoid all contact with eyes. Wear rubber boots and gloves and avoid contact directly with skin or through porous materials. In case of contact with eyes or skin, FLUSH THOROUGHLY WITH WATER. If irritation persists, get medical attention promptly. KEEP CHILDREN AWAY.

| CUSTOMER NAME | DELIVERY INSTRUCTIONS |
|---|---|
| COD HUNGER CONST. TAXED | CLSRK ROAD<br>87 S. T/R SNOW CAMP RD.<br>CROSS GRS. C. HILL RD. T/L<br>CLARK ROAD |

| DATE | TICKET # | SLUMP | TIME |
|---|---|---|---|
| 09/16/96 | 0022945 | 4.0 | 10:39 |

| CUSTOMER # | PURCHASE ORDER NUMBER | ORDER # | TAX CODE | PLANT | ZONE | TRUCK # | DRIVER NAME |
|---|---|---|---|---|---|---|---|
| 509999 | | 0011 | 06 | 601 | CR15 | 143 | MCADAMS, BILL |

| LOAD QUANTITY | CUMULATIVE QUANTITY | ORDERED QUANTITY | PRODUCT CODE | PRODUCT DESCRIPTION | UNIT OF MEASURE | UNIT PRICE | AMOUNT |
|---|---|---|---|---|---|---|---|
| 4.00 | 4.00 | 4.00 | 41 | 4000 PSI | | | |
| 1.00 | | | 067 | FREIGHT | | | |

| LV. PLANT | ARR. JOB | START POUR | END POUR | LV. JOB | ARR. PLANT |
|---|---|---|---|---|---|
| 10:38 | 11:23 | | | | |

| SUBTOTAL |
|---|
| TAX |
| TOTAL |
| PREV. BALANCE |
| GRAND TOTAL |

| WATER ADDED | SLUMP POURED | TEST CYLINDERS MADE |
|---|---|---|
| | | YES ☐ NO ☐ |

Customer acknowledges receipt of the concrete in good condition. Customer agrees to purchase and pay for the concrete at the price stated and upon the terms and conditions described on the reverse side of this ticket. Customer expressly agrees to convey the above warning to all persons who come in contact with wet (unhardened) concrete.

UNUSUAL INCIDENT OF NOTE ON THIS DELIVERY

Jr. Chris Bridges
AUTHORIZED REPRESENTATIVE OF CUSTOMER

11:30AM
TIME

FORM NO. 6010004048

LUCK STONE Corporation

LUCK STONE CORPORATION
BURLINGTON PLANT
P.O. BOX 99
HAW RIVER NC 27258-
Phone: (910)578-5420 Fax: (910)578-5410

TICKET NO. 198537
07:14 09/16/1996

| CUSTOMER | CUST ACCT # | ORDER ID | P.O. # |
|---|---|---|---|
| J E LONG SAND & STONE<br>1216 RAUHUT STREET<br>BURLINGTON NC 27217-1445<br>00 | 212127 | LONGFOB | |
| | PROJECT # | PROJECT DESCRIPTION | |
| | JE LONG SA | J.E. LONG SAND & STONE | |

DELIVERY INSTRUCTIONS
J.E. LONG SAND & STONE

Unger Const.

SPECIAL INSTRUCTIONS

| PRODUCT | PRODUCT DESCRIPTION |
|---|---|
| 11 | AGGREGATE BASE COURSE |

13.98-Metric

| MAX GROSS | GROSS SCALE WT | TARE WT | NET WT | NET TONS | STONE RATE | STONE PRICE |
|---|---|---|---|---|---|---|
| 55.000 LBS. | 53.320 LBS. | 22.500 LBS. | 30.820 LBS. | 15.41-Short | | |

| TRUCK # | HAULER # | HAULER NAME | HAUL RATE | HAUL CHARGE |
|---|---|---|---|---|
| 114 | | | | |
| J.E. LONG | | | | |

| | | | | | |
|---|---|---|---|---|---|
| TOTAL QTY ORDERED | 0.00 | TONS | | | SALES TAX |
| TOTAL QTY DELIVERED | 742.36 | SHORT TONS | 673.45 | METRIC TONS | |
| DELIVERED TODAY | 15.41 | SHORT TONS | 13.98 | METRIC TONS | TOTAL |
| LOADS TODAY | 1 | LOADS | | | |

N.C. Public Weighmaster licenses expire 6/30/97-Tommy Read, LIC.# 2383;Shawn Boswell, #9073

WEIGHMASTER
TOMMY READ

RECEIVED BY Ernest Greene
CUSTOMER

FC # [redacted]

LUCK STONE Corporation

LUCK STONE CORPORATION
BURLINGTON PLANT
P.O. BOX 99
HAW RIVER NC 27258-
Phone: (910)578-5420 Fax: (910)578-5410

TICKET NO. 168550
11:40 09/14/1995

| CUSTOMER | CUST ACCT # | ORDER ID | P.O. # |
|---|---|---|---|
| J E LONG SAND & STONE<br>1216 RHUHOT STREET<br>BURLINGTON NC 27217-1445 | 212107 | LONGFOB | |
| | PROJECT # | PROJECT DESCRIPTION | |
| | JE LONG SA | J.E. LONG SAND & STONE | |

DELIVERY INSTRUCTIONS
J.E. LONG SAND & STONE

Unger Const.
M. Chisholm

SPECIAL INSTRUCTIONS

| PRODUCT | PRODUCT DESCRIPTION |
|---|---|
| 11 | AGGREGATE BASE COURSE |

14.51-Metric

| MAX GROSS | GROSS SCALE WT | TARE WT | NET WT | NET TONS | STONE RATE | STONE PRICE |
|---|---|---|---|---|---|---|
| 99.000 LBS. | 54.480 LBS. | 22.500 LBS. | 31.980 LBS. | 15.99-Short | | |

| TRUCK # | HAULER # | HAULER NAME | HAUL RATE | HAUL CHARGE |
|---|---|---|---|---|
| 114 | | | | |
| J.E. LONG | | | | |

| | | | | |
|---|---|---|---|---|
| TOTAL QTY ORDERED | 0.00 | TONS | | SALES TAX |
| TOTAL QTY DELIVERED | 726.94 | SHORT TONS | 659.47 METRIC TONS | |
| DELIVERED TODAY | 48.02 | SHORT TONS | 43.56 METRIC TONS | TOTAL |
| LOADS TODAY | 3 | LOADS | | |

N.C. Public weighmaster licenses expire 6/30/97-Tommy Reed. LIC.#
2563:Shawn Boswell. #9073

WEIGHMASTER
TOMMY REED

RECEIVED BY Gail Overman

CUSTOMER

FC # [redacted]

LUCK STONE Corporation

LUCK STONE CORPORATION
BURLINGTON PLANT
P.O. BOX 99
HAW RIVER NC 27258-
Phone: (910)578-5420 Fax: (910)578-5410

TICKET NO. 18497 I
14:06 07/14/1998

| CUSTOMER | CUST ACCT # | ORDER ID | P.O. # |
|---|---|---|---|
| J E LONG SAND & STONE<br>1216 RAUHUT STREET<br>BURLINGTON NC 27217-1445<br>00 | 212127 | LONGF08 | |
| | PROJECT # | PROJECT DESCRIPTION | |
| | JE LONG SA | J.E. LONG SAND & STONE | |

DELIVERY INSTRUCTIONS
J.E. LONG SAND & STONE

Unger Coast
M. Chris McKee

SPECIAL INSTRUCTIONS

| PRODUCT | PRODUCT DESCRIPTION |
|---|---|
| 11 | AGGREGATE BASE COURSE |

14.56-Metri

| MAX GROSS | GROSS SCALE WT | TARE WT | NET WT | NET TONS | STONE RATE | STONE PRICE |
|---|---|---|---|---|---|---|
| 55.000 LBS. | 54.600 LBS. | 22.500 LBS. | 32.100 LBS. | 16.05-Short | | |

| TRUCK # | HAULER # | HAULER NAME | HAUL RATE | HAUL CHARGE |
|---|---|---|---|---|
| 114 | | | | |
| J.E. LONG | | | | |

| | | | | |
|---|---|---|---|---|
| TOTAL QTY ORDERED | 0.00 | TONS | | SALES TAX |
| TOTAL QTY DELIVERED | 710.95 | SHORT TONS | 644.96 METRIC TONS | |
| DELIVERED TODAY | 32.03 | SHORT TONS | 29.06 METRIC TONS | TOTAL |
| LOADS TODAY | 2 | LOADS | | |

N.C. Public Weighmaster licenses expire 6/30/99-Tommy Redd, Lic.# 2363;Shawn Boswell, 89077

WEIGHMASTER
TOMMY REDD

RECEIVED BY
CUSTOMER

FC # [redacted]

LUCK STONE Corporation

LUCK STONE CORPORATION
BURLINGTON PLANT
P.O. BOX 99
HAW RIVER NC 27258-
Phone: (910)578-5410 Fax: (910)578-5410

TICKET NO. 68812
#8147 09/14/98

| CUSTOMER | CUST ACCT # | ORDER ID | P.O. # |
|---|---|---|---|
| J E LONG SAND & STONE<br>1216 RAILROAD STREET<br>BURLINGTON NC 27217-1445 00 | 212127 | LONGF08 | |
| | PROJECT # | PROJECT DESCRIPTION | |
| | JE LONG SA | J.E. LONG SAND & STONE | |

DELIVERY INSTRUCTIONS
J.E. LONG SAND & STONE

Unger Const.
M. Chisholm

SPECIAL INSTRUCTIONS

| PRODUCT | PRODUCT DESCRIPTION |
|---|---|
| 11 | AGGREGATE BASE COURSE |

14.50-Metric

| MAX GROSS | GROSS SCALE WT | TARE WT | NET WT | NET TONS | STONE RATE | STONE PRICE |
|---|---|---|---|---|---|---|
| 80,000 LBS. | 54,460 LBS. | 22,500 LBS. | 31,960 LBS. | 15.98-Short | | |

| TRUCK # | HAULER # | HAULER NAME | HAUL RATE | HAUL CHARGE |
|---|---|---|---|---|
| 114 | | J.E. LONG | | |

| | | | | |
|---|---|---|---|---|
| TOTAL QTY ORDERED | 0.00 | TONS | | SALES TAX |
| TOTAL QTY DELIVERED | 694.90 | SHORT TONS | 630.40 METRIC TONS | |
| DELIVERED TODAY | 15.98 | SHORT TONS | 14.50 METRIC TONS | TOTAL |
| LOADS TODAY | 1 | LOADS | | |

N.C. Public weighmaster licenses expire 6/30/99-Tommy Reid. LIC.# 2363:Shawn Boswell. #9073

WEIGHMASTER
TOMMY REID

RECEIVED BY Earl Owen

CUSTOMER

FC # [redacted]

**J. E. Long, Inc.**
Sand & Stone
1216 Rauhut St.
Burlington, N.C. 27217
910-228-9706

26002

Thurs. 8:30 A.M.

Date: SEP 19 1996 P.O.#

Name: Unger Construction

Job: A.T. & T.

Delivery Address: Clarke Rd - Snow Camp

Billing Address:

Ph.#

| | |
|---|---|
| Mortar Sand - | Shale - |
| White Sand - | (Topsoil -) 1 yard Ld. |
| # Stone - | Sandy Topsoil - |
| Screenings - | Filldirt - |
| White Stone - | Brick Chips - |

Directions:

$

(C.O.D.) Account - Cash - Check #

Rec'd By: THANK YOU Delv. By: Earl

S&H OIL COMPANY, INC.
119 A West Dolphin St.
Siler City, N.C. 27344
742-4165
"You Ring — We Bring"

Mr. or Mrs. Unger Const.

Address

This is The Only Itemized Statement You Will Receive

Our charge sale terms will be Net, payable thirty days from date of purchase. Charges over thirty days old will be subject to a service charge of 1½% interest per month, which is an ANNUAL INTEREST RATE OF EIGHTEEN (18) percent.

| OPERATOR | Cash | | TRUCK NO. | TIME A.M. P.M. |
|---|---|---|---|---|
| | Charge | | | |

GALLONS DELIVERED → 585.3

KEROSENE ☐ FUEL OIL NO. ____ ☐

| PREVIOUS SALE NO. | CODE | GALLON READING—START |
|---|---|---|
| THIS PRODUCT IS DYED DIESEL FUEL | | |
| PENALTY FOR TAXABLE USE | | |
| YOUR SALE NO. | | GALLON READING—FINISH |

CUSTOMER SIGNATURE

Date 9-18 19 86

INVOICE NO. → 34377

| | |
|---|---|
| GALS. READING — START | 000000.0 |
| GALS. READING — FINISH | 000585.3 |
| SALES SEQUENCE NUMBER | |
| PRICE PER GALLON — CENTS | |
| PRODUCT COST | |
| TAX | |
| TOTAL PRICE | |

UNGER
CONSTRUCTION
COMPANY

Date: October 11, 1996

Hanson Engineers
47 Perimeter Center East
Suite 280
Atlanta, GA 30346

Attention: Mr. John Ferguson

Dear Mr. Ferguson

UNGER CONSTRUCTION COMPANY warrants the underground/aboveground storage tank removal and installation per specifications at the AT&T site at Silk Hope, NC to be free from defects in workmanship and materials for a period of one year from the date of this letter.

Sincerely,

UNGER CONSTRUCTION COMPANY

Wesley Seabolt
Project Manager

17

# APPENDICES/CHECKLIST

Underground Fuel Tank Replacement
AT&T RADIO RELAY STATION
Silk Hope, North Carolina

# AT&T CORPORATE ENVIRONMENTAL CLOSURE FORM

(To Be Included as Appendix Y-1)

| | |
|---|---|
| Facility Name | Silk Hope Radio Relay Station |
| Facility GEO Code | NC2150 |
| Facility Address | S.R. 2352 (Clark Road) |
| | |
| | |
| Facility Status | Active |
| **Tank Data** | |
| Tank Number | 1 |
| Size (gallons) | 560 |
| Contents | Diesel |
| Closure Method | Removal |
| **Tank Residue and Rinsates** | |
| Quantity | 277 gallons |
| Manifested | Yes |
| Sent to | |
| Site Owner | S&H Oil Company |
| Site Name | |
| Address | |
| Disposal Method | |
| **Petroleum Containing Soil** | |
| Quantity (tons) | None |
| Manifested | |
| Sent to | |
| Site Owner | |
| Site Name | |
| Address | |
| Disposal Method | |
| **Tank and Piping Disposal** | |
| Method | Recycled |
| Cert. of Destru. | Yes |
| **Final Site Assessment Results** | |
| Name of lab | Hydrologic, Inc. of Morrisville, NC |
| Soil Results | See Environmental Report |
| | |
| Water Results | See Environmental Report |
| | |
| Imported Soil Sampled | N/A |
| | |
| Location of Closure Documents | |
| | Johnson, Spellman & Associates |
| | 6991 Peachtree Industrial Blvd. |
| | Norcross, GA 30092 |

## APPENDICES/CHECKLIST

| Designation | Applicability | Title | Date Received/ Initials/Comments |
|---|---|---|---|
| A. | Contractor | Subcontractor and Material Suppliers List. | |
| B. | Contractor | Contractor Daily Construction Report to document tank removal, inspection and sampling events. | 8/18/97 |
| C. | AT&T | AT&T Representative Daily Construction Report. | |
| D. | Contractor | Transfer/Disposition of Usable Product. | 8/18/97 |
| E. | Contractor | Bill of Lading/Manifest for Transportation of Product (Tank Bottoms). | |
| F. | Contractor | Receipt for Product Disposal. (Tank Bottoms at final destination). | |
| G. | Contractor | Bill of Lading/Manifest for Transit Disposal. | |
| H. | Contractor | Application and Permit for Underground Storage Tank Transportation. | |
| I. | Contractor | Bill of Lading/Manifest for Underground Storage Tank Disposal. | |
| J. | Contractor | Receipt for Disposal of Underground Storage Tank. | 8/18/97 |
| K. | Contractor | Bill of Lading/Manifest for Product Piping Disposal. | |
| L. | Contractor | Bill of Lading/Manifest for the Transportation of Regulated Soil. | |

APPENDICES/CHECKLIST

| Designation | Applicability | Title | Date Received/ Initials/Comments |
|---|---|---|---|
| M. | Contractor | Bill of Lading/Manifest for the Transportation of Regulated Water. | |
| N. | Contractor | Bill of Lading/Manifest for the Transportation of Other Regulated Products. | |
| O. | Environmental Consultant | Analytical (soil/water) Sampling Location Plan. (location in Section B if single plan). | 8/18/97 |
| P. | Environmental Consultant | Analytical Test Reports for Soil Samples with formal signed Chain of Custody records. | 8/18/97 |
| Q. | Environmental Consultant | Analytical Test Reports for Groundwater Samples with formal signed Chain of Custody records. | |
| R. | Environmental Consultant | Analytical Test Reports for Drinking Water Samples with formal signed Chain of Custody records. | |
| S. | Contractor | Certificate from Supplier of Imported Backfill stating that the material conforms to the specification gradation requirements. | |
| T. | Contractor | Analytical Test Report for Imported Backfill. (not required for crushed stone or pea gravel). | |
| U. | Contractor | Soil Compaction Field report for Underground Storage Tank Disposal. | |
| V. | Contractor | Soil Compaction Lab report Underground Storage Tanks. | 8/18/97 |

## APPENDICES/CHECKLIST

| Designation | Applicability | Title | Date Received/ Initials/Comments |
|---|---|---|---|
| W. | Contractor | Certificate from Receiving Landfill for regulated soil characterization. | |
| X. | AT&T | Photographs to document tank removal activities. | 8/18/97 |
| Y-1. | AT&T | AT&T Corporate Environmental Tank Closure Form. | See Page 1 of Tab 4 |
| Y-2. | AT&T | Federal Notification Form for Substantial Site Modification (Registration Form). | |
| Y-3. | AT&T | State Notification Form for Substantial Site Modification (Registration Form). | See Tab 1 |
| Y-4. | AT&T | Local Notification Form for Substantial Site Modifications (Registration Form). | |
| Z. | Contractor | Project Completion Acceptance Form. | |
| AA. | Contractor | AT&T Building Engineering Site Survey. | |
| AB. | Contractor | State Regulations. | |
| AC. | Contractor | Local Regulations. | |
| AD. | Contractor | Closure Letter of concurrence from regulator agency. | |
| AE. | Contractor | Correspondence. | |