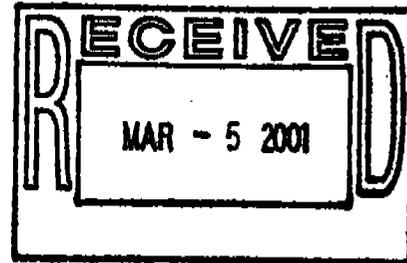




ENGINEERING CONSULTING SERVICES, LTD.
Geotechnical • Construction Materials • Environmental

February 26, 2001

Mr. David L. Smith
N.C. Monroe Construction Company
P.O. Box 20008
Greensboro, North Carolina 27420



Subject: 20-Day Report
10,000-Gallon #2 Fuel Oil UST
Northwest Guilford High School
Greensboro, North Carolina
ECS Project G-4873

Dear Mr. Smith:

As authorized by your acceptance of our Proposal 3310-P dated February 7, 2001, Engineering Consulting Services, Ltd. (ECS) has completed the underground storage tank (UST) closure report for one 10,000-gallon #2 fuel oil UST at the above referenced site. Included in this report is a description of the field activities, the results obtained, and our conclusions and recommendations.

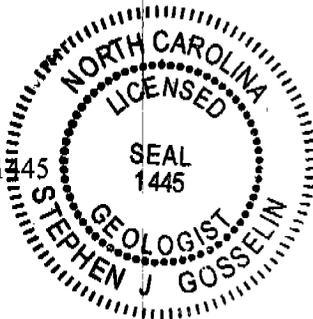
ECS appreciates the opportunity to provide our environmental consulting services to you on this project. If you have any questions concerning this report or this project, please contact us at (336)-856-7150.

Sincerely,

ENGINEERING CONSULTING SERVICES, LTD.

John S. Lair
Project Geologist

Stephen J. Gosselin, P.G.
Principal Geologist
NC Licensed Geologist #1445



6909 International Drive, Suite 103 • Greensboro, NC 27409 • (336) 856-7150 • Fax (336) 856-7160

Offices: Aberdeen, MD • Atlanta, GA • Austin, TX • Baltimore, MD • Chantilly, VA • Charlotte, NC • Chicago, IL • Frederick, MD • Fredericksburg, VA
• Greensboro, NC • Greenville, SC • Norfolk, VA • Raleigh, NC • Richmond, VA • Roanoke, VA • Williamsburg, VA • Wilmington, NC

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- GW/UST-2 Form
- Material Manifests (Liquids and Sludges)
- Tank Disposal Manifest
- Laboratory Data Sheets and Chain of Custody Records

I. GENERAL INFORMATION

The subject site is the Northwest Guilford High School located at 5240 Northwest School Road in Greensboro, North Carolina (Figure 1). Information regarding site ownership, project contacts, underground storage tank (UST) information and characteristics of the site is presented below:

A. Ownership of USTs

Guilford County Schools
900 English Road
High Point, North Carolina 27262
(336) 819-2798

B. Facility Information

Northwest Guilford High School
5240 Northwest School Road
Greensboro, North Carolina 27409
(336) 664-9307

C. Contacts

Primary Contact: Guilford County Schools
c/o Mr. David L. Smith – N.C. Monroe Construction Company
P.O. Box 20008
Greensboro, North Carolina 27420
(336) 664-1222

Closure Contractor: EME Demolition
1541 Pleasant Ridge Road
Greensboro, North Carolina 27409
(336) 664-0003

Primary Consultant: Engineering Consulting Services, Ltd.
5-C Dundas Circle
Greensboro, North Carolina 27407
(336) 856-7150

Laboratory: Paradigm Analytical Laboratory
2627 Northchase Parkway S.E.
Wilmington, North Carolina 28405
(910) 350-1903
Laboratory I.D. # 481

D. UST Information

Tank Number	Installation Date	Size	Tank Dimensions (diameter, length)	Last Contents	Previous Contents
UST	Unknown	10,000-gallons	8.2 ft. x 26.6 ft.	#2 Fuel Oil	#2 Fuel Oil

E. Site Characteristics

The subject site is Northwest Guilford High School located at 5240 Northwest School Road in Greensboro, North Carolina (Figure 1). Surrounding areas are developed with residential properties. One 10,000-gallon UST was located at the site. The UST was reported to contain #2 fuel oil used to heat an on-site building.

The nearest surface water feature is Moores Creek located approximately 1,600 feet east of the location of the former UST (Figure 1). The site is located in the Carolina Slate Belt of the Piedmont Physiographic Province. The soils encountered in this area are the residual product of in-place chemical weathering of rock presently underlying the site. In general, shallow unconfined groundwater movement within the overlying soils is controlled largely by topographic gradients. Recharge occurs primarily by infiltration along higher elevations and typically discharges into streams or other surface water bodies. The elevation of the shallow water table is transient and can vary greatly with seasonal fluctuations in precipitation. Movement in this water table is generally from higher to lower elevations. As such, shallow groundwater would be expected to flow to the east across the site.

II. CLOSURE PROCEDURES

UST removal activities were performed by EME Demolition (EME) of Greensboro, North Carolina on February 19, 2001 and observed by an ECS professional. Prior to initiating excavation activities, EME had A&D Environmental & Industrial Services, Inc. (A&D) pump the UST using a vac-truck. A total of 1,883 gallons of liquids were removed from the UST. The material manifests for the liquids are included in the Appendix.

A track excavator was used to perform the removal activities. Overlying soils were removed with the track excavator to expose the top of the UST. The top of the UST was approximately 5 feet below the ground surface (bgs). The UST appeared to be in good condition with no obvious holes, surface pitting or rust noted. The UST measured 8.2 feet in diameter by 26.6 feet in length. The UST and associated product piping were transported by EME to A&D's facility in High Point, North Carolina for disposal. The tank disposal manifest is included in the Appendix.

After removing the UST from the ground, ECS personnel collected three soil samples (UST-1A through UST-1C, Figure 2) from beneath the UST. The soil samples were collected 2 feet beneath the bottom of the UST at an approximate depth of 15.0 feet bgs. Groundwater was not encountered during UST closure and soil sampling activities. Soil samples could not be collected from beneath the product lines due to their close proximity to the adjacent building and overlying trees.

III. SITE INVESTIGATION

Sample Collection Procedures

The soil samples for the UST were collected manually from the bucket of the track excavator using new, disposable nitrile gloves. The soil samples were placed into new 4-ounce capacity laboratory prepared glass containers. After being filled, the sample containers were labeled with the project name and number, the time and date of sample collection, the analyses to be performed, and the absence or presence of preservative. The filled sample containers were placed into a cooler. Plastic bags containing ice were packed around the sample containers in the cooler to maintain the samples at approximately 4° Celsius. The samples were shipped via overnight express delivery to Paradigm Analytical Laboratories (PAL) in Wilmington, North Carolina for analysis. A chain of custody record was maintained and is included in the Appendix.

TVA Screening

Soils samples were screened in the field for relative levels of organic vapors. A representative portion of each soil sample was placed into a resealable plastic bag and placed in a warm location. Approximately 10 minutes after the time of collection, the bag was opened slightly and the probe of a Foxboro Model 1000B toxic vapor analyzer (TVA) was inserted. The meter of the TVA was monitored and the reading recorded.

Field screening results of the samples obtained during the UST closure assessment are summarized below:

Sample ID	Sample Location	Sample Depth (ft)	TVN Response (ppm)
UST-1A	South End of UST	15.0	0.0
UST-1B	Middle of UST	15.0	0.0
UST-1C	North End of UST	15.0	0.0

ppm = parts per million

Laboratory Analytical Results

The three soil samples collected beneath the UST were submitted to PAL for chemical analysis for volatile and semi-volatile total petroleum hydrocarbons (TPH) using EPA Methods 8015/5030 and 8015/3550, respectively. Laboratory analysis of the soil samples did not detect petroleum hydrocarbons above laboratory quantitation limits. A summary of the laboratory analytical results is included in Table 1. The laboratory data sheets and chain of custody record are included in the Appendix.

IV. CONCLUSIONS

ECS personnel observed the closure by removal of one 10,000-gallon #2 fuel oil UST from the site. Laboratory analysis of the soil samples did not detect petroleum hydrocarbons above laboratory quantitation limits.

VI. RECOMMENDATIONS

It is recommended that a copy of this report be submitted to the Guilford County Department of Environmental Health for their review. Based on the laboratory analysis of the soil samples collected from beneath the UST, we recommend no additional assessment at this time and we request that a Notice of No Further Action be issued for the site.

The activities and evaluative approaches used in this assessment are consistent with those normally employed in UST assessments and remediation projects of this type. Our evaluation of site conditions has been based on our understanding of the project information and the data obtained during our field activities.

FIGURES



REFERENCE:

USGS TOPOGRAPHIC MAP
SUMMERFIELD, NC QUADRANGLE
DATED 1969, PHOTOREVISED 1994

SCALE: 1" = 2,000'

ECS LTD

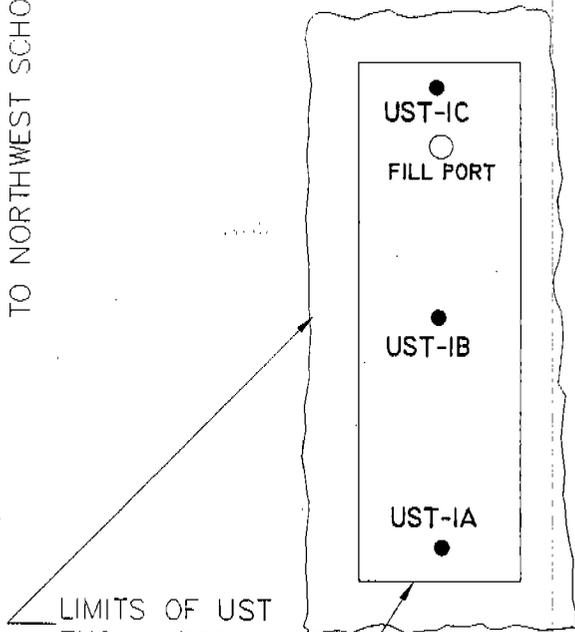
ENGINEERING
CONSULTING
SERVICES, LTD

FIGURE 1
SITE LOCATION MAP
NORTHWEST GUILFORD
HIGH SCHOOL
GREENSBORO, NORTH CAROLINA

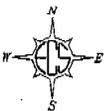
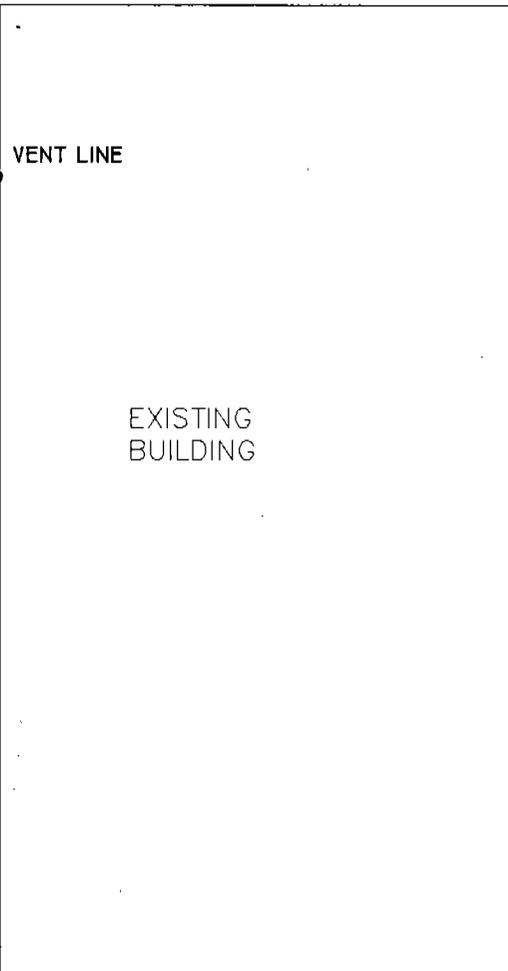
ECS PROJECT G-4873

CONCRETE
PAD FOR
DUMPSTER

TO NORTHWEST SCHOOL ROAD



10,000-GALLON
#2 FUEL OIL UST



REFERENCE:

FIELD NOTES BY ECS PERSONNEL

SCALE 1" = 10'



FIGURE 2
SAMPLE LOCATION PLAN
NORTHWEST GUILFORD HIGH SCHOOL
GREENSBORO, NORTH CAROLINA

ECS PROJECT G-4873

TABLE

TABLE 1
UST SOIL SAMPLE ANALYTICAL RESULTS
Northwest Guilford High School
Greensboro, North Carolina
ECS Project G-4873

Sample ID	Analytical Method	Results (mg/kg)
UST-1A	8015/5030	BQL
	8015/3550	BQL
UST-1B	8015/5030	BQL
	8015/3550	BQL
UST-1C	8015/5030	BQL
	8015/3550	BQL

Notes: mg/kg = milligrams per kilograms = parts per million (ppm)
 BQL = Below laboratory quantitation limits
 8015/5030 = volatile total petroleum hydrocarbons
 8015/3550 = semi-volatile total petroleum hydrocarbons
 Samples collected on February 19, 2001

APPENDIX

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

FOR TANKS IN NC	Return Completed Form To: The appropriate DWQ 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 at least five (5) working days prior to closure or change-in-service if a Professional Engineer (P.E.) or a Licensed Geologist (L.G.) provided supervision for closure or change-in-service site assessment activities and signs and seals all closure reports. Otherwise, thirth (30) days notice is required.

I. OWNERSHIP OF TANK(S) II. LOCATION OF TANK(S)

Tank Owner Name: High Point University (Corporation, Individual, Public Agency, or Other Entity)	Facility Name or Company: Northwest Guilford High School
Street Address: Guilford County Schools	Facility ID # (if available):
County: Guilford	Street Address or State Road: 5240 Northwest School Road
City: High Point State: NC Zip Code: 27262	City: Greensboro State: NC Zip Code: 27409
Tele. No. (Area Code): (336) 819-2798	Tele. No. (Area Code): (336) 664-9307

III. CONTACT PERSON

Name: John S. Lair	Job Title: Project Geologist	Telephone Number: (336) 856-7150
--------------------	------------------------------	----------------------------------

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

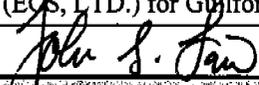
- | | | |
|--|--|---|
| 1. Contact Local Fire Marshall. | 5. Provide a sketch locating piping, tanks and soil sampling locations. | closure must be conducted under the supervision of a P.E. or L.G., with all closure site assessment reports bearing signature and seal of the P.E. or L.G. If a release has not occurred, the supervision, signature, or seal of a P.E. or L.G. is not required.
8. Keep closure records for 3 years |
| 2. Plan the entire closure event. | 6. Submit a closure report in the format of GW/UST-12 and include the form GW/UST-2 within 30 days following the site investigation. | |
| 3. Conduct Site Soil Assessments. | 7. If a release from the tank(s) has occurred, the site assessment portion of the tank | |
| 4. If Removing Tanks or Closing in Place refer to API Publications 2015 "Cleaning Petroleum Storage Tanks" & 1604 "Removal & Disposal of Used Under-ground Petroleum Storage Tanks". | | |

V. WORK TO BE PERFORMED BY:

(Contractor) Name: EME Demolition	State: NC	Zip Code: 27409
Address: 1541 Pleasant Ridge Road	Phone: (336) 664-0908	
Contact: Wayne Brown	Phone: (336) 856-7150	
Primary Consultant : ECS, LTD.		

TANK ID#	TANK CAPACITY	LAST CONTENTS	PROPOSED ACTIVITY		
			CLOSURE		CHANGE-IN-SERVICE
			Removal	Abandonment In Place	New Contents Stored
	10,000	#2 Fuel Oil	2/19/01		

VII. OWNER OR OWNER'S AUTHORIZED REPRESENTATIVE

Print name and official title John S.Lair (ECS, LTD.) for Guilford County Schools	*Scheduled Removal Date: 2/19/01
Signature: 	Date Submitted: 2/20/01

*If scheduled work date changes, notify yur appropriate DWQ Regional Office 48 hours prior r originally scheduled date.

GW/UST-2 Site Investigation Report for Permanent Closure or Change-In-Service of UST

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) II: Location of Tank(s)

Owner Name: Guilford County Schools (Corporation, Individual, Public Agency, or Other Entity)	Facility Name or Company Northwest Guilford High School
Street Address: 900 English Road	Facility ID # (if available): N/A
County: Guilford	Street Address or State Road: 5240 Northwest School Road
City: High Point State: NC Zip Code: 27262	County: Guilford City: Greensboro Zip Code: 27409
Tele. No: (336) 819-2798	Tele. No. (336) 664-9307

III: Contact Person

Name: John S. Lair	Job Title: Project Geologist	Telephone Number: 336-856-7150
Closure Contractor: EME Demolition.	Address: Greensboro, NC	Telephone Number: 336-664-0908
Primary Consultant: ECS, Ltd.	Address: Greensboro, NC	Telephone Number: 336-856-7150
Lab: Paradigm Analytical Laboratories, Inc.	Address: Wilmington, NC	Telephone Number: 910-350-1903

IV: U.S.T. Information V: Excavation Condition VI: Additional Information Required

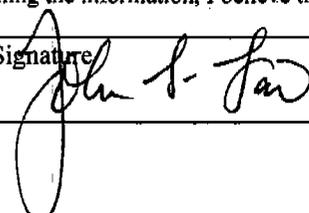
Tank No.	Size in Gallons	Tank Dimensions	Last Contents	Water in Excavation	Free Product	Noticeable Odor or Visible Soil Contamination	See reverse side of pink copy (owner's copy) for additional information required by N.C. - DEM in the written report and sketch.
1	10,000	8.2 ft. x 26.6 ft.	#2 fuel oil	NO	NO	NO	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)		ABANDONMENT IN PLACE	
<input type="checkbox"/>	Contact local fire marshal.	<input type="checkbox"/>	Fill tank until material overflows tank opening.
<input type="checkbox"/>	Notify DEM Regional Office before abandonment.	<input type="checkbox"/>	Plug or cap all openings.
<input checked="" type="checkbox"/>	Drain & flush piping into tank	<input type="checkbox"/>	Disconnect and cap or remove vent line.
<input checked="" type="checkbox"/>	Remove all product and residuals from tank.	<input type="checkbox"/>	Solid inert material used - specify:
<input checked="" type="checkbox"/>	Excavate down to tank.	<input type="checkbox"/>	REMOVAL
<input checked="" type="checkbox"/>	Remove drop tube, fill pipe, gauge pipe, vapor recovery tank connections, submersible pumps and other tank fixtures	<input type="checkbox"/>	Create vent hole
<input checked="" type="checkbox"/>	Cap or plug all lines except the vent and fill lines	<input type="checkbox"/>	Label tank.
<input type="checkbox"/>	Purge tank of all product & flammable vapors.	<input type="checkbox"/>	Dispose of tank in approved manner.
<input type="checkbox"/>	Cut one or more large holes in the tanks.	<input type="checkbox"/>	Final tank destination: A&D Environment and Industrial Services, Inc.
<input checked="" type="checkbox"/>	Backfill the area.	<input type="checkbox"/>	
<input type="checkbox"/>	Date Tank(s) Permanently closed: February 19, 2001	<input type="checkbox"/>	
<input type="checkbox"/>	Date of Change-in-Service: N/A	<input type="checkbox"/>	

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 John S. Lair. -- Project Geologist (Owner's Representative)	Signature 	Date Signed: 2/20/01
--	---	-------------------------

MATERIAL MANIFEST

A & D Environmental and Industrial Services, Inc.

EMERGENCY PHONE NO.
(800) 434-7750

POST OFFICE BOX 484
HIGH POINT, NC 27262

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

Manifest Document No.	
Page 1	of 1
A & D Job No. A001330	

GENERATOR INFORMATION

Name Guilford County Schools - Northwest High School	US EPA ID No.
Street Address 1541 Pleasant A. Rd Northwest School Rd Greensboro NC	Mailing Address
Phone No.	Contact

DESCRIPTION OF MATERIALS

HM	USDOT Proper Shipping Name (Complete All Items for Hazardous Materials)	Hazard Class or Div.	UN / NA ID No.	Packing Group	Containers Qty. Type	Total Quantity	Unit Wt./ Vol.
a. X	Non-Regulated Liquids Fuel oil No. 2	3	NA1492	III	1 TT	188.3	G
b.							
c.							

ADDITIONAL INFORMATION

	ERG No.	A & D Profile Code	Facility Use
a.			
b.			
c.			

GENERATOR'S CERTIFICATION

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

Printed / Typed Name John Dixon	Signature <i>[Signature]</i>	Mo. / Day / Yr.
------------------------------------	---------------------------------	-----------------

TRANSPORTER INFORMATION

Transporter A & D ENVIRONMENTAL AND INDUSTRIAL SERVICES	I hereby acknowledge receipt of the above-described materials for transport from the generator site listed above.	
Address 2718 UWHARRIE ROAD ARCHDALE, NC 27263	Signature <i>[Signature]</i>	Shipment Date
Transporter or EPA ID No. NCD986232221	Unit No. VT3	I hereby acknowledge that the above-described materials were received from the generator site and were transported to the facility listed below.
Phone (336) 434-7750	Signature <i>[Signature]</i>	Delivery Date

FACILITY INFORMATION

Facility A & D ENVIRONMENTAL AND INDUSTRIAL SERVICES	I hereby acknowledge receipt of the materials covered by this manifest except for any discrepancy noted below.	
Address 2718 UWHARRIE ROAD ARCHDALE, NC 27263	Signature <i>[Signature]</i>	Receipt Date 02-20-01
Facility or EPA ID No. NCD986232221	Discrepancies / Routing Codes / Handling Methods	
Phone (336) 434-7750		
Contact DAVID TEDDER		



Environmental and Industrial Services

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

TANK DISPOSAL MANIFEST

1) Tank Owner/Authorized Representative: Name and Mailing Address

Northwest High Sch
Northwest High Sch Road
Greensboro NC

2) Tank Owner/Authorized Representative: Contact

C/O EME
Phone#: _____

3) Description Of Tanks:

<u>Tank No.</u>	<u>Capacity</u>	<u>Previous Contents</u>	<u>Comments</u>
<u>1</u>	<u>10,000 gal.</u>	<u>#2 Heating Oil</u>	

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

Printed/Typed Name

Signature

Month/Day/Year

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

+ Emily Notson
Printed/Typed Name

Signature

2-21-01
Month/Day/Year

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

Recycling Facility: D. H. Guffin Scrap Recyclers

Eric D. McManus
Printed/Typed Name

Eric D. McManus
Signature

2-22-01
Month/Day/Year

Results for Total Petroleum

Hydrocarbons

by GC 8015B

Client Sample ID: UST-1A
 Client Project ID: NW High School
 Lab Sample ID: 15207
 Lab Project ID: G161-739
 Matrix: Soil

Date Collected: 2/19/01
 Date Received: 2/20/01
 Analyzed By: BMS
 %Solids: 83.7

Compound	Result (MG/KG)	Quantitation Limit	Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.2	5030/8015B	1.0	2/21/01
Diesel Range Organics	BQL	7.4	3550/8015B	1.0	2/21/01

Comments:

Quantitation Limits are fully calculated using dilution factors and % solids.
 BQL = Undetected or below quantitation limit.

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Total Petroleum

Hydrocarbons

by GC 8015B

Client Sample ID: UST-1B
Client Project ID: NW High School
Lab Sample ID: 15208
Lab Project ID: G161-739
Matrix: Soil

Date Collected: 2/19/01
Date Received: 2/20/01
Analyzed By: BMS
%Solids: 78.9

Compound	Result (MG/KG)	Quantitation Limit	Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.6	5030/8015B	1.0	2/21/01
Diesel Range Organics	BQL	7.8	3550/8015B	1.0	2/21/01

Comments:

Quantitation Limits are fully calculated using dilution factors and % solids.
BQL = Undetected or below quantitation limit.

Results for Total Petroleum Hydrocarbons by GC 8015B

Client Sample ID: UST-1C
Client Project ID: NW High School
Lab Sample ID: 15209
Lab Project ID: G161-739
Matrix: Soil

Date Collected: 2/19/01
Date Received: 2/20/01
Analyzed By: BMS
%Solids: 83.0

Compound	Result (MG/KG)	Quantitation Limit	Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.2	5030/8015B	1.0	2/21/01
Diesel Range Organics	BQL	7.5	3550/8015B	1.0	2/21/01

Comments:

Quantitation Limits are fully calculated using dilution factors and % solids.
BQL = Undetected or below quantitation limit.

