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N.C. Dept. of EHNR

OCT 25 1993

Winston-Salem
Regional Office

Sun Company, Inc.
Ten Penn Center
1801 Market Street
Philadelphia PA 19103-1699

October 20, 1993

NCDEHNR
Attn: Groundwater Section Supervision
8025 North Point Blvd.
Winston-Salem, NC 27106

Re: Summit Avenue Sunoco
Greensboro, Guilford County

Dear Sir:

Enclosed is one (1) copies of the Tank Pull Report for the referneced site.

If you require further information, please advise.

Sincerely,

A handwritten signature in cursive script, appearing to read "Bill Mulligan".

Bill Mulligan
Sun Company, Inc.



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Bill Mulligan
Sun Company, Inc.

(GWUST-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
 N.C. Dept. of EM
 I.D. Number OCT 25 1993
 Date Received Winston-Salem

INSTRUCTIONS

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

I. Ownership of Tank(s)

MID-STATE OIL Co.
 Owner Name (Corporation, Individual, Public Agency, or Other Entity)
1820 S. MAIN ST.
 Street Address
DAVIDSON
 County
LEXINGTON NC 27293
 City State Zip Code
(704) 249-0363
 Area Code Telephone Number

II. Location of Tank(s)

SUMMIT AVE. SUNOCO
 Facility Name or Company
 Facility ID # (if available)
1103 SUMMIT AVE
 Street Address or State Road
(GUILFORD) GREENSBORO 27405
 County City Zip Code
(919) 274-5858
 Area Code Telephone Number

III. Contact Person

WILLIAM SHIPTON REPAIR MAINT. SUPERVISOR (704) 249-0363
 Name Job Title Telephone No. (Area Code)
 Closure Contractor JERRY KELLY, INC ELIZABETH CITY, NC (800) 258-4107
 (Name) (Address) Telephone No. (Area Code)
 Lab REIC LABORATORY BEAVER, WV (800) 499-8105
 (Name) (Address) Telephone No. (Area Code)

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		Notable Odor or Visible Soil Contamination	
				Yes	No	Yes	No	Yes	No
1	550	46" x 74"	FUEL OIL		X		X	X	

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

VII. Check List

Check the activities completed.

- Contact local fire marshal.
 - Notify DEM Regional Office before abandonment.
 - Drain & flush piping into tank.
 - Remove all product and residuals from tank
 - Excavate down to tank
 - Clean and inspect tank.
 - Remove drop tube, fill pipe, gauge pipe, vapor recovery tank connections, submersible pumps and other tank fixtures.
 - Cap or plug all lines except the vent and fill lines.
 - Purge tank of all product & flammable vapors.
 - Cut one or more large holes in the tanks.
 - Backfill the area.
- Date Tank(s) Permanently closed: 4/27/93
 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**
- Create vent hole
 - Label tank
 - Dispose of tank in approved manner
- Final tank destination: JERRY KELLY, INC
ELIZABETH CITY, 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
BILL MULLIGAN - PROJECT MANAGER

Signature


Date Signed
10/20/93

RECEIVED
N.C. Dept. of EHNR

OCT 25 1993

Winston-Salem
Regional Office

TANK EXCAVATION ASSESSMENT
SUMMIT AVENUE SUNOCO
1103 SUMMIT AVENUE
GREENSBORO, GUILFORD COUNTY

AUGUST 24, 1993

PREPARED FOR:

SUN OIL COMPANY, INC.

PREPARED BY:

GRIFFITH ENTERPRISES, INC.
WINSTON-SALEM, NORTH CAROLINA



August 24, 1993

Tank Excavation Assessment Report
Summit Avenue Sunoco
1103 Summit Avenue
Greensboro, Guilford County

Mr. Bill Mulligan
Sun Oil Company, Inc.
1801 Market Street Penn Center
Philadelphia, PA 19103

Dear Mr. Mulligan,

Griffith Enterprises, Inc. is pleased to submit the final Tank Excavation Assessment Report for the above referenced project.

Included in this report is a narrative text describing the closure activities, sampling information, analytical results, and site maps per 15A NCAC 2N.

Griffith Enterprises, Inc. appreciates the opportunity to be of service to Sun Oil Company, Inc. If there are any questions, or any additional information is needed, please contact us immediately.

Sincerely,

A handwritten signature in black ink that reads 'Bill Cook'.

Bill Cook
Project Manager

A handwritten signature in black ink that reads 'M. Alan Griffith'.

M. Alan Griffith
Project Manager

I. INTRODUCTION

This is the Tank Excavation Assessment Report for the closure of one (1) underground storage tank (UST) at Summit Avenue Sunoco in Greensboro, North Carolina. This site, and the UST, are owned by Mid-State Oil Company and is operated as a retail facility.

The site is located along Summit Avenue in Greensboro. The property consists of a retail fueling facility and is primarily covered by asphalt. The property is relatively flat, as is the regional topography.

The adjacent property owners consist primarily of retail and commercial occupants. Other UST facilities are located within 1500 feet of the site. All properties in the area are served by public water supply.

A Preliminary Site Assessment has been performed at this site by Groundwater Technology, under contract with Sun Oil Company, Inc., due to a pending property transfer.

II. EXCAVATION PROCESS

The removal of the UST was conducted by Jerry Kelly, Inc., of Elizabeth City, North Carolina, on April 27, 1993. The excavation was conducted using a rubber tire backhoe.

After removing the topsoil layer on top of the UST, the contractor then began removing the native soil backfill from around the UST. The backfill material that was removed was stockpiled along the west side of the excavation. After sufficient quantities of the backfill material were removed, the fill pipe, vent line, and drain line were disconnected from the UST, and was lifted from the excavation by placing a chain through the lifting eye in the top of the tank.

After the UST was removed, the remaining backfill material was moved within the excavation to allow soil samples to be taken in the native soil beneath the UST. Upon completion of the sampling, the excavation was backfilled with the soil from the stockpile and clean sand.

III. TANK CONDITION

One (1) 550 gallon single-wall steel UST, used to store Fuel oil, was removed from the excavation along the rear of the building. The orientation of the UST is shown in Figure 2.

The UST had numerous 1/4" holes along the bottom. Once the condition was assessed, the UST was loaded onto a flatbed truck and taken to Jerry Kelly, Inc. property, in Elizabeth City, for disposal.

No groundwater was encountered in the UST excavation to a depth of approximately 9 feet below ground surface. Throughout the entire removal process, no releases were noted from the UST.

IV. SAMPLE COLLECTION PROCESS

During the removal of the UST, the backfill and native soils from the excavation were collected and screened in accordance with NC DEM guidelines. Each sample was collected using a clean, stainless steel sampling spoon and split evenly to perform photoionization screening with an HNU hydrocarbon sensor, while the other half was preserved for possible analytical testing.

The soil samples retrieved from the backhoe bucket were visually inspected by a field technician. The samples to be scanned with the HNU hydrocarbon sensor were placed in glass jars to approximately one-half full and covered with aluminum foil for sealing purposes. The jars were then placed out of direct sunlight for approximately twenty (20) minutes to allow the soil vapors time to reach equilibrium. After sufficient time had elapsed, the probe of the HNU sensor was inserted into the head space of each jar and the vapor concentration was measured and recorded. The results of this scanning are contained in Table 1.

Upon completion of the field scanning, soil samples were taken from two (2) feet below the UST, in native soil, per NC DEM protocol. The samples were placed into separate glass jars, with Teflon-lined screw-on lids, using a clean sampling spoon. These jars were then placed on ice in an insulated cooler and shipped to REIC Laboratory, in Beaver, West Virginia, on April 28, 1993.

The soil samples were tested using EPA methods 5030 and 3550. The results of the laboratory analysis are shown in Table 2, while the exact sampling locations are shown in Figure 3.

V. CONCLUSIONS

The results of the soil screening and analytical testing show that hydrocarbon constituents were found to be present in the residual soils of the excavation at concentrations below NC DEM action levels.

The results in Table 1 show that the HNU hydrocarbon sensor measured a slight hydrocarbon presence in the samples taken from floor of the UST excavation.

The results in Table 2 show that there was soil impact within the limits of the UST excavation. The soil samples taken in the excavation indicate hydrocarbon levels below the target levels calculated through the Site Sensitivity Evaluation (SSE) for this site.

VI. LIMITATIONS

This report has been prepared for Sun Oil Company, Inc. to assist in the assessment of this site. This report has been prepared in accordance with standard NC DEM criteria, and no warranties, either expressed, or implied, are made.

Observations presented in this report were based upon information and data obtained from the excavations made in the locations shown in Figure 3. Variations which exist may not become evident until a later date. If variations are noted, our company should be contacted to re-examine the site and revise documentation as necessary.



USGS MAP

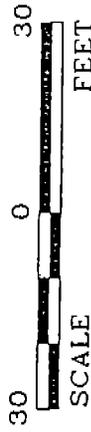
GREENSBORO QUADRANGLE

SUMMIT AVENUE SUNOCO
 1103 SUMMIT AVE. GREENSBORO, NC

SCALE	DRAWN: WRB	JOB NUMBER
1"=2000'	CHECKED: MWC	GESOSUMM
	DATE:	FIGURE NUMBER
	8/25/93	1

LEGEND

- ▣ CB CATCH BASIN
- ✦ MONITORING WELL
- VERTICAL DEFINITION MONITORING WELL



SOURCE: JAMES L. HAINES & ASSOC. - 6/74/93 SURVEY

GROUNDWATER TECHNOLOGY
1000 PERMETER PARK DR
SUITE 1
MORRISVILLE, NC 27560
(919) 467-2227

REV. NO.: DRAWING DATE: 7/19/93 ACAD FILE: 5445-SIT

SITE MAP

CLIENT:	SUN COMPANY, INC.	PM:	
LOCATION:	1103 SUMMIT AVE. GREENSBORO, NC	PE/RG:	
DESIGNED:	TLW	PROJECT NO.:	053245445
		FKP	3

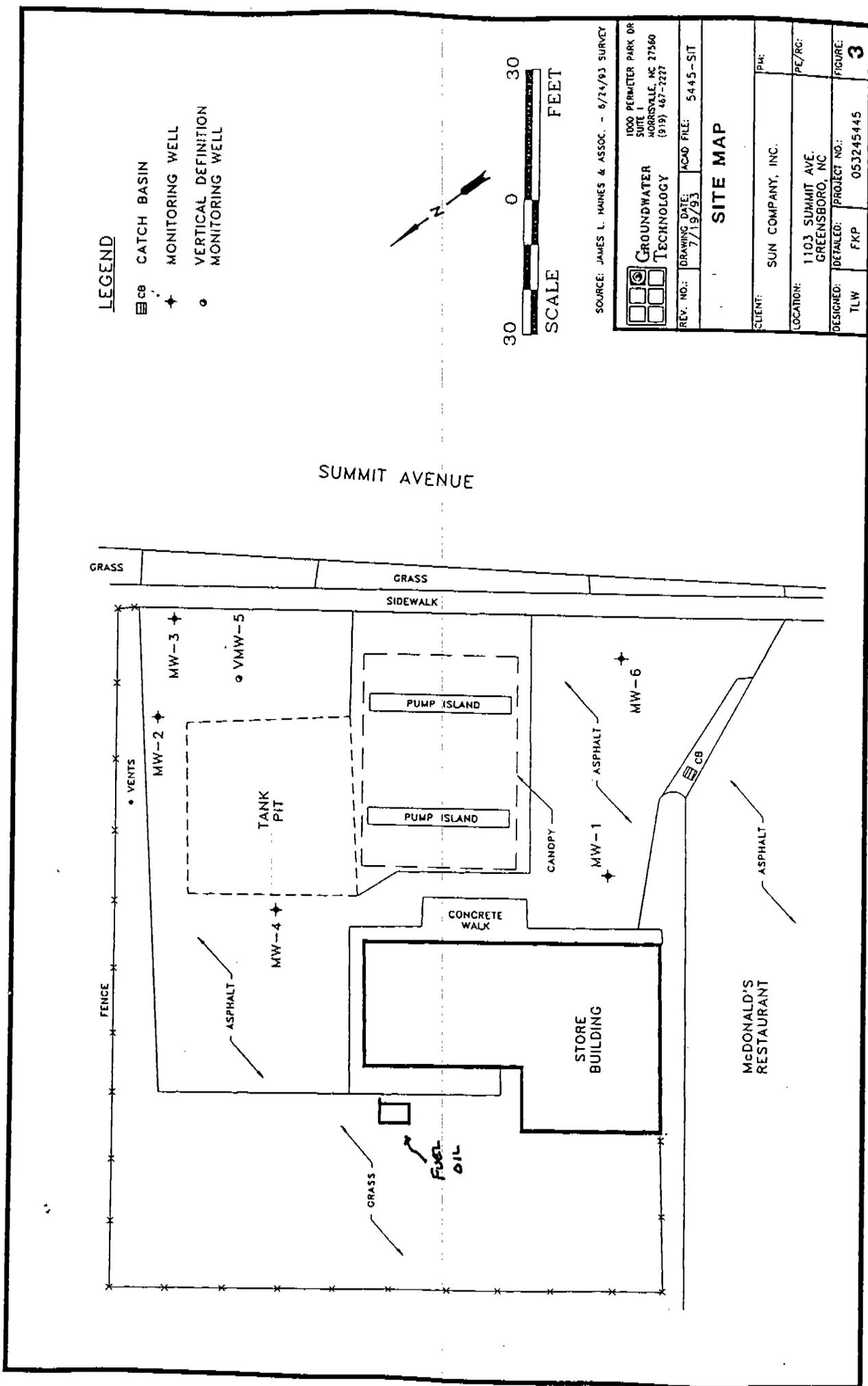
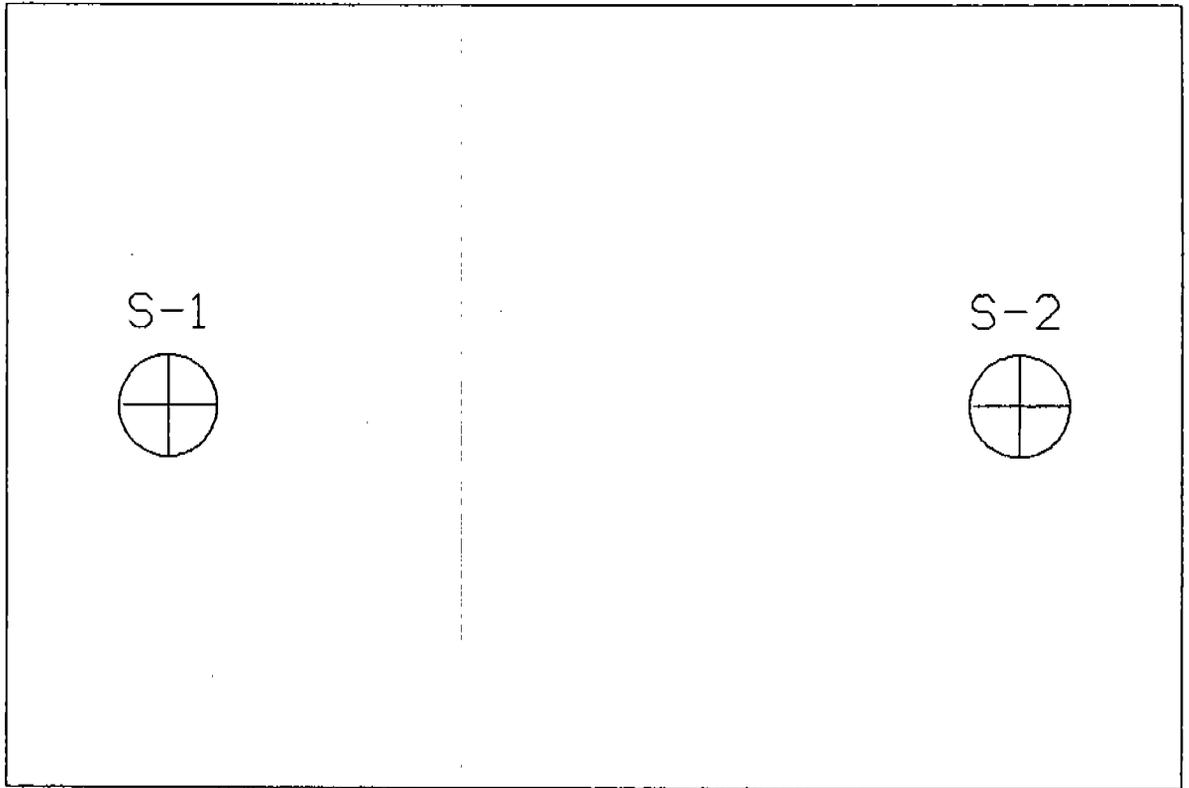


FIGURE 2



SAMPLING MAP			
SUMMIT AVENUE SUNOCO		SCALE	DRAWN: WRB CHECKED: WWC
1103 SUMMIT AVE. GREENSBORO, NC		1" = 1'	DATE: 8/25/93
			JOB NUMBER GESOSUM FIGURE NUMBER 3

TABLE 1
SOIL SCANNING RESULTS (ppm)
SUMMIT AVENUE SUNOCO

SAMPLE #	DEPTH (in.)	RESULTS
S-1	108	9.6
S-2	108	8.8

TABLE 2
 SOIL ANALYTICAL RESULTS (ppm)
 SUMMIT AVENUE SUNOCO

SAMPLE #	DATE	DEPTH (in.)	EPA METHOD	CONSTITUENT	RESULTS
S-1	4/27	102	5030		63.3
			3550	Diesel	180
S-2	4/27	102	5030		55.1
			3550	Diesel	730

MQL - Minimum Quantifying Level
 ND - None Detected at MQL
 EPA 5030 - MQL is 5 ppm
 EPA 3550 - MQL is 10 ppm

Table 1
Site Sensitivity Evaluation (SSE)
 Site Characteristics Evaluation (Step 1)

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

Total Site Characteristics Score: 75

* **Predominant** grain size based on Unified Soil Classification System or U.S. Dept. of Agriculture 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)		Category A & B (Multiply initial cleanup level by 1)		Final Cleanup Level
>150	≤10	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Select Site Category* → </div>	Category A & B (Multiply initial cleanup level by 1)	1 x _____ = _____ ppm	
121-150	20		Category C & D (Multiply initial cleanup level by 2)	2 x _____ = _____ ppm	
91-120	40		Category E (Multiply initial cleanup level by 3)	3 x <u>60</u> = <u>180</u> ppm	
61-90	60				
31-60	80				
0-30	100				

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

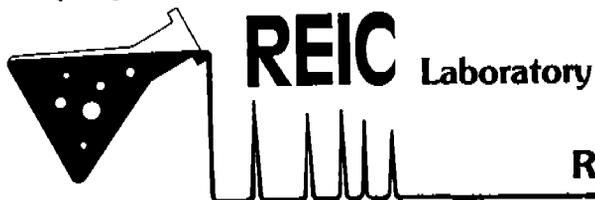
Total Site Characteristics Score	Initial Cleanup Level TPFH (ppm)		Category A & B (Multiply initial cleanup level by 1)		Final Cleanup Level
>150	≤40	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Select Site Category* → </div>	Category A & B (Multiply initial cleanup level by 1)	1 x _____ = _____ ppm	
121-150	80		Category C & D (Multiply initial cleanup level by 2)	2 x _____ = _____ ppm	
91-120	160		Category E (Multiply initial cleanup level by 3)	3 x <u>240</u> = <u>720</u> ppm	
61-90	240				
31-60	320				
0-30	400				

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)		Category A & B (Multiply initial cleanup level by 1)		Final Cleanup Level
>150	≤250	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Select Site Category* → </div>	Category A & B (Multiply initial cleanup level by 1)	1 x _____ = _____ ppm	
121-150	400		Category C & D (Multiply initial cleanup level by 2)	2 x _____ = _____ ppm	
91-120	550		Category E (Multiply initial cleanup level by 3)	3 x <u>700</u> = <u>2100</u> ppm	
61-90	700				
31-60	850				
0-30	1000				

* See Site Category Descriptions, Table 3

Quality Environmental Services



Research, Environmental & Industrial Consultants, Inc.

P. O. Box 286 • Beaver, West Virginia 25813 • 1-304-255-2500
1-800-999-0105
FAX 1-304-255-2572

Job #: 0493-18046

May 18, 1993

Mr. Alan Griffith
Griffith Enterprises, Inc.
163 Stratford Ct
Winston Salem NC 27103

Dear Mr. Griffith

Please find enclosed the analysis report for the samples submitted to our laboratory on April 29, 1993. The samples are identified as Sun Oil - Summit Avenue, Custody #0428935.

If you have any questions, please do not hesitate to call.

Thank you.

Sincerely,

A handwritten signature in dark ink, appearing to read "James L. Hern".

James L. Hern, Ph. D.

Enclosure
JLH/cas

Research, Environmental & Industrial Consultants, Inc.

P. O. Box 286 • Beaver, West Virginia 25813 • 1-304-255-2500
1-800-999-0105
FAX 1-304-255-2572

*****ANALYSIS REPORT*****

JOB #: 0493-18046
SERVICES FOR: Griffith Enterprises, Inc.
DATE SAMPLED: 4-27-93
DATE SUBMITTED: 4-29-93
DATE ANALYZED: TPH (EPA 5030/GC-FID) - 4-30-93
TPH (EPA 3550/GC-FID) - 5-4-93
DATE COMPLETED: 5-13-93
METHOD OF ANALYSIS: AS Noted Below
CUSTOMER JOB IDENTIFICATION: Sun Oil - Summit Avenue
CUSTODY #: 0428935

Page 2
Griffith Enterprises, Inc.
Job #: 0493-18046

REIC SAMPLE #	18046-1	METHOD	MOL
GRIFFITH SAMPLE #	1-A		
-----mg/kg-----			
TPH	63.3	EPA 5030/GC-FID	5.0
TPH (diesel)	180	EPA 3550/GC-FID	10

REIC SAMPLE #	18046-2	METHOD	MOL
GRIFFITH SAMPLE #	2-A		
-----mg/kg-----			
TPH	55.1	EPA 5030/GC-FID	5.0
TPH (diesel)	730	EPA 3550/GC-FID	10

MQL - Minimum Quantifying Level
TPH - Total Petroleum Hydrocarbons

DATE 5-13-93 APPROVED Ray Erickson
Ray Erickson

