

N00639.AR.000895  
NSA MID SOUTH  
5090.3a

SOIL SAMPLING RESULTS FOR THE REMOVAL OF A 6 INCH PIPELINE ON THE NSA  
MEMPHIS NORTHSIDE MILLINGTON SUPPACT TN  
8/5/1998  
NAVFAC SOUTHERN

**SOIL SAMPLING RESULTS FOR THE REMOVAL  
OF A 6-INCH PIPELINE ON THE NSA MEMPHIS  
NORTHSIDE  
NAVAL SUPPORT ACTIVITY MEMPHIS  
MILLINGTON, TENNESSEE**

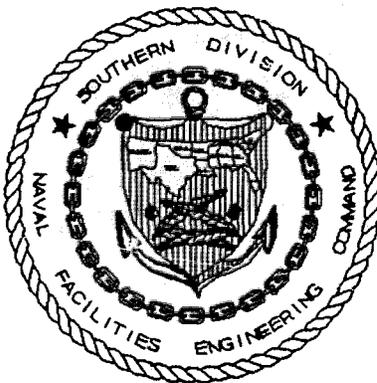


**CTO-0113**

**Contract Number: N62467-89-D-0318**

**Prepared for:**

**Department of the Navy  
Southern Division  
Naval Facilities Engineering Command  
North Charleston, South Carolina**



**Prepared by:**

**EnSafe Inc.  
5724 Summer Trees Drive  
Memphis, Tennessee 38134  
(901) 372-7962**

**August 5, 1998**

August 5, 1998

Commanding Officer  
ATTN: John Karlyk/1846  
SOUTHNAVFACENGCOM  
P.O. Box 190010  
North Charleston, SC 29419-9010

**Subject: CTO-0113; NSA Memphis, Millington, Tennessee  
Soil Sampling Results for the Removal of a 6-inch Pipeline on the  
NSA Memphis Northside**

Dear Sir:

On August 27, 1997, the Corps of Engineers (COE) began the removal of a 6-inch steel pipeline once used for the conveyance of aviation gasoline (AVGAS). The pipeline was located on the Naval Support Activity Memphis (NSAM) Northside, and ran parallel to the runway apron near Building N-94. The attached site map shows the location of the former pipeline.

Approximately 630 feet of the pipeline was removed, beginning at the southwest end up to the roadway running adjacent to Building N-94. At this point, two 90 degree tees intersected the pipeline. One 10-inch steel line intersected the pipeline and appeared to head northwest toward the runway, and another line tee which appeared to head southeast toward Building N-94. Neither of these lines were removed at the direction of the NSAM Public Works Department, Environmental Division, and the lines were blanked off. The removal of the 6-inch steel line terminated where an 8-inch steel line reduced to the 6-inch steel line.

Once the pipeline was removed from the trench, samples were collected every 50 feet over the length of the trench as depicted on the site map. Soil samples were collected with a stainless steel spoon from the floor of the trench. Samples were placed in pre-cleaned soil sample jars and immediately placed on ice. Samples were transported to Environmental Testing and Consulting (ETC) of Memphis, Tennessee, to be analyzed for Total Petroleum Hydrocarbons (TPH) - Gasoline Range Organics (GRO), TPH - Diesel Range Organics (DRO), and benzene. A summary of the sampling results is shown in the following table. Laboratory analytical data sheets are attached to this report.

Table 1  
Analytical Results (mg/kg)

Sample I.D.	TPH-DRO	TPH-GRO	Benzene
PL 1	<10.0	<10.0	<0.100
PL 2	<10.0	<10.0	<0.100
PL 3	<10.0	<10.0	<0.100
PL 4	21.4	45.0	<0.100
PL 5	15.8	<10.0	<0.100
PL 6	<10.0	<10.0	<0.100
PL 7	<10.0	<10.0	<0.100
PL 8	<10.0	<10.0	<0.100
PL 9	<10.0	<10.0	<0.100
PL 10	56.5	<10.0	<0.100
PL 11	56.3	<10.0	<0.100
PL 12	61.8	<10.0	<0.100

Results indicate that all sample results are below TDEC's most stringent soil cleanup standard for TPH (100 mg/kg) and benzene (5 mg/kg). Based on these results, excavated soil generated during the removal of the pipeline was used as backfill in the trench and no further action is recommended.

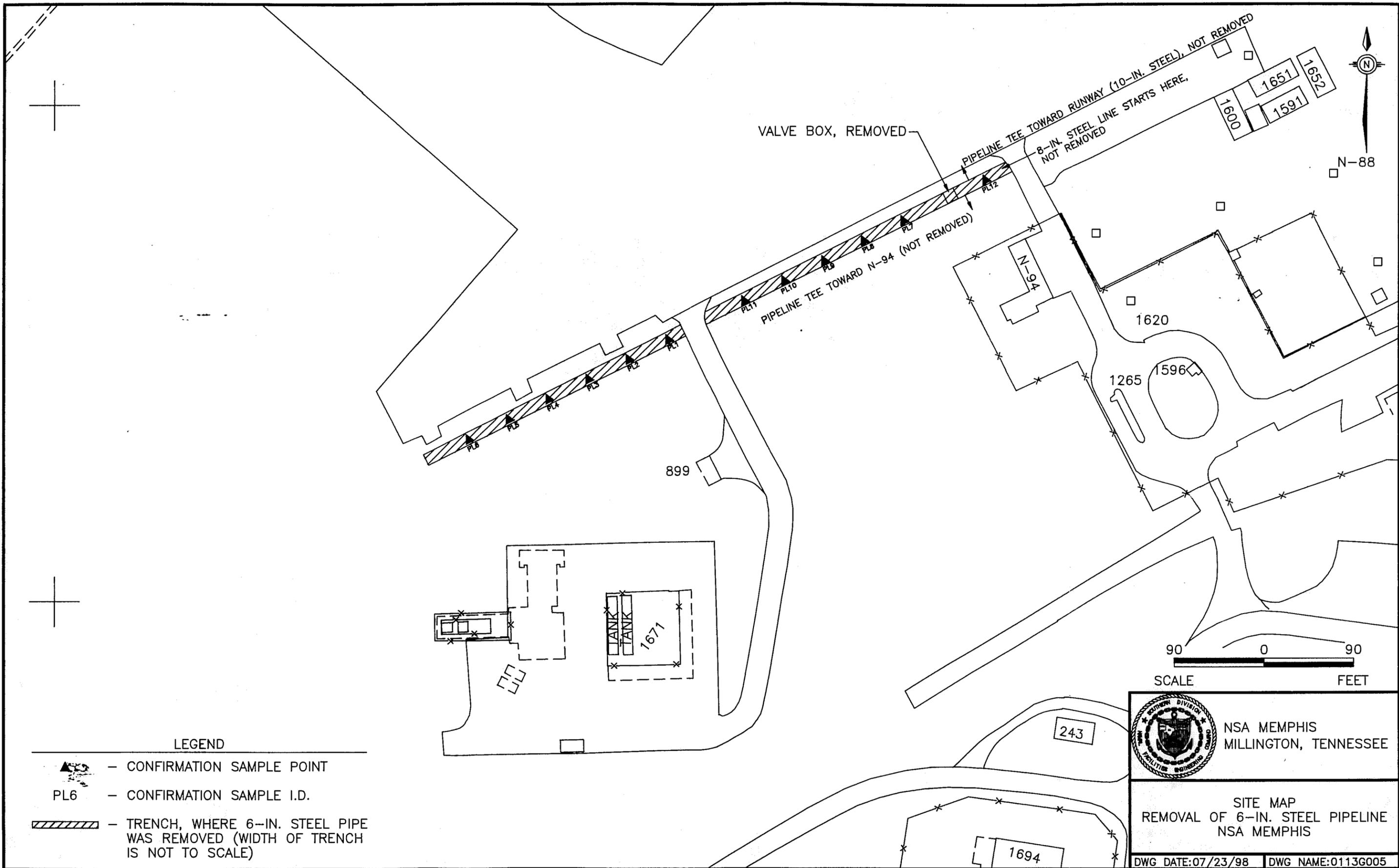
If you have any questions concerning this project, please do not hesitate to contact me at (901) 372-7962.

Sincerely,  
EnSafe, Inc.



By: Darrell Richardson  
Project Engineer

cc Mr. Randy Wilson, NSA Memphis  
Contracts File: CTO-0113  
Project File: 0113-8440



LEGEND

-  - CONFIRMATION SAMPLE POINT
- PL6 - CONFIRMATION SAMPLE I.D.
-  - TRENCH, WHERE 6-IN. STEEL PIPE WAS REMOVED (WIDTH OF TRENCH IS NOT TO SCALE)



NSA MEMPHIS  
MILLINGTON, TENNESSEE

SITE MAP  
REMOVAL OF 6-IN. STEEL PIPELINE  
NSA MEMPHIS

DWG DATE: 07/23/98 | DWG NAME: 0113G005



ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road • Memphis, TN 38111 • (901) 327-2750 • FAX (901) 327-6334

Founded 1972

September 3, 1997

Mr. Robert Smith  
Ensafe/Allen & Hoshall  
5909 Shelby Oaks Dr.  
Suite 201  
Memphis, TN 38134

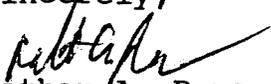
Ref: Analytical Testing  
ETC Order # 9708777  
Project Description NSA Memphis

The above referenced project has been analyzed per your instructions. The analyses were performed in our laboratory in accordance with Standard Methods 17th/18th Edition; The Solid Waste Manual SW-846; EPA Methods for the Analysis of Water and Wastes and/or 40 CFR part 136.

The results are shown on the attached analysis sheet(s).

Please do not hesitate to contact our office if you have any questions.

Sincerely,

  
Nathan A. Pera, IV  
Chief Executive Officer

rt  
Attachment

ENSAFEALLEN

Certifications

Tennessee	#02027	New Jersey	#81617
Arkansas		Mississippi	
Alabama	#40730	Oklahoma	#9311
Kentucky	#90047	Virginia	#00106
North Carolina	#415	Washington	#C248
South Carolina	#84002002	US Army Corps of Engineers	
	#84002001		



**NAVY CLEAN**  
**ENSAFE/ALLEN&HOSHALL**  
 (901) 383-9115

**CHAIN OF CUSTODY RECORD**

PAGE 1 OF 1

CTO-TASK: 0113-8440  
 COC #: 082797  
 BPA/SO: \_\_\_\_\_

CLIENT NSA Memphis PROJECT MANAGER John Steelman  
 ADDRESS Millington TN TELEPHONE NO. 901-372-7962  
 PROJECT NAME/NUMBER 0113-8440 FAX. NO. 901-372-2454  
 SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL		PRO	ARO	BENZENE		
PL 1	8/27/97	1350	S	9g. glass	4°C	—	1	✓	✓	✓		
PL 2		1350				—	1	✓	✓	✓		
PL 3		1355				—	1	✓	✓	✓		NORMAL TAT
PL 4		1355				—	1	✓	✓	✓		
PL 5		1400				—	1	✓	✓	✓		
PL 6		1400				—	1	✓	✓	✓		

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>8/27/97</u>	RECEIVED BY: <u>[Signature]</u>	DATE: <u>8/27/97</u>	RELINQUISHED BY: _____	DATE: _____	RECEIVED BY: _____	DATE: _____
SIGNATURE: <u>[Signature]</u>		SIGNATURE: <u>[Signature]</u>		SIGNATURE: _____		SIGNATURE: _____	
PRINTED: <u>Richardson</u>		PRINTED: <u>R. Barger</u>		PRINTED: _____		PRINTED: _____	
COMPANY: <u>Ensafe Inc</u>	TIME: <u>1330</u>	COMPANY: <u>ETC</u>	TIME: <u>1530</u>	COMPANY: _____		COMPANY: _____	TIME: _____
REASON: <u>LAB</u>		REASON: <u>LAB</u>		REASON: _____		REASON: _____	

METHOD OF SHIPMENT: \_\_\_\_\_ SHIPMENT NO. \_\_\_\_\_ SPECIAL INSTRUCTION: \_\_\_\_\_

COMMENTS: Will call with release #

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**  
Site ID **NSA Memphis**

Project # **0113-8440**  
FID #

Date Arrived **08/27/97**  
ETC Order Number **9708777**

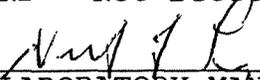
ETC Lab ID **9708777-01**

**Sample ID: PL1**

Matrix : **SOIL**  
Sample Date : **08/27/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
BTX/TPH GRO							8020/GRO
Benzene	ND	mg/Kg	0.100	08/27/97	08/28/97	QM	
Gasoline Range Organics	ND	mg/Kg	10.0				
<u>Surrogate Standard</u>	<u>% Recovery</u>		<u>QC Limits</u>				
S1 - BFB	91		50		150		
S2 - BFB	113		50		150		

ND - Not Detected

  
LABORATORY MANAGER

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**

Project # **0113-8440**  
FID #

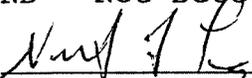
Date Arrived **08/27/97**  
ETC Order Number **9708777**

ETC Lab ID **9708777-01**  
**Sample ID: PL1**

Matrix : **SOIL**  
Sample Date : **08/27/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
Petroleum Hydrocarbons							TN DRO
Diesel Range Organics	ND	mg/Kg	10.0	08/27/97	09/02/97	JP	
<u>Surrogate Standard</u>	<u>% Recovery</u>		<u>QC Limits</u>				
S1 - OTP	72		50	150			

ND - Not Detected

  
LABORATORY MANAGER

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**  
Site ID **NSA Memphis**

Project # **0113-8440**  
FID #

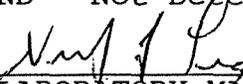
Date Arrived **08/27/97**  
ETC Order Number **9708777**

ETC Lab ID **9708777-02**

**Sample ID: PL2**

Matrix : **SOIL**  
Sample Date : **08/27/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
BTX/TPH GRO							8020/GRO
Benzene	ND	mg/Kg	0.100	08/27/97	08/28/97	QM	
Gasoline Range Organics	ND	mg/Kg	10.0				
<b>Surrogate Standard</b>	<b>% Recovery</b>		<b>QC Limits</b>				
S1 - BFB	93		50	150			
S2 - BFB	116		50	150			

ND - Not Detected  
  
LABORATORY MANAGER

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**

Project # **0113-8440**  
FID #

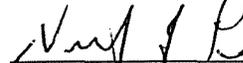
Date Arrived **08/27/97**  
ETC Order Number **9708777**

ETC Lab ID **9708777-02**  
**Sample ID: PL2**

Matrix : **SOIL**  
Sample Date : **08/27/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
Petroleum Hydrocarbons							TN DRO
Diesel Range Organics	ND	mg/Kg	10.0	08/27/97	09/02/97	JP	
<u>Surrogate Standard</u>	<u>% Recovery</u>		<u>QC Limits</u>				
S1 - OTP	76		50	150			

ND - Not Detected

  
LABORATORY MANAGER

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**

Project # **0113-8440**  
FID #

Date Arrived **08/27/97**  
ETC Order Number **9708777**

ETC Lab ID **9708777-03**

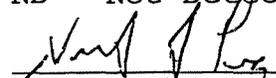
**Sample ID: PL3**

Matrix : **SOIL**

Sample Date : **08/27/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
BTX/TPH GRO							8020/GRO
Benzene	ND	mg/Kg	0.100	08/27/97	08/28/97	QM	
Gasoline Range Organics	ND	mg/Kg	10.0				
<u>Surrogate Standard</u>	<u>% Recovery</u>		<u>QC Limits</u>				
S1 - BFB	88		50		150		
S2 - BFB	110		50		150		

ND - Not Detected

  
LABORATORY MANAGER

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**

Project # **0113-8440**  
FID #

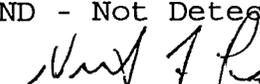
Date Arrived **08/27/97**  
ETC Order Number **9708777**

ETC Lab ID **9708777-03**  
**Sample ID: PL3**

Matrix : **SOIL**  
Sample Date : **08/27/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
Petroleum Hydrocarbons							TN DRO
Diesel Range Organics	ND	mg/Kg	10.0	08/27/97	09/02/97	JP	
<u>Surrogate Standard</u>	<u>% Recovery</u>		<u>OC Limits</u>				
S1 - OTP	84		50	150			

ND - Not Detected

  
LABORATORY MANAGER

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**  
Site ID **NSA Memphis**

Project # **0113-8440**  
FID #

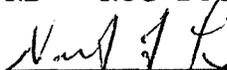
Date Arrived **08/27/97**  
ETC Order Number **9708777**

ETC Lab ID **9708777-04**  
**Sample ID: PL4**

Matrix : **SOIL**  
Sample Date : **08/27/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
BTX/TPH GRO							8020/GRO
Benzene	ND	mg/Kg	0.100	08/27/97	08/28/97	QM	
Gasoline Range Organics	45.0	mg/Kg	10.0				
<u>Surrogate Standard</u>	<u>% Recovery</u>		<u>QC Limits</u>				
S1 - BFB	85		50	150			
S2 - BFB	97		50	150			

ND - Not Detected

  
LABORATORY MANAGER



# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**

Project # **0113-8440**  
FID #

Date Arrived **08/27/97**  
ETC Order Number **9708777**

ETC Lab ID **9708777-05**

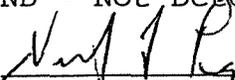
**Sample ID: PL5**

Matrix : **SOIL**

Sample Date : **08/27/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
BTX/TPH GRO							
Benzene	ND	mg/Kg	0.100	08/27/97	08/28/97	QM	8020/GRO
Gasoline Range Organics	ND	mg/Kg	10.0				
<u>Surrogate Standard</u>							
S1 - BFB	90		50		150		
S2 - BFB	116		50		150		

ND - Not Detected

  
LABORATORY MANAGER

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**

Project # **0113-8440**  
FID #

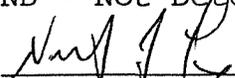
Date Arrived **08/27/97**  
ETC Order Number **9708777**

ETC Lab ID **9708777-05**  
**Sample ID: PL5**

Matrix : **SOIL**  
Sample Date : **08/27/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
Petroleum Hydrocarbons							TN DRO
Diesel Range Organics	15.8	mg/Kg	10.0	08/27/97	09/02/97	JP	
<b>Surrogate Standard</b>	<b>% Recovery</b>		<b>QC Limits</b>				
S1 - OTP	86		50	150			

ND - Not Detected

  
LABORATORY MANAGER

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**  
Site ID **NSA Memphis**

Project # **0113-8440**  
FID #

Date Arrived **08/27/97**  
ETC Order Number **9708777**

ETC Lab ID **9708777-06**

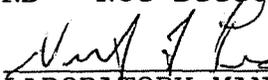
Matrix : **SOIL**

**Sample ID: PL6**

Sample Date : **08/27/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
BTX/TPH GRO							8020/GRO
Benzene	ND	mg/Kg	0.100	08/27/97	08/28/97	QM	
Gasoline Range Organics	ND	mg/Kg	10.0				
<b>Surrogate Standard</b>	<b>% Recovery</b>		<b>QC Limits</b>				
S1 - BFB	87		50	150			
S2 - BFB	88		50	150			

ND - Not Detected

  
LABORATORY MANAGER

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**  
Site ID **NSA Memphis**

Project # **0113-8440**  
FID #

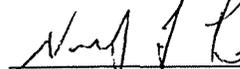
Date Arrived **08/27/97**  
ETC Order Number **9708777**

ETC Lab ID **9708777-06**  
**Sample ID: PL6**

Matrix : **SOIL**  
Sample Date : **08/27/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
Petroleum Hydrocarbons							TN DRO
Diesel Range Organics	ND	mg/Kg	10.0	08/27/97	09/02/97	JP	
<u>Surrogate Standard</u>	<u>% Recovery</u>		<u>QC Limits</u>				
S1 - OTP	68		50	150			

ND - Not Detected

  
LABORATORY MANAGER



ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road • Memphis, TN 38111 • (901) 327-2750 • FAX (901) 327-6384

Founded 1972

September 12, 1997

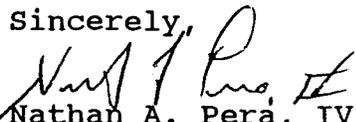
Mr. John Stedman  
Ensafe/Allen & Hoshall  
5909 Shelby Oaks Dr.  
Suite 201  
Memphis, TN 38134

Ref: Analytical Testing  
ETC Order # 9709072  
Project Description NSA Memphis  
Millington, TN

The above referenced project has been analyzed per your instructions. The analyses were performed in our laboratory in accordance with Standard Methods 17th/18th Edition; The Solid Waste Manual SW-846; EPA Methods for the Analysis of Water and Wastes and/or 40 CFR part 136.

The results are shown on the attached analysis sheet(s).

Please do not hesitate to contact our office if you have any questions.

Sincerely,  
  
Nathan A. Pera, IV  
Chief Executive Officer

rt  
Attachment

ENSAFEALLEN

Certifications

Tennessee	#02027	New Jersey	#81617
Arkansas		Mississippi	
Alabama	#40730	Oklahoma	#9311
Kentucky	#90047	Virginia	#00106
North Carolina	#415	Washington	#C248
South Carolina	#84002002	US Army Corps of Engineers	
	#84002001		

**Environmental Testing & Consulting, Inc.**  
**Data Qualifiers for Organic Reporting**

Within the attached report, some analytical data may be reported as "Qualified Data" as indicated by a "Data Qualifier" next to the result. This table summarizes the possible "Data Qualifiers" that may be associated with this report.

Q	Surrogate Recovery Outside QC Limits
J	Estimated Value. Presence of the compound was confirmed but less than the reported detection limit.
E	Concentration exceeds the established method calibration range but is within the working range of the instrument.
B	Analyte detected in the associated Method Blank.
U	Reported result was unconfirmed. Refer to Case Narrative.
N	Non-Compliance Report associated with this sample or project.
C	Result reported from GC/MS confirmation analysis.
*	QC Data (percent recovery/RPD for a particular analyte was outside QC Limits)

**Environmental Testing & Consulting, Inc.**

**Login**  
**Chain-of-Custody**

**000002**

4709072



NAVY CLEAN  
ENSAFE/ALLEN&HOSHALL  
(901) 383-9115

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CTO-TASK: 0113-8440  
COC #: 090397  
BPA/SO: M0040

CLIENT NSA Memphis PROJECT MANAGER John Stelman  
ADDRESS Millington TN TELEPHONE NO. 901-372-7962  
PROJECT NAME/NUMBER 0113-8440 FAX NO. 901-372-2454  
SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED			REMARKS
					TEMP.	CHEMICAL		DRD	GRO	GENERAL	
PL7	9-3-97	1000	S	9oz. glass	4°C	—	1	✓	✓	✓	Normal/TAT
PL8		1000				—	1	✓	✓	✓	
<del>PL9</del>		1010				—	1	✓	✓	✓	
PL10		1011				—	1	✓	✓	✓	
PL11		1015				—	1	✓	✓	✓	
PL12		1345		4oz. glass		—	2	✓	✓	✓	

RELINQUISHED BY: <u>[Signature]</u> SIGNATURE PRINTED <u>DRichardson</u> COMPANY <u>Ensafe Inc</u> REASON <u>Labs</u>	DATE <u>9/3/97</u> TIME <u>145</u>	RECEIVED BY: <u>[Signature]</u> SIGNATURE PRINTED <u>L. Harmon</u> COMPANY <u>ETC</u> REASON <u>LGB</u>	DATE <u>9/3/97</u> TIME <u>145</u>	RELINQUISHED BY: _____ SIGNATURE PRINTED _____ COMPANY REASON	DATE _____ TIME	RECEIVED BY: _____ SIGNATURE PRINTED _____ COMPANY REASON	DATE _____ TIME
---	---------------------------------------	---	---------------------------------------	---	--------------------	---	--------------------

METHOD OF SHIPMENT: Hand COMMENTS: Ref. # M0040

SHIPMENT NO. \_\_\_\_\_

SPECIAL INSTRUCTION: \_\_\_\_\_

AFTER ANALYSIS, SAMPLES ARE TO BE:  
 DISPOSED OF  
 STORED (90 DAYS MAX)  
 STORED OVER 90 DAYS  
 RETURNED TO CUSTOMER

000003

Environmental Testing and Consulting, Inc.  
2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Cross Reference Table

Project : NSA Memphis

Sample ID	Laboratory ID
PL7	9709-072-01
PL8	9709-072-02
PL9	9709-072-03
PL10	9709-072-04
PL11	9709-072-05
PL12	9709-072-06

000004

**Environmental Testing & Consulting, Inc.**

**Sample Reports**

**000005**

ENVIRONMENTAL TESTING & CONSULTING, INC.  
Memphis, TN  
INORGANIC ANALYSIS DATA SHEET  
PERCENT SOLIDS

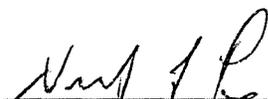
Client Name : Ensafe/Allen & Hoshall  
Project Name : NSA Memphis  
Millington, TN

Matrix : SOIL

Date Sample Received : 09/03/97

Contract Laboratory Order Number : 9709-072

<u>Contract Lab Sample No</u>	<u>Client Sample ID</u>	<u>Date Sampled</u>	<u>Result Units : (%)</u>	<u>Date Analyzed</u>	<u>Method</u>	<u>By</u>
9709-072-01	PL7	09/03/97	84.1	09/04/97	160.3	RB
9709-072-02	PL8	09/03/97	83.5	09/04/97	160.3	RB
9709-072-03	PL9	09/03/97	87.1	09/04/97	160.3	RB
9709-072-04	PL10	09/03/97	91.1	09/04/97	160.3	RB
9709-072-05	PL11	09/03/97	89.7	09/04/97	160.3	RB
9709-072-06	PL12	09/03/97	83.0	09/04/97	160.3	RB

  
LABORATORY MANAGER

000006

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**  
**Millington, TN**

Project # **0113-8440**  
FID #

Date Arrived **09/03/97**  
ETC Order Number **9709072**

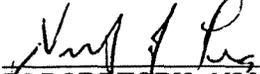
ETC Lab ID **9709072-01**  
**Sample ID: PL7**

Matrix : **SOIL**  
Sample Date : **09/03/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
BTX/TPH GRO							8020/GRO
Analysis Batch Method 5030	S109041S	mg/Kg		09/04/97	09/04/97	QM	
Benzene	ND	mg/Kg	0.100				
Gasoline Range Organics	ND	mg/Kg	10.0				

Surrogate Standard	% Recovery	QC Limits
S1 - BFB	84	50 150
S2 - BFB	81	50 150

ND - Not Detected

  
LABORATORY MANAGER

000007

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**  
**Millington, TN**

Project # **0113-8440**  
FID #

Date Arrived **09/03/97**  
ETC Order Number **9709072**

ETC Lab ID **9709072-01**

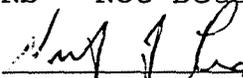
**Sample ID: PL7**

Matrix : **SOIL**

Sample Date : **09/03/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
Petroleum Hydrocarbons							TN DRO
Extraction Batch Method 3550	V19DRS31	mg/Kg		09/04/97	09/05/97	JP	
Diesel Range Organics	ND	mg/Kg	10.0				
<b>Surrogate Standard</b>	<b>% Recovery</b>						<b>QC Limits</b>
S1 - OTP	89						50 150

ND - Not Detected

  
LABORATORY MANAGER

000008

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name    Ensafe/Allen & Hoshall  
                  Navy Clean Joint Venture  
                  5909 Shelby Oaks Dr.  
                  Suite 201  
                  Memphis, TN 38134  
Site ID            NSA Memphis  
                  Millington, TN

Project # 0113-8440  
FID #

Date Arrived 09/03/97  
ETC Order Number 9709072

ETC Lab ID 9709072-02

**Sample ID: PL8**

Matrix :SOIL  
Sample Date :09/03/97

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
BTX/TPH GRO							8020/GRO
Analysis Batch Method 5030	S109041S	mg/Kg		09/04/97	09/04/97	QM	
Benzene	ND	mg/Kg	0.100				
Gasoline Range Organics	ND	mg/Kg	10.0				

Surrogate Standard	% Recovery	QC Limits
S1 - BFB	84	50    150
S2 - BFB	81	50    150

ND - Not Detected

  
LABORATORY MANAGER

000009

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**  
**Millington, TN**

Project # **0113-8440**  
FID #

Date Arrived **09/03/97**  
ETC Order Number **9709072**

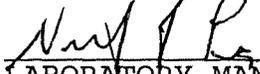
ETC Lab ID **9709072-02**

**Sample ID: PL8**

Matrix : **SOIL**  
Sample Date : **09/03/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
Petroleum Hydrocarbons							TN DRO
Extraction Batch Method 3550	V19DRS31	mg/Kg		09/04/97	09/05/97	JP	
Diesel Range Organics	ND	mg/Kg	10.0				
<b>Surrogate Standard</b>	<b>% Recovery</b>		<b>QC Limits</b>				
S1 - OTP	84		50	150			

ND - Not Detected

  
LABORATORY MANAGER

000010

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**  
Site ID **NSA Memphis**  
**Millington, TN**

Project # **0113-8440**  
FID #

Date Arrived **09/03/97**  
ETC Order Number **9709072**

ETC Lab ID **9709072-03**

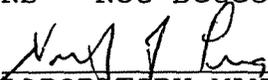
**Sample ID: PL9**

Matrix : **SOIL**

Sample Date : **09/03/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
BTX/TPH GRO							8020/GRO
Analysis Batch Method 5030	S109041S	mg/Kg		09/04/97	09/04/97	QM	
Benzene	ND	mg/Kg	0.100				
Gasoline Range Organics	ND	mg/Kg	10.0				
<b>Surrogate Standard</b>	<b>% Recovery</b>		<b>QC Limits</b>				
S1 - BFB	83		50	150			
S2 - BFB	81		50	150			

ND - Not Detected

  
LABORATORY MANAGER

000011

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**  
**Millington, TN**

Project # **0113-8440**  
FID #

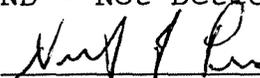
Date Arrived **09/03/97**  
ETC Order Number **9709072**

ETC Lab ID **9709072-03**  
**Sample ID: PL9**

Matrix : **SOIL**  
Sample Date : **09/03/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
Petroleum Hydrocarbons							TN DRO
Extraction Batch Method 3550	V19DRS31	mg/Kg		09/04/97	09/05/97	JP	
Diesel Range Organics	ND	mg/Kg	10.0				
<b>Surrogate Standard</b>	<b>% Recovery</b>		<b>QC Limits</b>				
S1 - OTP	84		50	150			

ND - Not Detected

  
LABORATORY MANAGER

000012

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name: Ensafe/Allen & Hoshall  
Navy Clean Joint Venture  
5909 Shelby Oaks Dr.  
Suite 201  
Memphis, TN 38134  
Site ID: NSA Memphis  
Millington, TN

Project # 0113-8440  
FID #

Date Arrived 09/03/97  
ETC Order Number 9709072

ETC Lab ID 9709072-04  
**Sample ID: PL10**

Matrix :SOIL  
Sample Date :09/03/97

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
BTX/TPH GRO							8020/GRO
Analysis Batch Method 5030	S109041S	mg/Kg		09/04/97	09/04/97	QM	
Benzene	ND	mg/Kg	0.100				
Gasoline Range Organics	ND	mg/Kg	10.0				
<u>Surrogate Standard</u>	<u>% Recovery</u>		<u>QC Limits</u>				
S1 - BFB	86		50 150				
S2 - BFB	83		50 150				

ND - Not Detected

  
LABORATORY MANAGER

000013

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**  
**Millington, TN**

Project # **0113-8440**  
FID #

Date Arrived **09/03/97**  
ETC Order Number **9709072**

ETC Lab ID **9709072-04**

**Sample ID: PL10**

Matrix : **SOIL**

Sample Date : **09/03/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
Petroleum Hydrocarbons							TN DRO
Extraction Batch Method 3550	V19DRS34	mg/Kg		09/09/97	09/09/97	JP	
Diesel Range Organics	56.5	mg/Kg	10.0				
<b>Surrogate Standard</b>	<b>% Recovery</b>		<b>QC Limits</b>				
S1 - OTP	95		50		150		

ND - Not Detected

  
LABORATORY MANAGER

000014

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**  
**Millington, TN**

Project # **0113-8440**  
FID #

Date Arrived **09/03/97**  
ETC Order Number **9709072**

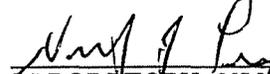
ETC Lab ID **9709072-05**  
**Sample ID: PL11**

Matrix :**SOIL**  
Sample Date :**09/03/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
BTX/TPH GRO							8020/GRO
Analysis Batch Method 5030	S109041S	mg/Kg		09/04/97	09/04/97	QM	
Benzene	ND	mg/Kg	0.100				
Gasoline Range Organics	ND	mg/Kg	10.0				

Surrogate Standard	% Recovery	QC Limits
S1 - BFB	86	50 150
S2 - BFB	83	50 150

ND - Not Detected

  
LABORATORY MANAGER

000015

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**  
**Millington, TN**

Project # **0113-8440**  
FID #

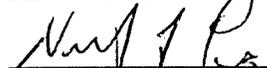
Date Arrived **09/03/97**  
ETC Order Number **9709072**

ETC Lab ID **9709072-05**  
**Sample ID: PL11**

Matrix : **SOIL**  
Sample Date : **09/03/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
Petroleum Hydrocarbons							TN DRO
Extraction Batch Method 3550	V19DRS34	mg/Kg		09/09/97	09/09/97	JP	
Diesel Range Organics	56.3	mg/Kg	10.0				
<u>Surrogate Standard</u>	<u>% Recovery</u>						<u>QC Limits</u>
S1 - OTP	107						50 150

ND - Not Detected

  
LABORATORY MANAGER

000016

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**  
**Millington, TN**

Project # **0113-8440**  
FID #

Date Arrived **09/03/97**  
ETC Order Number **9709072**

ETC Lab ID **9709072-06**

**Sample ID: PL12**

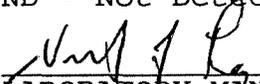
Matrix : **SOIL**

Sample Date : **09/03/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
BTX/TPH GRO				09/04/97	09/04/97	QM	8020/GRO
Analysis Batch Method 5030	S109041S	mg/Kg					
Benzene	ND	mg/Kg	0.100				
Gasoline Range Organics	ND	mg/Kg	10.0				

Surrogate Standard	% Recovery	OC Limits
S1 - BFB	84	50 150
S2 - BFB	83	50 150

ND - Not Detected

  
LABORATORY MANAGER

000017

# ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

## ORGANIC ANALYSIS DATA SHEET

Client Name **Ensafe/Allen & Hoshall**  
**Navy Clean Joint Venture**  
**5909 Shelby Oaks Dr.**  
**Suite 201**  
**Memphis, TN 38134**

Site ID **NSA Memphis**  
**Millington, TN**

Project # **0113-8440**  
FID #

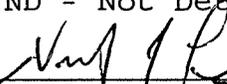
Date Arrived **09/03/97**  
ETC Order Number **9709072**

ETC Lab ID **9709072-06**  
**Sample ID: PL12**

Matrix :**SOIL**  
Sample Date :**09/03/97**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
Petroleum Hydrocarbons				09/09/97	09/09/97	JP	TN DRO
Extraction Batch Method 3550	V19DRS34	mg/Kg					
Diesel Range Organics	61.8	mg/Kg	10.0				
<u>Surrogate Standard</u>	<u>% Recovery</u>		<u>QC Limits</u>				
S1 - OTP	103		50	150			

ND - Not Detected

  
LABORATORY MANAGER

000018