

12/5/06

SOIL CLEANUP REPORT WITH SITE CLOSURE REQUEST TT-3548

NCDENR Incident Number: 23694
Marine Corps Base
Camp Lejeune, North Carolina

November 21, 2006

Prepared for:



Mr. David T. Cleland, P.G.
Marine Corps North Carolina IPT
Naval Facilities Engineering Command Mid-Atlantic
6506 Hampton Blvd
Norfolk, VA 23508-1278



Mr. Andrew Smith
I&E/EMD/EQB
Building 12, Post Lane
MCB Camp Lejeune, NC 28542

Prepared by:



Sovereign Consulting Inc.
405 Oakmeads Crescent, Suite 1
Virginia Beach, VA 23462

Contract Number: N62470-04-D-0205
Task Order: 0012

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
1.0 TITLE PAGE	2
2.0 INTRODUCTION	3
3.0 SITE HISTORY	3
4.0 SITE REMEDIATION	3
5.0 RECEPTOR SURVEY	4
6.0 CONCLUSIONS AND PETITION FOR SITE CLOSURE	5
7.0 REFERENCES	6

TABLES

TABLE 1	TT-3548 GROUNDWATER SAMPLING RESULTS – EPA METHOD 602
TABLE 2	TT-3548 GROUNDWATER SAMPLING RESULTS – EPA METHOD 625 + 10 TICS
TABLE 3	TT-3548 GROUNDWATER SAMPLING RESULTS – MADEP METHOD VPH/EPH
TABLE 4	TT-3548 GROUNDWATER SAMPLING RESULTS – MADEP METHOD VPH/EPH AS COMPARED TO NCDENR 2L GWQS
TABLE 5	SUMMARY OF CONFIRMATION SOIL SAMPLING RESULTS MADEP Method VPH AND EPH
TABLE 6	SUMMARY OF CONFIRMATION SOIL SAMPLING RESULTS – MADEP Method VPH/EPH as compared to NCDENR MSCCs

FIGURES

FIGURE 1	GENERAL VICINITY TOPOGRAPHIC MAP
FIGURE 2	SITE MAP WITH MONITORING WELL LOCATIONS
FIGURE 3	SITE MAP SHOWING AREA OF 2006 EXCAVATION
FIGURE 4	SITE MAP WITH CONFIRMATION SOIL SAMPLING RESULTS – MADEP Method VPH AND EPH

APPENDICES

APPENDIX A	HISTORICAL DATA
APPENDIX B	LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTATION FROM SEPTEMBER 2006 EVENT
APPENDIX C	PHOTOGRAPHS
APPENDIX D	SOIL DISPOSAL MANIFESTS

LIST OF ACRONYMS

2000 Guidelines	Groundwater Section Guidelines for Investigation and Remediation of Soil and Groundwater
2001 Guidelines	Guidelines for Assessment and Corrective Action, North Carolina Underground Storage Tank Section (Effective July 1, 2001)
2L GWQS	NCAC T15A:02L Groundwater Quality Standards
AS	Air Sparge
AST	Aboveground Storage Tank
BDL	Below Detection Limit
BN	Base/Neutral (extractables)
BNA	Base/Neutral/Acid (extractables)
BQL	Below Quantitation Limit
BLS	Below Land Surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAP	Corrective Action Plan
CFR	Code of Federal Regulations
Cr	Chromium
CSA	Comprehensive Site Assessment
DIPE	Di-isopropyl Ether
DO	Dissolved Oxygen
DOD	Department of Defense
DPT	Direct Push Technology
DWQ	Division of Water Quality
DWM	Division of Waste Management
DTW	Depth to Water
EDB	Ethylene di-bromide
EMD	Environmental Management Division
EPA	Environmental Protection Agency
EPH	Extractable Petroleum Hydrocarbons
EQB	Environmental Quality Branch
Fe	Iron
FID	Flame Ionization Detector
FT	Feet
GCL	Gross Contaminant Level
GIS	Geographic Information System
GPS	Global Positioning System
Guidelines Vol. II	Groundwater Section Guidelines for Investigation and Remediation of Soil and Groundwater, Volume II, Petroleum Underground Storage Tanks (January 2, 1998)
HDPE	High Density Polyethylene
I/C	Industrial/Commercial
ID	Identification
I&E	Installations and Environment Department
IGWQS	Interim Groundwater Quality Standards
IPE	Isopropyl Ether
LSA	Limited Site Assessment
LUST	Leaking Underground Storage Tank
m	Meter
MADEP	Massachusetts Department of Environmental Protection
MCAS	Marine Corps Air Station

MCB	Marine Corps Base
MDL	Method Detection Limit
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
MSCC	Maximum Soil Contaminant Concentration
MSL	Mean Sea Level
MTBE	Methyl tertiary butyl ether
µg/Kg	Micrograms per Kilogram
µg/L	Micrograms per Liter
NA	Not Analyzed
N/A	Not Applicable
NAVFAC	Naval Facilities Engineering Command Atlantic
NC	North Carolina
NCAC	North Carolina Administrative Code
NCDENR	North Carolina Department of Environment and Natural Resources
NE	None Established
NM	Not Measured
NMT	No Measurable Thickness
NS	Not Sampled
OVA	Organic Vapor Analyzer
PAH	Polynuclear Aromatic Hydrocarbons
Pb	Lead
PPB	Parts Per Billion
PPM	Parts Per Million
PID	Photo Ionization Detector
PQL	Practical Quantitation Limit
PVC	Polyvinyl chloride
RBCA	Risk-Based Corrective Action
RCRA	Resource Conservation and Recovery Act
Res	Residential
SOW	Scope of Work
STGW	Soil-to-Groundwater
SVE	Soil Vapor Extraction
SVOC	Semi Volatile Organic Compound
TCLP	Toxicity Characteristic Leaching Procedure
TIC	Tentatively Identified Compound
TOC	Top of Casing
TPH	Total Petroleum Hydrocarbons
US	United States
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
VPH	Volatile Petroleum Hydrocarbons
WiRO	NCDENR Wilmington Regional Office

EXECUTIVE SUMMARY

The TT-3548 project site is located in the Tarawa Terrace II Housing Area of Marine Corps Base (MCB), Camp Lejeune, North Carolina. The building is a single-family residence and is located off Chosin Circle. The former leaking underground storage tank system was a 550 gallon heating oil UST and associated piping used to heat the single family residence.

J.A. Jones Environmental, Inc. (J.A. Jones) removed the tank in August 2001. Approximately 3 cubic yards of TPH impacted soils were removed from the subsurface. J.A. Jones took soil samples from the center and each sidewall of the UST excavation. Volatile organic compounds (VOCs), semi-VOCs, and MADEP constituents were detected above applicable soil action limits; therefore a limited site assessment was conducted later at the site.

Mid-Atlantic Associates, Inc (Mid-Atlantic) conducted a Phase I Limited Site Assessment (LSA) for the site in 2002-2003. Mid-Atlantic collected three soil samples for laboratory analysis and installed and sampled one temporary groundwater monitoring well, USTTT35481070-MW01. Soil contaminants were identified above both the STGW and residential MSCCs. Groundwater contamination above 2L standards was not identified during the LSA.

As a result, CATLIN Engineers and Scientists (CATLIN) conducted a soil assessment report (SAR) to delineate the horizontal and vertical extent of soil contamination at the site. CATLIN confirmed the presence of MADEP constituents at the base and sidewalls of the excavation in excess of the Residential MSCCs. The soil contamination was present at depths of greater than eight feet BLS and within the boundary of the excavation area. CATLIN, therefore, recommended the excavation of impacted soils from a depth of six feet BLS to the water table.

CATLIN also sampled the site's groundwater during SAR activities and detected aliphatic and aromatic petroleum hydrocarbons in excess of the groundwater quality standards. They recommended that MCB Camp Lejeune monitor groundwater conditions on an annual basis until soil excavation was performed in August 2006.

All soil contamination was excavated in August 2006 per SAR recommendations based on the outcome of the April 7, 2006 CATLIN soil sampling event. Approximately 117.5 tons of contaminated soil were removed and properly disposed. Based on the findings of this investigation and previous reports, soils at TT-3548 no longer contain contaminants above residential MSCCs. Since this site had been classified as low risk by NCDENR and soil contamination has been remediated to the residential MSCC, no further soil remediation is necessary per the requirements of 15A NCAC 2L .0408.

Groundwater is no longer impacted based on recent monitoring and there are no 2L NCGWQS exceedences. All detections are also below applicable GCLs. As such, these sites qualify for No Further Action as outlined in 15A NCAC 2L .0407(d). Land use restrictions are not necessary as site groundwater has been remediated to the standards established in 15A NCAC 2L.

1.0 TITLE PAGE

DATE OF REPORT: November 21, 2006

Facility I.D.: N/A

UST Incident Number: 23694

Site Name: TT-3548

Site Location: Tarawa Terrace II, Marine Corps Base Camp Lejeune, North Carolina

Nearest City/Town: Camp Lejeune

County: Onslow

Risk Classification: Low Risk

Land Use Classification: Residential

UST Owner: Commanding Officer – MCB Camp Lejeune

I&E/EMD/EQB

PSC Box 20004

Address: MCB Camp Lejeune, NC 28542-0004

Phone: (910) 451-5068

UST Operator: Same as above

Address: Same as above

Phone: Same as above

Property Owner: Same as above

Address: Same as above

Phone: Same as above

Property Occupant: Military Housing Resident

Address: TT3548, Chosin Circle (TT II)

Phone: Same as above

Consultant/Contractor: Sovereign Consulting Inc.

Address: 405 Oakmears Crescent, Suite 1

Virginia Beach, VA 23462

Phone: (757) 456-5093

Release Information

Date Discovered: August 7, 2001

Latitude:
34° 44' 7.4" N

Longitude:
77° 23' 0.6" W

Estimated Quantity of Release: Unknown

Cause of Release: Unknown

Source of Release (Piping/UST): UST and piping

Sizes and contents of UST system(s) from which the release occurred: The former system was a 550 gallon heating oil UST and associated piping used to heat the single family residence.

I, Martin Schlesinger, a Professional Engineer representing Sovereign Consulting Inc., do certify that the information contained in this report is correct and accurate to the best of my knowledge.

Martin Schlesinger
21/NOV/2006

2.0 INTRODUCTION

This report summarizes field activities conducted during a recent soil removal action at the TT-3548 site located aboard MCB Camp Lejeune in the Tarawa Terrace II Housing area

The project's scope of work entailed a soil removal action and analyzing soil samples for petroleum constituents using the MADEP methods. Sampling was conducted based on the recommendations made in the site's SAR, dated December 29, 2004, performed by CATLIN Engineers and Scientists. Results of Sovereign's 2006 sampling event are presented in this report.

3.0 SITE HISTORY

The project site contained one 550 gallon heating oil UST with associated piping, which provided fuel to heat the single-family residence, TT-3548. The tank was removed in August 2001 by J.A. Jones Environmental Services, Inc. The tank closure report states the piping was previously removed by others. Upon removal of the tank, J.A. Jones personnel noted petroleum impact within the excavation. J.A. Jones, therefore, over-excavated the site. Final excavation limits measured 8 feet (length) by 5 feet (width) by 8 feet (depth). J.A. Jones collected confirmation soil samples from the base of the excavation and sidewalls and analyzed them for VOCs by EPA Method 8260, SVOCs by EPA Method 8270, and volatile and extractable hydrocarbons by the MADEP Methods. VOCs and SVOCs were detected above the applicable STGW MSCCs, and MADEP fractions were detected above both the STGW and Residential MSCCs. J.A. Jones used sand backfill from the Base borrow pit to fill the excavation.

As a result of the detected contamination, MCB Camp Lejeune conducted a Phase I LSA per the NCDENR NORR dated February 15, 2002. Mid-Atlantic conducted the assessment, dated May 7, 2003, and found naphthalene, 2-methylnaphthalene, and 1,2,4-trimethylbenzene in excess of the applicable STGW MSCCs. C₉-C₂₂ aromatic soil concentrations were also detected above both the STGW and Residential MSCCs. Groundwater at the site was also sampled and analyzed via EPA Methods 602 and 625, as well as the MADEP methods. There were no contaminants in excess of the NCGWQSs, and no free product was detected. Information collected during the LSA showed the site classified as a low risk site with residential land use.

A SAR was then conducted by CATLIN to delineate the horizontal and vertical extent of contamination at the site. The report, dated December 29, 2004, confirmed the presence of MADEP constituents at the base and sidewalls of the excavation in excess of the Residential MSCCs. VOCs and SVOCs were also detected; however, concentrations were below residential MSCCs, but above STGW MSCCs. Soil contamination was confirmed to be present at depths of greater than eight feet BLS and within the boundary of the excavation area.

CATLIN recommended the excavation of impacted soils from a depth of six feet BLS to the water table and subsequent treatment of the excavated soils at an off-site, permitted disposal facility. CATLIN also sampled the site's groundwater during SAR activities and detected aliphatic and aromatic petroleum hydrocarbons in excess of the groundwater quality standards. They recommended that MCB Camp Lejeune monitor groundwater conditions on an annual

basis until soil excavation was performed. Soil excavation, as of the SAR, was to occur concurrent with housing demolition, which was planned for 2009 or 2010.

As a result of the approved recommendations made by CATLIN in the SAR, Engineering and Environment, Inc. conducted the first annual groundwater sampling event in 2005. Sovereign performed the second annual sampling event of monitoring well USTTT3548-MW01 in January 2006. The 2006 Annual Monitoring Report summarizes the details and findings associated with the Sovereign sampling event.

Sovereign was recently tasked to conduct soil excavation activities out at TT-3548 in September 2006. This report summarizes the details associated with the Sovereign excavation and sampling activities.

4.0 SITE REMEDIATION

The NAVFAC Midlant North Carolina Marine Corp Integrated Project Team prompted Sovereign to conduct a remedial action of subject site soils to below NCDENR action levels by means of excavation.

Prior to the excavation event, the structure formerly known as TT3548 was demolished in August 2006 in accordance with some housing renovation activities set to take place at MCB Camp Lejeune. Prior to this demolition, Sovereign sampled monitoring well MW01 at the site in order to assess the groundwater at the site.

Sovereign purged and sampled the well, then sent the groundwater sample under chain of custody for analysis to Paradigm Analytical Laboratories Inc. (Paradigm) in Wilmington, NC (NC Certification Number 481). The lab tested the groundwater sample for VOCs, SVOCs, and MADEP hydrocarbons using EPA Methods 602 and 625, as well as the MADEP methods. Laboratory reports and chain of custody documentation are included in Appendix B.

There were no compounds detected above the laboratory quantitation limits for VOCs, SVOCs, and MADEP hydrocarbons. No specific TICs were identified with match probabilities. Tables 1-4 summarize the data obtained during Sovereign's groundwater sampling activities.

Based on the Scope of Work for this project, further soil excavation took place on August 30, 2006. Prior to any field activities, Sovereign reviewed site diagrams and recommended plans for the soil removal. Sovereign also initiated a thorough utility mark out with a private utility locator familiar with sites and standard operations at MCB Camp Lejeune and MCAS New River.

Sovereign excavated and disposed of approximately 117.5 tons of petroleum impacted soils from the project site. Figure 3 shows the approximate excavation area, which was approximately sixteen (16) feet deep. The soils were excavated until the extent of contamination had been reached based on PID readings. Soil sampling was performed after excavation to confirm removal of impacted soil to a concentration below the applicable action levels.

A total of six (6) soil samples and one (1) trip blank were obtained for laboratory analysis. Once removal activities were completed, six (6) confirmation soil samples (USTTT3548-5019 through USTTT3548-5024) were obtained from the excavation sidewalls. All samples were taken at an approximate depth of twelve to fourteen (12-14) feet. The soil samples were then packed in pre-labeled jars, stored on ice, and shipped to SGS/Paradigm Analytical Laboratories Inc. (SGS) in Wilmington, North Carolina (NC Lab Certification #481). The laboratory analyzed the samples for MADEP Methods VPH and EPH.

Laboratory results indicated no presence of VPH or EPH in any of the six (6) soil samples collected. Therefore excavation activities were successful at removing the petroleum hydrocarbon source in the TT-3548 project area.

All laboratory results are summarized in Tables 1 and 2, and the analytical data can be found in Appendix B. The locations of the confirmation soil samples are shown on Figure 4.

5.0 RECEPTOR SURVEY

Sovereign reassessed site conditions in August 2006. The site was found to be fenced off and the housing structure had been demolished. MCB Camp Lejeune is building new enlisted housing in the Tarawa Terrace housing. Site demolition and housing construction activities will occur over the course of the remainder of 2006. The area will still be used as residential acreage where military families will live. There are no water supply wells in the area. As a result, no change should be made to the previous receptor survey. The previous survey can be found within the Phase I LSA data in Appendix A.

6.0 CONCLUSIONS AND PETITION FOR SITE CLOSURE

Based on fieldwork and laboratory analytical data gathered during the tank removal, Phase I LSA, SAR, and subsequent groundwater sampling events, the following conclusions and recommendations are presented:

1. Soil contaminants were detected in the UST basin during tank removal. Six VOCs and SVOCs were detected above applicable STGW MSCCs. MADEP constituents were also detected above STGW and residential MSCCs. Specifically, the C₉-C₁₈ aliphatics concentration was above the STGW MSCC, but below the residential level. In addition, the C₉-C₂₂ aromatics concentration was present in the center of the basin above the residential standard.
2. Mid-Atlantic detected soil contamination during the Phase I LSA at levels above the applicable STGW MSCCs. Only C₉-C₂₂ aromatics, however, were detected above the residential MSCC from SB-2, which was located near the center of the former tank basin.
3. Mid-Atlantic took a groundwater sample from the site during the LSA. Laboratory analysis did not detect groundwater contamination above applicable groundwater quality standards.
4. CATLIN conducted a SAR at the project site, and they confirmed the presence of MADEP constituents at the base and sidewalls of the excavation in excess of the Residential MSCCs. VOCs and SVOCs were also detected; however, concentrations were below residential MSCCs and above STGW MSCCs.
5. During the SAR, soil contamination was confirmed to be present at depths of greater than eight feet BLS and within the boundary of the excavation area.
6. A groundwater sample obtained during the SAR exhibited MADEP constituents in excess of the applicable groundwater quality standards.
7. An EEI groundwater sampling event, conducted in July 2005, only detected C₉-C₂₂ aromatics at a concentration of <240 µg/L, which should be considered in excess of the standard of 210 µg/L.
7. Sovereign conducted additional groundwater sampling activities at the project site on January 19, 2006. While contaminants were detected, only the C₉-C₂₂ aromatics concentration was just above the NCGWQS (210 µg/L) at <250 µg/L.
8. Sovereign conducted additional groundwater sampling at the project site on July 7, 2006. There were no compounds detected above the laboratory quantitation limits for VOCs, SVOCs, and MADEP hydrocarbons thus levels have attenuated to below applicable NCGWQs.
9. All soil contamination was excavated in August 2006 per SAR recommendations based on the outcome of the April 7, 2006 CATLIN soil sampling event. Approximately 117.5 tons of contaminated soil were removed and properly disposed.

Based on the findings of this investigation and previous reports, soils at TT-3548 no longer contain contaminants above residential MSCCs. Since this site had been classified as low risk by NCDENR and soil contamination has been remediated to the residential MSCC, no further soil remediation is necessary per the requirements of 15A NCAC 2L .0408.

Groundwater is no longer impacted based on recent monitoring and there are no 2L NCGWQS exceedences. All detections are also below applicable GCLs. As such, this site qualifies for No Further Action as outlined in 15A NCAC 2L .0407(d). Land use restrictions are not necessary as site groundwater has been remediated to the standards established in 15A NCAC 2L.

7.0 REFERENCES

AH Environmental Consultants, *Final Report, Wellhead Protection Plan – 2002 Update, Marine Corps Base, Camp Lejeune*, August 2002.

CATLIN Engineers and Scientists, *Soil Assessment Report for TT-3548, Marine Corps Base Camp Lejeune, North Carolina*, December 29, 2004.

J.A. Jones Environmental, Inc, *Underground Storage Tank Closure Report, TT3546/3548, Camp Lejeune, Onslow County, North Carolina, January 10, 2002*.

Mid-Atlantic Engineers and Scientists, *Leaking Underground Storage Tank (LUST) Phase I Limited Site Assessment Report for UST TT3546/3548 Site, Tarawa Terrace II Housing Area, Marine Corps Base Camp Lejeune, North Carolina, May 7, 2003*.

North Carolina Department of Environment and Natural Resources, Division of Waste Management, Underground Storage Tank Section, *Guidelines for Assessment and Corrective Action*, April 2001.

TABLES

TABLE 1
SUMMARY OF GROUNDWATER SAMPLING RESULTS

Date: July 2006
 Incident Number and Name: TT-3548, 23694
 Facility ID#: N/A

Analytical Method: EPA Method 602

Contaminant of Concern			Benzene	Diisopropyl ether (DIPE)	Ethylbenzene	Methyl-tert butyl ether (MTBE)	Toluene	Total Xylenes
Well ID	Sample ID	Date Collected						
USTTT3548-MW01	USTTT3548-MW01	7/7/2006	BQL	BQL	BQL	BQL	BQL	BQL
2L Standard (µg/l)			1	70	550	200	1,000	530
GCL (µg/l)			5,000	70,000	84,500	200,000	257,500	87,500

- All results reported in µg/l
- µg/L = micrograms per liter
- GCL = gross contamination level
- BQL = Below Quantitation Limits

Table 2
SUMMARY OF GROUNDWATER SAMPLING RESULTS

Date: July 2006
 Incident Number and Name: TT-3548, 23694
 Facility ID#: N/A

Analytical Method: EPA Method 625 plus 10 largest TICS¹

Contaminant of Concern			Phenanthrene	All Other Analytes
Well ID	Sample ID	Date Collected		
USTTT3548-MW01	USTTT3548-MW01	7/7/2006	BQL	BQL
2L Standard (µg/l)			210	Varies
GCL (µg/l)			410	Varies

- ¹ Note – No specific TICS identified with a match probability. See laboratory reports for additional information.
- All results reported in µg/l
- µg/L =micrograms per liter
- GCL = gross contamination level
- BQL = Below Quantitation Limits
- J = detected below the quantitation limit
- **BOLDED** = detected concentration

TABLE 3
SUMMARY OF GROUNDWATER SAMPLING RESULTS

Date: July 2006
 Incident Number and Name: TT-3548, 23694
 Facility ID#: N/A

Analytical Method: MADEP Method VPH/EPH

Contaminant of Concern			C ₅ -C ₈ Aliphatics	C ₉ -C ₁₂ Aliphatics	C ₉ -C ₁₀ Aromatics	C ₉ -C ₁₈ Aliphatics	C ₁₉ -C ₃₆ Aliphatics	C ₁₁ -C ₂₂ Aromatics
Well ID	Sample ID	Date Collected						
USTTT3548-MW01	USTTT3548-MW01	7/7/2006	<100	<100	<100	<100	<100	<100

- All results reported in µg/l
- µg/L = micrograms per liter
- GCL = gross contamination level
- **BOLDED** = detected concentration

TABLE 4
SUMMARY OF GROUNDWATER SAMPLING RESULTS

Date: July 2006
 Incident Number and Name: TT-3548, 23694
 Facility ID#: N/A

Analytical Method: MADEP Method VPH/EPH as compared to NCDENR 2L Interim GWQS

Contaminant of Concern →			C ₅ -C ₈ Aliphatics	C ₉ -C ₁₈ Aliphatics	C ₁₉ -C ₃₆ Aliphatics	C ₉ -C ₂₂ Aromatics
Well ID	Sample ID	Date Collected				
USTTT3548-MW01	USTTT3548-MW01	7/7/2006	<100	<100	<100	<100
2L Interim Standard (µg/l)			420	4,200	42,000	210
GCL (µg/l)			NE	NE	NE	NE

- All results reported in µg/l
- µg/L = micrograms per liter
- GCL = Gross Contaminant Level
- NE = Not Established
- **BOLDED** = detected concentration
- **BOLDED** and **SHADED** = detected concentration exceeds NCGWQS

TABLE 5 SUMMARY OF CONFIRMATION SOIL SAMPLING RESULTS

Date: August 2006
 Incident Number and Name: TT-3548, 23694
 Facility ID#: N/A

Analytical Method: MADEP Method VPH/EPH

Contaminant of Concern →			C ₅ -C ₈ Aliphatics	C ₉ -C ₁₂ Aliphatics	C ₉ -C ₁₀ Aromatics	C ₉ -C ₁₈ Aliphatics	C ₁₉ -C ₃₆ Aliphatics	C ₁₁ -C ₂₂ Aromatics
Sample ID	Date Collected	Sample Depth (ft BGS)						
USTTT3548-5019	8/30/2006	12'	<10	<10	<10	<10	<10	<10
USTTT3548-5020	8/30/2006	12'	<10	<10	<10	<10	<10	<10
USTTT3548-5021	8/30/2006	14'2"	<10	<10	<10	<10	<10	<10
USTTT3548-5022	8/30/2006	12'5"	<10	<10	<10	<10	<10	<10
USTTT3548-5023	8/30/2006	13'4"	<10	<10	<10	<10	<10	<10
USTTT3548-5024	8/30/2006	13'8"	<10	<10	<10	<10	<10	<10
USTTT3548-Trip Blank	8/30/2006	13-14'	<10	<10	<10			

- All results reported in mg/kg
- mg/kg = milligrams per kilogram
- MSCC = Maximum Soil Contaminant Concentration
- # = Health Based Level >100%
- ## = Considered immobile
- **BOLD** = detected concentration
- **BOLD** and **SHADED** = detected concentration above applicable standard

TABLE 6
SUMMARY OF CONFIRMATION SOIL SAMPLING RESULTS

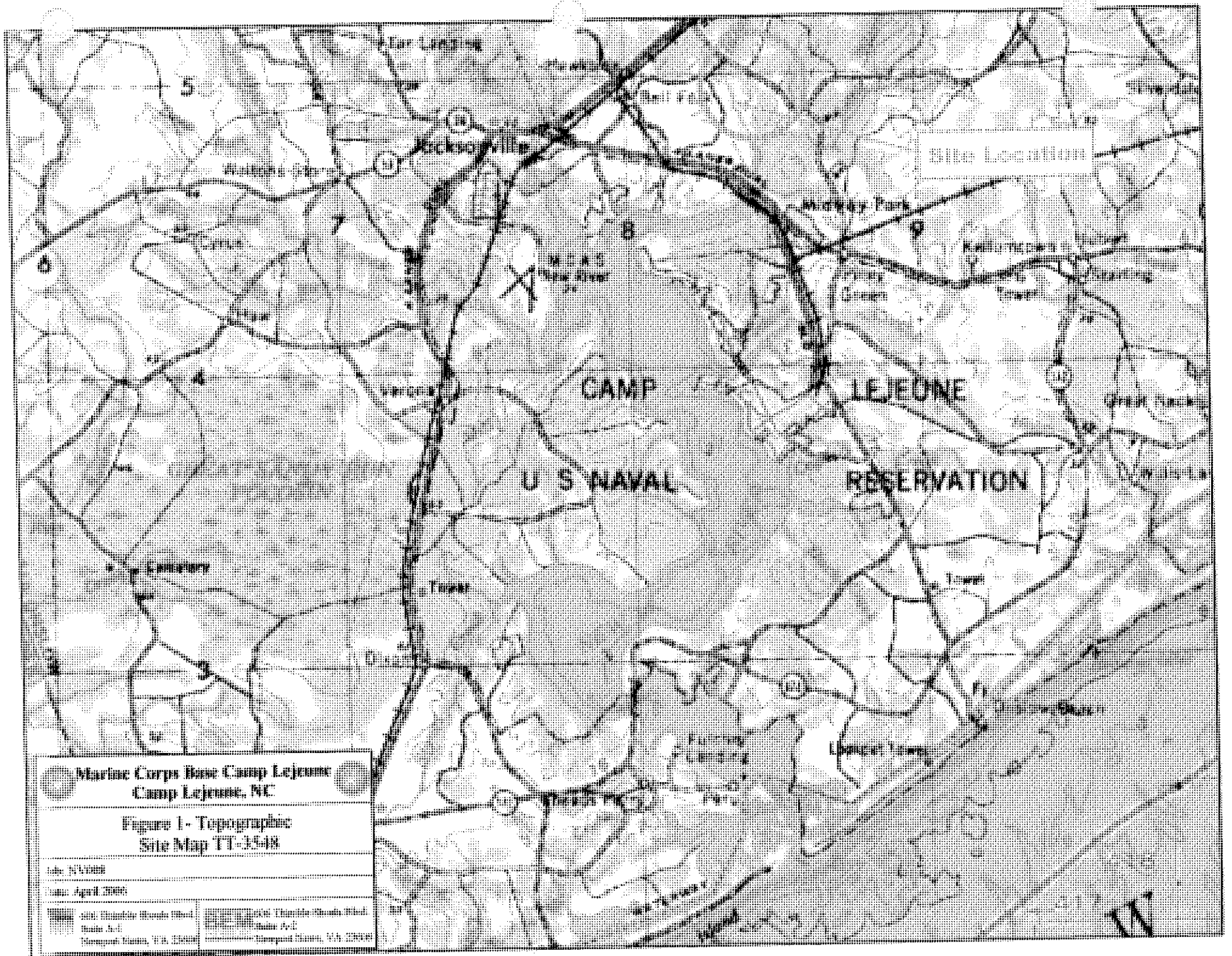
Date: August 2006
 Incident Number and Name: TT-3548, 23694
 Facility ID#: N/A

Analytical Method: MADEP Method VPH/EPH as compared to NCDENR MSCCs

Contaminant of Concern →			C ₅ -C ₈ Aliphatics	C ₉ -C ₁₈ Aliphatics	C ₁₉ -C ₃₆ Aliphatics	C ₉ -C ₂₂ Aromatics
Sample ID	Date Collected	Sample Depth (ft BGS)				
USTTT3548-5019	8/30/2006	12'	<10	<20	<10	<20
USTTT3548-5020	8/30/2006	12'	<10	<20	<10	<20
USTTT3548-5021	8/30/2006	14'2"	<10	<20	<10	<20
USTTT3548-5022	8/30/2006	12'5"	<10	<20	<10	<20
USTTT3548-5023	8/30/2006	13'4"	<10	<20	<10	<20
USTTT3548-5024	8/30/2006	13'8"	<10	<20	<10	<20
Soil to Groundwater MSCC (mg/kg)			72	3,300	##	34
Residential MSCC (mg/kg)			939	9,386	93,860	469
Industrial/Commercial MSCC (mg/kg)			24,528	245,280	#	12,264

- All results reported in mg/kg
- mg/kg = milligrams per kilogram
- MSCC = Maximum Soil Contaminant Concentration
- # = Health Based Level >100%
- ## = Considered immobile
- **BOLD** = detected concentration
- **BOLD** and SHADED = detected concentration above applicable standard

FIGURES



TT3544

Chosin Circle









TT3546

USTTT3548-MW01

TT3548

TT3550

Legend

-  Monitoring Wells
-  Existing Structures
-  Roads
-  Former UST
-  Former Fuel Delivery Line
-  Former Excavation Area
-  Water Lines
-  Sewer Lines



Marine Corps Base Camp Lejeune
Camp Lejeune, NC

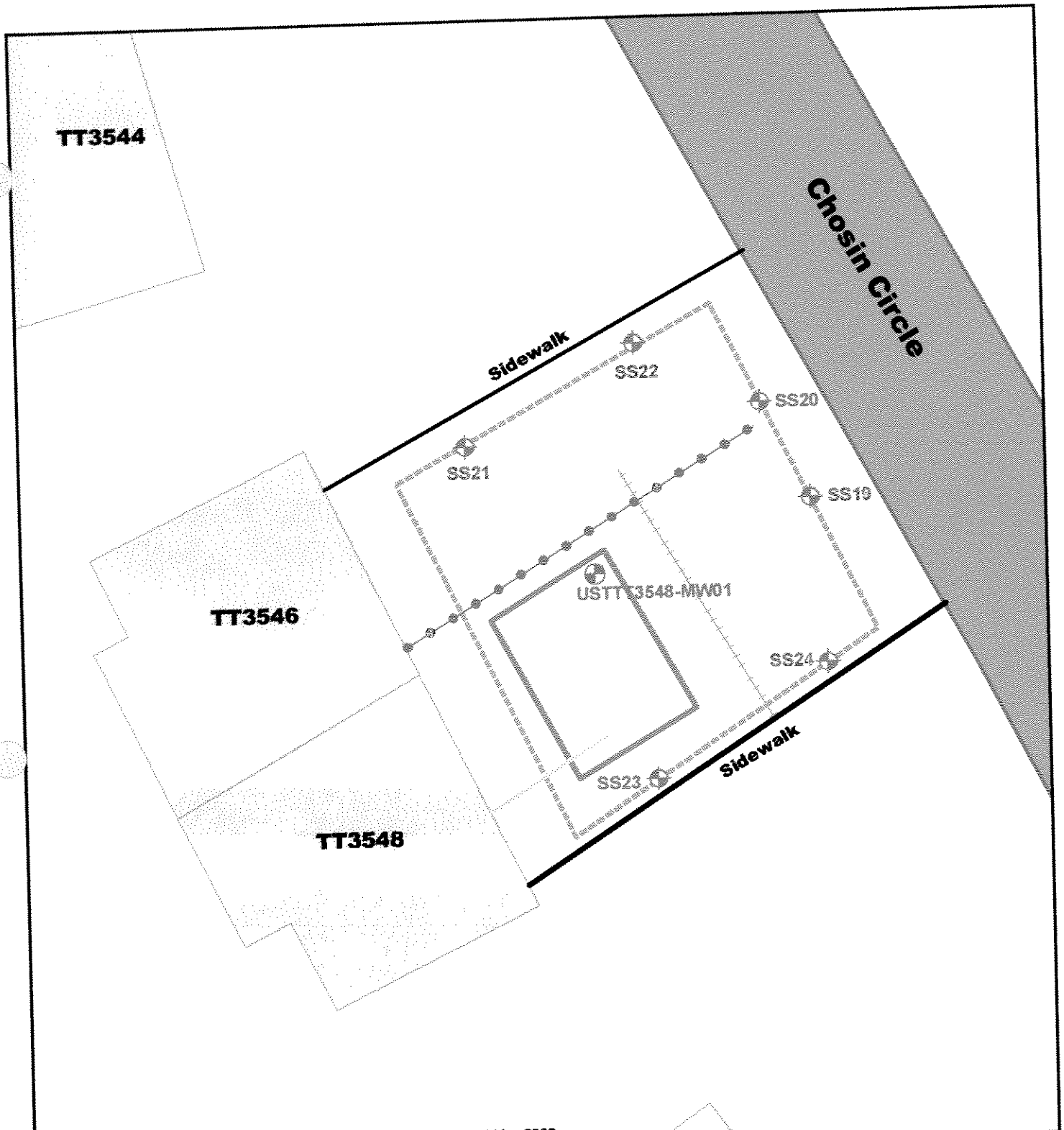
Figure 2: Site Map
With Monitoring Well Location

Project No. NV007

Date: April 2006


606 Thimble Shoals Blvd.
Suite A-1
Newport News, VA 23606

BEM SYSTEMS, INC.
606 Thimble Shoals Blvd.
Suite A-2
Newport News, VA 23606







NOTE: Map adapted from Catlin Site Plan Draft SAR Addendum Dated May 2006

Legend	
	Monitoring Wells
	Soil Sample Locations
	Existing Structures
	Sewer Lines
	Former Fuel Delivery Line
	Former Excavation Area
	Water Lines
	Current Excavation Area


 N
 W E
 S

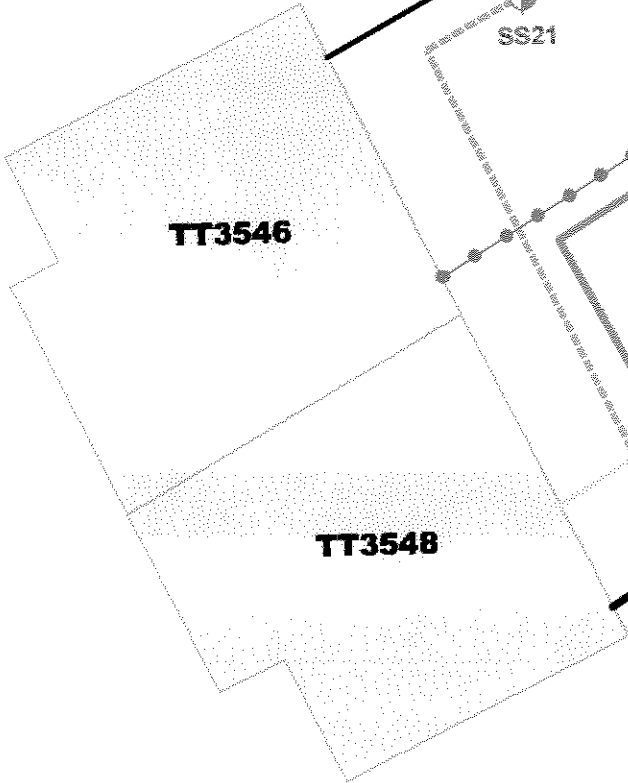
1 inch = approximately 15 feet

 Marine Corps Base Camp Lejeune Camp Lejeune, NC	
Figure 3: Site Map Showing Area of 2006 Excavation	
Project No. NV012	
Date: September 2006	
 405 Oakmeads Crescent Suite 1 Virginia Beach, VA 23462	 606 Thimble Shoals Blvd. Suite A-2 Newport News, VA 23606

Analytical Method: MADEP Method VPH/EPH

Contaminant of Concern →			C ₁ -C ₃ Aliphatics	C ₁ -C ₁₁ Aliphatics	C ₃ -C ₁₀ Aromatics	C ₁ -C ₁₀ Aliphatics	C ₁₅ -C ₁₈ Aliphatics	C ₁ -C ₃ Aromatics
Sample ID	Date Collected	Sample Depth (in BGS)						
USTTT3548-5019	8/30/2006	12"	<10	<10	<10	<10	<10	<10
USTTT3548-5020	8/30/2006	12"	<10	<10	<10	<10	<10	<10
USTTT3548-5021	8/30/2006	14'2"	<10	<10	<10	<10	<10	<10
USTTT3548-5022	8/30/2006	12'5"	<10	<10	<10	<10	<10	<10
USTTT3548-5023	8/30/2006	13'4"	<10	<10	<10	<10	<10	<10
USTTT3548-5024	8/30/2006	13'8"	<10	<10	<10	<10	<10	<10
USTTT3548-Trip	8/30/2006	13-14'	<10	<10	<10			

- Blank
- All results reported in mg/kg
 - mg/kg = milligrams per kilogram
 - MSCC = Maximum Soil Contaminant Concentration
 - H = Health Based Level >100%
 - SH = Considered immobile
 - BOLD = detected concentration
 - BOLD and SHADED = detected concentration above applicable standard



Sidewalk

Chesin Circle

Sidewalk

NOTE: Map adapted from Catlin Site Plan Draft SAR Addendum Dated May 2006

Legend

- Monitoring Wells
- Soil Sample Locations
- Existing Structures
- Sewer Lines
- Former Fuel Delivery Line
- Former Excavation Area
- Water Lines
- Current Excavation Area



1 inch = approximately 15 feet

Marine Corps Base Camp Lejeune
Camp Lejeune, NC

Figure 4: Site Map
With Confirmation Soil Sampling Results-
MADEP Method VPH AND EPH

Project No. NV012

Date: September 2006

405 Oakmeads Crescent
Suite 1
Virginia Beach, VA 23462



606 Thimble Shoals Blvd.
Suite A-2
Newport News, VA 23606

APPENDIX A
HISTORICAL DATA

Table 6.2: Summary of Chemical Constituents Detected in Groundwater (µg/L)

Date: May 2003 Incident Number and Name: 23694, Tarawa Terrace 3548 Facility ID#: Not Applicable

Analytical Method (e.g., VOC by EPA 801)		VOC EPA 602	VOC EPA 602	Semi-VOC EPA 625	Semi-VOC EPA 625	Semi-VOC EPA 625	MADEP VPH	MADEP EPH	MADEP VPH	MADEP EPH	MADEP VPH	MADEP EPH
Constituent of Concern	Sample ID	Toluene	Xylenes (Total)	1-Methylnaphthalene (TIC), Estimated concentration, ug/L [Match Probability, %]	2-Methylnaphthalene (TIC), Estimated concentration, ug/L [Match Probability, %]	Other Total TICs Estimated, ug/L	C5-C8 Aliphatics	C9-C12 Aliphatics	C19-C36 Aliphatics	C9-C10 Aromatics	C11-C22 Aromatics	
USTT3546/3548-MW01 Temporary Well at former UST location	UST TT3546/3548-MW01	2	14	15 [97%]	13 [94%]	104	< 100	130	< 100	< 100	< 100	120
2L Standard (ug/l)		1,000	530	NA	28	NA	420	4,200	42,000	210	210	
GCL (ug/l)		257,500	87,500	NA	12,500	NA	Not Est.	Not Est.	Not Est.	Not Est.	Not Est.	Not Est.


Notes:
 Bold = Concentration is equal to or exceeds State Groundwater Standard
 GCL = Gross Contaminant Level
 NA = Not Applicable
 Not Est. = GCL not established
 PQL = Practical Quantitation Limit
 ug/L = micrograms per liter



Facility ID#: N/A

TABLE 4A SUMMARY OF GROUNDWATER LABORATORY RESULTS
Incident Number and Name: 23694 - UST TT3546/3548
Date: September 2004

Analytical Method: EPA Method 602 + Xylenes + IPE + MTBE

Well ID	Contaminant of Concern 		Ethylbenzene	Total Xylenes	All Other Target Analytes
	Sample ID	Date Collected			
GCL (ug/L) 2L GWQS (ug/L)					
UST-TT3548-MW01	UST-TT3548-MW01	8/25/2004	29,000 29	87,500 530	Varies Varies
UST-TT3548-MW01	UST-TT3548-MW01 Dup	8/25/2004	2.06 1.99	10.2 10.4	BQL BQL

All results in ug/L
BQL = below quantitation limit

Facility ID#: N/A

TABLE 4B SUMMARY OF GROUNDWATER LABORATORY RESULTS
 Incident Number and Name: 23694 - UST TT3546/3548

Date: September 2004

Analytical Method: EPA Method 825 + TICs

Well ID	Concentration of Constituent		BCL
	Sample ID	Date Collected	
UST-TT3546-NP01	BCL (BPL)		BCL
	AL (MPPR (LPL))		
UST-TT3546-NP01	UST-TT3546-NP01	025-2004	BCL


All results in µg/L

BCL = below quantitation limit

Facility ID#: N/A

TABLE 4C SUMMARY OF GROUNDWATER LABORATORY RESULTS
 Incident Number and Name: 23694 - UST TT3546/3548
 Date: September 2004

Analytical Method: MADEP VPH/EPH


Well ID	Contaminant of Concern 		Date Collected	C5-C8 Aliphatics	C9-C12 Aliphatics	C9-C10 Aromatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C11-C22 Aromatics
	Sample ID								
UST-TT3548-MW01	UST-TT3548-MW01		8/25/2004	<100	190	260	22000	3300	10000

All results in ug/L

TABLE 4D SUMMARY OF GROUNDWATER LABORATORY RESULTS
 Incident Number and Name: 23694 - UST TT3546/3548

Facility ID#: N/A

Analytical Method: MADEP VPH/EPH As Compared to NCDENR IGWQS

Well ID	Contaminant of Concern 		IGWQS (ug/L)	Date Collected
	Sample ID			
UST-TT3548-MW01	C5-C8 Aliphatics	420	<100	8/25/2004
	C9-C18 Aliphatics	4,200	22,190	
	C19-C36 Aliphatics	42,000	3300	
	C9-C22 Aromatics	210	10,260	

All results in ug/L
 Shaded concentrations exceed IGWQS

APPENDIX B

**LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTATION FROM
2006 SAMPLING EVENTS**



Mr. Chris Murray
Sovereign Consulting
405 Oakmeads Crescent
Suite 1
Virginia Beach VA 23462
Report Number: G650-67
Client Project: CTO 0014

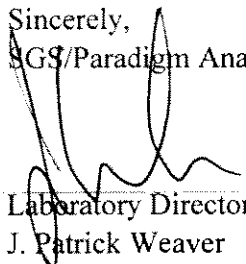
Dear Mr. Murray:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call SGS/Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS/Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
SGS/Paradigm Analytical Laboratories, Inc.


Laboratory Director
J. Patrick Weaver


Date



Results for Volatiles

by GC 602

Client Sample ID: USTTT3548-MW01

Analyzed By: CLP

Client Project ID: CTO 0014

Date Collected: 7/7/2006 11:00

Lab Sample ID: G650-67-1A

Date Received: 7/8/2006

Lab Project ID: G650-67

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.316	1	7/13/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.294	1	7/13/2006	
Ethylbenzene	BQL	1.00	0.299	1	7/13/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.588	1	7/13/2006	
Toluene	BQL	1.00	0.302	1	7/13/2006	
m/p-Xylene	BQL	2.00	0.608	1	7/13/2006	
o-Xylene	BQL	2.00	0.596	1	7/13/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.5	101

Comments:

All values corrected for dilution.
BQL = Below quantitation limit.



Results for Volatiles
by GC 602

Client Sample ID: Trip Blank
 Client Project ID: CTO 0014
 Lab Sample ID: G650-67-2A
 Lab Project ID: G650-67

Analyzed By: CLP
 Date Collected: 7/7/2006 0:00
 Date Received: 7/8/2006
 Matrix: Water


Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.316	1	7/13/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.294	1	7/13/2006	
Ethylbenzene	BQL	1.00	0.299	1	7/13/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.588	1	7/13/2006	
Toluene	BQL	1.00	0.302	1	7/13/2006	
m/p-Xylene	BQL	2.00	0.608	1	7/13/2006	
o-Xylene	BQL	2.00	0.596	1	7/13/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.9	105

Comments:

All values corrected for dilution.
 BQL = Below quantitation limit.

Reviewed By: 
 Copy of GC_NMS_v2.0



Results for Volatiles
by GC 602

Client Sample ID: Method Blank	Analyzed By: CLP
Client Project ID:	Date Collected:
Lab Sample ID: VBLK1071306A	Date Received:
Lab Project ID:	Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.316	1	7/13/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.294	1	7/13/2006	
Ethylbenzene	BQL	1.00	0.299	1	7/13/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.588	1	7/13/2006	
Toluene	BQL	1.00	0.302	1	7/13/2006	
m/p-Xylene	BQL	2.00	0.608	1	7/13/2006	
o-Xylene	BQL	2.00	0.596	1	7/13/2006	

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.8	102

Comments:
All values corrected for dilution.
BQL = Below quantitation limit.

Reviewed By: hw
Copy of GC_LIMS_v2.0



Control Limits for QC Check / Laboratory Control Spike

Method: 602 Spike[ppb]: 10
 Instrument: gc1
 Filename: 071306\005r0101.txt

Compound	ppb	Q(%)	QC Limits		P _s (%)	LCS Limits	
			Lower	Upper		Lower	Upper
Benzene	10.3	103.4	77.0	123.0	103	39	150
Chlorobenzene	10.1	101.1	80.5	119.5	101	55	135
1,2-Dichlorobenzene	10.2	102.4	68.0	132.0	102	37	154
1,3-Dichlorobenzene	10.4	103.6	72.5	127.5	104	50	141
1,4-Dichlorobenzene	10.2	102.4	69.5	130.5	102	42	143
Diisopropyl ether	9.8	97.6	43.1	156.9	98	30	170
Ethylbenzene	10.5	105.4	63.0	137.0	105	32	160
MTBE	10.2	101.6	46.8	153.2	102	35	165
Toluene	10.3	102.6	77.5	127.0	103	46	148
m,p-Xylene	21.5	107.5	11.2	188.8	108	D	239
o-Xylene	10.3	103.1	47.6	152.4	103	36	164

Flags :

- + = out of QC limits.
- = lab generated limits.
- D = Detected

Reviewed by: hw



Control Limits for MS-MSD

Method: **602** Spike[ppb]: **10**
 Instrument : gc1
 Sample : 071306\016r0101.txt
 MS : 071306\018r0101.txt
 MSD : 071306\019r0101.txt

Compound	µg/L			P(%)		P Limits	
	Sam.	MS	MSD	MS	MSD	Lower	Upper
Benzene	16.0	26.9	26.7	110	107	39	150
Chlorobenzene	ND	9.6	9.7	96	97	55	135
1,2-Dichlorobenzene	ND	9.7	9.7	97	97	37	154
1,3-Dichlorobenzene	ND	9.8	9.8	98	98	50	141
1,4-Dichlorobenzene	ND	9.3	9.3	89	90	42	143
• Diisopropyl ether	2.9	12.6	12.5	97	96	30	170
Ethylbenzene	2.2	12.6	12.6	104	105	32	160
• MTBE	ND	9.9	9.9	99	99	35	165
Toluene	30.5	40.1	39.8	96	93	46	148
• m,p-Xylene	10.3	29.6	29.6	97	97	D	239
• o-Xylene	2.7	13.0	13.0	102	103	36	164

Flags :

- + = out of QC limits.
- = lab generated limits.
- D = Detected
- ND = None Detected

Reviewed by:



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: CTO 0014

Sample Information and Analytical Results	
Sample Identification	USTTT3548-MW01
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	07/07/06
Date Received	07/08/06
Date Extracted	07/21/06
Date Analyzed	07/21/06
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₀ Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	90
Surrogate % Recovery - FID	99

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: G650-67-1D

Reviewed By: lw



Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 06/30/06 PID Initial Calibration Date: 06/30/06

Calibration Ranges and Limits

Range	MDL (07/15/2004) (µg/L)	ML (µg/L)	RL	
			(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	4.4	14	100	10
C ₉ -C ₁₂ Aliphatics	3.4	11	100	10
C ₉ -C ₁₀ Aromatics	0.13	0.41	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C ₅ -C ₈ Aliphatics	40	4.4	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C ₉ -C ₁₂ Aliphatics	10	14.80	Calibration Factor
	250		
	500		
	750		
	1000		
C ₉ -C ₁₀ Aromatics	10	16.50	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date: 07/21/06

Calibration Check

Range	Levels (µg/L)		RPD
	(mg/Kg)		
C ₅ -C ₈ Aliphatics	2000	200	18.9
C ₉ -C ₁₂ Aliphatics	500	50	19.8
C ₉ -C ₁₀ Aromatics	500	50	16.9

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit

RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting


Project Name: CTO 0014

Sample Information and Analytical Results	
Sample Identification	USTTT3548-MW01
Sample Matrix	Water
Date Collected	07/07/06
Date Received	07/08/06
Date Extracted	07/20/06
Date Analyzed	07/27/06
Dry Weight	
Dilution Factor	1:1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₆ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	87
Aromatic Surrogate % Recovery	66
Fractionation Surrogate 1 % Recovery	62

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-67-11

Reviewed By: 



Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 07/26/06

Calibration Ranges and Limits

Range	MDL (2/2004) (µg/L)	ML (µg/L)	RL	
			(µg/L)	(mg/Kg)
C ₉ -C ₁₈ Aliphatics	3.84	12.2	100	10
C ₁₉ -C ₃₆ Aliphatics	0.57	1.8	100	10
C ₁₁ -C ₂₂ Aromatics	4.54	14.4	100	10

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	6	1.00	Linear Regression
	30		
	60		
	120		
	240		
C ₁₉ -C ₃₆ Aliphatics	8	1.0	Linear Regression
	40		
	80		
	160		
	320		
C ₁₁ -C ₂₂ Aromatics	17	1	Linear Regression
	85		
	170		
	340		
	680		

Calibration Check Date: 07/27/06

Calibration Check

Range	Levels (µg/mL)	RPD
C ₉ -C ₁₈ Aliphatics	120	-18.3
C ₁₉ -C ₃₆ Aliphatics	160	-20.2
C ₁₁ -C ₂₂ Aromatics	340	-16.1

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit

RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve



**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTTT3548-MW01
 Client Project ID: CTO 0014
 Lab Sample ID: G650-67-1H
 Lab Project ID: G650-67

Analyzed By: MRC
 Date Collected: 7/7/2006 11:00
 Date Received: 7/8/2006
 Date Extracted: 7/12/2006
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	7/19/2006	
Acenaphthylene	BQL	10.0	1.12	1	7/19/2006	
Anthracene	BQL	10.0	1.75	1	7/19/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	7/19/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	7/19/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	7/19/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	7/19/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	7/19/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	7/19/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	7/19/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	7/19/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	7/19/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	7/19/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	7/19/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	7/19/2006	
2-Chlorophenol	BQL	10.0	4.22	1	7/19/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	7/19/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	7/19/2006	
Chrysene	BQL	10.0	1.11	1	7/19/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	7/19/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	7/19/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	7/19/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	7/19/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	7/19/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	7/19/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	7/19/2006	
Diethylphthalate	BQL	10.0	1.48	1	7/19/2006	
Dimethylphthalate	BQL	10.0	1.04	1	7/19/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	7/19/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	7/19/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	7/19/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	7/19/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	7/19/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	7/19/2006	
Diphenylamine *	BQL	10.0	1.53	1	7/19/2006	
Fluoranthene	BQL	10.0	1.41	1	7/19/2006	
Fluorene	BQL	10.0	1.22	1	7/19/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	7/19/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	7/19/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	7/19/2006	
Hexachloroethane	BQL	10.0	1.58	1	7/19/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	7/19/2006	
Isophorone	BQL	10.0	1.27	1	7/19/2006	
Naphthalene	BQL	10.0	1.08	1	7/19/2006	



**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTTT3548-MW01
 Client Project ID: CTO 0014
 Lab Sample ID: G650-67-1H
 Lab Project ID: G650-67

Analyzed By: MRC
 Date Collected: 7/7/2006 11:00
 Date Received: 7/8/2006
 Date Extracted: 7/12/2006
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	7/19/2006	
2-Nitrophenol	BQL	10.0	3.52	1	7/19/2006	
4-Nitrophenol	BQL	50.0	3.17	1	7/19/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	7/19/2006	
Pentachlorophenol	BQL	50.0	2.83	1	7/19/2006	
Phenanthrene	BQL	10.0	1.38	1	7/19/2006	
Phenol	BQL	10.0	3.38	1	7/19/2006	
Pyrene	BQL	10.0	2.08	1	7/19/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	7/19/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	7/19/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.3	74
2-Fluorophenol	10	7.1	71
Nitrobenzene-d5	10	9.2	92
Phenol-d6	10	7.8	78
2,4,6-Tribromophenol	10	10	100
4-Terphenyl-d14	10	9.6	96

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.
 J = Detected below the quantitation limit.

Reviewed By: 



**Results for Semivolatiles
by GCMS 625**

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB5679
Lab Project ID:

Analyzed By: MRC
Date Collected:
Date Received:
Date Extracted: 7/12/2006
Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	7/18/2006	
Acenaphthylene	BQL	10.0	1.12	1	7/18/2006	
Anthracene	BQL	10.0	1.75	1	7/18/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	7/18/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	7/18/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	7/18/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	7/18/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	7/18/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	7/18/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	7/18/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	7/18/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	7/18/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	7/18/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	7/18/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	7/18/2006	
2-Chlorophenol	BQL	10.0	4.22	1	7/18/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	7/18/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	7/18/2006	
Chrysene	BQL	10.0	1.11	1	7/18/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	7/18/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	7/18/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	7/18/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	7/18/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	7/18/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	7/18/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	7/18/2006	
Diethylphthalate	BQL	10.0	1.48	1	7/18/2006	
Dimethylphthalate	BQL	10.0	1.04	1	7/18/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	7/18/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	7/18/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	7/18/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	7/18/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	7/18/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	7/18/2006	
Diphenylamine *	BQL	10.0	1.53	1	7/18/2006	
Fluoranthene	BQL	10.0	1.41	1	7/18/2006	
Fluorene	BQL	10.0	1.22	1	7/18/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	7/18/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	7/18/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	7/18/2006	
Hexachloroethane	BQL	10.0	1.58	1	7/18/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	7/18/2006	
Isophorone	BQL	10.0	1.27	1	7/18/2006	
Naphthalene	BQL	10.0	1.08	1	7/18/2006	



**Results for Semivolatiles
by GCMS 625**

Client Sample ID: Method Blank
 Client Project ID:
 Lab Sample ID: PB5679
 Lab Project ID:

Analyzed By: MRC
 Date Collected:
 Date Received:
 Date Extracted: 7/12/2006
 Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	7/18/2006	
2-Nitrophenol	BQL	10.0	3.52	1	7/18/2006	
4-Nitrophenol	BQL	50.0	3.17	1	7/18/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	7/18/2006	
Pentachlorophenol	BQL	50.0	2.83	1	7/18/2006	
Phenanthrene	BQL	10.0	1.38	1	7/18/2006	
Phenol	BQL	10.0	3.38	1	7/18/2006	
Pyrene	BQL	10.0	2.08	1	7/18/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	7/18/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	7/18/2006	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	7.5	75		
2-Fluorophenol		10	8.4	84		
Nitrobenzene-d5		10	9.6	96		
Phenol-d6		10	8.7	87		
2,4,6-Tribromophenol		10	8.8	88		
4-Terphenyl-d14		10	8.8	88		

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.
 J = Detected below the quantitation limit.

Reviewed By: 



Results For Matrix Spike / Matrix Spike Duplicate and Laboratory Control Standard (MS/MSD/LCS)
by GCMS

Client Sample ID: Batch QC

Date Collected:

Client Project ID:

Date Received:

Lab Sample ID: Batch-5679-MS/MSD/LCS

Date Extracted: 7/121

Lab Project ID:

Date Analyzed: 07/19/06

Matrix: WATER

Analyzed By: MRC

Prep Method: 3520

Dilution: 1

	Sample Amount (µg/L)	MS Spike (µg/L)	MS Conc. (µg/L)	MS Spike % Rec.	MSD Spike (µg/L)	MSD Conc. (µg/L)	MSD Conc. % Rec.	RPD	QC Limits	
									RPD	% Rec.
Acenaphthylene	BQL	217	198	91.2	217	186	85.6	6.33	30	62.0-119
4-Chloro-3-methylphenol	BQL	217	218	100	217	203	93.5	7.02	30	67.0-109
2-Chlorophenol	BQL	217	190	87.4	217	185	84.9	2.90	30	59.0-95.0
1,4-Dichlorobenzene	BQL	217	90.2	41.5	217	97.0	44.6	7.20	30	29.0-86.0
2,4-Dinitrotoluene	BQL	217	272	125*	217	259	119*	4.84	30	63.0-103
N-Nitrosodi-n-propylamine	BQL	217	197	90.7	217	199	91.7	1.10	30	67.0-107
4-Nitrophenol	BQL	217	197	90.6	217	184	84.7	6.73	30	49.0-146
Pentachlorophenol	BQL	217	225	104	217	206	94.8	8.87	30	43.0-106
Phenol	BQL	217	185	85.3	217	179	82.4	3.46	30	61.0-100
Pyrene	BQL	217	231	106	217	186	85.6	21.4	30	41.0-123
1,2,4-Trichlorobenzene	BQL	217	159	73.0	217	141	64.9	11.7	30	41.0-96.0

	Spiked Amount (µg/L)	LCS Conc. (µg/L)	LCS Spike %	QC Limits
				% Rec.
Acenaphthylene	100	88.9	88.9	72.9-127
4-Chloro-3-methylphenol	100	101	101	61.6-113
2-Chlorophenol	100	84.2	84.2	52.3-104
1,4-Dichlorobenzene	100	44.5	44.5	27.3-85.0
2,4-Dinitrotoluene	100	126	126*	66.5-117
N-Nitrosodi-n-propylamine	100	95.0	95.0	54.4-119
4-Nitrophenol	100	99.1	99.1	32.4-150
Pentachlorophenol	100	99.2	99.2	23.9-115
Phenol	100	82.9	82.9	54.5-106
Pyrene	100	99.1	99.1	63.5-126
1,2,4-Trichlorobenzene	100	72.4	72.4	49.1-98.5

Comments:

Concentrations reflect the spiked sample amounts.

Flags:

* = Out of limits.

NA = Not applicable.

Reviewed By:



List of Reporting Abbreviations
and Data Qualifiers

- B = Compound also detected in batch blank
- BQL = Below Quantitation Limit (RL or MDL)
- DF = Dilution Factor
- Dup = Duplicate
- D = Detected, but RPD is > 40% between results in dual column method.
- E = Estimated concentration, exceeds calibration range.
- J = Estimated concentration, below calibration range and above MDL
- LCS(D) = Laboratory Control Spike (Duplicate)
- MDL = Method Detection Limit
- MS(D) = Matrix Spike (Duplicate)
- PQL = Practical Quantitation Limit
- RL = Reporting Limit
- RPD = Relative Percent Difference
- mg/kg = milligram per kilogram, ppm, parts per million
- ug/kg = micrograms per kilogram, ppb, parts per billion
- mg/L = milligram per liter, ppm, parts per million
- ug/L = micrograms per liter, ppb, parts per billion
- % Rec = Percent Recovery
- % solids = Percent Solids

Special Notes:

- 1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.
- 2) Uncertainty for all reported data is less than or equal to 30 percent.



CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

- Locations Nationwide
- Alaska
 - Hawaii
 - Louisiana
 - Maryland
 - New Jersey
 - North Carolina
 - West Virginia
- www.us.sgs.com

053846

1 CLIENT: Sovereign Consulting

CONTACT: Inessa Elbermann PHONE NO: (901) 526-3941

PROJECT: ATO 0014 SITE/WSID#: TT3548

REPORTS TO: CHRIS MURRAY FAX NO: 757 456-5095

INVOICE TO: CHRIS MURRAY QUOTE #

405 ONE WILSONS DRIVE SUITE 2346 WILMINGTON, NC 28405 P.O. NUMBER

SGS Reference: G150-67 PAGE 1 OF 1

2 LAB NO. SAMPLE IDENTIFICATION DATE TIME MATRIX

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX
	WITNESS-MN01	7/7/06	1100	W
	TELD BLANK	7/7/06		W

NO	CONTAINERS	SAMPLE TYPE	PRESERVATION Used	ANALYSIS Required	ANALYSIS				REMARKS
					HE1	HE1	HE1	NEM	
7				③	X	X	X	X	602 + mtdg xylenes VPH EPH 605 + TICs

3 Collect/Relinquished By: (1) [Signature]

Relinquished By: (2) [Signature]

Relinquished By: (3) [Signature]

Relinquished By: (4) [Signature]

Date	Time	Received By:
7/7/06		[Signature]
7/8/06	1:00	[Signature]

4 Shipping Carrier: Samples Received Cold? (Circle) YES NO

Shipping Ticket No: Temperature [Signature]

Special Deliverable Requirements: Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions: Standard Turnaround Email RESULTS in EDD Format to: nhall@sovereign.com

Yellow - Returned by Lab
Pink - Lab Report
White - Returned by Lab and with Report and by sampler



Mr. Chris Murray
Sovereign Consulting
405 Oakmeads Crescent
Suite 1
Virginia Beach VA 23462
Report Number: G650-78
Client Project: NV012


Dear Mr. Murray:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call SGS/Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS/Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
SGS/Paradigm Analytical Laboratories, Inc.

Asst. 
Laboratory Director
~~J. Patrick Weaver~~
Date 9/7/06
Christopher E. Cornwell



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5018
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	08/30/06
Date Analyzed	09/05/06
Dry Weight	94
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₂ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₀ Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	99
Surrogate % Recovery - FID	100

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g650-78-1a

Reviewed By:

SGS**VPH (Aliphatics/Aromatics) Laboratory Reporting Form**Client Name: Sovereign ConsultingProject Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5019
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	08/30/06
Date Analyzed	09/02/06
Dry Weight	93
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₂ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₀ Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	98
Surrogate % Recovery - FID	100

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g650-78-2a

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5020
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	08/30/06
Date Analyzed	09/02/06
Dry Weight	94
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₂ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₀ Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	100
Surrogate % Recovery - FID	100

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g650-78-3a

Reviewed By:



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5021
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	08/30/06
Date Analyzed	09/02/06
Dry Weight	86
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₂ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₀ Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	98
Surrogate % Recovery - FID	100

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.
 ** = Excludes any surrogates or internal standards.

Lab Info: g650-78-4a

Reviewed By:



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5022
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	08/30/06
Date Analyzed	09/02/06
Dry Weight	95
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₂ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₀ Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	96
Surrogate % Recovery - FID	100

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g650-78-5a

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5023
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	08/30/06
Date Analyzed	09/02/06
Dry Weight	76
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₂ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₀ Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	95
Surrogate % Recovery - FID	100

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g650-78-6a

Reviewed By:



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5024
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	08/30/06
Date Analyzed	09/02/06
Dry Weight	80
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₂ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₀ Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	97
Surrogate % Recovery - FID	100

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g650-78-7a

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV012

Sample Information and Analytical Results	
Sample Identification	Trip Blank
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	08/30/06
Date Analyzed	09/02/06
Dry Weight	100
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₂ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₀ Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	96
Surrogate % Recovery - FID	99

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g650-78-8a

Reviewed By:



Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 09/01/06 PID Initial Calibration Date: 09/01/06

Calibration Ranges and Limits

Range	MDL (07/15/2004) (µg/L)	ML (µg/L)	RL	
			(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	4.4	14	100	10
C ₉ -C ₁₂ Aliphatics	3.4	11	100	10
C ₉ -C ₁₀ Aromatics	0.13	0.41	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C ₅ -C ₈ Aliphatics	40	8.7	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C ₉ -C ₁₂ Aliphatics	10	0.99	Linear Regression
	250		
	500		
	750		
	1000		
C ₉ -C ₁₀ Aromatics	10	0.99	Linear Regression
	250		
	500		
	750		
	1000		

Calibration Check Date: 09/02/06

Calibration Check

Range	Levels (µg/L)		RPD
	(mg/Kg)		
C ₅ -C ₈ Aliphatics	2000	200	-0.2
C ₉ -C ₁₂ Aliphatics	500	50	0.0
C ₉ -C ₁₀ Aromatics	500	50	-6.6

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit

RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve



Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 09/01/06 PID Initial Calibration Date: 09/01/06

Calibration Ranges and Limits

Range	MDL (07/15/2004) (µg/L)	ML (µg/L)	RL	
			(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	4.4	14	100	10
C ₉ -C ₁₂ Aliphatics	3.4	11	100	10
C ₉ -C ₁₀ Aromatics	0.13	0.41	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C ₅ -C ₈ Aliphatics	40	8.7	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C ₉ -C ₁₂ Aliphatics	10	0.99	Linear Regression
	250		
	500		
	750		
	1000		
C ₉ -C ₁₀ Aromatics	10	0.99	Linear Regression
	250		
	500		
	750		
	1000		

Calibration Check Date: 09/05/06

Calibration Check

Range	Levels		RPD
	(µg/L)	(mg/Kg)	
C ₅ -C ₈ Aliphatics	2000	200	12.3
C ₉ -C ₁₂ Aliphatics	500	50	-3.4
C ₉ -C ₁₀ Aromatics	500	50	6.9

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

SGS**EPH (Aliphatics/Aromatics) Results**

by MDEP-EPH


Client Name: Sovereign ConsultingProject Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5018
Sample Matrix	Soil
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	
Date Analyzed	09/01/06
Dry Weight	93.8
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 10 (mg/Kg)
C ₁₉ -C ₃₆ Aliphatics*	< 10 (mg/Kg)
C ₁₁ -C ₂₂ Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	86
Aromatic Surrogate % Recovery	84

Comments:

* = Excludes any surrogates or internal standards.
 Sample did not require fractionation.

Lab info: G650-78-1D

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting


Project Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5019
Sample Matrix	Soil
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	
Date Analyzed	09/01/06
Dry Weight	93.3
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 10 (mg/Kg)
C ₁₉ -C ₃₈ Aliphatics*	< 10 (mg/Kg)
C ₁₁ -C ₂₂ Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	88
Aromatic Surrogate % Recovery	84

Comments:

- * = Excludes any surrogates or internal standards.
Sample did not require fractionation.

Lab info: G650-78-2D

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5020
Sample Matrix	Soil
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	
Date Analyzed	09/01/06
Dry Weight	94.1
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 10 (mg/Kg)
C ₁₉ -C ₃₆ Aliphatics*	< 10 (mg/Kg)
C ₁₁ -C ₂₂ Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	86
Aromatic Surrogate % Recovery	84

Comments:

- * = Excludes any surrogates or internal standards.
Sample did not require fractionation.

Lab info: G650-78-3D

Reviewed By:



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting


Project Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5021
Sample Matrix	Soil
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	
Date Analyzed	09/01/06
Dry Weight	85.9
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 10 (mg/Kg)
C ₁₉ -C ₃₆ Aliphatics*	< 10 (mg/Kg)
C ₁₁ -C ₂₂ Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	56
Aromatic Surrogate % Recovery	40

Comments:

- * = Excludes any surrogates or internal standards.
 Sample did not require fractionation.

Lab info: G650-78-4D

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5022
Sample Matrix	Soil
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	
Date Analyzed	09/01/06
Dry Weight	95.2
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 10 (mg/Kg)
C ₁₉ -C ₃₆ Aliphatics*	< 10 (mg/Kg)
C ₁₁ -C ₂₂ Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	85
Aromatic Surrogate % Recovery	85

Comments:

* = Excludes any surrogates or internal standards.
 Sample did not require fractionation.

Lab info: G650-78-5D

Reviewed By: *[Signature]*



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

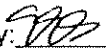
Project Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5023
Sample Matrix	Soil
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	
Date Analyzed	09/01/06
Dry Weight	76.3
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 10 (mg/Kg)
C ₁₉ -C ₃₆ Aliphatics*	< 10 (mg/Kg)
C ₁₁ -C ₂₂ Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	87
Aromatic Surrogate % Recovery	79

Comments:

* = Excludes any surrogates or internal standards.
 Sample did not require fractionation.

Lab info: G650-78-6D

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV012

Sample Information and Analytical Results	
Sample Identification	USTTT3548-5024
Sample Matrix	Soil
Date Collected	08/30/06
Date Received	08/31/06
Date Extracted	
Date Analyzed	09/01/06
Dry Weight	79.9
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 10 (mg/Kg)
C ₁₉ -C ₃₆ Aliphatics*	< 10 (mg/Kg)
C ₁₁ -C ₂₂ Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	87
Aromatic Surrogate % Recovery	83

Comments:

- * = Excludes any surrogates or internal standards.
 Sample did not require fractionation.

Lab info: G650-78-7D

Reviewed By:



Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 05/31/06

Calibration Ranges and Limits

Range	MDL (2/2004) (µg/L)	ML (µg/L)	RL	
			(µg/L)	(mg/Kg)
C ₉ -C ₁₈ Aliphatics	3.84	12.2	100	10
C ₁₉ -C ₃₆ Aliphatics	0.57	1.8	100	10
C ₁₁ -C ₂₂ Aromatics	4.54	14.4	100	10

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	6	5.30	Calibration Factor
	30		
	60		
	120		
	240		
C ₁₉ -C ₃₆ Aliphatics	8	6.4	Calibration Factor
	40		
	80		
	160		
	320		
C ₁₁ -C ₂₂ Aromatics	17	10.4	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 09/01/06

Calibration Check

Range	Levels (µg/mL)	RPD
C ₉ -C ₁₈ Aliphatics	120	-17.7
C ₁₉ -C ₃₆ Aliphatics	160	-16.3
C ₁₁ -C ₂₂ Aromatics	340	-6.8

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit

RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve



List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

- 1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.
- 2) Uncertainty for all reported data is less than or equal to 30 percent.



CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

- Alaska
- Louisiana
- New Jersey
- West Virginia
- Hawaii
- Maryland
- North Carolina

www.us.sgs.com

065356

1 CLIENT: **Sovereign Consulting Inc**

CONTACT: **TERESA ELBERMAN** PHONE NO: (910) 526-3944

PROJECT: **NV012** SITE/PWSID#: **TT3548**

REPORTS TO: **Chris Murray** E-MAIL: **cmurray@sovercon.com**

INVOICE TO: **Chris Murray** QUOTE # **1456-5095**

405 ONE MORGAN CRESTMENT SITE / VIRGINIA BRANCH VA 23170 FAX NO: (757) 456-5095

2 LAB NO. SAMPLE IDENTIFICATION DATE TIME MATRIX

1641 1703 1715 1742 1750 1825 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

1818 1818 1818 1818 1818 1818 1818

SGS Reference: **G 650-78**

PAGE **1** OF **1**

No CONTAINERS

SAMPLE TYPE: G-COMP, G-GRAB

Preservatives Used: **None**

Analysis Required: **None**

3

VPH, EPH

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

5 Collected/Relinquished By: (1) **Blayne J. ...** Date: **8/31/06** Time: **1134** Received By: **Paul ...**

Relinquished By: (3) **SGS** Date: Date: Time: Received By:

Relinquished By: (4) **SGS** Date: Date: Time: Received By:

Shipping Carrier: **HAND DELIVERED**

Shipping Ticket No.: **N/A**

Special Deliverable Requirements: **EIDD Format**

Requested Turnaround Time and Special Instructions: **48 HOUR TURNAROUND EMAIL RESULTS TO: nhall@sovercon.com**

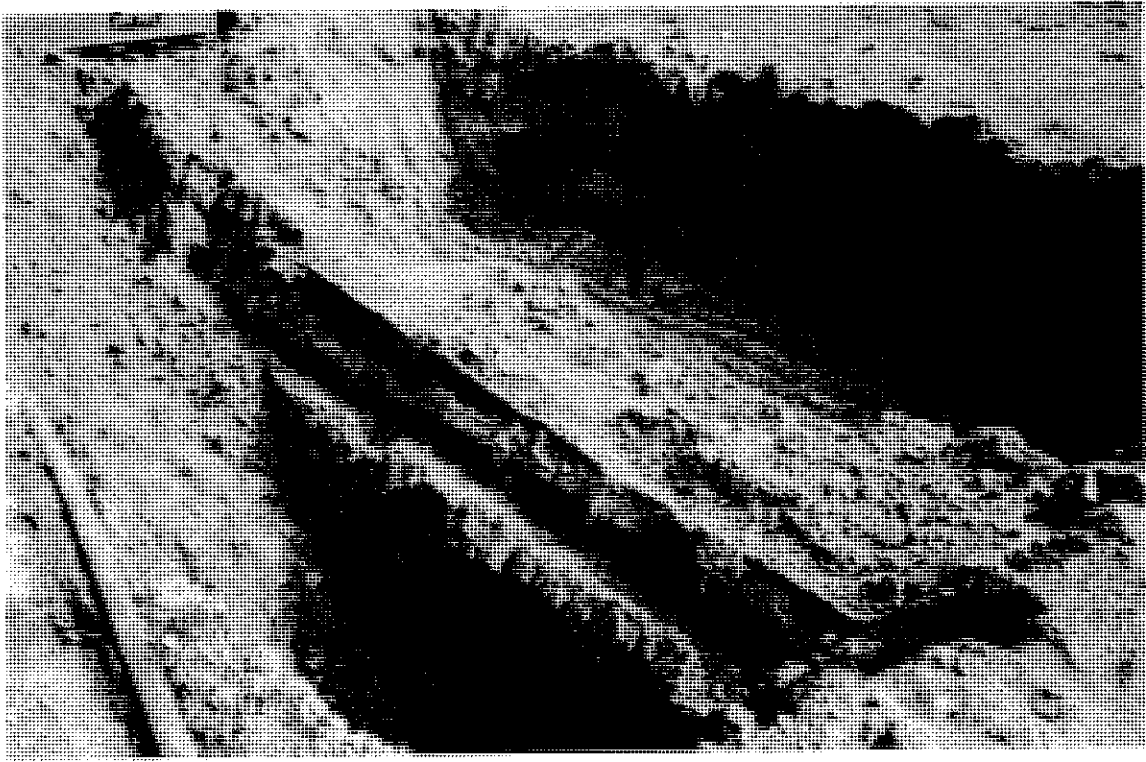
Samples Received Cold? (Circle) YES NO

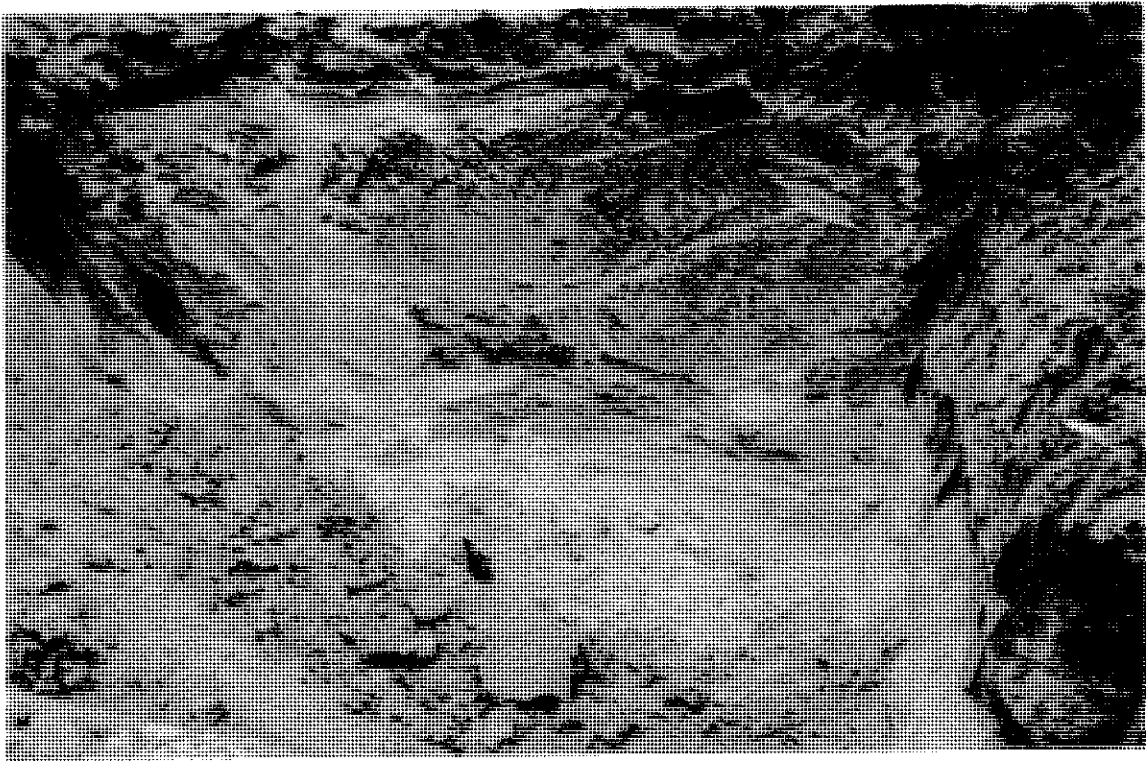
Temperature (C): **2.3°C**

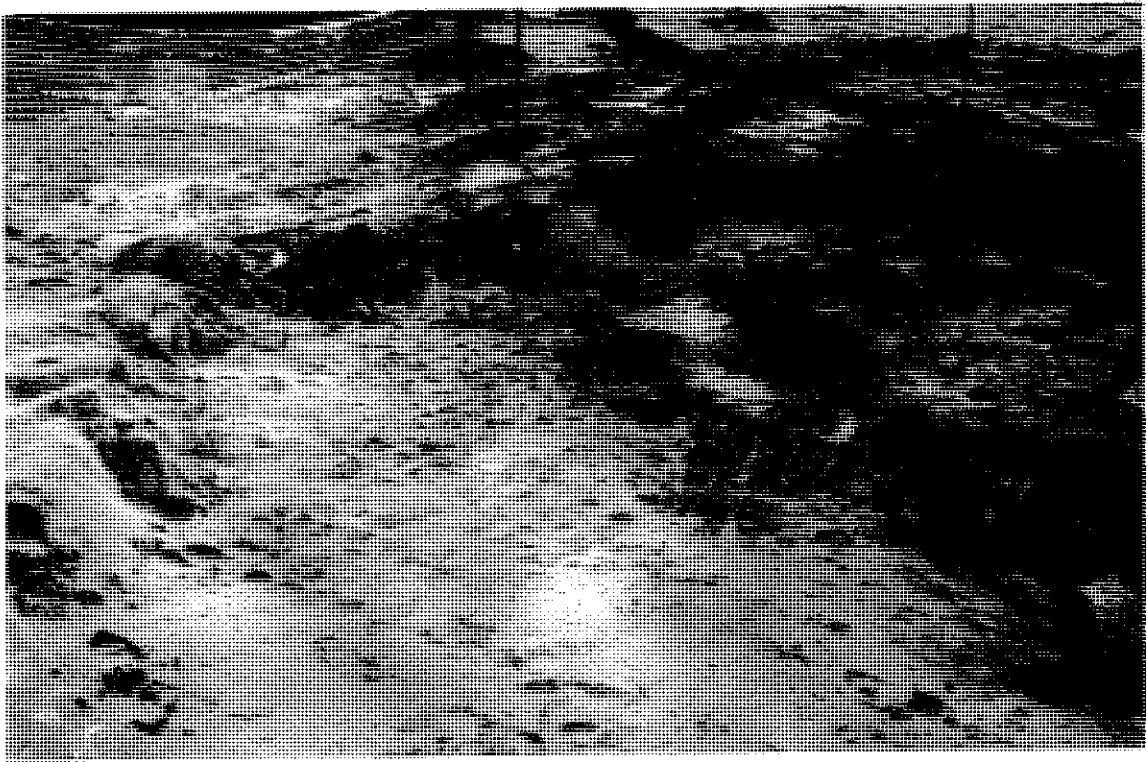
Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

1300 W. Porter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
5500 Baber Way Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557
1270 Greenbrier Street Charleston, WV 25311 Tel: (304) 346-0725 Fax: (304) 346-0751
Chris Murray Yellow - Retained by Lab
Blayne J. ... Pink - Returned with Report
Paul ... Red - Retained by Sampler

APPENDIX C
PHOTOGRAPHS



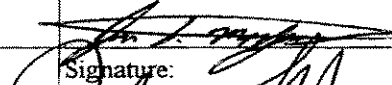
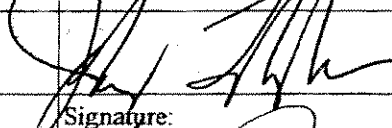
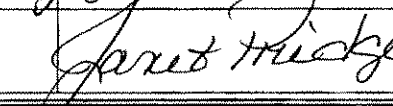




APPENDIX D
SOIL DISPOSAL MANIFESTS

Marine Corps Base, Camp Lejeune Non-Hazardous Waste Shipping Document

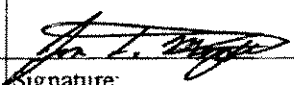
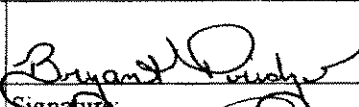
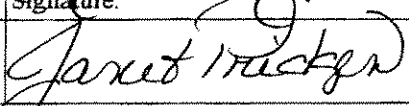
Document #: 06256

Site: TT3546 TARPINA TERRACE CLNC 28547		Page 1 of			
Generator's Name & Mailing Address: COMMANDING GENERAL AC/S, I&E (EMD) MARINE CORPS BASE PSC BOX 20004 CAMP LEJEUNE, NC 28542-0004		US EPA ID Number: NC6170022580			
Generator's Telephone #: (910) 451-1482					
Transporter's Name, Mailing Address & Telephone Number: P+F Environmental 8549 Mill Branch Rd Rocky Mount NC 27503 (252) 212-8012		US EPA ID Number: NC6170022580			
Destination's Name, Mailing Address & Telephone Number: P+F Environmental SPEIGANT'S CHAPEL RD NHTAKERS NC 27891 (252) 443-4083		US EPA ID Number: SD0500182			
Waste Shipping Name and Description	Containers		Total Quantity	Units	
	Number	Type			
	TPH Contaminated Soil	001	TT	90500	GROSS
	NON HAZARDOUS			31040	TARE
				59500	NET
			39.76	TONS	
Container/Tag Number: Lab:		Profile #:			
Additional Information and Discrepancy Indication: CDL # NC 358604 TRK # P103 TAG # ZB11949					
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:					
Printed/Typed Name		Signature:	Date:		
John Nagos			8-30-06		
Transporter's Name		Signature:	Date:		
Johnny Laughinghouse			8/30/06		
Accepting Facility		Signature:	Date:		
P+F Environmental, Inc.			8/30/06		

Return Original form to Generator

Marine Corps Base, Camp Lejeune Non-Hazardous Waste Shipping Document

Document #: 06257

Site: <u>TT3548 TARAUA TERRACE CLNC 28547</u>		Page 1 of		
Generator's Name & Mailing Address: <u>COMMANDING GENERAL AC/S, I&E (EMD) MARINE CORPS BASE PSC BOX 20004 CAMP LEJEUNE, NC 28542-0004</u>		US EPA ID Number: <u>NC6170022580</u>		
Generator's Telephone #: <u>(910) 451-1482</u>				
Transporter's Name, Mailing Address & Telephone Number: <u>P+F Environmental 8549 Mill Branch RD Rocky Mount NC 27803 (252) 212-8012</u>		US EPA ID Number: <u>NC6170008190</u>		
Destination's Name, Mailing Address & Telephone Number: <u>P+F Environmental SPEIGHTS CHAPEL RD WHITAKER NC 27891 (252) 443-4083</u>		US EPA ID Number: <u>SR0500106</u>		
Waste Shipping Name and Description	Containers	Total Quantity	Units	
	Number	Type		
	<u>001</u>	<u>TT</u>	<u>85400</u>	<u>GROSS</u>
			<u>32720</u>	<u>TDR</u>
			<u>52680</u>	<u>NET</u>
		<u>26.34</u>	<u>TONS</u>	
Container/Tag Number:	Profile #:			
Lab:				
Additional Information and Discrepancy Indication: <u>COL# NC 1406087 TRK# P102 TAG# ZB2582</u>				
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:				
Printed/Typed Name	Signature:	Date:		
<u>Jon Mages</u>		<u>8-30-06</u>		
Transporter's Name	Signature:	Date:		
<u>Johnny Bryant Pridgen</u>		<u>8/30/06</u>		
Accepting Facility	Signature:	Date:		
<u>P+F ENVIRONMENTAL, LLC</u>		<u>8/30/06</u>		

Return Original form to Generator

Marine Corps Base, Camp Lejeune Non-Hazardous Waste Shipping Document

Document #: 06254

Site: <u>TT 3548 - NVO12 CAMP LEJEUNE NC 28547</u>		Page 1 of		
Generator's Name & Mailing Address: <u>COMMANDING GENERAL AC/S, I&E (EMD) MARINE CORPS BASE PSC BOX 20004 CAMP LEJEUNE, NC 28542-0004</u>		US EPA ID Number: <u>NC6170022580</u>		
Generator's Telephone #: <u>(910) 451-1482</u>				
Transporter's Name, Mailing Address & Telephone Number: <u>P+P Environmental 8549 Mill Branch Rd. Rocky Mount NC (252) 212-8012</u>		US EPA ID Number: <u>NCR000208490</u>		
Destination's Name, Mailing Address & Telephone Number: <u>P+P Environmental SPEIGHTS CHAPEL RD WHITKERS NC 27891 (252) 443-4083</u>		US EPA ID Number: <u>SR0500106</u>		
Waste Shipping Name and Description	Containers		Total Quantity	Units
	Number	Type		
<u>TPH Contaminated Soil NON HAZARDOUS</u>	001		<u>93520</u>	
			<u>9358</u>	GROSS
			<u>31040</u>	DREE
			<u>62480</u>	NET
			<u>31.24</u>	TONS
Container/Tag Number: Lab:		Profile #:		
Additional Information and Discrepancy Indication: <u>CDL# 358604 TRC# P103 TRC# ZB16949</u>				
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:				
Printed/Typed Name <u>Jon A. Myles, II</u>		Signature: <u>[Signature]</u>		Date:
Transporter's Name <u>Johnny Laughinghouse</u>		Signature: <u>[Signature]</u>		Date: <u>8/30/06</u>
Accepting Facility <u>Johnny Laughinghouse</u>		Signature: <u>[Signature]</u>		Date: <u>8/30/06</u>
<u>P+P Environmental, LLC</u>		Signature: <u>[Signature]</u>		Date: <u>8/30/06</u>

Return Original form to Generator

Marine Corps Base, Camp Lejeune Non-Hazardous Waste Shipping Document

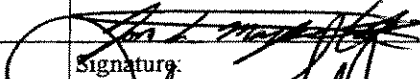
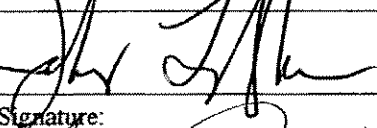
Document #: 06255

Site: <u>TT3548 - NVO2 CAMP LEJEUNE NC 28547</u>			Page 1 of	
Generator's Name & Mailing Address: <u>COMMANDING GENERAL AC/S, I&E (EMD) MARINE CORPS BASE PSC BOX 20004 CAMP LEJEUNE, NC 28542-0004</u>		US EPA ID Number: <u>NC6170022580</u>		
Generator's Telephone #: <u>(910) 451-1482</u>				
Transporter's Name, Mailing Address & Telephone Number: <u>P+F ENVIRONMENTAL 8549 Mill Branch RD Rocky Mount NC (252) 212-8012</u>		US EPA ID Number: <u>NCR00008110</u>		
Destination's Name, Mailing Address & Telephone Number: <u>P+F ENVIRONMENTAL SPEIGHTS CHAPEL RD WHITAKERS NC 27891 (252) 443-4083</u>		US EPA ID Number: <u>SR0500106</u>		
Waste Shipping Name and Description	Containers	Total Quantity	Units	
	Number Type			
	<u>TPH Contaminated Soil</u>	<u>001</u>	<u>93060</u>	<u>GROSS</u>
	<u>NON HAZARDOUS</u>		<u>32720</u>	<u>TARE</u>
			<u>60340</u>	<u>NET</u>
		<u>30.17</u>	<u>TONS</u>	
Container/Tag Number: Lab:		Profile #:		
Additional Information and Discrepancy Indication: <u>CDL # NC 1406087 TRK # P102 TAG # ZB25801</u>				
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:				
Printed/Typed Name <u>Jon A. Myers, II</u>		Signature: <u>[Signature]</u>	Date:	
Bryant Priddy			<u>8/30/06</u>	
Transporter's Name		Signature:	Date:	
<u>Bryant Priddy</u>		<u>[Signature]</u>	<u>8/30/06</u>	
Accepting Facility		Signature:	Date:	
<u>P+F ENVIRONMENTAL, INC</u>		<u>[Signature]</u>	<u>8/30/06</u>	

Return Original form to Generator

Marine Corps Base, Camp Lejeune Non-Hazardous Waste Shipping Document

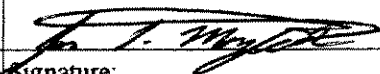


Document #: 06260

Site: <u>TT 3548 TARAWA TERRACE CLMC 28547 (NVO12)</u>		Page 1 of	
Generator's Name & Mailing Address: <u>COMMANDING GENERAL AC/S, I&E (EMD) MARINE CORPS BASE PSC BOX 20004 CAMP LEJEUNE, NC 28542-0004</u>		US EPA ID Number: <u>NC6170022580</u>	
Generator's Telephone #: <u>(910) 451-1482</u>			
Transporter's Name, Mailing Address & Telephone Number: <u>P+F Environmental 8549 Mill Branch Rd Rocky Mount NC (252) 212-8012</u>		US EPA ID Number: <u>NC61700008190</u>	
Destination's Name, Mailing Address & Telephone Number: <u>P+F Environmental SPEIGHT CHAPEL RD WINTAKERS NC 27891 (252) 443-4083</u>		US EPA ID Number: <u>SR0500106</u>	
Waste Shipping Name and Description	Containers		Total Quantity
	Number	Type	
<u>TP4 Contaminated Soil NON HAZARDOUS</u>	<u>001</u>	<u>TT</u>	<u>107000 GROSS 31040 TARE 75960 NET 37.98 TONS</u>
Container/Tag Number:	Profile #:		
Lab:			
Additional Information and Discrepancy Indication: <u>ONE # NC 358604</u> <u>REC # P103</u> <u>TAG # ZB16949</u>			
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:			
Printed/Typed Name	Signature:	Date:	
<u>Jon Mayes TP</u>		<u>8/31/06</u>	
Transporter's Name	Signature:	Date:	
<u>Johnny Laughinghouse</u>		<u>8/31/06</u>	
Accepting Facility	Signature:	Date:	
<u>P+F Environmental, LLC</u>	<u>Greg Hedges</u>	<u>8/31/06</u>	

Return Original form to Generator

Marine Corps Base, Camp Lejeune Non-Hazardous Waste Shipping Document

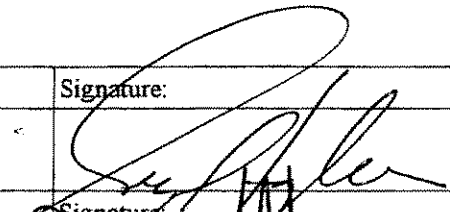
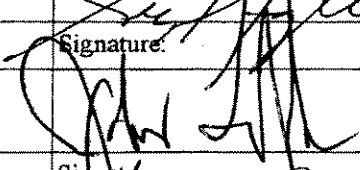
Document #: 06261

Site: <u>TT 3548 TARAWA TERRACE CLNC 285471 (NVO12)</u>			Page 1 of		
Generator's Name & Mailing Address: COMMANDING GENERAL AC/S, I&E (EMD) MARINE CORPS BASE PSC BOX 20004 CAMP LEJEUNE, NC 28542-0004		US EPA ID Number: <u>NC6170022580</u>			
Generator's Telephone #: <u>(910) 451-1482</u>					
Transporter's Name, Mailing Address & Telephone Number: <u>P&F Environmental</u> <u>8549 Mill Branch Rd Rocky Mount NC 27803 (252) 212-8012</u>		US EPA ID Number: <u>NCR00008490</u>			
Destination's Name, Mailing Address, & Telephone Number: <u>P&F Environmental</u> <u>SPEIGATS CHAPEL RD WHITAKERS NC 27891 (252) 443-4083</u>		US EPA ID Number: <u>SR0500100</u>			
Waste Shipping Name and Description	Containers		Total Quantity	Units	
	Number	Type			
	<u>TPH Contaminated Soil</u>	<u>001</u>	<u>TT</u>	<u>83940</u>	<u>GROSS</u>
	<u>Non HAZARDOUS</u>			<u>32720</u>	<u>TARE</u>
				<u>51220</u>	<u>NET</u>
			<u>25.61</u>	<u>TONS</u>	
Container/Tag Number: Lab:		Profile #:			
Additional Information and Discrepancy Indication: <u>CDL # NC1406087</u> <u>TRK # P102</u> <u>TAG # ZB25821</u>					
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:					
Printed/Typed Name		Signature:		Date:	
<u>Jon Mayes II</u>				<u>8/31/06</u>	
Transporter's Name		Signature:		Date:	
<u>Bryant Priddy</u>				<u>8/31/06</u>	
Accepting Facility		Signature:		Date:	
<u>P&F ENVIRONMENTAL, INC.</u>				<u>8/31/06</u>	

Return Original form to Generator

Marine Corps Base, Camp Lejeune Non-Hazardous Waste Shipping Document

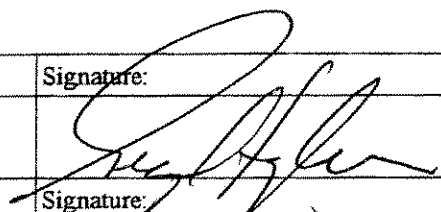
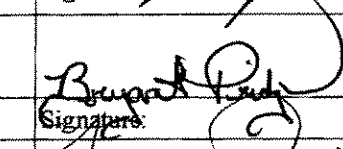
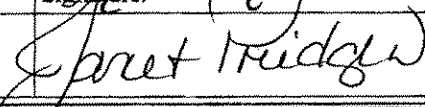
Document #: 06262

Site: <u>TT 3548 TABAWA TERRACE W 28547 (NVO12)</u>		Page 1 of		
Generator's Name & Mailing Address: <u>COMMANDING GENERAL AC/S, I&E (EMD) MARINE CORPS BASE PSC BOX 20004 CAMP LEJEUNE, NC 28542-0004</u>		US EPA ID Number: <u>NC6170022580</u>		
Generator's Telephone #: <u>(910) 451-1482</u>				
Transporter's Name, Mailing Address & Telephone Number: <u>P+F Environmental 8549 Mill Branch Rd Rocky Mount NC 27803 (252) 212-8012</u>		US EPA ID Number: <u>NCR00008493</u>		
Destination's Name, Mailing Address & Telephone Number: <u>P+F Environmental SPRIGG Chapel Rd Whitakers NC 27891 (252) 443-4083</u>		US EPA ID Number: <u>SR0500106</u>		
Waste Shipping Name and Description	Containers	Total Quantity	Units	
	Number	Type		
	<u>001</u>	<u>TT</u>	<u>104400</u>	<u>GROSS</u>
			<u>31040</u>	<u>TARE</u>
			<u>73360</u>	<u>NET</u>
		<u>36.68</u>	<u>TONS</u>	
Container/Tag Number: Lab:		Profile #:		
Additional Information and Discrepancy Indication: <u>CDL # NC 358604</u> <u>TRK # P103</u> <u>TRG # ZB118949</u>				
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:				
Printed/Typed Name	Signature:	Date:		
<u>George Taylor</u>		<u>8/31/06</u>		
Transporter's Name	Signature:	Date:		
<u>Johnny Laughinghouse</u>		<u>8/31/06</u>		
Accepting Facility	Signature:	Date:		
<u>P+F Environmental, Inc.</u>	<u>Garet Bridges</u>	<u>8/31/06</u>		

Return Original form to Generator

Marine Corps Base, Camp Lejeune Non-Hazardous Waste Shipping Document

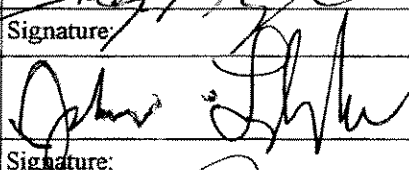
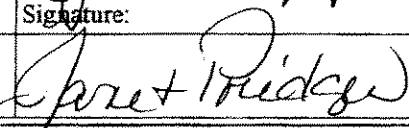
Document #: 06263

Site: <u>TT3548 TARDNA TERRACE CLNC NC (NVA12)</u>		Page 1 of		
Generator's Name & Mailing Address: COMMANDING GENERAL AC/S, I&E (EMD) MARINE CORPS BASE PSC BOX 20004 CAMP LEJEUNE, NC 28542-0004		US EPA ID Number: <u>NC6170022580</u>		
Generator's Telephone #: <u>(910) 451-1482</u>				
Transporter's Name, Mailing Address & Telephone Number: <u>P+P Environmental</u> <u>8549 Mill Branch Rd Rocky Mount, NC 27803 (252) 212-8012</u>		US EPA ID Number: <u>NCR00008490</u>		
Destination's Name, Mailing Address, & Telephone Number: <u>P+P Environmental</u> <u>SPECIALTS Chapel Rd Whitaker NC 27791 (252) 443-4083</u>		US EPA ID Number: <u>SR0500106</u>		
Waste Shipping Name and Description	Containers		Total Quantity	Units
	Number	Type		
<u>TPH Contaminated Soil</u> <u>NON HAZARDOUS</u>	<u>801</u>	<u>TP</u>	<u>89400</u>	<u>GROSS</u>
			<u>32720</u>	<u>TARE</u>
			<u>56680</u>	<u>NET</u>
			<u>28,34</u>	<u>TONS</u>
Container/Tag Number:	Profile #:			
Lab:				
Additional Information and Discrepancy Indication: <u>CDL# NC1406087</u> <u>TRK# P102</u> <u>TAG# 2B25821</u>				
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:				
Printed/Typed Name	Signature:	Date:		
<u>George Taylor</u> DA Mages II		<u>8/31/06</u>		
Transporter's Name	Signature:	Date:		
<u>Bryant Pridden</u>		<u>8/31/06</u>		
Accepting Facility	Signature:	Date:		
<u>P+P Environmental, Inc.</u>		<u>8/31/06</u>		

Return Original form to Generator

Marine Corps Base, Camp Lejeune Non-Hazardous Waste Shipping Document

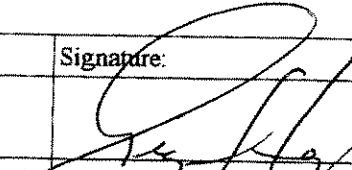
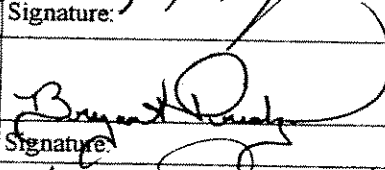
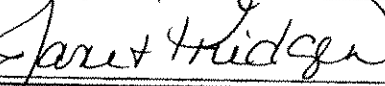
Document #: 06264

Site: <u>TT 3548 TORAWA TERRACE CLNC 28547 (NVO12)</u>		Page 1 of			
Generator's Name & Mailing Address: COMMANDING GENERAL AC/S, I&E (EMD) MARINE CORPS BASE PSC BOX 20004 CAMP LEJEUNE, NC 28542-0004		US EPA ID Number: <u>NC6170022580</u>			
Generator's Telephone #: <u>(910) 451-1482</u>					
Transporter's Name, Mailing Address & Telephone Number: <u>P+F Environmental</u> <u>8471 Mill Branch Rd Rocky Mount NC 27803 (252) 212-8012</u>		US EPA ID Number: <u>NCR000008490</u>			
Destination's Name, Mailing Address & Telephone Number: <u>P+F Environmental</u> <u>SPENCERS ONPESL RD WINDSTOCKS NC 27891 (252) 443-4083</u>		US EPA ID Number: <u>SR0500106</u>			
Waste Shipping Name and Description	Containers		Total Quantity	Units	
	Number	Type			
	<u>TPH Contaminated Soil</u>	<u>001</u>	<u>TT</u>	<u>91360</u>	<u>GROSS</u>
	<u>NON HAZARDOUS</u>			<u>31040</u>	<u>TDEE</u>
				<u>60320</u>	<u>NBT</u>
			<u>30.16</u>	<u>TONS</u>	
Container/Tag Number: Lab:		Profile #:			
Additional Information and Discrepancy Indication: <u>CDL # NC 358604</u> <u>TRE # P103</u> <u>TDEE # ZB11849</u>					
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:					
Printed/Typed Name	Signature:	Date:			
<u>George L. Taylor</u>		<u>8/31/06</u>			
Transporter's Name	Signature:	Date:			
<u>Johnny Laughinghouse</u>		<u>8/31/06</u>			
Accepting Facility	Signature:	Date:			
<u>P+F ENVIRONMENTAL, INC.</u>		<u>8/31/06</u>			

Return Original form to Generator

Marine Corps Base, Camp Lejeune Non-Hazardous Waste Shipping Document

Document #: 06265

Site: <u>TT 3548 TARRAWA TERRORS CLNC (NVO12)</u>		Page 1 of		
Generator's Name & Mailing Address: COMMANDING GENERAL AC/S, I&E (EMD) MARINE CORPS BASE PSC BOX 20004 CAMP LEJEUNE, NC 28542-0004		US EPA ID Number: <u>NC6170022580</u>		
Generator's Telephone #: <u>(910) 451-1482</u>				
Transporter's Name, Mailing Address & Telephone Number: <u>P+F Environmental</u> <u>8549 Mill Branch Rd Rocky Mount NC 27803</u>		US EPA ID Number: <u>NCR000008490</u>		
Destination's Name, Mailing Address & Telephone Number: <u>P+F Environmental</u> <u>Speights Chapel Rd Whitakers NC 27891</u>		US EPA ID Number: <u>SR0500106</u>		
Waste Shipping Name and Description	Containers	Total Quantity	Units	
	Number Type			
	<u>TPH Contaminated Soil</u>	<u>001</u> <u>TT</u>	<u>90320</u>	<u>GROSS</u>
	<u>NON HAZARDOUS</u>		<u>32720</u>	<u>TARE</u>
		<u>(JP)</u> <u>57.600</u>	<u>67080</u>	<u>NET</u>
	<u>(JP)</u> <u>28.80</u>	<u>34.04</u>	<u>TONS</u>	
Container/Tag Number:	Profile #:			
Lab:				
Additional Information and Discrepancy Indication: <u>CDL# NC 1406087</u> <u>TRK# P102</u> <u>TRK# ZB25821</u>				
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:				
Printed/Typed Name	Signature:	Date:		
<u>George L Taylor</u>		<u>8/31/06</u>		
Transporter's Name	Signature:	Date:		
<u>Brand Priddy</u>		<u>8/31/06</u>		
Accepting Facility	Signature:	Date:		
<u>P+F ENVIRONMENTAL, INC.</u>		<u>8/31/06</u>		

Return Original form to Generator