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Courthouse Bay near Site 65.

THREE WELL SITE CHECK

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA UST BB-46

REWAI Project 94444 United States Navy Contract N62470-93-D-4035 Delivery Order No. 0026

Prepared for

Atlantic Division Naval Facilities Engineering Command Norfolk, VA 23511-6287

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November 1994

Enclosure (5)

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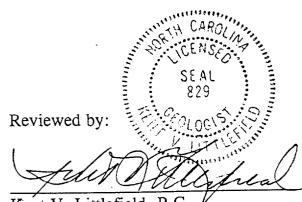
Prepared for

Atlantic Division Naval Facilities Engineering Command Norfolk, VA 23511-6287

By

R. E. WRIGHT ASSOCIATES, INC. #18 Koger Executive Center Suite 109 Norfolk, VA 23502-4015 (804) 461-6906

November 1994



Kent V. Littlefield, P.G. Project Director

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Respectfully submitted,

Eric L. Engle 1 MUI

Eric L. Engle Project Scientist II

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Michael W. Iannicelli General Manager

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1.1.1

1.0 INTRODUCTION

On behalf of the Atlantic Division Naval Facilities Engineering Command (LANTDIV), R. E. Wright Associates, Inc. (REWAI) performed a three well site check adjacent to former underground storage tank (UST) BB-46 at Marine Corps Base (MCB) Camp Lejeune, North Carolina (Figure 1). Three soil borings were drilled and monitoring wells subsequently installed in August 1994. Soil and groundwater samples were collected for laboratory analysis to characterize hydrocarbon contamination in the subsurface. In order to accurately determine the groundwater flow direction and gradient at the site, well locations and elevations were surveyed and depth to groundwater was measured at each well. Wastewater and soil cuttings generated during these activities were contained in 55-gallon drums, sampled and disposed off-site. This work complies with the requirements of basic Contract No. N62470-93-D-4035 with LANTDIV. The following report documents the field activities performed, and presents the results of the investigation conducted by REWAI.

2.0 BACKGROUND INFORMATION

2.1 Facility Description

Building BB-46, which is used as a boat house, is located on Front Street in the Courthouse Bay area of MCB Camp Lejeune (Figure 2). The UST was a 1,000-gallon steel tank used to store regular gasoline for retail use. The UST located west of Building BB-46 was installed in 1980, deactivated in 1989, and removed on January 6, 1994.

A groundwater sample taken during UST closure activities indicated elevated levels of benzene, toluene, ethylbenzene, and xylene (BTEX) present in the subsurface.

2.2 Regional Geology/Hydrogeology

MCB Camp Lejeune, North Carolina, is located within the Atlantic Coastal Plain Physiographic Province. Subsurface geology in the area consists of interbedded Quaternary sands and clays. Groundwater was encountered at approximately five feet below ground surface (bgs), reflecting the near-costal environment in this region.

3.0 SUBSURFACE INVESTIGATION - METHODS AND PROCEDURES

3.1 Boring/Monitoring Well Installation

Boring locations were selected in areas of potential concern to determine if petroleum hydrocarbons from the UST had adversely impacted soil and groundwater quality at the site (Figure 3). Three monitoring wells were completed at the site by ATEC Associates, Inc., on August 3 and 4, 1994, under the supervision of a REWAI geologist. Borings were advanced by the hollow-stem auger technique using a truck-mounted drill rig. The augers and split-spoon sampling equipment were steam-cleaned prior to the start of drilling activities and between boreholes to mitigate the possibility of sample cross-contamination. Three soil borings were initially sampled and characterized by continuously split spooning to six feet bgs. The borings were subsequently reamed with a larger 10-inch outside-diameter (OD) hollow-stem auger to a maximum depth of 14 feet bgs and completed as

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groundwater monitoring wells. Groundwater monitoring wells MW-1, MW-2, and MW-3 consisted of four-inch Schedule 40 polyvinyl chloride (PVC) well screen and casing threaded for flush joints. A 10-foot length of factory-slotted 0.010-inch well screen was installed in each well so that the groundwater table intercepted the screen. PVC casing was installed above the well screen in each well to extend the well construction to ground surface. Expandable well caps with locks were installed at the top of casing in each well.

After placement of the well screen and riser pipe, the annular space between the monitoring well and the borehole wall was backfilled with a chemically inert, washed, coarse silica sand to approximately two feet above the top of the well screen. A one-half to one-foot thickness of bentonite pellets were placed on top of the sand pack and hydrated with potable water. After the bentonite pellets were allowed to hydrate and seal the borehole, the remainder of the borehole was backfilled to the ground surface with Portland cement grout. A cast-iron drive-over was installed with concrete to finish each well and allow future access. Soil boring and well construction logs are presented in Appendix B.

3.2 Soil Sampling

Soil borings MW-1, MW-2, and MW-3 were completed to approximately 8 feet below static water level (SWL). Continuous split-spoon samples were collected to 6 feet bgs in all three borings. Split-spoon samples were screened in the field using a photoionization detector (PID) to detect the presence of organic vapors. The PID readings are recorded on the drilling logs (Appendix B). The sample from each borehole, which exhibited the highest reading, was placed into laboratory-prepared glass jars. For quality

assurance/quality control (QA/QC) purposes, a duplicate soil sample (randomly selected from MW-3) was collected and submitted for analysis. The samples were labeled, packaged in ice, and shipped with the appropriate chain of custody to Hydrologic Laboratories, Inc. (Hydrologic) in Frankfort, Kentucky. All soil samples were analyzed at Hydrologic by United States Environmental Protection Agency (EPA) Method 8015M (5030) for total petroleum hydrocarbons-gasoline range organics (TPH-GRO).

3.3 Groundwater Sampling

Immediately after construction, the monitoring wells were developed by pumping sediment-laden groundwater from the wells at the maximum sustainable rate until the sediment cleared from the water. At least 3 well volumes (approximately 35 gallons) of water were removed from each well during development at an average rate of less than 1 gallon per minute (gpm). After the groundwater was allowed to recover from purging during development, groundwater samples were collected to determine if petroleum hydrocarbons had adversely impacted the groundwater quality underlying the site. No free-phase hydrocarbons were detected on the groundwater surface immediately after drilling or at the time of sampling (as measured with a sonic interface probe).

Disposable plastic bailers were used to obtain samples from the groundwater table. Disposable latex gloves were also used to ensure sample integrity when transferring water to laboratory-cleaned, labeled, septum-sealed sample vials. One random duplicate groundwater sample was taken from MW-2 for QA/QC purposes. The samples were :

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packaged in ice and shipped with the soil samples and chain of custody to Hydrologic for analysis of volatile organic compounds (VOCs) by EPA Method 601, benzene, toluene, ethylbenzene, and xylene (BTEX) by EPA Method 602, and total lead by EPA Method 239.2.

3.4 Elevation Survey

Surveying was completed by Parker and Associates, Inc., on August 22, 1994, in order to obtain surface and top of casing elevations for future monitoring activities. Coordinates on well locations are given in meters using a Universal Transverse Mercator grid (NAD, 1983). Top of casing and surface elevations are listed in feet above mean sea level (NGVD, 1929). Computations were done using a conversion for feet/meter of 39.37 inches divided by 12 inches. Horizontal coordinates are given in meters using a Universal Transverse Mercator (UTM) grid. Survey results are attached as Appendix C and summarized in Table 1.

4.0 **RESULTS OF THREE WELL SITE CHECK**

4.1 Site Geology and Hydrogeology

Subsurface materials encountered during drilling activities at the site indicate that the site is primarily underlain by shallow fine-grained sand, with a layer of underlying clay. Groundwater was encountered between 5.0 and 5.5 feet bgs, and bedrock was not •]

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encountered to 14 feet bgs (the maximum depth penetrated during drilling). Measured groundwater elevations at the three new monitoring wells indicate an apparent groundwater flow to the northeast at a gradient of approximately 0.014 (Figure 3).

4.2 Analytical Results

4.2.1 Petroleum Hydrocarbons

Organic vapors were detected with a PID in near-surface soils to a maximum of 1, 11, and 15 parts per million (ppm) in soils from wells MW-1, MW-2, and MW-3, respectively. Soil vapor readings were highest in the zone between 2 and 4 feet bgs in all 3 locations, with the exception of 61 ppm at 4 to 6 feet in MW-2. Moderate hydrocarbon odors were encountered in soils at MW-2. No noticeable hydrocarbon odors were evident in soils from MW-1 or MW-3. No free-phase hydrocarbons or staining were noted at the time of drilling or sampling.

In order to quantify the concentrations of adsorbed-phase hydrocarbons in soils and dissolved-phase hydrocarbons in groundwater, one soil and one groundwater sample were collected from each well for laboratory analysis. Copies of the laboratory chemistry reports are attached as Appendix D and summarized in Tables 2 and 3.

Results of soil sampling for TPH-GRO were below the limits of detection in the four soil samples (Table 2). Laboratory analyses of water samples were below the limits of detection for all gasoline constituents.

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4.2.2 Additional Compounds

Detectable concentrations of tetrachloroethene (PCE) were found in water samples from each well ranging from 16.0 micrograms per liter (μ g/l) at MW-2 to 30.0 μ g/l at MW-1 (Table 3). PCE is not a constituent of gasoline and its source therefore would not have been UST BB-46.

4.3 Waste Disposal

Soil cuttings generated during drilling, water from equipment decontamination activities, and water from development of the wells were collected in labeled Department of Transportation (PennDOT)-approved 55-gallon drums and staged at an activity-approved location. Drums were transported off-site and disposed by Noble Oil Services on October 24th and 25th, 1994.

A composite soil sample was taken from the drums in which soil cuttings were containerized and analyzed for TPH-GRO and TPH-diesel range organics (TPH-DRO) (SW-846:8015M), VOCs (SW-846:8260), semi-VOCs (SVOCs) (SW-846:8270), pesticides/polychlorinated biphenyls (PCBs) (SW-846:8080), and Toxicity Characteristic Leaching Procedure (TCLP) eight Resource Conservation and Recovery Act (RCRA) metals. Results indicated 11.5 milligrams per kilogram (mg/kg) diesel, and barium concentration of 0.615 milligrams per liter (mg/l) (Table 4).

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5.0 SUMMARY AND CONCLUSIONS

Based on the results of this subsurface investigation conducted at UST BB-46, the following conclusions have been formed:

- 1. Apparent groundwater flow in the area is to the northeast at an average gradient of approximately 0.014.
- 2. All soil samples were below the limits of detection for TPH-GRO.
- 3. No gasoline constituents were detected in the groundwater at this site. However, samples indicated concentrations of PCE ranging from 16.0 μ g/l to a maximum of 30.0 μ g/l in MW-1.
- 4. Based on the lack of gasoline compounds in groundwater detected during this investigation, no further action is warranted at this site in response to the UST closure.

APPENDIX A

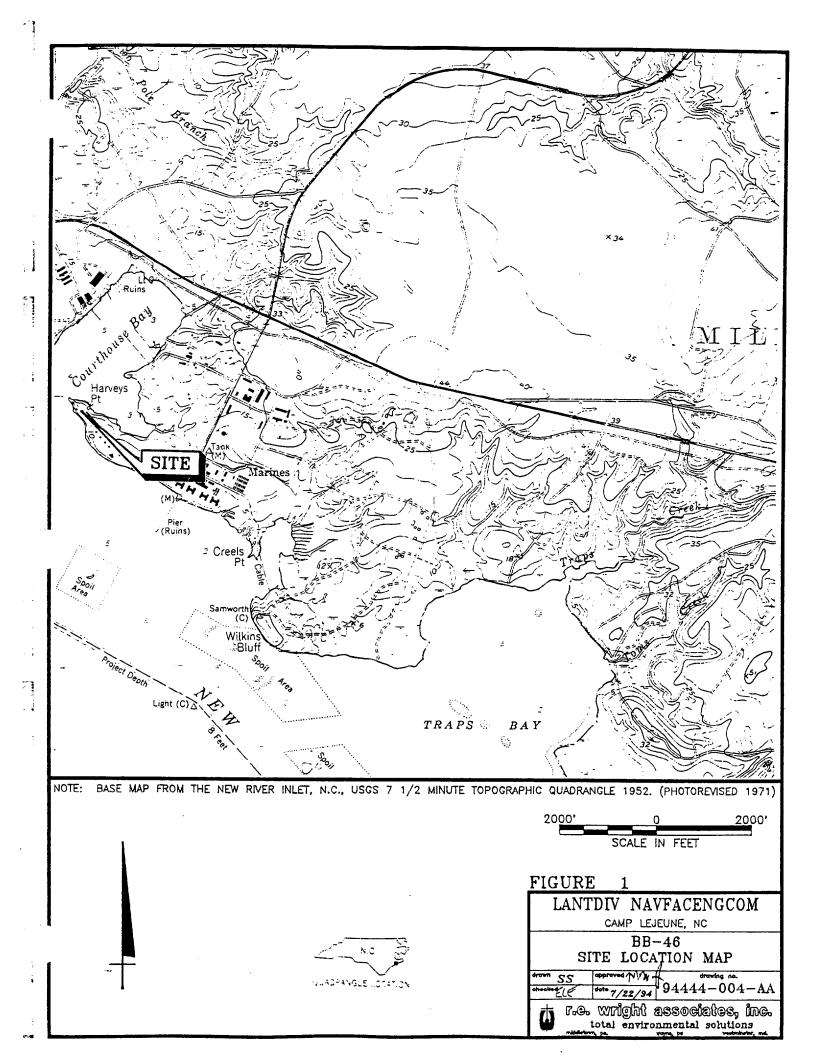
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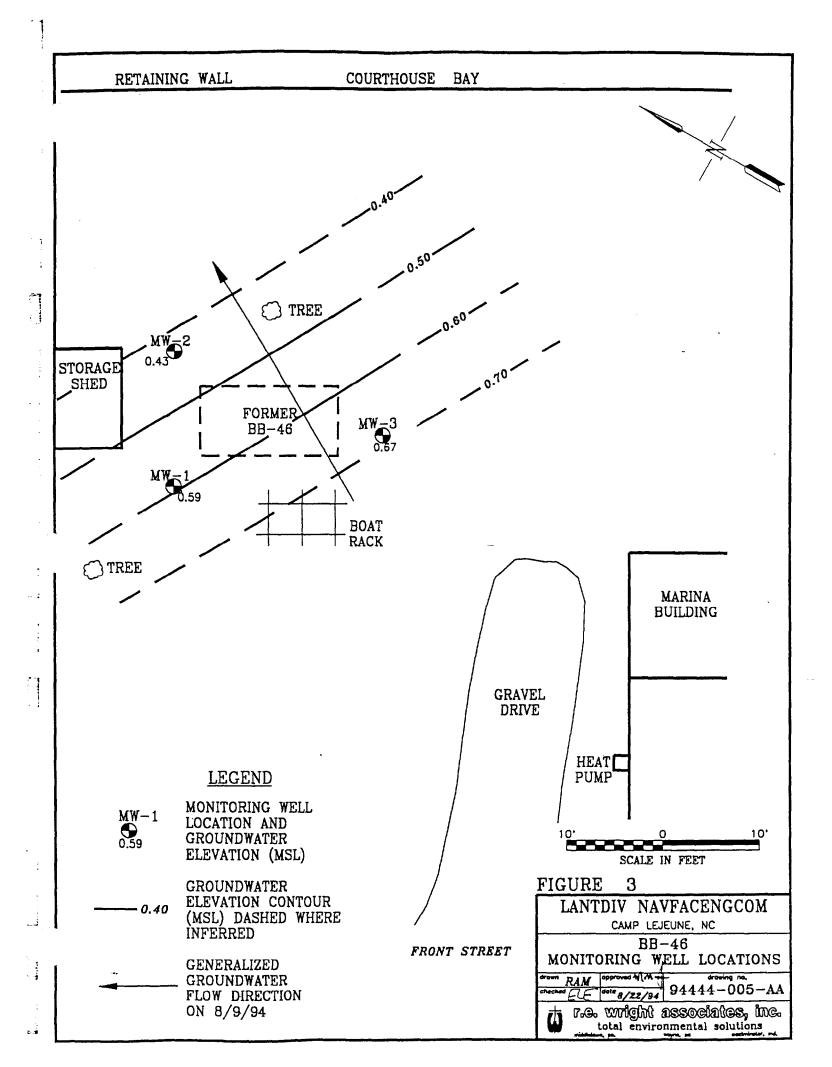
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Figures and Tables



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NOTE: ADAPTED FROM CAD DRAWINGS SUPPLIED BY NAVY
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SCALE IN FEET
FIGURE 2 LANTDIV NAVFACENGCO
CAMP LEJEUNE, NC LOCATION ON ACTIVITY
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total environmental solution



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	the second s	nitoring Well Dat ps Base, Camp Lo REWAI Project	jeune, North Carol	ina 🦾
Sample Location	Surface Elevation (AMSL)	Top of Casing Elevation (AMSL)	Depth to Groundwater (BTOC)	Calculated Groundwater Elevation (AMSL)
MW-1	5.49	5.19	4.60	0.59
MW-2	5.33	4.93	4.50	0.43
MW-3	4.83	4.47	3.80	0.67

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TABLE 2. Soil Sample Analytical Results – UST BB-46 Marine Corps Base, Camp Lejeune, North Carolina REWAI Project 94444. Concentrations reported in milligrams per kilogram (mg/kg)							
EPA Method 8015M/5030		MW-1		· ·	MW-3 Duplicate		
TPH/GRO	10	BDL	BDL	BDL	BDL		
TPH/GRO IO BDL BDL BDL BDL EPA = United States Environmental Protection Agency bgl: = Below Ground Level TPH = Total Petroleum Hydrocarbons GRO = Gasoline Range Organics BDL = Below Detection Limits							

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TABLE 3 Water Sample Analytical Results - UST BB-46 Marine Corps Base, Camp Lejeune, North Carolina REWAI Project 94444 Concentrations reported in micrograms per liter (µg/l)								
Analysis	NC	MW-1	MW-2	MW-2 Duplicate	MW-3			
EPA Method 601 Volatile Organic Compounds Tetrachloroethene	 0.7	BDL* 30.0	BDL* 16.0	BDL* 25.0	BDL* 27.0			
EPA Method 602 BTEX		BDL*	BDL*	BDL*	BDL*			
EPA Method 239.2 Lead	15	BDL	BDL	BDL	BDL			
Lead 15 BDL BDL BDL BDL BDL NC = Groundwater Quality Standards per North Carolina Administrative Code, Title 15A, Subchapter 2L EPA = United States Environmental Protection Agency BTEX = Benzene, Toluene, Ethylbenzene, and Xylene = Not Applicable BDL = Below Detection Limits * All parameters of analysis method were below detection limits, except as noted (Appendix D).								

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TABLE 4 Composite Drum Sample Analytical Results - UST BB-46 Marine Corps Base, Camp Lejeune, North Carolina REWAI Project 94444						
Drum CompositeDrum CompositeAnalysisSoilWater (mg/l)						
EPA Method 200.7 Lead		BDL				
EPA Method 602 BTEX +MTBE		BDL*				
SW-846:3550 Diesel	11.5 mg/kg					
SW-846:5030 Gasoline	BDL					
SW-846:8260 VOC's	BDL*					
SW-846:8270 SVOC's	BDL*					
SW-846:8080 Pesticides/PCB's BDL*						
TCLP 8 RCRA Metals Barium, Total	BDL* 0.615 mg/l					
mg/kg= Milligrams per Kilogrammg/l= Milligrams per LiterEPA= United States Environmental Protection Agency= Not AnalyzedBDL= Below Detection LimitsBTEX= Benzene, Toluene, Ethylbenzene, and XyleneMTBE= Methyl Tertiary-butyl EtherVOCs= Volatile Organic CompoundsSVOCs= Semi-VOCsPCBs= Polychlorinated BiphenylsTCLP= Toxicity Characteristic Leaching ProcedureRCRA= Resource Conservation and Recovery Act*All parameters of analysis method were BDL, except as noted (Appendix D).						

APPENDIX B

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Geologic Well Logs

	North Carolina - Department of Environment, Health Division of Environmental Management - Gro P.O. Box 29535 - Raleigh, N.C. 276	undwater Section		_). NO	OFFICE USE ONLY
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	WELL CONSTRUCTION RE	CORD				
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	NG CONTRACTOR: ALLO ASSOCIACE.		STATE WE	LL COI	NSTRUCTION	
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1		County				
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	DDRESS Commanding General, AC/S	EMD (IRD)		0.0	8.0	Fine-grained sand
	(Street or Route No.) MCB	PSC Box 20	0004	8.0	14.0	Clay
	- 1 3	28542-0004				
_	City or Town State	Zip Code Monitorin				•
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	CUTTINGS COLLECTED YES X NO	7		-		
	DOES WELL REPLACE EXISTING WELL?		X			
	STATIC WATER LEVEL Below Top of Casing:	<u>4,60</u> FT.				*
	(Use "+" if Above					
	OP OF CASING IS FT. Above Lar					
	ng Terminated at/or below land surface is illegal unles coordance with 15A NCAC 2C .0118	ss a variance is is	ssued			
``	(IELD (apm): METHOD OF TEST					
). 1	WATER ZONES (depth): Saturated below	v 5.0 feet				
.4	CHLORINATION: Type A	mount	 	lf additi	onal space is ne	eded use back of form
1	Depth Diameter Wall From 0.0 To 3.7 Ft. 4 Sc1 From To Sc1 40 5 5 From To Ft. Ft. 40 5	Thickness VeighvFt. Mate nedule PV	erial (Shi 7C	nw direc		DN SKETCH_ e from at least two State
3. 1	GROUT:		. c	0 0	3 '	()
	Depth Material	Method	- t			Ņ
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	From <u>1.0</u> To <u>2.0</u> Ft. <u>Bentonite</u>	· <u>·····</u>				
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э.	SAND/GRAVEL PACK:	Matarial				BB46MWI
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	SI	GNATURE OF CO			IT Management and	DATE

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Submit original to Division of Environmental Management and copy to well owner.

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Phone (919) 733-32					
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* Casing Terminated at/or below land surface is illegal in accordance with 15A NCAC 2C .0118	uniess a variance is ist	sued			
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 North Carolina - Department of Environment, Health, and Natural Resour Division of Environmental Management - Groundwater Section P.O. Box 29535 - Raleigh, N.C. 27626-0535 Phone (919) 733-3221 WELL CONSTRUCTION RECORD 	CUAD. NO.
ING CONTRACTOR: ATEC Associates, Inc.	Besin Code GW-1 Ent
STA	TE WELL CONSTRUCTION MIT NUMBER: NA
 WELL LOCATION: (Show sketch of the location below) Nearest Town: <u>Jacksonville</u> County: 	Onslow
Front Street BB46	
(Road, Community, or Subdivision and Lot No.)	DEPTH DRILLING LOG
2. OWNER <u>Environmental Management Department/IRD</u>	
ADDRESS Commanding General, AC/S EMD (IRD) (Street or Route No.) MCB PSC Box 20004	0.0 4.5 Very fine-grained san 4.5 8.0 Very fine-grained san
Camp Lejeune NC 28542-0004	4.5 8.0 Very fine-grained sand 8.0 13.0 Clay
City or Town State Zip Code	0.0 13.0 Clay
3. DATE DRILLED 8/4/94 USE OF WELL Monitoring	
. TOTAL DEPTH	
3. CUTTINGS COLLECTED YES X NO	
6. DOES WELL REPLACE EXISTING WELL? YES NOX	
7. STATIC WATER LEVEL Below Top of Casing: <u>3.80</u> FT. (Use "+" if Above Top of Casing)	
3. TOP OF CASING IS FT. Above Land Surface*	
* Casing Terminated at/or below land surface is illegal unless a variance is issued	
In accordance with 15A NCAC 2C .0118	
). YIELD (gpm):METHOD OF TEST 10. WATER ZONES (depth):Below 5.5 feet	
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FromTo Ft	1 * 0
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14. SCREEN:	
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16. REMARKS:	BB46MW3
I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN A	CCOHDANCE WITH 15A NCAC 2C, WELL

CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

5 SIGNATURE OF CONTRACTOR OR AGENT

9-12-94

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SIGNATURE OF CONTRACTOR OR AGENT DATE Submit original to Division of Environmental Management and copy to well owner.

Client Projec				BORING LOG ENGCOM Phase	Ta	isk	Boring Locatio Surface	n Cam	46-MW1 Piezon p Lejeune MCB 5.49 FT.		Page 1 of 1
с н н н н н н н н н н н н н н н н н н н	Blow Count	Sampler	Re- covery/ ROD		rden/Litholog Description	gic	FID (PPm)	Graphic Log	Well Construction Graphics	Depth Feet	Well Construction Details
	Ground Surface N/A 2-3-2-4 5-6-4-3		FEET N/A 1.5/2.0* 1.7/2.0*	Fine-grained san light gray at 1.0 water saturated a Clay, some silt; plastic, water sat	". well sorted lo a 5.0". (0.0 - 8. medium gray, c	ose, .0')	1 0 0				T.O.C. Elev. 5.19 Flushmount driveover Concrete (0.0-1.0') 4" PVC casing (0.3-3.7') Bentonite plug (1.0-2.0') Morie #2 sand (2.0-14.0') 4" PVC screen (3.7-13.7') - Bottom cap (13.7-14.0') Total boring depth=14.0'
Lo	iller <u>ATEC A</u> ogged By <u>John R</u> illing Started	арр	iates, Inc (REWAI) 8/3/94		Blown/Bailed Y Well Casing Casing Type)ia. <u>0.3'</u>	10 <u>3.7</u> *	 Bentonite Seal Filter Pack Qty Filter Pack Ty 	7. <u>40</u>	chips 0 Ibs orie grade #2 sand
Co De	rilling Completed onstruction Compl evelopment Comp ater Bearing Zone	leteo		/94	Well Screen Screen Type Slot Size Drilling Mud Grout Type	4 C Schedule 44 0.010-inch N/A Cement) PVC	to <u>13.7</u>			0.59 MSL 8/9/94

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r.e. wright associates, inc.

Form #wi-sc-1 (02/90)

			IL BORING LOG			Boring	No. BB	46-MW2	Piezon	neter No	·
Clien			CENGCOM			Locatio		p Lejeune	мсв	, NC	
Projec	et No: 94444	1.1	Phase		l'ask	Surface	T	5.33 FT.		<u> </u>	Page 1 of 1
С Feet	Blow Count	Sampler Re- covery/	요. Overt	purden/Litholo Description	ogic	FID (ppm)	Graphic Log	Well Construct Graphic	ion	Depth Feet	Well Construction Details
								<u> </u>			T.O.C. Elev. 4.93
	Ground Surface 2-2-3-3 2-2-2-2 2-3-3-3	FEE 1.5/2.0 1.3/2.0 1.5/2.0	 Fine-grained s with depth; da yellowish brow moist. (0.0 -) Wery fine-grain gray, cohesive (5.5 - 7.0') 	ted sand, some c , plastic, water s ; medium gray, c	g light oose, lay; light aturated.	11 10 6				0 	Flushmount driveover Concrete (0.0-1.0') 4" PVC casing (0.4-3.5) Bentonite plug (1.0-2.0' Morie #2 sand (2.0-13.8 4" PVC screen (3.5-13.4
								' <u></u>		- 15	Bottom cap (13.5-13.8') Total boring depth=13.8
				· -							
Dril	ller ATEC Ass	ociates, Inc	· · · · · ·	Blown/Bailed	Yield <u>N/A</u>			Bentonite	Seal	3/8* (chips
	ged By John Ra			Well Casing	<u>4</u> Dia	. 0.4'	10 3.5') Ibs
1	lling Started	8/3/94		Casing Type	Schedule 40			Filter Pac			nie grade #2 sand
Dril	lling Completed	8/3/94	·	Well Screen	<u>4"</u> Dia		to <u>13.5'</u>	1			0.43 MSL
Con	nstruction Complet		3/94	Screen Type	Schedule 40			_			8/9/94
Dev	elopment Comple	ted <u>8</u>	8/94	Slot Size	0.010-inch			Notes:			
1	ter Bearing Zones		5.5' bgs	Drilling Mud	N/A						
	- <u>م</u> ان مان مان مان مان مان مان مان مان مان م			Grout Type	Cement			-			

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Form #w1-sc-1 (02/90)

Client:	LANTDI	' NA		BORING LOG ENGCOM	Boring Locatio		46-MW3 Piezom p Lejeune MCB		
Project No	. 94444			Phase Task	Surfac		.83 FT.		Page 1 of 1
ب عو عو عو عو عو عو	Blow Count		Re- cover⊌∕ R0D	Overburden/Lithologic Description	FID (ppm)	Graphic Log	Well Construction Graphics	Depth Feet	Well Construction Details
0 Gr - 2-3- - 5-4 	3-2	X	FEET 1.9/2.0' 0.5/2.0' 2.0/2.0'	Very fine-grained sand, trace silt increasing with depth; dark gray becoming light yellowish brown, loose, moist. (0.0 - 4.5') Very fine-grained sand, some clay increasing with depth; light gray changing to brownish yellow at 5.5', eohesive, water saturated below 5.5'. (4.5 - 8.0') Clay, some silt; medium gray, cohesive, plastic, water saturated. (8.0 - 13.0')	10 15 9			0	T.O.C. Elev. 4.47 Flushmount driveover Concrete (0.0-0.5') 4" PVC casing (0.4-2.7") Bentonite plug (0.5-1.0") Morie #2 sand (1.0-12.7 4" PVC screen (2.7-12.7 - Bottom cap (12.7-13.0") Total boring depth = 13.0
20								20	
Drilling Drilling Constru Develop	ATEC As By John R: Started Completed ction Completed oment Completed cearing Zones	1 pp (<u>8/</u>		Casing Type <u>Schedule 4</u> Well Screen <u>4</u> 94 Screen Type <u>Schedule 4</u> 94 Slot Size <u>0.010-inch</u>	Dia. <u>0.4'</u> 0 PVC Dia. <u>2.7'</u> 0 PVC	_ to <u>2.7'</u> to <u>12.7'</u>	Filter Pack Type	e <u>M</u> o vel _	chips 0 Ibs orie grade #2 sand 0.67 MSL 8/9/94

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r.e. wright associates, inc.

Form #wi-sc-1 (02/90)

APPENDIX C

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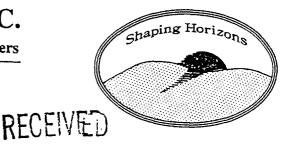
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Survey Data

PARKER & ASSOCIATES, INC.

Consulting Engineers - Land Surveyors - Land Planners

306 New Bridge Street - P.O. Box 976 Jacksonville, NC 28541-0976 -(910) 455-2414 - Fax: (910) 455-3441



AUG 2 5 1994

Mr. Eric Engle R. E. Wright Associates, Inc. 3240 Schoolhouse Road Middletown, PA 17057-3595

> RE: Monitor Wells Camp LeJeune, N.C. P.O. # 0136853

REWAL

Dear Mr. Engle,

Attached you will find our survey results on the above referenced project that are complete to date.

Coordinates are in meters using U.T.M. grid as established by Marine Corps Base, Camp LeJeune. Please note the different North American Datum (NAD) listed for each site. The reason for this is not all monumens used were updated to NAD-83 coordinates. Elevations listed are in feet (Mean Sea Level).

We are continuing to work on the other five sites and will forward data when complete.

Parker & Associates, Inc. appreciates this opportunity to provide our professional services. If more information is needed or you have any additional questions, please feel free to call.

Very truly yours,

PARKER & ASSOCIATES, INC.

Robert Ein ummer fi

Robert E. Wimmer, Jr., R.L.S. Vice President of Surveying Division

REW/jlw xc: CF (P)

ATTACHMENT I

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WELL	COORDINATES	(M)	ELEVAT	TIONS
IDENTIFICATION	NORTH	East	TOP PVC	GROUND
Building BB-46				
MW - 1	3829316.40	383144.86	5.19	5.49
MW - 2	3829318.81	383148.45	4.93	5.33
MW - 3	3829311.59	383149.59	4.47	4.83

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APPENDIX D

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Laboratory Reports

EPORT TO:	1		CH		IN								• <u>_</u>				
RE HRIGHT ASSOC. 3240 Schoolhouse R			HydroLogic, Inc. 2500 Gateway Centre Blvd., Suite 900											od of Shipment			
			2500 Galeway Centre Divd., Suite 555 Morrisville, NC 27560 800-241-4174 919-380-9699 PAGEOF										HAMD Deliver				
MIPPLETOLA PA 1705		•															
ATTON: MILLE IANN	ICUL																
											PROJECT ID #: 94	YYY					
CLIENT: REWAL			E	Ŧ			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	4 Pro					REPORT DUE:				
PHONE: 717-944-5 PROJ #: 94444	<u>>01</u> P0#:		HAT SIOB	17	Voci	65	P(E	n me	BIEX + MTBE	3070			VERBAL FAX C	OPY HARD COPY			
SAMPLER: ERIC L C			50/8	180	ž	5	Per	8 200	Btex +	LEAD							
FIELD ID SAMPLE MATRIX	DATE COLLECTE	1 M	5030/BOIL TPH	8260	UZZO SUNS	2080 Pert / P(BS	TCLP & RCPA Metau	1205	TOTAL LEAD			R	EMARKS				
BB-46 SUIL (OMD SUL	COLLECTED 31900	8-9-94	X	X		X	×	X									
DB-YG WATER (UND WATER	0910	8-9-94							X	X							
				+		+-						+					
				+			+				-	1					
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RELINQUISHED BY:		DATE								ED B			DATE / TIME:				
RELINQ' "D BY:		DATE / TIME:				RECEIVED BY: DATE / TI				DATE / TIME:							

REPORT TO:

For WATHER MYSON IM

3140 SCHOULANDS HURP

MIANLINGN, JA 11057

MILLIN MIKE IMMILLION

CHAIN OF CUSTODY

PO#

Method of Shipment

HydroLogic, Inc. 2500 Gateway Centre Blvd., Suite 900 Morrisville, NC 27560 800-241-4174 919-380-9699

PAGE _____ OF ___

CLIENT: Remov							ļ	١NA	LYS	SES			PROJECT ID #: 74444			
PHONE: 1.1	144 5501			Τ		ŝ							REPORT DUE:			
PROJ #: 941	444	PO #:		-] ु	TCX	9.7 / JUNIU							VERBAL FAX	COPY (HARD CO	PY	
SAMPLER:	OLC L EMOLE			(voc)	2 (8	1/2.1										
FIELD ID	SAMPLE MATRIX	TIME COLLECTED	DATE COLLECTE	- 09 - 09	501	239								REMARKS		
P.B.YL. MW 1	WATER	0830	Ralay	X		1										
PB-46- Mw.2	LAICE	0840	8/1/94	X	X	λ										
BB-41 mw-3	WATCH	0900	8/9/94	X	у	X										
BB.46-WATCA	WATEr	0930	8/9/94		λ	X										
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					TIME			+		REC	EIVE	D BY:		DATE / TIME:		
RELINQ' 'ED BY: DA					TIME	:				RE	ŒIVE	D BY:	 	DATE / TIME:		
										BE	CEIVE	D BY:		DATE / TIME	1	

REPORT TO:

R.E. Wright Associates Tur. 3,240 Schoolhouse Kind

Middletown DA 17057 ATTUR: Mike IANINGCOUL

CHAIN OF CUSTODY

HydroLogic, Inc. 2500 Gateway Centre Blvd., Suite 900 Morrisville, NC 27560 800-241-4174 919-380-9699

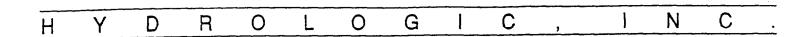
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PO #

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PROJ #: 94	444	PO #:		C ASCUS										VERBAL FAX	AX COPY (HARD COPY)		Ŷ
SAMPLER:	John Ro	W		1													
FIELD ID	SAMPLE MATRIX	TIME COLLECTED	DATE COLLECTE	ED S											REMARKS		
130-46 MNLI	Seit	1620	8/3/91	X													
BB-46 Meg	5,16	515	0/3/91	K													
BB-46 3	Goil	0620	4/4/91	iX													
BB-116 501	501	1000	5/4/44	' X													
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DISPATCI, LIJ, BY:				DATE /	ATE / TIME:					RE	CEIVI	ED B	/:	DATE / TIME			



August 17, 1994

REPORTING:

1

INVOICING:

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

Attention: Pomeroy Smith

PROJECT NUMBER: FL94-10294

DATE COMPLETED: August 17, 1994 DATE RECEIVED: August 6, 1994

PROJECT DESCRIPTION:

#94444--4 soil samples for 8015-5030, sampled on 08/03 and 08/04/94.

Enclosed is the laboratory report for the project described above. If you have any questions or if we can be of further assistance, please feel free to contact Jamie Fore. We appreciate your business and look forward to serving you again soon.

Respectfully,

.....

Benjamin Carl Esterle

Laboratory Director

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COMPANY NAME: COMPANY PROJECT NUMBER:	HydroLogic-Morris #94444	s., Inc.	
HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: HYDROLOGIC LAB I.D.#: SAMPLE IDENTIFICATION: DATE SAMPLED: DATE EXTRACTED: DATE/TIME ANALYZED:	FL94-10294 10294 399 BB-46 MW 1 8/3/94 N/A 8/17/94		
	METHOD TPH 80	15/5030	
ANALYSIS	CAS NO.	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)
Gasoline		2.0	BDL

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:

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BDL

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COMPANY NAME: COMPANY PROJECT NUMBER:	HydroLogic-Morri: #94444	s., Inc.	
HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: HYDROLOGIC LAB I.D.#: SAMPLE IDENTIFICATION: DATE SAMPLED: DATE EXTRACTED: DATE/TIME ANALYZED:	FL94-10294 10295 399 BB-46 MW 2 8/3/94 N/A 8/17/94		
	METHOD TPH 80	15/5030	
ANALYSIS	CAS NO.	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)

Gasoline

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BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS: HEAVIER FUEL PRESENT.

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COMPANY NAME:	HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER:	#94444
HYDROLOGIC PROJECT NUMBER:	FL94-10294
HYDROLOGIC SAMPLE NUMBER:	10296
HYDROLOGIC LAB I.D.#:	399
SAMPLE IDENTIFICATION:	BB-46 MW 3
DATE SAMPLED:	8/4/94
DATE EXTRACTED:	N/A
DATE /TIME ANALYZED:	8/17/94
	METHOD TPH 8015/5030

ANALYSIS	CAS NO.	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)
Gasoline		0.1	BDL

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:

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BDL

COMPANY NAME: COMPANY PROJECT NUMBER:	HydroLogic—Morri: #94444	s., Inc.	
HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: HYDROLOGIC LAB I.D.#: SAMPLE IDENTIFICATION: DATE SAMPLED: DATE EXTRACTED: DATE/TIME ANALYZED:	FL94-10294 10297 399 BB-46 Soil Dup. 8/4/94 N/A 8/17/94		
	METHOD TPH 80	15/5030	
ANALYSIS	CAS NO.	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)

Gasoline

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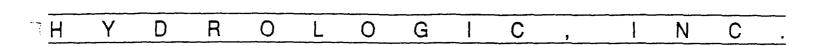
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BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:

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CLIENT: DF	Ewalt	Associates I	Tur				AN	IALYS	ES		PROJECT 1	D#: 4	14444]
	17 - 944		<u>E[[[:</u>	as							REPORT DU			
PROJ #: 94	and the second	PO #:		L Jeds							VERBAL	FAX	COPY (HARD O	DPY
	John Ru	H		30/hic/: (red 8015										
FIELD ID	SAMPLE MATRIX	TIME COLLECTED	DATE COLLECT	EDS									REMARKS	
30-46 MWI	Scil	1620	8/3/44	X										
BB-46 MW2	Soil	1715	8/3/94	X								·		
BB-46 3	f Soil	0930	13/4/9	4 X									M7	
BB-46 50il	Soil	1000	8/4/4	4 X					 				10	
											<u> </u>			
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August 18, 1994

REPORTING:

INVOICING:

Suite #900

HydroLogic-Morris., Inc.

Morrisville, NC 27560

2500 Gateway Centre

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

Attention: Pomeroy Smith

PROJECT NUMBER: FL94-10466

DATE COMPLETED: August 18, 1994 DATE RECEIVED: August 11, 1994

PROJECT DESCRIPTION:

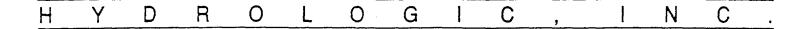
#94444--4 water samples for 601/602-BIEX, sampled on 08/09/94.

Enclosed is the laboratory report for the project described above. If you have any questions or if we can be of further assistance, please feel free to contact Jamie Fore. We appreciate your business and look forward to serving you again soon.

Respectfully,

nin Benjamin Carl Esterle

Laboratory Director



COMPANY NAME: COMPANY PROJECT NUMBER:	HydroLogic-Morr #94444	is., Inc.	
HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: HYDROLOGIC LAB I.D.#: SAMPLE IDENTIFICATION: DATE SAMPLED: DATE EXTRACTED: DATE/TIME ANALYZED:	FL94-10466 10466 399 BB46 MW-1 8/9/94 N/A 8/17/94		
	METHOD EF	A 601	
ANALYSIS	CAS NO.	<u>SDL</u> (ug/l)	<u>RESULT</u> (ug/l)
Bromodichloromethane Bromoform Bromomethane Carbon Tetrachloride Chlorobenzene	75-27-4 75-25-2 74-83-9 56-23-5 108-90-7	1.0 1.0 1.0 1.0	BDL BDL BDL BDL BDL
Chloroethane 2-Chloro Ethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane	75-00-3 110-75-8 - 67-66-3 74-87-3 124-48-1	1.0 1.0 1.0 1.0	BDL BDL BDL BDL BDL
1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorofluoromethane 1,1-Dichloroethane	95-50-1 541-73-1 106-46-7 75-43-4 75-34-3	1.0 1.0 1.0 1.0	BDL BDL BDL BDL BDL
1,2-Dichloroethane 1,1-Dichloroethene trans-1,2-Dichloroethene 1,2-Dichloropropane cis-1,3-Dichloropropene	107-06-2 75-35-4 156-60-5 78-87-5 10061-01-5	1.0 1.0 1.0 1.0 1.0	BDL BDL BDL BDL BDL
trans-1,3-Dichloropropene Methylene Chloride 1,1,2,2-Tetrachloroethane Tetrachloroethene 1,1,1-Trichloroethane	10061-02-6 75-09-2 79-34-5 127-18-4 71-55-6	1.0 1.0 1.0 1.0 1.0	BDL BDL BDL 30.0 BDL

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1491 Twilight Trail 🗆 Frankfort, KY 40601 🗆 502/223-0251 🗆 FAX 502/875-8016 🗆 Toll Free 1-800/728-2251

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	Page	2 cont	inued											
	COMPAN COMPAN	y Name: Y Projec	CT NUMB	ER:		lroLogic 1444	-Morri	is., I	nc.					
	HYDROLI SAMPLE	OGIC PRO OGIC SAN IDENTII AMPLED:	MPLE NU	MBER:	104 BB4	94-10466 166 16 MW-1 9/94	5							
ì	_						HOD EP	A 601						
	<u>ANALYS</u>	IS			<u>C</u>	<u>as no.</u>			<u>DL</u> ug/l)	<u>RESULT</u> (ug/l				
فيت المراجع	Trichle Trichle Vinyl	Irichlo: oroethe orofluo: Chloride 2-Dichlo	ne rometha e	ne	79 75 75	9-00-5 9-01-6 5-69-4 5-01-4 41-59-4		1 1 1	.0 - .0 .0 .0	BDL BDL BDL BDL BDL		Ţ		
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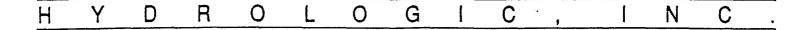
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BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:



COMPANY NAME:	HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER:	#94444
HYDROLOGIC PROJECT NUMBER:	FL94-10466
HYDROLOGIC SAMPLE NUMBER:	10466
HYDROLOGIC LAB I.D.#:	399
SAMPLE IDENTIFICATION:	BB46 MW-1
DATE SAMPLED:	8/9/94
DATE EXTRACTED:	N/A
DATE/TIME ANALYZED:	8/17/94
	METHOD EPA 602

ANALYSIS	CAS NO.	<u>SDL</u> (ug/l)	<u>RESULT</u> (ug/l)
Benzene Toluene Ethylbenzene	71-43-2 108-88-3 100-41-4	1.0 1.0 1.0	BDL BDL BDL
Xylene	1330-20-7	1.0	BDL

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:

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COMPANY NAME: COMPANY PROJECT NUMBER:	HydroLogic-Morr #94444	is., Inc.	
HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: HYDROLOGIC LAB I.D.#: SAMPLE IDENTIFICATION: DATE SAMPLED: DATE EXTRACTED: DATE/TIME ANALYZED:	FL94-10466 10467 399 BB46 MW-2 8/9/94 N/A 8/17/94		
	METHOD EF	PA 601	
ANALYSIS	CAS NO.	<u>SDL</u> (ug/l)	<u>RESULT</u> (ug/l)
Bromodichloromethane Bromoform Bromomethane Carbon Tetrachloride Chlorobenzene	75-27-4 75-25-2 74-83-9 56-23-5 108-90-7	1.0 1.0 1.0 1.0	BDL BDL BDL BDL BDL
Chloroethane 2-Chloro Ethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane	75-00-3 110-75-8 67-66-3 74-87-3 124-48-1	1.0 1.0 1.0 1.0	BDL BDL BDL BDL BDL
1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorofluoromethane 1,1-Dichloroethane	95-50-1 541-73-1 106-46-7 75-43-4 75-34-3	1.0 1.0 1.0 1.0	BDL BDL BDL BDL BDL
1,2-Dichloroethane 1,1-Dichloroethene trans-1,2-Dichloroethene 1,2-Dichloropropane cis-1,3-Dichloropropene	107-06-2 75-35-4 156-60-5 78-87-5 10061-01-5	1.0 1.0 1.0 1.0	BDL BDL BDL BDL BDL
trans-1,3-Dichloropropene Methylene Chloride 1,1,2,2-Tetrachloroethane Tetrachloroethene	10061-02-6 75-09-2 79-34-5 127-18-4	1.0 1.0 1.0 1.0	BDL BDL BDL 16.0

1,1,1-Trichloroethane

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71-55-6

BDL

1.0

HYDROLOGIC, INC.

Page 2 continued

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COMPANY NAME:	HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER:	#94444
HYDROLOGIC PROJECT NUMBER:	FL94-10466
HYDROLOGIC SAMPLE NUMBER:	10467
SAMPLE IDENTIFICATION:	BB46 MW-2
DATE SAMPLED:	8/9/94

METHOD EPA 601

90%

ANALYSIS	CAS NO.	<u>SDL</u> (ug/l)	<u>RESULT</u> (ug/l)
1,1,2-Trichloroethane Trichloroethene	79-00-5 79-01-6	1.0 1.0	BDL BDL
Trichlorofluoromethane	75-69-4	1.0	BDL
Vinyl Chloride cis-1,2-Dichloroethylene	75-01-4 541-59-4	1.0 1.0	BDL BDL
SURROGATE RECOVERY:			

BFB

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:



COMPANY NAME: COMPANY PROJECT NUMBER:	HydroLogic-Mor #94444	ris., Inc.	
HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: HYDROLOGIC LAB I.D.#: SAMPLE IDENTIFICATION: DATE SAMPLED: DATE EXTRACTED: DATE /TIME ANALYZED:	FL94-10466 10467 399 BB46 MW-2 8/9/94 N/A 8/17/94		
	METHOD E	PA 602	
ANALYSIS	CAS NO.	<u>SDL</u> (ug/l)	<u>RESULT</u> (ug/l)
Deveen	71 42 2	1 0	זממ

Benzene	71-43-2	1.0	BDL
Toluene	108-88-3	1.0	BDL
Ethylbenzene	100-41-4	1.0	BDL
Xylene	1330-20-7	1.0	BDL

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:

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-	/droLogic-Morris., Inc. 1444
HYDROLOGIC SAMPLE NUMBER:10HYDROLOGIC LAB I.D.#:39SAMPLE IDENTIFICATION:BEDATE SAMPLED:8/DATE EXTRACTED:N/	346 MW-3 /9/94

METHOD EPA 601

ANALYSIS	<u>Cas no.</u>	<u>SDL</u> (ug/l)	<u>RESULT</u> (ug/l)
Bromodichloromethane	75-27-4	1.0	BDL
Bromoform	75-25-2	1.0	BDL
Bromomethane	74-83-9	1.0	BDL
Carbon Tetrachloride	56-23-5	1.0	BDL
Chlorobenzene	108-90-7	1.0	BDL
Chlorœthane 2-Chloro Ethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane	75-00-3 110-75-8 67-66-3 74-87-3 124-48-1	1.0 1.0 1.0 1.0	BDL BDL BDL BDL BDL
1,2-Dichlorobenzene	95-50-1	1.0	BDL
1,3-Dichlorobenzene	541-73-1	1.0	BDL
1,4-Dichlorobenzene	106-46-7	1.0	BDL
Dichlorofluoromethane	75-43-4	1.0	BDL
1,1-Dichloroethane	75-34-3	1.0	BDL
1,2-Dichloroethane	107-06-2	1.0	BDL
1,1-Dichloroethene	75-35-4	1.0	BDL
trans-1,2-Dichloroethene	156-60-5	1.0	BDL
1,2-Dichloropropane	78-87-5	1.0	BDL
cis-1,3-Dichloropropene	10061-01-5	1.0	BDL
trans-1,3-Dichloropropene Methylene Chloride 1,1,2,2-Tetrachloroethane Tetrachloroethene 1,1,1-Trichloroethane	10061-02-6 75-09-2 79-34-5 127-18-4 71-55-6	1.0 1.0 1.0 1.0	BDL BDL 27.0 BDL

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HYDROLOGIC, INC.															
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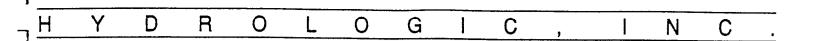
Page 2 continued

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COMPANY NAME: COMPANY PROJECT NUMBER:	HydroLogic-Mori #94444	cis., Inc.	
HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: SAMPLE IDENTIFICATION: DATE SAMPLED:	FL94-10466 10468 BB46 MW-3 8/9/94		
	METHOD E	PA 601	
ANALYSIS	CAS NO.	<u>SDL</u> (ug/l)	<u>RESULT</u> (ug/l)
1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane Vinyl Chloride cis-1,2-Dichloroethylene	79-00-5 79-01-6 75-69-4 75-01-4 541-59-4	1.0 1.0 1.0 1.0 1.0	BDL BDL BDL BDL BDL
SURROGATE RECOVERY: BFB			87%

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:



COMPANY NAME: COMPANY PROJECT NUMBER:	HydroLogic—Morri: #94444	s., Inc.
HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: HYDROLOGIC LAB I.D.#: SAMPLE IDENTIFICATION: DATE SAMPLED: DATE EXTRACTED: DATE/TIME ANALYZED:	FL94-10466 10468 399 BB46 MW-3 8/9/94 N/A 8/17/94	
	METHOD EPA	602
ANTAT VOTO	CAC NO	ODT

ANALYSIS	<u>CAS NO.</u>	<u>SDL</u> (ug/l)	<u>RESULT</u> (ug/l)
Benzene	71-43-2	1.0	BDL
Toluene	108-88-3	1.0	BDL
Ethylbenzene	100-41-4	1.0	BDL
Xylene	1330-20-7	1.0	BDL

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:

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RESULT (ug/l)

> BDL BDL BDL BDL BDL

BDL BDL BDL BDL BDL

BDL BDL BDL BDL

COMPANY NAME: COMPANY PROJECT NUMBER: HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: HYDROLOGIC LAB I.D.#: SAMPLE IDENTIFICATION: DATE SAMPLED:	HydroLogic-Morr #94444 FL94-10466 10469 399 BB46 Water Dup. 8/9/94	ris., Inc.
DATE EXTRACTED: DATE/TIME ANALYZED:	N/A 8/17/94	
	METHOD EF	PA 601
ANALYSIS	<u>CAS NO.</u>	<u>SDL</u> (ug/l)
Bromodichloromethane Bromoform Bromomethane Carbon Tetrachloride Chlorobenzene	75-27-4 75-25-2 74-83-9 56-23-5 108-90-7	1.0 1.0 1.0 1.0 1.0
Chloroethane 2-Chloro Ethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane	75-00-3 110-75-8 67-66-3 74-87-3 124-48-1	1.0 1.0 1.0 1.0 1.0
1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorofluoromethane 1,1-Dichloroethane	95-50-1 541-73-1 106-46-7 75-43-4 75-34-3	1.0 1.0 1.0 1.0

BDL 107-06-2 1.0 BDL 1,2-Dichloroethane BDL 75-35-4 1.0 1,1-Dichloroethene 156-60-5 1.0 BDL trans-1,2-Dichloroethene 1,2-Dichloropropane . 78-87-5 1.0 BDL cis-1,3-Dichloropropene 10061-01-5 1.0 BDL BDL trans-1, 3-Dichloropropene 10061-02-6 1.0 BDL 75-09-2 1.0 Methylene Chloride BDL 1,1,2,2-Tetrachloroethane 79-34-5 1.0 25.0 Tetrachloroethene 127-18-4 1.0 BDL 1,1,1-Trichloroethane 71-55-6 1.0

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COMPANY NAME:	HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER:	#94444
HYDROLOGIC PROJECT NUMBER:	FL94-10466
HYDROLOGIC SAMPLE NUMBER:	10469
SAMPLE IDENTIFICATION:	BB46 Water Dup.
DATE SAMPLED:	8/9/94

METHOD EPA 601

ANALYSIS	CAS NO.	<u>SDL</u> (ug/l)	<u>RESULT</u> (ug/l)
1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane Vinyl Chloride cis-1,2-Dichloroethylene	79-00-5 79-01-6 75-69-4 75-01-4 541-59-4	1.0 1.0 1.0 1.0	BDL BDL BDL BDL BDL

SURROGATE RECOVERY: BFB

87%

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:



COMPANY NAME:	HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER:	#94444
HYDROLOGIC PROJECT NUMBER:	FL94-10466
HYDROLOGIC SAMPLE NUMBER:	10469
HYDROLOGIC LAB I.D.#:	399
SAMPLE IDENTIFICATION:	BB46 Water Dup.
DATE SAMPLED:	8/9/94
DATE EXTRACTED:	N/A
DATE/TIME ANALYZED:	8/17/94
UALE/IING ANALIZED:	0/1//94 METHOD EPA 602

<u>ANALYSIS</u>	CAS NO.	<u>SDL</u> (ug/l)	<u>RESULT</u> (ug/l)
Benzene	71-43-2	1.0	BDL
Toluene	108-88-3	1.0	BDL
Ethylbenzene	100-41-4	1.0	BDL
Xylene	1330-20-7	1.0	BDL

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

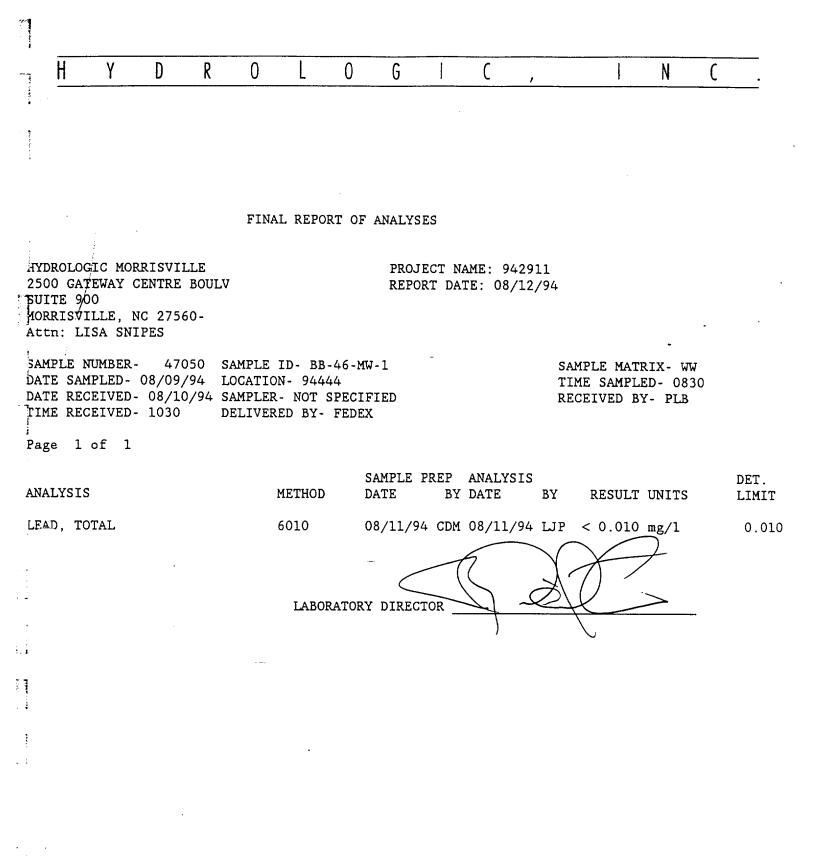
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Contact Na Date Shipp	stor: <u>HUI-KY</u> ime: <u>BEN</u> bed: <u>8-15-94</u>	· · ·	Proj Name , <u>Ré</u> Proj Cont	/No: <u><u></u> </u>	1291 T			Re	aport	t To	: <u>1.1y(</u> 25(10101 10 (30 10 (31) 10 (31)			Fax No	101 1/9-31 1_9/1	 . 7
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Atten Mike	IAMAJUUI				Þ,		919-3 				1		ļ	42 4		
CLIENT: اكتب	^1						A	NA	LYS	ES			PRO	JECT ID #: 944	144 -	
PHONE: ANT	949-5501					(av;							REP	ORT DUE:		
PROJ #: 444	144	PO #:	•	(sig)	602 (BTEX)	עשירוקשי (VER	BAL FAX (COPY (HARD	COPY
SAMPLER: CI	ILL. ENGLE			\square	<u>(1)</u> <u></u>	9.2 (
FIELQ ID	SAMPLE MATRIX	TIME COLLECTED	DATE COLLECT	ED 09	60	239.								R	EMARKS	
BB 46- MW 1	WATEr	0830	<i>9/4/94</i>	X	X	λ										
PB-46-MW-2	LATU	0840	8/1/94	X	X	X										
BB-46 MW-3	MATCI	0900	8/9/94	1	X	X										
BB 4L-WATER	WASer	0930	8/9/90	/ X	λ	X		-								
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		FINAL REPORT	OF ANALYSI	ES				
DROLOGIC MORR 00 GATEWAY CE ITE 900 RRISVILLE, NC tn: LISA SNIP	NTRE BOULV			ECT NAME: 942 RT DATE: 08/1			-	
TE SAMPLED- 0	8/09/94 LO 08/10/94 SA	MPLE ID- BB-46 CATION- 94444 MPLER- NOT SPI LIVERED BY- FI	ECIFIED		TI	MPLE MATR ME SAMPLE CEIVED BY	D- 084	
ge 1 of 1								
		METHOD	SAMPLE 1 DATE	PREP ANALYSI BY DATE	S BY	RESULT	UNITS	DET LIM
ALYSIS		6010	08/11/94	4 CDM 08/11/9	4 LJP	< 0.010	mg/l	0.
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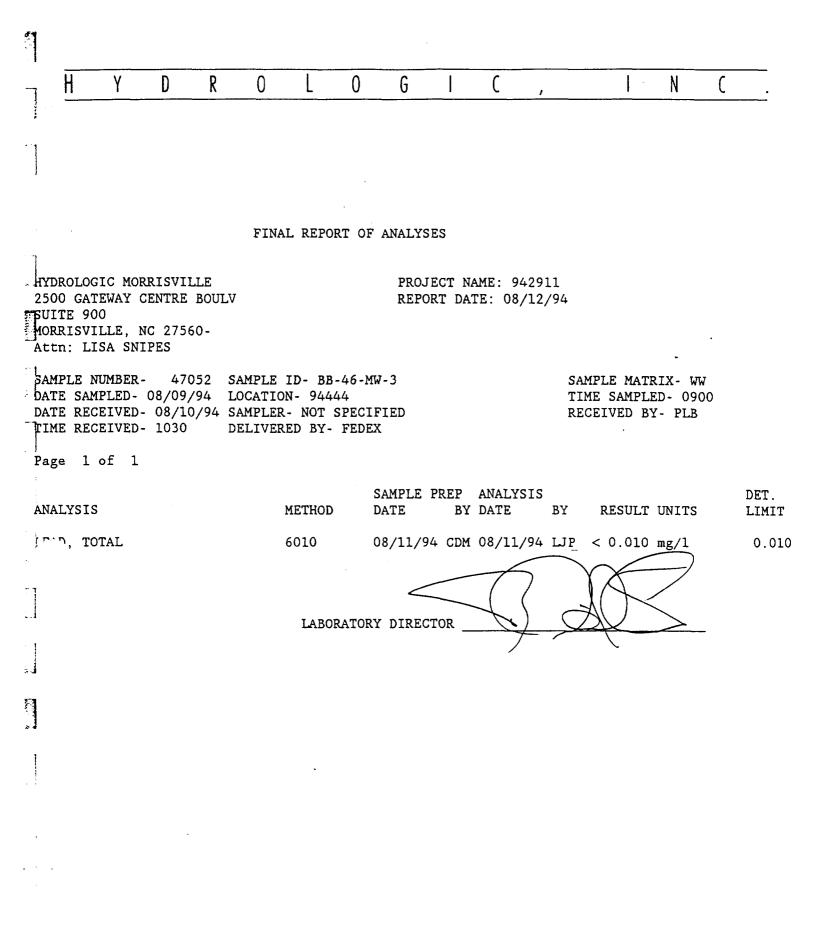
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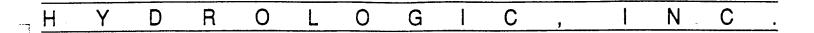
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γ D R G Η (N 0 L 0 ł (, FINAL REPORT OF ANALYSES HYDROLOGIC MORRISVILLE PROJECT NAME: 942911 2500 GATEWAY CENTRE BOULV **REPORT DATE: 08/12/94** FSUITE 900 MORRISVILLE, NC 27560-Attn: LISA SNIPES SAMPLE NUMBER-47053 SAMPLE ID- BB-46-MW-DUP SAMPLE MATRIX- WW DATE SAMPLED- 08/09/94 LOCATION- 94444 TIME SAMPLED- 0930 DATE RECEIVED- 08/10/94 SAMPLER- NOT SPECIFIED RECEIVED BY- PLB TIME RECEIVED- 1030 DELIVERED BY- FEDEX Page 1 of 1 SAMPLE PREP ANALYSIS DET. ANALYSIS METHOD DATE BY DATE BY RESULT UNITS LIMIT LEAD, TOTAL 6010 08/11/94 CDM 08/11/94 LJP < 0.010 mg/1 0.010 LABORATORY DIRECTOR : ;

Contact [‡] Na Data Shipp	ed: 8-9-94		Proj Name <u>RC</u> Proj Cont	eot /No: <u>90</u> wr.c eot act/Pho 444	1291 HT	1		Reporting Information: Report To: IlydroLunic, Inc. 2500 Galgway Contra Blvd. Sulla 900 Invoice To: HydroLonic, Inc. Invoice To: HydroLonic, Inc. HydroLonic, Inc. Sulla 900 Invoice To: HydroLonic, Inc. Sulla 900 Contra Blvd. Sulla 900 Monlavilla, NC 27560							Verbal [] Phone No: Fax E 919-30- Fax No: 9177 Typed Copy [] Date:		
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83-46-MW-1 BB-46-MW-2 BB-46 MW-2 BB-46 MW-3 BB-46 MW-3 BB-46 MW-3			7 (1)		0830	2 7								3030<			
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					F	AGE			0	-	<u> </u>				
CLIENT: REW	^\						A	NA	LYS	SES			Р	ROJECT ID #: 94444	
PHONE: 717	944-5501					(av)							R	EPORT DUE:	
PROJ #: ԳԿԿ	144	PO #:			602 (BTEX)	239.2 (TOMILLAD)							V	TERBAL FAX COPY (HARD	COPY
SAMPLER: EI	RIC L. ENGLE		•		2 (BTE	7.2									
FIELD ID	SAMPLE MATRIX	TIME COLLECTED	DATE COLLECT	ED S	209	234								REMARKS	
BB-46- MW-1	WATEr	0830	<i>4/4/44</i>		x x	X									
BB-46-MW-2	LATUR	0840	3/1/94	/	(x	X							l	600-656	
BB-46- MW-3	WATEr	0900	8/9/94		(x	X								001,602·KJ	
BB-4L-WATER DUP	WATEr	0930	8/9/90	4	λ	X								•	
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August 23, 1994

REPORTING:

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

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

Attention: Pomeroy Smith

PROJECT NUMBER: FL94-10496

DATE COMPLETED: August 23, 1994 DATE RECEIVED: August 11, 1994

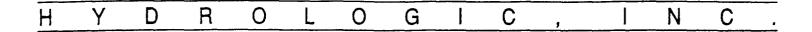
PROJECT DESCRIPTION:

#94444--1 soil sample for 8015-3550/8015-5030/8260/8270/8080 and 1 water sample for 602-BTEX + MTBE, sampled on 08/09/94.

Enclosed is the laboratory report for the project described above. If you have any questions or if we can be of further assistance, please feel free to contact Jamie Fore. We appreciate your business and look forward to serving you again soon.

Respectfully,

Behjamin Carl Esterle / / Laboratory Director



COMPANY NAME:	HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER:	#94444
HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: HYDROLOGIC LAB I.D.#: SAMPLE IDENTIFICATION: DATE SAMPLED: DATE EXTRACTED: DATE /TIME ANALYZED:	FL94-10496 10496 399 BB-46 Soil Comp 8/9/94 8/17/94 8/19/94 METHOD TPH 8015/3550

ANALYSIS	<u>CAS_NO.</u>	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)
Diesel		1.2	11.5

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

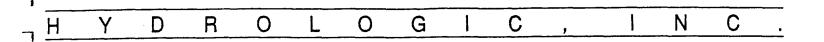
COMMENTS:

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COMPANY NAME:	HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER:	#94444
HYDROLOGIC PROJECT NUMBER:	FL94-10496
HYDROLOGIC SAMPLE NUMBER:	10496
HYDROLOGIC LAB I.D.#:	399
SAMPLE IDENTIFICATION:	BB-46 Soil Comp
DATE SAMPLED:	8/9/94
DATE EXTRACTED:	N/A
DATE/TIME ANALYZED:	8/16/94
	METHOD TPH 8015/5030

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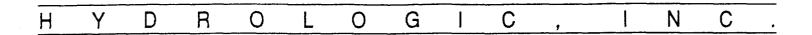
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ANALYSIS	CAS NO.	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)
Gasoline		2.0	BDL

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS: GASOLINE: HEAVIER FUEL PRESENT.



COMPANY NAME:	HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER:	#94444
HYDROLOGIC PROJECT NUMBER:	FL94-10496
HYDROLOGIC SAMPLE NUMBER:	10496
HYDROLOGIC LAB I.D.#:	399
SAMPLE IDENTIFICATION:	BB-46 Soil Comp
DATE SAMPLED:	8/9/94
DATE EXTRACTED:	N/A
DATE/TIME ANALYZED:	8/11/94

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METHOD EPA 8260

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ANALYSIS	CAS NO.	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)
Dichlorodifluoromethane	75-71-8	0.005	BDL
Chloromethane	74-87-3	0.005	BDL
Vinyl Chloride	75-01-4	0.005	BDL
Bromomethane	74-83-9	0.005	BDL
Chloroethane	75-00-3	0.005	BDL
Trichlorofluoromethane	75-69-4	0.005	BDL
1,1-Dichloroethene	75-35-4	0.005	BDL
Methylene Chloride	75-09-2	0.005	BDL
trans-1,2-Dichloroethene	156-60-5	0.005	BDL
1,1-Dichloroethane	75-34-3	0.001	BDL
2,2-Dichloropropane	590-20-7	0.005	BDL
cis-1,2-Dichloroethene	156-59-4	0.005	BDL
Chloroform	67-66-3	0.005	BDL
Bromochloromethane	74-97-5	0.01	BDL
1,1,1-Trichloroethane	71-55-6	0.005	BDL
Carbon Tetrachloride	56-23-5	0.001	BDL
1,1-Dichloropropene	563-58-6	0.001	BDL
Benzene	71-43-2	0.001	BDL
1,2-Dichloroethane	107-06-2	0.001	BDL
Trichloroethene	79-01-6	0.001	BDL
1,2-Dichloropropane	78-87-5	0.001	BDL
Bromodichloromethane	75-27-4	0.001	BDL
Dibromomethane	74-95-3	0.001	BDL
cis-1,3-Dichloropropene	10061-01-5	0.002	BDL
Toluene	108-88-3	0.001	BDL



Page 2 continued

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COMPANY NAME:	HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER:	#94444
HYDROLOGIC PROJECT NUMBER:	FL94-10496

10496

8/9/94

BB-46 Soil Comp

HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: SAMPLE IDENTIFICATION: DATE SAMPLED:

METHOD EPA 8260

ANALYSIS	CAS NO.	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)
trans-1,3-Dichloropropene	10061-02-6	0.001	BDL
1,1,2-Trichloroethane	79-00-5	0.001	BDL
Tetrachloroethene	127-18-4	0.001	BDL
1,3-Dichloropropane	142-28-9	0.001	BDL
Dibromochloromethane	124-48-1	0.001	BDL
1,2-Dibromoethane Chlorobenzene 1,1,1,2-Tetrachloroethane Ethylbenzene (m+p)-Xylene	106-93-4 108-90-7 630-20-6 100-41-4	0.001 0.001 0.001 0.001 0.002	BDL BDL BDL BDL BDL
o-Xylene	95-47-6	0.001	BDL
Styrene	100-42-5	0.001	BDL
Bromoform	75-25-2	0.001	BDL
Isopropylbenzene	98-82-8	0.001	BDL
1,1,2,2-Tetrachloroethane	79-34-5	0.001	BDL
Bromobenzene	108-86-1	0.001	BDL
1,2,3-Trichloropropane	96-18-4	0.001	BDL
n-Propylbenzene	103-65-1	0.001	BDL
2-Chlorotoluene	95-45-8	0.001	BDL
1,3,5-Trimethylbenzene	108-67-8	0.001	BDL
4-Chlorotoluene	. 106-43-4	0.001	BDL
t-Butylbenzene	98-06-6	0.001	BDL
1,2,4-Trimethylbenzene	95-63-6	0.001	BDL
sec-Butylbenzene	135-98-8	0.001	BDL

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COMPANY NAME:	HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER:	#94444
HYDROLOGIC PROJECT NUMBER:	FL94-10496
HYDROLOGIC SAMPLE NUMBER:	10496
SAMPLE IDENTIFICATION:	BB-46 Soil Comp
DATE SAMPLED:	8/9/94

METHOD EPA 8260

ANALYSIS	CAS NO.	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)
p-Isopropyltoluene	99-87-6	0.001	BDL
1,3-Dichlorobenzene	541-73-1	0.005	BDL
1,4-Dichlorobenzene	106-46-7	0.005	BDL
n-Butylbenzene	104-51-8	0.001	BDL
1,2-Dichlorobenzene	95-50-1	0.005	BDL
1,2-Dibromo-3-Chloropropane	96-12-8	0.01	BDL
1,2,4-Trichlorobenzene	120-82-1	0.005	BDL
Hexachlorobutadiene	87-68-3	0.005	BDL
Naphthalene	91-20-3	0.01	BDL
1,2,3-Trichlorobenzene	87-61-6	0.005	BDL

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:



COMPANY NAME:	HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER:	#94444
HYDROLOGIC PROJECT NUMBER:	FL94-10496
HYDROLOGIC SAMPLE NUMBER:	10496
HYDROLOGIC LAB I.D.#:	399
SAMPLE IDENTIFICATION:	BB-46 Soil Comp
DATE SAMPLED:	8/9/94
DATE EXTRACTED:	8/17/94
DATE/TIME ANALYZED:	8/17/94

METHOD SW 846 8270

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ANALYSIS	CAS NO.	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)
Acenaphthene	83-32-9	0.6	BDL
Acenaphthylene	208-96-8	0.6	BDL
Aniline	62-53-3	0.6	BDL
Anthracene	120-12-7	0.6	BDL
Benzidine	92-87-5	0.6	BDL
Benzoic Acid	65-85-0	3.3	BDL
Benzo(a)Anthracene	56-55-3	0.6	BDL
Benzo(b)Fluoranthene	205-99-2	0.6	BDL
Benzo(k)Fluoranthene	207-08-9	0.6	BDL
Benzo(g,h,i)Perylene	191-24-2	0.6	BDL
Benzo(a)Pyrene	50-32-8	0.6	BDL
Benzyl Alcohol	100-51-6	1.3	BDL
Bis(2-Chloroethoxy)Methane	111-91-1	0.6	BDL
Bis(2-Chloroethyl)Ether	111-44-4	0.6	BDL
Bis(2-Chloroisopropyl)Ether	39638-32-9	0.6	BDL
Bis(2-Ethylhexyl)Phthalate 4-Bromophenyl Phenyl Ether Butyl Benzyl Phthalate 4-Chloroaniline 1-Chloronaphthalene	117-81-7 101-55-3 85-68-7 106-47-8	0.6 0.6 1.3 0.6	BDL BDL BDL BDL BDL
2-Chloronaphthalene	91-58-7	0.6	BDL
4-Chloro-3-Methyl Phenol	59-50-7	1.3	BDL
2-Chlorophenol	95-57-8	0.6	BDL
4-Chlorophenyl Phenyl Ether	7005-72-3	0.6	BDL
Chrysene	218-01-9	0.6	BDL

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COMPANY NAME:	HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER:	#94444

HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: SAMPLE IDENTIFICATION: DATE SAMPLED: FL94-10496 10496 BB-46 Soil Comp 8/9/94

METHOD SW 846 8270

ANALYSIS	CAS NO.	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)
Dibenz(a,h)Anthracene	53-70-3	0.6	BDL
Dibenzofuran	132-64-9	0.6	BDL
Di-N-Butylphthalate	≈ 84−74−2	0.6	BDL
1,3-Dichlorobenzene	541-73-1	0.6	BDL
1,4-Dichlorobenzene	106-46-7	0.6	BDL
1,2-Dichlorobenzene	95-50-1	0.6	BDL
3,3'-Dichlorobenzidine	91-94-1	1.3	BDL
2,4-Dichlorophenol	120-83-2	0.6	BDL
2,6-Dichlorophenol	87-65-0	0.6	BDL
Diethylphthalate	84-66-2	0.6	BDL
A,A-Dimethylphenethylamine	122-09-8	0.6	BDL
2,4-Dimethylphenol	105-67-9	0.6	BDL
Dimethylphthalate	131-11-3	0.6	BDL
4,6-Dinitro-2-Methylphenol	534-52-1	3.3	BDL
2,4-Dinitrophenol	51-28-5	5.3	BDL
2,4-Dinitrotoluene	121-14-2	0.6	BDL
2,6-Dinitrotõluene	606-20-2	0.6	BDL
Diphenylamine	122-39-4	0.6	BDL
Di-N-Octylphthalate	117-84-0	0.6	BDL
Fluoranthene	206-44-0	0.6	BDL
Fluorene	· 86–73–7	0.6	BDL
Hexachlorobenzene	118-74-1	0.6	BDL
Hexachlorobutadiene	87-68-3	0.6	BDL
Hexachlorocyclopentadiene	77-47-4	0.6	BDL

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COMPANY NAME:	HydroLogic-Morris.,	Inc.
COMPANY PROJECT NUMBER:	# 94444	

FL94-10496 10496

8/9/94

BB-46 Soil Comp

HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: SAMPLE IDENTIFICATION: DATE SAMPLED:

METHOD SW 846 8270

ANALYSIS	CAS NO.	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)
Hexachloroethane	67-72-1	0.6	BDL
Indeno(1,2,3-cd)Pyrene	193-39-5	0.6	BDL
Isophorone	78-59-1	0.6	BDL
2-Methylnaphthalene	91-57-6	0.6	BDL
2-Methylphenol	95-48-7	0.6	BDL
4-Methylphenol	106-44-5	0.6	BDL
Naphthalene	91-20-3	0.6	BDL
2-Nitroaniline	88-74-4	3.3	BDL
3-Nitroaniline	99-09-2	3.3	BDL
4-Nitroaniline	100-01-6	3.3	BDL
Nitrobenzene	98-95-3	0.6	BDL
2-Nitrophenol	88-75-5	0.6	BDL
4-Nitrophenol	100-02-7	3.3	BDL
N-Nitroso-Di-N-Butylamine	924-16-3	0.6	BDL
N-Nitrosodimethylamine	62-75-9	0.6	BDL
N-Nitrosodiphenylamine	86-30-6	0.6	BDL
N-Nitrosodipropylamine	621-64-7	0.6	BDL
Pentachlorophenol	87-86-5	3.3	BDL
Phenanthrene	85-01-8	0.6	BDL
Phenol	108-95-2	0.6	BDL
Pyrene	129-00-0	0.6	BDL
1,2,4,5-Tetrachlorobenzene	95-94-3	0.6	BDL
2,3,4,6-Tetrachlorophenol	58-90-2	0.6	BDL
1,2,4-Trichlorobenzene	120-82-1	0.6	BDL

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COMPANY NAME:	HydroLogic-Morris., Inc.
COMPANY PROJECT NUMBER:	#94444
HYDDOTOCIC DROTECT NIMBER.	FT 94-10496

HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: SAMPLE IDENTIFICATION: DATE SAMPLED: FL94-10496 10496 BB-46 Soil Comp 8/9/94

METHOD SW 846 8270

ANALYSIS	CAS NO.	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)
2,4,5-Trichlorophenol	95-95-4	0.6	BDL
2,4,6-Trichlorophenol	88-06-2	0.6	BDL

Surrogate Recovery:

2-Fluorobiphenyl Nitrobenzene-d5 4-Terphenyl-D14	106% 100% 94%
2-Fluorophenol	111%
Phenol-D5	103%
2,4,6-Tribromophenol	98%

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:

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COMPANY NAME: COMPANY PROJECT NUMBER:	HydroLogic-Morr #94444	is., Inc.	
HYDROLOGIC PROJECT NUMBER: HYDROLOGIC SAMPLE NUMBER: HYDROLOGIC LAB I.D.#: SAMPLE IDENTIFICATION: DATE SAMPLED: DATE EXTRACTED: DATE/TIME ANALYZED:	FL94-10496 10496 399 BB-46 Soil Comp 8/9/94 8/17/94 8/17/94		
,	METHOD SW 8	46 8080	
ANALYSIS	CAS NO.	<u>SDL</u> (mg/kg)	<u>RESULT</u> (mg/kg)
alpha-BHC	319-84-6	0.010	BDL
beta-BHC	319-85-7	0.010	BDL
delta-BHC	319-86-8	0.010	BDL
gamma-BHC (Lindane)	58-89-9	0.010	BDL
Heptachlor	76-44-8	0.010	BDL
Aldrin	309-00-2	0.010	BDL
Heptachlor epoxide	1024-57-3	0.010	BDL
Endosulfan I	959-98-8	0.010	BDL
Dieldrin	60-57-1	0.019	BDL
4,4'-DDE	72-55-9	0.019	BDL
Endrin	72-20-8	0.019	BDL
Endosulfan II	33213-65-9	0.019	BDL
4,4'-DDD	72-54-8	0.019	BDL
Endrin aldehyde	7421-93-4	0.019	BDL
Endosulfan sulfate	1031-07-8	0.019	BDL
4,4'-DDT	50-29-3	0.019	BDL
Methoxychlor	72-43-5	0.100	BDL
Chlordane	57-74-9	0.100	BDL
Toxaphene	8001-35-2	0.192	BDL
Aroclor-1016	12674-11-2	0.096	BDL
Aroclor-1221	11104-28-2	0.096	BDL
Aroclor-1232	11141-16-5	0.096	BDL
Aroclor-1242	53469-21-9	0.096	BDL
Aroclor-1248	12672-29-6	0.096	BDL
Aroclor-1254	11097-69-1	0.192	BDL
Aroclor-1260	11096-82-5	0.192	BDL

BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:

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HydroLogic-Morris., Inc. COMPANY NAME: COMPANY PROJECT NUMBER: #94444 FL94-10496 HYDROLOGIC PROJECT NUMBER: 10497 HYDROLOGIC SAMPLE NUMBER: 399 HYDROLOGIC LAB I.D.#: SAMPLE IDENTIFICATION: BB-46 Water Comp 8/9/94 DATE SAMPLED: DATE EXTRACTED: N/A 8/12/94 DATE/TIME ANALYZED:

METHOD EPA 602/MIBE

ANALYSIS	CAS NO.	<u>SDL</u> (ug/l)	<u>RESULT</u> (ug/l)
Benzene Ethylbenzene Toluene Xylene (Total) MTBE	71-43-2 100-41-4 108-88-3 1330-20-7	1.0 1.0 1.0 1.0 5.0	BDL BDL BDL BDL BDL

Surrogate Recovery: BFB

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BDL = Below Sample Detection Limit SDL = Sample Detection Limit

COMMENTS:

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Subcontractor: <u>HUI-KY</u> Contact:Name: <u>BEN</u> Date Shipped: <u>8-10-94</u> Comments:	Proj Name <u>Ré</u> Proj Cont <u>94</u>	SUBCONTRACT CUC Project Name/No: <u>942407</u> <u>Re walest</u> Project Contact/Phone: <u>94444</u> P.0. 1:						: To	Contra Blvd.	Verbal [] Phone No: Fax [] 919-300 Fax Ho: Typed Copy [] Date:				
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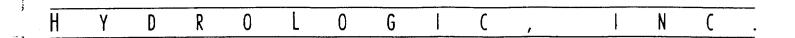
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Page 1 of 1												
ANALYSIS			NETHO	D	DATE		ANALYS DATE	BY	RESULT	UNITS	i	DET. LINII
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FINAL REPORT OF ANALYSES

PROJECT NAME: 942907 REPORT DATE: 08/22/94

 ACUIL HISA SNIFES

 SAMPLE NUMBER- 47042
 SAMPLE ID- BB-46-WATER
 SAMPLE MATRIX- WW

 DATE SAMPLED- 08/09/94
 LOCATION- 94444
 TIME SAMPLED- 0910

 DATE RECEIVED- 08/10/94
 SAMPLER- NOT SPECIFIED
 RECEIVED BY- PLB

 TIME RECEIVED- 1030
 DELIVERED BY- FEDEX
 RECEIVED BY- PLB

Page 1 of 1

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SUITE 900

HYDROLOGIC MORRISVILLE

MORRISVILLE, NC 27560-Attn: LISA SNIPES

2500 GATEWAY CENTRE BOULV

	ANALYSIS	METHOD	SAMPLE PR DATE		ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
•	LEAD, TOTAL	6010	08/11/94	CDM	08/11/94	LJP <	< 0.010	mg/l	0.010

LABORATORY DIRECTOR

Contact [‡] Na Date Shipp	ed: 8-9-94		Proj Name RE Proj Cont	SUBCONTRACT COC Project Hame/No: 942907 Rewright Project Contact/Phone: 94444 P.O. 1:						t To	1177	Contra Alvd.	Fax Ho1 9117				
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CLIENT: REI	HA)		<u></u>					ANA	LYS	ES			PROJECT ID #: $Q 4444$
PHONE: 71-		501		14	грн			Bs	ichu	¥.	20		REPORT DUE:
PROJ #: 94	444	PO #:		50/8015 TPM	5030 BOIS TPH	Noci	Nes	8080 Ruf / PUBS	TCLP & RCAA METAU	602 BIEXTMIESE	OE di		VERBAL FAX COPY HARD COPY
SAMPLER: F	RIC E EN	ULE		20/1	30/8	0	B270 Sues	al O	BR	OTEX	L LEA		
FIELD ID	SAMPLE MATRIX	TIME COLLECTED	DATE COLLECT	ED	50:	828	58	808	Talp	209	TOTA		REMARKS
BB-46 SOIL COMP	SOIL	30900	8-1-94	X	1 1	X	X	×	X				
DB-46 WATEr COM	D WATCH	0910	8-9-94	'						Х	X		TCLP metils, lead Ash
	-												Rest-KY
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APPENDIX E

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Soil/Water Disposal Documentation

r.e. wright associates, inc.

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F. CILIT		JSTRIAL SER		VISION		25580
	1-800-662-5364	5617 CLYDE RH		SANFORD	NC 2733	30
	1-000-002-0004					i i
	R EMERGENCY RESPONSE:	EPA ID# NCD	9861-72476			0/21/94
	Spill, Leak, Fire, Accident 5. PER DAY, 7 DAYS PER WEE	к		~	TRUCK#	55+53
			1/0			
			$ \leq $	and the		
	GENERATOR			\sim -	.TO:	
CSTOM	IER CAMP (4)	TEVHE	CUSTOMER		WRI	
ADDRES	S		ADDRESS	J Kege-	Exection	CTr, SUTRICY
<u>: 10KS</u>	OHVILLE NC ZI	P	A North	Coik, Va	ZIP	23502
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PHONE(_	<u>) 910-451-506</u>	8	PHONE <u>(</u>	461.6906		
S ART TI	ME STOP TIM	ЛЕ	P.O.# 13	8034	<u></u>	
RUMS	>	MATERIAL			UNIT SR	
A TOD	PETROLEUM OIL MIXTURE, N.O.S. (USE		ABUSTIBLE LIQUID, L	UN 1270, PG III	55 = 1/	- 935 ₩
	SLUDGE/NON-HAZARDOUS SOLIDS	For Therman Remea	Lation	/	853 -4	€ 12395 =
* /	GASOLINE, CLASS 3, UN 1203, PG II (GA	SOLINE) FOR RECOVERY/RE	CYCLING			
	GASOLINE/MIXTURE, CLASS 3, UN 1203	PG II (GASOLINE/WATER MI	XTURE) FROM U.S.T.	S OR EXEMPT		
	FUEL OIL MIXTURE, COMBUSTIBLE LIO		-1			
*	2 ME2/ 0 \$45	" PLA HOUR	/ no Mill		225 x 2	-> 450 * *
-	x 5 HOURS	FOR SEAACH \$1		-		12 12 12
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(perator	PROFILE NI	JMBER				
I _ertify th	hat the materials above are ad	curately described, c	lassified, packa	aged, marked a	ind labeled, a	and are in proper
condition	for transport according to app us waste contained or mixed wit	hicable state, EPA, and th the material that is to	be transported	ons. Furthermo I. I, the generator	re, i nave no i r, expressly a	gree and promise
t hold No	bble Oil Services, Inc. and all its c ies and other liability resulting	fficers and employee:	s free from and (otherwise inden	nnify the sam	e against any and
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A thorize	d Customer Agent (Sign) x	1 C Janey	/ (Pr		pangler_	
Noble Oil	Services Agent (Sign) x		/ (Pr	int) SPEL	re Ple	The second
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FRANK G. PERNY, SR. Freeident J. R. HOLTON Secretary/Treesurer



BRICK for the finest Building

LEE for the finest Brick

P.O. BOX 1027 SANFORD, NC 27330

30 (919) 774-4800

NC TOLL FREE 800-672-7559

Lee Brick & Tile Company, Inc., operating under the State of North Carolina Air Permit #3464R10 and the Contaminated Soil Disposal Permit # WQ0002988, hereby acknowledges the acceptance of <u>24.830</u> tonage of soil contaminated with fuel hydrocarbons and will handle the disposal of this soil in the prescribed manner as set forth by the Division of Environmental Management of the Department of Environment, Health, and Natural Resources, State of North Carolina, Raleigh, North Carolina.

COMPANY:	Noble Oil Services, Inc. (Name)
	5617 Clyde Rhyne Drive (Street Address)
	Sanford, NC 27330 (City, State & ZIP Code)
JOB LOCATION:	Noble Oil Services, Inc. (Name)
	5617 Clyde Rhyne Drive (Street Address)
	Sanford, NC 27330 (City, State & ZIP Code)
TRUCKING COMPANY:	Nchle Oil Services, Inc. (Name)
	5617 Clyde Rhyne Drive (Street Address)
	Sanford, NC 27330

(City, State & ZIP Code)

Date Received: November 1, 1994

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LEE	BRICK & TILE COMPANY, INC.	\square
BY:	Frank A. Per	Prrs.
	President	
	(Position with Lee Brid	k & Tile Co.)

LEE BRICK & TILE COMPANY, INC., APPRECIATES THE OPPORTUNITY TO SERVE YOU!!!!