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Site Name (Subject): USA RESERVE XVIII AIRBORNE CORPS

Site ID (Document ID): NC6210021626

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North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary

February 24, 2006

Ms. Jennifer Wendel
Superfund Site Evaluation Section
US EPA Region IV Waste Division
61 Forsyth Street SW, 11th Floor
Atlanta, GA 30303

Subject: Preliminary Assessment II (PA II)
USA Reserve XVIII Airborne Corps. Hickory
Hickory, Catawba County, NC
US EPA ID: NC6 210 021 626

Dear Ms. Wendel:

Enclosed is the Preliminary Assessment II (PA II), completed by the North Carolina Department of Environment and Natural Resources (NCDENR), Superfund Section for the USA Reserve XVIII Airborne Corps Site located just northwest of downtown Hickory, Catawba County, NC. The NC Superfund Section recommends that this site be assigned a No Further Remedial Action Planned status under CERCLIS.

Under the authority of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), and the Superfund Amendments and Reauthorization Act of 1986 (SARA), the North Carolina Superfund Section conducted this PA II to evaluate updated data regarding environmental conditions at the site in order to determine the need for any further CERCLA action. Information about the site was obtained through the review of available file documents and interviews with US Army personnel and contractors who manage the site.

The USA Reserve XVIII Airborne Corps Site (AKA D. W. Hudson USAR Center) in Hickory, NC is located on 1500 12th Street Drive NW, Hickory, NC 28601(Ref. 1). This location is about 2.0 miles northwest of the central business district of downtown Hickory, near the northwest corner of the intersection with 15th Avenue on City of Hickory property just southeast of the sewage treatment plant (Ref. 2).

Corresponding geographic coordinates for the facility are 35.7549 north latitude and 81.3686 west longitude (Ref. 1). This site consists of a 3.2-acre parcel with an approximate 4,500 square foot training and assembly building, a 1,800 square foot

vehicle maintenance shop and a utility building (Ref. 3). The site parcel is part of a larger 46 acre tract that contains the Hickory Wastewater Treatment Plant to its northwest (Ref. 2). The site is surrounded by residential areas to its north and east. A daycare borders the southern perimeter of the site and its playground borders part of the western perimeter (Ref. 2). There is a commercial area beyond this playground area to the west of the site.

This center has been active since its construction in the 1950's. The original training and assembly building was demolished and replaced in 1998. This new center is solely an administrative facility with no vehicle maintenance (Ref 3). Vehicle maintenance procedures such as oil changes, antifreeze changes, axle lubrication, and battery replacements were reportedly performed at this site in years prior to this renovation.

No major spills were reported for this center. This center uses city water and city sewers (Ref. 3). A Preliminary Assessment was completed in August of 1990 (Ref. 4). A request for updated information was submitted by EPA in order to complete the revised Hazard Ranking System in August of 1991 (Ref. 5). This PA II is intended to serve as the response to that request.

Documents regarding the site's regulatory history were found dating back to about 1985. This center is classified as a conditionally exempt small quantity generator by the NC Hazardous Waste Section. All spent petroleum products were temporarily stored on the premises and were removed by a commercial contractor and transported off-site for reclamation. This center is periodically inspected by a contractor of the Department of the Army to insure compliance with the military's Environmental Regulation regarding the storage and proper disposal of hazardous waste (Ref. 3).

Two heating oil underground storage tanks, a 1,500 gallon tank and a 500 gallon tank, were removed in 1990 (Ref. 3). The 500-gallon tank, that was located behind or west of the vehicle maintenance shop, had leaked and contaminated the soil with petroleum hydrocarbons (Ref. 6). This contamination (maximum level at 65,800 ppm in W3) was found in two grab samples (W3 and W4) from the excavation wall, but no contamination was noted in grab samples from beneath the tank. Figure 1, summarizes sampling locations, depths, and analytical data from three sampling events (1990, 1996, and 1999). The excavation was backfilled without any soil removal.

A field investigation was conducted by the US Army Corp of Engineers (Savannah District) in May of 1996 to determine the extent of contamination. Several auger borings were obtained from the area around the tank at various depths and throughout the rear area outside the maintenance shop and storage building (Fig. 1; Ref. 6). The two highest levels of Total Petroleum Hydrocarbons (70 ppm and 389 ppm) were found at a depth from 10-14 feet (borings SB-12 and SB-1, respectively) between the excavated tank area and the rear wall of the shop (Figure 1). Soil and a groundwater samples were collected in 1999 for a Limited Site Assessment Report (LSA) (Ref. 6).

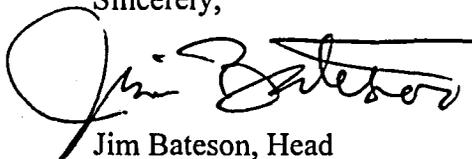
Both failed to reveal any volatile or semi-volatile petroleum hydrocarbons. Samples were collected at depths of 8 ft. (SB-1-1-6/99) and 18 ft (SB-1-2-6/99) from the single soil boring obtained in the location of the former tank (Ref. 6,p. 9). The monitoring well was installed adjacent to the soil boring with a screened interval depth from 53 feet to 73 feet. The groundwater table was found at a depth of 51 feet (Ref. 6,p. 21). In the LSA, the Savannah District speculated that the site's limited soil contamination may attenuate over time. A No Further Action letter was granted by the NC UST Section in November 1999 (Ref. 7).

Current information indicates that the site's operations have been limited to the generation of small quantities of spent petroleum products. There may be detectable residual petroleum compounds in the soils at depths from 5 to 14 feet. Even though a daycare playground is located on the adjoining property adjacent to the area of contamination, the layer of residual contamination is beneath the 2 foot surficial surface (Ref. 6,p. 7). Analytical data from the 1999 sampling failed to detect any groundwater contamination. The area is served by the Hickory Water and Sewer Department whose drinking water originates from an upstream reservoir (Ref. 6,p. 4). Based on these known facts, the NC Superfund Section recommends that this site be assigned a No Further Remedial Action Planned status under CERCLIS. If you have any questions about this PA II, please call Serafino Franch at (919) 508-8455, or by email at serafino.franch@ncmail.net.

Sincerely,



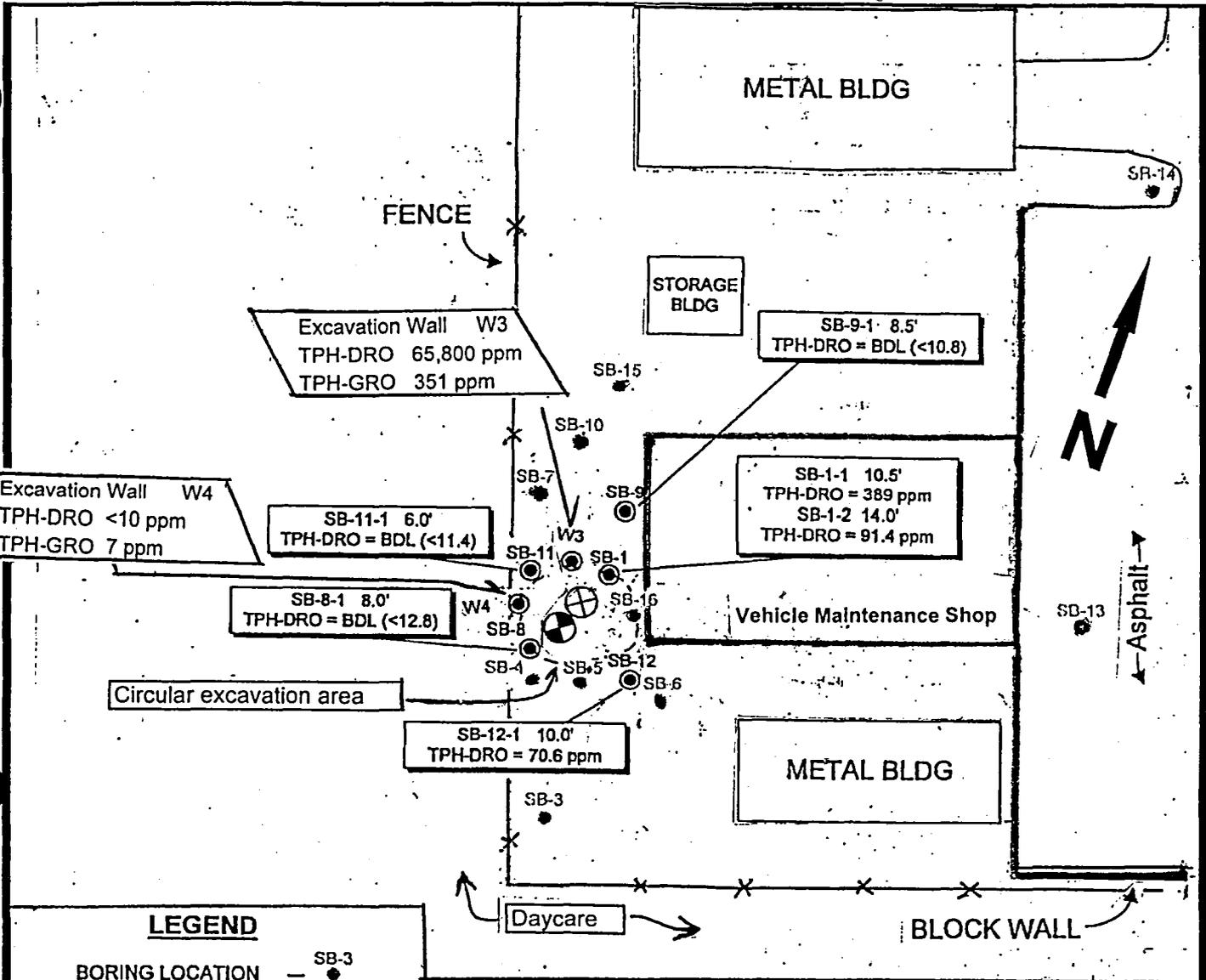
Serafino Franch
Environmental Chemist
NC Superfund Section



Jim Bateson, Head
Site Evaluation and Removal Branch
NC Superfund Section

cc: File
Charlotte Jesneck (letter only)

Attachments: APA Checklist
NCDENR GIS Topo Map Viewer: Address Locator (1998 aerial) (Reference 1)
Catawba County GIS Property Aerial Image (taken 2002) (Reference 2)
Memorandum dated May 16, 2005 with Email Attachment (Reference 3)
Letter dated August 11, 1990 (Reference 4)
Letter dated August 27, 1991 (Reference 5)
Excerpts from 1999 Limited Site Assessment Report (Reference 6)
Letter dated November 19, 1999 from UST (NFA letter) (Reference 7)



LEGEND

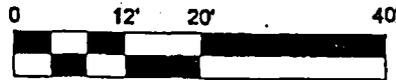
BORING LOCATION — ● SB-3

BORING LOCATION W/LABORATORY SAMPLE — ● SB-3

1999 Soil Boring, SB 1-1 and SB 1-2 ⊕

Monitoring well of 1999 ⊕

APPROXIMATE SCALE



1996 Data is Displayed in Rectangles
 1990 Data is Displayed in Rhomboids
 TPH = Total Petroleum Hydrocarbons
 DRO Diesel Range Organics
 GRO Gasoline Range Organics

This map was obtained from the August 1999 Limited Site Assessment Report prepared by the US Army Corps of Engineers, Savannah District and modified by NC Superfund Section.



TITLE: Sampling Locations & Results

SITE NAME: USA Reserves XVIII Airborne Corps-Hickory
LOCATION: Hickory, Catawba County, NC
US EPA ID: NC6 210 021 626

DRAWN BY: S.Franch
SCALE: as indicated
DATE: 1/27/06

FIGURE
 1

ABBREVIATED PRELIMINARY ASSESSMENT CHECKLIST

This checklist can be used to help the site investigator determine if an Abbreviated Preliminary Assessment (APA) is warranted. This checklist should document the rationale for the decision on whether further steps in the site investigation process are required under CERCLA. Use additional sheets, if necessary.

Checklist Preparer:	<u>Serafino Franch, Environmental Chemist</u>	<u>Aug 8, 2005</u>
	<u>Name/Title</u>	<u>Date</u>
	<u>NCDENR-Superfund Section</u>	<u>919-508-8455</u>
	<u>Address</u>	<u>Phone</u>
	<u>serafino.franch@ncmail.net</u>	
	<u>E-mail Address</u>	

Site Name:	<u>USA-Reserve XVIII Airborne Corps-Hickory</u>
Previous Names (if any):	<u></u>
EPA ID #	<u>NC6 210 021 626</u>
Site Location:	<u>1500 12th Street Drive NW, Hickory, Catawba County, NC</u>
Latitude:	<u>35.7549° N</u> Longitude: <u>81.3686° W</u>

Describe the release (or potential release) and its probable nature: Heating oil had leaked from tank to its sidewall soil.

Part 1 - Superfund Eligibility Evaluation

If all answers are no go on to Part 2, otherwise proceed to Part 3.

	YES	NO
1. Is the site currently in CERCLIS or an alias of another site?	X	
2. Is the site being addressed by some other remedial program (Federal, State, or Tribal)?		X
3. Are the hazardous substances potentially released at the site regulated under a statutory exclusion (e.g., petroleum, natural gas, natural gas liquids, synthetic gas usable for fuel, normal application of fertilizer, release located in a workplace, naturally occurring, or regulated by the NRC, UMTRCA, or OSHA)?	X	
4. Are the hazardous substances potentially released at the site excluded by policy considerations (i.e., deferred to RCRA corrective action)?		X
5. Is there sufficient documentation to demonstrate that no potential for a release that could cause adverse environmental or human health impacts exists (e.g., comprehensive remedial investigation equivalent data showing no release above ARARs, completed removal action, previous HRS score determined, or an EPA approved risk assessment completed)?		X

Please explain all yes answers.

1. The site was added to CERCLIS based on a potential for accidental spills of petroleum-based hazardous substances and The potential to impact nearby human and environmental targets.
3. A small release from a 500 gallon tank (one of two underground storage tanks containing heating oil) was discovered following the excavation of this tank. This release contaminated (65,800 ppm TPH) the sidewall soil of the tank. This source was not removed. Sampling in 1999 at depths of 8ft. and 18 feet below the tank failed to detect any volatile and semi-volatile compounds. None of these compounds were detected (in 1999) in the monitoring well (installed in tank's former location) at a screened interval depth of 53 to 73 feet.

Part 2 - Initial Site Evaluation

Use Exhibit 1 of the APA fact sheet to make site assessment decisions based on the answers below:

	YES	NO
1. Does documentation indicate that a target (e.g., drinking water wells, drinking surface water intakes, etc.) has been exposed to a hazardous substance released from the site?		X
2. Is there an apparent release at the site with no documentation of exposed targets, but there are targets on site or immediately adjacent to the site?	X	
3. Is there an apparent release and no documented on-site targets or targets immediately adjacent to the site, but there are nearby targets (e.g., targets within 1 mile)?		X
4. Is there no indication of a hazardous substance release, and there are uncontained sources containing CERCLA hazardous substances, but there is a potential to release with targets present on site or in proximity to the site?		X
5. Does the site lack documented on-site, adjacent, or nearby targets?		X
6. Does the site lack releases or potential to release?	X	
7. Does the site lack uncontained sources containing CERCLA eligible substances are present on site?	X	

Please explain all yes answer(s).

- 2. The petroleum release (1990 and 1996 data) is subsurface. There is a daycare adjacent to the release area. However, due to the estimated 4 foot depth of the contaminated soil, there should be no effect to receptors.
- 6. Documented on-site sub-surface contamination consisting of 65,800 ppm TPH (1990 data) is regulated under a statutory exclusion. No known CERCLA eligible substances have been released.
- 7. Based on known releases, the hazardous substances released at the site are regulated under a statutory exclusion (petroleum products). The release consisted of heating oil that resulted in residual sub-surface soil contamination. Sampling (1999 data) from an installed monitoring well at the site of the former tank failed to detect any groundwater contamination.

Part 3 - State Site Assessment Recommendation

Check the box that applies based on the conclusions of the APA:		
<input checked="" type="checkbox"/>	NFRAP	
<input type="checkbox"/>	Higher Priority SI	
<input type="checkbox"/>	Lower Priority SI	
<input type="checkbox"/>	Defer to RCRA Subtitle C	
<input type="checkbox"/>	Defer to NRC	
<input type="checkbox"/>	Refer to Removal Program - further site assessment needed	
<input type="checkbox"/>	Refer to Removal Program - NFRAP	
<input type="checkbox"/>	Site is being addressed as part of another CERCLIS site	
<input type="checkbox"/>	Other:	
State Reviewer:	Serafino Franch <i>Serafino Franch</i>	02/16/06
	Print Name/Signature	Date

USA Reserve XVIII Airborne Corps-Hickory
NC6 210 021 626

Map for 1500 12th St NW 28601

Location of 1500 12th St NW 28601



VICINITY MAP

1:8,000

1998 AERIAL

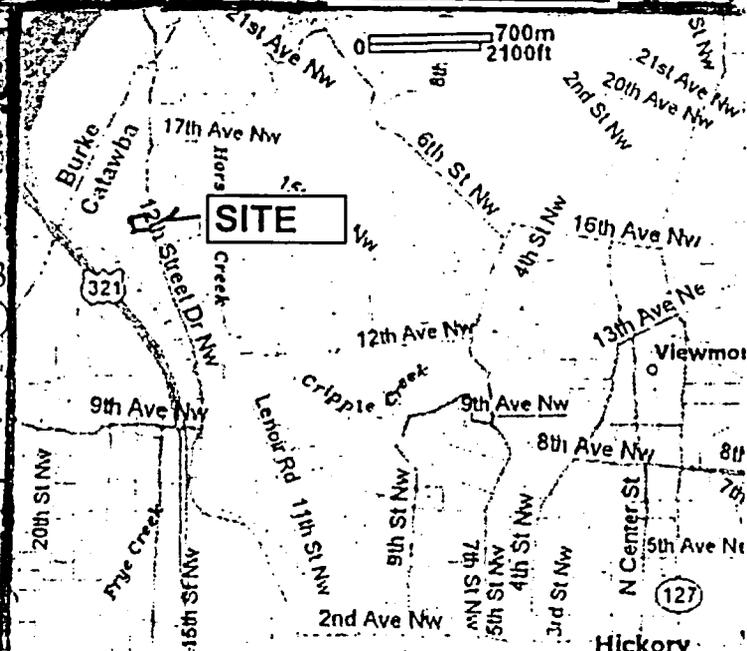
Bethlehem

7.5-minute Quadrangle

Site reference point: Northeast corner of Main Building

NC SPCS E: 395421.5, N:224960.6 meters (NAD83)

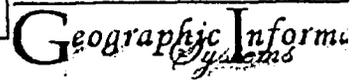
Long: -81.3685827 W, Lat: 35.7548840 N (NAD83)



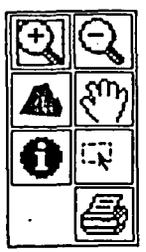
USA Reserve XVIII Airborne Corps-Hickory
 NC6 210 021 626



Real Estate Map Server



Map Tools

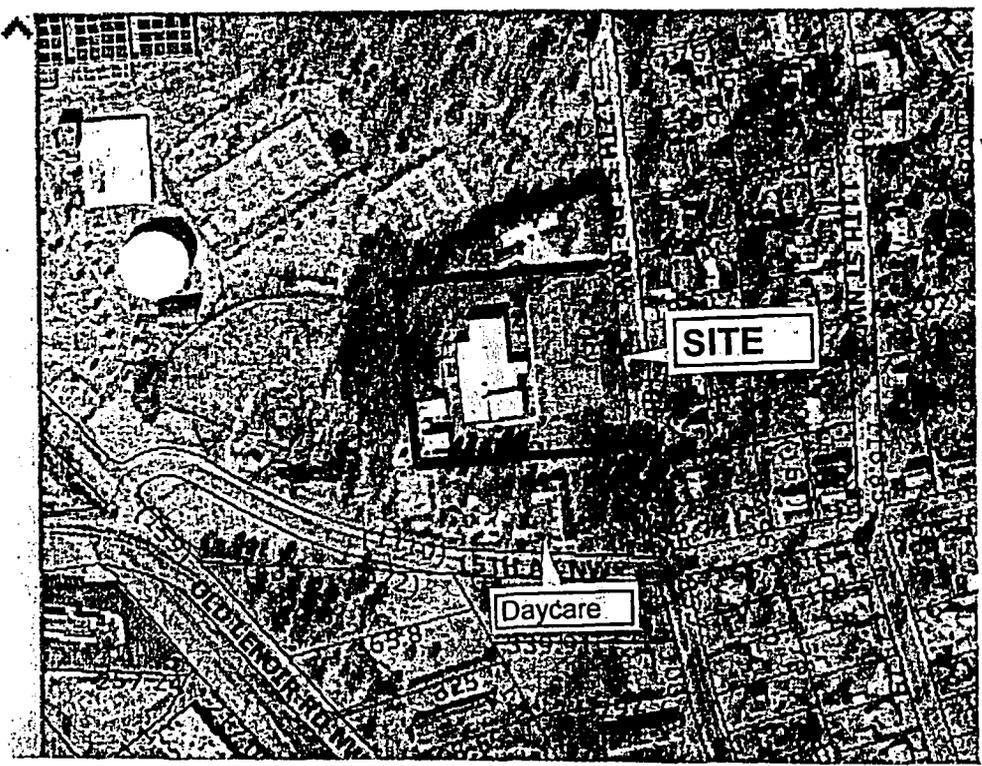


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Search by

Parcel Id

Owner



Layers

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- Parcels
 - Misc. Lin
 - Structur
 - Contour
 - Soils
 - Townshi,
 - Water Features
 - Tiles
 - Flood Zo
 - Aerial 2002
 - Cities
 - North Ar
 - Scale Ba

Parcel Information:	Owner Information:
Parcel ID: 279307780912	Name: HICKORY CITY OF
Parcel Address: 1560 OLD LENOIR RD NW	Name2:
City/Zip: HICKORY, 28601	Address: PO BOX 398
LRK (REID): 60497	Address2:
Deed Book/Page: 0216/0526	City: HICKORY
Subdivision:	State/Zip: NC, 28603-0398
Lots:	
Block:	
Plat Book/Page: /	
Calculated Acreage: 46.94	
Tax Map: 184H 02001	
State Road:	
Township: HICKORY	

MEMORANDUM

TO: File

FROM: S. Franch, Environmental Chemist, NC Superfund Section

DATE: May 16, 2005 *S. Franch*

SUBJECT: Status of U.S. Army Reserve Centers in North Carolina

SITE: USA Reserves XVIII Airborne Corps Sites in North Carolina (see attached email, dated 5-12-05, with list of sites)

Summary from telecommunications of April 7 and May 5, 2005 with Michelle Hook (803 751-6757). She is the Environmental Manager that oversees the reserve centers in both North and South Carolina. Ms. Hook is a contractor to the US Army 81st Regional Readiness Command (RRC), Installation Management, employed by Bregman & Company and based in Fort Jackson, SC. The RRC's environmental division chief is Mr. Steven Francis (205 912-6957) who is based in Alabama.

Michelle Hook has visited all of the NC sites in the capacity of an environmental auditor. She has been in this position since 1999 and doesn't have many records prior to 1992. Prior to 1992, military bases were not required to comply with local environmental regulations or keep records of spent solvents, nor did they have an Environmental Program. They did have guidelines on handling of hazardous substances such as Army Regulations 200-1 and 200-2. The Federal Facilities Compliance act was passed in 1992 that required the military to abide by local regulations and keep records of spent chemicals. All of these reserve centers are conditionally exempt from RCRA.

As auditor she examines the sites for dead vegetation, inquires about any spills, reviews handling procedures for various solvents and reviews their recycling program. The Defense Reutilization Marketing Office (DRMO) manages recycleable and non-recycled generated products at military installations. This program selects a contractor to retrieve and redistribute for reprocessing or reuse as a fuel additive in boilers elsewhere. All spent solvents (used oil, antifreeze, lubricants, and batteries) are collected by a contractor (Safety Kleen) and transported off site. The contractor also removes such items as any leftover paint cans, oil soaked vermiculite, and greasy rags.

The original administrator of these centers --Director of Engineering and Housing-- was based under the 18th Airborne Corps at Fort Bragg. None of the reserve centers have gasoline pumps on site. Fuel is obtained at nearby civilian gas stations and nearby military installations. All of the centers had heating oil tanks, mainly above

ground. These have been removed during the conversion to natural gas. Both the Hickory (NC6 210 021 626) and the Wilmington (NC0 210 021 929) centers had underground storage tanks for heating oil. Contractors that removed the oil tanks would determine whether samples should be obtained if they saw any suspected leaks or soil discoloration. Several of the centers have only administration buildings with no facilities for vehicle maintenance. None of the centers were on well water. Because the reserve centers are mostly located within the city, all are connected to city sewers.

Two of the centers are in the process/or have been sold. These are the Greenville center (NC8 210 022 044) and the Durham Center (NC9 210 022 787) on Foster Street. The Greenville center is undergoing an EBS (Environmental Baseline Study) prior to being sold. The Durham Center on Foster Street has been sold to the City of Durham. A Durham Reserve Center still remains on Carol Street (NC4 210 021 891).

The Rocky Mount center (NC8 210 021 624) had a non-reportable quantity spill of hydraulic fluid. The Morehead City Reserve center (NC5 210 022 906) has been undergoing a site investigation. This was initiated since there had been construction plans to add more piers to accommodate additional landing boats. This project has been delayed following September 2001. This harbor area had been used for shipbuilding periodically since the 1860s.

Attachment: Email from Michelle Cook dated 5-12-05 (USA Reserve Centers in NC).

Subject: Status of NC USAR Centers listed on CERCLIS
From: "Hook, Michelle Ms 81 RRC INSTL MGMT" <michelle.hook@usar.army.mil>
Date: Thu, 12 May 2005 15:50:36 -0400
To: <serafino.franch@ncmail.net>

Mr. Franch,

Below is a brief description of NC USAR facilities you inquired about. Some of the facilities are administrative facilities only and have never had any vehicle maintenance activities conducted on site. Some of the facilities have small vehicle maintenance shops that handle minor maintenance activities and there is one that is a larger vehicle maintenance shop which handles minor and major maintenance activities. With reference to the administrative-only facilities, I cannot explain the rationale of the Environmental Manager before me obtaining EPA ID numbers for these sites since these facilities do not generate any HW. However, the paperwork was submitted to NCDENR and EPA ID numbers were generated for these facilities. Please note all USAR Centers in NC are classified as CESQG.

The 81st RRC has an Environmental Regulation in place that details how HM items should be stored and how HW items are to be properly disposed. Facility personnel are also required to inform the Environmental Division of any spills of petroleum products. You had asked for copies of Preliminary Assessments for each of these facilities yet I was only able to locate the PA for one, NC6210022905. This is the location of the larger vehicle maintenance shop and I assume the person that held my position during that time period understood the requirement to only involve that type of facility and not facilities that have the smaller vehicle maintenance shops or the administrative-only facilities.

1. NC6210022046. The Jesse F. Niven USAR Center, constructed in 1958, is situated on a 3.92-acre parcel located at 1816 East Main Street, Albemarle NC 28001. The center consists of a 11,392 ft² training and assembly building and a 2,619 ft² vehicle maintenance shop. Minor maintenance activities such as oil changes are conducted at the maintenance shop. Numerous internal inspections have been conducted at the facility dating back to 1992 that indicate no signs of contamination. One 500-gallon heating oil UST was removed on 28 September 1994 by Environmental Technology of North America, Inc. The Closure Report was submitted to the NCDENR 27 December 1994. Heating oil USTs are not regulated in the state of North Carolina and no additional documentation from the state is available. No Preliminary Assessment was completed for this facility.

2. NC4210020042. The Walter Hatch Lee USAR Center, constructed in 1950, is situated on a 9-acre parcel located at 224 Louisiana Avenue, Asheville NC 28806. The center consists of a 29,164 ft² training and assembly building and a 2,300 ft² vehicle maintenance shop. Minor maintenance activities such as oil changes are conducted at the vehicle maintenance shop. Numerous internal inspections have been conducted at the facility dating back to 1992 that indicate no signs of contamination. No Preliminary Assessment was completed for this facility.

3. NC7210022045. The Miller Duckett USAR Center, constructed in 1959, is situated on a 4.06-acre parcel located at 306 East French Broad Avenue, Brevard NC 28712. The center consists of a 4,316 ft² training and assembly building, a 4,000 ft² utility building used for training and supply storage and a 1325 ft² vehicle maintenance shop. No maintenance activities are conducted in the maintenance shop, the building is used for storage. No Preliminary Assessment was completed for this facility.

4. NC6210022905. The Charlotte USAR Center and Area Maintenance Support Activity (AMSA) 122(G) is situated on a 14-acre parcel located at 1330 Westover Street, Charlotte NC 28205. The USAR Center consists of three training and assembly buildings; a 28,402 ft² two story building, a 23,287 ft² two story building, and an 8,180 ft² one story building. There is also a 7,598 ft² vehicle maintenance shop that is utilized by the AMSA 122(G). The AMSA 122(G) performs minor and major vehicle maintenance activities on military equipment. Numerous internal inspections have been conducted at the facility dating back to 1992 that indicate no signs of contamination. Attached is a copy of the 14 June 1990 Preliminary Assessment.

5. NC9210022787. The Durham #2 USAR Center, constructed in 1928, was situated on a 0.9-acre parcel located at 724 Foster Street, Durham NC 27701. The center consisted of a 29,918 ft² two story training and assembly building. No maintenance activities were performed at the facility, it was an administrative facility only. No Preliminary Assessment was completed for this facility. The facility was transferred to the City of Durham in 2002.

6. NC4210021891. The Durham #1 USAR Center, constructed in 1962, is situated on a 5.5-acre parcel located at 1228 Carroll Street, Durham NC 27707. The center consists of 15,624 ft² two story training and assembly building, a 3,500 ft² utility building and a 3,800 ft² vehicle maintenance shop. Minor maintenance activities such as oil changes are conducted at the maintenance shop. Numerous internal inspections have been conducted at the facility dating back to 1992 that indicate no signs of contamination. No Preliminary Assessment was completed for this facility.

7. NC4210022907. The BG James Moore USAR Center, constructed in 1974, is situated on a 5-acre parcel located at 2017 West Garner Road, Garner NC 27529. The center consists of a 21,550 ft² training and assembly building, a 3,500 ft² utility building and a 2,160 ft² vehicle maintenance shop. Minor maintenance activities such as oil changes are conducted at the maintenance shop. Numerous internal inspections have been conducted at the facility dating back to 1992 that indicate no signs of contamination. No Preliminary Assessment was completed for this facility.

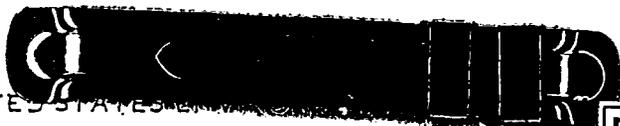
8. NC9210021755. The E. Earle Rives AFRC, constructed in 1955, is situated on a 4.41-acre parcel located at 1120 North Church Street, Greensboro NC 27401. The center consists of a 16,500 ft² training and assembly building, two 5,000 ft² storage buildings and a 1,100 ft² vehicle maintenance shop. Minor maintenance activities such as oil changes are conducted at the maintenance shop. Numerous internal inspections have been conducted at the facility dating back to 1993 that indicate no signs of contamination. A 1000-gallon heating oil UST was removed in 1991 when the facility converted to natural gas. No Preliminary Assessment was completed for this facility.

9. NC0690308242 (NC8210022044 associated with 1391 North Memorial Drive). The Preston C. Clark USAR Center, constructed in 1958, is situated on a 3-acre parcel located at 1301 North Memorial Drive, Greenville NC 27834. The center consists of a 10,850 ft² training and assembly building, a 3,500 ft² utility building and a 3,390 ft² vehicle maintenance shop. The facility was vacated March 2004 when the units assigned to the facility transferred to another USAR Center. While the facility was still occupied, only minor maintenance activities such as oil changes were conducted at the maintenance shop. Numerous internal inspections have been conducted at the facility dating back to 1994 that indicate no signs of contamination. A 1,000-gallon and a 2,000-gallon underground storage tank that housed heating oil were removed in 1990. They were replaced by a 600-gallon AST that also housed heating oil. The facility converted to natural gas in the mid 1990's and the 600-gallon AST, which is empty, remains on site. No Preliminary Assessment was completed for this facility.

10. NC6210021626. The D. W. Hudson USAR Center, constructed in 1998, is situated on a 3.21-acre parcel located at 1500 12th Street Drive NW. The old training and assembly building constructed in the 1950's was demolished in 1996 to allow for remediation activities to proceed and to eventually make way for the present day USAR Center. Remediation activities were necessary due to a leaking UST. EnviroSpec Inc. removed a 500-gallon heating oil UST and a 1500-gallon heating oil UST on 12 December 1990. Contamination resulted from leaks in the 500-gallon tank and the NCDENR issued an NOV on 15 February 1991. The final Limited Site Assessment (LSA) Report, dated 13 August 1999 was submitted to NCDENR and at that time the 81st Regional Readiness Command requested a NFA finding. The NCDENR issued a NFA letter 19 November 1999. Attached is a copy of the LSA. Presently the center consists of a 4,500 ft² training and assembly building, a utility building and a 1,825 ft² vehicle maintenance shop. No maintenance activities are conducted at the maintenance shop. Numerous internal inspections have been conducted at the facility dating back to 1992 that indicate no signs of newly identified contamination. No Preliminary Assessment was completed for this facility.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



REFERENCE 4

REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

AUG 1 9 21 AM

RECEIVED

1990

4WD-RCRA & FF

SUPERFUND SECTION

Colonel K.W. Crissman
Director of Engineering & Housing
Headquarters, XVIII Airborne Corps & Fort Bragg
Fort Bragg, North Carolina 28307-5000

Re: Preliminary Assessments
U.S. Army Reserve Centers in North Carolina

Dear Colonel Crissman:

The Preliminary Assessment forms for potential hazardous waste sites at U.S. Army Reserve Centers in North Carolina, submitted by letter of June 21, 1990, have been reviewed by the U.S. Environmental Protection Agency. Based upon the information submitted and a telephone verification by Mr. William A. Kern of your Directorate, we have concluded that no further action is needed at this time.

If any releases of hazardous substances to the environment should occur in the future or any information on any past releases should be found, these should be reported to EPA. If you have questions concerning this review, please contact Mr. J.C. Meredith, P.E., Remedial Project Manager, at (404) 347-3016.

Sincerely yours,

James H. Scarbrough
James H. Scarbrough, P.E., Chief
RCRA & Federal Facilities Branch
Waste Management Division

cc: Lee Crosby, NCDEHNR



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

REFERENCE 5

AUG 27 1991

WD-RCRA & FF

Certified Mail
Return Receipt Requested

RECEIVED

SEP 09 1991

HAZARDOUS WASTE SECTION

Commander
Directorate of Engineering and Housing
Attention: AFZA-DE-RJ (Mr. Robert Turner)
Fort Bragg, NC 28307

RE: Updating Preliminary Assessments for the Revised
Hazard Ranking System
U. S. Army Reserve Centers

Dear Sir:

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), requires the U.S. Environmental Protection Agency (EPA) to establish a Federal Agency Hazardous Waste Compliance Docket to provide information on the status and compliance of federal facilities that may have releases of hazardous substances. Section 120 specifically addresses federal agency compliance with requirements on response actions, site evaluations, and hazard ranking procedures for facilities on the Docket. The U. S. Army Reserve Centers on the enclosed list are on the Docket.

EPA Region IV is currently contacting each federal facility on the Docket but not on the National Priorities List (NPL) to request updated information required by the revised Hazard Ranking System (HRS2) of the National Contingency Plan (NCP), which became effective March 14, 1991. Our records indicate that a Preliminary Assessment (PA) report or its equivalent was submitted previously for the reserve centers and that it was determined that no further action was needed at that time. We are writing to request updated information on any releases of hazardous substances that may have occurred or been discovered since that time.

We are enclosing the basic guidelines for a Preliminary Assessment. If the EPA determines from the updated PA information that a release has occurred or there is a potential for release, we may require further investigation later in the form of a Site Inspection (SI). We are also enclosing guidelines on the requirements of HRS2, generally to be utilized following an SI; however, we are not requesting that level of investigation at this time. Both PA and SI are defined in the NCP (40 CFR 300).

We are requesting submittal of the updated PA information within 60 days of receipt of this letter. If that is not feasible, we request submittal of a timetable for compliance within 30 days of receipt of this letter.

If you have questions regarding the updating of PA information, please contact Mr. J. C. Meredith of this office at (404) 347-3016.

Sincerely yours,

for *James H. Scarbrough*
James H. Scarbrough, P.E., Chief
RCRA & Federal Facilities Branch
Waste Management Division

Enclosure

cc: Mr. William L. Meyer, Director
Division of Solid Waste Management
North Carolina Department of Environment,
Health & Natural Resources
Post Office Box 27687
Raleigh, NC 27611-7687

Commander
U. S. Army Toxic & Hazardous Materials Agency
CETHA-IR-S (Conrad Swann)
Aberdeen Proving Ground, MD 21010-5401

cc: *Jack Butler*
Superfund

APR 1999
REGISTERED PROFESSIONAL
S. CAROLINA

Limited Site Assessment Report

U.S. Army Reserve Center
1500 12th Street Drive Northwest
Hickory, North Carolina

SEP 0 1999

STATE OF SOUTH CAROLINA
REGISTERED PROFESSIONAL

August 1999

Prepared for the UST and Property Owner:

Department of the Army
81st Regional Support Command
FAST #2
Attn: Mr. Jim Adair
13000 Jackson Blvd.
Ft. Jackson, South Carolina 29207

Prepared by:

U. S. Army Corps of Engineers, Savannah District
Geology/Hydrogeology and HTRW Design Section
100 W. Oglethorpe Ave.
P.O. Box 889
Savannah, Georgia 31402-0889
(912) 652-5464

This report has been reviewed by:

Name: Steven Manning Bath South Carolina 13898 6/30/2000
Registered Professional Registration # Date

Signature: Steven M. Bath 13 Aug 1999
Date



Site History

The U.S. Army Reserve Center in Hickory, North Carolina is located at 1500 12th Street Drive. A USGS Quadrangle sheet is included in the appendix as a Location Map, Figure 1. This site previously contained a 500 gallon Underground Storage Tanks (UST) adjacent to the OMS building. Figure 2 shows the location of the tank on the property. The tank was owned by the Department of the Army. Under a contract to Wilmington District of the Corps of Engineers, Enviro Spec of Mathews, North Carolina removed the tank in December 1990.

Tank ID	Size	Contents
STDS-681	500 gallons	#2 fuel oil

Soil samples were collected from each side of the tank excavation and directly below the tank approximately two feet below the bottom of the excavation. Figure 3 provides the sample locations. Samples were analyzed for Total Petroleum Hydrocarbons-Gasoline Range Organics (TPH-GRO) and Total Petroleum Hydrocarbons-Diesel Range Organics (TPH-DRO). Results of this investigation are shown below.

Tank Removal Sample Results

Sample	Test	Result (mg/kg)
W1	TPH-GRO	< 1
W1	TPH-DRO	< 10
W2	TPH-GRO	< 1
W2	TPH-DRO	< 10
W3	TPH-GRO	351
W3	TPH-DRO	65,800
W4	TPH-GRO	7
W4	TPH-DRO	< 10
B1	TPH-GRO	< 1
B1	TPH-DRO	< 10

Based on the results of the tank closure, the North Carolina Department of Environment and Natural Resources (NCDENR) issued a Notice of Violation on February 15, 1991. In September 1991, Wilmington District began installing a well at the former tank location in order to detect any possible ground-water contamination. The hole was advanced through top of rock at 21.2 ft. to a depth of 50 ft. without locating ground water. The dry hole was properly abandoned.

In April and May 1996, Savannah District conducted a field investigation to determine if there was any remaining soil contamination. The investigation included shallow auger borings, headspace sampling, and laboratory analyses of soil samples to ascertain the horizontal and vertical extent of soil contamination. Eighteen (18) auger borings were advanced in the area adjacent to the OMS building and screened using headspace analysis. Where screening indicated possible contamination, samples were collected and analyzed for TPH-DRO. In Phase II, samples were collected at hot spots and analyzed for both TPH-GRO and TPH-DRO to determine vertical migration. A site map indicating the location of each boring is included as Figure 4. Results of this investigation are shown in the following table.

1996 Sample Results

Sample	TPH-DRO mg/Kg	TPH-GRO mg/Kg
SB-1-1	389	
SB-1-2	91.4	
SB-8-1	< 12.8	
SB-9-1	< 10.8	
SB-11-1	< 11.4	
SB-12-1	70.6	
SB-14-1	< 11.8	
Phase II Samples		
SB-1A-1	< 12.0	< 12.0
SB-1A-2	< 11.8	< 11.8
SB-12A-1	< 10.6	< 10.6
SB-12A-2	< 12.1	< 12.1

In June 1999, Savannah District returned to the site to conduct a Phase I investigation for this Limited Site Assessment. Results from this investigation form the basis for this report.

Limited Site assessment Risk Classification and Land Use Form

Part I- Groundwater/Surface water/ Vapor Impacts

High Risk

1. Has the discharge or release contaminated any water supply well including any used for non-drinking purposes? NO
If yes, explain. _____

2. Is a water supply well used for drinking water located within 1000 feet of the source area of the discharge or release? NO

3. Is a water supply well used for any purpose (e.g., irrigation, washing cars, industrial cooling water, filling swimming pools) located within 250 feet of the source area of the release or discharge? NO

4. Does groundwater within 500 feet of the source area of the discharge or release have the potential for future use in that there is no other source of water supply other than the groundwater? NO
Explain. The Hickory Water and Sewer Department supplies this area with drinking water.

5. Do vapors from the discharge or release pose a threat of explosion because of accumulation of the vapors in a confined space or pose any other serious threat to public health, public safety, or the environment? NO
If yes, explain. _____

6. Are there any other factors that would cause the discharge or release to pose an imminent danger to public health, public safety, or the environment? NO
If yes, explain. _____

Intermediate Risk

7. Is a surface water body located within 500 feet of the source area of the discharge or release? **NO**

If yes, does the maximum groundwater contaminant concentration exceed the surface water quality standards and criteria found in 15A NCAC 2B .0200 by a factor of 10?

NO

8. Is the source area of the discharge or release located within a designated wellhead protection area as defined in 42 USC 300h-7(e)? **NO**

If yes explain. Based on conversation with the Hickory Water and Sewer Department this area is not designated a wellhead protection area.

9. Is the discharge or release located in the Coastal Plain physiographic region as designated on a map entitled "Geology of North Carolina" published by the department in 1985? **NO**

If yes, is the source area of the discharge or release located in an area in which there is recharge to an unconfined or semi-confined deeper aquifer that is being used or may be used as a source of drinking water? **NO**

If yes, explain.

10. Do the levels of groundwater contamination for any contaminant exceed the gross contamination levels established (see Table 7) by the Department. **NO**

No target analytes were detected in the ground-water sample.

Part II - Land Use

Property Containing Source Area of Discharge or Release

The questions below pertain to the property containing the source area of the release.

1. Does the property contain one or more primary or secondary residences (permanent or temporary)? NO

Explain. The property is a reserve center "armory" for the U. S. Army.

2. Does the property contain a school, daycare center, hospital, playground, park, recreation area, church, nursing home, or other place of public assembly? NO

The property is a active military site with access restricted to military personnel.

3. Does the property contain a commercial (e.g., retail, warehouse, office/business space, etc.) or industrial (e.g., manufacturing, utilities, industrial research and development, chemical/petroleum bulk storage, etc.) enterprise, an inactive commercial or industrial enterprise, or is the land undeveloped? YES

Explain. The property is a reserve center "armory" for the U. S. Army. It contains both office space and warehouse space for the U. S. Army.

4. Do Children visit the property? NO

Explain. Access to the site is restricted to military personnel.

5. Is access to the property reliably restricted consistent with its use (e.g., by fences, security personnel or both)? YES

Explain. Access to the site is restricted by fences and by the military personnel on duty at the site.

6. Do pavement, buildings or other structures cap the contaminated soil? YES

Explain. If any contaminated soil still exists on site, it is located underneath the building that was adjacent to the tank.

If yes, what mechanisms are in place or can be put into place to ensure that the contaminated soil will remain capped in the foreseeable future? _____

The building capping any possibly contaminated soil is in use and will not be removed.

7. What is the zoning status of the property? R2 Residential

8. Is the use of the property likely to change in the next 20 years? **NO**
Explain. The buildings on the property are new, and it is unlikely the Army would leave this site.

Property Surrounding Source Area of Discharge or Release

The questions below pertain to the area within 1500 feet of the area of the discharge or release (excludes property containing source area of the release):

11. What is the distance from the source area of the release to the nearest primary or secondary residence (permanent or temporary)? The nearest residence is across the street from the Reserve Center. Approximately 500 feet from the site.

12. What is the distance from the source area of the release to the nearest school, daycare center, hospital, playground, park, recreation area, church, nursing home or other place of public assembly? A daycare facility is adjacent to the property. The building is approximately 250 feet from the site. The playground area is 10 feet from the former tank location.

13. What is the zoning status of properties in the surrounding area? The area across the street from the Reserve Center is zoned R2 Residential. The properties along both sides and behind the Reserve Center are zoned recreation.

14. Briefly characterize the use and activities of the land in the surrounding area. The Reserve property is bordered on the north by woods and residential areas. More residential areas exist to the east. A daycare facility borders the property on the south side. Directly west of the former tank site is a playground for the daycare. Beyond the playground are woods and some industrial sites.

Receptor Information

Based on phone conversations with the Hickory Water and Sewer Department, there are no water wells within 1500 feet of the site. This area receives water from a public water supply, the Hickory Water and Sewer Department. The site is not in an area designated as a wellhead protection area as defined in 42 USC 300h-7(e). The nearest surface-water body is Horseford Creek approximately 1500 feet from the site. Horseford Creek is not a receptor because the topography of the site slopes away from the creek. There are no subsurface structures in or near the area of known soil contamination. The closest utilities are the lines entering the front of the OMS Building. These lines are unlikely to be receptors because of their distance from the source area. There are no basements in the vicinity of contamination. Previous headspace analysis indicates a very restricted area containing measurable soil vapors.

East

Site Geology and Hydrogeology

The property is located in the Inner Piedmont Geological Belt. Metamorphic rocks ranging in age from 500 to 750 million years old make up this intensely metamorphosed and deformed segment of the Piedmont. The geology is predominantly gneiss and schist that have been intruded by younger granite rocks.

The ground-water system in this region consists of the regolith and bedrock. The regolith consists of the unconsolidated soil, alluvium, and saprolite. This strata with its high porosity acts as a reservoir supplying water slowly downward into fractures in the bedrock. The bedrock itself contains minimal pore spaces. Water within the bedrock is contained in fractures and other secondary openings. These are usually larger and more numerous near the surface and decrease with depth. The number and size of the fractures intercepted determine the yield of bedrock wells in this region.

Sampling Results

In June 1999, Savannah District returned to the site to conduct a Phase I investigation for this Limited Site Assessment. One soil boring was advanced in the previously delineated area of contamination adjacent to the OMS building. Two soil samples were collected from this boring at depths of 8 ft. and 18 ft. These samples were analyzed by EPA Method 8260, EPA Method 8270, MADEP Volatile Petroleum Hydrocarbons, and MADEP Extractable Petroleum Hydrocarbons. No target analytes were detected in either soil sample for the analyses run.

A boring was also advanced for installation of a monitoring well in the location of the former tank. A site map indicating the location of the soil boring adjacent to the monitoring well is included as Figure 5. The boring log and well construction details are included with this report. The well was sampled and analyzed by EPA Method 602, EPA Method 625, MADEP Volatile Petroleum Hydrocarbons, and MADEP Extractable Petroleum Hydrocarbons. No target analytes were detected in the ground-water sample.

Soil Sample Results

Sample ID	USARC-SB-1-1-6-99	USARC-SB-1-2-6-99
Sample Depth	7.5-9.5 feet	17.5-19.5 feet
Date of Sampling	07/01/99	07/01/99
Collection Procedure	Split spoon	Split spoon
EPA Method 8260	Below Detection Limit	Below Detection Limit
MADEP VPH	Below Detection Limit	Below Detection Limit
EPA Method 8270	Below Detection Limit	Below Detection Limit
MADEP EPH	Below Detection Limit	Below Detection Limit

as compared with Shauna 11/8/99

Monitor Well Data

Well	Well Depth (ft.)	Screen Interval (ft)	Depth to Water (ft)	Date Measured
MW-1-99	74.4	53.89 - 73.89	51.95	07/01/99

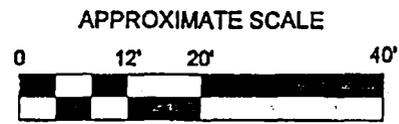
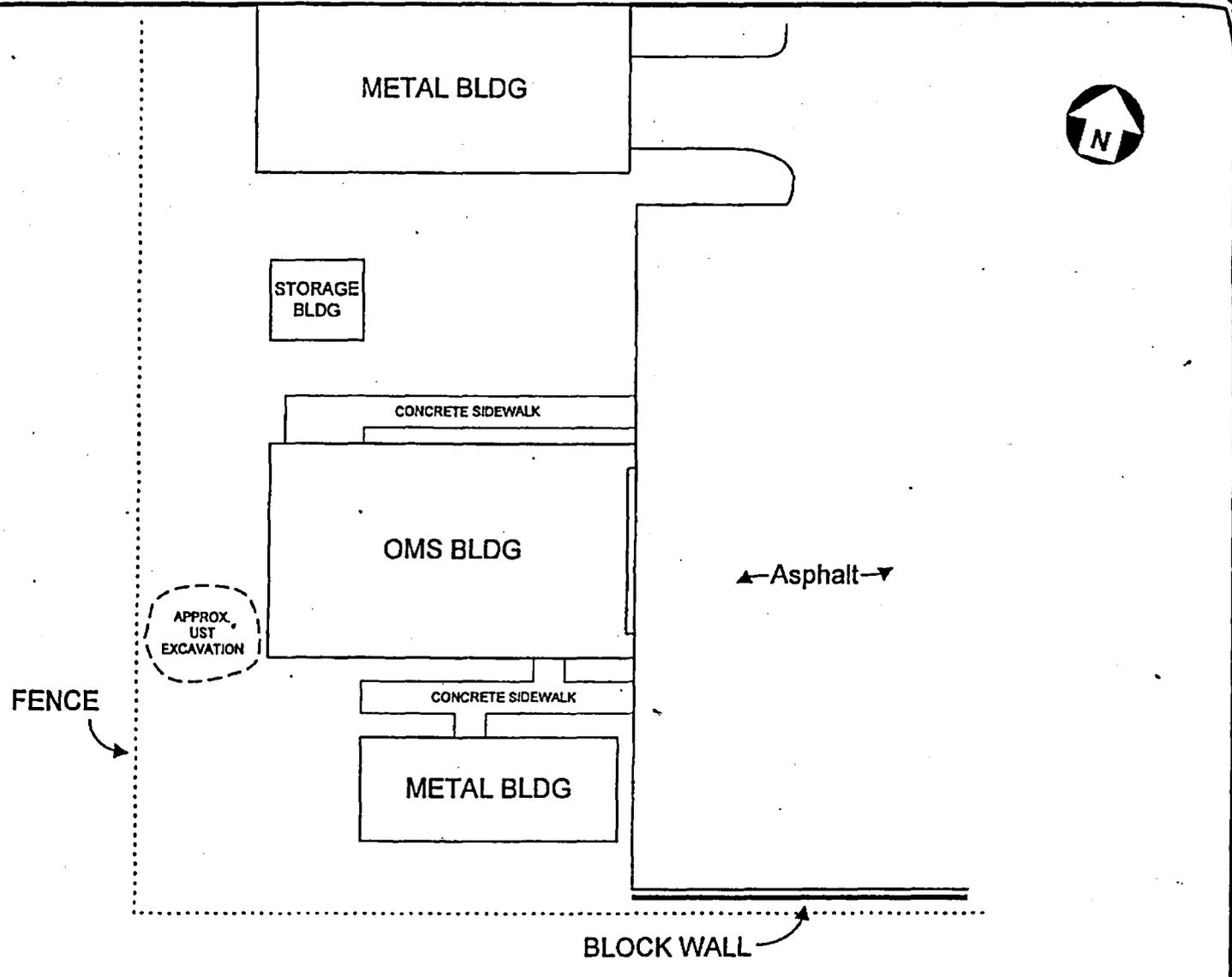
*52 ft
101.20.30*

Ground-Water Sample Results

Sample ID	USARC-MW-1-6/99
Sampling Date	7/1/99
EPA Method 602	Below Detection Limit
EPA Method 625	Below Detection Limit
MADEP VPH	Below Detection Limit
MADEP EPH	Below Detection Limit

Conclusions and Recommendations

This Limited Site Assessment for the U.S. Army Reserve Center Hickory was conducted as per NCDENR guidance. Results of this assessment do not indicate any soil contamination in the samples collected. Due to the limited scope of this investigation, the possibility still exists that some contamination may remain in the soil at the site. This contamination would be limited in size and location and will attenuate naturally over time. This contamination does not pose a threat to human health because access to the site is restricted, and there is no evidence that the contamination is migrating. The monitoring well installed in the source area tested clean for contaminants of concern. This investigation detected no chemicals of concern in the soil or ground water. Further assessment or cleanup is not necessary. **No Further Action** is recommended for this site.

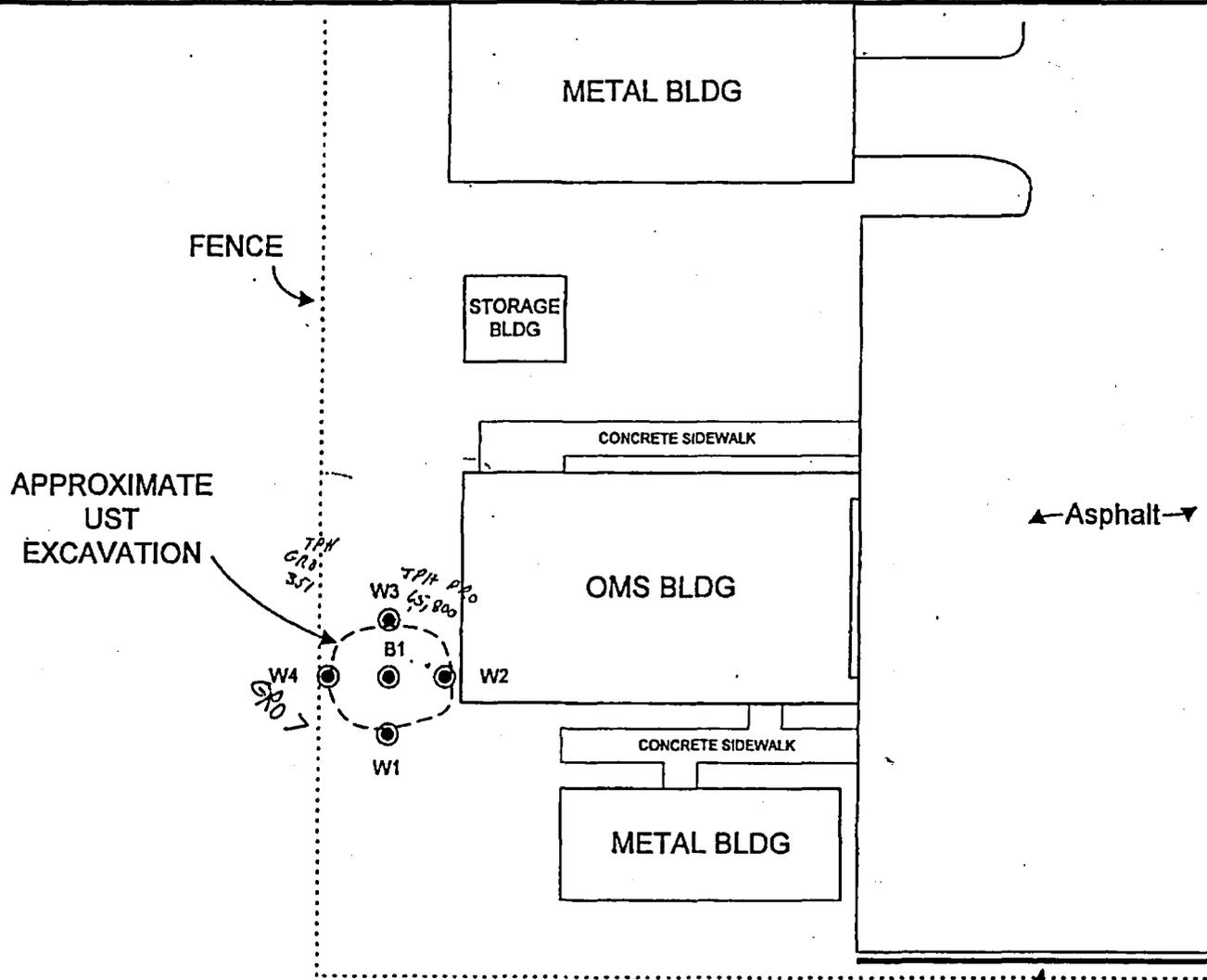


U.S. ARMY RESERVE COMMAND
 ARMY RESERVE CENTER, HICKORY, NC

OMS BUILDING
 FORMER UST SITE

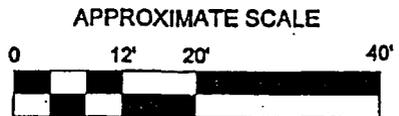
Figure 2
 Site Map

12



LEGEND

BORING LOCATION
W/LABORATORY
SAMPLE — ●



U.S. ARMY RESERVE COMMAND
ARMY RESERVE CENTER, HICKORY, NC

OMS BUILDING
FORMER UST SITE

Figure 3
TANK REMOVAL SAMPLING

13

METAL BLDG



SR-14

SB-17

FENCE

CORPUS BLDG

SB-9-1 8.5'
TPH-DRO = BDL (<10.8)

SB-15

SB-10

SB-1-1 10.5'
TPH-DRO = 389 ppm
SB-1-2 14.0'
TPH-DRO = 91.4 ppm

SB-11-1 6.0'
TPH-DRO = BDL (<11.4)

SB-7

SB-9

SB-8-1 8.0'
TPH-DRO = BDL (<12.8)

SB-11

SB-1

SB-2

APPROX SB-16

UST

EXCAVATION

SB-4

SB-5

SB-12

SB-12-1 10.0'
TPH-DRO = 70.6 ppm

SB-3

CONCRETE UNDERWAY

METAL BLDG

SD-13

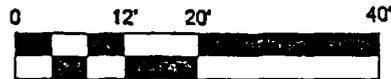
BLOCK WALL

LEGEND

BORING LOCATION — ● SB-3

BORING LOCATION W/LABORATORY SAMPLE — ● SB-3

APPROXIMATE SCALE

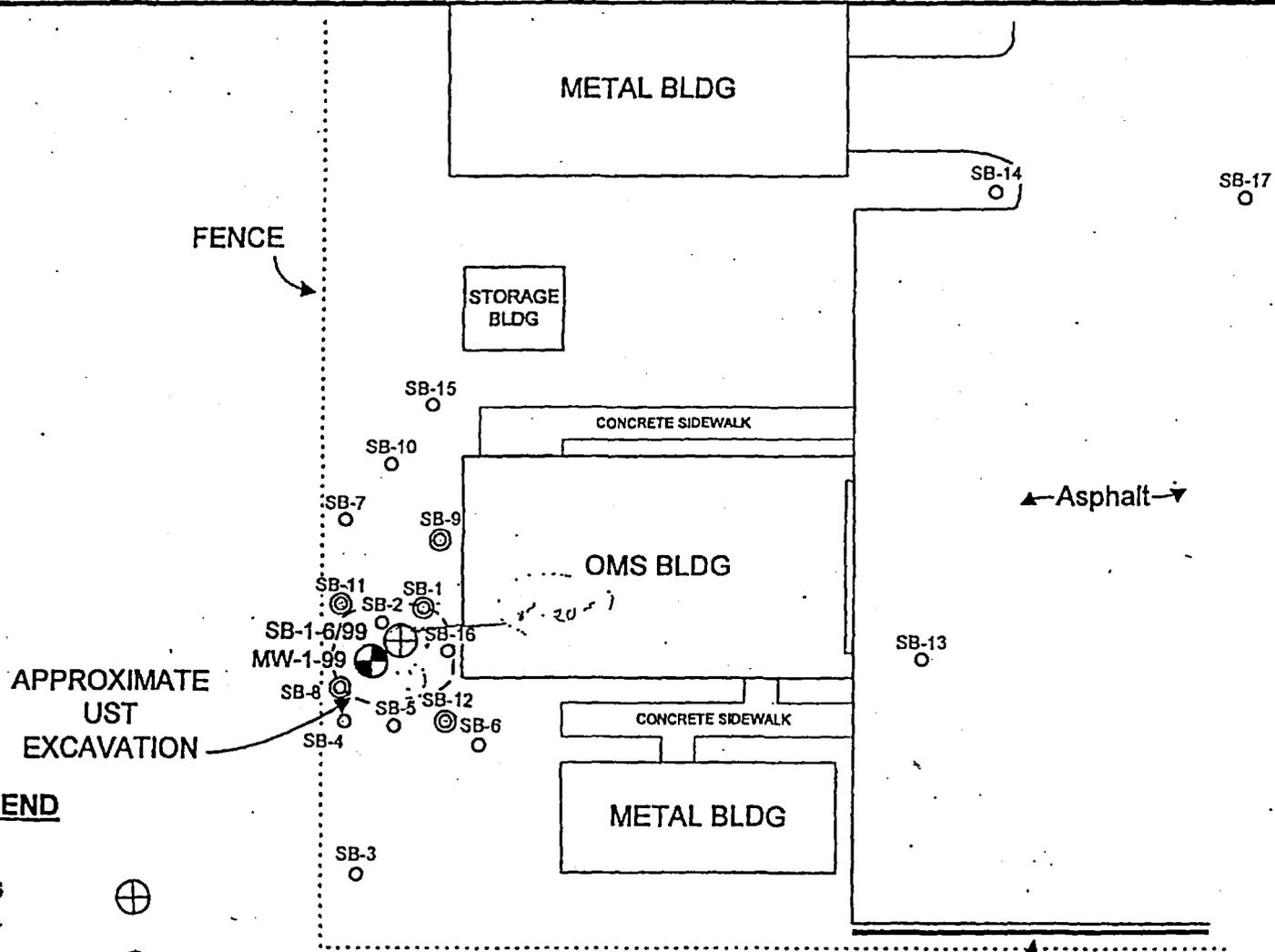


U.S. ARMY RESERVE COMMAND
ARMY RESERVE CENTER, HICKORY, NC

OMS BUILDING
FORMER UST SITE

Figure 4
10 APR - 12 APR 1996 SAMPLING RESULTS

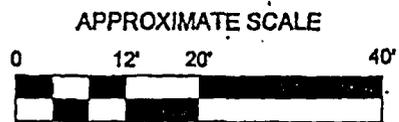
71



APPROXIMATE UST EXCAVATION

LEGEND

- SOIL BORING 
- MONITOR WELL 
- BORING LOCATION W/ HEADSPACE  SB-3
- BORING LOCATION W/LABORATORY SAMPLE  SB-3



U.S. ARMY RESERVE COMMAND
 ARMY RESERVE CENTER, HICKORY, NC

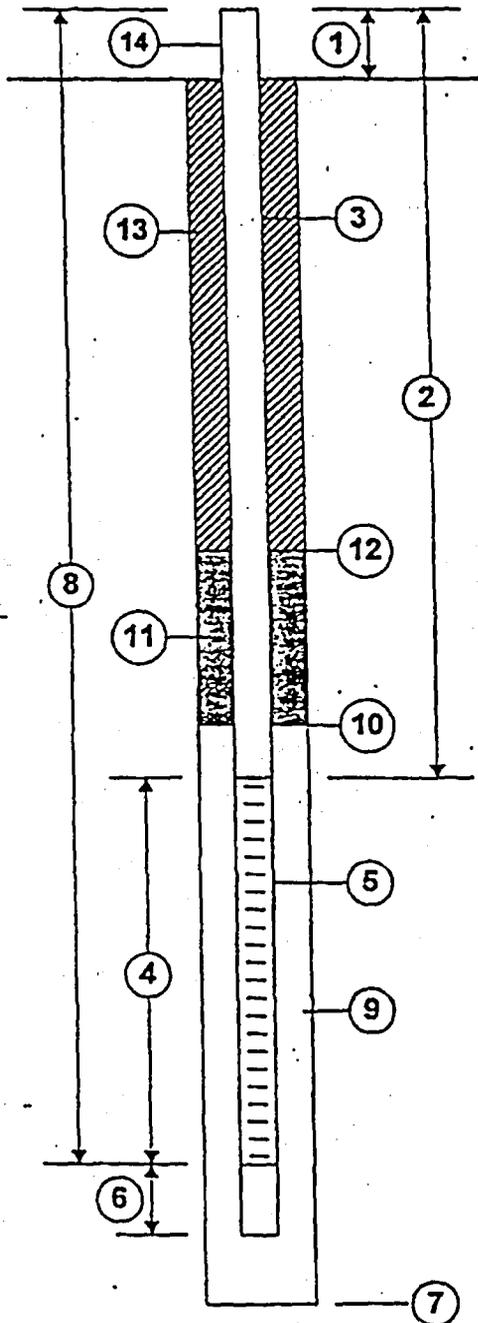
OMS BUILDING
 FORMER UST SITE

Figure 5
 BORING LOCATION PLAN

WELL CONSTRUCTION DETAILS

USARC, HICKORY, NC

WELL NUMBER USARC-MW-1-99
 DATE OF INSTALLATION 07/01/99
 INSTALLED BY H. FULCHER, J. BIDDLE



1. Height of Casing above ground -0.14'
2. Total length of Riser pipe 53.75'
3. Type of Riser pipe 2" ID Schedule 40 PVC Flush Thread "TRILoc"
4. Length of Screen 20.0' (2 x 10')
2" ID Schedule 40 PVC, 0.010"
5. Type of Screen Slotted "Trilac Brand"
0.9' (Includes 0.4' unslotted
Portion of Screen
6. Length of Sump Portion of Screen
7. Depth of Boring 75.5' (Fall in to 74.4')
Diameter of Boring 7.5" to 23.4', 5.2" to 75.5'
8. Depth to Bottom of Screen 73.9' Point to 74.7'
9. Type of filter pack Foster Dixiana Bx-30
Quantity Used 305 Lbs
Size 16-35 Screen Size
10. Depth to Top of Filter Pack 49.0'
11. Type of Seal Volclay® 4" Bentonite tablets
Quantity Used 100 Lbs
12. Depth to Top of Seal 38.5'
13. Type of Grout Bentonite Portland 90 Gallons
Grout Mixture 3-5% / 94 Lbs / 7 Gal H₂O
Method of Placement Tremie to Top of Seal

14. Type of Well Protection 9" Cast Iron Flush maint
Cover in 2' x 2' Concrete Apron. Locking Cap

COMMENTS: Ground Surface Elev: 1073.93

- TOP OF CASING ELEVATION: 1073.79
- Depth to Groundwater: 51.81 (TOC)
- Ground-Water Elevation: 1021.98
- Filter Pack placed to approximately 5 Feet above screen to intercept water bearing zone.
- 26 Feet of 6" PVC casing placed into rock at 24.8' to prevent downward migration of any possible contamination



US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT
GEOLOGY AND HYDROGEOLOGY

SOIL
SAMPLE LOG
DATA SHEET

Project Name: HICKORY NC. USARL MONITORING WELL INSTALLATION
 Sample ID No.: USARC-SB-1-2-6/99 Date: 07/01/99 Time: 1600
 Sample Location: Soil Boring for HW-1 Sampled by: J. Biddle
 Weather Conditions: WARM, HUMID, OVERCAST Temperature: 93°F

ANALYSIS	PERSERVATIVE	NO. OF CONTAINERS
625/8270	NONE (ICE)	1
8260B	HCL (ICE)	3
MADEP EPH	NONE (ICE)	1
MADEP VPH	HCL (ICE)	3
TOTAL NUMBER OF JARS		8

SAMPLING PROCEDURE

- Drill Rig
- Hand Auger
- SCAPS
- Geoprobe
- Other: _____

Explanation of Sampling Method: Drilled to just above sample (17.5') with 4" conf- in uds FLIGHT AUGER. Drove 1 3/8" ID SPUR SPOON TO 19.5' TO obtain sample. Had to Re-drive to get sufficient sample for 8270/MADEPEPH

Soil Classification: (ML) Greenish-yellowish Brown, Micaceous LEAN SILT. SATURATED

Screened: Yes: No: Depth Screened: 17.5-19.5
 Instrument: PID MICRO TIP. Results: 0.0 units

Duplicate Sample: Yes: No:

QA Sample ID No.: _____
 QC Sample ID No.: USARL-SB-1-3-6/99 False Time Assigned 15:30

COMMENTS/LOCATION SKETCH



US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT
GEOLOGY AND HYDROGEOLOGY

SOIL
SAMPLE LOG
DATA SHEET

Project Name: Hickory Nc. USARL HW INSTALLATION
 Sample ID No.: USARL-SB-1-1-6/99 Date: 07 10 1999 Time: 1500
 Sample Location: USARL-HW-1-99 Sampled by: J. Biddk
 Weather Conditions: overcast, Humid Warm Temperature: 90°F

ANALYSIS	PERSERVATIVE	NO. OF CONTAINERS
625/8270	NONE (ICE)	1
9260B	HCL (ICE)	3
MADEP EPH	NONE (ICE)	1
MADEP VPIT	HCL (ICE)	3
TOTAL NUMBER OF JARS		8

SAMPLING PROCEDURE

Drill Rig
 Hand Auger
 SCAPS
 Geoprobe
 Other: _____

Explanation of Sampling Method: Bored to Just above sample w/ 4" continuous flight Auger. Drove 1 3/8" ID SPLITSPAWN 2' From 7.5' TO 9.5'. Took sample from Splitspan.

Soil Classification: (SM) REDDISH-BROWN FINE SILTY SAND, SATURATED

Screened: Yes: No: Depth Screened: 7.5-9.5'
 Instrument: PID. Results: 0.0 units

Duplicate Sample: Yes: No:
 QA Sample ID No.: _____
 QC Sample ID No.: _____

COMMENTS/LOCATION SKETCH

Field Blank (Rinse) taken from Sampling Equipment to be USED for sampling USARL-SB-1-1-6/99



SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

USACE-SAVANNAH DISTRICT 8993
MARK HARVISON
100 WEST OGLETHORPE AVE
SAVANNAH, GA 31402

Lab Number: 99-A98810
Sample ID: USARC-SB-1-1-6/99
Sample Type: Soil
Site ID:

Project:
Project Name: USARMY RESERVE CENTER
Matrix: Soil
% Dry Weight: 75.
Received condition: Good
Sampler: JAMES B.

Date Collected: 7/ 1/99
Time Collected: 15:00
Date Received: 7/ 2/99
Preservative:
Temperature: 4 degrees C
Time Received: 9:00

VPH Initial Calibration Date: 6/ 4/99

Range	NDL	ML	Report Limit (mg/kg)
C5-C8 Aliphatics	0.14	0.433	5.0
C9-C12 Aliphatics	0.05	0.172	5.0
C9-C10 Aromatics	0.012	0.039	5.0

Calibration Range	Level (mg/kg)	CCC
C5-C8 Aliphatics	0.075	
	0.150	
	0.300	
	0.600	
	1.125	0.999
C9-C12 Aliphatics	0.055	
	0.110	
	0.220	
	0.440	
	0.825	0.998
C9-C10 Aromatics	0.010	
	0.020	
	0.040	
	0.080	
	0.100	0.999

Continuing Calibration Check Date: 7/10/99

Range	Level (mg/kg)	ZD
C5-C8 Aliphatics	0.300	0.0
C9-C12 Aliphatics	0.220	2.7
C9-C10 Aromatics	0.040	2.0



SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 99-A98810
Sample ID: USARC-SB-1-1-6/99

Page 2

EPH Initial Calibration Date: 4/28/99

Range	MDL	ML	Report Limit (mg/kg)
C9-C18 Aliphatics	0.3	4.1	10.0
C19-C36 Aliphatics	3.1	10.0	10.0
C11-C22 Aromatics	2.48	7.9	10.0

Calibration Range	Level (mg/kg)	CCC
C9-C18 Aliphatics	5	
	12	
	24	
	30	
	60	0.999
C19-C36 Aliphatics	8	
	16	
	32	
	40	
C11-C22 Aromatics	80	0.999
	8	
	17	
	34	
	68	
	85	0.999

Continuing Calibration Check Date: 7/13/99

Range	Level	%D
C9-C18 Aliphatics	30	4.6
C19-C36 Aliphatics	40	6.7
C11-C22 Aromatics	42.5	2.1



SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

USACE-SAVANNAH DISTRICT B995
MARK HARVISON
100 WEST OGLETHORPE AVE
SAVANNAH, GA 31402

Lab Number: 99-A98B10
Sample ID: USARC-SB-1-1-6/99
Sample Type: Soil
Site ID:

Project:
Project Name: USARMY RESERVE CENTER
Matrix: Soil
% Dry Weight: 75.
Received condition: Good
Sampler: JAMES B.

Date Collected: 7/ 1/99
Time Collected: 15:00
Date Received: 7/ 2/99

Preservative:
Temperature: 4 degrees C
Time Received: 9:00

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Date	Time	Analyst	Method	Batch
VPH C5-C8 Aliphatics	ND	ng/kg	4.34	0.200	50.0	7/10/99	0:04	Ciesielski	VPH-98-1	2056
VPH C9-C12 Aliphatics	ND	ng/kg	4.34	0.200	50.0	7/10/99	0:04	Ciesielski	VPH-98-1	2056
VPH C9-C10 Aromatics	ND	ng/kg	4.34	0.200	50.0	7/10/99	0:04	Ciesielski	VPH-98-1	2056
C9-C18 Aliphatics	ND	ng/kg	10.0	10.0	1.0	7/13/99	22:00	K.Phelps	EPH-98-1	3567
C19-C36 Aliphatics	ND	ng/kg	10.0	10.0	1.0	7/13/99	22:00	K.Phelps	EPH-98-1	3567
C11-C22 Aromatics	ND	ng/kg	10.0	10.0	1.0	7/13/99	22:00	K.Phelps	EPH-98-1	3567
EXTRACTABLE ORGANICS										
Acenaphthene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
Acenaphthylene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
Anthracene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
Benzo(a)anthracene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
Benzo(a)pyrene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
Benzo(b)fluoranthene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
Benzo(g,h,i)perylene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
Benzo(k)fluoranthene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
4-Bromophenylphenylether	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
Butylbenzylphthalate	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
Carbazole	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
4-Chloro-3-methylphenol	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
4-Chloroaniline	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
bis(2-Chloroethoxy)methane	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
bis(2-Chloroethyl)ether	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
bis(2-Chloroisopropyl)ether	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
2-Chloronaphthalene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
2-Chlorophenol	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
4-Chlorophenylphenylether	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
Chrysene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
Dibenzofuran	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
Dibenz(a,h)anthracene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
1,2-Dichlorobenzene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
1,3-Dichlorobenzene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
1,4-Dichlorobenzene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196
3,3'-Dichlorobenzidine	ND	ng/kg	0.880	0.660	1	7/15/99	7:34	N.Goodrich	8270C	2196
2,4-Dichlorophenol	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N.Goodrich	8270C	2196

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SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 99-A98810
Sample ID: USARC-SB-1-1-6/99

Page 2

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Date	Time	Analyst	Method	Batch
Diethylphthalate	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
2,4-Dimethylphenol	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Dimethylphthalate	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Di-n-butylphthalate	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
4,6-Dinitro-2-methylphenol	ND	ng/kg	1.10	0.825	1	7/15/99	7:34	N. Goodrich	8270C	2196
2,4-Dinitrophenol	ND	ng/kg	1.10	0.825	1	7/15/99	7:34	N. Goodrich	8270C	2196
2,4-dinitrotoluene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
2,6-Dinitrotoluene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Di-n-octylphthalate	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Fluoranthene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Fluorene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Hexachlorobenzene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Hexachlorobutadiene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Hexachlorocyclopentadiene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Hexachloroethane	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Indeno(1,2,3-cd)pyrene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Isophorone	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
2-Methylnaphthalene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
2-Methylphenol	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
m,p-Methylphenol	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Naphthalene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
2-Nitroaniline	ND	ng/kg	1.10	0.825	1	7/15/99	7:34	N. Goodrich	8270C	2196
3-Nitroaniline	ND	ng/kg	1.10	0.825	1	7/15/99	7:34	N. Goodrich	8270C	2196
4-Nitroaniline	ND	ng/kg	1.10	0.825	1	7/15/99	7:34	N. Goodrich	8270C	2196
Nitrobenzene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
2-Nitrophenol	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
4-Nitrophenol	ND	ng/kg	1.10	0.825	1	7/15/99	7:34	N. Goodrich	8270C	2196
N-nitrosodi-n-propylamine	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
N-nitrosodiphenylamine	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Pentachlorophenol	ND	ng/kg	1.10	0.825	1	7/15/99	7:34	N. Goodrich	8270C	2196
Phenanthrene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Phenol	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Pyrene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
Bis(2-ethylhexyl)phthalate	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
1,2,4-Trichlorobenzene	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
2,4,5-Trichlorophenol	ND	ng/kg	1.10	0.825	1	7/15/99	7:34	N. Goodrich	8270C	2196
2,4,6-Trichlorophenol	ND	ng/kg	0.440	0.330	1	7/15/99	7:34	N. Goodrich	8270C	2196
VOLATILE ORGANICS										
Acetone	ND	ng/kg	0.0133	0.0100	1	7/ 6/99	21:55	K. Hill	82608	1873
Acrolein	ND	ng/kg	0.0133	0.0100	1	7/ 6/99	21:55	K. Hill	82608	1873
Acrylonitrile	ND	ng/kg	0.0133	0.0100	1	7/ 6/99	21:55	K. Hill	82608	1873
Benzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K. Hill	82608	1873
Bromobenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K. Hill	82608	1873
Bromochloromethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K. Hill	82608	1873
Bromoform	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K. Hill	82608	1873



SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 99-A98810
Sample ID: USARC-SB-1-1-6/99

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Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Date	Time	Analyst	Method	Batch
Bromomethane	ND	ng/kg	0.0133	0.0100	1	7/ 6/99	21:55	K.HILL	82608	1873
2-Butanone	ND	ng/kg	0.0133	0.0100	1	7/ 6/99	21:55	K.HILL	82608	1873
n-Butylbenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
sec-Butylbenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1-Butylbenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Carbon disulfide	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Carbon tetrachloride	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Chlorobenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Chloroethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1-Chloroethylvinylether	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Chloroform	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Chloromethane	ND	ng/kg	0.0133	0.0100	1	7/ 6/99	21:55	K.HILL	82608	1873
2-Chlorotoluene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
4-Chlorotoluene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1,2-Dibromo-3-chloropropane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Dibromochloromethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1,2-Dibromoethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Dibromomethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1,4-Dichloro-2-butene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1,2-Dichlorobenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1,3-Dichlorobenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1,4-Dichlorobenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Dichlorodifluoromethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1,1-Dichloroethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1,2-Dichloroethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1,1-Dichloroethene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
cis-1,2-Dichloroethene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
trans-1,2-Dichloroethene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1,2-Dichloropropane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1,3-Dichloropropane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
2,2-Dichloropropane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
1,1-Dichloropropene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
cis-1,3-Dichloropropene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
trans-1,3-Dichloropropene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Ethylbenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Hexachlorobutadiene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
2-Hexanone	ND	ng/kg	0.0133	0.0100	1	7/ 6/99	21:55	K.HILL	82608	1873
Iodomethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Isopropylbenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
4-Isopropyltoluene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Methyl methacrylate	ND	ng/kg	0.0067	0.0050	1	7/ 6/99	21:55	S. Ward	82608	3900
4-Methyl-2-pentanone	ND	ng/kg	0.0133	0.0100	1	7/ 6/99	21:55	K.HILL	82608	1873
Methylene chloride	ND	ng/kg	0.0067	0.0050	1	7/ 6/99	21:55	K.HILL	82608	1873
Naphthalene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
n-Propylbenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873
Styrene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.HILL	82608	1873



SPECIALIZED ASSAYS, INC.

1960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 99-A98810
Sample ID: USARC-SB-1-1-6/99

Analyte	Result	Units	Report Limit	Ruan Limit	DII Factor	Date	Time	Analyst	Method	Batch
1,1,1,2-Tetrachloroethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
1,1,2,2-Tetrachloroethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
Tetrachloroethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
Toluene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
1,2,3-Trichlorobenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
1,2,4-Trichlorobenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
1,1,1-Trichloroethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
1,1,2-Trichloroethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
Trichloroethene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
1,2,3-Trichloropropane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
1,2,4-Trimethylbenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
1,3,5-Trimethylbenzene	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
Vinyl acetate	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
Vinyl chloride	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
Xylenes	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
Bromodichloromethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
Trichlorofluoromethane	ND	ng/kg	0.0027	0.0020	1	7/ 6/99	21:55	K.Hill	82608	1873
Methyl-t-butyl ether	ND	ng/kg	0.0133	0.0050	1	7/ 6/99	21:55	K.Hill	82608	1873

ND = Not detected at the report limit.

Sample Extraction Data

Parameter	Nt/Vol Extracted	Extract Vol	Date	Analyst	Method
EPH	10.0 gm	1.0 ml	7/ 8/99	Fitzwater	MADEP
SHA's	30.0 gm	1.0 ml	7/ 6/99	Fitzwater	3530
Volatile Organics	4.9 g	5.0 ml	7/ 2/99	K. Hurt	5035
UPH Prep	28.8 g	25.0 ml	7/ 3/99	Ciesielski	5035

Surrogate	% Recovery	Target Range
UPH Surr., PID	123.	70. - 130.
UPH surr., FID	125.	70. - 130.
surr-1,2-Dichloroethane, d9	77.	48. - 160.
surr-Toluene d8	103.	79. - 119.
surr-4-Bromofluorobenzene	94.	69. - 135.
surr-Nitrobenzene-d5	52.	20. - 110.
surr-2-Fluorobiphenyl	62.	18. - 110.
surr-Terphenyl d14	88.	27. - 128.
surr-Phenol d5	65.	10. - 111.

COPY

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

DIVISION OF WASTE MANAGEMENT

November 19, 1999



Department of the Army
81st Regional Support Command
FAST #2
13000 Jackson Boulevard
Fort Jackson, South Carolina 29207
Attention: Mr. Jim Adair

RE: Limited Site Assessment
Phase One Results
No Further Action Required

U.S. Army Reserve Center
1500 12th Street Drive Northwest
Hickory, NC
Incident #08399
Catawba County

Dear Mr. Adair:

The Underground Storage Tank Section of the Division of Waste Management at the Mooresville Regional Office has received the laboratory analyses from the samples collected during the Phase I LSA for one 500 gallon (#2 fuel oil) UST system at the above referenced facility. The Phase I LSA report arrived on September 9, 1999. Based on the reported results and more detailed information provided on November 18, 1999, no further action is required at this time. Should you have any questions, please do not hesitate to call me at (704) 663-1699, ext. 235.

Sincerely,

Steve Barbee

Discussed with 52 women + Carol before 11/19/99

Steve Barbee
Hydrogeological Technician II

cc: Fay Sweat - UST Section, Raleigh

