712SERBSF10,639

712SERBSF10,639

Site Name (Subject):	USA RESERVE XVIII AIRBORNE CORPS
Site ID (Document ID):	NC9210022787
Document Name (DocType):	Preliminary Assessment/Site Inspection (PA/SI)
Report Segment:	
Description:	Preliminary Assessment II (PA II)
Date of Document:	9/20/2005
Date Received:	
Box: *Enter SF and # with no spaces*	SF10,639
Access Level:	PUBLIC
Division:	WASTE MANAGEMENT
Section:	SUPERFUND
Program (Document Group):	SERB (SERB)
Document Category:	FACILITY

Print Report for Record | **Go to New Blank Record** | **Go to New Record - (default to last record values)** | **Delete Record**

NCDENR

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

September 20, 2005

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 (Durham #2)
Durham, Durham County, NC
US EPA ID: NC9 210 022 787

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 (Durham #2) located in Durham, Durham 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 Durham #2 USAR Center) on Foster Street, Durham, NC is located at 724 Foster Street, Durham NC 27701. It is located at the north central end of downtown Durham just north of the Geer Street intersection with Foster Street (Ref. 1). Corresponding geographic coordinates for the facility are 36.0040 north latitude and 78.9011 west longitude (Ref. 1). This site consists of a 0.9-acre parcel with an approximate 29,900 square foot two-story training and assembly building (Ref. 2). The surrounding area is a mixture of commercial/industrial and residential property (Ref. 1). The site itself is bordered by a vacant field to its east (Ref. 3).

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This center has been active since its construction in 1928. Reportedly, no maintenance activities were conducted at this facility. The center was used solely as an administrative facility (Ref. 2). 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.

Two 1,000 gallon underground storage tanks were excavated and removed in April 1993. These tanks were formerly used to store heating fuel oil and were located along the outer eastern wall of the building. Soil staining and petroleum odors were noted during the excavation and total petroleum hydrocarbons were initially detected in the 140 ppm range. The final excavation resulted in the removal of 103 tons of soil for offsite disposal. Analytical results indicated no detection of petroleum hydrocarbons in confirmation samples obtained at 9 feet below land surface. Neither free product nor groundwater was encountered during the excavation (Ref. 6). No other incidents or regulatory actions are currently known regarding this site.

This reserve center was sold to the City of Durham in 2002. The administrative activities of this center were transferred to the other US Army Reserve Center on Carroll Street in Durham. The City of Durham then leased the property to a charter elementary school called the Central Park School for Children and sold the property to that school in the latter part of 2003. The school is the current site owner (Ref. 3).

Based on current information, the site's operations have been limited to administrative functions and training. There is no history of significant releases. 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)
Memorandum dated May 16, 2005 with Email Attachment (Reference 2)
Durham County GIS Property Aerial Image (taken 1999) (Reference 3)
Letter dated August 11, 1990 (Reference 4)
Letter dated August 27, 1991 (Reference 5)
Excerpts from UST Closure Report (Reference 6)

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:	**Serafino Franch /Environmental Chemist**	**Sept. 16, 2005**
	Name/Title	Date
	NCDENR-Superfund Section	**919-508-8455**
	Address	Phone
	Serafino.franch@ncmail.net	
	E-mail Address	

Site Name:	**USA Reserve XVIII Airborne Corps (Durham #2)**		
Previous Names (if any):	**AKA Durham #2 USAR Center**		
EPA ID #	**NC9 210 022 787**		
Site Location:	**724 Foster Street, Durham, Durham County, NC**		
Latitude:	**36.0040°**	**Longitude:**	**78.9011°**

Describe the release (or potential release) and its probable nature:

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 review of what was known about the routine activities conducted at Army Reserve Centers. These activities included routine vehicle maintenance that had the potential for accidental spills of petroleum-based hazardous substances that might impact nearby human and environmental targets. It was later learned that this site was solely an administrative facility with no vehicle maintenance activities.**
3. **A small release from a underground storage tank containing heating oil was discovered following the excavation of this tank. Post-excavation analytical results indicated that no detectable petroleum products remained in the soil.**

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).

6. The site was solely an administrative office facility with no vehicle maintenance activities. A minor heating oil release that resulted in contaminated soil has been excavated resulting in no detectable residual petroleum products.
7. No known CERCLA eligible substances have been released.

Part 3 - State Site Assessment Recommendation

Check the box that applies based on the conclusions of the APA:

- [X] NFRAP
- [ ] Higher Priority SI
- [ ] Lower Priority SI
- [ ] Defer to RCRA Subtitle C
- [ ] Defer to NRC
- [ ] Refer to Removal Program - further site assessment needed
- [ ] Refer to Removal Program – NFRAP
- [ ] Site is being addressed as part of another CERCLIS site
- [ ] Other:

State Reviewer: **Serafino Franch** Serafino Franch — Print Name/Signature

09/16/05 — Date

REFERENCE 1

USA Reserve XVIII Airborne Corps-Durham #2
NC9 210 022 787

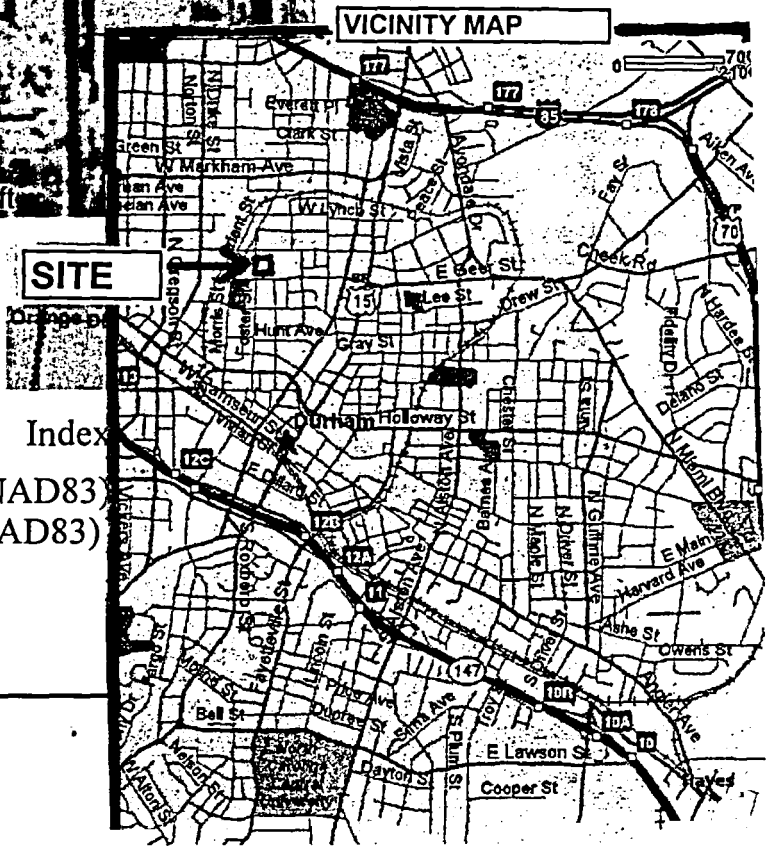
Map for 724 Foster St 27701

Location of 724 Foster St 27701

1:4,000 1998 AERIAL

Northwest Durham
7.5-minute Quadrangle

NC SPCS E: 618516.3, N:250049.2 meters (NAD83)
Long: -78.9011138 W, Lat: 36.0040025 N (NAD83)


VICINITY MAP
SITE
Index
Durham
Everett Pl
Clark St
W Markham Ave
W Lynch St
E Geer St
Lee St
Crew St
Hunt Ave
Gray St
Holloway St
Harvard Ave
Ashe St
Owens St
Ball St
E Lawson St
Cooper St
Dayton St
Hayes
Delano St
Miami Blvd
Cheek Rd
Fayetteville St
Mangum St
Duke St
Alston Ave
Pine St
Plum St
Dupree St
Mangum St
Roxboro St
Foster St
Morris St
Mimosa St
Nelson St
Alton St
Pettigrew St
Vivian St
Ellington St
Ellington Dr
Hardee St
Avon Ave
Ivy St
Cole St
Dillard St
Dillard Dr
Ruby St
Ellington St
Pettigrew St
Vivian St
Nelson St
Alton St
Mangum St
Roxboro St
Fayetteville St
Morris St
Mimosa St
Foster St
Duke St
Alston Ave
Pine St
Plum St
Dupree

REFERENCE 2

MEMORANDUM

TO: File

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

S. Franch

DATE: May 16, 2005

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 Facilites 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 recyleable and non-recyled 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 coversion 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.

REFERENCE 3

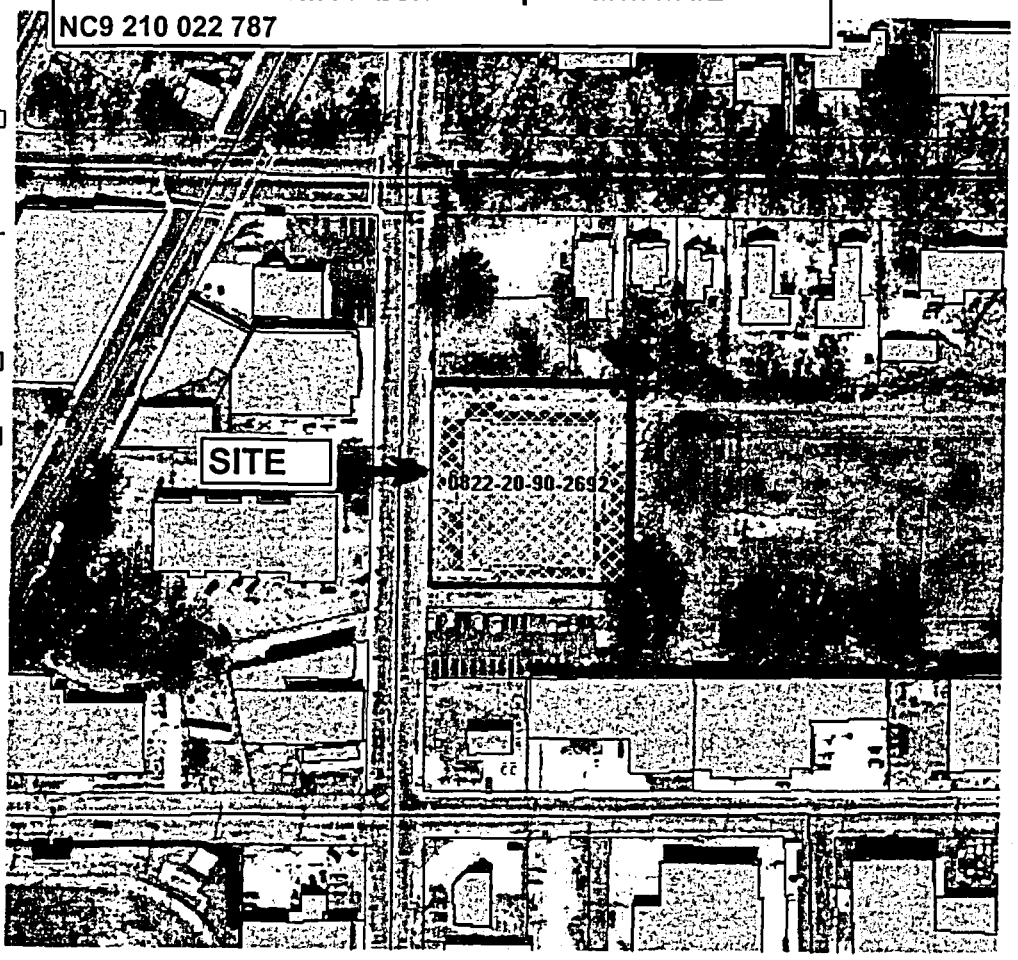
Durham Spatial Data Explorer Print Layout

USA Reserve XVIII Airborne Corps-Durham #2
NC9 210 022 787

Boundary
- Tax Parcels

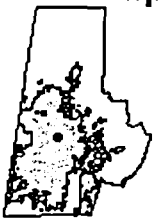
Infrastructure
- Street Centerlines

Physical
- 1994 Building Footprints
- 1999 Aerial Photography



One Inch = 176 Feet
Feet 100 200 300

Locator Map



Maps and other data in Spatial Data Explorer were developed from public records and data sources including recorded deeds, plats, and other public records. Users of this map are hereby notified that the aforementioned public primary information sources should be consulted for verification of the information contained on this website. While efforts have been made to use the most current and accurate data, Durham County The City of Durham, NC and the mapping and software companies assume no legal responsibility for

- *Parcel No. (PIN):* 0822-20-90-2692
- *Parcel-ID (6-Digit):* 105017
- *Tax Map No. (Obsolete):* 062 -03-002 -
- *Acreage:* .891
- *Front Dimension:* 203.30
- *Land Use Code:* 612
- *Land Use Description:* COMM SVC/ SCHOOL
- *District Code:* 1
- *Subdivision:* N/A - NO SUBDIVISION
- *Land Value:* $135,841.00
- *Building Value:* $1,158,212.00
- *Total Value:* $1,294,053.00
- *Deed Book / Page:* 004231 / 000073
- *Plat Book / Page:* 000129 / 000137
- *Owner Name:* CENTRAL PARK SCHOOL FOR CHILDREN
- *Owner Address:* 724 FOSTER ST DURHAM NC 27701
- *Property Address:* 724 FOSTER ST

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

REFERENCE 4

RECEIVED
AUG 1 1990
SUPERFUND SECTION

AUG 1 4 1990

4WD-RCRA & FF

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

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

REFERENCE 5

AUG 27 1991

RECEIVED

SEP 09 1991

HAZARDOUS WASTE SECTION

WD-RCRA & FF

Certified Mail
Return Receipt Requested

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).

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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, 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

REFERENCE 6

RECEIVED
JUN 11 1993
DEHNR-RAL RO

UST Closure and Site Investigation Report

U.S. Army Reserve Center
724 Foster Street
Durham, North Carolina
ENSCI Job #S92110
Solicitation #DACA54-92-B-0085

Prepared for
U.S. Army Corps of Engineers
Wake Forest, North Carolina

May 25, 1993

Chris Boggs
Environmental Scientist

Henry M. Havener
Project Manager

ENSCI Environmental, Inc.
1108 Old Thomasville Road
High Point, North Carolina 27260
(919) 883-7505

1. Introduction

ENSCI Environmental was contracted by the U.S. Army Corps of Engineers to remove a 1,000-gallon underground storage tank (UST) from the U.S. Army Reserve Center, 724 Foster Street, Durham, North Carolina (see Figure 1). This was performed on January 27, 1993. During removal of the UST, another UST was encountered, and subsequently removed on April 29, 1993. The USTs had been used to store #2 heating oil for consumptive use on the premises. They will be replaced with a new above-ground system.

This UST Closure and Site Investigation Report will satisfy state and federal requirements under 40 CFR 280.72 and 15A NCAC 2N .0803. In connection with these requirements, a Site Investigation Report for UST Closure (form GW/UST-2) is included as Appendix A.

2. Scope of Work

In order to perform permanent closure of the USTs in accordance with state and federal requirements, ENSCI developed the following scope of work:

- Submitting all necessary state and local regulatory notifications
- Removing and disposing of the USTs
- Performing any necessary release prevention or mitigation
- Conducting field screening in order to identify any potentially petroleum hydrocarbon-impacted soil and determine the extent of excavation
- Performing site characterization

3. Preparation for UST Removal

Prior to removal of the USTs, all necessary notifications were filed with state and local authorities. They included a 30-day notification which was submitted to the DEHNR.

After each mobilization to the site, asphalt, gravel, and soil above the USTs was removed until the point at which the top of the tank was exposed (approximately 2 feet below grade for each UST). All product lines leading from UST #1 were disconnected

and removed. There were no product lines associated with UST #2, which had apparently been taken out of service and filled with sand. The lines leading from UST #1 into the building were 0.5-inch diameter copper lines.

For safety, the internal atmosphere of the USTs was tested with a lower explosive level meter (explosimeter) before additional activity. The vapors inside the tanks were measured to be less than 10 percent of the lower explosive limit. Therefore, it was not necessary to purge the tanks, and it was determined to be safe to continue with removal. The lower explosive level meter was used periodically to monitor the vapors during all site activities involving the USTs.

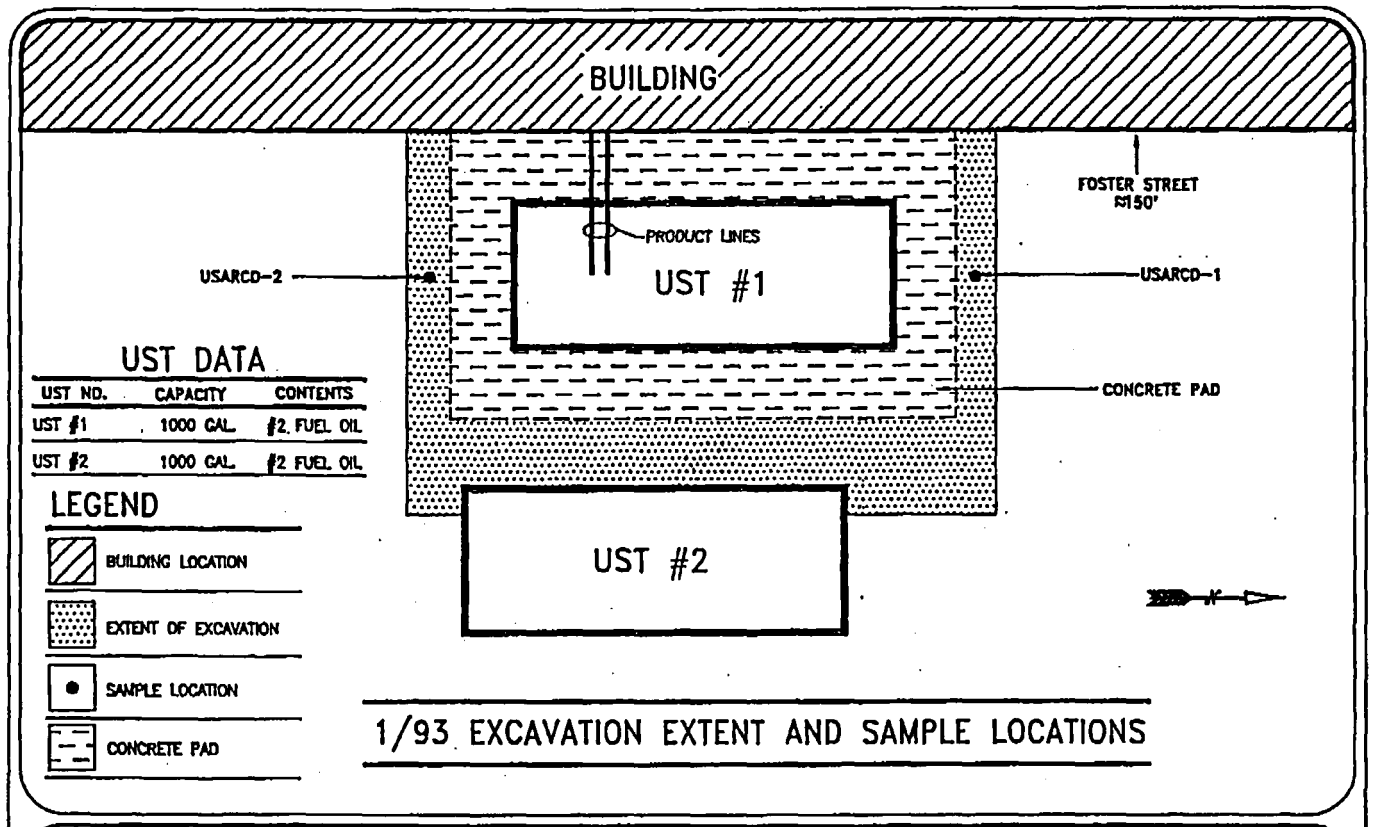
Residual liquids which remained in UST #1 (701 gallons) were pumped out by ENSCI using a vacuum truck and transported for offsite disposal at Environmental Compliance Corporation (EPA ID #NCD 986166551). No residual liquids remained in UST #2.

4. UST Removal and Disposal

The USTs which were removed from the U.S. Army Reserve Center were approximately 4 feet in diameter by 10 feet, 6 inches in length. They were located adjacent to the armory building, as illustrated in **Figure 2**. During each of the removal events, excavation proceeded to the depth of the bottom of the subject tank. At that point, the UST was removed, cleaned of debris, and inspected by ENSCI personnel for any indications of a release. In order to remove UST #2, one end of the tank was removed and the sand inside the tank was removed and stockpiled onsite in accordance with DEHNR guidelines for temporary staging. Results of inspection are illustrated in Table 1.

Table 1: UST Condition

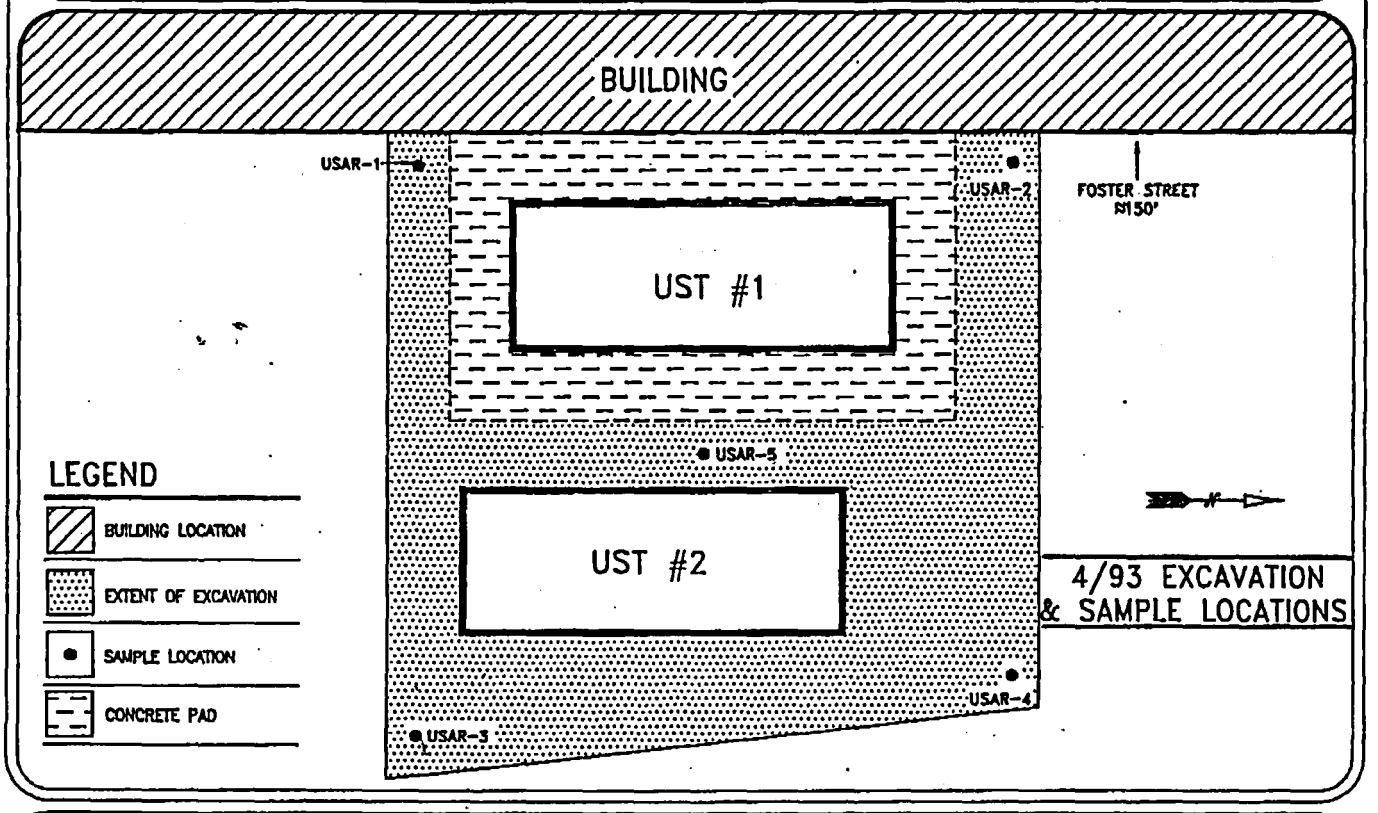
UST #/Former Contents	Capacity/Dimensions	Condition
UST #1 #2 fuel oil	1,000 gallons 10'6" x 4'	extensive corrosion, numerous holes up to 0.5" in diameter
UST #2 #2 fuel oil	1,000 gallons 10'6" x 4'	extensive corrosion, numerous holes up to 0.5" in diameter



UST DATA

UST NO.	CAPACITY	CONTENTS
UST #1	1000 GAL.	#2 FUEL OIL
UST #2	1000 GAL.	#2 FUEL OIL

1/93 EXCAVATION EXTENT AND SAMPLE LOCATIONS



4/93 EXCAVATION & SAMPLE LOCATIONS

ENVICI® ENVIRONMENTAL, INC. HIGH POINT, N.C.

U.S. ARMY RESERVE CENTER	1"=5'
724 FOSTER STREET	5/12/93
DURHAM / NORTH CAROLINA	USARC-D
UST/SAMPLE LOCATION MAP	2

DJ
CB
S92110
TANK PULL

0 2.5 10
GRAPHIC SCALE IN FEET

Following inspection, each tank was labelled in preparation for transporting it to the disposal facility. UST #1 was disposed of at Safeway Tank Disposal. Residuals which remained in the tank were also disposed of by Safeway, EPA ID # NCD 986171494. UST #2 was disposed of at Mid-East Industrial in Carthage, North Carolina. There were no residuals remaining in the tank. Certificates of Disposal for the USTs are included in Appendix B.

5. Field Observations and Screening

Throughout each excavation event, soil was screened visually and with an Organic Vapor Analyzer (OVA) to determine the potential presence or absence of petroleum hydrocarbons. The OVA detects airborne flame ionizable gases and vapors on a scale from 0 to 2,500 parts per million, relative to the calibration gas. Results are illustrated in Table 2.

Table 2: Field Observations and Screening
OVA results in parts per million (ppm)

UST/Date	Observations
UST #1 1/27/93	No odor or visible evidence of a release in cover material or in vicinity of product lines. However, soil staining and odor surrounding tank. Concrete pad encountered. OVA screening levels 200 ppm and 70 ppm, respectively, on north and south ends of concrete pad. No free product or groundwater encountered.
UST #2 4/29/93	No odor or visible evidence of a release in cover material. Soil staining and odor surrounding tank. No free product or groundwater encountered.

As indicated in Table 2, an underground concrete pad to which UST #1 was attached was encountered during removal of this tank (see Figure 2). UST #2 was encountered immediately adjacent to UST #1. Following removal of UST #1 and sample collection (discussed in Section 6), activity was discontinued pending a decision by the U.S. Army Corps of Engineers concerning action on UST #2. During this time, the excavation remained open.

4

Based on the results of initial sampling (see Section 6), additional excavation was conducted in the vicinity of UST #1 at the time of removal of UST #2. The concrete pad beneath UST #1 was removed at this time. In addition, ENSCI excavated to remove potential contamination encountered in the immediate vicinity of UST #2. Excavation was discontinued when evidence of petroleum hydrocarbon contamination was no longer apparent and OVA readings had diminished to 40 parts per million.

The final excavation size was 16 feet by 18 feet by 8 feet deep. Neither groundwater nor free product were encountered.

All soil removed during each excavation event, in addition to the sand removed from UST #2, was stockpiled on polyethylene sheeting in accordance with DEHNR guidelines for temporary staging. Following a second round of sample collection, the excavation was backfilled with clean soil, and asphalt was replaced. Approximately 103 tons of stockpiled soil were removed by Terradyne Environmental Services, Inc. for offsite disposal (see disposal manifests, Appendix B).

6. Soil Sampling

6.1 Soil Sample Collection Procedure

As part of the limited site assessment required under 40 CFR 280.72 and 15A NCAC .0803, ENSCI collected samples of native soil from locations discussed below. When sampling equipment was reused, personnel used the following procedure in order to prevent cross-contamination:

1. Wash with nonphosphate detergent and water, brush to remove particulate matter.
2. Rinse with tap water.
3. Rinse with 10 percent nitric acid solution.
4. Rinse with deionized water.
5. Rinse with pesticide-grade isopropyl alcohol.
6. Rinse with deionized water.
7. Air dry as long as possible.

As an additional measure in preventing cross-contamination, latex gloves were worn by the sampling technician during these activities. Gloves were changed between samples.

The samples were packed in ice and maintained at 4°C during shipment to Law & Company in Wilmington, North Carolina for analysis. Chain of custody forms and

analytical reports are included in Appendix C. Results are discussed in the sections that follow.

6.2 Analytical Methods and Results

Soil sampling at the time of the removal of UST #1 consisted of the collection of two samples located approximately 6 feet, 6 inches feet below grade, or 6 inches beneath each end of the concrete pad (see Figure 2). The samples were analyzed for total petroleum hydrocarbons using EPA Methods 3550 and 5030. These analyses were chosen in accordance with DEHNR guidelines specified in the document *Guidelines for the Remediation of Soil Contaminated by Petroleum*. Results are presented in Table 3, and a copy of the original laboratory report is included as Appendix C. Note that samples USARCB-1 and USARCB-2, which are included in the laboratory report, were not collected at the subject site and are unrelated to this report.

Table 3: Initial Analytical Results
Total Petroleum Hydrocarbons in parts per million (ppm)

Sample #	EPA Method 5030	EPA Method 3550
USARCD-1	<10*	100
USARCD-2	<10*	142

* Not detected in excess of the practical quantitation limit for this analysis (10 parts per million).

As illustrated in Table 3, total petroleum hydrocarbons via EPA Method 3550 were detected during this sampling event. As a result of these analytical findings, ENSCI excavated the underground concrete pad and additional soil surrounding UST #1 at the time of removal of UST #2 (see Section 5).

Following these activities, confirmation samples were collected throughout the excavation from the locations illustrated in Figure 2 to ensure that all impacted soil had been removed. These samples were collected from native soil located approximately 9 feet below grade. Results are illustrated in Table 4 (see also Appendix C).

Table 4: Final Soil Sampling Results
Total Petroleum Hydrocarbons in parts per million

Sample	EPA Method 5030	EPA Method 3550
USAR-1	<10*	<10*
USAR-2	<10*	<10*
USAR-3	<10*	<10*
USARC-4	<10*	<10*
USARC-5	<10*	<10*

* No detection in excess of the practical quantitation limit of 10 parts per million.

As illustrated in Table 4, results of laboratory analysis indicated no detection of total petroleum hydrocarbons using either of the chosen methodologies.