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Site Name (Subject): USA RESERVE XVIII AIRBORNE CORPS

Site ID (Document ID): NC8210021624

Document Name (DocType): Preliminary Assessment/Site Inspection (PA/SI)

Report Segment:

Description: Preliminary Assessment II (PA II)

Date of Document: 4/27/2006

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

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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

April 27, 2006

Ms. Donna Webster
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.-Rocky Mount
Rocky Mount, Edgecombe County, NC
US EPA ID: NC8 210 021 624

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-Rocky Mount Site located just northeast of downtown Rocky Mount, Edgecombe 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 in Rocky Mount, NC is located on 804 Fairview Road, Rocky Mount, NC 27801. This location is about 1.0 mile northeast of the central business district of downtown Rocky Mount, near the northwest corner of the intersection with Nutrition Street (Refs.1;2).

Corresponding geographic coordinates for the facility are 35.9414 north latitude and 77.7758 west longitude (Ref. 1). This site consists of a 5-acre parcel with an approximate 16,000 square foot training and assembly building, a 3,400 square foot

vehicle maintenance shop and a storage building (Refs. 2;3). The north-south trending section of the original T-shaped training and assembly building was demolished some time after 1993. The current building was added onto the original west-wing that resulted in a larger complex. The site is located adjacent to a creek along its northern and western perimeter. This adjacent land is owned by Pineview Cemetery (Ref. 2). Beyond this cemetery are residential areas. There is a mix of commercial and residential areas to the site's east and south (Ref. 1).

This center has been active since its construction in 1956. 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 1988. 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 3,000-gallon heating oil underground storage tank (listed as tank A and B) were excavated and removed by October of 1990 (Ref. 6). These tanks were located at the northeast corner of the west-wing of the original training building (Ref. 2). Tank B was about 36 years old and had been abandoned in place in 1981. Tank A replaced Tank B. Both tanks had pitting at the bottom. Tank A had base trench soil levels ranging from 27-770 ppm of Total Petroleum Hydrocarbons (TPH). The 770 ppm area consisted of distillates that are found in gasoline (Ref. 6). The base trench soils of Tank B were not collected since groundwater seeped into the pit at 10.5 feet below grade. Pit wall samples were collected from both pits at 9 feet below land surface (bls). The wall between Tank A and B had 87 ppm TPH. The wall excavation continued until residual TPH readings were 10 ppm or less. About half of the 600 cubic yards of excavated stockpiled soil was transported for off-site disposal. The maximum levels encountered in this excavated stockpile were 390 ppm of TPH (Ref. 7).

Because of the proximity of the contaminated soil to the groundwater table, three monitoring wells were installed downgradient of the former UST's location (Ref. 2). All three wells were screened from 5 to 15 feet bls (Ref. 8). Groundwater samples were collected on September 1992 and January 1993. Only low levels (2.7 to 2.8 ppb) of

naphthalene were detected in MW-1 and MW-3 in the January sampling. BTEX compounds were not detected in either event (Ref. 8). Increasing levels of Methyl tertiary butylether (MTBE) were detected in MW-2 ranging from 6-40 ppb. MW-3 had 20 ppb of MTBE in the January sampling, but was not detected in the September event. Table 1 below illustrates these results. This presence of MTBE suggests that there may have been a gasoline spill. These levels of MTBE are below the 200 ppb of the NC groundwater standards, but above the Region 9 PRG's of 11 ppb for cancer screening levels. The levels for Naphthalene are above the Region 9 PRG's of 0.093 ppb for cancer screening levels, but below all other standards. Based on these results, a No Further Action letter was granted by the NC Underground Storage Tank Section in June of 2001 classifying the release as a low risk (Ref. 9).

Table 1. Comparison of Groundwater Contaminant Levels from 1992-1993. Units= ug/liter (ppb)

| Sample ID | Contaminants | Sept. 1992 | Jan. 1993 | Federal Region 9 PRGs + | NC 2L Standards++ | Detection Limit |
|-----------|--------------|------------|-----------|-------------------------|-------------------|-----------------|
| MW-1 | Naphthalene | 2.8 | ND | 0.093ca 6.2 nc | 21 | 1.1 |
| | MTBE | 3.3 | <10 | 11.0 ca 5,200 nc | 200 | 1.2 |
| MW-2 | Naphthalene | ND | ND | | | |
| | MTBE | 6.4 | 40 | | | |
| MW-3 | Naphthalene | 2.7 | NA | | | |
| | MTBE | ND | 20 | | | |

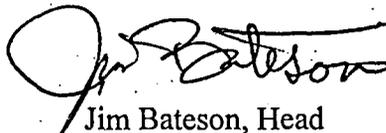
Bold values indicate most recent data. ++ = NC Aquifer Protection Section 2L Standards. + = Region 9 Preliminary Remediation Goals (Tap Water). ca= Cancer-based PRG. nc= Noncancer-based PRG. ND= Not Detected. NA= Not Analyzed.

Current information indicates that the site's operations have been limited to the generation of small quantities of spent petroleum products. The petroleum-based contaminated soil due to the release from two heating oil tanks has been removed and shipped off site. Only naphthalene and MTBE remain in the groundwater below NC 2L health benchmark standards based on the analytical data from the January 1993 sampling event. There are no known groundwater users in the surrounding area. A review of the Rocky Mount Water Distribution System indicates that the entire one-mile radius area around the site is served by city water. 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)
Edgecombe County GIS Property Aerial Image (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 UST Closure Assessment Report (Reference 6)
Excerpts from UST Soil Quality Assessment Report (Reference 7)
Excerpts from UST Environmental Investigation Report (Reference 8)
Letter dated June 11, 2001 from UST Section (NFA letter) (Reference 9)

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 March 31, 2006
 Name/Title NCDENR-Superfund Section Date 919-508-8455
 Address serafino.franch@ncmail.net Phone
 E-mail Address

Site Name: USA-Reserve XVIII Airborne Corps-Rocky Mount
 Previous Names (if any):
 EPA ID # NC8 210 021 624
 Site Location: 804 Fairview Road, Rocky Mount, Edgecombe County, NC
 Latitude: 35.9414° N Longitude: 77.7758° W

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.

- 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.
- A release from two 3,000 gallon underground storage tanks containing heating oil was discovered following the excavation of these tanks in 1990. This release contaminated (27-770 ppm TPH) a soil area along the walls of one tank and below both tanks. This source was removed in October of 1990. Because of the proximity of the contaminated soil depth to the water table (WT=10.5 feet below grade), three downgradient monitoring wells indicated in 1993 that groundwater had low levels of Naphthalene (2.8 ppb) and MTBE (ranging from 20-40 ppb) contamination. The MTBE suggests that an undocumented gasoline release may have occurred.

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. Documented on-site sub-surface contamination consisting of 27-770 ppm TPH (pre-removal) is regulated under a statutory exclusion. Two CERCLA eligible substances (naphthalene at 2.8 ppb and MTBE at 40 ppb) have been found in groundwater.
7. The uncontained source (heating oil) has been removed. The releases consisted of heating oil and possibly an undocumented gasoline release that resulted in residual groundwater contamination when last sampled in 1993. Please see #6 above.

Part 3 - State Site Assessment Recommendation

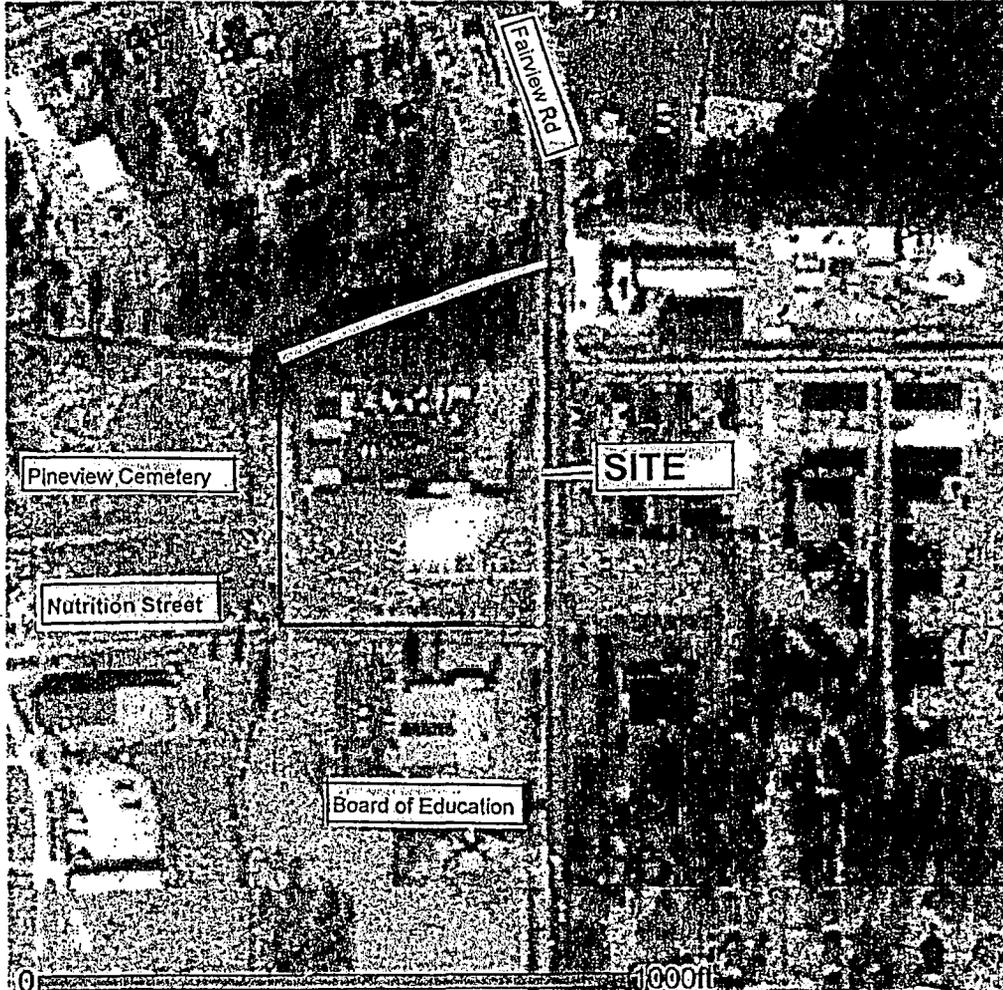
| | | |
|---|---|----------|
| Check the box that applies based on the conclusions of the APA: | | |
| <input checked="" type="checkbox"/> | NFRAP | |
| <input type="checkbox"/> | Higher Priority SI | |
| <input type="checkbox"/> | Lower Priority SI | |
| <input type="checkbox"/> | Defer to RCRA Subtitle 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> | 03/31/06 |
| | Print Name/Signature | Date |

REFERENCE 1

USA Reserve XVIII Airborne Corps-Rocky Mount
NC8 210 021 624

Map for 804 Fairview Rd 27801

Location of 804 Fairview Rd 27801



VICINITY MAP

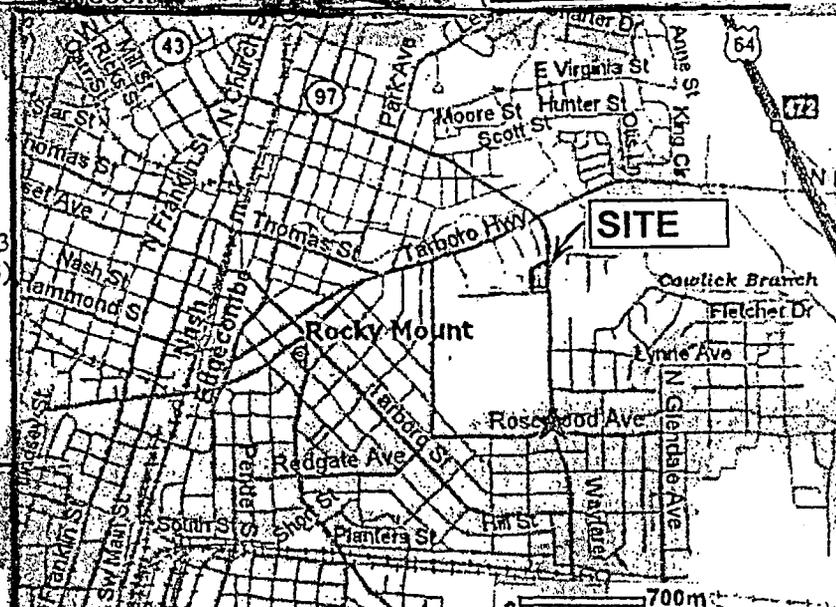
1:4,000

1998 AERIAL

Rocky Mount
7.5-minute Quadrangle

NC SPCS E: 720052.2, N:243783.9 meters (NAD83)
Long: -77.7758007 W, Lat: 35.9414361 N (NAD83)

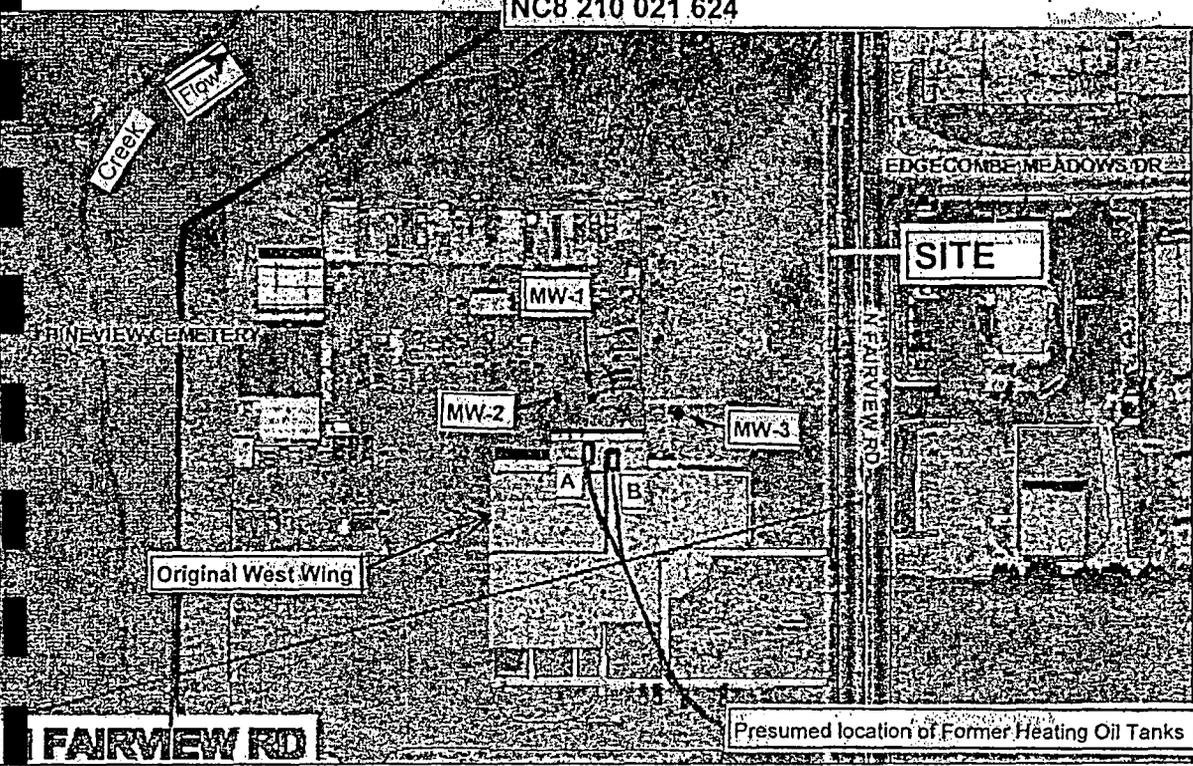
Site reference point: Northeast corner of Main Building



City of Rocky Mount Street Finder

USA Reserve XVIII Airborne Corps-Rocky Mount
NC8 210 021 624

- Legend**
- Streets
 - Fire Stations
 - Schools
 - Buildings
 - Railroad
 - Pavement Edge
 - Tar River
 - Ponds
 - Streams
 - City Limits
 - Floodzones
 - 100-Year
 - Floodway
 - Parks
 - Rocky Mount sid



DISCLAIMER: This map is intended for display purposes only and is not intended for any legal representations.

Report

<http://www.ci.rocky-mount.nc.us/property/presentation/...>

| Property Report | |
|-----------------|--------------------------|
| PIN | 376929188100 |
| COUNTY | EDGE |
| NOTES | Tax update 07/12/2004 |
| NAM | UNITED STATES OF AMERICA |
| NAM2 | |
| ADRS | FAIRVIEW RD |
| ADRS2 | |
| CITY | ROCKY MOUNT, NC |
| ZIP | 27801 |
| PARCEL_DES | 804 N FAIRVIEW RD |
| REAL_VALUE | 789084 |
| AREA | 227414.187 |
| MODIFIED | |
| CRM_ZONING | B-2CU |
| ID | 13118 |

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.

11. NC3210022486. The High Point USAR Center, constructed in 1960, is situated on a 3.8-acre parcel located at 156 East Parris Avenue, High Point NC 27262. The center consists of a 3,700 ft² training and assembly building, a 5,000 ft² storage building and a 1,100 ft² vehicle maintenance shop. The facility is an administrative facility only, no maintenance activities are conducted in the maintenance shop and the building is used as a storage building. No Preliminary Assessment was completed for this facility.

12. NC9210022043. The Thomas Erwin Allen USAR Center, constructed in 1989, is situated on a 3.1-acre parcel located at 1400 Carthage Road, Lumberton NC 28358. The center consists of a 14,380 ft² training and assembly building and a 1,325 ft² vehicle maintenance shop that was constructed in 1959. The facility is an administrative facility only, no maintenance activities are conducted in the maintenance shop and the building is used as a storage building. When the previous USAR Center located at this site, a 4,316 ft² building, was demolished in 1989 to allow for the construction of a larger facility, a 1000-gallon UST that housed fuel oil was removed from the site. 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.

13. NC9210020732. The Otis Gray Rucker USAR Center, constructed in 1962, is situated on a 4.14-acre parcel located at 3115 Western Boulevard, Raleigh NC 27606. The center consists of a 22,180 ft² training and assembly building, a 3,500 ft² storage building and a 3,854 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.

14. NC8210021624. The Rocky Mount USAR Center, constructed in 1956, is situated on a 5.2-acre parcel located at 804 Fairview Road, Rocky Mount NC 27801. The center consists of 16,700 ft² training and assembly building and a 3,400 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. Four Seasons Industrial Services, Inc. removed a 1500-gallon heating oil UST in FY90. Contamination resulted from leaks in the tanks. Remediation was completed and a Phase I Environmental Investigation Report dated March 1993 was submitted to NCDENR and the 81st Regional Readiness Command requested a finding of NFA at that time. The NCDENR issued a letter 15 July 1996 stating the site had been classified at the lowest priority level and NFA was required. No Preliminary Assessment was completed for this facility.

15. NC5210022047. The Uriah G. Lucas USAR Center, constructed in 1960, is situated on a 5.03-acre parcel located at 1835 Jake Alexander Boulevard, Salisbury NC 28144. The center consists of a 14,286 ft² training and assembly building, a 500 ft² storage building and a 2,528 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.



REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30363

RECEIVED

AUG 17 1990
← 1990
SUPERFUND SECTION

AUG 14 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



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,

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

**Underground Storage Tank
Closure Assessment
United States Army Reserve Center Site
Rocky Mount, North Carolina**

December 4, 1990

Prepared for

**Four Seasons Industrial Services, Inc.
Greensboro, North Carolina**

Prepared by

**Aquaterra, Inc.
Greensboro, North Carolina**



AQUATERRA

Aquaterra, Inc. • 309 Concord Street, Suite 204D • Greensboro, NC 27406 • 919-273-5003 • FAX 919-271-8138

December 4, 1990

Four Seasons Industrial Services, Inc.
Post Office Box 16590
Greensboro, North Carolina 27416

Attention: Mr. Mike Stoneman
Corporate Underground Storage Tank Program Manager

Reference: Underground Storage Tank Closure Assessment
United States Army Reserve Center Site
Rocky Mount, North Carolina
Aquaterra Job No. G170

Dear Mr. Stoneman

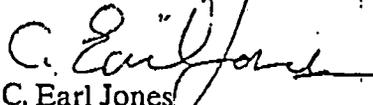
Aquaterra, Inc. (Aquaterra) has conducted an underground storage tank closure assessment at the United States Army Reserve (Army Reserve) located in Rocky Mount, North Carolina (see Figure 1). The purpose of this investigation was to assess the possibility of contamination in the area of excavation created by the removal of one 3,000 gallon underground storage tank. The assessment was conducted in an effort to satisfy the underground storage tank closure assessment requirements set forth in 40 CFR Part 280 Subpart G.

The purpose of this report is to provide a summary of field activities and laboratory analyses, along with providing our conclusions and recommendations.

If you have any questions, please do not hesitate to contact us at (919) 273-5003.

Sincerely,

AQUATERRA, INC.


C. Earl Jones
Project Manager

Peer Review By:

Phillip L. Rahn, P.G.
Senior Hydrogeologist

CEJ/kb
GR128-90

**Underground Storage Tank Closure Assessment
United States Army Reserve Center
Rocky Mount, North Carolina
Aquaterra Job No. G170**

1 Introduction

Aquaterra, Inc. (Aquaterra) was contracted to conduct an underground storage tank (UST) closure assessment at the United States Army Reserve Center (Army Reserve) site located in Rocky Mount, North Carolina (see Figures 1 and 2). It is Aquaterra's understanding that one 3,000 gallon UST that previously contained #2 fuel oil was excavated, removed and properly disposed of by Four Seasons Industrial Services, Inc. (Four Seasons).

The closure assessment included screening the in situ and excavated soils with an organic vapor analyzer (OVA) for total volatilized organic compounds (VOCs), which may indicate petroleum hydrocarbon contamination. A typical procedure for screening soils involves filling a clean container approximately half full and sealing the container. This creates an open space in which the VOCs from the soils accumulate.

After allowing approximately 10 minutes for this process to occur, the probe of the OVA is then inserted in the headspace of the container to obtain a total VOC reading. If OVA readings of the in situ soils do not indicate the presence of significant volatile organic contamination (greater than 10 parts per million, ppm), soil samples are collected from the UST excavation. Soil samples collected from the #2 fuel oil tank pit are prepared for analysis following SW-846 Extraction Methods 3550 and 5030 and are analyzed for total petroleum hydrocarbons (TPH) by laboratory gas chromatograph (GC). This analysis supports the field OVA readings and documents the closure assessment.

2 Previous Investigations

On August 20, 1990, Aquaterra mobilized an environmental technician to the Army Reserve site to conduct a UST closure assessment. The assessment was conducted in conjunction with the excavation and removal of one 3,000 gallon UST formerly containing #2 fuel oil. The UST was approximately 9 years old and was contained in a single tank pit. The tank, measuring 64 in (D) x 18 ft (L), was visually inspected by the geologist and exhibited pitting and a hole located on the south end on the bottom of the UST.

The in situ soil samples collected from the pit bottom (see Figure 3) exhibited TPH levels of 27 mg/kg (ppm) similar to #2 fuel oil and 770 mg/kg (ppm) similar to gasoline. These levels exceed the North Carolina Department of Environment, Health and Natural Resources (NCDEHNR), Division of Environmental Management (DEM) soil clean up level for TPH of 10 mg/kg (ppm). However, at the client's request, petroleum hydrocarbon contaminated soils were not remediated.

3 Site Investigation

On October 16, 1990, Aquaterra mobilized a staff geologist to the Army Reserve site to conduct a UST closure assessment. The assessment was conducted in conjunction with the excavation and removal of one 3,000 gallon #2 fuel oil UST. The vessel was contained in a single tank pit, located adjacent to the UST removed in August of 1990 (see Figure 4). The 3,000 gallon UST was approximately 36 years old; however, the tank was abandoned in place and filled with sand in 1981.



On October 15, 1990, the soils on top of and around the 3,000 gallon #2 fuel oil UST were excavated and the tank was removed. According to Four Seasons personnel, the tank exhibited pitting and several small holes, as well as a large cut opening located on the top of the vessel.

The pit floor and pit wall soils were screened for total VOCs using an OVA according to the procedures previously mentioned. OVA readings ranged from <0.2 ppm to 700 ppm. The pit floor was excavated to a depth of approximately 11 to 14 feet below ground surface. At this point, apparent ground water was noted to be seeping into the pit. The pit walls were excavated until 10 ppm or less registered on the OVA.

Due to the presence of water at approximately 10.5 feet, pit bottom samples were not considered representative and were not collected. However, five pit wall samples were collected at a depth of approximately 9 feet below ground surface (see Figure 4). These samples were collected above the stabilized water level and are considered representative. OVA readings for the five pit wall soil samples ranged from less than 0.2 ppm to 500 ppm, as summarized in Table 2.

On October 17, 1990, the Winston-Salem DEM regional office was contacted by telephone and informed of a confirmed release at the Army Reserve site. Written documents were faxed on October 19, 1990 following the telephone conversation (see Attachment A).

On October 17, 1990, the west pit wall (500 ppm) was excavated. This excavation continued into the area where the UST was excavated in August 1990. Petroleum hydrocarbon contaminated soils were excavated to 10 ppm or less.

Four pit wall soil samples were collected upon terminating the excavation at a depth of approximately 9 feet below ground surface (see Figure 4). OVA readings for the pit wall samples ranged from 3.5 ppm to 50 ppm, as summarized in Table 2.

4 Laboratory Procedures and Results

All soil samples were immediately placed in laboratory provided glassware and labeled with a tag identifying the job name, job number, date, time, sample number, sampler's name, and analysis to be conducted. The samples were then placed in a cooler with ice and chilled to approximately 4° C. The samples were transported to the analytical laboratory in accordance with EPA approved chain-of-custody procedures. The samples were relinquished to laboratory personnel to be analyzed for TPH by GC. Soil sample analytical results are summarized in Table 2 and documented in Attachment B.

Results from the laboratory analysis of the soil samples were all below laboratory method detection limit of 2 mg/kg (ppm) of TPH with the exception of sample 1PW1. Soil sample 1PW1, collected from the west wall separating the two tank pits, exhibited 87 mg/kg (ppm). However, this wall was completely removed during the excavation process.

5 Recommendations

Based on the field investigation as well as the laboratory analytical results, Aquaterra finds reason to recommend the following:



- The in situ soil samples collected from the pit walls did not exhibit TPH levels above the laboratory method detection limit of 2 mg/kg (ppm). The DEM soil clean up level for TPH is 10 mg/kg (ppm). Based upon this information, Aquaterra does not recommend any further soil assessment activities at the former tank pit.
- Petroleum hydrocarbon contaminated soils were excavated to a depth of approximately 11 to 14 feet below ground surface. At this point, apparent ground water was noted to be seeping into the excavation.
- Aquaterra recommends a temporary ground water monitoring well be installed in the former tank pit, in order to determine the possible impact the contamination may have had on the shallow ground water. Aquaterra has submitted a proposal to Four Seasons for conducting this assessment.
- It is Aquaterra's understanding that remediation and/or disposal of any stockpiled soils is the responsibility of Four Seasons.
- The results of the UST closure assessment should be forwarded to the DEM located at the following address:

3800 Barrett Drive
Raleigh, North Carolina 27611



Table 1. Soil Analytical Results for United States Army Reserve Site

| Sample No. | Date | Location | Depth (feet) | TPH by GC (mg/kg) |
|------------|---------|-----------|--------------|-------------------|
| DHG-1A | 8-20-90 | South End | 9 | 770 ^a |
| DHG-1B | 8-20-90 | North End | 9 | 27 ^b |

^aDistillation range similar to gasoline

^bDistillation range similar to #2 fuel oil

Analytical Laboratory: Industrial & Environmental Analysts, Inc.
Cary, North Carolina

Aquaterra Job No. G170
GR128-90

Table 2. OVA and Soil Analytical Results for United States Army Reserve Site

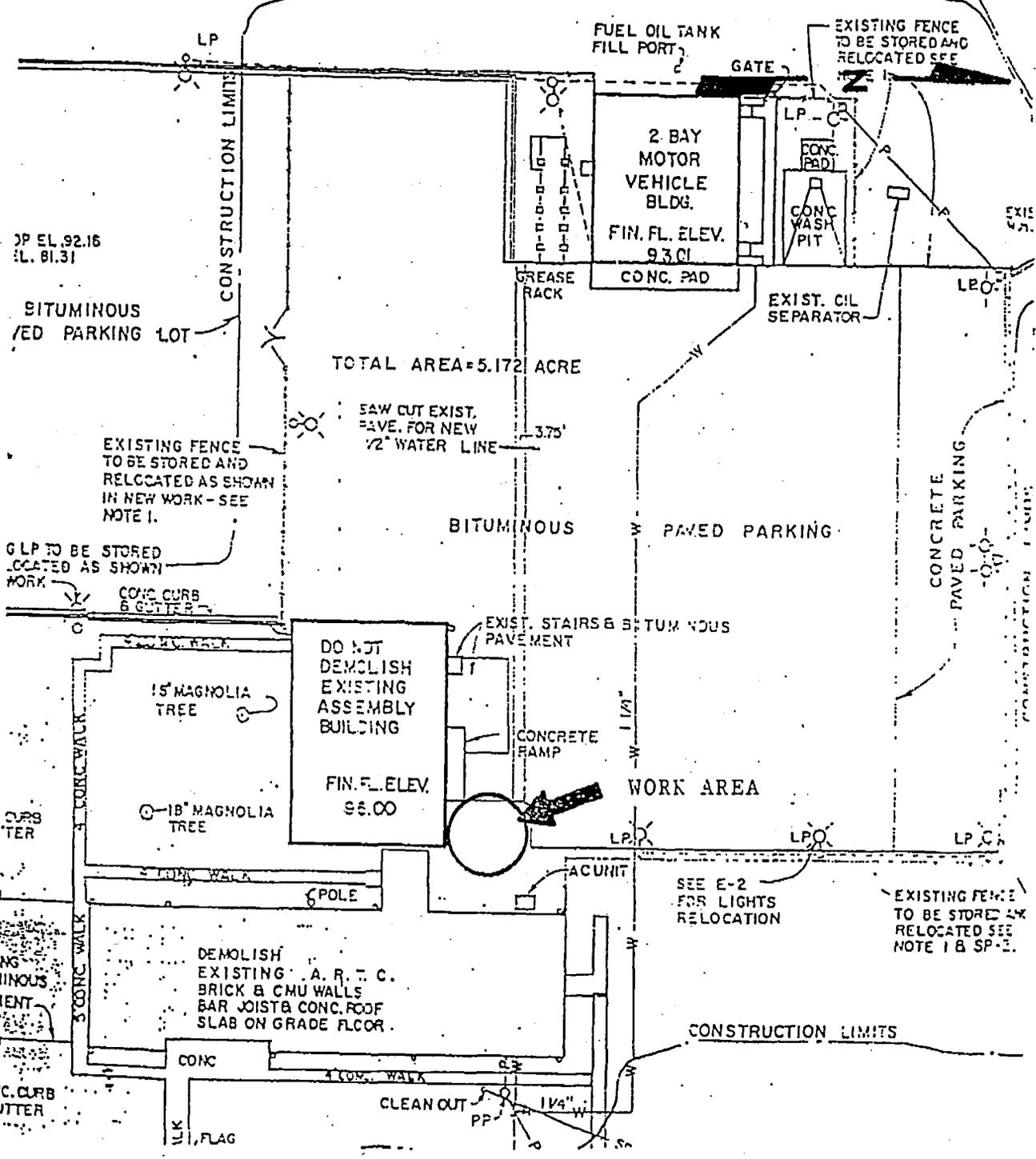
| Sample No. | Date | Location | Depth (feet) | OVA (ppm) | TPH by GC (mg/kg) |
|------------|----------|------------|--------------|-----------|-------------------|
| 1PW1 | 10-17-90 | West Wall | 9 | 500 | 87 ^a |
| 1PW2 | 10-17-90 | West Wall | 9 | 70 | <2.0 |
| 1PW3 | 10-17-90 | South Wall | 9 | <0.2 | <2.0 |
| 1PW4 | 10-17-90 | East Wall | 9 | <0.2 | <2.0 |
| 1PW5 | 10-17-90 | North Wall | 9 | 0.5 | <2.0 |
| 2PW1 | 10-17-90 | South Wall | 5 | 30 | <2.0 |
| 2PW1 | 10-17-90 | South Wall | 9 | 50 | <2.0 |
| 2PW2 | 10-18-90 | West Wall | 9 | 10 | <2.0 |
| 2PW3 | 10-18-90 | North Wall | 9 | 3.5 | <2.0 |

^aIdentified as having a distillation range similar to #2 fuel oil

Analytical Laboratory: Industrial & Environmental Analysts, Inc.
Cary, North Carolina

Aquaterra Job No. G170
GR128-90

-INV. EL. 88.01



PROJECT:
 U.S. Army Reserve Center
 Rocky Mount, N C

TITLE
 Site Layout Map
 DATE: 6.70 DRAWING: FIGURE 2 SCALE: NTS

 **AQUATEPRA, INC.**
 RALPH SHREVEBERG : PROJECT
 NORTH CAROLINA

ASSEMBLY BUILDING

3,000 GALLON #2 FUEL OIL UST

EXCAVATION AREA

PAVED PARKING

DHG-1A

DHG-1B

FILL PIPE

LEGEND:

● SOL SAMPLE LOCATION

PROJECT:

U.S. ARMY RESERVE CENTER
ROCKY MOUNT, NORTH CAROLINA

TITLE: SOIL SAMPLE LOCATION MAP
ALBERT, ERIC

JOB:
G170

DRAWING:
G170-3

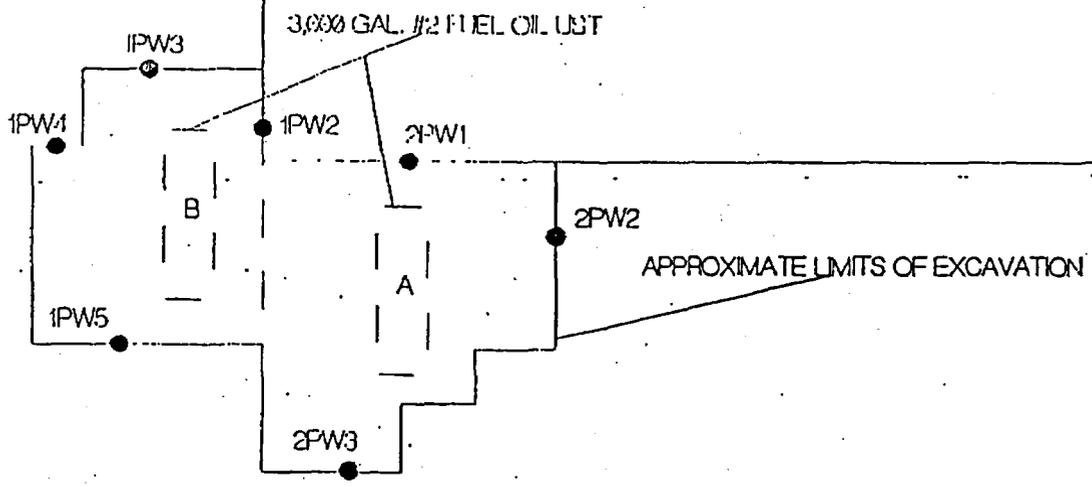
FIGURE:
1/3

SCALE:
1"=10'



AQUATERRA, INC.
RALEIGH, GREENSBORO, CHARLOTTE
NORTH CAROLINA

10



A= UST REMOVED IN AUGUST 1990
B= UST REMOVED IN OCTOBER 1990

LEGEND:
● SOIL SAMPLE LOCATION

| | | | | |
|---|--|--------------------|--------------|------------------|
| PROJECT: U.S. ARMY RESERVE CENTER ROCKY MOUNT, NORTH CAROLINA | TITLE: SOIL SAMPLE LOCATION MAP OCTOBER, 1990 | | | SCALE: 1"=20' |
| | JOB: G170 | DRAWING: G170-4 | FIGURE: 4 | |

 **AQUATERRA, INC.**
RALEIGH, GREENSBORO, CHARLOTTE
NORTH CAROLINA

Pat -
Advised Kudala -
29 May 1992 @ 1600
of the results for
four (4) test

SPATCO
Environmental
Services

USA Reserve XVIII Airborne Corps-Rocky Mount
NC8 210 021 624

RECEIVED
JUL 29 1992
DEHNR-RAL RO

SPATCO



DEPARTMENT OF THE ARMY
HEADQUARTERS, 120TH U.S. ARMY RESERVE COMMAND
FORT JACKSON, SOUTH CAROLINA 29207-6070



REPLY TO
ATTENTION OF

RECEIVED

JUL 29 1992

DEHNR-RAL RO

AFKD-ARC-EN

27 July 1992

Mr. Nile Testerman
Environmental Engineer
Groundwater Section
NCDEM-Raleigh Regional Office
3800 Barrett Drive
Raleigh, NC 27609

*Soil
Samples*

Subject: US ARMY RESERVE CENTER, ROCKY MOUNT, NC
Report of Excavated Soil Analyses

Dear Mr. Testerman:

Thank you for the time you spent with me last Friday explaining the NCDEM requirements for disposal of excavated soil. With your help, this command should be able to save significant disposal costs, while protecting the environment of our community as well.

As you requested, I am forwarding a copy of the Soil Analyses Report. The samples were collected in May 1992, and the soil was excavated in March 1991. We will be forwarding in the near future a request for a Certificate of Approval for offsite disposal of "clean" soils and a Permit Application for landfarming of the contaminated soils.

Your continued assistance in this matter is greatly appreciated. Please contact me for further information in this matter, 803-281-0030.

Sincerely,

ROBERT E. ALEXANDER
MAJ, EN, USAR
Engineer Staff Officer

Copy To: ARCOM Engineer

SPATCO

May 22, 1992

US Army Corp of Engineers
11409 Falls of the Neuse
Wake Forest, North Carolina 27587

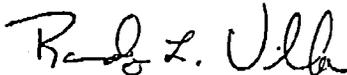
Attention: Mr. Peter Schubert

Reference: Non Hazardous Petroleum Contaminated Soil
US Army Corp of Engineers
Rocky Mount, North Carolina

Dear Mr. Schubert:

SPATCO Environmental is pleased to present this report regarding the sampling of the stockpiled soil. The following report outlines the technical services performed, field procedures and analytical results.

Sincerely,



Randy L. Villa
Environmental Scientist
SPATCO Environmental

RLV/dwc
RV.148

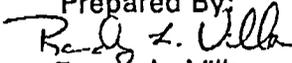
SPATCO

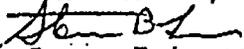
Soil Quality Assessment

U.S. Army Corp of Engineers
Rocky Mount, North Carolina

May 22, 1992

Prepared For:
Mr. Peter Schubert
U.S. Army Corp of Engineers
11409 Falls of the Neuse
Wake Forest, North Carolina

Prepared By:

Randy L. Villa
SPATCO Environmental
130 Penmarc Drive
Suite 112
Raleigh, North Carolina 27603

Reviewed By:

Steven B. Lucas
Assessment Group Manager
SPATCO Environmental
130 Penmarc Drive
Suite 112
Raleigh, North Carolina 27603

24

TABLE OF CONTENTS

| | |
|-----|---------------------------------|
| 1.0 | Soil Assessment Procedures |
| 2.0 | Analytical Results |
| 3.0 | Conclusions and Recommendations |

ATTACHMENTS

| | |
|------------|---|
| Table 1 | Soil Sample Laboratory Analysis Results |
| Appendix A | Laboratory Results |

SPATCO

1.0 Soil Assessment Procedures

On April 30, 1992, SPATCO Environmental mobilized an environmental technician to sample approximately 600 cubic yards of stockpiled soil at the above referenced facility.

Soil samples were collected using a decontaminated hand auger. The auger was decontaminated before each sample was collected using a soap and tap water wash, a tap water rinse, a methyl alcohol wash and a deionized water rinse.

Each of the composite samples was made up of soil from four sample points. Soil from each sample point then was placed in a decontaminated stainless steel container and thoroughly mixed. Once mixed, the soil was transferred to laboratory supplied glass containers, sealed and labeled, placed in iced coolers, and chilled to approximately 4 degrees celsius. Chain of custody records were kept and a completed chain of custody accompanies this report. The composite soil samples were delivered to a sub-contracted laboratory for chemical analysis by Method 5030/3550. The results of the chemical analysis are contained in Appendix A.

2.0 Analytical Results

Analytical results are summarized in Table 1. The actual laboratory data can be found in Appendix A. Composite soil samples 1 and 4 contained 390 and 350 ppm of petroleum hydrocarbons respectively as #2 fuel oil. These concentrations are above North Carolina guidelines of 10 ppm. Composite soil samples 2 and 3 contained 4.0 and 4.5 ppm petroleum hydrocarbons as #2 fuel oil.

3.0 Conclusions and Recommendations

Hydrocarbon contaminants were detected above North Carolina Maximum Allowable Concentrations (NCMAC) of 10 ppm for petroleum hydrocarbons in composite soil samples 1 and 4.

Due to the presence of petroleum hydrocarbon contamination in the stockpiled soils, SPATCO Environmental recommends that the soil be treated or disposed of accordingly by a method approved by the State.

to

TABLE 1

Soil Sample Laboratory Analysis Results

**U.S. Army Corp of Engineers
Rocky Mount, North Carolina**

Composite soil samples collected April 30, 1992

| Composite Sample | TPH SW846-3550 | TPH SW846-5030 | Quantitation Limit | North Carolina Action Limit |
|-------------------------|-----------------------|-----------------------|---------------------------|------------------------------------|
| 1 | 390 | 0 | 2.0 | 10 |
| 2 | 4.0 | 0 | 2.0 | 10 |
| 3 | 4.5 | 0 | 2.0 | 10 |
| 4 | 350 | 0 | 2.0 | 10 |
| QC Blank | 0 | 0 | 2.0 | N/A |

All units are mg/kg or parts per million (ppm)
N/A Not applicable

Total Petroleum Hydrocarbon Analysis

| | | | |
|--------------------|-----------|-----------------|----------|
| IEA Sample No: | 860-273-2 | Date Sampled: | 04-30-92 |
| Client Sample No: | 2 | Date Received: | 05-01-92 |
| Client Project No: | RM-1 | Date Extracted: | 05-06-92 |

Extraction (SW 846 - 3550) / GC-FID analysis (for #2 fuel oil, kerosene, varsol)
Date Analyzed: 05-07-92 Analyzed by: Correa

The sample contains a petroleum hydrocarbon blend with a distillation range similar to #2 fuel oil. The concentration is 4.0 mg/kg. The quantitation limit is 2.0 mg/kg.

Comment:

=====

Purge and Trap (SW 846 - 5030) / GC-FID analysis (for gasoline only)
Date Analyzed: 05-07-92 Analyzed by: Correa

The sample does not contain a petroleum hydrocarbon blend with a distillation range similar to gasoline. The quantitation limit is 2.0 mg/kg.

Comment:

FAX

SPATCO
Environmental
Services

SPATCO
Liquid Process
Technology

SPATCO
Petro Marketing
Systems

SPATCO

June 9, 1992

US Army Corp of Engineers
11409 Falls of the Neuse Road
Wake Forest, North Carolina 27587

Attention: Mr. Peter Schubert

Reference: Diagram of Soil Stockpile
US Arm Reserve Center
Rocky Mount, North Carolina

RECEIVED

JUN 12 1992

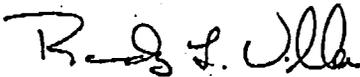
Raleigh Area Office

Dear Mr. Schubert:

SPATCO Environmental is pleased to present the diagram of the above referenced facility. The diagram illustrates the location of the soil samples taken from the soil stockpile.

If you have any comments or need additional information, do not hesitate to call.

Sincerely,



Randy L. Villa
Environmental Scientist
SPATCO Environmental

RV.153

130 Penmarc Drive
Unit 112
Raleigh, NC 27603-2434

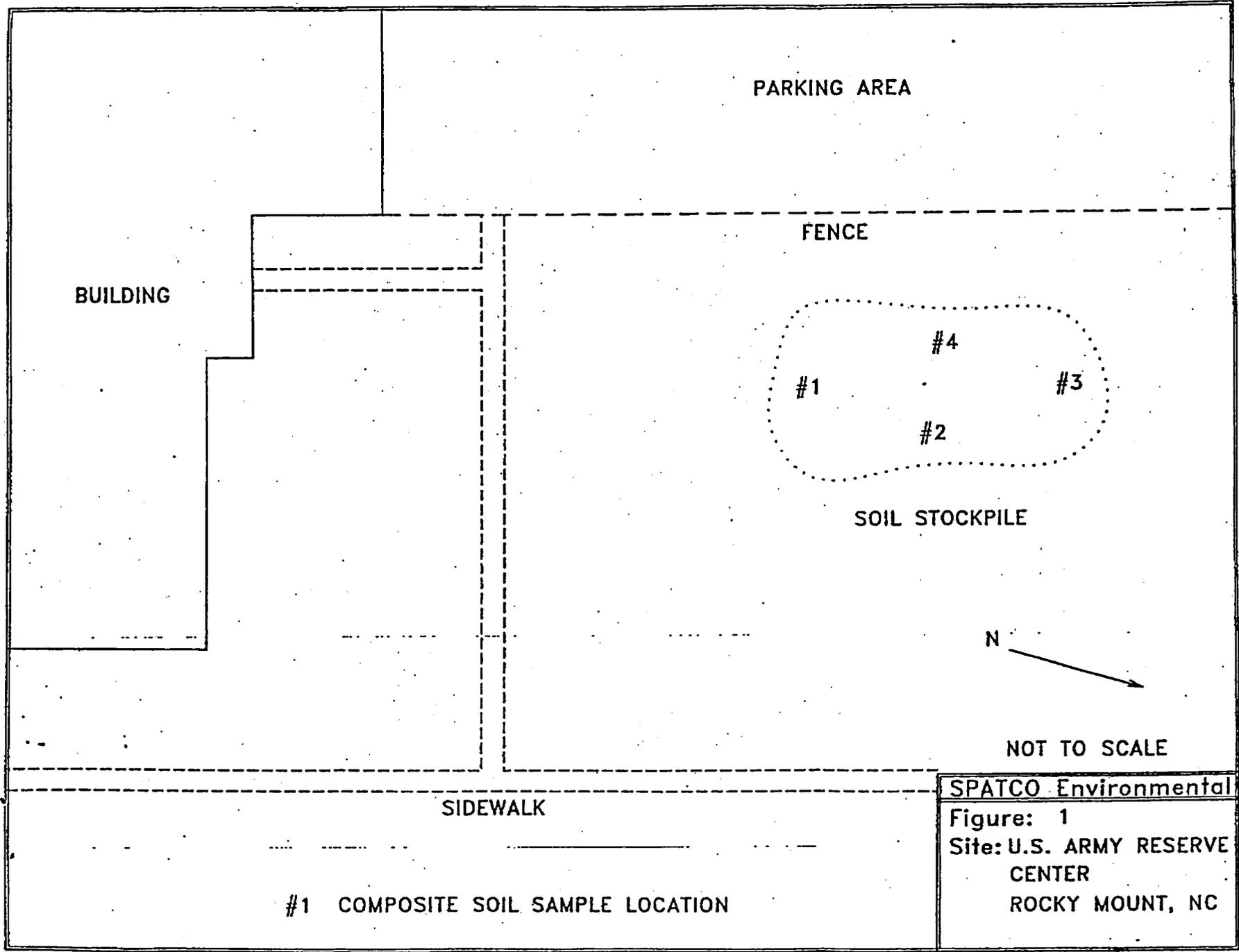
919.832.2535
FAX 919.832.5914

Corporate Environmental
Charlotte, NC
704.597.5960

Printed on
recycled
paper

17

81



PARKING AREA

BUILDING

FENCE

#1

#4

#3

#2

SOIL STOCKPILE



NOT TO SCALE

SIDEWALK

#1 COMPOSITE SOIL SAMPLE LOCATION

SPATCO Environmental
Figure: 1
Site: U.S. ARMY RESERVE
CENTER
ROCKY MOUNT, NC



DEPARTMENT OF THE ARMY
 HEADQUARTERS, 120TH U.S. ARMY RESERVE COMMAND
 FORT JACKSON, SOUTH CAROLINA 29207-8070



REPLY TO
 ATTENTION OF

AFKD-ARC-EN

*Rec'd
 9/30/92
 558*

August 5, 1992

Mr. Nile Testerman
 Environmental Engineer
 Groundwater Section
 NCDEM-Raleigh Regional Office
 3800 Barrett Drive
 Raleigh, NC 27609

Subject: US ARMY RESERVE CENTER, ROCKY MOUNT, NC
 UST Closure Assessment Report and
 Certificate of Approval for Disposal of Soils

Dear Mr. Testerman:

I am forwarding a copy of the subject report for your files. As shown in the report, a notice of suspected release was provided on October 19, 1990. Perhaps the reason you had difficulty locating records for this site was due to the notice having been provided by the subcontractor to the Winston Salem office by mistake.

We are proceeding with plans to segregate the excavated soil for landfarming and disposal offsite of the portion having TPH concentrations <10 ppm. We are in contact with the City of Rocky Mount and Edgecombe County Landfill for their concurrence with landfarming. Please review and approve the enclosed 'Certificate of Approval for Disposal of Soils Containing Petroleum Products' for the offsite disposal of the clean soil at the landfill.

Your continued assistance in this matter is greatly appreciated. Please contact me for further information in this matter, 803-281-0030.

Sincerely,

ROBERT E. ALEXANDER
 MAJ, EN, USAR
 Engineer Staff Officer

Copy To: ARCOM Engineer

CERTIFICATE # _____

North Carolina - Division of Environmental Management
CERTIFICATE OF APPROVAL FOR
DISPOSAL OF SOILS CONTAINING PETROLEUM PRODUCTS

- of 50 Cubic Yards or Less
- with Average Total Petroleum Hydrocarbon Concentration of 10 Parts Per Million or Less
- Other (explain below)

Approval Is Hereby Granted To:

Name: 120th US ARMY RESERVE COMMAND
 Address: ATTN: AFRC-ASC-EN, Office of the Engineer
Ft. Jackson, SC 29207-6070

for the disposal of approximately 300 cubic yards of contaminated soil as specified below:

Type of Contaminants: HEATING OIL

Location of Source of Contaminant(s) (Include business/owner name): _____

UNDERGROUND TANKS REMOVED AUGUST & OCTOBER 1990

Address of Source of Contaminants: 804 Fairview Road
Rocky Mount, NC

County: EDGECOMBE

Method of Disposal: TRANSPORT TO EDGECOMBE COUNTY LANDFILL

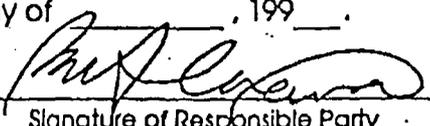
Location(s) where contaminated soils will be disposed of (map must be provided):
Edgecombe Co. Landfill, south of Tarboro

This approval is based upon information provided to the Regional Supervisor, RALEIGH Regional Office, by the responsible party, who hereby agrees to conduct the approved soil disposal activities in accordance with applicable state, local or federal requirements and additionally agrees to abide by any special conditions or limitations specified below. (Note: Contaminated Soils shall not be disposed of, without written permission from the Division of Solid Waste Management, if the soil is Regulated under Subtitles C or D of RCRA)

Special Conditions, Limitations or Comments: _____

Certificate of Approval issued this the _____ day of _____, 199__.

Signature of D.E.M. Representative


Signature of Responsible Party

ROBERT E. ALEXANDER
MAJOR, EN, USAR
Engineer Staff Officer

Regional Office

Date: 5 AUG. 92

GW-71 7/1/91

White Copy - Regional Office

Pink Copy - Responsible Party

20



DEPARTMENT OF THE ARMY
HEADQUARTERS, 120TH U.S. ARMY RESERVE COMMAND
FORT JACKSON, SOUTH CAROLINA 29207-6070



REPLY TO
ATTENTION OF

ENVIRONMENTAL INVESTIGATION REPORT

US ARMY RESERVE CENTER

804 FAIRVIEW ROAD

ROCKY MOUNT, NC

RECEIVED

APR 06 1993

MARCH 1993

DEHNR-RAL RO

For Submission To:
NC Division of Environmental Management
Raleigh Regional Office
Groundwater Section

ROBERT E. ALEXANDER
Major, Engineer Corps, USAR
Engineer Staff Officer

WARREN P. MORGAN, *EG*
Lieutenant Colonel, Engineer Corps, USAR
120th Army Reserve Command Engineer



DEPARTMENT OF THE ARMY
HEADQUARTERS, 120TH U.S. ARMY RESERVE COMMAND
FORT JACKSON, SOUTH CAROLINA 29207-6070



April 3, 1993

REPLY TO
ATTENTION OF

Office of the Engineer

RECEIVED

APR 06 1993

DEHNR-RAL RO

Mr. Arthur Mouberry
Regional Supervisor
Raleigh Regional Office
NC Division of Environmental Management
3800 Barrett Drive
Raleigh, NC 27609

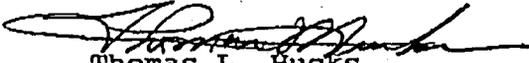
Dear Mr. Mouberry:

The purpose of this letter is to forward an Environmental Site Investigation Report for the U.S. Army Reserve Center, Rocky Mount, Edgecombe County, NC. This report follows our submission of the UST Closure Assessment Report on September 28, 1992, and issuance of NCDEM Monitoring Well Permit No. 32-0259-WM-0192, September 4, 1992.

We have completed a follow-up assessment of the heating oil tank closure to evaluate potential effects on ground water. Based on this assessment, we plan no further monitoring actions at this site. Soil treatment is proceeding in accordance with the approval granted by your office.

Should you desire additional information on this matter, please contact Mr. Ed Etzkorn, Senior Facilities Management Specialist, at 803-751-5559 or Major Bob Alexander at 615-373-3350.

Sincerely,


Thomas L. Hucks
Colonel, GS, USAR
Acting Chief of Staff

Enclosure

7

TABLE OF CONTENTS

PHASE I ENVIRONMENTAL INVESTIGATION REPORT

US Army Reserve Center
804 Fairview RD
Rocky Mount, NC

| <u>Title</u> | <u>Page No.</u> |
|---|-----------------|
| 1.0 INTRODUCTION | 1-1 |
| 1.1 Site Location Description | 1-1 |
| 1.2 Regional Geology & Hydrogeology | 1-1 |
| 1.2.1 Geology | 1-1 |
| 1.2.2 Hydrogeology | 1-4 |
| 2.0 SCOPE OF WORK | 2-1 |
| 3.0 METHODS AND PROCEDURES | 3-1 |
| 3.1 Drilling Method | 3-1 |
| 3.2 Soil Sampling Procedure | 3-1 |
| 3.3 Monitoring Well Installation Procedure | 3-1 |
| 3.4 Groundwater Sampling Procedure | 3-2 |
| 3.5 Laboratory Analytical Methods | 3-2 |
| 4.0 FINDINGS | 4-1 |
| 4.1 Drilling Program | 4-1 |
| 4.2 Site Hydrogeology | 4-1 |
| 4.2.1 Near Surface Geology | 4-1 |
| 4.2.2 Groundwater Flow Direction and Gradient | 4-1 |
| 4.3 Chemistry | |
| 4.3.1 Soil Geochemistry | |
| 4.3.2 Groundwater Chemistry | |
| 5.0 CONCLUSIONS AND RECOMMENDATIONS | |
| 5.1 Conclusions | 5-1 |
| 5.2 Recommendations | 5-1 |

LIST OF TABLES

| <u>Table No.</u> | <u>Title</u> |
|------------------|---|
| 1 | PID Readings Obtained During Well Installation |
| 2 | Analytical Results for Ground Water Monitoring Well Samples |

LIST OF FIGURES

| <u>Figure No.</u> | <u>Title</u> |
|-------------------|--|
| 1 | Facility Location Map |
| 2 | Site Location Map |
| 3 | Monitoring Well and Soil Boring Location Map |

APPENDICES

| <u>Appendix <x></u> | <u>Title</u> |
|---------------------------|-------------------------------------|
| A | Soil Boring Logs |
| B | Monitoring Well Completion Drawings |
| C | Laboratory Analytical Reports |

PHASE I ENVIRONMENTAL INVESTIGATION REPORT

US Army Reserve Center
804 Fairview Road
Rocky Mount, NC

1.0 INTRODUCTION

An initial environmental investigation was conducted at the US Army Reserve Center (USARC) in September, 1992. The investigation was conducted in order to assess the vertical and horizontal extent of residual hydrocarbons in the subsurface resulting from an UST release of petroleum hydrocarbons, i.e. fuel from a heating oil tank.

1.1 Site Location and Facility Description

The USARC is located in Rocky Mount, North Carolina at 804 Fairview Road, southeast of the downtown area as shown on Figure 1, Site Location Map. A Facility Location Map that shows the facility and study area is shown as Figure 2.

1.2 Regional Geology and Hydrogeology

The regional geology and hydrogeology are described in the sections that follow.

1.2.1 Geology

Rocky Mount straddles the Fall Line which separates the Piedmont Physiographic province from the Atlantic Coastal Plain province. Basement rock outcrops in the Tar River valley along the northern edge of the city. Sedimentary rocks and sediments of Miocene and Pleistocene age mantle the basement and thicken in a wedge shape, to the east and southeast of the city. The total thickness of the Coastal Plain sediments range from 50 to 100 feet in the areas of the Rocky Mount Army Reserve Center. The

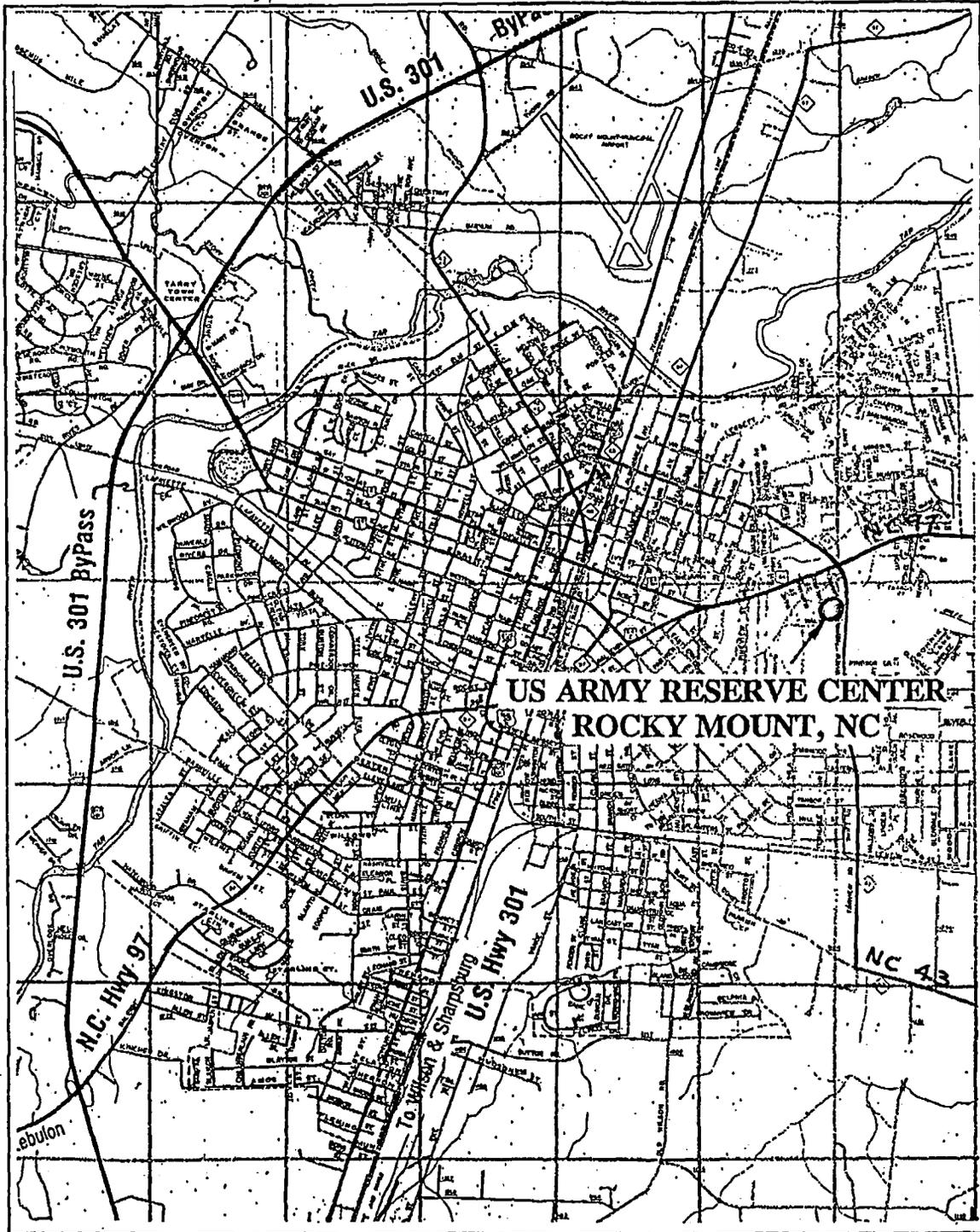


FIGURE-1

FACILITY LOCATION MAP

6

surficial deposits are sands, silts, and clays of the mid-Pleistocene, while the deeper sediments are sands and limestones of the Miocene Yorktown formation.

1.2.2 Hydrogeology

The site is underlain by a leaky aquifer system consisting of the water table aquifer and the water bearing zones of the Yorktown formation. Perched zones are common in the upper sediments due to the discontinuous nature of the sand and clay lenses in the formations. Ground water is not a major water supply in the area of the Reserve Center due to the relatively thin column of the strata in this area and its overall lack of a reliable ground water supply. All water supplies for the City of Rocky Mount, NC are pumped from the Tar River and a city-owned reservoir. The sediments thicken to the east and southeast toward Greenville and Wilson, NC, with a corresponding increase in aquifer productivity.

2.0 SCOPE OF INVESTIGATION

The scope of the investigation is as follows:

- o Drilled three soil borings (RMW-92-1, -2, and -3).
- o Collected soil samples using a 1-foot continuous soil sampler. Soil samples were taken from the surface to the top of the saturated zone.
- o Conducted a headspace analysis with a PID on a representative sample composited from each 1-foot section of recovered material in each boring.
- o Installed three monitoring wells constructed of 2-inch diameter, schedule 40, PVC blank casing and 15-feet of 2-inch diameter, schedule 40 PVC, No. 10 slot screen
- o Developed all monitoring wells until the discharge water was relatively free of suspended sediment.
- o Measured and recorded water levels
- o Analyzed three groundwater samples for TPH, volatile organic compounds (BTEX, and methyl tertiary butyl ether (MTBE)) per EPA Method 602 or 8020, and for semi-volatile compounds per EPA Method 610 or 625.

3.0 METHODS AND PROCEDURES

The field and analytical methods used in the investigation are presented in this section.

3.1 Drilling Method

A hollow-stem auger rig was used to drill all soil borings and set all monitoring wells. All hollow-stem augers were steam cleaned between soil borings.

3.2 Soil Sampling Procedure

A continuous soil sampler was used to take continuous, 1-foot samples of soil. The sampler was advanced through the hollow-stem auger. A representative sample was composited from each 1-foot section of recovered material, split and placed in one, 4-ounce jar and one, 6-ounce jar. A headspace analysis was performed with a PID on the sample split in the 4-ounce jar. All recovered material was described and classified according to the Unified Soil Classification System. A log was prepared for each soil boring. The continuous sampler was decontaminated using a high pressure steam cleaner.

3.3 Monitoring Well Installation Procedure

All monitoring wells were set through the hollow stem augers. Each well is constructed of 15-feet of 2-inch diameter schedule 40 PVC, No. 10 slot screen and blank riser. All wells are packed with coarse-grained sand to approximately 1.5-feet above the top of the screen. A 1-foot thick bentonite pellet seal was placed above the sand pack. Neat cement/bentonite grout was used to seal the well from the top of the bentonite pellet seal to grade. The grout mixture was pumped into the well using a tremie pipe. Monitoring well completion drawings were prepared for each well.

The monitoring wells were developed using a PVC bailer. The bailer used to develop the well was dedicated to that well. Wells 1 and 2 were developed until the discharge water was relatively free

of suspended sediment; well 3 remained milky after development.

All monitoring well top-of-casing elevations were surveyed to the nearest .01 foot by a registered surveyor. All top of well casing elevation are measured relative to a base elevation of 96.0 feet, which is the floor elevation of the new USARC Building.

3.4 Groundwater Sampling Procedure

Water level measurements were taken and recorded prior to purging the monitoring well. A minimum of three well volumes were purged from each well using a dedicated PVC bailer.

All groundwater samples were taken with a dedicated PVC bailer. Water samples taken for BTEX and MTBE analyses were placed in 40-milliliter vials. The water samples taken for semi-volatile compounds analyses were placed in 1-liter glass bottles. All water samples were stored on ice and transported under chain-of-custody in September 1992 to Law Environmental National Laboratories, and in January 1993 to Environmental Science Corp.

3.5 Laboratory Analytical Methods

The USEPA methods used to analyze for the parameters of interest are as follows:

| <u>Parameter</u> | <u>Water</u> |
|---------------------|-----------------------|
| BETX | EPA Method 602 & 8020 |
| MTBE | EPA Method 602 & 8015 |
| PAH's | EPA Method 610 |
| Base/Neutrals/Acids | EPA Method 625 |

4.0 FINDINGS

The findings of the site investigation are presented in this section.

4.1 Drilling Program

The locations of all monitoring wells are shown in Figure 3. Soil boring logs of RMW-92-1 through -3 are presented in Appendix A. Monitoring well completion drawings are presented in Appendix B.

4.2 Site Hydrogeology

The site hydrogeology is described in the sections that follow.

4.2.1 Near Surface Geology

Discontinuous layers of fine to medium grained sands, to clayey sands underlies the site from the surface to a depth of 10 to 12 feet below grade. A silty to fat clay underlies these materials to a depth of 15 feet below grade. The unconfined water table was present at a depth of 11-12 feet in September, and a depth of approximately 5 feet in January 1993, following a period of rainfall heavy enough to produce local flooding.

4.1.2 Groundwater Flow Direction

Groundwater elevations were determined from water level measurements taken on September 25, 1992. Groundwater water flow lines could not be constructed since all elevations were approximately identical. The topography of the area, along with the natural and artificial drainage ways, suggest the water table flow is to the north-northwest.



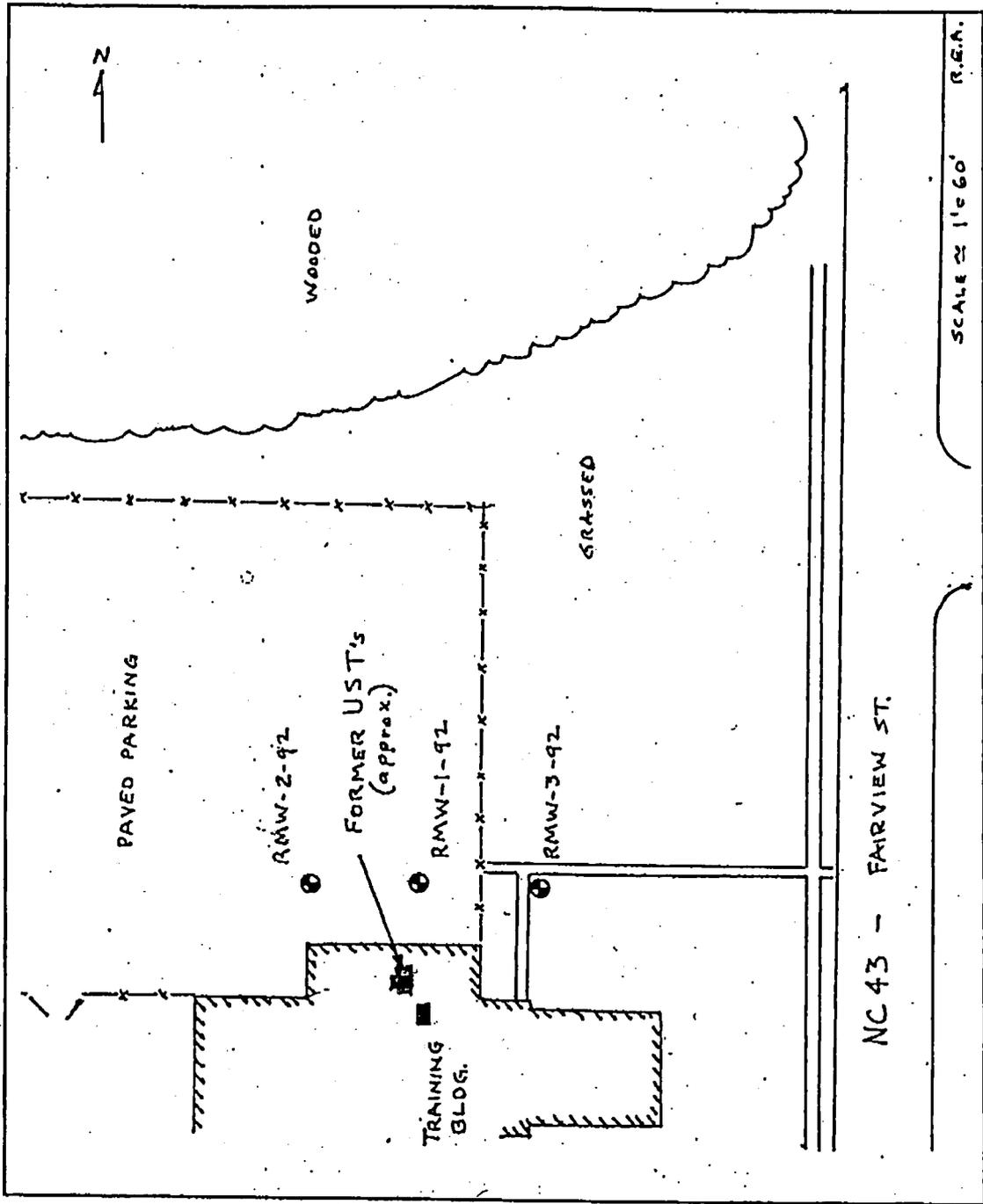


FIGURE 3

MONITORING WELL AND SOIL BORING LOCATIONS

4.3 Chemistry

The ground water analytical results are presented in this section. The laboratory analytical reports are included as Appendix C.

4.3.1 Soil Geochemistry

The headspace analyses results are tabulated in Table 1. Based on the low PID readings and the absence of any odors or stained soils, soil samples were not collected for laboratory analyses.

4.3.2 Groundwater Chemistry

Analytical results of groundwater samples obtained during well installation in September 1992 are tabulated in Table 2. Naphthalene was the only semi-volatile compound detected in the samples from MW-92-1 and -3 at a concentration level of 2.8 and 2.7 ppb (part-per-billion), respectively, at a detection limit of 1.1 ppb. Accordingly, followup samples were collected for analysis in January 1993. Naphthalene was not detected in MW-1 using EPA Method 625; MW-3 was inadvertently not analyzed.

MTBE was detected in MW-92-1 and -2 at concentrations of 3.3 and 6.4 ppb, respectively, at a detection limit of 1.2 ppb. MTBE is a very low-molecular weight compound commonly used as an additive in gasoline, and not likely found in heating oil. Additional analyses of ground water samples for volatile compounds was performed in January 1993 to assess the significance of these findings. Concentrations of MTBE were reported as Non-Detected, 40, and 20 ppb in the three wells, using EPA Method 8020 with a detection limit of 10 ppb. The presence of MTBE in these samples, especially noting the absence of other BTEX-related compounds, cannot be correlated to the heating oil release being assessed.

TABLE 1

PID READINGS OBTAINED DURING WELL INSTALLATION

| Well Number | Depth (ft) | OVA Reading (ppm) |
|-------------|------------|-------------------|
| RMW-92-1 | 1.0 - 2.0 | 1.5 |
| | 4.0 - 5.0 | -0- |
| | 6.0 - 7.0 | 0.5 |
| | 8.0 - 9.0 | 0.4 |
| RMW-92-2 | 2.0 - 2.5 | 0.2 |
| | 4.0 - 4.5 | 2.3 |
| | 6.0 - 6.5 | 0.5 |
| | 8.0 - 8.5 | 0.7 |
| RMW-92-3 | 0.0 - 1.0 | 0.4 |
| | 4.0 - 4.5 | 5.7 |
| | 6.0 - 6.5 | 1.1 |
| | 8.0 - 8.5 | 1.3 |
| | 9.0 - 9.5 | 0.8 |

TABLE 2

ANALYTICAL RESULTS¹ FOR GROUNDWATER MONITORING WELL SAMPLES
COLLECTED DURING PHASE 1 INVESTIGATION

US ARMY RESERVE CENTER

Rocky Mount, NC

| Monitoring Well Number | Sample Number | Date Collected | Benzene ² | Ethyl- Benzene ² | Toluene ³ | Xylenes ⁴ | Methyl Tertiary Butyl Ether ⁵ | Naphthalene ⁶ |
|---------------------------|------------------|-------------------|----------------------|--------------------------------|----------------------|----------------------|--|--------------------------|
| RMW-92-1 | RMW-92-1 | 9/25/92 | ND | ND | ND | ND | 3.3 | 2.8 |
| | RMW-1 | 1/10/93 | ND | ND | ND | ND | <10 | ND |
| RMW-92-2 | RMW-92-2 | 9/25/92 | ND | ND | ND | ND | 6.4 | ND |
| | RMW-2 | 1/10/93 | ND | ND | ND | ND | 40 | ND |
| RMW-92-3 | RMW-92-3 | 9/25/92 | ND | ND | ND | ND | ND | 2.7 |
| | RMW-3 | 1/10/93 | ND | ND | ND | ND | 20 | N.A. |

¹ Concentrations in parts per billion (ppb); ND = Not Detected; ² 0.6 ppb detection level; ³ 0.7 ppb detection level;

⁴ 1.4 ppb detection level; ⁵ 1.2 ppb detection level; ⁶ 1.1 ppb detection level; N.A. = Not Analyzed.

5.0 CONCLUSIONS

5.1 Conclusions

Petroleum-related compounds detected in subsurface soils following an UST closure at the Rocky Mount US Army Reserve Center have been properly assessed. Soil borings adjacent to the former UST site have been advanced and groundwater monitoring wells installed. Groundwater analyses which initially detected naphthalene concentrations subsequently indicated naphthalene concentrations below the quantification limit. The presence of MTBE in groundwater cannot be correlated to the heating oil release being assessed.

5.2 Recommendations

No further action at this site is warranted. Monitoring wells should be properly abandoned in accordance with NCDEM procedures.

APPENDIX A

Soil Boring Logs

REPORT OF ANALYSIS

January 18, 1993
Sample # : 00394-93-1

Mr. Edward J. Ossi
ERM-Southeast, Inc.
Ste. 110-215 Centerview Dr
Brentwood TN 37027

Date Received: January 10, 1993
Description : Groundwater - Army Reserves
120th Army Command, Rocky Mount, NC
Collection Point : RMW-2
Collection Date/Time : 01/10/93 0930
Collected by : Bob Alexander

| Parameter | Result | Units | Method | Date |
|------------------------------|----------|-------|--------|----------|
| Benzene | < 0.0005 | mg/l | 8020 | 01/14/93 |
| Ethylbenzene | < 0.0005 | mg/l | 8020 | 01/14/93 |
| Toluene | < 0.0005 | mg/l | 8020 | 01/14/93 |
| o-Xylene | < 0.0005 | mg/l | 8020 | 01/14/93 |
| m&p-Xylenes | < 0.001 | mg/l | 8020 | 01/14/93 |
| Methyl tert-butyl ether | 0.04 | mg/l | 8015 | 01/14/93 |
| Acenaphthene | < 0.005 | mg/l | 625 | 01/17/93 |
| Acenaphthylene | < 0.005 | mg/l | 625 | 01/17/93 |
| Anthracene | < 0.005 | mg/l | 625 | 01/17/93 |
| Benzidine | < 0.005 | mg/l | 625 | 01/17/93 |
| Benzo (a) anthracene | < 0.005 | mg/l | 625 | 01/17/93 |
| Benzo (a) fluoranthene | < 0.005 | mg/l | 625 | 01/17/93 |
| Benzo (K) fluoranthene | < 0.005 | mg/l | 625 | 01/17/93 |
| Benzo (a) pyrene | < 0.005 | mg/l | 625 | 01/17/93 |
| Benzo (g,h,i) perylene | < 0.005 | mg/l | 625 | 01/17/93 |
| Benzylbutyl Phthalate | < 0.005 | mg/l | 625 | 01/17/93 |
| Bis(2-ethylhexyl)phthalate | < 0.005 | mg/l | 625 | 01/17/93 |
| Di-n-butyl Phthalate | < 0.005 | mg/l | 625 | 01/17/93 |
| Di-n-octyl Phthalate | < 0.005 | mg/l | 625 | 01/17/93 |
| Diethyl phthalate | < 0.005 | mg/l | 625 | 01/17/93 |
| Dimethyl Phthalate | < 0.005 | mg/l | 625 | 01/17/93 |
| Bis(2-Chloroethyl) Ether | < 0.005 | mg/l | 625 | 01/17/93 |
| Bis(2-chloroethoxy)methane | < 0.005 | mg/l | 625 | 01/17/93 |
| Bis(2-chloroisopropyl) ether | < 0.005 | mg/l | 625 | 01/17/93 |
| 4-Bromophenyl-phenylether | < 0.005 | mg/l | 625 | 01/17/93 |
| 2-Chloronaphthalene | < 0.005 | mg/l | 625 | 01/17/93 |
| 4-Chlorophenyl-phenylether | < 0.005 | mg/l | 625 | 01/17/93 |
| Chrysene | < 0.005 | mg/l | 625 | 01/17/93 |
| Dibenzo (A,H) Anthracene | < 0.005 | mg/l | 625 | 01/17/93 |
| 1,2-Dichlorobenzene | < 0.005 | mg/l | 625 | 01/17/93 |
| 1,3-Dichlorobenzene | < 0.005 | mg/l | 625 | 01/17/93 |

| Parameter | | Result | Units | Method | Date |
|----------------------------|---|--------|-------|--------|----------|
| 1,4-Dichlorobenzene | < | 0.005 | mg/l | 625 | 01/17/93 |
| 3,3-Dichlorobenzidine | < | 0.005 | mg/l | 625 | 01/17/93 |
| 2,4-Dinitrotoluene | < | 0.005 | mg/l | 625 | 01/17/93 |
| 2,6-Dinitrotoluene | < | 0.005 | mg/l | 625 | 01/17/93 |
| Fluoranthene | < | 0.005 | mg/l | 625 | 01/17/93 |
| Fluorene | < | 0.005 | mg/l | 625 | 01/17/93 |
| Hexachlorobenzene | < | 0.005 | mg/l | 625 | 01/17/93 |
| Hexachlorobutadiene | < | 0.005 | mg/l | 625 | 01/17/93 |
| Hexachlorocyclopentadiene | < | 0.005 | mg/l | 625 | 01/17/93 |
| Hexachloroethane | < | 0.005 | mg/l | 625 | 01/17/93 |
| Indeno(1,2,3-C,D)Pyrene | < | 0.005 | mg/l | 625 | 01/17/93 |
| Isophorone | < | 0.005 | mg/l | 625 | 01/17/93 |
| Naphthalene | < | 0.005 | mg/l | 625 | 01/17/93 |
| Nitrobenzene | < | 0.005 | mg/l | 625 | 01/17/93 |
| N-Nitrosodimethylamine | < | 0.005 | mg/l | 625 | 01/17/93 |
| N-Nitrosodiphenylamine | < | 0.005 | mg/l | 625 | 01/17/93 |
| N-Nitroso-Di-N-propylamine | < | 0.005 | mg/l | 625 | 01/17/93 |
| Phenanthrene | < | 0.005 | mg/l | 625 | 01/17/93 |
| Pyrene | < | 0.005 | mg/l | 625 | 01/17/93 |
| 1,2,4-Trichlorobenzene | < | 0.005 | mg/l | 625 | 01/17/93 |
| 2-Chlorophenol | < | 0.010 | mg/l | 625 | 01/17/93 |
| 2,4-Dichlorophenol | < | 0.010 | mg/l | 625 | 01/17/93 |
| 2,4-Dimethylphenol | < | 0.010 | mg/l | 625 | 01/17/93 |
| 2,4-Dinitrophenol | < | 0.010 | mg/l | 625 | 01/17/93 |
| 2-Nitrophenol | < | 0.010 | mg/l | 625 | 01/17/93 |
| 4-Nitrophenol | < | 0.010 | mg/l | 625 | 01/17/93 |
| Pentachlorophenol | < | 0.010 | mg/l | 625 | 01/17/93 |
| Phenol | < | 0.010 | mg/l | 625 | 01/17/93 |
| 2,4,6-Trichlorophenol | < | 0.010 | mg/l | 625 | 01/17/93 |
| 2-Methyl-4,6-dinitrophenol | < | 0.010 | mg/l | 625 | 01/17/93 |
| 4-Chloro-3-methylphenol | < | 0.010 | mg/l | 625 | 01/17/93 |

DP: ms 0
init.rev.


Dewey Klahn

Laboratory Manager

Please review all information in this report for accuracy and completeness.
Contact our office within 10 days if there are any questions.

24

REPORT OF ANALYSIS

Mr. Edward J. Ossi
ERM-Southeast, Inc.
Ste. 110-215 Centerview Dr
Brentwood TN 37027

January 18, 1993
Sample # : 00395-93-1

Date Received: January 10, 1993

Description: Groundwater - Army Reserves
120th Army Command, Rocky Mount, NC

Collection Point : RMW-3
Collection Date/Time : 01/10/93 1030
Collected by : Bob Alexander

| Parameter | | Result | Units | Method | Date |
|-------------------------|---|--------|-------|--------|----------|
| Benzene | < | 0.0005 | mg/l | 8020 | 01/14/93 |
| Ethylbenzene | < | 0.0005 | mg/l | 8020 | 01/14/93 |
| Toluene | < | 0.0005 | mg/l | 8020 | 01/14/93 |
| o-Xylene | < | 0.0005 | mg/l | 8020 | 01/14/93 |
| m&p-Xylenes | < | 0.001 | mg/l | 8020 | 01/14/93 |
| Methyl tert-butyl ether | | 0.02 | mg/l | 8015 | 01/14/93 |

DP: MS 0
init.rev.


Dewey Klahn
Laboratory Manager

Please review all information in this report for accuracy and completeness.
Contact our office within 10 days if there are any questions.

25



1993

1910 May's Chapel Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
FAX (615) 758-5859
Est. 1970

CHAIN OF CUSTODY

Company's Name: 120th Army Command Telephone: 373-3350

Address: 215 Centerline Drive Suite 110, Brentwood TN 37215
Street City State Zip

Project Name or No.: ARMY RESERVES - ROCKY MOUNT, NC,

Report to: MAJOR ALEXANDER Collector's Name: BOB ALEXANDER

Indicate potential contaminant - Gas (G), Diesel (D), Both (B), Waste Oil (WO), Unknown (U), Other (O).

| Collection Point | Date/Time | Pot. Cont. | Tests Requested | Lab Use Sample# |
|---------------------------|---------------------|------------|-------------------|-----------------|
| 1. <u>Rm.w-1</u> | <u>1/10/92 0830</u> | <u>D</u> | <u>method 625</u> | <u>00393</u> |
| 2. _____ | <u>1</u> | _____ | <u>BTEX/MTBE</u> | _____ |
| 3. <u>Rm.w-2</u> | <u>1/10/92 0930</u> | <u>D</u> | <u>Method 625</u> | <u>00394</u> |
| 4. <u>(only one vial)</u> | <u>1</u> | _____ | <u>BTEX/MTBE</u> | _____ |
| 5. _____ | <u>1</u> | _____ | _____ | _____ |
| 6. <u>Rm.w-3</u> | <u>1/10/92/1030</u> | <u>D</u> | <u>BTEX/MTBE</u> | <u>00395</u> |

Normal T/A is 10 working days. Please Call in advance for Rush analysis.

NORMAL TURNAROUND: _____ RUSH ANALYSIS: 24 Hr. _____ 48 Hr. _____

Request results by phone: Yes () No () Phone () _____

Request results by fax: Yes () No () Fax # () _____

(No additional charge for phone or fax on RUSH reports.)

* * * * *

CHAIN OF POSSESSION

| | | | |
|--|--------------------------|------------------------|-------|
| 1. <u>[Signature]</u> (Collector's Signature) | <u>1/10/92</u> (Date) | _____ | _____ |
| 2. <u>[Signature]</u> (Signature) | <u>1/10/92</u> (Date) | <u>19:25</u> (Time) | _____ |
| 3. _____ (Signature) | _____ | _____ | _____ |

SKETCH A ROUGH DIAGRAM OF THE SAMPLE COLLECTION AREA ON THE BACK OF THIS SHEET. INDICATE THE COLLECTION POINT FOR EACH SAMPLE. THIS SHEET WILL BE RETURNED WITH YOUR SAMPLE RESULTS.

all dates should be 1993 of January.

TRANSMITTAL OF SAD LABORATORY REPORT(S)

TO: US Army Corps of Engineers
Wilmington District
ATTN: CESAW-EN-GG
Mr. Larry Benjamin
Wilmington, NC 28402-1890

FROM: Director (CESAD-EN-FL)
SAD Laboratory
USACE
611 South Cobb Drive
Marietta, GA 30060-3112

PROJECT: Rocky Mount

REQN NO:
CESAW-EN-GG-92-0038
W.O. NO: 6778

SUBJECT: Aqueous Samples Collected for Analytical Testing

1. Enclosed is our report of analytical test results and chain of custody forms for the 7 aqueous samples collected on 25 September 1992 at the US Army Reserve Center, Rocky Mount, NC.
2. If you have any questions, please call Mr. Blaise Willis at 404/421-5295 or the undersigned at 404/421-5296.

SUBMITTED BY:
WILLIAM L. TISON, P. E.
Director, SAD Laboratory

SIGNATURE



DATE:

9 Nov 1992

South Atlantic Division Laboratory
 U. S. Army Corps of Engineers
 611 South Cobb Drive
 Marietta, Georgia 30060-3112

District - SAVANNAH

ROCKY MOUNT, NC

Date Received - 92/09/28

Requisition - ADVANCE

Date Reported - 92/11/09 11:05:45

Work Order - 6778 Job Number - 666

Test Performed - PAH'S

Storet No. M8100

| Lab # | Field ID | Date | Time | Depth | Result | Units | Tested By | Test Date |
|-------|----------|----------|------|-------|--------|-------|-----------|-----------|
| 14905 | RMW-1-92 | 92/09/25 | 830 | 0.0 | * | | LAW | 92/10/05 |
| 14907 | RMW-2-92 | 92/09/25 | 800 | 0.0 | * | | LAW | 92/10/05 |
| 14909 | RMW-3-92 | 92/09/25 | 700 | 0.0 | * | | LAW | 92/10/05 |

Test Performed - VOLATILE ORGANICS - MTBE

Storet No. M8240

| Lab # | Field ID | Date | Time | Depth | Result | Units | Tested By | Test Date |
|-------|-----------|----------|------|-------|--------|-------|-----------|-----------|
| 14904 | RMW-1-92 | 92/09/25 | 840 | 0.0 | * | | LAW | 92/10/07 |
| 14906 | RMW-2-92 | 92/09/25 | 810 | 0.0 | * | | LAW | 92/10/07 |
| 14908 | RMW-3-92 | 92/09/25 | 710 | 0.0 | * | | LAW | 92/10/07 |
| 14910 | TRIPBLANK | 92/09/25 | 900 | 0.0 | * | | LAW | 92/10/07 |

NOTE: See Attached Report

Sampled by District Personnel

Signed by:

Checked by: BW

Blaise Willis
 Blaise Willis
 Chemist

Sheet 1 of 3



LAW ENVIRONMENTAL, INC.

112 TOWNPARK DRIVE
KENNESAW, GEORGIA 30144-5599
404-421-3400

October 14, 1992

Department of the Army
South Atlantic Division Laboratory
Corps of Engineers
611 South Cobb Drive (GA. HWY. 280)
Marietta, GA 30060-3112

Attention: Blaise Willis

Subject: Chemical analysis of samples received on 09/28/92.

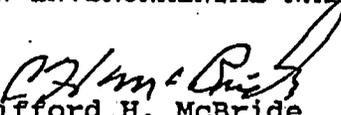
Dear Mr. Willis:

Law Environmental National Laboratories has completed its analysis of your samples and reports the results on the following pages. These results relate only to the contents of the samples as submitted. This report shall not be reproduced except in full without the approval of Law Environmental National Laboratories.

If there are any questions, please do not hesitate to contact us.

Sincerely,

LAW ENVIRONMENTAL NATL LABS


Clifford H. McBride
QC Coordinator

Attachment: Data Report
Invoice

LAW ENVIRONMENTAL NATIONAL LABORATORIES
TEST DATA REPORT

Date 10/13/92
Page 1

--- Project Information ---

Lab Number : 92-3734-01
Project No. : 03390
Project Name : DEPARTMENT OF THE ARMY

Cust. No. :

Manager: WENDY WOLFE

--- Sample Information ---

Station ID : RMW-1-92 (14904)
Matrix : W
Type : GRAB
Collector :

Sampled Date/Time : 09/25/92 08:40
Received Date/Time : 09/28/92 14:30
Received From/By : JS/LD
Chain of Custody : 0
Number of Containers : 2

MW-1

Parameter..... Method.... Units DL..... Results... Test Date Analy

-- GC ORGANIC ANALYSIS RESULTS --

| | | | | | | |
|------------------------------------|---------|------|-----|-----|----------|----|
| Methyl-tertiary-butyl ether (MTBE) | EPA 602 | ug/l | 1.2 | 3.3 | 10/07/92 | VZ |
| Benzene | EPA 602 | ug/l | 0.6 | ND | 10/07/92 | VZ |
| Toluene | EPA 602 | ug/l | 0.6 | ND | 10/07/92 | VZ |
| Ethylbenzene | EPA 602 | ug/l | 0.7 | ND | 10/07/92 | VZ |
| Xylene, Total | EPA 602 | ug/l | 1.4 | ND | 10/07/92 | VZ |

LAW ENVIRONMENTAL NATIONAL LABORATORIES
TEST DATA REPORT

Date 10/13/92
Page 1

--- Project Information ---

Lab Number : 92-3734-02
Project No. : 03390
Project Name : DEPARTMENT OF THE ARMY

Cust. No. :

Manager: WENDY WOLFE

--- Sample Information ---

Station ID : RMW-2-92 (14906)
Matrix : W
Type : GRAB
Collector :

Sampled Date/Time : 09/25/92 08:10
Received Date/Time : 09/28/92 14:30
Received From/By : JS/LD
Chain of Custody : 0
Number of Containers : 1

MW-2

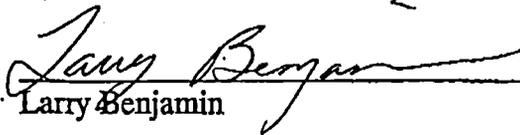
Parameter..... Method.... Units DL..... Results... Test Date Analy

-- GC ORGANIC ANALYSIS RESULTS --

| | | | | | | |
|------------------------------------|---------|------|-----|-----|----------|----|
| Methyl-tertiary-butyl ether (MTBE) | EPA 602 | ug/l | 1.2 | 6.4 | 10/07/92 | VZ |
| Benzene | EPA 602 | ug/l | 0.6 | ND | 10/07/92 | VZ |
| Toluene | EPA 602 | ug/l | 0.6 | ND | 10/07/92 | VZ |
| Ethylbenzene | EPA 602 | ug/l | 0.7 | ND | 10/07/92 | VZ |
| Xylene, Total | EPA 602 | ug/l | 1.4 | ND | 10/07/92 | VZ |

FIELD MEMORANDUM; ARMY RESERVE CENTER, ROCKY MOUNT, NC

During the construction of three shallow monitoring wells, soils were screened for the presence of hydrocarbons with an Organic Vapor Analyzer (OVA). Based on OVA readings and field observations, there was no evidence of soil contamination; thus, no samples were submitted for laboratory analysis. A groundwater sample was collected from each of the three wells installed around the former tank basin area to determine possible hydrocarbon impact at the site.

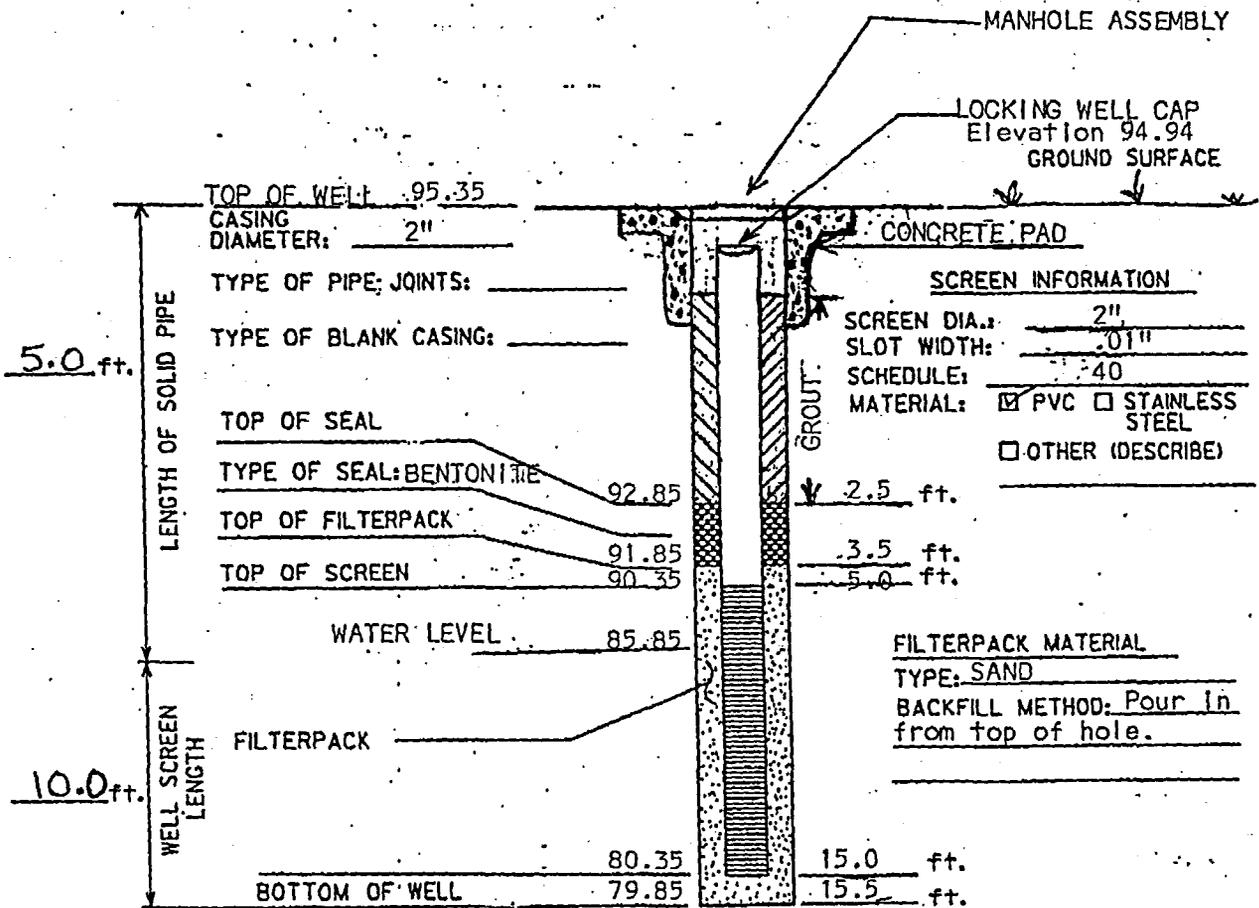

Larry Benjamin


Amy Ohlberg

| | | | |
|------------------------|---------|-----------|-----------------------------------|
| ELEVATION GROUND WATER | | | PROJECT |
| 85.85 | | | USARC ROCKY MOUNT, NC |
| DATE INSTALLED | STARTED | COMPLETED | LOCATION (Coordinates or Station) |
| SEP. 24 1992 | 9/24/92 | 9/24/92 | SEE PLAN |
| ELEVATION TOP OF HOLE | | | SIGNATURE OF INSPECTOR |
| 95.35 | | | JIM BIDDLE |
| TOTAL DEPTH OF HOLE | | | HOLE NO. |
| 15.5' | | | RMW-92-1 |

MONITORING WELL CONSTRUCTION DIAGRAM

(ALL MEASUREMENTS FROM GROUND SURFACE)



WELL DEVELOPMENT

METHOD: Three Volumes

TIME SPENT DEVELOPING: 35 Minutes

VOLUME OF WATER REMOVED: 2 Gallons

VOLUME OF WATER ADDED: _____

DESCRIPTION OF PREDEVELOPMENT WATER:
Milky Looking

DESCRIPTION OF POST DEVELOPMENT WATER:
Clear

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS

DATE/TIME/LEVEL 9/25/92 0830 9.5'

DEPTH FROM TOP CASING

AFTER DEVELOPMENT: 7.0'



43

Department of Environment and Natural Resources
Raleigh Regional Office

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



DIVISION OF WASTE MANAGEMENT
UST SECTION

June 11, 2001

Department of the Army
Headquarters, 120th U. S Army Reserve Command
Fort Jackson, SC 29207-6070

RE: Notice of No Further Action
15A NCAC 2L .0115(h)
RISK-BASED ASSESSMENT AND
CORRECTIVE ACTION FOR PETROLEUM
UNDERGROUND STORAGE TANKS

US Army Reserve Center
804 Fairview Road
Rocky Mount, NC
Incident #: 15925

Dear Sir/Madam:

On April 6, 1993 the Division of Waste Management (DWM) Raleigh Regional Office, received a Environmental investigation Report for the above-referenced site. A review of the report indicates that One 3,000 gallon # 2 fuel oil UST was removed on August 1990. The remaining unsaturated soil in the sidewalls and at the base of the UST system excavation does not contain contaminant levels which exceed either the residential or soil-to-groundwater maximum soil contaminant concentrations established in 15A NCAC 2L .0115(m) or the soil cleanup levels established by the Department in the *Groundwater Section Guidelines for the Investigation and Remediation of Soil and Groundwater* (March 1997).

Based on information provided to date, the DWM classifies the risk posed by the discharge or release as low risk and determines that no further action is required for this incident. This determination shall apply unless the DWM later determines that the discharge or release poses an unacceptable risk or a potentially unacceptable risk to human health or the environment.

1628 Mail Service Center; Raleigh; North Carolina 27699-1628

Phone: (919) 571-4700 \ FAX: (919) 571-4718 \ Internet: www.enr.state.nc.us/ENR/

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This no further action determination only applies to Under Ground Storage Tanks of the above-referenced incident and that for any other incidents, the responsible party is expected to continue to address the contamination as required by the applicable rules and in accordance with any previously issued notices.

Pursuant to 15A NCAC 2L .0115(e), you have a continuing obligation to notify the DWM of any changes that you know of or should know of, that might affect the level of risk assigned to the discharge or release.

If you have any questions, please contact Zahid Baloch at 919-571-4700.

Sincerely,



Robert K. Davies, L.G.
UST Section Regional Supervisor

cc: Incident Management Files.
Faye Sweat - Central Office.