CONTRACT DACA87-94-D-0019 — TASK ORDER #002

TIME CRITICAL REMOVAL ACTION FORMER CAMP CROFT, RED HILL Spartanburg, South Carolina

Human Factors Applications, Inc.
ORDNANCE & EXPLOSIVE WASTE REMEDIATION
700 Old Line Center, Suite 210, Waldorf, Maryland 20602-2513

June 8, 1995

FINAL REMOVAL REPORT

August 8, 1994 – January 19, 1995

U.S. Army Corps of Engineers, Huntsville Division, CEHND-PM-OT
4820 University Square, Huntsville, Alabama 35816

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ACRONYMS

GFE ..... Government Furnished Equipment

GPS ..... Global Positioning System

HFA ..... Human Factors Applications, Inc.

OD ..... Open Detonation

OEW ..... Ordnance and Explosive Waste

QC ..... Quality Control

SOW ..... Scope of Work

SUXOS ..... Senior UXO Supervisor

TCRA ..... Time Critical Removal Action

UXO ..... Unexploded Ordnance

WP ..... White Phosphorous

FORMER CAMP CROFT, RED HILL
FINAL REPORT

1.0 INTRODUCTION

1.1 Human Factors Applications, Inc. (HFA) was issued Task Order 0002 under contract DACA87-94-D-0019. This Time Critical Removal Action (TCRA) consisted of the removal of surface and subsurface ordnance and explosive waste (OEW) at the Former Camp Croft, Red Hill, Spartanburg SC (a formerly used defense site). The Red Hill area was not identified during the Archive Search, but evidence of potential surface OEW contamination was found during a 6 July 1994 site visit. The former Camp Croft operated from 1941 until it was excessed in 1947. The actual work site is approximately 30 acres of a 350 acre parcel, currently owned by Dr. Lowry. The site is planned for development, and a Class 1 industrial landfill is intended for the site.

1.2 The areas of interest expressed in the original Scope of Work (SOW) were Area 1—the access roads into and out of the site (approximately three miles in length and 30 feet wide); and Area 2—a work area where asphalt recycling equipment is to be installed (approximately 20 acres) . Modification 01 to the SOW (see Appendix A, Scope of Work) described the area of interest somewhat differently, although the size of the area (30 acres) remained essentially the same. Mod. 01 stated that the exact clearance areas would be determined on-site. The project was initiated in a non-traditional manner. HFA received verbal direction from the contracting officer and mobilized under an Emergency Site Safety Plan.

1.3 The objective of this TCRA was to remove surface and subsurface OEW to a depth of four feet within the planned work areas. An additional tasking existed to conduct geophysical mapping of the planned site.

1.4 HFA employed a standard technical approach to the project. HFA established grids in the areas identified in the SOW and performed magnetometry searches using Schonstedt GA52/72 magnetometers. All subsurface anomalies were excavated by hand and their identities determined. Unexploded ordnance (UXO) that was unsafe to move was detonated in place. UXO and OEW determined safe to move were destroyed on-site in the designated open detonation (OD) area. All scrap determined free of explosive residue was turned over to a local scrap dealer at no cost to the government. The project unfolded in two phases. Phase One consisted of non-intrusive activities performed under the Emergency Site Safety Plan. Phase Two incorporated intrusive and disposal activities conducted under the approved Work Plan and associated plans. The site mapping was completed using a Differentially Processed Global Positioning System (GPS). This system was linked to three control points established by a local land surveyor. The fragmentation contamination was denser than expected, and the iron content in the soil was heavier than normally encountered. Although not every area was completed, each of the completed areas

was swept and cleared as outlined in the Work Plan. Each area also received a quality control (QC) check conducted by HFA and quality assurance inspections performed by the CEHND Site Safety Specialist.

2.0 DISCUSSION

2.1 Site Conditions

2.1.1 The site is located in a rural area along Highway 176, approximately 15 miles south of Spartanburg, South Carolina (see Figure 1). The site has easy access directly from Highway 176 via a county road. The site is moderately to heavily vegetated, and the terrain ranges from gentle hills to deep water eroded gullies and ravines.

2.1.2 Roads within the site itself are a system of cleared fire breaks and logging roads. These roads proved satisfactory for most of the site operations, but were difficult to traverse during inclement weather.

2.1.3 Work was conducted during the months of August 1994 through January 1995. The project experienced the full range of weather conditions.

2.2 Mobilization and Support

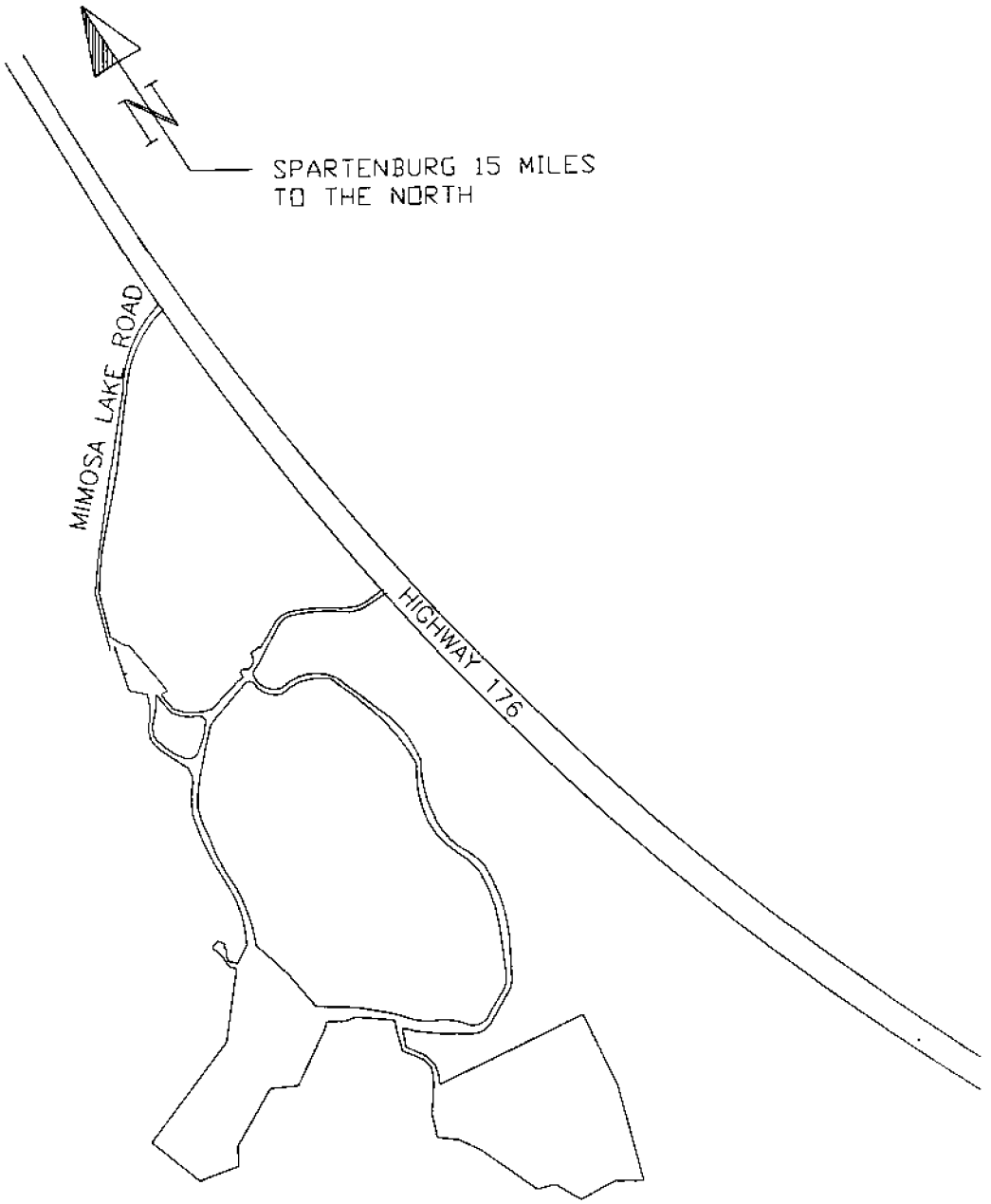
2.2.1 HFA received a draft SOW and verbal direction from the contracting officer on 4 August 1995. On 7 August, HFA mobilized an initial response team of five men under an Emergency Site Safety Plan. Their goal was to begin site preparation for UXO removal operations. Expansion of the organization began 15 September 1995, after the Contracting Officer approved the Work Plan and its sub-plans. Personnel were mobilized in phases based on the developing requirements and equipment availability. The total work force of 27 personnel was on site by 14 October 1994.

2.2.2 The team was initially supported with HFA owned magnetometers until the equipment plan was approved. Since this was an undeveloped site, initial telephone communications were achieved by cellular telephones. Carolina Security Services was contracted to provide 24 hour security for the site and control access during working hours.

2.3 Removal Efforts

2.3.1 The Senior UXO Supervisor (SUXOS), Mr. John Miles, and other HFA personnel arrived on site 8 August 1994. Mr. Miles began site operations by touring the site with the property owner, Dr. Lowry; Mr. Bill Davis, CEHND PM-OT; and CPT Troy Williams, Project Manager, Charleston District, USACE.

FIGURE 1
SITE LOCATION MAP



Because of the short response time, a site visit was not authorized. The 8 August mobilization allowed HFA personnel to become familiar with the site and assisted the group in determining the site priorities and the nature and extent of the effort required. During the site tour, it was determined that UXO search and removal actions would begin at the site access road. After this tour, Dr. Lowry was to provide the final configuration of the road loop, which was the second priority.

2.3.2 Activities began at the access road on 9 August 1994. The team began by establishing the boundaries of the access road—an area 525 feet long by 40 feet wide, and the Road Loop—approximately three miles long and 30 feet wide. Concurrent with the initial site work and establishment of priorities, HFA developed the site Work Plan and supporting plans. Approval of these plans was critical to the start of intrusive activities, establishing the OD area, and purchasing and storing the demolition materials and explosives needed to dispose of UXO found on the site.

2.3.3 The team conducted non-intrusive site preparation activities, such as clearing brush, magnetometer searches, marking anomalies located with pin flags, and establishing the boundaries and grids of the remaining areas outside the access road boundaries. The team also constructed a lay down area for the site trailer and facilities necessary to support the removal action. These types of activities continued throughout the month of August. Each day's activities are detailed in the HFA Daily Journals (Appendix B).

2.3.4 On 6 September, the Neil Phillips Surveying Co. established three control points as required in the SOW. HFA provided UXO avoidance services for the surveyors. During 13-20 September, the site was mapped using differentially processed GPS. The map was referenced to the control points established by the surveying company. This mapping documented the boundaries of the search areas and provided HFA with the base document to record all significant UXO finds.

2.3.5 On 14 September, the CEHND Project Manager directed the team to another site to investigate a suspected mine field. The team swept approximately 22,960 square feet and marked 215 contacts. At the direction of the CEHND Site Safety Specialist, the team also excavated 25 contacts. No UXO/OEW was located; however, fourteen M6 mine containers were located and removed. These containers were later disposed of as scrap.

2.3.6 On 15 September, the Work Plan was approved and HFA implemented the equipment plan and mobilization of additional UXO team members. Government furnished equipment (GFE) and HFA owned equipment began arriving on site 21 September. Twelve additional HFA UXO Specialists arrived on Sunday, 25 September. Electrical power was installed to the site by Duke Power Co. on 27 September. On 28 September, soil samples of the

OD area were collected and other initial site monitoring was completed in accordance with the Work Plan. Explosives were ordered and set for delivery on 3 October.

2.3.7 On 3 October, the explosives were delivered to the site and stored at the explosive storage site. The lightning protection system for the magazines required re-installation due to design errors in the original government furnished specifications. Intrusive searching and clearing began on 4 October. As expected, progress was slow due to the heavy contamination of fragmentation. One team was assigned to sweep and clear the site access road and the other team was assigned to begin clearing the access routes to the area designated as Landfill 1. Additional personnel arrived on site 12 October; thereby increasing the complement to four UXO teams.

2.3.8 During the week of 11 October, it rained almost continuously. The crew was, however, able to work. The roads were difficult to traverse and vehicles had to be pulled up the hills using the back hoe. Grid B1 was temporarily abandoned because the excavation was getting beyond the scope of hand digging—one excavation was approximately 15 square feet with no end in sight. These areas were later excavated using the backhoe, and this became a standard technique for the remainder of the project. In an effort to increase the clearance rate, the Work Plan was modified to allow personnel to disregard small anomalies and to excavate and remove only frag and magnetic material two inches and larger. This technique did increase production somewhat.

2.3.9 On 17 October, an additional clearance team was mobilized, bringing the crew size to five teams which was the maximum the site could safely support. Operations continued as before. The clearance rate was disappointingly slow, despite efforts to improve it. On 18 October, a live 105mm artillery projectile with an M48 series fuse was located in Grid A13. After jarring it remotely, the projectile was transported to the OD site for disposal. The projectile was detonated without incident. Operations were temporarily halted twice on 20 October due to electrical storms in the area, and were suspended altogether at 1630 because of lightning. Mr. Hud Heaton, CEHND-PM, also visited the site this day and was given a tour.

2.3.10 During the week of 24 October, the weather cleared and the site began to dry out, thus improving the roads and general working conditions. Three UXO teams were assigned to the road network and the remaining two teams were assigned to sweep and clear the landfill area. The progress remained slow because of heavy fragmentation and "hot rocks."

2.3.11 The site configuration changed on 8 November (see Appendix C, Site Map). On 10 November, a team was assigned to clear and prepare the area where truck scales were to be installed by the property owner. The team grubbed and

cleared the site. A large pile of logs had to be moved to gain access to the area prior to sweeping and UXO removal.

2.3.12 On 17 November, two 60mm HE mortars with fuzes were located. One was found in Grid B30, and the other in Grid B15. Both Mortars were transported to the OD area and destroyed by detonation. While sweeping Grid B14, an explosive burster tube from a 155mm White Phosphorous (WP) projectile was located, transported to the OD area, and detonated.

2.3.13 No site work occurred 24-30 November due to Thanksgiving Holiday and Home Leave. Clearance activities resumed on 1 December with the five UXO teams. Production continued to be slow. Rain further slowed progress by deteriorating the county access road (Mimosa Road) and the site roads to the point that access to the site became difficult and movement within the site was hampered. The county road crew attempted to repair the road, because the poor condition of the road could have affected safety if an ambulance or other emergency equipment were needed.

2.3.14 The county access road into the site was still unsatisfactory after the county's attempted repairs and was deemed a safety issue by the CEHND Site Safety Specialist. On 5 December, HFA began repairing the county road surface. The road was graded to improve the drainage and surfaced with 66 tons of gravel beginning at the paved portion of Mimosa Road and ending at the site entrance gate. HFA also repaired problem sections of the internal site roads. This task was completed on 7 December. In all, 132 tons of gravel were used to repair the site roads.

2.3.15 During the week of 12 December, the CEHND Site Safety Specialist was not on site and no intrusive activities were conducted. HFA UXO teams conducted grubbing and clearing operations in the Expanded Compost Area (Grids B37 through B74). The teams cleared an area of 240,500 square feet (see Appendix D, Grid Map).

2.3.16 Intrusive activities were resumed during the week of 19 December after the CEHND Site Safety Specialist returned to the site. Emphasis of the project shifted to completing Landfill 1 and the access road to it. On 19 December, one team was assigned to Grid A8. Completion of this grid linked the access road to the fire break road and Landfill 1. The remaining teams were assigned grids within Landfill 1.

2.3.17 The team structure was reorganized on 20 December because teams were beginning to encroach on one another, producing a potentially unsafe situation. UXO teams continued operating in this manner through 21 December, when they demobilized for the Christmas Holiday break.

2.3.18 All personnel returned to the job site on 4 January 1995, and intrusive activities resumed. Teams continued to work in the Landfill 1 Area, and Grid A8 was completed effectively finishing the access road for the site. Demobilization for all teams was scheduled for 12 January. All GFE and materials purchased on behalf of the government were inventoried, packaged, and turned over to a CEHND representative for transport to Huntsville, Alabama. The SUXOS and four other personnel remained on site until 19 January to close out the site and complete final site GPS mapping. The site was officially closed on 19 January 1995, and all personnel were demobilized.

3.0 TESTS

3.1 Soil Samples

3.1.1 Soil samples were collected at the point where the OD area was established prior to any explosive operations being conducted. A soil sample was again collected upon completion of explosive operations. All of these samples were analyzed by the General Physics Environmental Services, Inc. Laboratory, Gaithersburg, MD (see Appendix E, Sample Analysis Reports). Both reports show a high concentration of heavy metals, but all tests conducted for explosive residue were negative or below quantitative limits. The concentrations of heavy metals appears not to have changed significantly from the initial samples to the closing samples.

3.2 Quality Control/Safety

3.2.1 QC consisted of three elements—(1) inspection of equipment to ensure it met established standards, (2) observation of operations, and (3) sampling of cleared areas. Magnetometers were checked against a buried test item each morning and afternoon prior to starting work to ensure detection equipment was functioning properly. Safety related equipment was checked and spot checks of equipment maintenance were conducted. Spot checks and observations of personnel conducting magnetometer searches, excavations, and operating equipment were conducted to ensure compliance with the Work Plan and Safety Plan. A ten percent inspection of all cleared grids was conducted using an Mk26 Ordnance Locator. QC inspections of all cleared grids are recorded on the QC Site Map (Appendix F).

3.2.2 During the project, safety briefings were conducted each morning. Topics for these meetings consisted of daily work schedules, descriptions of ordnance found the previous day, a short briefing on special safety considerations for new operating areas, and any pertinent general safety information.

3.2.3 Quality Control Logs were maintained and are at Appendix G.

4.0 SUMMARY

4.1 The TCRA of the Former Camp Croft, Red Hill, located at Spartanburg, South Carolina, was initiated on 4 August 1994. The project was launched upon receipt of a draft SOW and a verbal notice to proceed by the CEHND Contracting Officer. The project evolved into a two phased operation. Phase One was the mobilization of a five man team to Camp Croft under an Emergency Safety Plan to conduct non-intrusive operations. During this phase, the areas to be cleared were defined, boundaries and the grid network were established, support facilities were brought on site, brush clearance was conducted, and magnetometer searches and flagging anomalies were performed. Phase Two was initiated with the approval of the Work Plan and other supporting plans and the authorization to purchase equipment. The project work force grew to five, 5-man teams, a SUXOS, and a QC/Safety Officer. The project site was heavily contaminated with ordnance fragmentation. Although a backhoe was used to excavate some locations and the standard size of magnetic anomalies to be removed was altered, progress remained excruciatingly slow. The project ended on 19 January, 1995. A total of four UXO were located and disposed of and 13,300 pounds of UXO related scrap was removed (see Appendix H, Scrap Turn-In).

5.0 RECOMMENDATIONS

5.1 The nature of a TCRA requires some deviation from the usual approval process. Some portions of the Work Plan should be considered for approval independently. It appears that approval of our equipment plan was linked to the approval of the complete Work Plan, which slowed the acquisition of supplies. This effected our ability to begin intrusive activities and deploy the work force. We recommend that Equipment and Disposal Alternative Plans be reviewed and approved independently for these kinds of removal projects.

6.0 DOCUMENTATION

6.1 Documentation for this report consists of:

- VHS video documentary (provided separately);
- 1:200 GPS produced map of the site;
- 1:100 QC documentation map;
- 1:100 site map with site changes;

- scrap turn in documentation (Form 1348-2);
- color photographs of the site and ordnance recovered (Appendix I);
- the original Scope of Work provided by CEHND to HFA and subsequent modifications thereof;
- the SUXOS Daily Site Journal;
- the QC/SSO Daily Site Journals; and
- Sample Analysis.

APPENDIX A

SCOPE OF WORK

RECEIVED DEC 27 1994

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
	1 5

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
000202	12/19/94	W31RYO-4216-0008	

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than item 6)	CODE
U.S. ARMY ENG. DIV.,HUNTSVILLE ATTN: CEHND-CT-D/MARY STRINGER P.O. BOX 1600 HUNTSVILLE AL 35807-4301 Mary F. Stringer C14 (205)955-5633	8013		EMPTY

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) Vendor ID: 00011023	(X)	9A. AMENDMENT OF SOLICITATION NO.
HUMAN FACTORS APPLICATIONS,INC ATTN: ELIZABETH H. THEISEN 4950 RTE 202, BLDG 1, STE 2A HOLICONG PA 18938-0615		9B. DATED (SEE ITEM 11)
	X	10A. MODIFICATION OF CONTRACT/ORDER NO. DACA87-94-D-0019 0002
		10B. DATED (SEE ITEM 13) 08/22/94
CODE 7W639	FACILITY CODE	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

n/a

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(X)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103 (b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) 52.242-4653

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

a. This modification to Task Order 0002, former Camp Croft, South Carolina, is for the purpose of realigning funds.

b. Labor is decreased in the amount of $38,504.86 from $595,015.34 to $556,510.48. Materials are increased in the amount of $9,754.86 from $100,048.30 to $109,803.16. Travel and Per Diem is increased in the amount of $28,750.00 from $243,250.36 to $272,000.36. The total value of the order remains unchanged in the amount of $938,314.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Mary M. Dowling	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY Mary M. Dowling (Signature of Contracting Officer)	16C. DATE SIGNED 21 Dec 94

c. The Schedule is revised to reflect changes. Parallel lines appear in the margins before and after changes to previous issue.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
	1 5

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
000201	09/26/94	W31RYO-4257-0047	

6. ISSUED BY CODE 8013

U.S. ARMY ENG. DIV.,HUNTSVILLE
ATTN: CEHND-CT-D/MARY STRINGER
P.O. BOX 1600
HUNTSVILLE AL 35807-4301
Mary F. Stringer C14 (205)955-5633

7. ADMINISTERED BY (If other than item 6) CODE EMPTY

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) Vendor ID: 00011023

HUMAN FACTORS APPLICATIONS,INC
ATTN: ELIZABETH H. THEISEN
4950 RTE 202, BLDG 1, STE 2A
HOLICONG PA 18938-0615

CODE 7W639 FACILITY CODE

(X) 9A. AMENDMENT OF SOLICITATION NO.

9B. DATED (SEE ITEM 11)

X 10A. MODIFICATION OF CONTRACT/ORDER NO. DACA87-94-D-0019 0002

10B. DATED (SEE ITEM 13) 08/22/94

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

See block 14

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(X)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103 (b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) 52.242-4653

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

This mod is to increase Task Order 0002 by $758,314.00 from $180,000 to $938,314.00 at the Former Camp Croft, South Carolina, project. The Scope of Work entitled, "Ordnance and Explosive Waste (OEW) Surface Clearance, Sub-Surface and Geophysical Mapping, Former Camp Croft Red Hill, Spartenberg, South Carolina", dated September 9, 1994, replaces the Scope of Work dated July 22, 1994. Attachment 1 is not revised and remains an attachment to the revised Scope of Work.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Danny Biggs	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY (Signature of Contracting Officer)	16C. DATE SIGNED 26 Sep 94

NSN 7540-01-152-8070
PREVIOUS EDITION UNUSABLE

STANDARD FORM 30 (REV. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

SF 30 CONTINUATION SHEET

The Schedule is revised to reflect changes. Parallel lines appear in the margins before and after changes to previous issue.

Accounting and appropriation data as follows:

Task Order awarded with funding W31RYO4216008 21 NA 2020.0000 AP 94 08 8130 43900821500 0110 2572 001CL3 $180,000.

Mod 000201 - 21420200000 088130 2570001CL343900821500 ENVIR 01110 $758,314.

SCOPE OF WORK
ORDNANCE AND EXPLOSIVE WASTE (OEW)
SURFACE CLEARANCE, SUB-SURFACE AND GEOPHYSICAL MAPPING
FORMER CAMP CROFT RED HILL, SPARTENBURG, S.C.

9 Sept 1994

1.0 **BACKGROUND AND GENERAL STATEMENT OF WORK.** The work required under this Scope Of Work (SOW) falls under the Defense Environmental Restoration Program. Explosive ordnance contamination by past Department of Defense (DOD) activities exists on property that was formerly owned by DOD.

1.1 Ordnance and Explosive Waste (OEW) is a safety hazard and constitutes an imminent and substantial endangerment to site personnel and the local populace.

1.2 This site is not a suspected Chemical Warfare Material (CWM) site. However, if the contractor encounters suspected CWM during work, the contractor shall immediately withdraw from the work area and notify the Corps of Engineer's on-site Safety Specialist for guidance. The Huntsville Division Safety Office will notify the supporting Technical Escort Unit (TEU) Team. Once the CWM item is identified, the contractor shall be directed to continue the investigation operation, suspend operations until further notice, or begin demobilization dependent upon the direction of the Corps of Engineers on-site coordinator. This work falls under the provisions of 29 CFR 1910.120.

1.3 **GENERAL DESCRIPTION.** The former Camp Croft Training Facility is 19,044.46 acres and is approximately five miles southeast of Spartanburg, South Carolina. The current land usage is 7,088.08 acres for the Camp Croft State Park, 4,936.24 acres for farming, 256 acres for private industry, and 6,764.14 acres of residential acres (including a public golf course). The site for the TCRA is located on the southeastern edge of Former Camp Croft.

1.4 SITE HISTORY:

On November 4, 1940, the War Department announced that a new training center would be located in Spartanburg County, South

Carolina. Camp Croft Infantry Replacement Training Center (IRTC) was officially activated on January 10, 1941 with housing available for 20,000 trainees and support personnel. It served the next four plus years as one of the Army's principal IRTCs, and approximately one-quarter of a million soldiers were trained. Camp Croft was also a prisoner of war camp. The installation was declared surplus to the Army's needs in November, 1946, and excessed to the War Assets Administration in 1947. The actual work site of approximately 30 acres is part of a 350 acre parcel currently owned by Dr. Lowery. The development of a Class I Industrial Landfill is planned for this area in the immediate future.

1.4.1 The area to be investigated and cleared is approximately 30 acres in and near an old impact area. The exact clearance areas will be determined on site. This area was not identified during the Archive Search but evidence of potential surface OEW contamination was found during a 6 July 1994 site visit by Huntsville Division, Charleston District and contractor personnel.

2.0 **OBJECTIVE:** The objective of this TCRA is to remove surface and sub-surface OEW to a depth of four feet and that is within the planned work areas.

2.1 **Task 1 Site Visit. Not Used**

2.2. **Task 2 Work Plan.** The contractor shall prepare and submit a site-specific WP to the Government for approval prior to beginning any UXO-related activities on the site. The WP shall outline the contractor's proposed methodology for accomplishing the objective and following tasks. This shall include site-specific training, UXO-related procedures and practices, equipment, administrative area and equipment, demolition materials and their security and accountability system, personal protective equipment, internal and external communications systems, responsibilities of project personnel, resumes of all UXO personnel and key non-UXO personnel, on-site and off-site medical facilities and emergency response actions, daily work schedule, project time line, UXO safety and site-general safety. All UXO-related procedures shall comply with CEHND Safety Concepts and Basic Considerations for UXO. The WP shall include, at a minimum, the following sub-plans. See Section 6, subsection

2.2.1, of the basic contract for detailed requirements.

2.2.1 UXO Operational Plan.

2.2.2 Site-specific Safety and Health Plan (SSHP)

2.2.3 Equipment Plan.

2.2.4 Surveying and Mapping Plan.

2.2.5 Environmental Protection Plan (See Section 6, subsection 5.0, of the basic contract.)

2.2.6 Quality Control Plan.

2.2.7 Work, Data, and Cost Management Plan.

2.2.8 In addition to the WP and subplans required above, a brief, concise, separate document (Remedial Action Safety Plan) RASP shall be prepared for submission with the WP. The RASP shall contain the following information and may reference chapters of the WP, when applicable.

2.2.8.1 Site location and description.

2.2.8.2 Projected removal action starting date.

2.2.8.3 Suspected items.

2.2.8.4 Precautions to be taken if toxic chemical agent items are accidentally discovered.

2.2.8.5 Names of all contractors.

2.2.8.6 An on-site detailed disposal plan.

2.2.8.7 A drawing of the site.

2.2.8.8 Location of the demolition area(s) as a potential explosive site and distances of potential exposed sites.

2.2.8.9 A summary of risk assessment and mitigating

features at demolition areas.

2.2.8.10 Identity of the basic contract and the delivery order.

2.2.8.11 Other subplans identified in Section 6, subsection 3.2.1 of the basic contract are not required for this delivery order.

2.3 **Task 3 Perform OEW Removal** This task shall be accomplished in accordance with Section 6, subsection 3.2.4, of the basic contract.

2.3.1 The contractor shall provide all necessary personnel and equipment to perform the subsurface OEW clearance of the project site to a depth of four feet and dispose of all OEW. This clearance action shall include all OEW related scrap. Non UXO-related metallic scrap shall be removed as necessary to completed the subsurface clearance.

2.3.2 The contractor shall propose a planned, systematic approach to search and clear the project site that will result in optimum search effectiveness. This methodology shall be outlined in the WP.

2.3.2.1 During subsurface operations, the contractor shall utilized a magnetometer or metal locator capable of detecting a 105mm projectile at a depth of four feet. The contractor shall excavate to a maximum depth of four feet to determine the identity of the magnetic anomaly. The on-site CEHND Safety Specialist will decide if deeper excavation is required.

2.3.2.2 Magnetometers or metal locators shall be field tested daily to ensure they are operating properly. This shall be accomplished by planting a 105mm or similar magnetic inert item to a depth of four feet and determining the standard indication. If the instrument does not meet the standard during the daily check, it shall be calibrated, repaired, or replaced.

2.3.2.3 All access/excavation/detonation holes shall be cleared of debris and backfill. The contractor shall backfill these areas with dirt and smooth to grade and reseed with native

grass seed.

2.3.2.3 The contractor shall take 2 soil samples in the area designated as the demolition range prior to beginning operations and shall take 2 soil samples after clean up of the area. The soil samples shall be analysised for those metals designated as being on the EPA Priority Pollutant List (PPL). The samples shall be analysised by a laboratory certified for work by the State of South Carolina Department of Health and Environmental Control.

2.3.2.4 The contractor shall maintain a detailed accounting of all OEW and UXO items/ components encountered. This accounting shall include the amounts of OEW, the identification and condition, depths located, disposition, and location/mapping. This accounting shall be a part of the Removal Report and shall be reported weekly to the Huntsville Division Project Manager by facsimile transmission to the number and person noted in paragraph 2.1.1 on the Monday following each work week.

2.3.2.5 The accounting system shall also account for all demolition materials used to detonate OEW and UXO on site.

2.3.2.6 If a situation is encountered that precludes the contractor from detonating UXO in place, unidentifiable UXO is located, or a suspected toxic chemical munitions is encountered, the on-site CEHND Safety Specialist shall be notified.

2.3.2.7 Activities of this task shall be video-taped in color using "Hi-grade" VHS video tape. A total of 45 to 60 minutes of footage, with an oral background describing the activities, shall be submitted on a single tape cassette.

2.4 **Task 4 Perform Community Relations.** This task shall be accomplished in accordance with Section 6, subsection 3.2.3, of the basic contract.

2.4.1 The contractor shall assist, if requested, in arranging a local public meeting to inform the public of the purpose of this clearance, the procedures to be followed, and the cooperation requested.

2.4.2 All press releases and media appearances shall be coordinated with and approved by the Public Affairs Officer (PAO), Charleston District.

2.4.3 A written record of the public meeting attendees, questions, and answers shall be provided as part of the final report.

2.4.4 Public Affairs. The contractor shall not make available or publicly disclose any data generated or reviewed under this contract or any subcontract unless specifically authorized by the CO and the Charleston District PAO. When approached by any person or entity requesting information about the subject of this contract, the contractor shall defer to the PAO for response. Reports and data generated under this contract shall become the property of the Government and distribution to any other source by the contractor is prohibited unless authorized by the CO.

2.5 **Task 5 Location Surveys and Mapping.** The contractor shall provide all location surveys and mapping in accordance with the enclosed attachment to this SOW. **Exact survey methods shall be delineated in the Site Specific Work Plan.**

2.6 **Task 6 Perform Vegetation Removal and Reseeding.**

2.6.1 The contractor shall furnish all personnel and equipment necessary to mow grass/weeds and remove selected brush/tress for the required surface and sub-surface clearance. Vegetation shall be chipped on site and wood chips shall be spread over the area where the brush/trees were removed. Vegetation shall be removed to the extent necessary to effectively locate and remove OEW.

2.6.2 Upon completion of the work, the contractor shall restore locations disturbed by his operations, except those area where brush/tress were removed. Excavated or trafficked areas shall be returned to natural grade and indigenous vegetation re-established by seeding or planting sprigs.

2.7 **Task 7 Turn-In of OEW Related and Non-OEW Scrap.**

2.7.1 This task shall be accomplished as per section 6, subsection 3.2.5, of the basic contract.

2.7.2 The contractor shall complete a DD Form 1348-1 as turn-in documentation. Instructions for completing this form are contained in the Defense Utilization and Disposal Manual, DOD 4160.21-M. The Senior UXO Supervisor shall sign a certificate as follows:

"I certify that the property listed hereon has been inspected by me and, to the best of my knowledge and belief, contains no items of a dangerous nature."

2.7.3 DRMO turn in documentation receipts shall be submitted as a component of the Removal Report.

2.7.4 Should the servicing DRMO refuse to accept the OEW related scrap, the contractor shall make arrangements with a local scrap contractor to pick up the inert material, at no cost to the Government.

2.8 **Task 8 Perform Quality Control.**

2.8.1 The contractor shall administer a Quality Control (QC) program to manage, control, and document his own and his subcontractor's activities. The methodology to accomplish this task shall be proposed in the WP. The QC activities shall be documented and included in the Removal report.

2.8.2 The individual performing the UXO QC shall not involved in the performance of Task 3 above. UXO QC shall be separate function and is not envisioned as a full-time position. The UXO QC Specialist shall meet the minimum prerequisites as outlined in section 6, subsection 3.2.4.2, of the basic contract.

2.9 **Task 9 Prepare Removal Report.**

2.9.1 The contractor shall accomplish this task in accordance with section 6, subsection 3.2.7, of the basic contract.

2.9.2 The Final Removal Report shall consist of the following:

2.9.2.1 All ordinal surveying and mapping data from Task 5.

2.9.2.2 Detailed accounting by (tabulated listed) areas of all OEW and OEW-related materials located and disposed of during this D.O.

2.9.2.3 A system of daily journals of all activities associated with this SOW.

2.9.2.3.1 A daily journal of each area listed in paragraph 1.4.1 shall be opened with the start of, and closed with the completion of, each area. Activities endemic to the specific listed area shall be recorded on a daily basis.

2.9.2.3.2 A daily journal for the site shall be opened upon first arrival for the field operations and closed after the contractor demobilization at the project site. The daily journal shall contain a daily record of which listed areas are active and all other activities on the site not endemic to any specific area.

2.9.2.4 A recapitulation of exposure data. This data shall include the total number of man-hours worked on the site, the total motor vehicle mileage, the total number of flying hours, and the number of flights.

2.9.2.5 QC documentation.

2.9.2.6 All DRMO turn-in documentation.

2.9.2.7 A minimum of 20 4" X 6" (10 X 15 cm) color photographs shall be included in the report depicting major action items and UXO discovers. The original copy of the Final Report furnished to USAEDH shall include the ordinal photographic print. Photographs contained in draft submissions and copies of the final submissions shall be color reproductions.

2.9.2.8 A written record of all public meetings.

2.9.2.9 A financial breakdown by area and task of all costs and labor hours used to preform this SOW.

2.9.2.10 Video tapes. The contractor shall provide two copies of all video tapes used to document work performed under this SOW, one copy shall provided to CEHND-PM-MC and one copy to Charleston District, U.S. Army Corps of Engineers.

2.9.2.11 The contractor shall provide planimetric maps at the scales identified in attachment 1. One copy of this map shall show the location of search patterns all and significant findings with respect to all surface features located within the project area.

3.0 **SUBMITTALS.** The contractor shall furnish copies of the plans, maps, and reports as identified paragraph 4.1 to each addressee listed below in the quanties indicated. The contractor shall use express mail services for delivering these plans and reports. Following each submission, comments generated as a result of the review shall be incorporated.

ADDRESSEE	COPIES
U.S. Army Engineer Division, Huntsville ATTN: CEHND-PM-MC (William T. Davis) 106 Wynn Drive Huntsville, Al 35805-1957	4
U.S. Army Engineer District, Charleston ATTN: CESAC-PM-W (CPT Wilson) P.O. Box 919 Charleston, SC 29042-0919	4

3.1 Submittals/Actions and Due Dates

TASK	SUBMITTAL	DUE DATE
Site Visit 1	N/A	5 Days After Award
A002	Feasibility Letter	3 Workdays after Site Visit
A001	Draft Work Plan	14 Days After Site Visit
A001	Final Work Plan	12 Sept 1994
Removal Action Starts	N/A	16 Sept 1994
Removal Action Complete	N/A	16 Nov 1994
A004	Draft Removal Report	16 Dec 1994
Report review	N/A	16 Dec 1994
A004	Final Removal Report	16 Jan 1994

3.2 Data Item A007 Status Report and Data item A008 Telephone Conversation/Correspondence records are due weekly and shall be faxed to the Project Manager at 205-955-5788 on the Monday of each work week.

4.0 **APPLICABLE REGULATIONS.** See section 6, subsection 3.2.4.4, of the basic contract.

4.1 The following publications also applies:

4.1.1 AR 385-40 with USACE Supplements, Accident reporting and Records.

5.0 GOVERNMENT FURNISHED.

5.1 Pertinent UXO Technical publications as required. (USAEDH)

5.2 Equipment will be provided as available.

6.0 SPECIAL INSTRUCTIONS.

6.1 During field activities on ordnance projects, hard hats need not be worn unless a head injury threat is present.

6.2 If UXO is located within a search grid during final UXO QA search, the contractor shall be required to, again, search the entire grid.

ATTACHMENT 1
OEW/UXO CLEARANCE
FORMER CAMP CROFT RED HILL, SPARTANBURG, SC

Task 3 LOCATION SURVEYS AND MAPPING.

1.0 UXO Safety. During all field and intrusive activities, the survey crews shall be accompanied by a UXO specialist who shall clear each area prior to the surveyors starting work.

2.0 Control Points. Plastic or wooden hubs shall be used for all basic control points. A minimum of three concrete monuments with a 3.25 inch - 3.5 inch domed brass, bronze, or aluminum alloy survey marker (cap) shall be established at this site. The concrete monuments be located within the project area and be well clear of any proposed construction project, be set 10 meters from the edge of paved roads and three meters from the edge of dirt roads, be a minimum of 300 meters apart, be set flush with the ground, and be a minimum of 0.5 meters below frost depth. The caps for these monuments shall be stamped in a consecutively numbered sequence as follows:

LOWERY-1-1994	LOWERY-2-1994	LOWERY-3-1994
USAED, Huntsville	USAED, Huntsville	USAED, Huntsville

The dies for stamping the numbers and letters into the caps shall be 1/8 inch - 3/16 inch in size. Horizontal control based on the metric system using the International Survey Foot (One inch = 25.4 millimeters (mm) and one ~~foot~~ meter = 3.2808399 feet) and referenced to NAD83 of Class I, Third Order or better shall be established for the network required for all of the control points. If aerial photographs are used to provide this survey,

the aerial targets used for control points shall meet the same horizontal accuracies and requirements detailed above. All coordinates and elevations shall be shown to the closest one-thousandth of a meter (0.001m) and one-hundredth of a foot (0.01 ft). All the control points recovered and/or established at this site shall be plotted at the appropriate coordinate point on a reproducible (mylar) planimetric or topographic map at metric scales between 1:500 and 1:2,000. For sites of approximately 10 hectares (25 acres) or less the maps shall be plotted at a metric scale of 1:500. All other site shall be plotted at a metric scale of 1:2,000. A tabulated list and a "Description Card" of all control points established or used shall be submitted in accordance with (IAW) paragraph 8.0 of this Attachment 1. The Description Card shall show north arrows; a sketch of each monument; its location relative to reference marks, buildings, roads, railroads, towers, etc.; a typed description telling how to locate the monument from a known point; the monument's name or number; and the final adjusted coordinates and elevations in meters and feet (to the closest 0.001m and 0.01 ft.) The Description Cards shall be five inches by eight inches with one monument per Description Card, or two monuments being described on an eight and a half inch by eleven inch sheet of bond paper.

3.0 Mapping. The location, identification, coordinates, and evaluations of all the control points recovered and/or established at the site shall be plotted on a reproducible (mylar) planimetric or topographic map at metric scales between

1:500 and 1:2,000. Each control point shall be identified on the map by its name or number, the final adjusted metric coordinates, and the elevations (to the closest 0.001m). Each map shall also include a Grid North, a True North, and a Magnetic North arrow with the differences in minutes and seconds shown between them; metric grid lines and tic marks in feet at systematic intervals with their grid values shown on the edges of the map; a legend showing the standard symbols used for the mapping; and a map index showing the site in relationship to all other sites within the boundary lines of the project area. All of the maps shall be referenced to the South Dakota State Plane Grid System using NAD83.

3.1 In addition, each magnetic anomaly (hit) shall be located in the field to the closest one-quarter of a meter (0.25m) and plotted and identified on the map. A tabulation of each hit shall also be provided showing the identification number, the metric coordinates referenced to NAD83, and the description of the item found above or below the ground surface. In cases of multiple hits within a small area the coordinates on the edges of the area may be shown.

3.2 This data shall be furnished to the Huntsville Division (HND) on 8mm 2.3 or 5.0 gigabyte magnetic tapes, or 3 1/2 inch floppy disks. The 8mm tapes are preferred. The HND graphics system consists of INTERGRAPH Corporation supplied workstations running microstation version 4.0 software.

4.0 Aerial Photography (Required if mapping is provided by

aerial photography).

4.1 Type of Photography Required. Single lens vertical black and white panchromatic photography at scales of 1:14,000 or larger with characteristics suitable for analytical aerotriangulation and standard photogrammetric mapping. The average flight height above natural ground shall be consistent with the mapping accuracies required to provide a scale of restitution of 1:500 and 1:2,000.

4.2 Photographs and Film. Each negative of the photograph assignment shall be marked with the date of exposure, the approximate scale (1:XXXXX), file number, the assigned roll number, flight line number, and exposure number. All such editing of numbered negatives shall be by mechanical lettering, with characters a minimum of 5 millimeters (0.2 inch) high, and shall be so placed as to appear within the image on the forward edge (in the line of the flight) of the positive prints, to read from the back edge, all in relative positions as follows:
Example of data to appear on each photograph:

DATE - 1 Sep 94

SCALE - 1:XXX

FILE# - BHAD

FILM ROLL# - XXX

FLIGHT LINE# - XXX

PHOTO# - XXX (Photos in the mission to be consecutively numbered from first to last)

4.3 Paper Prints. All prints shall be made on resin coated paper stock approved by the Contracting Officer. They shall be sharp and clear, shall contain all highlight and shadow detail, and shall be evenly toned. They shall be permanently fixed; thoroughly washed; processed through flattening solution and dried without pressing, rolling, or excessive heating; and trimmed to the image area, approximately 229mm by 229mm (nine inches by nine inches), with the imaged fiducial points retained on the print. Three copies of each paper print and all of the aerial photo negatives shall be delivered to the Huntsville Division in its proper flight line and exposure sequence.

4.4 Mylar Photo Index. Each sheet (minimum size of 508mm by 610mm or 20" x 24") of the Photo Index shall be one negative, entirely free of splicing and masking. Five reproducible (mylar) copies of each photo index are required. Each sheet shall have a Grid North, a True North, and a Magnetic North Arrow with their differences shown in minutes and seconds; a Sheet Index; and a Title Block as per the following example:

U.S. ARMY ENGINEER DIVISION, HUNTSVILLE
Project Name: BHAD, South Dakota
Date of Photography:
Scale of Photography: 1:XXXX
Scale of Index: 1:XXXX
Name of Contractor:
Sheet xx of xx

4.5 Quality of Materials. All materials, supplies or

articles required for this work which are not covered by detailed specifications herein shall be standard products of reputable manufacturers and entirely suitable for the purpose. They shall be new and unused, unless otherwise specified, and will be subject to the approval of the Contracting Officer.

4.5.1 Aerial Film. Aerial film shall be furnished where the quality is equal or superior to Kodak Aerographic 2405 black and white film. Only fresh, fine-grained aerial film shall be used. The negatives shall be exposed and developed in such a manner that they shall be sharp and clear, and contain all highlight and shadow detail. They shall be free of any defects which, in the opinion of the Contracting Officer, render them unsuitable for their intended purpose.

4.5.2 Compilation Medium. Compilation material shall be furnished where the quality is equal or superior to Mylar or Cronoflex Stable Base Materials.

4.6 Performance Required. The company providing the work must be cognizant of the difficulties involved and of the problems which may arise, and must ascertain that the personnel, plant, equipment, transportation facilities, and supply of materials are adequate at all times to ensure complete compliance with all provisions of this contract.

4.7 Personnel of Plane. The pilot must be well qualified, possessing a minimum of 250 hours of photographic map flying experience. The photographer shall possess a minimum of 250 hours of experience representing actual time spent in executing

vertical aerial photography on photographic assignments. Oblique photography is not considered as qualifying experience. Equipment replacements shall not be made during the progress of this contract without the express consent of the Contracting Officer.

4.8 Airplane. The airplane to be used shall be entirely capable of stable performance at the necessary altitude and air speeds. It shall be equipped with all essential navigational and photographic instruments and accessories. These shall be maintained in operational condition during the period of service for this work and shall be subject to the approval of the Contracting Officer. No windows shall be interposed between the camera lens system and the terrain. The camera lens system shall not be in the direct path of any gases or oil from the aircraft engine(s).

4.9 Camera. All mapping photography shall be made with a single lens precision aerial mapping camera equipped with a "high-resolution, distortion-free" type lens, calibrated by the National Bureau of Standards or an agency making calibrations of equal accuracy, and approved by the Contracting Officer. The calibrated focal length of the lens (the focal length at which the values of lens distortion, irrespective of sign, are held to the minimum within 45 degrees of the optical axis) shall be 153mm, plus or minus three (3)mm. The camera shall function properly at the necessary altitude and under the expected climatic conditions, and shall expose a 229mm (nine inch) square

negative. The lens cone shall be so constructed that the lens, focal plane at calibrated focal length, fiducial markers and marginal data markers comprise an integral unit or are otherwise fixed in rigid orientation with one another. Dimensional changes brought about by variations of temperature or other conditions shall not be of such magnitude as would cause deviation from the calibrated focal length in excess of plus or minus five-hundredths of a millimeter (0.05mm) or would preclude determination of the principal point location to within plus or minus three thousandths of a millimeter (0.003mm).

4.9.1 Platen. The focal plane surface of the platen shall be flat to within thirteen-thousands of a millimeter (0.013mm) and shall be truly normal to the optical axis of the lens. The camera shall be equipped with a means of holding the film motionless and flat against the platen at the instant of exposure.

4.9.2 Fiducial Marks. For mapping photography, the camera shall be equipped with a minimum of four (4) fiducial marks suitable for making precise measurements in analytical aerotriangulation process. The lens, focal plane, and fiducial marks must be permanently fixed in rigid orientation with each other.

4.9.3 Lens Distortion. As referred to the calibrated focal length, the radial distortion shall not exceed plus or minus one hundredth of a millimeter (0.01mm) within a 42.5 degree half-field angle, and the tangential distortion shall not exceed

five-thousandths of a millimeter (0.005mm). Values of distortion at equal but opposite angular separations from the axis along the same diameter shall not differ from each other by more than two-hundredths of a millimeter (0.02mm).

4.9.4 Lens Resolving Power. When installed in the camera, and with the appropriate filter mounted in place, the lens shall resolve at least 32 equally spaced lines to the millimeter in the center of the field; and, at least 14 equally spaced lines to the millimeter in any orientation extending to 45 degrees from its axis, all as could be determined by tests using Eastman Spectroscopic Type V-F Emulsion, or equivalent.

4.9.5 Filter. The appropriate minus-blue filter used in black and white photography shall be of such quality that no appreciable reduction in resolution will result. The surfaces of the filter shall be parallel to within 10 seconds of arc.

4.9.6 Shutter. The camera shall be equipped with a between-the-lens shutter of the variable speed type, whose efficiency shall be at least 75 percent at the fastest rated speed.

4.9.7 Substitute cameras may be used in taking special purpose aerial oblique photographs and photographs to be used in the preparation of mosaics, provided that prior written approval for the use of the special camera and lens is obtained from the Contracting Officer.

4.10 Flight Plan. Photographic flight height above the average ground elevation shall be such that the scale of the

photographic film negatives will not have a variation of more than plus or minus five (5) percent of the desired photo scale. All strips shall be flown as straight as possible, and shall be void of crab, tilt, and altitude variations to the extent that they afford good stereoscopic coverage of the entire minimum area of the photographic assignment. Successive photographs along the line of flight shall overlap each other by approximately 60 percent, and parallel strips shall overlap each other by approximately 30 percent as indicated on the approved flight plan. Deviations of more than five (5) percent from these specified overlaps, except those excessive due to allowances made for abnormal relief displacements, shall be cause for rejection. A flight plan shall be prepared and submitted to the Contracting Officer's Representative for approval. The plan shall indicate the area to be mapped, the flight line locations, and the pretargeted panel positions needed to tie the individual frames of photography to the State Plane Grid System and the North American Vertical Datum.

4.11 Crabbing. Any series of two or more consecutive photographs crabbed in excess of five (5) degrees as measured from the mean flight path of the airplane, and as indicated by the principal points of the consecutive photographs, shall be cause for rejection of the photographs in the flight.

4.12 Tilt. The average tilt for photographs shall not exceed one (1) degree and the maximum tilt shall not exceed three (3) degrees in a strip flight. Relative tilt between any two

successive negatives exceeding five (5) degrees shall be cause for rejection.

4.13 Scale Requirements. The aerial photography shall be performed at a flight height above average ground so that the mapping can be provided at a scale of 1:500 or 1:2,000. Negatives having a departure from the specified scale by more than five (5) percent because of tilt or abrupt changes in the flying altitude shall be corrected.

4.14 Suitable Conditions. All photography shall be accomplished between the hours of 10:00 a.m. and 2:00 p.m., Standard Time Zone, when the atmosphere is sufficiently clear, and when no part of the terrain being photographed is obscured by clouds, cloud shadows, smoke, fog, or snow, except with the permission of the Contracting Officer. Any day containing two or more consecutive hours of such suitable conditions, in any sizable portion of the area not yet photographed, will be considered a "Suitable Day" for aerial photography.

4.15 Stereoscopic Coverage. The entire area of the project shall be stereoscopically covered within the usable portion of the field of the lens. This stipulation is a prime requisite of this SOW. Nonattainment of acceptable stereoscopic coverage caused by the AE's failure to adhere to the specified flight design shall be corrected by reflights at his expense.

5.0 PHOTOGRAMMETRIC MAPPING

Photogrammetric mapping shall be produced from photography meeting the specifications detailed in Paragraph 4.0.

Enlargement from a negative scale to a compilation scale must be within the limits of the stereoplotter capability to produce mapping at a scale of 1:500.

5.1 Personnel. Operators of photogrammetric mapping equipment and digitizing graphics equipment shall be thoroughly trained and must have a minimum of six months production experience on the equipment they operate.

5.2 Control Extension. Aerotriangulation for control shall be accomplished by fully analytical methods. The positional accuracy (vector of both Northing and Easting coordinate errors) of pass points established by aerotriangulation shall meet either of the following minimum requirements:

5.2.1 A root-mean-square error in feet not greater than one part in 1,500 of the nominal negative scale as expressed in feet per inch.

5.2.2 Ninety (90) percent of the pass points in error in feet by not more than one part in 900 of the nominal negatives scale as expressed in feet per inch.

5.2.3 In either case, no point shall be in error by more than one part in 400 of the negative scale as expressed in feet per inch.

5.3 Stereo Compilation. Stereo compilation shall be accomplished using automated stereo plotting devices connected directly to the interactive graphics system. The stereo plotting devise shall be capable of capturing the level of detail required from the aerial photography. The production of a pencil or

scribe manuscript of the planimetric and cultural features and the contour data for direct digitization later will not be permitted. Stereo plotters and other mensuration instruments shall be well calibrated.

5.4 Photogrammetric Mapping Accuracy Requirements. All photogrammetric mapping shall meet the following horizontal and vertical accuracy requirements for a mapping scale of 1:500 and 1:2,000.

5.4.1 Contours. Not Required.

5.4.2 Coordinate Grid Lines. State plane coordinate grid lines shall be plotted as detailed in paragraph 3.0 of this SOW, and shall not vary by more than 0.25mm from the true grid value of each map.

5.4.3 Horizontal Control. Each horizontal control point shall be plotted on the map within the coordinate grid in which it should lie to an accuracy of 0.25mm from the true grid value on each map.

5.4.4 Planimetric Features. Ninety (90) percent of all planimetric features which are well defined on the photographs shall be plotted so that their position on the finished maps shall be accurate to within at least 0.635mmm of their true coordinate position, and none of the features shall be misplaced on the finished map by more than 1.27mm from their true coordinate position.

5.4.5 Spot Elevations. Ninety (90) percent of all spot elevations placed on the maps shall have an accuracy of at

least one-fourth (1/4) the contour interval, and the remaining 10 percent shall not be in error by more than one-half (1/2) the contour interval.

6.0 DIGITAL DATA

6.1 General Design File Requirements. An overall planimetric design file shall be created. All data shall be digitized into the Intergraph IGDS 2D design file. If contours and spot elevations are required, all data shall be digitized into a IGDS 3D design file with each element (contours and spot elevations) at their correct elevation, and topologically triangulated network (ttn) files shall be created to model the topographic surface.

6.2 The individual sheet design files shall have the following salient features:

6.2.1 Each sheet border and sheet dependent element shall occupy a separate file and be referenced to the planimetric file.

6.2.2 The fast curve display must be set off when digitizing.

6.2.3 Each sheet shall be a standard metric A-1 size which is 841mm by 594mm (33.1 inches by 23.4 inches). Each sheet shall also have a standard border, revision block, title block, complete index sheet layout, bar scale, legend, metric grid lines, grid tick layout in feet, a True, Grid and Magnetic North arrow with their differences shown in minutes and seconds, and shall be plotted at the horizontal scales detailed in paragraph

3.0 above.

6.2.4 The cell library used shall be attached.

6.2.5 A list of level assignments utilized shall be submitted.

6.2.6 Refer to paragraph 7.0 "Digital Format for Intergraph Data, Surveying/Mapping" for level assignments and additional information.

6.2.7 All digitized data will not be acceptable until proven compatible with the CEHND Graphics System. All revisions required to obtain compatibility with the CEHND Graphics System shall be done at the contractors own expense.

6.3 Specific Design File Requirements

6.3.1 The design file border sheet shall accommodate the scales detailed in paragraph 3.0 above. All surface and subsurface features shall appear in the design file.

6.3.2 The contractor shall provide the Government with two copies of the design files on 8mm 2.3 or 5.0 gigabyte magnetic tapes or 3-1/2" floppy disks. The 8mm tapes are preferred. The data to be submitted shall contain the final version of the design files, with corrections made. The tapes or disks shall be labeled, showing the project name, project number, date, contractor's name, address and telephone number, and the number of files.

6.4 If the mapping is to be digitized from aerial photographs, additional criteria and specifications will be added to this SOW and shall be followed by the contractor.

7.0 DIGITAL FORMAT FOR INTERGRAPH DATA SURVEY/MAPPING

7.1 Sources and Standard: These standards have been developed and produced by the Surveying and Mapping Single Discipline Task Group (SDTG). They are designed for computer assisted mapping methods that must interface with other surveying contractors, Government contractors and customers so that the final project will be usable and consistent CADD documents.

7.2 Design File Requirements:

7.2.1 General. The surface features shall be placed into an Intergraph IGDS 2D design file.

7.2.2 Design file units shall be MU=1 ft., SU=10th, PU=10.

7.2.3 Global Origin: Since most Surveying/Mapping drawings utilize coordinate systems with all positive "X" and "Y" values, the standard global origin (0, 0,, -21474836.48) to be used for surveying/mapping drawings is zero "X" and "Y" coordinates at the lower corner of the "X-Y" plane. This will allow "X-Y" coordinates from 0, 0 to 42949673, 4294973, 21474836, which should be sufficient for the majority of needs.

7.2.4 Compress all design files. File design with the entire sheet in view 5 and the title block in view 1. Only views 1 and 5 will be active. All locks will be off except snap, and all displays will be on except text nodes. Fonts 1, 2, 10, 23, 24, and 51 will be downloaded, and unused levels will be off.

7.2.5 Angular data read-out will be degrees, minutes and seconds to one decimal place.

7.2.6 Each sheet shall be a standard metric A-1 size drawing, and have a standard COE revision block, a title block, index sheet layout, a legend, grid lines, grid tick layout, a scale bar, and Grid North, True North, and Magnetic North arrows with their differences shown in minutes and seconds. In general the direction of north will run from the bottom of the file to the top, with no skew.

7.3 Level Assignments: Level assignments, colors, line weights, and line code (styles) as shown in Table 1 below shall be used.

7.4 Survey/Mapping Drafting Practices:

7.4.1 A sheet index for the project shall be prepared that includes enough of the planimetric data to include the sheet's geographical location in the project area, and the location of the sheet relative to all other sheets in the project. The sheet index, showing all sheets in the project, is to be shown in the legend of each sheet, with the current sheet crossed-hatched or heavily outlined. If required, a separate file may be utilized for the index.

7.4.2 All text shall be Font 10.

7.5 Planimetric data shall be digitized and furnished to CEHND in a primary 2D CADD file. The primary file shall contain all survey data. The individual sheet design files, as required, will use the primary file as a reference and will include the specific information required to plot the individual survey drawing sheets with sheet borders, title, legend, scale bars, and

north arrows. All files shall be referenced to NAD83. Two copies of the magnetic tapes containing all the source files required to produce the final drawings shall be provided. The following level/feature information (Table 1) shall be used in creating these files.

7.6 All unique cell libraries, user commands, color tables, menus, etc., created as part of this scope are to be delivered as part of the final submittal. A brief narrative explaining the function of each and how it was used shall also be required and included. In addition, provide a description of how the individual design files are assembled to produce the final plots; i.e., design file name, reference name(s), color table, etc.

TABLE 1

Survey/Mapping Level Assignments

and Level Symbology

Level	Description	Line Code	Line Weight	Color
1	Sheet Dependent Info	0	0	4
2	Coordinate Grid/Ticks	0	0	2
3	Coordinate Grid Annotation/Text	0	0	2
4	Buildings	0	2	4
5	Building Annotation	0	0	4
6	Road Centerline	0	0	4
7	Rd., RR and Centerline Anno.	0	0	4
8	Rds., Parking, Wlks., RR, Trls.	0	1	4
9	Concrete Joint Layout	0	0	4
10	Concrete Joint Elevations	0	0	4
11	Runway, Taxiway and Aprons	0	1	5
12	Runway Annotation	0	0	5
13	Pavement Markings, Signs	0	0	5
14	Structures, Headwalls	0	1	6
15	Structure Annotation	0	0	6
16	Culverts	0	1	4

NOTE: Obscured areas, unknowns, and dirt roads will be dashed (LC=3, long dashed)

TABLE 1 (continued)

Survey/Mapping Level Assignments

and Level Symbology

Level	Description	Line Code	Line Weight	Color
17	Culvert Annotation	0	0	4
18	Riprap	0	1	2
19	Water Features	0	1	1
20	Water Features Annotation	0	0	1
21	Vegetation	0	0	2
22	Vegetation Annotation	0	0	2
23	Fences	0	0	1
24	Fence Annotation	0	0	1
25	Boundary Line/Cadastral	0	2	6
26	Boundary Lines/Cad. Anno.	0	0	6
27	Survey Ctrl. Pts, Baselines	0	0	5
28	Survey Ctrl Point Anno	0	0	5
29	Break Lines	0	0	4
30	Spot Elevations	0	0	4
31	Major Contours	0	2	6
32	Contour Annotation	0	0	6
33	Minor Contours	0	0	3
34	Soil Borings and Text	0	0	6
35	Storm Sewer, Manholes	0	0	2

TABLE 1 (continued)

Survey/Mapping Level Assignments

and Level Symbology

Level	Description	Line Code	Line Weight	Color
36	Storm Sewer, Lines & Annotation	0	0	2
37	Sanitary Manholes	0	0	4
38	Sanitary Lines & Annotation	0	0	4
39	Water Tanks & Fire Hydrants	0	0	1
40	Water Line & Annotation	0	0	1
41	Gas Line, Features & Valves	0	0	3
42	Gas Lines & Annotation	0	0	3
43	Power Lines, Lights, & Telephone Poles	0	0	5
44	Power Lines & Annotation	0	0	5
45	Steam Ln., Features & Valves	0	0	6
46	Steam Lines & Annotation	0	0	6
47	Cross Sections & Profiles	0	0	4
48	Details & Inserts	0	0	0
49	Soundings	0	0	1
50	Channel Ln., Disposal Areas	0	1	4
51	Channel Line Annotation	0	0	4
52	Navigation Aids and Annot.	0	1	6

TABLE 1 (continued)

Survey/Mapping Level Assignments

and Level Symbology

Level	Description	Line Code	Line Weight	Color
53	Levees, Dikes and Annot.	0	1	4
54	Pipe Lines, Structures, Br.	0	1	6
55	Pipe Line Annotation	0	0	6
56	Stationing and Mile Markers	0	1	5
57	Revetments & Annotation	0	1	2
58	Vessel Track Line	0	1	2
59	Border/Title/Legend/N. Arrows	0	1	4
60	Concentrated Spot Elevations	0	0	4
61	Impact Area	0	1	6
62	SDZ (Surface Danger Zone)	0	1	6
63	Documentation			

NOTE: Obscured Areas, Unknown, and Dirt Roads will be dashed (LC=3, long dashed).

8.0 Items and Data to be Submitted to CEHND. The following items and data shall be submitted to CEHND:

8.1 Field Survey. The original copies of all field books, layout sheets, computation sheets, abstracts, and computer printouts. All of these items shall be suitably bound, and clearly marked and identified.

8.2 A tabulated list of all control points showing the adjusted coordinates and elevations (in meters and feet) established and/or used for this survey.

8.3 A tabulated list of all hits located in the field showing the data identified in paragraph 3.0 above.

8.4 A "Report on Establishment of Survey Mark" (Description Card) on each permanent control monument established and/or used for the survey. In addition to the name or ID number of the monument, the cards shall show the adjusted coordinates, the adjusted elevations, a written description for locating the monument, and a sketch showing how to locate the monument.

8.5 Drawings. All maps shall be drawn at metric scales of 1:500 and 1:2,000 on reproducible (mylar) drawings. One original mylar and five blueline prints of each final map shall be delivered to CEHND.

9.0 Schedule. All work and services under this paragraph shall be completed and submitted to CEHND 30 days after all field work has been completed.

SCOPE OF WORK
ORDNANCE AND EXPLOSIVE WASTE (OCW)
SURFACE CLEARANCE, SUB-SURFACE AND GEOPHYSICAL MAPPING
FORMER CAMP CROFT RED HILL, SPARTENBURG, S.C.

22 July 1994

1.0 **BACKGROUND AND GENERAL STATEMENT OF WORK.** The work required under this Scope Of Work falls under the Defense Environmental Restoration Program. Explosive ordnance contamination by past Department of Defense (DOD) activities exists on property that was formerly owned by DOD.

1.1 Ordnance and Explosive Waste (OEW) is a safety hazard and constitutes an imminent and substantial endangerment to site personnel and the local populace.

1.2 This site is not a suspected Chemical Warfare Material (CWM) site. However, if the contractor encounters suspected CWM during work, the contractor will immediately withdraw from the work area and notify the Corps of Engineer's on-site Safety Specialist for guidance. The Huntsville Division Safety Office will notify the supporting Technical Escort Unit (TEU) Team. Once the CWM item is identified, the contractor shall be directed to continue investigation operation, suspend operations until further notice, or begin demobilization dependent upon the direction of the Corps of Engineers on-site coordinator. This work falls under the provisions of 29 CFR 1910.120.

1.3 **GENERAL DESCRIPTION.** Former Camp Croft Training Facility is 19,044.46 acres that is approximately 5 miles southeast of Spartanburg, South Carolina. The current land usage is 7088.08 acres for Camp Croft State Park, 4936.24 acres for farming, 256 acres for private industry, and 6764.14 acres residential (including a public golf course).

1.4 SITE HISTORY:

On November 4, 1940, the War Department announced that a new training center would be located in Spartanburg County, South Carolina. Camp Croft Infantry Replacement Training Center (IRTC) was officially activated on January 10, 1941 with housing for 20,000 trainees and support personnel. It served the next four plus years as one of the Army's principal IRTCs and approximately one-quarter of a million soldiers were trained. Camp Croft was also a prisoner of war camp. The installation was declared surplus to the Army's needs in November, 1946 and excessed to the War Assets Administration in 1947. The actual work site of approximately 30 acres is part of a 350 acre parcel currently owned by Dr. Lowery. The development of a Class I Industrial Landfill is planned for installation in the immediate future.

1.4.1 The area of interest is the access road into and out of the site approximately 3 miles in length and 30 feet wide (area 1) and a work area of approximately 20 acres (area 2) were asphalt recycling equipment is to be installed. The area was not identified during the Archive Search but evidence of potential surface OEW contamination was found during a 6 July 1994 site visit.

2.0 **OBJECTIVE:** The objective of this TCRA is to remove surface and Sub-surface OEW that is within the planned work areas to a depth of 4 feet.

2.1 **Task 1 Site Visit.** The contractor shall visit the site and conduct any required inspections or data retrieval needed to develop the required work plans. Special attention should be given to any features that would impact on the Site safety or Ordnance Disposal plan.

2.1.1 Disposal Alternatives. Based on the site visit, the contractor shall describe feasible alternatives for OEW disposal and recommend the safest and most cost effective method of treatment and disposal of the explosive ordnance, inert ordnance, explosives, and debris. This letter proposal shall be mailed to the contracting officer (CO) and faxed to the Project Manager at 205-955-5788. The method of treatment will be selected and approved by the CO after which the contractor will then proceed with preparation of the WP.

2.2. **Task 2 Work Plan.** The contractor shall prepare and submit a site-specific WP to the Government for approval prior to beginning any UXO-related activities on the site. The WP shall outline the contractor's proposed methodology for accomplishing the objective and following tasks. This shall include site-specific training, UXO-related procedures and practices, equipment, administrative area and equipment, demolition materials and their security and accountability system, personal protective equipment, internal and external communications systems, responsibilities of project personnel, resumes of all UXO personnel and key nonUXO personnel, on-site and off-site medical facilities and emergency response actions, daily work schedule, project time line, UXO safety and site-general safety. All UXO-related procedures shall comply with CEHND Safety Concepts and Basic Considerations for UXO. The WP shall include, at a minimum, the following sub-plans. See Section 6, subsection

2.2.1, of the basic contract for detailed requirements.

2.2.2 UXO Operational Plan.

2.2.3 Site-specific Safety and Health Plan (SSHP)

2.2.4 Equipment Plan.

2.2.5 Surveying and Mapping Plan.

2.2.6 Environmental Protection Plan (See Section 6, subsection 5.0, of the basic contract.)

2.2.7 Quality Control Plan.

2.2.8 Work, Data, and Cost Management Plan.

2.2.9 In addition to the WP and subplans required above, a brief, concise, separate document (Remedial Action Safety Plan) RASPJJ shall be prepared for submission with the WP. The RASP shall contain the following information and may reference chapters of the WP, when applicable.

2.2.10 Site location and description.

2.2.11 Projected removal action starting date.

2.2.12 Suspected items.

2.2.13 Precautions to be taken if toxic chemical agent items are accidentally discovered.

2.2.14 Name of UXO contractor.

2.2.15 An on-site detailed disposal plan.

2.2.16 A drawing of the site.

2.2.17 Location of the demolition area(s) as a potential explosive site and distances of potential exposed sites.

2.2.18 A summary of risk assessment and mitigating features at demolition areas.

2.2.19 Identify the basic contract and the delivery order.

2.2.20 Other subplans identified in Section 6, subsection 3.2.1 of the basic contract are not required for this delivery order.

2.3 **Task 3 Perform OEW Removal of Areas 1 and 2.** This task shall be accomplished in accordance with Section 6, subsection 3.2.4, of the basic contract.

2.3.1 The contractor shall provide all necessary personnel and equipment to perform the subsurface OEW clearance of the project site and dispose of all OEW to a depth of 4 feet on site. This clearance action shall include all OEW related

scrap. Non UXO-related metallic scrap shall be removed as necessary to completed the subsurface clearance.

2.3.2 The contractor shall propose a planned, systematic approach to search and clear the project site that will result in optimum search effectiveness. This methodology shall be outlined in the WP.

2.3.2.1 During subsurface operations, the contractor shall utilized a magnetometer capable of detecting a 105mm projectile at a depth of 4 feet. The contractor shall excavate to a depth of 4 feet to determine the identity of the magnetic anomaly. The on-site USAEDH Safety Specialist will decide if deeper excavation is required.

2.3.2.2 Magnetometers shall be field tested daily to ensure they are operating properly. This shall be accomplished by planting a 105mm or similar magnetic inert item to a depth of 4 feet and determining the standard indication. If a magnetometer does not meet the standard during the daily check, it shall be calibrated, repaired, or replaced.

2.3.2.3 All access/excavation/detonation holes shall be backfilled. The contractor shall backfill areas with dirt and smooth to grade and reseed with native grass seed.

2.3.2.4 The contractor shall maintain a detailed accounting of all UXO items/ components encountered. This accounting shall include the amounts of OEW, the identification and condition, depth located, disposition, and location/mapping. This accounting shall be a part of the Removal Report and shall be reported weekly to the Huntsville Division Project Manager by facsimile transmission to (205) 955- 5788 on the Monday following each work week.

2.3.2.5 The accounting system shall also account for all demolition materials used to detonate OEW on site.

2.3.2.6 If a situation is encountered that precludes the contractor from detonating an UXO in place, an unidentifiable UXO is located, or a suspected toxic chemical munitions is encountered, the on-site USAEDH Safety Specialist shall be notified.

2.3.2.7 Activities of this task shall be video-taped in color using "Hi-grade" VHS video tape. A total of 45 to 60 minutes of footage, with an oral background describing the activities, shall be submitted on a single tape cassette.

2.4 <u>Task 4 Perform Community Relations.</u> This task shall be accomplished in accordance with Section 6, subsection 3.2.3, of the basic contract.

2.4.1 The contractor shall assist, if requested, in arranging a local public meeting to inform the public of the purpose of this clearance, the procedures to be followed, and the cooperation requested.

2.4.2 All press releases and media appearances shall be coordinated with and approved by the Public Affairs Officer (PAO), Charleston District.

2.4.3 A written record of the public meeting attendees, questions, and answers shall be provided as part of the final report.

2.4.4 Public Affairs The contractor shall not make available or publicly disclose any data generated or reviewed under this contract or any subcontract unless specifically authorized by the CO and the Charleston District PAO. When approached by any person or entity requesting information about the subject of this contract, the contractor shall defer to PAO for response. Reports and data generated under this contract shall become the property of the Government and distribution to any other source by the contractor is prohibited unless authorized by the CO.

2.5 **Task 5 Perform Location Surveys and Mapping.**

2.5.1 All surveying or mapping crews shall be escorted by an UXO-qualified person. A magnetometer shall be used to survey the location for the establishment of any monuments or markers.

2.5.2 As needed, the contractor; shall survey and establish the boundaries of areas stated under paragraph 1.4.1 of this SOW. The contractor shall mark the corners and outer edges of the designated areas with stakes or other visible temporary markers.

2.5.3 Items and data to be submitted to USAEDH as part of this task are as follows:

2.5.3.1 A tabulated list of all control points showing tee adjusted coordinates established and/or used for this survey.

2.5.3.2 A "Report of Establishment of Survey Mark" (Description Card) on each control point established and/or used for surveying. The Description Cards shall be 5" x 8" (1 2.7mm X 20.3mm) with one description per card. In addition to the name or ID number of the control points, the cards should show the adjusted coordinates, a written description for locating the control points, and a sketch showing how to locate the control points.

2.5.3.3 Drawings.- All maps shall be drawn at a scale no smaller than 1 inch = 200 feet (1 2400) on reproducible (mylar) drawings. One original and two blue line prints of each final drawing shall be delivered to USAEDH.

2.6 **Task 6 Perform Vegetation Removal and Reseeding.**

2.6.1 The contractor shall furnish all personnel and equipment necessary to mow grass/weeds and remove selected brush/tress for the required surface and sub-surface clearance. Vegetation shall be chipped on site and wood chips shall be spread over the area where the brush/trees were removed. Vegetation shall be removed to the extent necessary to effectively locate and remove OEW.

2.6.2 Upon completion of the work, if applicable, the contractor shall restore locations disturbed by his operations, except those area where brush/tress were removed. Excavated or trafficked areas shall be returned to natural grade and indigenous vegetation re-established by seeding or planting sprigs.

2.7 **Task 7 Turn-In of OEW Related and Non-OEW Scrap.**

2.7.1 This task shall be accomplished as per section 6, subsection 3.2.5, of the basic contract.

2.7.2 The contractor shall complete a DD Form 1348-1 as turn-in documentation. Instructions for completing this form are contained in the Defense Utilization and Disposal Manual, DOD 4160.21-M. The Senior UXO Supervisor shall sign a certificate as follows:

"I certify that the property listed hereon has been inspected by me and, to the best of my knowledge and belief, contains no items of a dangerous nature."

2.7.3 DRMO tun-in documentation receipts shall be submitted as a component of the Removal Report.

2.7.4 Should the servicing DRMO refuse to accept the OEW related scrap, the contractor shall make arrangements with a local scrap contractor to pick up the inert material, at no cost to the government.

2.8 **Task 8 Perform Quality Control.**

2.8.1 The contractor shall administer a Quality Control (QC) program to manage, control, and document his own and his subcontractor's activities. The methodology to accomplish this task shall be proposed in the WP. The QC activities shall be documented and included in the Removal report.

2.8.2 The individual performing the UXO QC shall not involved in the performance of Task 6 above. UXO QC shall be separate function and is not envisioned as a full-time position. The UXO QC Specialist shall meet the minimum prerequisites as outlined in section 6, subsection 3.2.4.2, of the basic contract.

2.9 Task 9 Prepare Removal Report.

2.9.1 The contractor shall accomplish this task in accordance with section 6, subsection 3.2.7, of the basic contract.

2.9.2 The Final Removal Report shall consist of the following:

2.9.2.1 All ordinal surveying and mapping data from Task 3.

2.9.2.2 Detailed accounting by listed area of all OEW and OEW-related materials located and disposed of during this D.O.

2.9.2.3 A system of daily journals of all activities associated with this SOW.

2.9.2.3.1 A daily journal of each area listed in paragraph 1.3.2 shall be opened with the start of, and closed with the completion of, each area. Activities endemic to the specific listed area shall be recorded on a daily basis.

2.9.2.3.2 A daily journal for the site shall be opened upon first arrival for the field operations and closed after the contractor demobilization at the project site. It shall contain a daily record of which listed areas are active and all other activities on the site not endemic to any specific area.

2.9.2.4 A recapitulation of exposure data. This shall include total number of man-hours worked on the site, total motor vehicle mileage, total number of flying hours, and number of flights.

2.9.2.5 QC documentation.

2.9.2.6 All DRMO turn-in documentation.

2.9.2.7 A minimum of 20 4" X 6" (10 X 16 cm) color photographs shall be included in the report depicting major action items and UXO discovers. The original Final report furnished to USAEDH shall include the ordinal photographic print. Photographs contained in draft submissions and copies of the final submissions shall be color reproductions.

2.9.2.8 Public meeting written record.

2.9.2.9 A financial breakdown by area and task of all costs and labor hours used to preform this SOW.

2.9.2.10 Video tapes. This contractor shall provide two copies of any video tapes used to document work performed under this SOW, one copy shall provided to CEHND-PM-MC and one copy to Charleston District, U.S. Army Corps of Engineers.

2.9.2.11 The contractor shall provide a plain metric map (at a scale no smaller than 1 inch = 200 feet [1:2400]). Upon this map the contractor shall show location of search patterns and significant findings with respect to all surface features located within the project area.

3.0 **SUBMITTALS.** The contractor shall furnish copies of the plans, maps, and reports as identified paragraph 4.1 to each addressee listed below in the quanties indicated. The contractor shall use express mail services for delivering these plans and reports. Following each submission, comments generated as a result of the review shall be incorporated.

ADDRESSEE COPIES

U.S. Army Engineer Division, Huntsville 4
ATTN: CEHND-PM-MC (William T. Davis)
106 Wynn Drive
Huntsville, Al 35805-1957

U.S. Army Engineer District, Charleston
ATTN: CESAC-PM-W (CPT Wilson)
P.O. Box 919
Charleston, SC 29042-0919

3.1 Submittals/Actions and Due Dates

TASK	SUBMITTAL	DUE DATE
Site Visit 1	N/A	5 Days After Award
A002	Feasibility Letter	3 Workdays after Site Visit
A001	Draft Work Plan	14 Days After Site Visit
A001	Final Work Plan	12 Sept 1994

TASK	SUBMITTAL	DUE DATE
Removal Action Starts	N/A	16 Sept 1994
Removal Action Complete	N/A	16 Oct 1994
A004	Draft Removal Report	16 Nov 1994
Report review	N/A	1 Dec 1994
A004	Final Removal Report	16 Dec 1994

3.2 Data Item A007 Status Report and Data item A008 Telephone Conversation/Correspondence records are due weekly and shall be faxed to the Project Manager at 205-955-5788 on the Monday of each work week.

4.0 **APPLICABLE REGULATIONS.** See section 6, subsection 3.2.4.4, of the basic contract.

4.1 The following publications also applies:

4.1.1 AR 385-40 with USACE Supplements, Accident reporting and Records.

5.0 **GOVERNMENT FURNISHED.**

5.1 Pertinent UXO Technical publications as required. (USAEDH)

5.2 Equipment will be provided as available.

6.0 **SPECIAL INSTRUCTIONS.**

6.1 During field activities on ordnance projects, hard hats need not be worn unless a head injury threat is present.

6.2 If an UXO is located within a search grid during final UXO QA search, the contractor will be required to, again, search the entire grid.

ATTACHMENT 1
OEW/UXO CLEARANCE
FORMER CAMP CROFT RED HILL, SPARTANBURG, SC

Task 3 LOCATION SURVEYS AND MAPPING.

1.0 UXO Safety. During all field and intrusive activities, the survey crews shall be accompanied by a UXO specialist who shall clear each area prior to the surveyors starting work.

2.0 Control Points. Plastic or wooden hubs shall be used for all basic control points. A minimum of three concrete monuments with a 3.25 inch - 3.5 inch domed brass, bronze, or aluminum alloy survey marker (cap) shall be established at this site. The concrete monuments be located within the project area and be well clear of any proposed construction project, be set 10 meters from the edge of paved roads and three meters from the edge of dirt roads, be a minimum of 300 meters apart, be set flush with the ground, and be a minimum of 0.5 meters below frost depth. The caps for these monuments shall be stamped in a consecutively numbered sequence as follows:

LOWERY-1-1994 LOWERY-2-1994 LOWERY-3-1994
USAED, Huntsville USAED, Huntsville USAED, Huntsville

The dies for stamping the numbers and letters into the caps shall be 1/8 inch - 3/16 inch in size. Horizontal control based on the metric system using the International Survey Foot (One inch = 25.4 millimeters (mm) and one ~~foot~~ meter = 3.2808399 feet) and referenced to NAD83 of Class I, Third Order or better shall be established for the network required for all of the control points. If aerial photographs are used to provide this survey,

the aerial targets used for control points shall meet the same horizontal accuracies and requirements detailed above. All coordinates and elevations shall be shown to the closest one-thousandth of a meter (0.001m) and one-hundredth of a foot (0.01 ft). All the control points recovered and/or established at this site shall be plotted at the appropriate coordinate point on a reproducible (mylar) planimetric or topographic map at metric scales between 1:500 and 1:2,000. For sites of approximately 10 hectares (25 acres) or less the maps shall be plotted at a metric scale of 1:500. All other site shall be plotted at a metric scale of 1:2,000. A tabulated list and a "Description Card" of all control points established or used shall be submitted in accordance with (IAW) paragraph 8.0 of this Attachment 1. The Description Card shall show north arrows; a sketch of each monument; its location relative to reference marks, buildings, roads, railroads, towers, etc.; a typed description telling how to locate the monument from a known point; the monument's name or number; and the final adjusted coordinates and elevations in meters and feet (to the closest 0.001m and 0.01 ft.) The Description Cards shall be five inches by eight inches with one monument per Description Card, or two monuments being described on an eight and a half inch by eleven inch sheet of bond paper.

3.0 Mapping. The location, identification, coordinates, and evaluations of all the control points recovered and/or established at the site shall be plotted on a reproducible (mylar) planimetric or topographic map at metric scales between

1:500 and 1:2,000. Each control point shall be identified on the map by its name or number, the final adjusted metric coordinates, and the elevations (to the closest 0.001m). Each map shall also include a Grid North, a True North, and a Magnetic North arrow with the differences in minutes and seconds shown between them; metric grid lines and tic marks in feet at systematic intervals with their grid values shown on the edges of the map; a legend showing the standard symbols used for the mapping; and a map index showing the site in relationship to all other sites within the boundary lines of the project area. All of the maps shall be referenced to the South Dakota State Plane Grid System using NAD83.

3.1 In addition, each magnetic anomaly (hit) shall be located in the field to the closest one-quarter of a meter (0.25m) and plotted and identified on the map. A tabulation of each hit shall also be provided showing the identification number, the metric coordinates referenced to NAD83, and the description of the item found above or below the ground surface. In cases of multiple hits within a small area the coordinates on the edges of the area may be shown.

3.2 This data shall be furnished to the Huntsville Division (HND) on 8mm 2.3 or 5.0 gigabyte magnetic tapes, or 3 1/2 inch floppy disks. The 8mm tapes are preferred. The HND graphics system consists of INTERGRAPH Corporation supplied workstations running microstation version 4.0 software.

4.0 Aerial Photography (Required if mapping is provided by

aerial photography).

4.1 Type of Photography Required. Single lens vertical black and white panchromatic photography at scales of 1:14,000 or larger with characteristics suitable for analytical aerotriangulation and standard photogrammetric mapping. The average flight height above natural ground shall be consistent with the mapping accuracies required to provide a scale of restitution of 1:500 and 1:2,000.

4.2 Photographs and Film. Each negative of the photograph assignment shall be marked with the date of exposure, the approximate scale (1:XXXXX), file number, the assigned roll number, flight line number, and exposure number. All such editing of numbered negatives shall be by mechanical lettering, with characters a minimum of 5 millimeters (0.2 inch) high, and shall be so placed as to appear within the image on the forward edge (in the line of the flight) of the positive prints, to read from the back edge, all in relative positions as follows:

Example of data to appear on each photograph:

DATE - 1 Sep 94

SCALE - 1:XXX

FILE# - BHAD

FILM ROLL# - XXX

FLIGHT LINE# - XXX

PHOTO# - XXX (Photos in the mission to be consecutively numbered from first to last)

4.3 Paper Prints. All prints shall be made on resin coated paper stock approved by the Contracting Officer. They shall be sharp and clear, shall contain all highlight and shadow detail, and shall be evenly toned. They shall be permanently fixed; thoroughly washed; processed through flattening solution and dried without pressing, rolling, or excessive heating; and trimmed to the image area, approximately 229mm by 229mm (nine inches by nine inches), with the imaged fiducial points retained on the print. Three copies of each paper print and all of the aerial photo negatives shall be delivered to the Huntsville Division in its proper flight line and exposure sequence.

4.4 Mylar Photo Index. Each sheet (minimum size of 508mm by 610mm or 20" x 24") of the Photo Index shall be one negative, entirely free of splicing and masking. Five reproducible (mylar) copies of each photo index are required. Each sheet shall have a Grid North, a True North, and a Magnetic North Arrow with their differences shown in minutes and seconds; a Sheet Index; and a Title Block as per the following example:

U.S. ARMY ENGINEER DIVISION, HUNTSVILLE
Project Name: BHAD, South Dakota
Date of Photography:
Scale of Photography: 1:XXXX
Scale of Index: 1:XXXX
Name of Contractor:
Sheet xx of xx

4.5 Quality of Materials. All materials, supplies or

articles required for this work which are not covered by detailed specifications herein shall be standard products of reputable manufacturers and entirely suitable for the purpose. They shall be new and unused, unless otherwise specified, and will be subject to the approval of the Contracting Officer.

4.5.1 Aerial Film. Aerial film shall be furnished where the quality is equal or superior to Kodak Aerographic 2405 black and white film. Only fresh, fine-grained aerial film shall be used. The negatives shall be exposed and developed in such a manner that they shall be sharp and clear, and contain all highlight and shadow detail. They shall be free of any defects which, in the opinion of the Contracting Officer, render them unsuitable for their intended purpose.

4.5.2 Compilation Medium. Compilation material shall be furnished where the quality is equal or superior to Mylar or Cronoflex Stable Base Materials.

4.6 Performance Required. The company providing the work must be cognizant of the difficulties involved and of the problems which may arise, and must ascertain that the personnel, plant, equipment, transportation facilities, and supply of materials are adequate at all times to ensure complete compliance with all provisions of this contract.

4.7 Personnel of Plane. The pilot must be well qualified, possessing a minimum of 250 hours of photographic map flying experience. The photographer shall possess a minimum of 250 hours of experience representing actual time spent in executing

vertical aerial photography on photographic assignments. Oblique photography is not considered as qualifying experience. Equipment replacements shall not be made during the progress of this contract without the express consent of the Contracting Officer.

4.8 Airplane. The airplane to be used shall be entirely capable of stable performance at the necessary altitude and air speeds. It shall be equipped with all essential navigational and photographic instruments and accessories. These shall be maintained in operational condition during the period of service for this work and shall be subject to the approval of the Contracting Officer. No windows shall be interposed between the camera lens system and the terrain. The camera lens system shall not be in the direct path of any gases or oil from the aircraft engine(s).

4.9 Camera. All mapping photography shall be made with a single lens precision aerial mapping camera equipped with a "high-resolution, distortion-free" type lens, calibrated by the National Bureau of Standards or an agency making calibrations of equal accuracy, and approved by the Contracting Officer. The calibrated focal length of the lens (the focal length at which the values of lens distortion, irrespective of sign, are held to the minimum within 45 degrees of the optical axis) shall be 153mm, plus or minus three (3)mm. The camera shall function properly at the necessary altitude and under the expected climatic conditions, and shall expose a 229mm (nine inch) square

negative. The lens cone shall be so constructed that the lens, focal plane at calibrated focal length, fiducial markers and marginal data markers comprise an integral unit or are otherwise fixed in rigid orientation with one another. Dimensional changes brought about by variations of temperature or other conditions shall not be of such magnitude as would cause deviation from the calibrated focal length in excess of plus or minus five-hundredths of a millimeter (0.05mm) or would preclude determination of the principal point location to within plus or minus three thousandths of a millimeter (0.003mm).

4.9.1 Platen. The focal plane surface of the platen shall be flat to within thirteen-thousands of a millimeter (0.013mm) and shall be truly normal to the optical axis of the lens. The camera shall be equipped with a means of holding the film motionless and flat against the platen at the instant of exposure.

4.9.2 Fiducial Marks. For mapping photography, the camera shall be equipped with a minimum of four (4) fiducial marks suitable for making precise measurements in analytical aerotriangulation process. The lens, focal plane, and fiducial marks must be permanently fixed in rigid orientation with each other.

4.9.3 Lens Distortion. As referred to the calibrated focal length, the radial distortion shall not exceed plus or minus one hundredth of a millimeter (0.01mm) within a 42.5 degree half-field angle, and the tangential distortion shall not exceed

five-thousandths of a millimeter (0.005mm). Values of distortion at equal but opposite angular separations from the axis along the same diameter shall not differ from each other by more than two-hundredths of a millimeter (0.02mm).

4.9.4 Lens Resolving Power. When installed in the camera, and with the appropriate filter mounted in place, the lens shall resolve at least 32 equally spaced lines to the millimeter in the center of the field; and, at least 14 equally spaced lines to the millimeter in any orientation extending to 45 degrees from its axis, all as could be determined by tests using Eastman Spectroscopic Type V-F Emulsion, or equivalent.

4.9.5 Filter. The appropriate minus-blue filter used in black and white photography shall be of such quality that no appreciable reduction in resolution will result. The surfaces of the filter shall be parallel to within 10 seconds of arc.

4.9.6 Shutter. The camera shall be equipped with a between-the-lens shutter of the variable speed type, whose efficiency shall be at least 75 percent at the fastest rated speed.

4.9.7 Substitute cameras may be used in taking special purpose aerial oblique photographs and photographs to be used in the preparation of mosaics, provided that prior written approval for the use of the special camera and lens is obtained from the Contracting Officer.

4.10 Flight Plan. Photographic flight height above the average ground elevation shall be such that the scale of the

photographic film negatives will not have a variation of more than plus or minus five (5) percent of the desired photo scale. All strips shall be flown as straight as possible, and shall be void of crab, tilt, and altitude variations to the extent that they afford good stereoscopic coverage of the entire minimum area of the photographic assignment. Successive photographs along the line of flight shall overlap each other by approximately 60 percent, and parallel strips shall overlap each other by approximately 30 percent as indicated on the approved flight plan. Deviations of more than five (5) percent from these specified overlaps, except those excessive due to allowances made for abnormal relief displacements, shall be cause for rejection. A flight plan shall be prepared and submitted to the Contracting Officer's Representative for approval. The plan shall indicate the area to be mapped, the flight line locations, and the pretargeted panel positions needed to tie the individual frames of photography to the State Plane Grid System and the North American Vertical Datum.

4.11 Crabbing. Any series of two or more consecutive photographs crabbed in excess of five (5) degrees as measured from the mean flight path of the airplane, and as indicated by the principal points of the consecutive photographs, shall be cause for rejection of the photographs in the flight.

4.12 Tilt. The average tilt for photographs shall not exceed one (1) degree and the maximum tilt shall not exceed three (3) degrees in a strip flight. Relative tilt between any two

successive negatives exceeding five (5) degrees shall be cause for rejection.

4.13 Scale Requirements. The aerial photography shall be performed at a flight height above average ground so that the mapping can be provided at a scale of 1:500 or 1:2,000. Negatives having a departure from the specified scale by more than five (5) percent because of tilt or abrupt changes in the flying altitude shall be corrected.

4.14 Suitable Conditions. All photography shall be accomplished between the hours of 10:00 a.m. and 2:00 p.m., Standard Time Zone, when the atmosphere is sufficiently clear, and when no part of the terrain being photographed is obscured by clouds, cloud shadows, smoke, fog, or snow, except with the permission of the Contracting Officer. Any day containing two or more consecutive hours of such suitable conditions, in any sizable portion of the area not yet photographed, will be considered a "Suitable Day" for aerial photography.

4.15 Stereoscopic Coverage. The entire area of the project shall be stereoscopically covered within the usable portion of the field of the lens. This stipulation is a prime requisite of this SOW. Nonattainment of acceptable stereoscopic coverage caused by the AE's failure to adhere to the specified flight design shall be corrected by reflights at his expense.

5.0 PHOTOGRAMMETRIC MAPPING

Photogrammetric mapping shall be produced from photography meeting the specifications detailed in Paragraph 4.0.

Enlargement from a negative scale to a compilation scale must be within the limits of the stereoplotter capability to produce mapping at a scale of 1:500.

5.1 Personnel. Operators of photogrammetric mapping equipment and digitizing graphics equipment shall be thoroughly trained and must have a minimum of six months production experience on the equipment they operate.

5.2 Control Extension. Aerotriangulation for control shall be accomplished by fully analytical methods. The positional accuracy (vector of both Northing and Easting coordinate errors) of pass points established by aerotriangulation shall meet either of the following minimum requirements:

5.2.1 A root-mean-square error in feet not greater than one part in 1,500 of the nominal negative scale as expressed in feet per inch.

5.2.2 Ninety (90) percent of the pass points in error in feet by not more than one part in 900 of the nominal negatives scale as expressed in feet per inch.

5.2.3 In either case, no point shall be in error by more than one part in 400 of the negative scale as expressed in feet per inch.

5.3 Stereo Compilation. Stereo compilation shall be accomplished using automated stereo plotting devices connected directly to the interactive graphics system. The stereo plotting devise shall be capable of capturing the level of detail required from the aerial photography. The production of a pencil or

scribe manuscript of the planimetric and cultural features and the contour data for direct digitization later will not be permitted. Stereo plotters and other mensuration instruments shall be well calibrated.

5.4 Photogrammetric Mapping Accuracy Requirements. All photogrammetric mapping shall meet the following horizontal and vertical accuracy requirements for a mapping scale of 1:500 and 1:2,000.

5.4.1 Contours. Not Required.

5.4.2 Coordinate Grid Lines. State plane coordinate grid lines shall be plotted as detailed in paragraph 3.0 of this SOW, and shall not vary by more than 0.25mm from the true grid value of each map.

5.4.3 Horizontal Control. Each horizontal control point shall be plotted on the map within the coordinate grid in which it should lie to an accuracy of 0.25mm from the true grid value on each map.

5.4.4 Planimetric Features. Ninety (90) percent of all planimetric features which are well defined on the photographs shall be plotted so that their position on the finished maps shall be accurate to within at least 0.635mmm of their true coordinate position, and none of the features shall be misplaced on the finished map by more than 1.27mm from their true coordinate position.

5.4.5 Spot Elevations. Ninety (90) percent of all spot elevations placed on the maps shall have an accuracy of at

least one-fourth (1/4) the contour interval, and the remaining 10 percent shall not be in error by more than one-half (1/2) the contour interval.

6.0 DIGITAL DATA

6.1 General Design File Requirements. An overall planimetric design file shall be created. All data shall be digitized into the Intergraph IGDS 2D design file. If contours and spot elevations are required, all data shall be digitized into a IGDS 3D design file with each element (contours and spot elevations) at their correct elevation, and topologically triangulated network (ttn) files shall be created to model the topographic surface.

6.2 The individual sheet design files shall have the following salient features:

6.2.1 Each sheet border and sheet dependent element shall occupy a separate file and be referenced to the planimetric file.

6.2.2 The fast curve display must be set off when digitizing.

6.2.3 Each sheet shall be a standard metric A-1 size which is 841mm by 594mm (33.1 inches by 23.4 inches). Each sheet shall also have a standard border, revision block, title block, complete index sheet layout, bar scale, legend, metric grid lines, grid tick layout in feet, a True, Grid and Magnetic North arrow with their differences shown in minutes and seconds, and shall be plotted at the horizontal scales detailed in paragraph

3.0 above.

6.2.4 The cell library used shall be attached.

6.2.5 A list of level assignments utilized shall be submitted.

6.2.6 Refer to paragraph 7.0 "Digital Format for Intergraph Data, Surveying/Mapping" for level assignments and additional information.

6.2.7 All digitized data will not be acceptable until proven compatible with the CEHND Graphics System. All revisions required to obtain compatibility with the CEHND Graphics System shall be done at the contractors own expense.

6.3 Specific Design File Requirements

6.3.1 The design file border sheet shall accommodate the scales detailed in paragraph 3.0 above. All surface and subsurface features shall appear in the design file.

6.3.2 The contractor shall provide the Government with two copies of the design files on 8mm 2.3 or 5.0 gigabyte magnetic tapes or 3-1/2" floppy disks. The 8mm tapes are preferred. The data to be submitted shall contain the final version of the design files, with corrections made. The tapes or disks shall be labeled, showing the project name, project number, date, contractor's name, address and telephone number, and the number of files.

6.4 If the mapping is to be digitized from aerial photographs, additional criteria and specifications will be added to this SOW and shall be followed by the contractor.

7.0 DIGITAL FORMAT FOR INTERGRAPH DATA SURVEY/MAPPING

7.1 Sources and Standard: These standards have been developed and produced by the Surveying and Mapping Single Discipline Task Group (SDTG). They are designed for computer assisted mapping methods that must interface with other surveying contractors, Government contractors and customers so that the final project will be usable and consistent CADD documents.

7.2 Design File Requirements:

7.2.1 General. The surface features shall be placed into an Intergraph IGDS 2D design file.

7.2.2 Design file units shall be MU=1 ft., SU=10th, PU=10.

7.2.3 Global Origin: Since most Surveying/Mapping drawings utilize coordinate systems with all positive "X" and "Y" values, the standard global origin (0, 0,, -21474836.48) to be used for surveying/mapping drawings is zero "X" and "Y" coordinates at the lower corner of the "X-Y" plane. This will allow "X-Y" coordinates from 0, 0 to 42949673, 4294973, 21474836, which should be sufficient for the majority of needs.

7.2.4 Compress all design files. File design with the entire sheet in view 5 and the title block in view 1. Only views 1 and 5 will be active. All locks will be off except snap, and all displays will be on except text nodes. Fonts 1, 2, 10, 23, 24, and 51 will be downloaded, and unused levels will be off.

7.2.5 Angular data read-out will be degrees, minutes and seconds to one decimal place.

7.2.6 Each sheet shall be a standard metric A-1 size drawing, and have a standard COE revision block, a title block, index sheet layout, a legend, grid lines, grid tick layout, a scale bar, and Grid North, True North, and Magnetic North arrows with their differences shown in minutes and seconds. In general the direction of north will run from the bottom of the file to the top, with no skew.

7.3 Level Assignments: Level assignments, colors, line weights, and line code (styles) as shown in Table 1 below shall be used.

7.4 Survey/Mapping Drafting Practices:

7.4.1 A sheet index for the project shall be prepared that includes enough of the planimetric data to include the sheet's geographical location in the project area, and the location of the sheet relative to all other sheets in the project. The sheet index, showing all sheets in the project, is to be shown in the legend of each sheet, with the current sheet crossed-hatched or heavily outlined. If required, a separate file may be utilized for the index.

7.4.2 All text shall be Font 10.

7.5 Planimetric data shall be digitized and furnished to CEHND in a primary 2D CADD file. The primary file shall contain all survey data. The individual sheet design files, as required, will use the primary file as a reference and will include the specific information required to plot the individual survey drawing sheets with sheet borders, title, legend, scale bars, and

north arrows. All files shall be referenced to NAD83. Two copies of the magnetic tapes containing all the source files required to produce the final drawings shall be provided. The following level/feature information (Table 1) shall be used in creating these files.

7.6 All unique cell libraries, user commands, color tables, menus, etc., created as part of this scope are to be delivered as part of the final submittal. A brief narrative explaining the function of each and how it was used shall also be required and included. In addition, provide a description of how the individual design files are assembled to produce the final plots; i.e., design file name, reference name(s), color table, etc.

TABLE 1

Survey/Mapping Level Assignments

and Level Symbology

Level	Description	Line Code	Line Weight	Color
1	Sheet Dependent Info	0	0	4
2	Coordinate Grid/Ticks	0	0	2
3	Coordinate Grid Annotation/Text	0	0	2
4	Buildings	0	2	4
5	Building Annotation	0	0	4
6	Road Centerline	0	0	4
7	Rd., RR and Centerline Anno.	0	0	4
8	Rds., Parking, Wlks., RR, Trls.	0	1	4
9	Concrete Joint Layout	0	0	4
10	Concrete Joint Elevations	0	0	4
11	Runway, Taxiway and Aprons	0	1	5
12	Runway Annotation	0	0	5
13	Pavement Markings, Signs	0	0	5
14	Structures, Headwalls	0	1	6
15	Structure Annotation	0	0	6
16	Culverts	0	1	4

NOTE: Obscured areas, unknowns, and dirt roads will be dashed (LC=3, long dashed)

TABLE 1 (continued)

Survey/Mapping Level Assignments

and Level Symbology

Level	Description	Line Code	Line Weight	Color
17	Culvert Annotation	0	0	4
18	Riprap	0	1	2
19	Water Features	0	1	1
20	Water Features Annotation	0	0	1
21	Vegetation	0	0	2
22	Vegetation Annotation	0	0	2
23	Fences	0	0	1
24	Fence Annotation	0	0	1
25	Boundary Line/Cadastral	0	2	6
26	Boundary Lines/Cad. Anno.	0	0	6
27	Survey Ctrl. Pts, Baselines	0	0	5
28	Survey Ctrl Point Anno	0	0	5
29	Break Lines	0	0	4
30	Spot Elevations	0	0	4
31	Major Contours	0	2	6
32	Contour Annotation	0	0	6
33	Minor Contours	0	0	3
34	Soil Borings and Text	0	0	6
35	Storm Sewer, Manholes	0	0	2

TABLE 1 (continued)

Survey/Mapping Level Assignments

and Level Symbology

Level	Description	Line Code	Line Weight	Color
36	Storm Sewer, Lines & Annotation	0	0	2
37	Sanitary Manholes	0	0	4
38	Sanitary Lines & Annotation	0	0	4
39	Water Tanks & Fire Hydrants	0	0	1
40	Water Line & Annotation	0	0	1
41	Gas Line, Features & Valves	0	0	3
42	Gas Lines & Annotation	0	0	3
43	Power Lines, Lights, & Telephone Poles	0	0	5
44	Power Lines & Annotation	0	0	5
45	Steam Ln., Features & Valves	0	0	6
46	Steam Lines & Annotation	0	0	6
47	Cross Sections & Profiles	0	0	4
48	Details & Inserts	0	0	0
49	Soundings	0	0	1
50	Channel Ln., Disposal Areas	0	1	4
51	Channel Line Annotation	0	0	4
52	Navigation Aids and Annot.	0	1	6

TABLE 1 (continued)

Survey/Mapping Level Assignments

and Level Symbology

Level	Description	Line Code	Line Weight	Color
53	Levees, Dikes and Annot.	0	1	4
54	Pipe Lines, Structures, Br.	0	1	6
55	Pipe Line Annotation	0	0	6
56	Stationing and Mile Markers	0	1	5
57	Revetments & Annotation	0	1	2
58	Vessel Track Line	0	1	2
59	Border/Title/Legend/N. Arrows	0	1	4
60	Concentrated Spot Elevations	0	0	4
61	Impact Area	0	1	6
62	SDZ (Surface Danger Zone)	0	1	6
63	Documentation			

NOTE: Obscured Areas, Unknown, and Dirt Roads will be dashed (LC=3, long dashed).

8.0 I[illegible]nd Data to be Submitted to CEHND. The following items [illegible]ta shall be submitted to CEHND:

8.1 [illegible]ld Survey. The original copies of all field books, layout [illegible], computation sheets, abstracts, and computer printout[illegible]ll of these items shall be suitably bound, and clearly [illegible] and identified.

8.2 [illegible]ulated list of all control points showing the adjusted [illegible]nates and elevations (in meters and feet) establishe[illegible]/or used for this survey.

8.3 A[illegible]lated list of all hits located in the field showing the[illegible] identified in paragraph 3.0 above.

8.4 A [illegible]t on Establishment of Survey Mark" (Description Card) on eac[illegible]manent control monument established and/or used for the surv[illegible]In addition to the name or ID number of the monument, th[illegible]s shall show the adjusted coordinates, the adjusted elev[illegible]s, a written description for locating the monument, and[illegible]tch showing how to locate the monument.

8.5 Drawi[illegible] All maps shall be drawn at metric scales of 1:500 and 1:2,[illegible] reproducible (mylar) drawings. One original mylar and five[illegible]ine prints of each final map shall be delivered to CE

9.0 Schedule. [illegible]ork and services under this paragraph shall be completed and[illegible]itted to CEHND 30 days after all field work has been complet

APPENDIX B

DAILY JOURNALS

DAILY TEAM LEADER JOURNAL

TEAM # 1 TASK ORDER # 002

DATE 8-8-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED —	TOTAL EXCAVATIONS —
TOTAL UXO'S —	TOTAL SCRAP — LBS
MAG TYPE —	MAG SETTING —
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME HRS	GOV DELAY TIME HRS
WEATHER Clear	TEMP 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

INITIAL SITE VISIT THIS MORNING 0800-1400 hrs. DC LOWERY (PROPERTY OWNER), MR. DAVIS CEHND-PM, CPT WILSON CAE Regional Rep AND MYSELF IN ATTENDANCE. GENERAL WALK THROUGH. FINAL LOCATION OF PART OF Road Loop STILL QUESTIONED by DC LOWERY, I will MAKE DETERMINATION IN THE NEAR FUTURE. ALL HFA PERSONNEL APPROVED. CEHND-SAFETY Spec. APPROVED. EQUIP LIST GIVEN TO DAVIS, for Bell IN HUNTSVILLE, SEE WHAT WE CAN GET. BUTLER POC TO SITE OKd by DAVIS. Should GET AT LEAST ONE TEK TOMORROW

TEAM LEADER SIGNATURE John R Miles

DAILY TEAM LEADER JOURNAL

TEAM # 1

TASK ORDER # 002

DATE 8-9-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED -0-	TOTAL EXCAVATIONS 0
TOTAL UXO'S -0-	TOTAL SCRAP -0- LBS
MAG TYPE Schonstedt	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME HRS
WEATHER clear	TEMP 80°

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS: Initial Briefing of UXO Team w/Corps Present. Personnel in-processed. SSHP Completed. 1 veh received F-150 [illegible] there tomorrow. Started physically working on site 1300 hrs. [illegible] Rd. Area from Hwy 176 onto site, 525' x 40' staked. During stake implacement, heavy contamination encounted w/mag. Most likely frag. Will cont. Rd layout tomorrow. Working hr. 0600-1630 Mon-Thur. (4-10's) [illegible] w/mag's (still working)

TEAM LEADER SIGNATURE [signature]

DAILY TEAM LEADER JOURNAL

TEAM # 1 TASK ORDER # 002

DATE 8-11-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Miles
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schon	MAG SETTING Standard
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME none HRS
WEATHER Clear/ Hot	TEMP High 90's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Roadway 90% defined and staked, awaiting final decision by Dr. Lowery on final location of one section. Should be made Monday. Additional Mobil Phone purchased, brings total on site to three (3). Map of site received, copies to 1H, only map available this time. Will keep looking.

TEAM LEADER SIGNATURE

PERSONNEL ON SITE

WEEK ENDING 8-11-94	LOCATION CAMP CROFT, SC
CONTRACT # DACA 87-94-D-0019	TASK ORDER # 002
SUXOS JOHN MILES	PM RICHARD THIEL

NAME	POSITION	TEAM #	MON	TUE	WED	THU	FRI
JOHN R. MILES	SUXOS		x	x	x	x	
DAVID I. BUTLER	UXOSPEC		x	x	x	x	
ALBERT C. GRANT	UXOSPEC			x	x	x	
GEORGE R PAYNE	UXOSPEC			x	x	x	
JOHN H. REOTT	UXOSPEC		x	x	x	x	

PERSONNEL ON LEAVE OR SICK

NAME	POSITION	TEAM #	MON	TUE	WED	THU	FRI

DAILY TEAM LEADER JOURNAL

TEAM # 1 TASK ORDER # 002

DATE 8-15-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schon	MAG SETTING Standard
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME HRS	GOV DELAY TIME HRS
WEATHER Rain	TEMP Mid 90's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Roadway layout completed, with the exception of approximately 600 ft. awaiting exact location layout by Dr. Lowery. Layout of 200 foot radius from landfill edge underway. 2nd PU F-150 received this date. Procurement of additional vehicle for my use approved (Jack Norris). Will not layout compost area until exact location (boundaries) are approved by CEHND and Dr. Lowery.

TEAM LEADER SIGNATURE

DAILY TEAM LEADER JOURNAL

TEAM # 1 TASK ORDER # 002

DATE 8-16-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schon	MAG SETTING Standard
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME HRS	GOV DELAY TIME HRS
WEATHER Rain	TEMP Mid 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Completed layout of trailer placement area.

Started Mag/stake operations, starting at new road access to Hwy 176. grid #1, 40'X100"= 476 contacts; grid #2, 5'X 100" = 110 contacts, large frag being found on surface, so assume most to be frag hits, but some are very large contacts possible ord. Team 9 hr day taken off range heavy rain, tornado warning. Mag check target buried 4' (pipe section)

TEAM LEADER SIGNATURE

DAILY TEAM LEADER JOURNAL

TEAM # 1

TASK ORDER # 002

DATE 8-17-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME HRS	GOV DELAY TIME HRS
WEATHER Rain	TEMP Mid 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

NO WORK THIS DATE, HEAVY RAIN, WILL MAKE DAY UP FRIDAY THE 19th.

TEAM LEADER SIGNATURE John R Wilson

DAILY TEAM LEADER JOURNAL

TEAM # 1 TASK ORDER # 002

DATE 8-18-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Miles
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schon	MAG SETTING Standard
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME HRS
WEATHER PC	TEMP Low 90's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Continued Mag/stake ops in new rd area 450 contacts stakes in less than 3/4's of a 40x200 foot grid. DR. Lowery on site compost area enlargement plus additional firebreaks and road system brought up. After his departure, w/Parson CEHND-Spec the original stated compost area was laid out with concurrence of the corps. Location of last parcel of loop (low side) confirmed by Dr. Lowery.

Both compost area and roadway staked out by team.

TEAM LEADER SIGNATURE

DAILY TEAM LEADER JOURNAL

TEAM # 1 TASK ORDER # 002

DATE 8-19-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Miles
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME HRS
WEATHER Clear, humid	TEMP 90's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

entire work day spent brush clearing, approximately 300' clared. Will continue this operation next week.

* See pg. 2

TEAM LEADER SIGNATURE

DAILY TEAM LEADER JOURNAL

TEAM # _____ TASK ORDER # 002

DATE 8-22-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Miles
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schostedt	MAG SETTING Standard
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME HRS
WEATHER PC	TEMP 90's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Continued brush cutting around perimeter of landfill.
Contacted FAA Rep at Spartanburg AP, given basic grid information for Flight Services. Will contact tomorrow.
Randy Harris given tour of site. All site boundaries set, will place corner stakes tomorrow for survey points. Veh. problems one F-150 released back to Hertz (would not repair, too old).
Info. FAX'd to Jack. WP received from IH (evening).

TEAM LEADER SIGNATURE [signature]

DAILY TEAM LEADER JOURNAL

TEAM # _____ TASK ORDER # 002

DATE 8-23-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Miles
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schonstedt	MAG SETTING Standard
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME HRS
WEATHER Clear	TEMP Hot 90's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS: Copy work plan given to Randy plus copy of SOW and attachment. Continued brush cutting around landfill. Doc on site confirmed boundaries of compost area. original map of site returned to Doc. Checked with Jack on vehicle, waiting status. Informed by Harris additional landfill and compost area will be added to total clearance ops. Will request total of 6 teams for clearance operations, Jack notified, paper work coming. Harris checking WP

TEAM LEADER SIGNATURE

DAILY TEAM LEADER JOURNAL

TEAM # 1 TASK ORDER # 002

DATE 8-24-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Miles
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schonstedt	MAG SETTING Standard
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME HRS
WEATHER Clear	TEMP 88

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Security area prepared for trailer and magazines placement. Continued brush clearance around perimeter of landfill. Payne and Grant to take state blasters test on Tuesday 30 Aug, Columbia SC. Payne primary , Grant just in case george has problem with test. Checking on surveyors. Additional acreage coming on line (#2 Landfill, #2 Compost area). More information as it becomes available.

TEAM LEADER SIGNATURE John Rmiles

DAILY TEAM LEADER JOURNAL

TEAM # _____ TASK ORDER # 002

DATE 8-25-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE SCHONSTEDT	MAG SETTING STANDARD
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME HRS	GOV DELAY TIME HRS
WEATHER Clear Hot	TEMP Low 90°

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Continuing breaching clearance. New Rd from 176 to Loop cleared, returned to work around Land fill. Continuing to crawl on Equip.

TEAM LEADER SIGNATURE R Miles

DAILY TEAM LEADER JOURNAL

TEAM # ______

TASK ORDER # 002

DATE 8-29-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Miles
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schonstedt	MAG SETTING [illegible]
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER Clear, Hot	TEMP Low 90°

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Mr. Davis in area, will be on site tomorrow evening possibly wed. continuing brush clearance ops. 2 people to Columbia tomorrow for Blasters test.

Received copy of comments on WP from Mr. Davis. informed him he had sent your copies

TEAM LEADER SIGNATURE [illegible]

DAILY TEAM LEADER JOURNAL

TEAM # _____ TASK ORDER # 002

DATE 8-30-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER PC HOT	TEMP LOW 90°

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Two personnel to Columbia SC for Polaroid test, both passed Mr Payne Licensed. Grant on hold.
Cleared area for Mag. placement. Major change in land area to be cleared (See attached Memo)

TEAM LEADER SIGNATURE J Miles

DAILY TEAM LEADER JOURNAL

TEAM # _____ TASK ORDER # 002

DATE 8-31-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schonstedt	MAG SETTING STANDARD
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER PC	TEMP Low 90's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

continued boundary staking, added to compost area A new Landfill (Phase II) and compost area B

Attended Team Meeting at request of Mr. Davis, very small attendance. Nothing of importance revealed of those NG have used part of Camp Croft in the 90's.

(see attached pg 3)

TEAM LEADER SIGNATURE Miles

DAILY TEAM LEADER JOURNAL

TEAM # _____ TASK ORDER # 002

DATE 9-1-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miller	SSO Miller
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schonstedt	MAG SETTING Standard
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME -0- HRS
WEATHER PC	TEMP High 80°

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Continued staking operations around 2nd landfill and compost areas.

Neil Phillips Survey Co. Bid sent to IM

Dr. Lowery on Site late wanting to change Phase I compost area

Mr. Davis will be on Site Wed. it's between these two.

TEAM LEADER SIGNATURE J. Miller

DAILY TEAM LEADER JOURNAL

TEAM # ______

TASK ORDER # 002

DATE 9-6-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schonstedt	MAG SETTING STd.
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME -0- HRS
WEATHER PC (showers)	TEMP 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Continued setting boundaries of Land fill #2
Survey team on site to establish 3 monuments as required.

TEAM LEADER SIGNATURE J. Miles

DAILY TEAM LEADER JOURNAL

TEAM # ______

TASK ORDER # 002

DATE 9-7-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schon	MAG SETTING 5
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME -0- HRS
WEATHER PC	TEMP 40's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Check conducted of Mag. Storage Area. plus firebreaks to be used as access route to same.

Dr. Lowery and L. Harris re-establishing one end of Landfill #1 boundary.

TEAM LEADER SIGNATURE

DAILY TEAM LEADER JOURNAL

TEAM # ______

TASK ORDER # 002

DATE 9-8-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schon	MAG SETTING 5
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME -0- HRS
WEATHER PC	TEMP 90°

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Boundary markers on Land parcel #1 reestablished -
Boundary markers for inside boundaries of compact area #2 set.
(extension to be delayed until possible 2nd Phase of project)
8x20 trailer on site.

This should just about get Dr. Lowery what he wanted this round.

TEAM LEADER SIGNATURE [signature]

DAILY TEAM LEADER JOURNAL

TEAM # ______ TASK ORDER # 002

DATE 9-12-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Miles
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schon	MAG SETTING 5
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME -0- HRS
WEATHER PC	TEMP Mid 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Continued clearance of mag storage area
Camera Post set Landfill #2, Near portion of Lorry roadway
Widen to 40' per instruction CEHND-Rep (Harris) this was
included in scope change Thursday 4 Sep.
Mr Davis COE-PM on site tomorrow 9-13-94
Meeting w/Doc Lowery 1715 hrs tomorrow.

TEAM LEADER SIGNATURE [signature]

DAILY TEAM LEADER JOURNAL

TASK ORDER # 002

TEAM # ______

DATE 9-13-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Miles
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S 0	TOTAL SCRAP LBS
MAG TYPE Schonstedt	MAG SETTING 5
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER PC	TEMP High 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

APS team on site, necessary equip leased (Generator)
Will start operations 9-14. Tour of area given by myself.
No problems foreseen at this time w/except of workable area
map. This should be corrected 9-14 by Neil Phillips Survey Co.
UXO team doing ord avoidance operations on area adjacent
to trailer location.

TEAM LEADER SIGNATURE R Miles

DAILY TEAM LEADER JOURNAL

TEAM # ______ TASK ORDER # 002

DATE 9-14-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Miles
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS 25
TOTAL UXO'S -0-	TOTAL SCRAP LBS
MAG TYPE Schonstedt	MAG SETTING Max.
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME -0- HRS
WEATHER Clear.	TEMP High 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS: approx 22,966.60 ft surveyed in suspected mine field, 315 contacts flagged, CEHND-Safety Specialist Guy Parsons required 25 contacts to be dug. No ord-related material recovered from digging. 14 ea. M6 landmine storage containers recovered.
CEHND-Specialist ceased survey operations and informed HFA to return to original job site (survey)
Site GPS'd for future reference (final report)

TEAM LEADER SIGNATURE R. Miles

DAILY TEAM LEADER JOURNAL

TEAM # ______

TASK ORDER # 002

DATE 9-15-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 162
TOTAL UXO'S 0	TOTAL SCRAP LBS
MAG TYPE Schonstedt	MAG SETTING 5
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER PC	TEMP Mid 80s

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N
H-1	0		162	20+	N	N

SIGNIFICANT COMMENTS:

Completed area in Trailer site (ord avoidance) nothing found
Elec Contractor to be on site Tuesday 20 Sep to set Temp Power
Pole. Team started Ord avoidance Clearance area across rd from
trailer Grid H-2, 3 + 4, if able will clear so Asphalt can be
piled in area possibly next wk.
GPS team in high gear, will work through weekend

TEAM LEADER SIGNATURE R Miles

DAILY TEAM LEADER JOURNAL

TEAM # _____ TASK ORDER # 002

DATE 9-19-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED 3	TOTAL EXCAVATIONS 179
TOTAL UXO'S -0-	TOTAL SCRAP 10/5 LBS
MAG TYPE Schonstedt	MAG SETTING 5
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER PC	TEMP MID 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N
H-2	-0-	N	61		N	N
H-3	-0-	N	83		N	N
H-4	-0-	N	30		N	N

SIGNIFICANT COMMENTS:

Jeff Moore CEHND-Safety Spec on Site this WK.
Received WP approval from Huntsville via Indian Head. Priority set on areas to be cleared. PM DAVIS to be on site 20 Sep to set final boundaries. Area for asphalt storage cleared GPS team will require one(1) additional day to complete their project. Approved by Jack Massini

TEAM LEADER SIGNATURE J Miles

09-20-1994 22:42 8035741243 P.01

DAILY TEAM LEADER JOURNAL

TEAM # ______ TASK ORDER # 002

DATE 9-20-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Miles
TOTAL GRIDS COMPLETED -0-	TOTAL EXCAVATIONS 26
TOTAL UXO'S -0-	TOTAL SCRAP LBS
MAG TYPE Schonstedt	MAG SETTING 5
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER Clear.	TEMP Mid 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS: Old ordnance open on roadway to
Demo Area. Roadway and site cleared, frag throughout area.
New boundary set for Landfill(1) and compost area (A) by Mr. Davis
New boundary GPS by team. Final set I hope. Survey reading by
GPS team roadway (frag), Landfill(1) and 2 and compost area A
totals 30+ acres. This is final setting, will start gridding
landfill 1 tomorrow. 7 additional personnel due in Sunday
25 Sep bring team to 12 personnel.

TEAM LEADER SIGNATURE R Miles

09-21-1994 18:43 8035741243 P.01

DAILY TEAM LEADER JOURNAL

TEAM # ______ TASK ORDER # 002

DATE 9-21-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED -0-	TOTAL EXCAVATIONS -0-
TOTAL UXO'S	TOTAL SCRAP -0- LBS
MAG TYPE Schonstedt	MAG SETTING 5
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME -0- HRS
WEATHER PC	TEMP MID 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Explosive Storage Magazine, 2 ea on site, grounding etc. Tomorrow.
Open Demolition site completed.
All Resumes of Personnel to arrive Sun/Mon approval by CEHND-Safety
Spec (Nesca) Harris notified. Equipment started arriving at motel.
20 odd lots.
Security at trailer set to start around 1700 hrs 22 Sep 94.

TEAM LEADER SIGNATURE R Miles

DAILY TEAM LEADER JOURNAL

TEAM # _____ TASK ORDER # 002

DATE 9-22-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO MILES
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS 6
TOTAL UXO'S 0	TOTAL SCRAP 0 LBS
MAG TYPE SchonSTedt	MAG SETTING 5
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER PC	TEMP Mid 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Cleared roadway to Demo area, sides of Demo area sloped
Backhoe on site.
Security on post starting at 1700 this date, 24hr Post.
Equip ordered by IH required, inventoried, placed in trailer.
Started gridding operations Landfill #1.
Mag shotgun grounded and Lightning Suppression installed

TEAM LEADER SIGNATURE J Miles

DAILY TEAM LEADER JOURNAL

TEAM # ______

TASK ORDER # 002

DATE 9-26-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO BUTLER
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER PC	TEMP mid 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

11 personnel on site, all in-processed, ops briefing, safety briefing, broken down into 2 teams

Butler to QC/SSO, Payne to UXO Sup, Grant to UXO Sup

[illegible] Mag moved to comply w/ WP and reg. over 150' between Mags (my mistake) had team stop walls of [illegible] area.

[illegible] ops and landfill interior brush clearing tomorrow

TEAM LEADER SIGNATURE [illegible signature]

DAILY TEAM LEADER JOURNAL

TEAM # ______

TASK ORDER # 002

DATE 9-27-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Butler
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE Schonstedt	MAG SETTING 5
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME -0- HRS
WEATHER Clear	TEMP Mid 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

All personnel on site 12 personnel.

Elec. into trailer completed by Duke Power.

Only soil sampling required and Demo Pit will be ready for ops

Gridding of Landfill one + compost site A continuing

intensive brush in landfill being cleared out.

Good days work achieved.

"See attached Memo"

TEAM LEADER SIGNATURE J.R. Miles

DAILY TEAM LEADER JOURNAL

TEAM # ______ TASK ORDER # 002

DATE 9-28-94	PROJECT CAMP CROFT, SC
TEAM LEADER NILES	SSO BUTLER
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS
TOTAL UXO'S	TOTAL SCRAP LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER Clear	TEMP Low 90's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

IAW para 6.5 of Appendix B of the WP Radiation Monitoring was conducted at selected locations throughout the work site, no above background reading detected.

Dr. Lavery on site, talked about another proposed change to seed system. Received call from Davis (CEHND-PM) on same subject, will change system when authorized by proper authority.

Work going smoothly, no problems.

TEAM LEADER SIGNATURE R. Niles

DAILY TEAM LEADER JOURNAL

TEAM # Sweps TASK ORDER # 002

DATE 9-29-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO BUTLER
TOTAL GRIDS COMPLETED -0-	TOTAL EXCAVATIONS -0-
TOTAL UXO'S -0-	TOTAL SCRAP -0- LBS
MAG TYPE Schonstedt	MAG SETTING 5
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME -0- HRS
WEATHER Clear	TEMP Mid 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Land fill / Compost Area ready for ord clearance ops.
Base line survey work completed on Landfill 2
Should start ord removal operations Monday 3 oct.
Dr. Lowery on site again to show proposed new roadway system.

TEAM LEADER SIGNATURE J. Miles

FROM: HOLIDAY INN SPTBG WEST FAX: 8035741243 Oct-10-94 Mon 22:05

DAILY TEAM LEADER JOURNAL

TEAM # ______

TASK ORDER # 002

DATE 10-4-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Butler
TOTAL GRIDS COMPLETED -0-	TOTAL EXCAVATIONS 676
TOTAL UXO'S -0-	TOTAL SCRAP approx. 150 LBS
MAG TYPE Schonstedt	MAG SETTING Full
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME -0- HRS
WEATHER Clear	TEMP Mid 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS: Clearing going slowly as expected. all frag so far.

Grounding of Mag [illegible] corrected, will have to move each Mag. approx 6 ft from Pole, dig 1 ft deep ditch between Pole and Mag (Speed up [illegible] CO)

TEAM LEADER SIGNATURE [signature]

DAILY TEAM LEADER JOURNAL

TEAM # ______

TASK ORDER # 002

DATE 10-5-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO BUTLER
TOTAL GRIDS COMPLETED -0-	TOTAL EXCAVATIONS 580
TOTAL UXO'S -0-	TOTAL SCRAP Approx 75 LBS
MAG TYPE Schonstedt	MAG SETTING Full
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER PC	TEMP 80's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS: Continuing clearance ops on the Rd Way and access route to landfill 1. Still very slow progress due to heavy frag. contamination. Thinking of possible way to move faster.

5X28 Trailer will be on site the 11th weather permitting. Larry wanting to change things again.

TEAM LEADER SIGNATURE [signature]

DAILY TEAM LEADER JOURNAL

TEAM # _____ TASK ORDER # 002

DATE 10-6-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO BUTLER
TOTAL GRIDS COMPLETED 0	TOTAL EXCAVATIONS 777
TOTAL UXO'S 0	TOTAL SCRAP 190 LBS
MAG TYPE Schonstedt	MAG SETTING Full
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER Pc	TEMP 80'

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS: Informed by Program Manager (Hattie) we would work Friday (Monday 3rd rain day) those personnel that put in time on Monday will take off early Friday. 2 people had set Scheduled for Friday (1st off).
Hattie working on getting additional hours for site plan & assistant will see what comes about.

TEAM LEADER SIGNATURE

FROM: HOLIDAY INN SPTBG WEST . FAX: 8035741243 Oct-10-

DAILY TEAM LEADER JOURNAL

TEAM # ______ TASK ORDER # 002

DATE 10-7-94	PROJECT CAMP CROFT, SC
TEAM LEADER Miles	SSO Butler
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 314
TOTAL UXO'S	TOTAL SCRAP 85 LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME HRS	GOV DELAY TIME HRS
WEATHER	TEMP

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N
A1	-0-	N	2,090	275	N	N

SIGNIFICANT COMMENTS: A1 in starting grid from HWY 176 onto property next grid A2 just as contaminated.

Lower team of 5 specialist to be on site Tuesday Mr Kittle will become UXO supervisor of team 3

Additional teams w/supervisor expected Wed 19 oct.

Paperwork on clearing to WC fax'd to 1H, request speedy approval and contact w/ Hunter Kittle

TEAM LEADER SIGNATURE [signature]

DAILY TEAM LEADER JOURNAL

TEAM # ______ TASK ORDER # 002

DATE 10-12-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO BUTLER
TOTAL GRIDS COMPLETED 0	TOTAL EXCAVATIONS 980
TOTAL UXO'S 0	TOTAL SCRAP 170 LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER RAIN	TEMP Mid 60's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

B-1 abandoned for the time being, team moved to A-2 after Mr. Thiel and Mr. Hubbard stopped work at B-1, will finish later w/ backhoe ops.

A-7 finding a lot of wire, slow going

A-2 moving along, still heavy frag throughout grid

TEAM LEADER SIGNATURE John R Miles

DAILY TEAM LEADER JOURNAL

TEAM # _____ TASK ORDER # 002

DATE 10-11-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO BUTLER
TOTAL GRIDS COMPLETED 0	TOTAL EXCAVATIONS 771
TOTAL UXO'S 0	TOTAL SCRAP 185 LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER RAIN	TEMP mid 60's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS:

Rain all day.

B-1 still having contamination in holes, going very slowly

Slower on A-2 and A-7

TEAM LEADER SIGNATURE John T Miles

DAILY TEAM LEADER JOURNAL

TEAM # _____ TASK ORDER # 002

DATE 10-13-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO BUTLER
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 1858
TOTAL UXO'S 0	TOTAL SCRAP 270 Approx LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER RAIN	TEMP high 60's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N
A-7	0	N	936	55	N	Y

SIGNIFICANT COMMENTS:

4th Team on site Working, Team put on access route A-13 due to very bad conditions along access route to Compost area A. When weather breaks Team will move to Compost area. Grid A-7 completed, Team to move to A-6 B-2 moving along heavy frag in Dirt building Area of landfill 1 (as expected).

A-2 moving slowly

TEAM LEADER SIGNATURE John Z Miles

DAILY TEAM LEADER JOURNAL

TEAM # ______

TASK ORDER # 002

DATE 10-14-94	PROJECT CAMP CROFT, SC
TEAM LEADER MILES	SSO BUTLER
TOTAL GRIDS COMPLETED -0-	TOTAL EXCAVATIONS 2,236
TOTAL UXO'S -0-	TOTAL SCRAP 240 approx LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER RAIN	TEMP High 60°

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS: Things moving a little faster w/ new ops in place. 2" or less left on ground.
Butler attempted to be unable due to mud.
5 teams to be on site Monday 17 oct.
Explosive ... for team.

TEAM LEADER SIGNATURE John R Miles

DAILY TEAM LEADER JOURNAL

TEAM # 54105

TASK ORDER # 002

DATE 10-17-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 2757
TOTAL UXO'S 0	TOTAL SCRAP 875 LBS
MAG TYPE Schonstedt	MAG SETTING MAX
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER Clear	TEMP Mid 60's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N
A2	0	N	2676	545	N	N

SIGNIFICANT COMMENTS:

8,875 SQ FT cleared today, Three personnel of the 5 on site working remainder of team due in shortly. Clearance ops slow, Weather turning better.

TEAM LEADER SIGNATURE

DAILY TEAM LEADER JOURNAL

TEAM # 5UXO5 TASK ORDER # 002

DATE 10-18-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO
TOTAL GRIDS COMPLETED 2	TOTAL EXCAVATIONS 1,913
TOTAL UXO'S 1	TOTAL SCRAP 230 LBS
MAG TYPE Schonstedt	MAG SETTING MAX
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 8.5 HRS	GOV DELAY TIME 1.5 HRS
WEATHER Clear	TEMP Mid 70's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N
C-1	0	N	319	50	N	N
C-6	0	N	42	10	N	N

SIGNIFICANT COMMENTS: Both C-1 and C-6 small grids along [illegible] site Compact A. [illegible] 105mm HE w/M48 series fuze [illegible] found approx 6" in depth in Grid [illegible], item [illegible] moved, then transported to disposal area. [illegible] went well. Teams 2+3 moved from [illegible] to Compact A due to PM Davis allowing [illegible] in area at [illegible] to move teams. Halford put all teams on extended [illegible], until he and CEMRO-PM cleared dumping operations off site. [illegible] time [illegible] teams 2+3 to remain in compact A until they finish grids started

TEAM LEADER SIGNATURE [signature]

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS

TASK ORDER # 002

DATE 10-19-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO
TOTAL GRIDS COMPLETED Ø	TOTAL EXCAVATIONS 2409
TOTAL UXO'S Ø	TOTAL SCRAP 190 LBS
MAG TYPE Schonstedt	MAG SETTING max
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER PC	TEMP High 70s

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS: all teams continued clearance operations
11,925 Sq. Ft. cleared, crews going in cleared area of Compart A.
Grid cleared except for brush along ravine. QC/QA required prior to
moving. Pilon, DeLaney, Davis, PA person from Corps on site afternoon.
Davis to return to site Thursday.
Dam area restored to flat bottom after tamped demo shot on 18th
hoping not to make lake to demo site.

TEAM LEADER SIGNATURE [signature]

FAX'd 10-24-94 0835

DAILY TEAM LEADER JOURNAL

TEAM # SUKOS TASK ORDER # 002

DATE 10-24-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 3,139
TOTAL UXO'S 0	TOTAL SCRAP 323 LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER pc	TEMP high 70's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N
B-8	0	N	295	45	N	N

SIGNIFICANT COMMENTS: 10,975 SQFT cleared, weather on our side. 3 teams on Roadway system, 2 teams in landfill area. Dr. Yowery on site this AM, talking, making part of roadway into 2 lanes. (just talk, so far).

Requested QA be made w/ schematic in area around work pits on Roadway, so pits can be secured. CAMO-Spec will check out and let us know tomorrow. MK2 should be back first of next week.

TEAM LEADER SIGNATURE J Miller

Rec'c 10-25-94 1610

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS

TASK ORDER # 002

DATE 10-25-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS 2766
TOTAL UXO'S	TOTAL SCRAP 365 LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 11 HRS	GOV DELAY TIME -0- HRS
WEATHER clear	TEMP low 70's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N
A-14						

SIGNIFICANT COMMENTS: 10,725 SQ FT cleared. Informed by COHWO-[illegible] that SCDOT would be on site Friday and Saturday to do survey work [illegible] 1 being compost 'B' and [illegible] 2 being 3 lines running at 90° to Grid A-1 and A-2, Lanes in compost Area will run from firebreak to Property Line. Will not interfere w/our project in any way. Project Brain child of Mr. Davis. Clearance moving along slowly. Hot rock being encountered in all sections of Landfill/compost Area. Will use backhoe to investigate, once procedure [illegible] approved.

TEAM LEADER SIGNATURE [signature]

DAILY TEAM LEADER JOURNAL

TEAM # 6UX06

TASK ORDER # 002

DATE 10-26-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS 2741
TOTAL UXO'S 0	TOTAL SCRAP 340 LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER Clear.	TEMP Low 70's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N
A3	0	N	2905	433	N	N

SIGNIFICANT COMMENTS: 8,625 SQ FT cleared, 2 team working Roadway 3 team working Landfill. EODT personnel on site. Shown area where they will make survey again no interference w/ our project. Load of Rock brought on site no further dumping until after work has de-[illegible] [illegible] will not be allowed through gate by Security.

TEAM LEADER SIGNATURE [signature]

DAILY TEAM LEADER JOURNAL

TEAM # 5YY45 TASK ORDER # 002

DATE 10-27-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS 2733
TOTAL UXO'S	TOTAL SCRAP 265 LBS
MAG TYPE	MAG SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME 0 HRS
WEATHER Clear	TEMP Upper 60's

GRIDS CLEARED	TOTAL UXO	BIP Y\N	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\N	BKHOE REQ Y\N

SIGNIFICANT COMMENTS: 7430 sq ft cleared. Flat rock giving massive problem in Grids on Top of hill and Landfill area. Will not be able to declare grid cleared (finished) until some backhoe work is done. Personnel task to write backhoe ops should have paper work to me Monday 31 oct. Will be moving 4 from site landfill area on Monday.

TEAM LEADER SIGNATURE [signature]

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 11-2-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 3,442
TOTAL UXO'S Ø	TOTAL SCRAP 391 LBS
MAG TYPE SCHONSTEDT 72°	MAG SETTING MAX SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLEAR	TEMP 70°

GRIDS CLEARED	TOTAL UXO	BIP Y\(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\(N)	BKHOE REQ Y\(N)
1, B-32	Ø	N	3,442	391	N	N

SIGNIFICANT COMMENTS: TOTAL SQ-FT CLEARED TODAY 12,000, SQ-FT, 11-1-94, THOMAS TITCOMB ASSUMED THE JOB OF SUXOS AT CAMP CROFT SC, BY GWEN OF RICK THIEL, PROJECT PM HFA, 11-1-94. DAVE ERICKSEN ASSUMED JOB OF UXOS TEAM "4, 11-2-94. FORD EXPLORER LIC#HWA-368 WAS BROKEN INTO AT WILSON WOODS MOTEL PARKING LOT. POLICE NOTIFIED, REPORTS BEING MADE, HERTZ NOTIFIED TO TOW VECHICLE IN.

TEAM LEADER SIGNATURE

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 11-2-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTTLER
TOTAL GRIDS COMPLETED Ø	TOTAL EXCAVATIONS 3,111
TOTAL UXO'S Ø	TOTAL SCRAP 310 LBS
MAG TYPE SCHONSTEDT 22'	MAG SETTING MAX-SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLEAR SUNNY	TEMP 72°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
Ø	Ø	N	3,111	310	N	N

SIGNIFICANT COMMENTS: TEAMS CLEARED 9,750 SQ-FT TODAY. FINISHED ALL REPORTS REQUIRED ON [redacted] VECHICLE THAT WAS BROKEN INTO, RECEIVED NEW VECHICLE IN ITS PLACE. SUXOS STILL IN CHANGE OVER GOING OVER ALL ADMIN + EQUIPMENT.

TEAM LEADER SIGNATURE Thomas Pittard SUXOS

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 11-3-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 3	TOTAL EXCAVATIONS 2,694
TOTAL UXO'S Ø	TOTAL SCRAP 278 LBS
MAG TYPE SCHONSTEDT 22"	MAG SETTING MAX-SETTING
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLEAR WARM	TEMP 72°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ (Y)N
3	Ø	N	2,694	278	N	IN MANY GRIDS

SIGNIFICANT COMMENTS: TEAMS CLEARED (8,480 SQ.FT)
TITCOMB NEW SUXOS FINISHED WITH ALL ADMIN + EQUIP
ON THE CHANGE OVER, PM NICK THIEL [redacted] LEAVING IN MORNING.

TEAM LEADER SIGNATURE Thomas Titcomb

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 11-8-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 3	TOTAL EXCAVATIONS 2,598
TOTAL UXO'S Ø	TOTAL SCRAP 221 LBS
MAG TYPE SCHONSTEDT 72°	MAG SETTING MAX-SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER SUNNY CLEAR	TEMP 74°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ (Y)N
3	Ø	N	2,598	221	N	Y

SIGNIFICANT COMMENTS: BILL DAVIS, COE HUNTSVILLE WAS ON SITE TO HAVE MEETING WITH DICK THIEL + DOC LOWRY ON WORK CHANGES TO THE SITE AREA. OUR SECURITY GUARD BECAME SICK, HAD OUR MED-TECH LOOK HIM OVER, HE DESIDED TO LEAVE + GO SEE A DOCTOR. CALLED CAROLINA SECURITY INC. FOR REPLACEMENT. DICK THIEL DEPARTED FOR THM. 1306.

TEAM LEADER SIGNATURE Thomas Titcomb SUXOS

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 11-9-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 2,061
TOTAL UXO'S Ø	TOTAL SCRAP 155 LBS
MAG TYPE SCHONSTEDT 72[5]	MAG SETTING MAX-SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER SUNNY CLEAR	TEMP 72°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ (Y)N
1	Ø	N	2061	155	N	Y

SIGNIFICANT COMMENTS: TEAM #5 VECH HIT STUMP IN MUD ROAD, HAVE TO BUY RIM ON INSURANCE ALL REPORTS MADE, MRS TIHESEN NOTIFIED, REPORTS FAXED TO HER, SITE-SUP MADE COMPLETE TOUR OF SITE, HAVE GOOD IDEA OF WORK AREA + DEMO BLOCKING POINTS, ON DAYS WE SHOOT

TEAM LEADER SIGNATURE Thomas Titsworth

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 11-10-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 2263
TOTAL UXO'S Ø	TOTAL SCRAP 252 LBS
MAG TYPE SCHONSTEDT'S 22'	MAG SETTING FULL SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER WARM-AM / RAINEY-PM	TEMP 68° AM / 58° PM.

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ (Y)N
1	Ø	N	2,263	252	N	Y

SIGNIFICANT COMMENTS: TEAM #2 STARTED GRUBBING & CLEARING AREA WERE WEIGHT SCALES WILL BE. HAD TO MOVE LARGE PILES OF LOGS TO GET INTO WORK AREA. EVERY THING ELSE GOING WELL.

TEAM LEADER SIGNATURE Thomas Titsworth

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 11-14-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED Ø	TOTAL EXCAVATIONS 2,913
TOTAL UXO'S Ø	TOTAL SCRAP 343 LBS
MAG TYPE SCHONSTEDT 72°	MAG SETTING MAX-SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER SUNNY CLEAR	TEMP 72°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
Ø	Ø	N	2,913	343	N	N

SIGNIFICANT COMMENTS: TEAMS SWEEPT & CLEARED 8,400 SQ-FT TOTAL TODAY. JAMES J. MARS STARTED WORK ON TEAM #2 TODAY. A. WIEDERHOEFER SENT TO TEAM #4. DOC LOWRY CAME BY JOB SITE, NOTHING DISCUSED HE DIDENT KNOW ALLREADY. WE ARE STICKING TO WORK PLANE. TRIED TO CHANGE VEHICHLS TO HERTZ EQUP RENTAL. THEY CANNOT HELP US. WILL TRY FOR ALL VEH TO COME FROM C/S AIRPORT.

TEAM LEADER SIGNATURE Thomas Titcomb SUXOS

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 11-15-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 2	TOTAL EXCAVATIONS 2,903
TOTAL UXO'S Ø	TOTAL SCRAP 385 LBS
MAG TYPE SCHONSTEDT 72/SH	MAG SETTING MAX SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER SUNNY CLEAR	TEMP 72°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ (Y)N
2	Ø	N	2,903	385 LA	N	Y

SIGNIFICANT COMMENTS: TEAMS SWEPT & CLEARED 2,950 SQ FT TODAY. DANIEL D. KNOEPPEL WHILE GRUBBING + CLEARING IN GRID # 9-A. DROPPED LOG ON HIS FINGER. TAKEN TO MED CLINIC. THEY PUT SPLINT ON IT AND HE WILL BE AT WORK IN THE MORNING. DOCTORS OK. HE IS ON NO MEDICATION TO IMPAIR HIS WORK.

TEAM LEADER SIGNATURE Thomas Titcomb SUXOS

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 16-NOV-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVIE BUTLER
TOTAL GRIDS COMPLETED	TOTAL EXCAVATIONS 2,744
TOTAL UXO'S	TOTAL SCRAP 266 LBS
MAG TYPE SCHONSTEDT'S 72°/54°	MAG SETTING MAX. SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME HRS
WEATHER OVERCAST	TEMP 68°

GRIDS CLEARED	TOTAL UXO	DIP Y (N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y (N)	BKHOE REQ Y (N)
1	Ø	N	2,744	266	N	N

SIGNIFICANT COMMENTS: TEAMS SWEEPT + CLEARED 9,010 SQFT TODAY. DAN IS INJURED AT WORK FINGER IN SPLINT, SUXOS WENT THROUGH "WORK PLAN" ITS READY FOR COPY. WORKED ON VEHICEL PROBLEM, SHOULD BE FIXED BY MONDAY, DOC LOWERY WILL BE DUMPING APPROX 100 TRUCK LOADS OF ASPHALT FOR ROAD WORK IN CLEARED AREA NEXT TO TRAILERS, WILL NOT EFFECT OUR WORK, COE REP SAID ITS OK.

TEAM LEADER SIGNATURE Thomas Titsworth

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 17-NOV-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 2,046
TOTAL UXO'S 2	TOTAL SCRAP 216 LBS
MAG TYPE SCHONSTEDTS - 22 5/54 5	MAG SETTING FULL SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER OVERCAST	TEMP 58°

GRIDS CLEARED	TOTAL UXO	BIP Y\(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\(N)	BKHOE REQ Y\N
1-A-9	2	N	2,046	216	N	N

SIGNIFICANT COMMENTS: TEAMS SWEEPT & CLEARED 2000 SQ FT TODAY, FOUND (2) TWO 60MM HE MORTARS FUZED, ONE IN GRID # B-30, AND ONE IN B-15, TSDA BOUTH ITEMS TO DEMO PIT, DESTROYED BY DETENATION.

TEAM LEADER SIGNATURE Thomas Titcomb

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE NOV-21-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 3,020
TOTAL UXO'S 1	TOTAL SCRAP 353 LBS
MAG TYPE SCHONSTEDTS 22/54	MAG SETTING FULL SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER RAIN IN AM SUNNY IN PM	TEMP 69°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
1-A-5	1	N	3,020	353	N	N

SIGNIFICANT COMMENTS: TEAMS SWEPT & CLEARED 3,020 SQFT TODAY FOUND (1) ONE BURSTER TUBE FROM 155MM WP IN GRID B-14 TSDA FOR DISPOSAL. PUT WORK PLAN IN FOR 6 NEW COPIES (COMPLETE ONES) HAD ALL COPIES OF SOP FOR INTRUSIVE WORK WITH BACK HOE DONE TODAY. SENT OUT TO ALL CONCERN.

TEAM LEADER SIGNATURE Thomas Titcomb

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 11-22-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 3,004
TOTAL UXO'S Ø	TOTAL SCRAP 376 LBS
MAG TYPE SCHONSTEDTS 72/54	MAG SETTING MAX-SCALE.
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER SUNNY CLEAR	TEMP 71°

GRIDS CLEARED	TOTAL UXO	BIP Y\(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\(N)	BKHOE REQ (Y)\N
1-B-30	Ø	N	3,004	376	N	Y

SIGNIFICANT COMMENTS: TEAMS SWEPT + CLEARED 8,375 SQFT TODAY, PERMISSION GIVEN TO USE BACKHOE ON MECHANIZED OEW OPERATIONS, LOCAL SCRAP DEALER WILL START TAKING OEW SCRAP IN MORNING. ALL VEHICLES DUE FOR RENEWAL IN DEC-94, WERE VARAFIED BY SUXOS ON OUR REPLACEMENTS, MEG ERNST MAKING ARRANGEMENTS FOR DROP OFF + PICK UP AT C/S AIRPORT. BUT I WILL KEEP ON THIS TO BE SURE, 14-GRIDS QC TODAY, 7-GRIDS QA

TEAM LEADER SIGNATURE Thomas Titcomb SUXOS

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 11-23-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 1,164
TOTAL UXO'S Ø	TOTAL SCRAP 130 LBS
MAG TYPE SCHONSTEDT 72/54	MAG SETTING MAX SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER SUNNY CLEAR	TEMP 68°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ (Y)\N
1-A-6	Ø	N	1,164	130	N	Y

SIGNIFICANT COMMENTS: TEAMS SWEEPT & CLEARED 3,450 SQFT TODAY, STARTED USEING BACKHOE IN ACCORDANCE WITH OUR MECHANIZED OFW OPP-PLAN, SCRAP WAS HAULED OFF BY LOCAL DEALER, HELD DEMO TODAY ALL WENT WELL. RECEIVED IN WRITING FROM COE-REP RANDY HARRIS TO ONLY CLEAR GROUND IN SLOPES AS HIGH AS WE CAN REACH & DIG, COPY OF TICKET SENT TO JACK NORRIS BY SSO. 4-GRIDS QC'd 12-GRIDS QA'd

TEAM LEADER SIGNATURE Thomas Titcomb SUXOS

DAILY TEAM LEADER JOURNAL

TEAM # SUXAS TASK ORDER # 002

DATE 11-29-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED Ø	TOTAL EXCAVATIONS 2,256
TOTAL UXO'S Ø	TOTAL SCRAP 255 LBS
MAG TYPE SCHONSTEDTS- 72/5A	MAG SETTING MAX SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER RAIN	TEMP 54°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	EXHOE REQ Y(N)
Ø	Ø	N	2,256	255	N	N

SIGNIFICANT COMMENTS: TEAMS SWEPT & CLEARED 7,075 SQFT TODAY, PHONE CO TO START INSTALING PHONES & LINES IN MORNING, COUNTY IS PUTTING DOWN GRAVEL ON ROAD INTO WORK SITE, COE-REP GREG PARSONS ON SITE, BILL DAVIS COE HUNTSVILL WILL BE ON SITE DEC-19-94 TO DISCUSS WORK SITE CHANGES WITH DOC LOWRY.

TEAM LEADER SIGNATURE Thomas Tatum

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 11-30-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 2	TOTAL EXCAVATIONS 3,212
TOTAL UXO'S Ø	TOTAL SCRAP 323 LBS
MAG TYPE SCHONSTEDTS 22/54	MAG SETTING MAX SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLEAR SUNNY	TEMP 64°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
2	Ø	N	3,212	323	N	N

SIGNIFICANT COMMENTS: TEAMS SWEPT & CLEARED 8,705 SQFT GRIDS B-15, G7 COMPLETED, PHONE JACKS & LINES INSTALLED IN WORK TRAILERS. PHONE CO WILL LAY GROUND CABLE WHEN MUD ROAD IS PASSIBLE. HOPE BY THURSDAY.

TEAM LEADER SIGNATURE Thomas Titcomb

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 12-1-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED Ø	TOTAL EXCAVATIONS 3,046
TOTAL UXO'S Ø	TOTAL SCRAP 223 LBS
MAG TYPE SCHONSTEDT 72/54	MAG SETTING MAX-SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER SUNNY CLEAR	TEMP 62°

GRIDS CLEARED	TOTAL UXO	BIP Y\(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\(N)	BKHOE REQ (Y)\N
Ø	Ø	N	3,046	223	N	Y

SIGNIFICANT COMMENTS: TEAMS SWEPT + CLEARED 7,950 SQFT TODAY, PHONE GROUND CABLE INSTALLED, PHONES SHOULD BE WORKING TOMORROW, COUNTY STARTED LAYING IN GRAVEL ON MUD ROAD TO WORK SITE.

TEAM LEADER SIGNATURE Thomas Titcomb

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 12-2-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 4	TOTAL EXCAVATIONS 2,918
TOTAL UXO'S Ø	TOTAL SCRAP 256 LBS
MAG TYPE SCHONSTEDT 72/52	MAG SETTING MAX-SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER SUNNY CLEAR	TEMP 67°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
A-12	Ø	N	2,918	256	N	N
B-13						
B-21						
B-29						

SIGNIFICANT COMMENTS: TEAMS SWEPT & CLEARED 7,900 SQFT TODAY. COUNTY STILL WORKING ON ROAD TO SITE. PHONES SHOULD BE IN AND FINISHED ON MONDAY.

TEAM LEADER SIGNATURE Thomas Pittman

DAILY TEAM LEADER JOURNAL

TEAM # Sux05 TASK ORDER # 002

DATE 12-5-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED Ø	TOTAL EXCAVATIONS 4,488
TOTAL UXO'S Ø	TOTAL SCRAP 360 LBS
MAG TYPE SCHONSTEDTS 72/52	MAG SETTING MAX-SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLOUDY WARM	TEMP 69°

GRIDS CLEARED	TOTAL UXO	BIP Y (N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y (N)	BKHOE REQ Y (N)
Ø	Ø	N	4,488	360	N	N

SIGNIFICANT COMMENTS: TEAMS SWEEPT & CLEARED 12,900 SQFT TODAY, WE WILL START OUR WORK DAY AT 0700 AM TILL 5:30 PM STARTING 12-6-94, PUT 66-TONS OF GRAVEL DOWN ON MUD ROAD GOING TO WORK SITE WILL CONTINUE ON TILL ALL AREAS ARE SAFE TO TRAVEL ON,

TEAM LEADER SIGNATURE Thomas Tillman

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 12-6-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 4,602
TOTAL UXO'S Ø	TOTAL SCRAP 359 LBS
MAG TYPE SCHONSTEDTS 72/52	MAG SETTING MAX - SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER SUNNY CLEAR	TEMP 70°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ (Y)N
1-A-10	0	N	4,602	359	N	Y

SIGNIFICANT COMMENTS: TEAMS SWEEPT + CLEARED 10,950 SQFT TODAY. LAYED DOWN 132-TONS OF GRAVEL ON MUD ROADS INTO + IN WORK SITE, FINISHED GRID A-10 GRIDS QA- TODAY, A-12, B-15, B-21, G-1, G-2, G-3,

TEAM LEADER SIGNATURE Thomas Tilcomb

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 12-7-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 4,271
TOTAL UXO'S Ø	TOTAL SCRAP 327 LBS
MAG TYPE SCHONSTEDTS 72/52	MAG SETTING MAX-SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER SUNNY CLEAR	TEMP 72°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
1-D-28	Ø	N	4,271	327	N	N

SIGNIFICANT COMMENTS: TEAMS SWEEPT & CLEARED 9,025 SQFT FINISHED ROADS IN WORK SITE, SAFE TO TRAVEL.

TEAM LEADER SIGNATURE Thomas Titcomb

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 12-8-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 2	TOTAL EXCAVATIONS 4,644
TOTAL UXO'S Ø	TOTAL SCRAP 403 LBS
MAG TYPE SCHONSTEDTS. 72/52	MAG SETTING MAX-SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME HRS
WEATHER SUNNY CLEAR	TEMP 70°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
A-11	Ø	N	4,644	403	N	N
B-10						

SIGNIFICANT COMMENTS: TEAMS SWEPT & CLEARED 11,175 SQ FT TODAY, QC - A-10 TODAY. QA - A-6, A-10, TODAY A-11

RENTED TWO VEH, RECEIVED THE SAME EXPLORERS BACK.

TEAM LEADER SIGNATURE

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 12-12-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED Ø	TOTAL EXCAVATIONS Ø
TOTAL UXO'S Ø	TOTAL SCRAP Ø LBS
MAG TYPE NONE USED	MAG SETTING NONE USED.
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLEAR COLD	TEMP 47°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ (Y)N
Ø	Ø	N	Ø	Ø	N	Y

SIGNIFICANT COMMENTS: TEAMS GRUBBED APPROX 90,000 SQFT USED BACKHOE TO CLEAR AREA BY RAVINE, STARTED LAYING IN GRIDS.

TEAM LEADER SIGNATURE Linda R. SUXOS

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 12-13-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED Ø	TOTAL EXCAVATIONS Ø
TOTAL UXO'S Ø	TOTAL SCRAP Ø LBS
MAG TYPE NON-USED	MAG SETTING NON-USED
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME HRS
WEATHER OVERCAST	TEMP 48°

GRIDS CLEARED	TOTAL UXO	BIP Y\(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\(N)	BKHOE REQ Y\N
Ø	Ø	N	Ø	Ø	N	N

SIGNIFICANT COMMENTS: CORPS REP NOT ON SITE, NO INTRUSIVE WORK BEING DONE, TEAMS GRUBBED 60,000.6 QUADS SOFT TODAY, ONE TEAM GRIDDING IN GRID A-8, ON ROAD, NO EXTRA WIEWERS RENTED MAKING DO WITH WHAT WE HAVE.

TEAM LEADER SIGNATURE [signature]

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 12-14-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED Ø	TOTAL EXCAVATIONS Ø
TOTAL UXO'S Ø	TOTAL SCRAP Ø LBS
MAG TYPE NONE USED	MAG SETTING NONE USED
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER RAIN	TEMP 45°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
Ø	Ø	N	Ø	Ø	N	N

SIGNIFICANT COMMENTS: WAS CALLED BY PM DICK THIEL TELLING ME OUR DEMOB DATES, WILL SPEND AS LEAST MONEY AS POSSIBLE, TEAMS GROUND 50,000 SQFT. 5 GRIDS. WORK IS SLOW DUE TO HEAVY RAINS + NOT ENOUGH WEEDEATERS W/BLADES.

TEAM LEADER SIGNATURE

DAILY TEAM LEADER JOURNAL

TEAM # SUXAS TASK ORDER # 002

DATE 12-15-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED Ø	TOTAL EXCAVATIONS Ø
TOTAL UXO'S Ø	TOTAL SCRAP Ø LBS
MAG TYPE NONE USED	MAG SETTING NONE USED
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLOUDY	TEMP 50°

GRIDS CLEARED	TOTAL UXO	BIP Y\(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\(N)	BKHOE REQ Y\(N)
Ø	Ø	N	Ø	Ø	N	N

SIGNIFICANT COMMENTS: TEAMS GRIDED 40,500 SQFT TODAY. 4½ GRIDS.

TEAM LEADER SIGNATURE Thomas Pittard

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 12-19-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 2	TOTAL EXCAVATIONS 3,557
TOTAL UXO'S	TOTAL SCRAP 270 LBS
MAG TYPE SCHONSTEDT 22/52	MAG SETTING MAX. SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER SUNNY CLEAR	TEMP 52°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
G-4	Ø	N	3,557	270	N	N
G-6						

SIGNIFICANT COMMENTS: TEAMS SWEEPT & CLEARED 10,675 SQFT TODAY. TEAM #1 SENT TO WORK WITH TEAMS 3+4+5, TEAM #2 WORKING GRID #A-8, ALL OUTHER TEAMS WORKING LANDFILL #1.

TEAM LEADER SIGNATURE Thomas Pittard

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 12-20-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 7	TOTAL EXCAVATIONS 3,638
TOTAL UXO'S Ø	TOTAL SCRAP 257 LBS
MAG TYPE SCHONSTEDT 72/52	MAG SETTING MAX - SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER SUNNY CLEAR	TEMP 51°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
B-20	Ø	N	3,638	257	N	N
B-19						
B-25						
B-24						
B-23						
B-22						
G-5						

SIGNIFICANT COMMENTS: TEAMS SWEEPT + CLEARED 20,100 SQ FT TODAY, (3) THREE TEAMS TOTAL (20) TWENTY MEN WORKING IN LANDFILL AREA #1, (1) ONE TEAM WORKING GRID #A-8 ON ROAD. QC'D GRIDS # G-4, G-5, G-6.

TEAM LEADER SIGNATURE Thomas Titsworth

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 12-21-94	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 2	TOTAL EXCAVATIONS 3,466
TOTAL UXO'S Ø	TOTAL SCRAP 273 LBS
MAG TYPE SCHONSTEDT 72/52	MAG SETTING MAX. SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLOUDY	TEMP 49°

GRIDS CLEARED	TOTAL UXO	BIP Y\(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\(N)	BKHOE REQ Y\(N)
B-17	Ø	N	3,466	273	N	N
B-18						

SIGNIFICANT COMMENTS: TEAMS SWEEPT & CLEARED 20,200 SQFT TODAY, HUNTSVILLE SENT (2) PERSONEL TO SITE TO FILM OEW INFORMATION FILM, COE-REP RANDY HARRIS SUPERVISED THE OPERATION, COMPLETED QC-ON GRIDS, B-10, B-20, B-23, B-24, B-25, QA-GRIDS, B-13, B-20, B-28, B-29, G-7, G-9,

TEAM LEADER SIGNATURE Thomas Pittard

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 1-4-95	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 1	TOTAL EXCAVATIONS 2043
TOTAL UXO'S	TOTAL SCRAP 163 LBS
MAG TYPE SCHONSTEDT 22/52	MAG SETTING MAX-SCALE.
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLEAR COLD	TEMP 41°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
A-8	0	N	2,043	163	N	N

SIGNIFICANT COMMENTS: ALL PERSONEL RETURNED TO JOB SITE. GRIDS QC = B-17, G-9.
GRIDS QA = B-17, B-10, B-23, B-24, B-25.
TEAMS SWEPT & CLEARED 11,300 SQFT TODAY

TEAM LEADER SIGNATURE Thomas Titcomb SUXOS

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DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 1-5-95	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 2	TOTAL EXCAVATIONS 2,563
TOTAL UXO'S Ø	TOTAL SCRAP 192 LBS
MAG TYPE SCHONSTEDT 52/52	MAG SETTING MAX-SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLEAR-COLD	TEMP 42°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
B-11	Ø	N	2,563	192	N	N
B-12						

SIGNIFICANT COMMENTS: TEAMS SWEEPT + CLEARED 2,600 SQFT TODAY. FINISHED CLEARING (2) TWO GRIDS

GRIDS QC= A-8, B-11, B-12, B-18, B-19.

TEAM LEADER SIGNATURE Thomas Pittard

DAILY TEAM LEADER JOURNAL

TEAM # SuxaS TASK ORDER # 002

DATE 1-9-95	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 2	TOTAL EXCAVATIONS 2,055
TOTAL UXO'S (6) 30.06	TOTAL SCRAP 151 LBS
MAG TYPE SCHONSTEDT 72/53	MAG SETTING MAX-SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLEAR SUNNY	TEMP 51°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
B-16	6	N	2,055	151	N	N
B-37						

SIGNIFICANT COMMENTS: TEAMS SWEPT & CLEARED 5,675-SQFT TODAY. TEAM FOUND (6) SIX 30.06 BULLETS

TEAM LEADER SIGNATURE Thomas Pittard

DAILY TEAM LEADER JOURNAL

TEAM # SUXOS TASK ORDER # 002

DATE 1-10-95	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED 2	TOTAL EXCAVATIONS 993
TOTAL UXO'S Ø	TOTAL SCRAP 44 LBS
MAG TYPE SCHONSTEDT - 72/52	MAG SETTING MAX. SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLEAR SUNNY	TEMP 52°

GRIDS CLEARED	TOTAL UXO	BIP Y\(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y\(N)	BKHOE REQ Y\(N)
B-44	Ø	N	993	44	N	N
B-64						

SIGNIFICANT COMMENTS: TEAMS SWEPT + CLEARED 3,475 SQFT TODAY WE FINISHED LANDFILL #1,
QC-GRIDS B-16, B-26 - B-37, B-44, B-64
QA-GRIDS A-11, B-16, B-26, B-37, B-44, B-64,

TEAM LEADER SIGNATURE Thomas Titcomb

DAILY TEAM LEADER JOURNAL

TEAM # Suxos TASK ORDER # 002

DATE 1-11-95	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED Ø	TOTAL EXCAVATIONS Ø
TOTAL UXO'S Ø	TOTAL SCRAP Ø LBS
MAG TYPE SCHONSTEDT 72/52	MAG SETTING MAX SCALE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLOUDY.	TEMP 51°

GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
Ø	Ø	N	Ø	Ø	N	N

SIGNIFICANT COMMENTS: DISPOSED OF ALL ORD ITEMS AND EXPENDED ALL EXPLOSIVES, SHIPED ALL GPS EQUIP TO IDEA IN WALDORF MD. WAS TOLD BY MICK THIEL, TO RETURN ALL EQUIPMENT TO HUNTSVILLE ON 1-12-95, MAKE ALL ARRANGEMENTS TO DEMOB ALL PERSONE NOT NEEDED. (I DID ALL THIS.) 3-THREE PERSONEL WILL CLOSE WORK SITE END OF WORK DAY 1-19-95

TEAM LEADER SIGNATURE Thomas Britt

DAILY TEAM LEADER JOURNAL

TEAM # Suxas

TASK ORDER # 002

DATE 1-17-95	PROJECT CAMP CROFT, SC
TEAM LEADER	SSO DAVE BUTLER
TOTAL GRIDS COMPLETED Ø	TOTAL EXCAVATIONS Ø
TOTAL UXO'S Ø	TOTAL SCRAP Ø LBS
MAG TYPE NONE USED	MAG SETTING NONE
CLIENT: CORPS OF ENGINEERS	CONTRACT # DACA 87-94-D-0019
FIELD OPERATION TIME 10 HRS	GOV DELAY TIME Ø HRS
WEATHER CLEAR	TEMP 55°

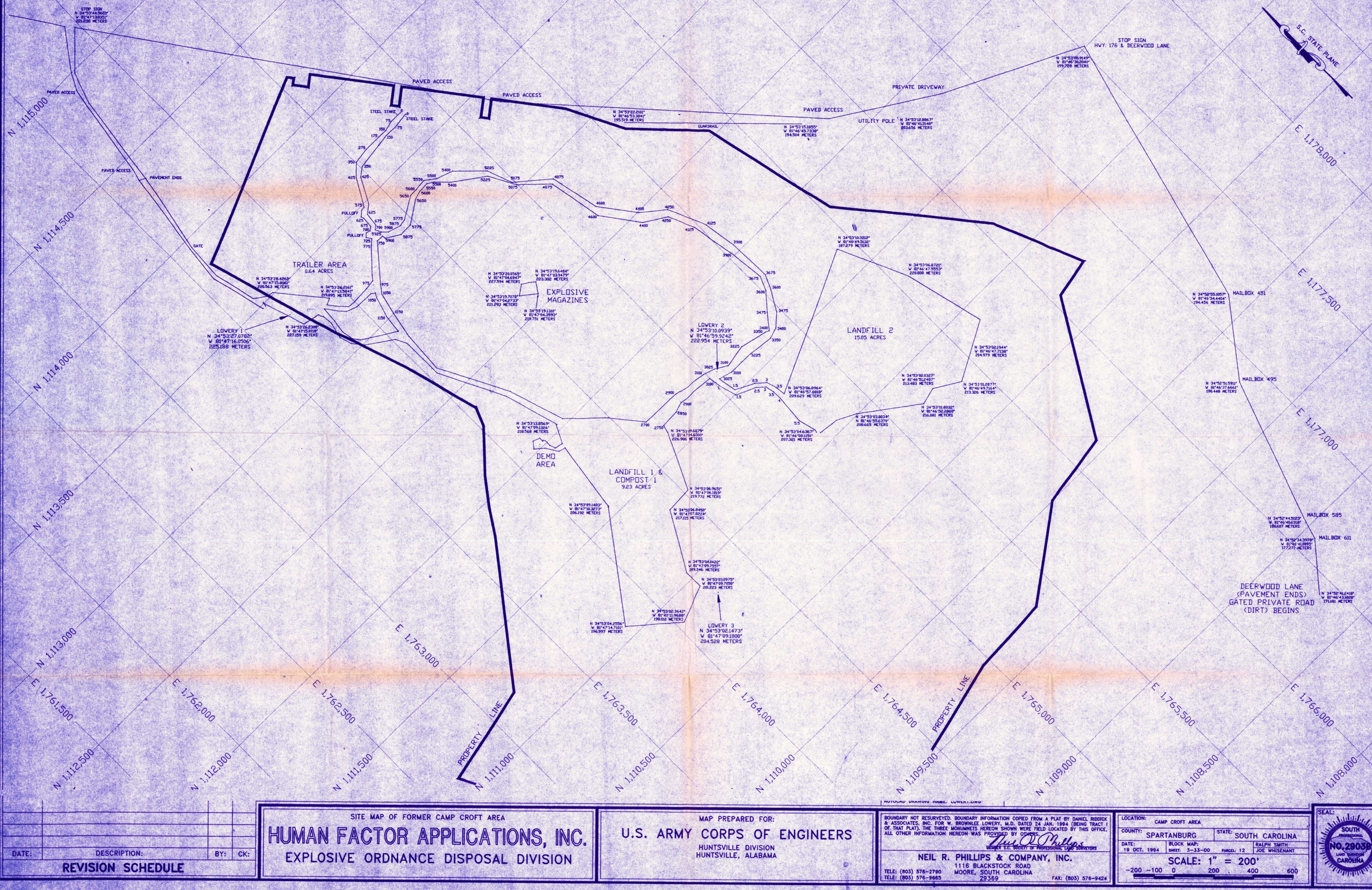
GRIDS CLEARED	TOTAL UXO	BIP Y(N)	TOTAL DIGS	TOTAL LBS SCRAP	HAZ MAT FOUND Y(N)	BKHOE REQ Y(N)
Ø	Ø	N	Ø	Ø	N	N

SIGNIFICANT COMMENTS: (3) THREE PERSONEL ON SITE. CLOSING DOWN WORK SITE. ALL ORD SCRAP WAS PICKED UP TODAY.

TEAM LEADER SIGNATURE Thomas Titcomb

APPENDIX C

SITE MAP



DATE:	DESCRIPTION:	BY:	CK:

REVISION SCHEDULE

SITE MAP OF FORMER CAMP CROFT AREA

HUMAN FACTOR APPLICATIONS, INC.

EXPLOSIVE ORDNANCE DISPOSAL DIVISION

MAP PREPARED FOR:

U.S. ARMY CORPS OF ENGINEERS

HUNTSVILLE DIVISION
HUNTSVILLE, ALABAMA

BOUNDARY NOT RESURVEYED. BOUNDARY INFORMATION COPIED FROM A PLAT BY DANIEL RIDDICK & ASSOCIATES, INC. FOR W. BROWNLEE LOWERY, M.D. DATED 24 JAN. 1994 (BEING TRACT I OF THAT PLAT). THE THREE MONUMENTS HEREON SHOWN WERE FIELD LOCATED BY THIS OFFICE. ALL OTHER INFORMATION HEREON WAS PROVIDED BY OTHERS.

Neil R. Phillips
NEIL R. PHILLIPS
MEMBER S.C. SOCIETY OF PROFESSIONAL LAND SURVEYORS

NEIL R. PHILLIPS & COMPANY, INC.
1116 BLACKSTOCK ROAD
MOORE, SOUTH CAROLINA
29369
TELE: (803) 576-2790
TELE: (803) 576-9665
FAX: (803) 576-9424

AUTOCAD DRAWING NAME: LOWERY.DWG

LOCATION: CAMP CROFT AREA
COUNTY: SPARTANBURG
STATE: SOUTH CAROLINA
DATE: 19 OCT. 1994
BLOCK MAP:
SHEET: 3-33-00
PARCEL: 12
RALPH SMITH
JOE WHISENANT

SCALE: 1" = 200'

-200 -100 0 200 400 600

SEAL:
SOUTH CAROLINA PROFESSIONAL ENGINEER
NO. 29038
LAND SURVEYOR
CAROLINA

APPENDIX D

GRID MAP

SITE MAP
GRIDS AND BOUNDARIES
FORMER CAMP CROFT
SPARTENBURG, S.C.

SCALE 1 INCH = 100 FEET

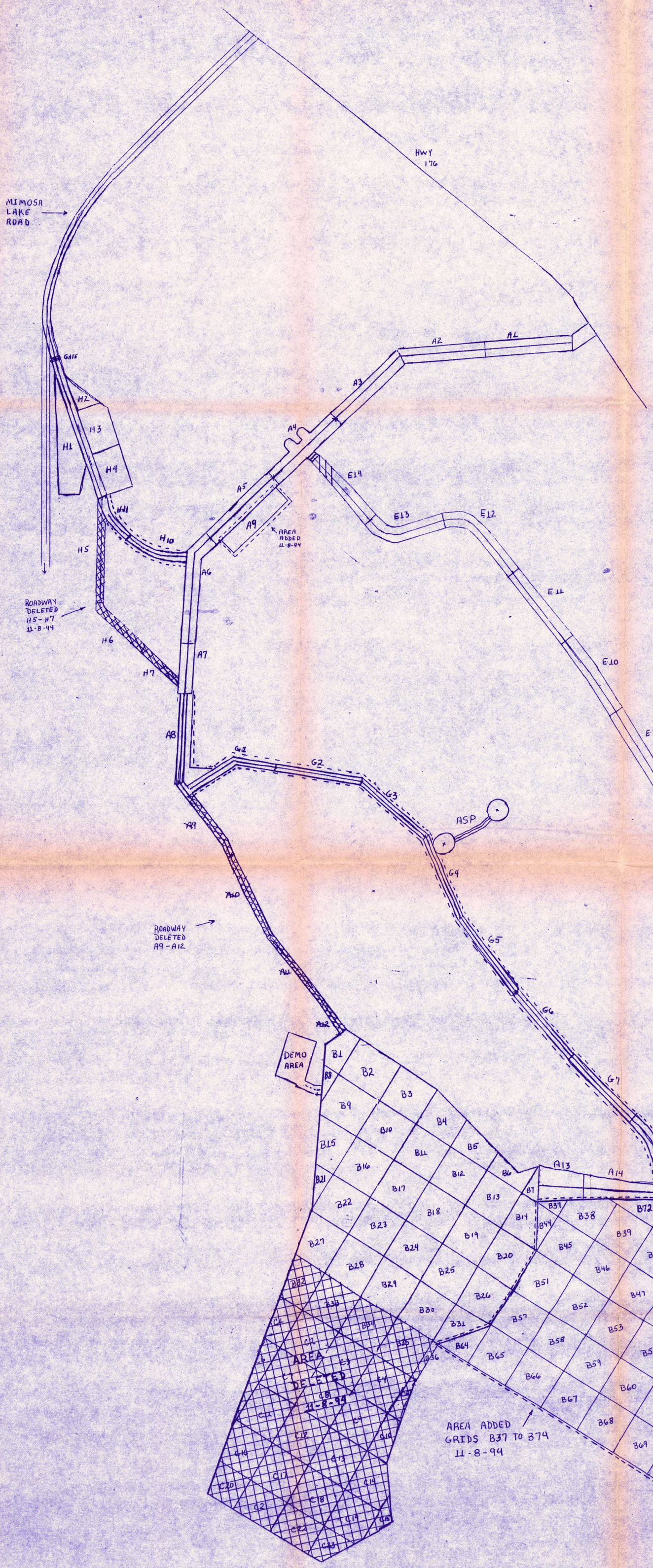
DACA87-94-D-0019 TASK ORDER # 002

BOUNDARIES AS OF 8 NOVEMBER, 1994

SUMMARY OF CHANGES:
ROADWAY GRIDS H5 - H7 (DELETED)
GRIDS B32 - B36 (DELETED)
GRIDS C1- 23 (DELETED)

ROADWAY GRID A9 (175' x 40') ADDED TO GRID A5
GRIDS B37 - B74 (ADDED)

ROADWAY GRIDS G1 - G9 (ADDED)



APPENDIX E

SAMPLE ANALYSIS RESULTS

South Carolina
DHEC
Department of Health and Environmental Control
2600 Bull Street, Columbia, SC 29201

August 8, 1994

Ms. Ruth Carter
GP Environmental Services
202 Perry Parkway
Gaithersburg, MD 20877

Laboratory I. D. #86003

Dear Ms. Carter:

On August 2, 1994, the Laboratory Certification Program completed the review of the information submitted by your laboratory in support of your request for certification in South Carolina. I am pleased to inform you of your laboratory's interim approved reporting status as of the above-mentioned date.

Please be reminded that in accordance with the protocol established under the authority of Act 122 of the 1993 Legislative Session in South Carolina, formal approval cannot be forwarded to you until the appropriate parameter fees are paid for the current fiscal year. Invoices for fiscal year 94-95 will be mailed within the next two months. The parameter list should be compared with your laboratory's original application to determine if any parameters have been inadvertently added or omitted. If problems are detected, please contact the Laboratory Certification Program within ten (10) working days.

This letter, in conjunction with your parameter list, may be used as verification of your laboratory's interim approved reporting status until formal approval can be forwarded to you. The identification number listed above has been assigned to your laboratory and must be placed on all data reports generated for clients in South Carolina and on all documentation submitted to the Laboratory Certification Program from your laboratory.

Any questions concerning the Laboratory Certification Program or the action(s) taken may be addressed to me.

Sincerely,

Carol F. Smith

Carol F. Smith
Laboratory Certification Section
Bureau of EQC Laboratories

CFS:ic

Enclosure

cc: R. Wayne Davis, Manager
Laboratory Certification Section

Laboratory Certification Section
P. O. Box 72
State Park, South Carolina 29147
FAX # (803) 935-6859
(803) 935-7025

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
ENVIRONMENTAL LABORATORY CERTIFICATION PROGRAM

GP ENVIRONMENTAL SERVICES (Laboratory ID 86003)
Certifying Authority: UT
Certificate Number: 86003001 *Expiration Date: 11/17/1995*

CLEAN WATER ACT

SEMI-VOLATILES

BASE NEUTRALS & ACIDS (GC/MS)	EPA 625

VOLATILES (VOCS)

PURGEABLES (GC/MS)	EPA 624

INORGANIC - TRACE METAL

ARSENIC	EPA 206.2
BARIUM	EPA 200.7
CADMIUM	EPA 200.7
CHROMIUM	EPA 200.7
LEAD	EPA 239.2
MERCURY	EPA 245.1
SELENIUM	EPA 270.2
SILVER	EPA 272.2

SOLID & HAZARDOUS WASTES

INORGANIC - TRACE METAL

ARSENIC	EPA 6010A
BARIUM	EPA 6010A
CADMIUM	EPA 6010A
CHROMIUM	EPA 6010A
LEAD	EPA 6010A
SELENIUM	EPA 6010A
SILVER	EPA 6010A

GP Work Order # 9410081

SAMPLE ANALYSIS REPORT

Prepared For:

Human Factors Application
1018A North Straus Avenue
Indian Head, MD 20640

FORMER CAMP CRAFT

Prepared By:

GP Environmental Services, Inc.
202 Perry Parkway
Gaithersburg, Maryland 20877

October 26, 1994

Albert Ellis, Laboratory Director

GP ENVIRONMENTAL SERVICES
ANALYTICAL RESULTS

Project: FORMER CAMP CRAFT

Human Factors Application
1016A North Straus Avenue
Indian Head, MD 20640
Atten: Mr. Sam Hooper

GP ENVIRONMENTAL SERVICES
202 Perry Parkway
Gaithersburg, MD 20877

Atten: Client Services
Phone: (301) 926-6802

Certified by: CB

SAMPLE IDENTIFICATION

GP ID	Client ID
9410081-01A	FCC-DS 001
9410081-02A	FCC-DS 002
9410081-03A	FCC-FR-001
9410081-04A	FCC-FB-001

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9410081-01
Client ID: FCC-DS 001

Matrix: SOIL
Collected: 10/12/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Antimony	SW846 7041	BQL	1.26	mg/Kg	1	10/18/94	10/19/94 FU
Arsenic	SW846 7060	0.957	0.297	mg/Kg	1	10/18/94	10/19/94 FU
Lead	SW846 7421	9.61	0.183	mg/Kg	1	10/18/94	10/19/94 FU
Mercury	SW846 7471	BQL	0.054	mg/Kg	1	10/22/94	10/22/94 AK
Potassium	SW846 7610	1700.0	75.4	mg/Kg	1	10/18/94	10/20/94 FU
Selenium	SW846 7740	BQL	0.681	mg/Kg	1	10/18/94	10/19/94 FU
Silver	SW846 7761	BQL	0.137	mg/Kg	1	10/18/94	10/19/94 FU
Sodium	SW846 7770	BQL	55.1	mg/Kg	1	10/18/94	10/20/94 FU
Thallium	SW846 7841	BQL	0.411	mg/Kg	1	10/18/94	10/19/94 FU
Aluminum	SW846 6010	16700.0	67.4	mg/Kg	5	10/18/94	10/20/94 MB
Barium	SW846 6010	128.0	1.76	mg/Kg	1	10/18/94	10/20/94 MB
Beryllium	SW846 6010	0.898	0.175	mg/Kg	1	10/18/94	10/20/94 MB
Calcium	SW846 6010	259.0	17.0	mg/Kg	1	10/18/94	10/20/94 MB
Cadmium	SW846 6010	0.538	0.489	mg/Kg	1	10/18/94	10/20/94 MB
Cobalt	SW846 6010	7.84	2.08	mg/Kg	1	10/18/94	10/20/94 MB
Chromium	SW846 6010	8.57	0.891	mg/Kg	1	10/18/94	10/20/94 MB
Copper	SW846 6010	3.83	1.90	mg/Kg	1	10/18/94	10/20/94 MB
Iron	SW846 6010	14200.0	50.0	mg/Kg	5	10/18/94	10/20/94 MB
Magnesium	SW846 6010	2290.0	11.4	mg/Kg	1	10/18/94	10/20/94 MB
Manganese	SW846 6010	495.0	0.960	mg/Kg	1	10/18/94	10/20/94 MB
Nickel	SW846 6010	BQL	3.63	mg/Kg	1	10/18/94	10/20/94 MB
Vanadium	SW846 6010	33.3	2.26	mg/Kg	1	10/18/94	10/20/94 MB
Zinc	SW846 6010	36.1	1.71	mg/Kg	1	10/18/94	10/20/94 MB

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9410081-02
Client ID: FCC-DS 002

Matrix: SOIL
Collected: 10/12/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed	By
Antimony	SW846 7041	BQL	1.32	mg/Kg	1	10/18/94	10/19/94	FU
Arsenic	SW846 7060	1.94	0.624	mg/Kg	2	10/18/94	10/19/94	FU
Lead	SW846 7421	14.2	0.384	mg/Kg	2	10/18/94	10/19/94	FU
Mercury	SW846 7471	BQL	0.059	mg/Kg	1	10/22/94	10/22/94	AK
Potassium	SW846 7610	2990.0	79.2	mg/Kg	1	10/18/94	10/20/94	FU
Selenium	SW846 7740	BQL	0.715	mg/Kg	1	10/18/94	10/19/94	FU
Silver	SW846 7761	BQL	0.144	mg/Kg	1	10/18/94	10/19/94	FU
Sodium	SW846 7770	BQL	57.9	mg/Kg	1	10/18/94	10/20/94	FU
Thallium	SW846 7841	BQL	0.432	mg/Kg	1	10/18/94	10/19/94	FU
Aluminum	SW846 6010	29400.0	70.8	mg/Kg	5	10/18/94	10/20/94	MB
Barium	SW846 6010	199.0	1.85	mg/Kg	1	10/18/94	10/20/94	MB
Beryllium	SW846 6010	1.38	0.184	mg/Kg	1	10/18/94	10/20/94	MB
Calcium	SW846 6010	453.0	17.9	mg/Kg	1	10/18/94	10/20/94	MB
Cadmium	SW846 6010	0.951	0.514	mg/Kg	1	10/18/94	10/20/94	MB
Cobalt	SW846 6010	10.6	2.18	mg/Kg	1	10/18/94	10/20/94	MB
Chromium	SW846 6010	12.7	0.936	mg/Kg	1	10/18/94	10/20/94	MB
Copper	SW846 6010	7.90	1.99	mg/Kg	1	10/18/94	10/20/94	MB
Iron	SW846 6010	23300.0	52.6	mg/Kg	5	10/18/94	10/20/94	MB
Magnesium	SW846 6010	3490.0	12.0	mg/Kg	1	10/18/94	10/20/94	MB
Manganese	SW846 6010	564.0	1.01	mg/Kg	1	10/18/94	10/20/94	MB
Nickel	SW846 6010	6.45	3.82	mg/Kg	1	10/18/94	10/20/94	MB
Vanadium	SW846 6010	55.2	2.38	mg/Kg	1	10/18/94	10/20/94	MB
Zinc	SW846 6010	56.5	1.80	mg/Kg	1	10/18/94	10/20/94	MB

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9410081-04
Client ID: FCC-FB-001

Matrix: WATER
Collected: 10/12/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed	By
Antimony	SW846 7041	BQL	5.50	ug/L	1	10/17/94	10/18/94	FU
Arsenic	SW846 7060	BQL	1.30	ug/L	1	10/17/94	10/18/94	FU
Lead	SW846 7421	3.93	0.800	ug/L	1	10/17/94	10/18/94	FU
Mercury	SW846 7471	0.131	0.100	ug/L	1	10/19/94	10/19/94	AK
Potassium	SW846 7610	BQL	330.0	ug/L	1	10/17/94	10/18/94	RA
Selenium	SW846 7740	BQL	2.98	ug/L	1	10/17/94	10/18/94	FU
Silver	SW846 7761	BQL	0.600	ug/L	1	10/17/94	10/18/94	RA
Sodium	SW846 7770	BQL	241.0	ug/L	1	10/17/94	10/18/94	RA
Thallium	SW846 7841	BQL	1.80	ug/L	1	10/17/94	10/18/94	FU
Aluminum	SW846 6010	BQL	71.4	ug/L	1	10/17/94	10/19/94	RA
Barium	SW846 6010	BQL	8.43	ug/L	1	10/17/94	10/19/94	RA
Beryllium	SW846 6010	BQL	1.01	ug/L	1	10/17/94	10/19/94	RA
Calcium	SW846 6010	132.0	128.0	ug/L	1	10/17/94	10/19/94	RA
Cadmium	SW846 6010	BQL	3.63	ug/L	1	10/17/94	10/19/94	RA
Cobalt	SW846 6010	BQL	15.2	ug/L	1	10/17/94	10/19/94	RA
Chromium	SW846 6010	BQL	6.72	ug/L	1	10/17/94	10/19/94	RA
Copper	SW846 6010	BQL	14.3	ug/L	1	10/17/94	10/19/94	RA
Iron	SW846 6010	BQL	72.9	ug/L	1	10/17/94	10/19/94	RA
Magnesium	SW846 6010	BQL	41.3	ug/L	1	10/17/94	10/19/94	RA
Manganese	SW846 6010	BQL	4.53	ug/L	1	10/17/94	10/19/94	RA
Nickel	SW846 6010	BQL	20.2	ug/L	1	10/17/94	10/19/94	RA
Vanadium	SW846 6010	BQL	11.0	ug/L	1	10/17/94	10/19/94	RA
Zinc	SW846 6010	BQL	8.79	ug/L	1	10/17/94	10/19/94	RA

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9410081-03
Client ID: FCC-FR-001

Matrix: WATER
Collected: 10/12/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Antimony	SW846 7041	BQL	5.50	ug/L	1	10/17/94	10/18/94 FU
Arsenic	SW846 7060	BQL	1.30	ug/L	1	10/17/94	10/18/94 FU
Lead	SW846 7421	2.35	0.800	ug/L	1	10/17/94	10/18/94 FU
Mercury	SW846 7471	0.442	0.100	ug/L	1	10/19/94	10/19/94 AK
Potassium	SW846 7610	BQL	330.0	ug/L	1	10/17/94	10/18/94 RA
Selenium	SW846 7740	BQL	2.98	ug/L	1	10/17/94	10/18/94 FU
Silver	SW846 7761	BQL	0.600	ug/L	1	10/17/94	10/18/94 RA
Sodium	SW846 7770	BQL	241.0	ug/L	1	10/17/94	10/18/94 RA
Thallium	SW846 7841	BQL	1.80	ug/L	1	10/17/94	10/18/94 FU
Aluminum	SW846 6010	BQL	71.4	ug/L	1	10/17/94	10/19/94 RA
Barium	SW846 6010	BQL	8.43	ug/L	1	10/17/94	10/19/94 RA
Beryllium	SW846 6010	BQL	1.01	ug/L	1	10/17/94	10/19/94 RA
Calcium	SW846 6010	BQL	128.0	ug/L	1	10/17/94	10/19/94 RA
Cadmium	SW846 6010	BQL	3.63	ug/L	1	10/17/94	10/19/94 RA
Cobalt	SW846 6010	BQL	15.2	ug/L	1	10/17/94	10/19/94 RA
Chromium	SW846 6010	BQL	6.72	ug/L	1	10/17/94	10/19/94 RA
Copper	SW846 6010	BQL	14.3	ug/L	1	10/17/94	10/19/94 RA
Iron	SW846 6010	BQL	72.9	ug/L	1	10/17/94	10/19/94 RA
Magnesium	SW846 6010	47.6	41.3	ug/L	1	10/17/94	10/19/94 RA
Manganese	SW846 6010	BQL	4.53	ug/L	1	10/17/94	10/19/94 RA
Nickel	SW846 6010	BQL	20.2	ug/L	1	10/17/94	10/19/94 RA
Vanadium	SW846 6010	BQL	11.0	ug/L	1	10/17/94	10/19/94 RA
Zinc	SW846 6010	BQL	8.79	ug/L	1	10/17/94	10/19/94 RA

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9410081-01
Client ID: FCC-DS 001

Matrix: SOIL
Collected: 10/12/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	87.5		%			10/19/94 SMA

GP ID: 9410081-02
Client ID: FCC-DS 002

Matrix: SOIL
Collected: 10/12/94

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	83.3		%			10/19/94 SMA

GP ENVIRONMENTAL SERVICES

Possible notes and definitions for this report:

BQL = Below Quantitation Limit

J = An estimated value, below method detection limit

B = Indicates that the compound was found in the associated blank

E = Indicates that the concentration exceeded the calibration range of the instrument

U = Indicates that the compound was analyzed for but not detected, number indicates the detection limit

D = Indicates that the compound was found in a analysis at a secondary dilution factor

* = Value obtained from a 1:5 dilution

\+ = Value obtained from a 1:10 dilution

\# = Value obtained from a 1:20 dilution

^ = Value obtained from a 1:50 dilution

~ = Value obtained from a 1:100 dilution

! = Value obtained from a 1:250 dilution

@ = Value obtained from a 1:125 dilution (Medium Level)

$ = Value obtained from a 1:1000 dilution

& = Value obtained from a 1:10000 dilution

N = Flashpoint not observed; heated to specified limit

F = Flammable at room temperature

TNTC = Too numerous to count

D.L. = Detection limit taken from boiling point

F.F. = Sample gave off flammable fumes

[redacted]

10-081

202 Perry Parkway
Gaithersburg, Maryland 20877
(301) 926-6802

Contract #/Billing Reference: ____

____ of ____ Pgs.

Project: Former Camp Cos Fr
Client: Human Factor Applications Inc
Send Results To: Mike Wisniewski
Address: 1018 A Strauss Av.
Indianhead, MD. 20640
Phone: 301 743-2377

Sample ID#	Date	Time	Sample Matrix	Sampler's Initials	Turnaround Time / # of Container / Container Type / Preservative Used / Type of Analysis										CLIENT COMMENTS
CC-DS002	12oct94	0830	TAL	DEB											
CC-DS002	12oct94	0830	TAL	DEB											
CC-FR-001	12oct94	0845	TAL	DEB											
CC-FB-001	12oct94	0905	TAL	DEB											

Relinquished By:	Date/Time	Received By:	Relinquished By:	Received for Laboratory By:	Date/Time
[signature]	10/12/94 1115			C [signature]	10/12/94 11:15

Relinquished By:	Date/Time	Received By:	Date/Time	Shipper:	Airbill No.:

Relinquished By:	Date/Time	Received By:	Lab Comments:	Temp:
				6°C

GP ENVIRONMENTAL SERVICES

SAMPLE RECEIPT CHECKLIST

W.O. No. 9410-021
Client Name [illegible]
Date Received [illegible]
Time Received [illegible]
Received By [illegible]

Carrier Name [illegible]
Prepared (Logged In) By [illegible] [illegible]
Initials Date
Project
Site
VOA Holding Blank I.D. No.

	YES	NO
Airbill/Manifest Present? No.		X
Shipping Container in Good Condition?	X	
Custody Seals Present on Shipping Container? Condition: Good ____ Broken ____		X
Chain-of-Custody Present?	X	
Chain-of-Custody Agrees with Sample Labels?	X	
Chain-of-Custody Signed?	X	
Packing Present in Shipping Container? Type of Packing [illegible]	X	
Custody Seals on Sample Bottles? Condition: Good ____ Broken ____		X
Total Number of Sample Bottles 4		
Total Number of Samples 4		
Samples Intact?	X	
Sufficient Sample Volume for Indicated Test?	X	

	YES	NO
Trip Blanks Received? No. of Sets		X
VOA Vials Have Zero Headspace?		X
Preservatives Added to Sample?	X	
pH Check Required? Performed By? [illegible]	X	
Ice Present in Shipping Container?	X	

Container#	Temperature
1	6°C

Project Manager Contacted?
Name: [illegible]
Date Contacted: [illegible]

Any NO response must be detailed in the comments section below. If items are not applicable to particular samples or contracts, they should be marked N/A.

COMMENTS: [illegible]

Checklist Completed by [illegible]

Date [illegible]

GP ENVIRONMENTAL SERVICES, INC.

202 Perry Parkway • Gaithersburg, Maryland 20877

(301) 926-6802 • FAX (301) 840-1209

TELECOPY COVER SHEET

DATE: 10/3/94 TIME: 2pm.

Telecopy to: Michael Winningham

From: Amy Fiorillander

Message: NOTE: S. Carolina certification for selected parameters only - Please note we are limited to these certified parameters only unless Army Corps certification is sufficient.

Number of sheets (including cover sheet): 3

RECEIVING OPERATOR INFORMATION

Sending operator phone number: 301-926-6802

GP Environmental Services, Inc. telecopy number: 301-840-1209

SERVICES SENDING OPERATOR INFORMATION

TELECOPY NUMBER: 301-743-7512

Verification Number :

Verification per (name)

GP Work Order # 9501121

SAMPLE ANALYSIS REPORT

Prepared For:

Human Factors Application
700 Old Line Ctr, Suite 210
Waldorf, MD 20602

FORMER CAMP CRAFT

Prepared By:

GP Environmental Services, Inc.
202 Perry Parkway
Gaithersburg, MD 20877

February 01, 1995

Albert Ellis, Laboratory Director

Project: FORMER CAMP CRAFT

GP ENVIRONMENTAL SERVICES
ANALYTICAL RESULTS

Project: FORMER CAMP CRAFT

Human Factors Application
700 Old Line Ctr, Suite 210
Waldorf, MD 20602
Atten: Mr. Sam Hooper

GP ENVIRONMENTAL SERVICES
202 Perry Parkway
Gaithersburg, MD 20877

Atten: Client Services
Phone: (301) 926-6802

Certified by: _____

SAMPLE IDENTIFICATION

GP ID	Client ID
9501121-01A	FCC-DSS001-0
9501121-02A	FCC-DSS002-0
9501121-03A	FCC-DSB-001-12
9501121-04A	FCC-DSB-002-12

Project: FORMER CAMP CRAFT

GP ENVIRONMENTAL SERVICES
ORGANIC ANALYSIS RESULTS

GP ID: 9501121-02A
Client ID: FCC-DSS002-0
Collected: 01/17/95
Dilution: 1

Matrix: SOIL
Method: SW-846 8330
Units: ug/Kg

Analyst: YS
Analyzed: 01/30/95
Prepared: 01/24/95

LIQUID CHROMATOGRAPHY TARGET COMPOUNDS

Parameter	Result	Det.Lim.	Qualifier
1,3,5-Trinitrobenzene	BQL	40.2	
1,3-Dinitrobenzene	BQL	37.2	
2,4,6-Trinitrotoluene	BQL	35.6	
2,4-Dinitrotoluene	BQL	51.6	
2,6-Dinitrotoluene	BQL	47.6	
2-Amino-4,6-dinitrotoluene	BQL	46.7	
2-Nitrotoluene	BQL	81.4	
3-Nitrotoluene	BQL	81.7	
4-Amino-2,6-dinitrotoluene	BQL	40.8	
4-Nitrotoluene	BQL	87.2	
HMX	BQL	70.5	
Nitrobenzene	BQL	35.2	
RDX	BQL	50.9	
Tetryl	BQL	163.0	

Project: FORMER CAMP CRAFT

GP ENVIRONMENTAL SERVICES
ORGANIC ANALYSIS RESULTS

GP ID: 9501121-03A
Client ID: FCC-DSB-001-12
Collected: 01/17/95
Dilution: 1

Matrix: SOIL
Method: SW-846 8330
Units: ug/Kg

Analyst: YS
Analyzed: 01/30/95
Prepared: 01/24/95

LIQUID CHROMATOGRAPHY TARGET COMPOUNDS

Parameter	Result	Det.Lim.	Qualifier
1,3,5-Trinitrobenzene	BQL	40.2	
1,3-Dinitrobenzene	BQL	37.2	
2,4,6-Trinitrotoluene	BQL	35.6	
2,4-Dinitrotoluene	BQL	51.6	
2,6-Dinitrotoluene	BQL	47.6	
2-Amino-4,6-dinitrotoluene	BQL	46.7	
2-Nitrotoluene	BQL	81.4	
3-Nitrotoluene	BQL	81.7	
4-Amino-2,6-dinitrotoluene	BQL	40.8	
4-Nitrotoluene	BQL	87.2	
HMX	BQL	70.5	
Nitrobenzene	BQL	35.2	
RDX	BQL	50.9	
Tetryl	BQL	163.0	

Project: FORMER CAMP CRAFT

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9501121-01
Client ID: FCC-DSS001-0

Matrix: SOIL
Collected: 01/17/95

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Antimony	SW846 7041	BQL	0.645	mg/Kg	1	01/23/95	01/24/95 FU
Arsenic	SW846 7060	0.979	0.387	mg/Kg	1	01/23/95	01/24/95 FU
Lead	SW846 7421	10.5	0.206	mg/Kg	1	01/23/95	01/24/95 FU
Mercury	SW846 7471	0.072	0.057	mg/Kg	1	01/25/95	01/26/95 AK
Potassium	SW846 7610	2550.0	70.2	mg/Kg	1	01/23/95	01/24/95 RA
Selenium	SW846 7740	BQL	0.439	mg/Kg	1	01/23/95	01/24/95 FU
Silver	SW846 7761	BQL	0.258	mg/Kg	1	01/23/95	01/24/95 RA
Sodium	SW846 7770	BQL	37.4	mg/Kg	1	01/23/95	01/24/95 RA
Thallium	SW846 7841	BQL	0.697	mg/Kg	1	01/23/95	01/24/95 FU
Aluminum	SW846 6010	22300.0	111.0	mg/Kg	5	01/23/95	01/24/95 MB
Barium	SW846 6010	188.0	1.76	mg/Kg	1	01/23/95	01/24/95 MB
Beryllium	SW846 6010	1.36	0.161	mg/Kg	1	01/23/95	01/24/95 MB
Calcium	SW846 6010	438.0	18.9	mg/Kg	1	01/23/95	01/24/95 MB
Cadmium	SW846 6010	BQL	0.689	mg/Kg	1	01/23/95	01/24/95 MB
Cobalt	SW846 6010	14.1	2.99	mg/Kg	1	01/23/95	01/24/95 MB
Chromium	SW846 6010	9.97	1.24	mg/Kg	1	01/23/95	01/24/95 MB
Copper	SW846 6010	8.12	1.54	mg/Kg	1	01/23/95	01/24/95 MB
Iron	SW846 6010	43100.0	135.0	mg/Kg	10	01/23/95	01/27/95 RA
Magnesium	SW846 6010	3140.0	14.6	mg/Kg	1	01/23/95	01/24/95 MB
Manganese	SW846 6010	815.0	1.61	mg/Kg	1	01/23/95	01/24/95 MB
Nickel	SW846 6010	BQL	4.54	mg/Kg	1	01/23/95	01/24/95 MB
Vanadium	SW846 6010	47.4	1.94	mg/Kg	1	01/23/95	01/24/95 MB
Zinc	SW846 6010	44.1	1.32	mg/Kg	1	01/23/95	01/24/95 MB

Project: FORMER CAMP CRAFT

GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS

GP ID: 9501121-04
Client ID: FCC-DSB-002-12

Matrix: SOIL
Collected: 01/17/95

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed	By
Antimony	SW846 7041	0.770	0.634	mg/Kg	1	01/23/95	01/24/95	FU
Arsenic	SW846 7060	0.481	0.381	mg/Kg	1	01/23/95	01/24/95	FU
Lead	SW846 7421	7.76	0.203	mg/Kg	1	01/23/95	01/24/95	FU
Mercury	SW846 7471	BQL	0.057	mg/Kg	1	01/25/95	01/26/95	AK
Potassium	SW846 7610	2000.0	69.0	mg/Kg	1	01/23/95	01/24/95	RA
Selenium	SW846 7740	BQL	0.431	mg/Kg	1	01/23/95	01/24/95	FU
Silver	SW846 7761	BQL	0.254	mg/Kg	1	01/23/95	01/24/95	RA
Sodium	SW846 7770	BQL	36.8	mg/Kg	1	01/23/95	01/24/95	RA
Thallium	SW846 7841	BQL	0.685	mg/Kg	1	01/23/95	01/24/95	FU
Aluminum	SW846 6010	3630.0	21.8	mg/Kg	1	01/23/95	01/24/95	MB
Barium	SW846 6010	125.0	1.74	mg/Kg	1	01/23/95	01/24/95	MB
Beryllium	SW846 6010	0.859	0.158	mg/Kg	1	01/23/95	01/24/95	MB
Calcium	SW846 6010	258.0	18.6	mg/Kg	1	01/23/95	01/24/95	MB
Cadmium	SW846 6010	BQL	0.678	mg/Kg	1	01/23/95	01/24/95	MB
Cobalt	SW846 6010	9.59	2.94	mg/Kg	1	01/23/95	01/24/95	MB
Chromium	SW846 6010	8.64	1.22	mg/Kg	1	01/23/95	01/24/95	MB
Copper	SW846 6010	3.77	1.52	mg/Kg	1	01/23/95	01/24/95	MB
Iron	SW846 6010	24400.0	66.2	mg/Kg	5	01/23/95	01/27/95	RA
Magnesium	SW846 6010	2700.0	14.4	mg/Kg	1	01/23/95	01/24/95	MB
Manganese	SW846 6010	575.0	1.58	mg/Kg	1	01/23/95	01/24/95	MB
Nickel	SW846 6010	BQL	4.47	mg/Kg	1	01/23/95	01/24/95	MB
Vanadium	SW846 6010	36.2	1.91	mg/Kg	1	01/23/95	01/24/95	MB
Zinc	SW846 6010	33.2	1.30	mg/Kg	1	01/23/95	01/24/95	MB

Project: FORMER CAMP CRAFT

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

GP ID: 9501121-01
Client ID: FCC-DSS001-0

Matrix: SOIL
Collected: 01/17/95

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	77.5		%			01/30/95 VHM

GP ID: 9501121-02
Client ID: FCC-DSS002-0

Matrix: SOIL
Collected: 01/17/95

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	78.4		%			01/30/95 VHM

GP ID: 9501121-03
Client ID: FCC-DSB-001-12

Matrix: SOIL
Collected: 01/17/95

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	77.2		%			01/30/95 VHM

GP ID: 9501121-04
Client ID: FCC-DSB-002-12

Matrix: SOIL
Collected: 01/17/95

Parameter	Method	Result	Det.Lim.	Units	Dil.	Prepared	Analyzed By
Percent Solids	MCAWW 160.3	78.8		%			01/30/95 VHM

GP ENVIRONMENTAL SERVICES

Possible notes and definitions for this report:

BQL	= Below Quantitation Limit
J	= An estimated value, below method detection limit
B	= Indicates that the compound was found in the associated blank
E	= Indicates that the concentration exceeded the calibration range of the instrument
U	= Indicates that the compound was analyzed for but not detected, number indicates the detection limit
D	= Indicates that the compound was found in a analysis at a secondary dilution factor
*	= Value obtained from a 1:5 dilution
+	= Value obtained from a 1:10 dilution
#	= Value obtained from a 1:20 dilution
^	= Value obtained from a 1:50 dilution
~	= Value obtained from a 1:100 dilution
!	= Value obtained from a 1:250 dilution
@	= Value obtained from a 1:125 dilution (Medium Level)
$	= Value obtained from a 1:1000 dilution
&	= Value obtained from a 1:10000 dilution
N	= Flashpoint not observed; heated to specified limit
R	= Flammable at room temperature
TNTC	= Too numerous to count
B.P.	= Detection limit taken from boiling point
F.F.	= Sample gave off flammable fumes

P ENVIRONMENTAL SERVICES, INC.

01-121

202 Perry Parkway
Gaithersburg, Maryland 20877
(301) 926-6802

Contract #/Billing Reference

1 of 1 Pgs.

Project: Former Camp Croft

Client: Human Factor Application / Spartanburg S.C.

Send Results To: Human Factor Application

Address: 700 Old Lane Center Suite 210

Waldorf, MD. 20602-2513

Phone: (301) 705-5044

Turnaround Time	
# of Container	
Container Type	glass / glass
Preservative Used	N/A / N/A
Type of Analysis	6010/7000 TAL METALS / 8330 Explosives

Sample ID#	Date	Time	Sample Matrix	Sampler's Initials	6010/7000 TAL METALS	8330 Explosives									CLIENT COMMENTS
FCC-DSS001-0	011795	1420	Soil	DEB	X										
FCC-DSS002-0	011795	1422	Soil	DEB		X									
FCC-DSB-001-12	011795	1430	Soil	DEB		X									
FCC-DSB-002-12	011795	1432	Soil	DEB	X										

Relinquished By:	Date/Time	Received By:	Relinquished By:	Received for Laboratory By:	Date/Time
[signature]	011895 1230			C. Ryan	1/20/95 10:40 AM

Relinquished By:	Date/Time	Received By:	Date/Time	Shipper:	Airbill No.:

Relinquished By:	Date/Time	Received By:	Lab Comments:	Temp:

GP ENVIRONMENTAL SERVICES

SAMPLE RECEIPT CHECKLIST

W.O. No. 95-01-111

Carrier Name UPS

Client Name Hunt. Fisher

Prepared (Logged In) By CL / 1/23/95
Initials Date

Date Received 1/23/95

Project

Time Received 10:45 AM

Site

Received By Lynn

VOA Holding Blank I.D. No.

	YES	NO
Airbill/Manifest Present? No.	—	X
Shipping Container in Good Condition?	X	—
Custody Seals Present on Shipping Container? Condition: Good ___ Broken ___	—	X
Chain-of-Custody Present?	X	—
Chain-of-Custody Agrees with Sample Labels?	X	—
Chain-of-Custody Signed?	X	—
Packing Present in Shipping Container? Type of Packing bubble	X	—
Custody Seals on Sample Bottles? Condition: Good ___ Broken ___	—	X

Total Number of Sample Bottles 4

Total Number of Samples 4

	YES	NO
Samples Intact?	X	—
Sufficient Sample Volume for Indicated Test?	X	—

	YES	NO
Trip Blanks Received? No. of Sets	—	X
VOA Vials Have Zero Headspace?	—	X
Preservatives Added to Sample?	—	X
pH Check Required? Performed By?	—	X
Ice Present in Shipping Container?	X	—

Container#	Temperature
1	7°

Project Manager Contacted?
Name: Fran
Date Contacted: 1/23/95

Any NO response must be detailed in the comments section below. If items are not applicable to particular samples or contracts, they should be marked N/A.

COMMENTS:

Checklist Completed by CL

Date 1/20/95

APPENDIX F

QC SITE MAP

SITE MAP
QC and QA GRID VERIFICATION
FORMER CAMP CROFT
SPARTENBURG, S.C.

SCALE 1 INCH = 100 FEET

DACA87-94-D-0019 TASK ORDER # 002

HWY 176

MIMOSA LAKE ROAD

GATE

ASP

DEMO AREA

AREA C8 DELETED 11-8-94

- Cleared areas
- -TEAM Location
- - AREAS STARTED NOT Completed
- - AREA Requires Heavy Equipment

APPENDIX G

QC LOGS

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS

DATE: 1-10-95 | CONTRACT #: 0019 DO#: 0002

LOCATION: Former Camp Croft, Spartanburg, S.C.

WEATHER CONDITIONS: Fair

MAGNETOMETER SETTINGS:

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

QC'd grids. B-16, B26, B37, B44 & B64

II UNSATISFACTORY RESULTS:

Nothing unsatisfactory noted

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

Quality Control Inspector

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS

DATE: 1-4-95 | CONTRACT #: 0019 | DO#: 002

LOCATION: Former Camp Croft, Spartanburg S.C.

WEATHER CONDITIONS: Fair

MAGNETOMETER SETTINGS:

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

QC'd grid B-19

II UNSATISFACTORY RESULTS:

Nothing unsatisfactory noted

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

Quality Control Inspector

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Thomas Titsworth
Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS

DATE: 1-5-95 | CONTRACT #: 0015 | DO#: 002

LOCATION: Former Camp Croft, Spartanburg S.C.

WEATHER CONDITIONS: Fair

MAGNETOMETER SETTINGS: 3 - 3

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

QC'd Grids A-8, B-11, B12, B18 and B15

II UNSATISFACTORY RESULTS:

Nothing unsatisfactory noted

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Quality Control Inspector

Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS

DATE: 12-21-99 | CONTRACT #: 0019 | DO#: 002

LOCATION: Former Camp Croft, Spartanburg S.C.

WEATHER CONDITIONS: Cloudy

MAGNETOMETER SETTINGS: 2-7

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

QC'd Grids B-23, B-24, B-25, and B-20, and B-10

II UNSATISFACTORY RESULTS:

Nothing unsatisfactory noted

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Quality Control Inspector

Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS

DATE: 12-20-94 | CONTRACT #: 0019 | DO#: 002

LOCATION: Former Camp Croft, Spartanburg S.C.

WEATHER CONDITIONS: Fair

MAGNETOMETER SETTINGS: 3-3

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

QC'd grids G-4, G-5, G-6 & G-9

II UNSATISFACTORY RESULTS:

Nothing unsatisfactory noted

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

Quality Control Inspector

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS

DATE: 12-15-94 | CONTRACT #: 0019 | DO#: 002

LOCATION: Former Camp Croft, Spartanburg S.C.

WEATHER CONDITIONS:

MAGNETOMETER SETTINGS:

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

Inspected + inventoried Equipment assigned to this site

II UNSATISFACTORY RESULTS:

Nothing noted

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Quality Control Inspector

Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS

DATE: 12-2-94 | CONTRACT #: 0019 DO#: 007

LOCATION: Former Camp Croft, Spartanburg S.C.

WEATHER CONDITIONS: Fair

MAGNETOMETER SETTINGS: 3-3

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

QC'd Grid A-10 and A-11

II UNSATISFACTORY RESULTS:

Marking Unsatisfactory NOTED

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Quality Control Inspector

Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS

DATE: 12-7-94 | CONTRACT #: 0019 DO#: 002

LOCATION: Former Camp Croft

WEATHER CONDITIONS: Fair, warm

MAGNETOMETER SETTINGS: 3-3

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

Grids B-13, B-28, and B-29

II UNSATISFACTORY RESULTS:

Nothing unsatisfactory noted

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Quality Control Inspector

Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS

DATE: 12-2-94 | CONTRACT #: 0019 DO#: 002

LOCATION: Former Camp Croft, Spartanburg S.C.

WEATHER CONDITIONS: Fair

MAGNETOMETER SETTINGS:

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

QC'd the following grids: A-6, A-12, B-15, B-21, G-1, G-2, G-3, and G-7

II UNSATISFACTORY RESULTS:

Nothing unsatisfactory noted

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

Quality Control Inspector

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Thomas Pittard

Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS

DATE: 11-23-94 | CONTRACT #: 0019 DO#: 0002

LOCATION: Former Camp Croft, Spartanburg S.C.

WEATHER CONDITIONS: Fair

MAGNETOMETER SETTINGS: 3-3

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

QC'd the Following grids: B-22, B27, G-8, G-9, A-15, A-4

II UNSATISFACTORY RESULTS:

grid G-5 still have Hot areas within the grid =

III CORRECTIVE ACTIONS RECOMMENDED:

Recommend MECHOEWOPS + Reinspect of Hot areas

IV REINSPECTION RESULTS:

V SIGNATURES:

Quality Control Inspector

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Thomas Pitcomb
Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS

DATE: 11-22-99 | CONTRACT #: 0015 | DO#: 002

LOCATION: Former Camp Croft, Spartanburg S.C.

WEATHER CONDITIONS: Fair

MAGNETOMETER SETTINGS: 3-3

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

QC'd the following Grids: A-1, A-2, A-3, A-5, A-8, B-30, and B-9

II UNSATISFACTORY RESULTS:

Nothing unsatisfactory noted

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

Quality Control Inspector

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS

DATE: 21 Nov 94 | CONTRACT #: 0015 DO#: 0002

LOCATION: Former Camp Croft, Spartanburg S.C.

WEATHER CONDITIONS: Fair

MAGNETOMETER SETTINGS: 3-3

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

QC'd the following grids; B-2, B-3, B-4 B-5, B-8, B-14

II UNSATISFACTORY RESULTS:

Nothing unsatisfactory noted

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

Quality Control Inspector

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS DACA87-94-

DATE: 9 Nov 94 | CONTRACT #: D-0015 DO#: 0002

LOCATION: Former Camp Croft, Spartanburg S.C.

WEATHER CONDITIONS: Fair

MAGNETOMETER SETTINGS:

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

QC'd grids B-6, B-7, A-13, and A-14

II UNSATISFACTORY RESULTS:

Nothing unsatisfactory noted.

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Quality Control Inspector

Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS DACA87-94-D-0019

DATE: 8 Nov 94 | CONTRACT #: | DO#: 0002

LOCATION: Former Camp Croft, Spartanburg S.C.

WEATHER CONDITIONS: Fair

MAGNETOMETER SETTINGS: MK 26 3-3

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

Grid B-1 mag'd about 50% of area to determine if backhoe would be needed due to heavy concentration of Hot Soil

II UNSATISFACTORY RESULTS:

Nothing unsatisfactory, determined that holes were not in need of backhoe.

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

Quality Control Inspector

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Thomas Pittman
Sr. UXO Supervisor/Project Manager

HFA, INC.
QUALITY CONTROL LOG
OEW OPERATIONS

DATE: 28 Sept 1994 | **CONTRACT #:** DACA87-94-D-0019 **DO#:** 0002

LOCATION: Former Camp Croft Spartanburg, S.C.

WEATHER CONDITIONS: Sunny

MAGNETOMETER SETTINGS:

I AREAS INSPECTED: *(List by grid number, equipment used, coordinates, or description)*

Ionizing Radiation Monitoring, used a Ludlum Model 3 Survey Meter that was set on X10 scale. Surveyed the following Grids, by digging 1 foot deep, reading background then reading bottom of hole, all readings were ~~0~~. Survey locations were in grids: D3, E35, D7, E66, E70, E53, E33, C16, C21, B22, F2, B7, G9, G2, A6, A4, A2, H2, H1, and D12. See MAP

II UNSATISFACTORY RESULTS:

III CORRECTIVE ACTIONS RECOMMENDED:

IV REINSPECTION RESULTS:

V SIGNATURES:

I acknowledge that I have been briefed on the results of this inspection and will take corrective actions (if necessary).

Quality Control Inspector

Sr. UXO Supervisor/Project Manager

APPENDIX H

SCRAP TURN-IN

DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT (DD FORM 1348-1, 1 MAR 74)

Field	Entry
Stock Number (FSC/NIIN)	1315-NSN
Unit of Issue	lb
Quantity	3300
Unit Price	$0.00
Total Price	$0.00
Shipped From	HUMAN FACTORS APPLICAT Former Camp Croft Spartanburg, SC 29306
Ship To	Dean Gossett 285 Bryant Rd Pacolet, SC 29372
Project	DACA87-94-D-0019 TO# 0002 (Former Camp Croft)
Freight Classification Nomenclature	OEW Scrap Metal
Item Nomenclature	OEW Scrap Metal
Received By and Date	Dean Gossett 1-17-1995

"We Certify that the above listed items have been inspected by us and determined to be free of all explosives or explosive residue"

Remarks:

THOMAS F. TITCOMB
SUXOS
HFA, Camp Croft Porject

DAVID I. BUTLER
SSO
HFA, Camp Croft Project

D FORM 1348-1 (6 PT) 1 MAR 74 — EDITION OF 1 JAN 64 MAY BE USED UNTIL EXHAUSTED — DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT

DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT (DD FORM 1348-1, 1 MAR 74)

Field	Entry
Stock Number (FSC/NIIN)	1315-NSN
Unit of Issue	lb
Quantity	10000
Document Number	HFA-TI- 0001
Unit Price	$0.00
Total Price	$0.00
Shipped From	Human Factors Applications Former Camp Croft Spartanburg, SC 29306
Ship To	Dean Gossett 285 Bryant Rd. Pacolet, S.C. 29372
Project	DACA87-94-D-0019 TO#0002 (Former Camp Croft)
Item Nomenclature	OEW Scrape metal
Received By and Date	Dean Gossett 11-23-96

"WE Certify that the above listed items have been inspected by us and determined to be free of all explosives or explosive residue"

Remarks:

THOMAS F. TITCOMB
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APPENDIX I

COLOR PHOTOGRAPHS

Original site trailer, an additional trailer was later placed along side of this one.

Laying out sweep lanes in lay down area for sweeping and clearing.

Grubbing and clearing operations.

"Magging" operations for new site access road. Note density of flags. All marks were small fragments.

105mm Sample round buried for QC checks of magnetometers.

QC/SSO performing quality control check of excavation.

UXO Specialists digging magnetic anomaly.

UXO located on Camp Croft Site. UXO identified as 60mm HE mortar.

Excavation marked for further excavation by backhoe.

Large anomaly area excavated by backhoe, no UXO located.

General view of logging road and site vegetation and terrain.

Magazine storage area, with lightning arrestor in background.

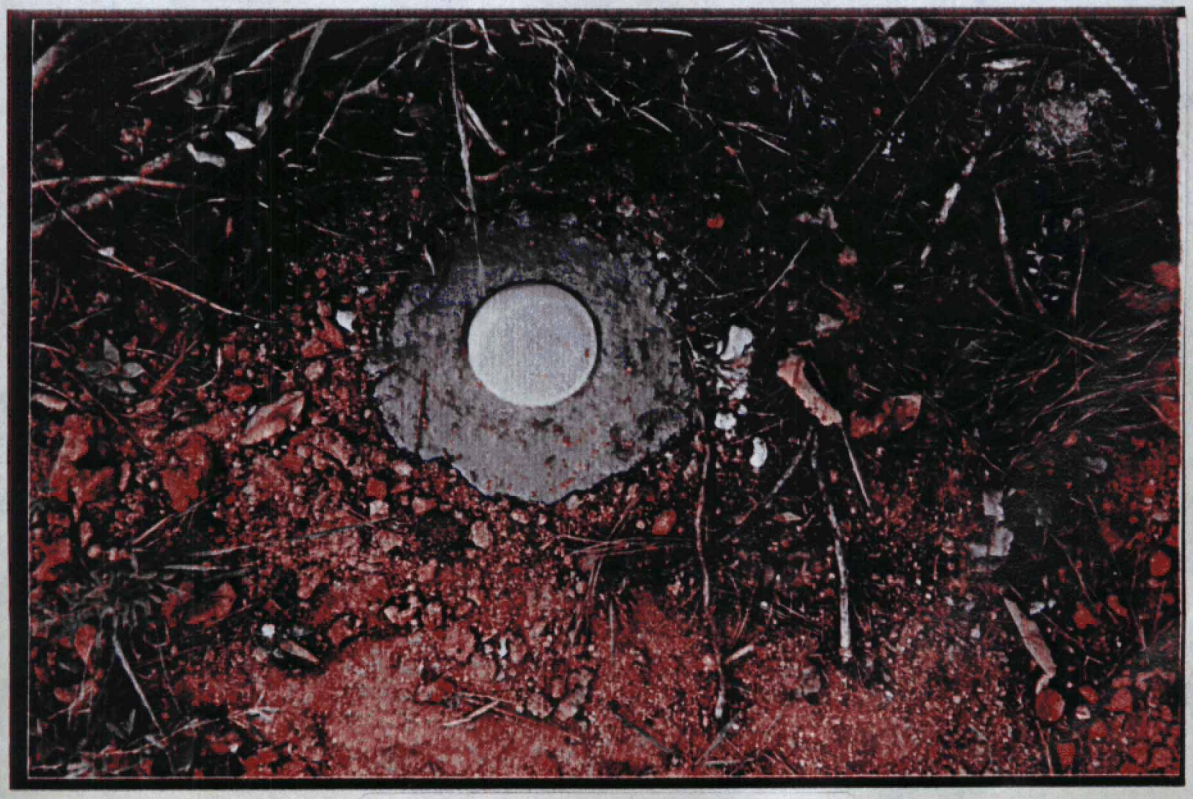
General view of site terrain. Fire break area later developed as site road.

Grubbing and clearing of expanded landfill area, December 1994.

HFA personnel laying out grids in expanded landfill area, December 1994.

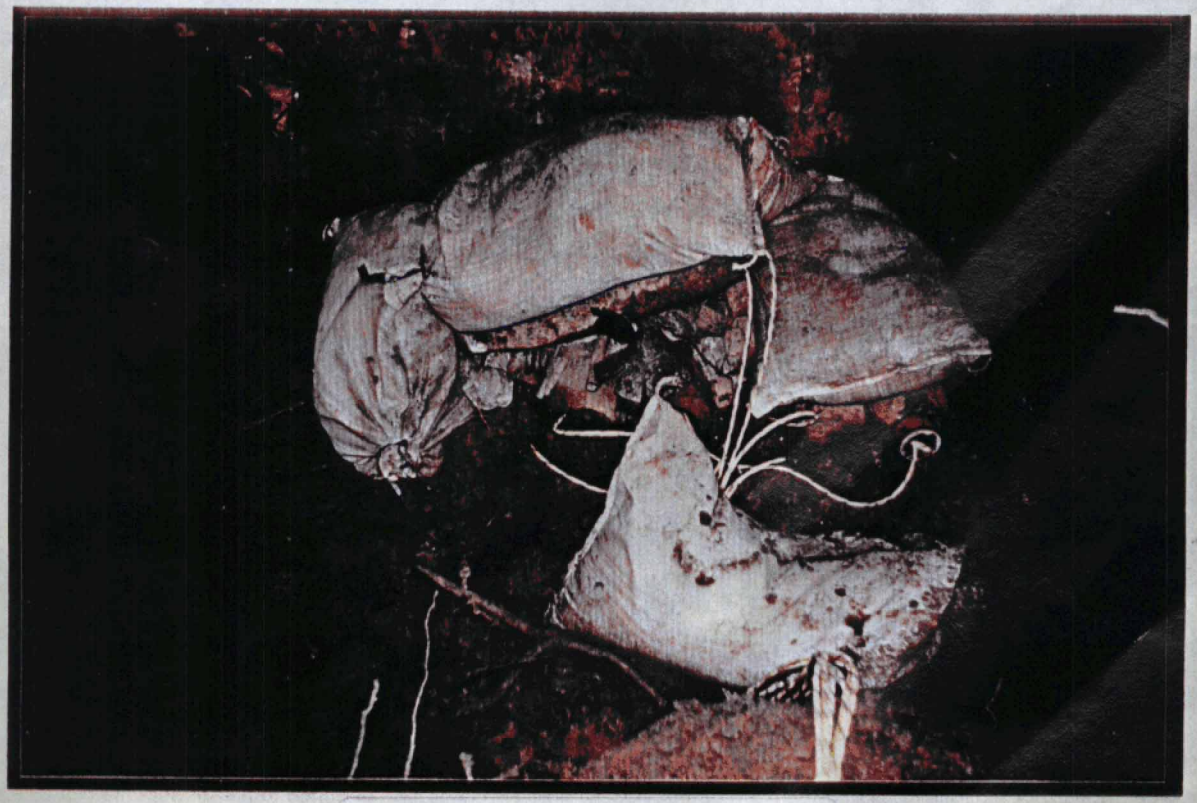
HFA UXO Specialist recording the site boundaries with GPS recorder.

Example of permanent site boundary markers installed by HFA.



Permanent control point established on Lowry property. 1 of 3 installed.

Last of UXO related items destroyed as final cleanup shot after site closure.



Preparation of demolition shot at former Camp Croft, South Carolina.