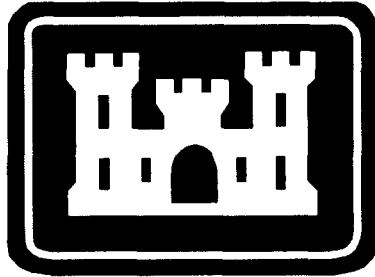


FINAL REMOVAL ACTION REPORT
Ordnance and Explosives (OE) Time Critical Removal Action
Assateague Island
Worcester County, Maryland

PREPARED FOR:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE



DACA87-95-D-0027

Task Order 0026, Mod 01

PREPARED BY:

HUMAN FACTORS APPLICATIONS, INCORPORATED



20 August 1998

The Views, Opinions, and/or Findings Contained in This Report are Those of the Author and Should Not Be Construed as an Official Department of the Army Position, Policy, or Decision, Unless So Designated by Other Documentation.

DACA87-95-D-0027
Task Order 0026 Mod 01

20 August 1998
Final Removal Action Report

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August 1998
HFA Serial # 027-999

U.S. Army Engineering & Support Center, Huntsville
CEHNC-OE-DG
4820 University Square
Huntsville, AL 35816

Attn: Mr. Glenn Earhart

Subj: Final Removal Report for contract DACA87-95-D-0027, Task Order 0026, MOD 1, Time Critical Removal Action (TCRA) Assateague Island, Worcester County, Maryland,

Dear Mr. Earhart:

Enclosed for your review are six copies of the Final Removal Report for the subject project, and two copies of the Ordnance ID Guide. I have distributed additional copies of the report, and Ordnance ID Guide in accordance with paragraph 4.0 of the Scope of Work, and your instructions.

If you have any questions or comments please call me at 301*705-5044, or fax 301*705-7561.

Sincerely,

David J. Frandsen
Project Manager

as

cc:

Ms. Lydia Tadesse, CEHNC-CT-D, (letter only)
National Park Service, Assateague Island, (2 copies final, 7 copies ID)
Ms. Eileen Barry, CENAD-FUDS MGR, (2 copies)
Ms. Sheila Bloom, CENAB-PP-E, (5 copies final, 1 copy ID)
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APPENDIX H	Record of Environmental Consideration

ABBREVIATIONS, ACRONYMS AND DEFINITIONS

AGA	American Gas Association
ANSI	American National Standards Institute
APP	Accident Prevention Plan
ASME	American Society of Mechanical Engineers
ASR	Archives Search Report
BZ	Breathing Zone
CEHNC	U.S. Army Engineering & Support Center, Huntsville
CERCLA	Comprehensive Environment Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
CPR	Cardiopulmonary Resuscitation
CRC	Contamination Reduction Corridor
CRZ	Contamination Reduction Zone
CWM	Chemical Warfare Material
DERP-FUDS	Defense Environmental Restoration Program-Formerly Used Defense Sites
DRMO	Defense Reutilization Marketing Office
EE/CA	Engineering Evaluation/Cost Analysis
EEDS	Electrical Explosive Devices
EMM	Earth-Moving Machinery
EOD	Explosive Ordnance Disposal
EPA	U.S. Environmental Protection Administration
ESS	Explosive Safety Submission
EZ	Exclusion Zone
F	Fahrenheit
GFCI	Ground Fault Circuit Interrupters
HAF	Hazard Analysis Form
HBV	Hepatitis B Vaccinations
HE	High Explosives
HEAT	High Explosive Anti-Tank
HFA	Human Factors Applications, Inc.
HTRW	Hazardous, Toxic, and Radioactive Waste
IAW	In accordance with
IDLH	Immediately Dangerous to Life or Health
INTRUSIVE ACTIVITY	Digging to investigate an anomaly
INTRUSIVE OPERATIONS	Digging to investigate an anomaly
MSDS	Material Safety Data Sheets
mm	Millimeter
NA	Not Applicable
NAD	North America Datum

ABBREVIATIONS, ACRONYMS AND DEFINITIONS

NCP	National Contingency Plan
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
OE	Ordnance and Explosive
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
PM	Project Manager
PZ	Piezoelectric
HSM	Safety and Health Manager
SUXOS	Senior UXO Supervisor
QC	Quality Control
QCO	Quality Control Officer
RCRA	Resource Conservation and Recover Act
RFI	RCRA Facility Investigation
SOP	Standing Operating Procedures
SSO	Site Safety Officer
SSHP	Specific Safety and Health Plans
TCRA	Time-Critical Removal Action
TERC	Total Environmental Restoration Contract
TEU	Technical Escort Unit
Tidal zone	The area between low tide and high tide each day
TO	Task Order
SZ	Support Zone
TWA	Time-Weighed Average
USACE	U.S. Army Corps of Engineers
USATHAMA	U.S. Army Toxic and Hazardous Material Agency
USCG	United States Coast Guard
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VEGETATED SAND DUNE	Frontal Dune
WWII	World War II

ORDNANCE AND EXPLOSIVES (OE) TIME CRITICAL REMOVAL ACTION ASSATEAGUE ISLAND WORCESTER COUNTY, MARYLAND

1 INTRODUCTION

- 1.1 Human Factors Applications, Inc. (HFA) under contract to the U.S. Army Corps of Engineers, Huntsville Center (CEHNC) for Ordnance and Explosives (OE), Remediation of Sites in the Continental United States, (CONUS), performed an Ordnance and Explosives (OE) Time Critical Removal Action at Assateague Island, Worcester County, Maryland, see the Scope of Work in Appendix A. The work required under this Scope of Work (SOW) falls under the Defense Environmental Restoration Program - Formerly Used Defense Sites (DERP-FUDS). Ordnance and Explosives (OE) exist on property formerly owned by the Department of the Army.
- 1.2 Assateague Island consists of approximately 17,552 acres and is located in two states, Maryland and Virginia. 8,018 acres of the Island is in Worcester County, Maryland, and 9,534 Acres is in Accomack County, Virginia. The U.S. National Park Service (NPS) owns 6,900 acres in Maryland and 205 acres in Virginia that comprise the Assateague Island National Seashore.
- 1.3 In 1994, Parsons Engineering and Science Corporation, under contract to the U.S. Army Corps of Engineers, Huntsville Division, conducted a Site Investigation at Assateague Island. All ordnance items discovered during the investigation were inert munitions scrap, generally in rusted and deteriorated condition. Additionally, no live ordnance items were found during previous investigations. As a result, no further action was recommended at Assateague Island.
- 1.4 During the sampling investigation, Parsons ES discovered and removed numerous practice ordnance items. None of these ordnance items were live, or found to contain explosives. After discussions with CEHNC, it was determined the location of the burial pit would be marked within their grid system, and left buried since no live ordnance had been discovered during the EE/CA ordnance sampling project.
- 1.5 In February 1998, NPS personnel assumed the ordnance items discovered on the beach had been washed ashore by the storm. This assumption is what the SOW and HFA's Work and Safety Plan was based upon. But when the surveyors began to survey in the position NPS personnel had marked in February, it turned out to be the same location where the practice ordnance burial pit was discovered in 1994.

- 1.6 This Time Critical Removal Action pertains to approximately 2.41 acres of sand beach on the eastern shore of Assateague Island National Sea Shore. It is comprised of 12 grids; six 100 ft. x 100 ft., and six 100 ft. x 75 ft. in size. In February 1998 a major storm removed two or more feet of sand from the beach uncovering approximately 150 pieces of ordnance. National Park Service (NPS) personnel placed markers at the northern and southern boundaries of the site and called U.S. Navy EOD personnel to the site.
- 1.7 When U.S. Navy EOD personnel arrived on site and inspected the ordnance, they were not able to positively identify it as inert practice ordnance. Without positive identification of the ordnance, it was treated as live, and classified too hazardous to transport. They instructed NPS personnel to secure the area from public access, and to request assistance from the U.S. Army Corps of Engineers. After the Navy EOD personnel departed the site, high tides replaced the sand, re-burying the ordnance. All parties involved in the project assumed the ordnance was still buried at the site marked by NPS personnel.
- 1.8 On 3 April 1998, a site visit was conducted by personnel from the U.S. Army Corps of Engineers and Human Factors Applications, Inc. (HFA). All personnel met at the NPS Office and were escorted by Chief Ranger John Burns to the area of the beach where the ordnance was discovered in February. These personnel were, Mr. Glenn Earhart, CEHNC Project Manager; Ms. Sheila Bloom, CENAB Project Manager; Mr. John Brezenski, CENAB; Mr. Jim Hourica, CENAB; and Mr. Dave Frandsen, HFA Project Manager.
- 1.9 The four corner stakes placed by NPS personnel in February marked the area. It was approximately 400 ft. long, parallel to the water and approximately 100 ft. wide. No ordnance had re-surfaced since the February storm. After returning to the NPS office a short meeting was held to discuss the removal action. During the meeting it was determined that approximately three feet of sand was now covering the ordnance items, and that mechanical equipment could be used for excavation. Chief Ranger Burns requested the project be completed by 22 May 1998, the start of Memorial Day weekend, and all parties agreed. Ranger Burns also offered HFA the use of a storage shed near the work site for equipment storage.
- 1.10 The objective of this Time Critical Removal Action is to safely locate, positively identify, and dispose of all surface and subsurface UXO/OE down to 4 ft. on approximately 2.41 acres of beach property as specified in Task 4, of the Scope of Work, [*See Appendix A*].

Figure 1-1
Site Location Map

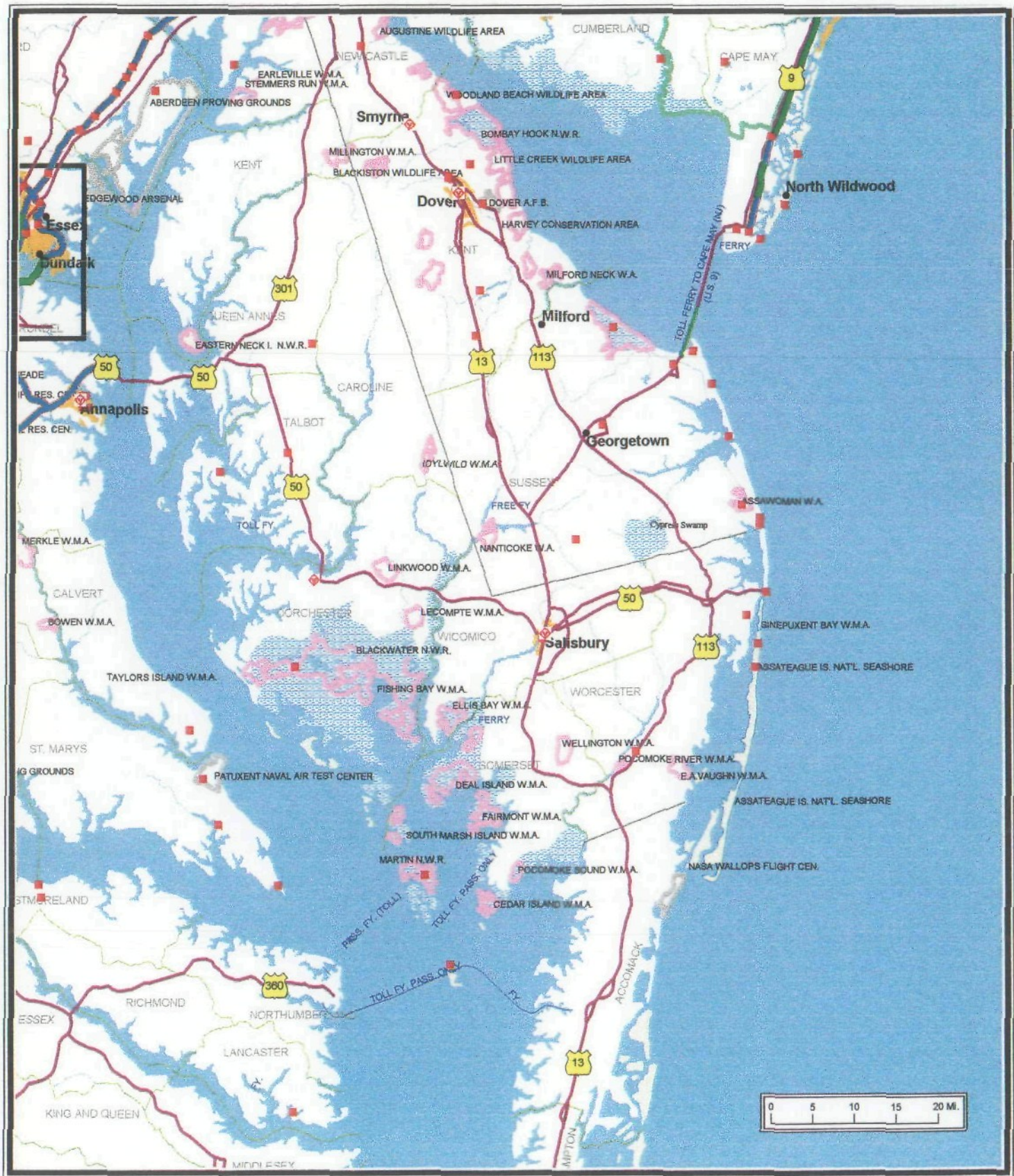
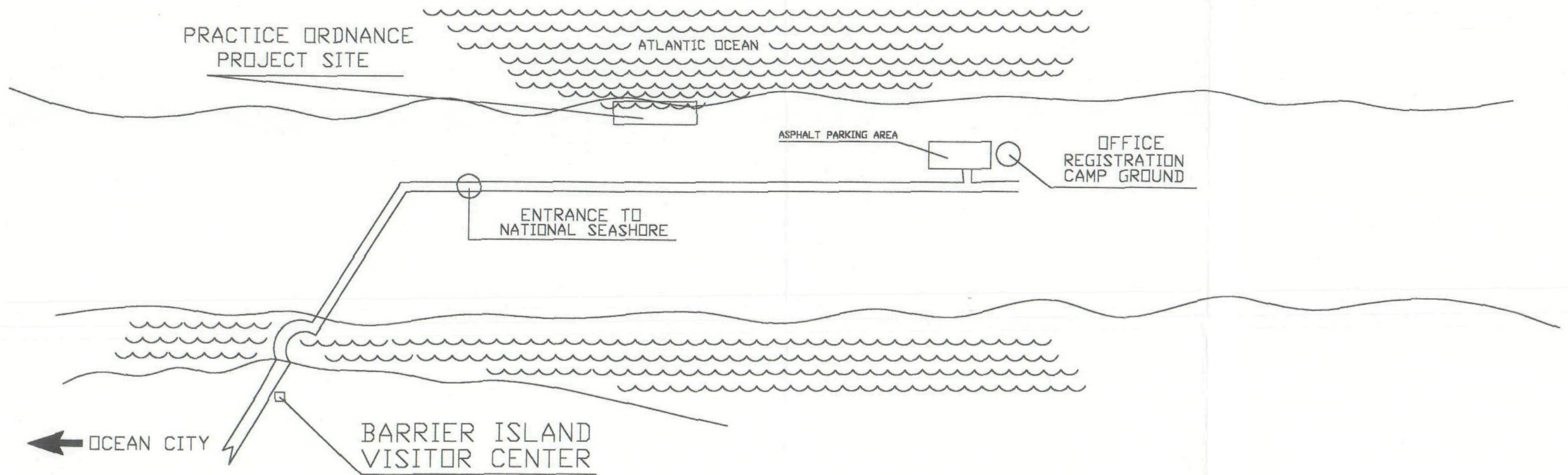


Figure 1-2
Project Area Map

ASSATEAGUE ISLAND



2 DISCUSSION

- 2.1 On 4 May 1998, HFA mobilized two UXO personnel to the project site to begin site set-up activities. A meeting was held with Chief Ranger Burns to discuss the work schedule and pick-up government equipment that had been shipped to the NPS office for HFA's use during the project. The following day the surveyor's arrived on site and began laying in the grid network. While setting the control points, the surveyors realized the coordinates for the contaminated area was the same as the coordinates for the burial pit discovered by Parsons ES in 1994. HFA immediately notified the CEHNC Project Manager, Mr. Glenn Earhart, (see the memorandum at the end of Appendix A). Since the area included the area marked by NPS in February, CEHNC determined the grid network should overlay the burial trench, and include a buffer to the north and south approximately 100 ft.
- 2.2 Two explosive storage magazines were delivered to the site, placed in a secure area, and grounded on the morning of 6 May 1998. Later, explosives were delivered to the site and placed into the magazines. On 11 May 1998 the main workforce mobilized to the site.
- 2.3 On 12 May intrusive activities were scheduled to begin and Media Day was held by the Baltimore District's Public Affairs Officer. Due to weather conditions, high wind and rain, intrusive activities were canceled and the media briefing was held in the main NPS office. The Baltimore District's Project Manager, Miss Sheila Bloom, CEHNC's Project Manager, Mr. Glenn Earhart, Chief Ranger Burns, HFA's Project Manager, and the CEHNC Safety Specialist, met with the local press. An overview of the project including a brief history of the site, pictures of recovered ordnance from similar projects and the project's objectives were presented. The possible hazards of the ordnance, and the procedures HFA would use to ensure it was safe prior to disposal were explained and discussed. A question and answer session was held and more details of the project were provided.
- 2.4 On 13 May 1998 the weather subsided and intrusive activities began in grid A-1. The wind continued to blow from the east, pushing the tide in farther than normal. This unusually high tide covered most of the work area and only the most westerly grids were able to be searched. At 1100 hrs., HFA was notified by the Baltimore District's Public Affairs Officer that the local press were on their way to the site to take pictures and interview the UXO personnel.
- 2.5 At approximately 1130 hrs. the first of three press groups began arriving. The CEHNC Safety Specialist and HFA's Senior UXO Supervisor provided the press with information on the project and the type of ordnance expected to be recovered. In addition, HFA personnel demonstrated for three local television stations, the procedures used to search an area and mark the contacts. This demonstration included, laying out ropes within a grid to define search lanes, searching the lanes with magnetometers, and marking each contact with a small flag. This demonstration was repeated for each press group that arrived, a total of three times.

- 2.6 The area searched the first day was the buffer to the extreme west of the area and no ordnance items were located. Removal activities continued and each day thereafter resulted in the location and removal of practice ordnance items. Each item located was visually inspected, then explosively vented to ensure it contained no explosives or explosive residue.
- 2.7 While providing security during demolition operations on 18 May 1998, a UXO Specialist discovered a practice 2.25" Rocket laying on the surface. It was approximately 356 ft. southwest of the project area. On 19 May a second practice 2.25" Rocket was discovered in the same direction but at 969 ft. Both rockets were explosively vented and did not contain any explosives or explosive residue. HFA surveyed in the location where both rockets were discovered with a total station. These coordinates are shown on the map located in Appendix B.
- 2.8 On 20 May 1998, HFA completed all intrusive clearance operations, and the explosive venting of all practice ordnance recovered. Prior to demobilizing the site HFA returned the clearance area to it's original condition, cleaned and inventoried all GFE, turned in all of the OE and Non-OE scrap recovered and shipped the remaining jet perforators to the CEHNC project at Griffiss AFB, NY.
- 2.9 During the course of the project removal activities resulted in the removal of 212 practice ordnance items. The majority of the practice ordnance items were recovered from four burial pits located in grids B-3 and B-4, see the map at Figure 2-1, and grid sheet in Appendix D. All of these items were visually inspected, explosively vented with jet perforators, and re-inspected by eight UXO qualified persons. Each item was then cut in half with an emergency access saw. None of the ordnance items recovered were found to contain explosives or explosive residue. The specific type and quantity of practice ordnance items located and removed can be found in the body, tables, and appendices of this report. Site security, general field support, equipment storage and office space was provided by Assateague Island National Park Service Personnel.

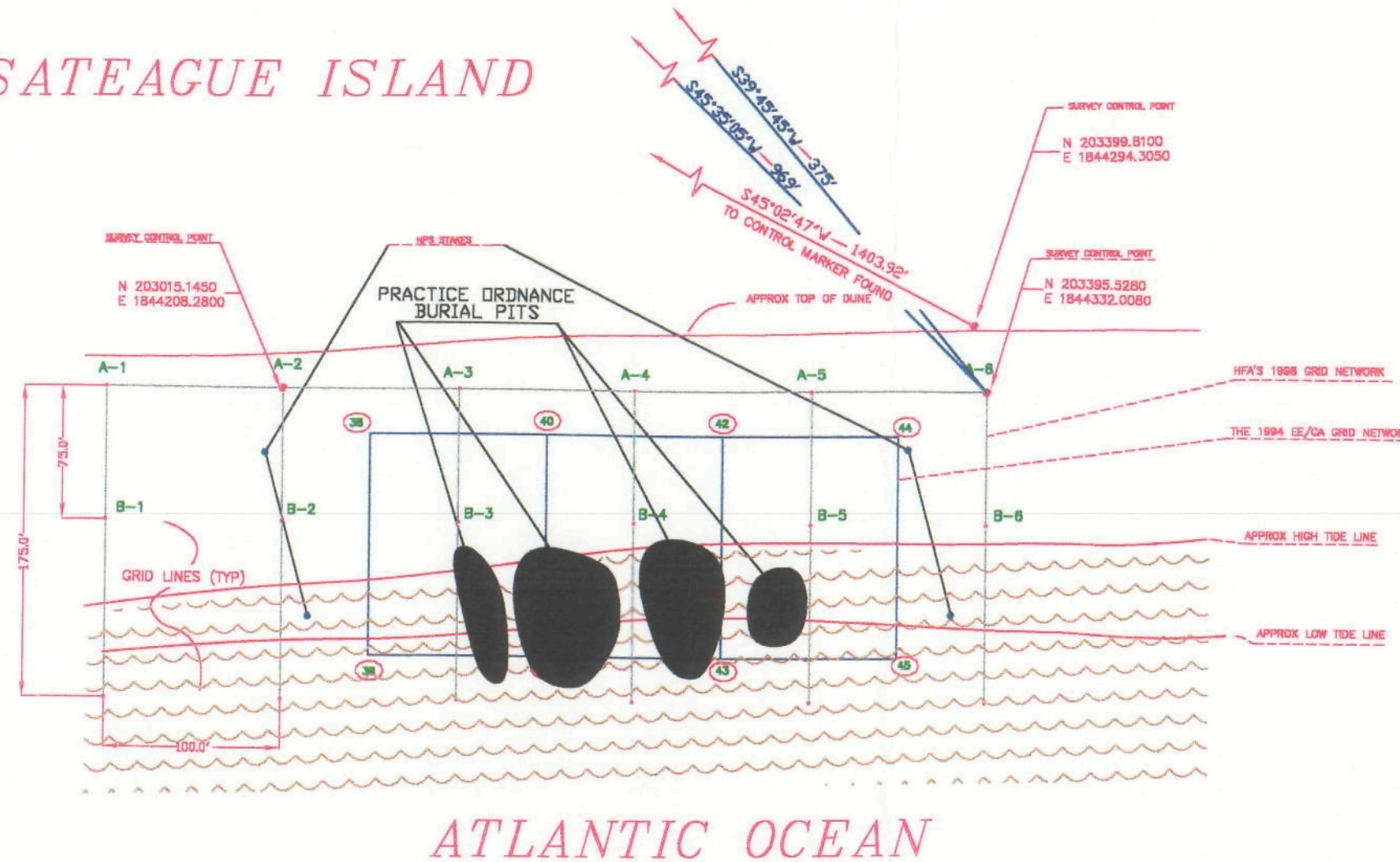
3 **SITE SAFETY**

- 3.1 Site Safety was ensured by HFA's Site Safety Officer (SSO). Each morning prior to the start of work a Site Specific Safety briefing was held by the SSO, and attended by all personnel working on the site. A variety of subjects were covered throughout the project, from ordnance safety and identification to personal health and safety subjects.
- 3.2 During the course of the project, the SSO inspected and certified the condition of all ordnance items, ordnance scrap, and common metallic scrap recovered. He also monitored all search activities and explosive venting procedures. This safety documentation is located in Appendix C.
- 3.3 There were no accidents or injuries reported during the course of this project that resulted in

ASSATEAGUE ISLAND

FIGURE 2-1

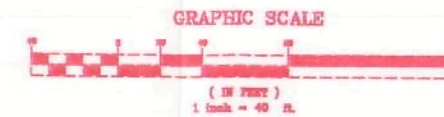
PRACTICE ORDNANCE BURIAL PITS



GRID	NORTHING	EASTING
A1	202920.05	1844177.97
A2	203015.14	1844208.28
A3	203110.24	1844239.21
A4	203205.34	1844270.14
A5	203300.43	1844300.45
A6	203395.52	1844332.01
B1	202896.79	1844248.65
B2	202991.95	1844280.23
B3	203087.04	1844311.16
B4	203182.26	1844340.47
B5	203277.23	1844371.77
B6	203372.33	1844403.95

1994 GRID		
POINT NUMBER	NO. HAD 83, US SURVEY FEET	
	NORTHING	EASTING
38	203054.9800	1844247.5200
39	203016.3200	1844388.3800
44	203340.2300	1844340.3100
45	203301.5900	1844459.1900

AREA A & B SURVEY CONTROL				
POINT NUMBER	NO. HAD 83, US SURVEY FEET		NO. HAD 83, METERS	
	NORTHING	EASTING	NORTHING	EASTING
GPS-7	204898.44	1843741.88	62453.17	581973.58
NORTH BEACH-2	199313.24	1842219.35	60750.80	561509.58



LEGEND (38) 1994 GRID CELL CORNER

REFERENCE: CONTRACT DACAB7-95-D-0027
TASK ORDER-0026
DATED MAY, 1998



ASSATEAGUE ISLAND
MARYLAND

HUMAN FACTORS APPLICATIONS, INC. CORPORATE OFFICES 6000 BUCKINGHAM BRANCH BLVD BETHESDA, MD 20814 PHONE: 301-281-7000 FAX: 301-281-7001	TITLE: CRITICAL REMOVAL ACTION PROJECT: ASSATEAGUE ISLAND, WORCESTER COUNTY, MARYLAND CLIENT: U.S. ARMY CORPS OF ENGINEERS, HUNTSVILLE DIVISION TASK ORDER: DACAB7-95-D-0027	DATE: 15 JUNE 1998
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lost work time. There were no standard UXO safety violations or CEHNC safety violations committed during this project, see Appendix C.

4 **QUALITY CONTROL**

- 4.1 In addition to ensuring safe working conditions were maintained on the site, the Site Safety Officer also performed Quality Control functions. Some specific Quality Control checks were only performed during times when site UXO personnel were not performing removal activities. These specific Quality Control checks primarily consisted of performing a QC check of each grid, see Appendix D.
- 4.2 The daily quality control checks that were combined with the safety duties included, but were not limited to, observing the use and performance of all equipment, inspecting the condition of site vehicles, site equipment, site records, monitoring all removal activities, and monitoring inspection procedures of suspected UXO/OE, and demolition operations. This quality control documentation is contained in, Appendix D.
- 4.3 In addition to his daily inspections, the Quality Control Officer ensured that each morning prior to conducting field operations all Schonstedt magnetometers were tested for proper operation by locating a 105mm projectile buried at a depth of four feet.

5 **EXPOSURE DATA**

- 5.1 During this project a total of 500 ft. of detonating cord, 280 Jet Perforators, and 50 blasting caps were used to explosively vent all practice ordnance items located, see table 5-1. There was no remaining detonating cord, or blasting caps. The remaining jet perforators were shipped to CEHNC's clearance project at Griffiss AFB.
- 5.2 A total of 212 practice ordnance items were recovered. None of the items recovered contained explosives or explosive residue. All ordnance items were visually inspected, and certified free of explosives, prior to being turned over as metal scrap to HD Metal Company, Salisbury, Maryland. see table 5-2, and Appendix D.

Table 5-6
ACCOUNTING BY TASK

Contract Number : DACA87-95-D-0027		Location: Assateague Island, Worchester County, MD										
		Task Order Number : 0026										
		and Accomack County, VA										
		Project: Time Critical Removal Action										
		Labor Hours										
SERV CLIN	LABOR CATEGORY	LABOR RATE								Total Hours	Total Cost	
			Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7			
	Field Office Admin	\$16.61	0	0	0	0	0	0	0	0	0	\$0.00
	Project Manager	\$48.91	48	12	10	8	0	0	6	84	\$4,108.44	
	Laborer	\$13.45	0	0	0	0	0	0	0	0	\$0.00	
	Senior UXO Supervisor	\$40.42	0	10	0	65	16	0	40	131	\$5,295.02	
	Site Safety Officer	\$37.71	44	0	12	21	8	0	0	85	\$3,205.35	
	Quality Control Spec	\$38.75	0	0	0	0	0	91	0	91	\$3,526.25	
	UXO Supervisor	\$34.61	0	10	0	104	68	0	0	182	\$6,299.02	
	UXO Specialist	\$30.34	0	20	0	259	120	0	0	399	\$12,105.66	
	Labor Hours		92	52	22	457	212	91	46	972		
	Labor Cost		\$4,006.92	\$1,944.02	\$941.62	\$15,267.99	\$6,942.68	\$3,526.25	\$1,910.26		\$34,539.74	
	Materials		\$732.64	\$227.50	\$1,879.95	\$12,996.88	\$2,782.50	\$1,194.38	\$1,663.92		\$21,477.76	
	Travel		\$141.21	\$764.22	\$323.32	\$8,166.21	\$3,115.66	\$1,337.38	\$456.36		\$14,304.36	
	Per Diem		\$104.54	\$422.33	\$178.68	\$5,111.64	\$1,721.81	\$739.08	\$262.99		\$8,541.07	
TOTAL COST			\$4,985.31	\$3,358.07	\$3,323.57	\$41,542.72	\$14,562.65	\$6,797.09	\$4,293.53		\$78,862.93	

6 SUMMARY

- 6.1 Field work for this Time Critical Ordnance Removal Project began on 4 May 1998 when HFA mobilized two personnel to Assateague Island National Seashore and began surveying the project area and arranging for support facilities. Two explosive storage magazines were delivered and grounded. Lightning protection was installed on the magazines and they were certified for explosive storage. Explosives were delivered and properly stored in the magazines. Two semi-permanent markers were surveyed in by a professional land surveyor.
- 6.2 HFA's main workforce mobilized to the site on 11 May, and field work began on 13 May 1998 in grid A-1 and A-2. Field activities were canceled on 12 May due to heavy rain and high winds. On 12 and 13 May the local media visited the site and were provided a project briefing, information on the buried ordnance, a demonstration of search activities, and the opportunity to take pictures.
- 6.3 During the course of the project removal activities were conducted on 7.5 days, and a total of 212 ordnance items were recovered from the 2.5 acre site. All of the items recovered were explosively vented, and none were found to contain any explosive or explosive residue. A complete accounting of the ordnance recovered and disposed of is contained in Appendix D.
- 6.4 All personnel and equipment performed satisfactorily. There were no lost work days due to accidents or injuries. One half day was lost due to weather, and two half days were lost to local media interest. More practice ordnance items were located and disposed of than anticipated and the project was completed on schedule. HFA completed all intrusive clearance activities on 20 May, and demobilized the site on 22 May 1998.

7 CONCLUSIONS

- 7.1 HFA cleared the three grids (Cells A-27, A-28, and A-29) that Parsons ES designated as the practice ordnance burial trench to a depth of four feet. HFA also cleared the area within the four markers placed by NPS in February 1998 to a depth of four feet. HFA placed a network of twelve grids that overlapped these two areas, and cleared them to a depth of four feet.
- 7.2 Based upon the results of HFA's removal activities and CEHNC's QA check of the grids, see Appendix D, a "Certificate of Clearance", can be issued for the 2.41 acres as depicted on the site map at Appendix B.
- 7.3 The daily cooperation, and support provided by Chief Ranger John Burns and all of the NPS personnel at Assateague Island National Seashore were instrumental in the completion of this project and was greatly appreciated.

8 RECOMMENDATIONS

- 8.1 Based upon the results of the removal action HFA recommends that no further UXO activities be conducted.
- 8.2 During the removal action, two, 2.25 inch rockets were discovered on the surface, without the aid of a magnetometer. HFA recommends that if any further ordnance items are located on the island, the nearest Park Ranger, or the local National Park Service Office be immediately notified.

- 9 **DOCUMENTATION**
- 9.1 **SCOPE OF WORK, APPENDIX A**
- 9.2 **GENERAL SITE MAP, APPENDIX B**
- 9.3 **SITE SAFETY DOCUMENTATION, APPENDIX C**
- 9.4 **SITE QUALITY CONTROL DOCUMENTATION, APPENDIX D**
- 9.5 **DAILY SITE JOURNALS, APPENDIX E**
- 9.6 **SITE PHOTOGRAPHS, APPENDIX F**
- 9.7 **SITE VIDEO TAPE, APPENDIX G, (PROVIDED SEPARATELY)**
- 9.8 **RECORD OF ENVIRONMENTAL CONSIDERATION, APPENDIX H**

Appendix A

Scope of Work

DACA87-95-D-0027
TASK ORDER #0026, MOD 1

FINAL REMOVAL ACTION REPORT

**SCOPE OF WORK
TIME CRITICAL REMOVAL ACTION
ASSATEAGUE ISLAND
WORCESTER COUNTY, MARYLAND
AND ACCOMACK COUNTY, VIRGINIA**

15 APRIL 98

1.0 BACKGROUND AND GENERAL STATEMENT OF WORK: The work required under this Scope of Work (SOW) falls under the Defense Environmental Restoration Program-Formerly Used Defense Sites (DERP-FUDS). Ordnance and Explosive (OE) contamination exists on property formerly owned by the Department of the Army.

1.1 Explosive ordnance is a safety hazard and constitutes an imminent and substantial endangerment to site personnel and the local populace. During this action, it is the Government's intent that the contract or destroy, by detonation, on-site, all OE items encountered. This action will be performed in accordance with (IAW) the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section 104 and the National Contingency Plan (NCP), Sections 300.120(c) and 300.400(e). In accordance with above, no Federal, State, or Local permits are required for any remedial action taken on this site.

1.2 The provisions of 29 CFR 1910.120 shall apply to all actions taken at this site.

1.2.1 Due to the inherent risk in this type of operation, the contractor shall be limited to a 40-hour work week: either five 8-hour days or four 10-hour days. Unexploded Ordnance (UXO) personnel shall not perform UXO-related tasks for more than 10 hours per day.

1.3 GENERAL DESCRIPTION: This site consists of approximately 17,552 acres: 8,018 acres in Worcester County, Maryland, and 9,534 acres in Accomack County, Virginia. Of that acreage, the U.S. National Park Service (NPS) owns 6,900 acres in Maryland and 205 acres in Virginia that comprise the Assateague Island National Seashore. From 1945 to 1946 or 1947, two areas in Maryland which total 350 acres, were used as practice target ranges, and to a lesser extent, as practice bombing ranges by the U.S. Navy and/or Army Air Corps. During the month of February 1998, 150 OE items washed ashore within Assateague National Park. A March 1995, Site Investigation Report states that all OE items found within Area A during the site investigation were inert munitions scrap, generally in rusted and deteriorated condition. The boundaries of a potential depression were identified in March, 1995 within Area A and is now believed to be the source of all OE washed ashore. The area of concern starts 400 feet from the NE corner of the asphalt parking lot to the SW corner of the area in question and extends 1000 feet thereafter and encompasses all other areas identified by the Navy EOD. A clearance action needs to be performed on approximately 3 to 4 acres of beach within this area. Consequentially from the reemergence of OE, the remaining ordnance at the site may represent a serious OE safety hazard to human health and the environment.

1.3.1 The area from which ordnance related materials are to be removed under this SOW consists of 3 to 4 acres and is comprised of 9 grids and any other area identified by Navy EOD within Area A. The Time-Critical Removal Action (TCRA) area is identified on the attached map which is based on the 1995 report and the February 1998 Navy EOD report.

1.4 DEFINITIONS: Definitions of applicable terms are found in Section C, paragraph 2.4 of the basic contract.

2.0 OBJECTIVE: Safely locate, identify, and dispose of all surface and subsurface OE located at the TCRA sites to a depth of 4 feet.

3.0 DESCRIPTION OF SERVICES:

3.1 (TASK 1) PERFORM SITE VISIT, PREPARE WORK PLAN (WP) AND PROPERTY EQUIPMENT PLAN: This task shall be accomplished in accordance with Section C, subsection 3.2 of the basic contract.

3.1.1 PERFORM SITE VISIT: Prior to preparation of the Work Plan (WP), the contractor shall coordinate the number of days and any site visit travel plans with the CEHNC-PM. The site visit team shall not exceed three persons, one of whom shall be a Senior UXO Supervisor. The site visit shall include coordination with the local emergency management personnel, local Environmental and Land Management office, Fire Department, law enforcement agencies, local Explosive Ordnance Disposal Detachment (EOD), off-site medical facilities, MedEvac procedures, and local airports to determine FAA restrictions over sites. During the site visit, archaeological resources, environmental concerns, and endangered species in the site areas shall be addressed. No UXO related activities will be performed during the site visit. The contractor shall notify the CEHNC Project Manager, Glenn Earhart (205-895-1577), at least 10 calendar days in advance of the site visit. Using the OVERALL SITE MAP, (exhibit 1) and the site survey, locate and identify each of the boundaries of the TCRA area.

3.1.1.1 DISPOSAL ALTERNATIVES: Based on the site visit, the contractor shall define all feasible alternatives for disposal, and shall recommend the safest and most cost effective method of treatment and disposal of the explosive ordnance, inert ordnance, explosives, and debris. If on-site disposal is not possible, per DID OT-040, a Disposal Feasibility Letter Report shall be forwarded to the Contracting Officer (CO). The method of treatment will be selected and approved by the CO after which the contractor will then proceed with preparation of the WP. See Section C, of the basic contract for detailed requirements.

3.1.2 PREPARE WORK PLAN (WP): The contractor shall prepare and submit a site-specific work plan to the Government for approval prior to beginning any UXO-related activities on site. The WP shall outline the contractor's proposed methodology of accomplishing this Time Critical Removal Action. 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 to include snakes, ticks, and other flora and fauna. All UXO related procedures shall comply with *CEHNC Safety Concepts and Basic Considerations for UXO, 16 February 1996*. The WP shall include, as a minimum, the following sub-plans (See Section C, Section 3.0, subsection 3.4, of the basic contract for detailed requirements):

- a. UXO Operational Plan, which will incorporate the Technical and Management Plan without duplicate effort or information.
- b. Site-specific Safety and Health Plan (SSHP). The contractor shall submit a SSHP IAW 29 CFR 1910.120 the contractor shall submit a SSHP that contains OE safety standards and procedures.
- c. Equipment Plan (EP). The contractor shall prepare and submit a detailed EP (as a WP subplan) describing the equipment to be employed to perform all the necessary operations.
- d. Location Survey and Mapping Plan, as detailed in DID OT-020.
- e. Environmental Protection Plan (See Section C).
- f. Quality Control Plan.
- g. Work, Data, and Cost Management Plan.
- h. Other subplans identified in Section C, (basic contract) are not required for this delivery order.

3.1.3 In addition to the hard copy distribution as shown in paragraph 4.0 of this SOW, the contractor shall provide two copies of the WP (in Word Perfect) on a 3.5" computer disk, to CEHNC-OE-DG.

3.1.4 The contractor shall submit work schedule and manpower allocation (by task) with the WP. Any assumptions shall be stated and their basis shall be provided.

3.1.5 The contractor shall notify the CEHNC Project Manager at least 10 calendar days in advance of mobilization for field work after the WP is approved by the CO.

3.2 (TASK 2) PERFORM COMMUNITY RELATIONS: This task shall be accomplished in accordance with Section C, of the basic contract.

3.2.1 The contractor when requested, shall assist in conducting a public meeting and a Media day to inform the public of the purpose of the project, the procedures to be followed, and the cooperation requested. The contractor shall propose the methodology to accomplish this task in the WP.

3.2.2 All press releases and media appearances shall be coordinated with, and approved by, the U.S. Army Corps of Engineers District Public Affairs Officer (PAO).

3.2.3 **PUBLIC AFFAIRS:** The contractor shall not make available or publicly disclose any data generated or reviewed under this contract or at any subcontract unless specifically authorized by the CO and the 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.

3.3 (TASK 3) PERFORM LOCATION SURVEYS AND MAPPING

The Contractor shall perform all location surveys and mapping required to establish boundaries of areas specified in paragraph 1.3 and as required to support the project. During all field and intrusive activities, the survey crew shall perform a UXO survey in each area prior to the surveyors starting work. based on site conditions it is possible that a UXO escort will not be required in all areas at all times after the initial site visit. However, such a decision will be made jointly by the on-site safety officer and the CEHNC Safety Specialist who may rescind or modify it at any time. Grid corners shall be established using precision surveying methods. Each corner of the grid area shall be located by establishing the appropriate state plane grid system to the closest 1 foot and shall be both tabulated and shown on the maps of the site. Other coordinate systems and accuracy specifications are not acceptable and shall not be used. The Contractor shall mark and survey the corners of the designated grids with stakes or other visible temporary markers. Individual locations of recovered UXOs only shall be tape measured or the "x" and "y" distance estimated to obtain a horizontal accuracy of plus or minus one foot from the established grid corners. If subsurface UXOs are encountered, their depth below ground surface shall also be measured. The location of ordnance scrap, ordnance fragments, shrapnel, small arms ammunition and metallic debris shall be recorded only on a "per-grid" basis and not located by coordinates. The use of Total Station, GPS or other precision survey methods to locate individual UXOs, UXO scrap, or geophysical anomalies within a grid shall not be performed. A magnetometer shall be used to survey the location for the establishment of any monument or markers.

3.3.1 Control Points: Wooden hubs shall be used for all basic control points. If any new concrete monuments are established for horizontal control, they shall be established and set flush with the ground, be located within the limits of the project, be set at least 10 meters from the edge of any existing road, and be a minimum of 300 meters apart. Witness posts shall be set within 1 meter of each monument. Horizontal control (1:10,000 and reference to NAD83) and vertical control (1:5,000 and referenced to NAVD88) of "Third Order" or better and based on the metric system using the International Survey foot (One Inch = 25.4 Millimeters (mm) and One meter = 3.2808399 Feet) shall be established for each monument. The aerial targets used to control the photography shall also meet this criteria. All of the control points recovered and/or established at the site shall be plotted at the appropriate coordinate point on the drawings and shall be identified by the name and number and the final adjusted coordinates and elevations. Each new monument shall have a 3 1/4 inch - 3 1/2 inch domed bronze, brass, or aluminum survey marker (cap) set in the top of the monument. The new monuments shall be numbered and stamped in sequence as follows:

ASSAI-1-1998
USAESCH,HSV

ASSAI-2-1998
USAESCH,HSV

ASSAI-3-1998
USAESCH,HSV

The dies for stamping the numbers and letters into these caps shall be 1/8 inch to 3/16 inch in size. All coordinates and elevations shall be closest one-thousandth of a meter (0.001 m) and one-hundredth of a foot (0.01 ft.) All the control points recovered and/or established within the project area shall be plotted at the appropriate coordinate point on a reproducible (Mylar) planimetric map at a scale appropriate to fit on an A-1 size sheet. Each control point shall be identified by name or number, final adjusted coordinates, and final adjusted elevation. A "Description Card" for each monument and a tabulated list of all control points established or used shall be submitted in accordance with (IAW) paragraph 3.4.1 of this SOW.

3.3.1.1 The Description Card shall show a north arrow; 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 (if available) in meters and feet (to the closest 0.001 m 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. Electronic copies may be provided in electronic format compatible with Microstation (Version 5.0) DGN format.

3.3.1.2 Field Notes. All field notes are to be clearly and precisely recorded in standard field books or in a data recorder, and there are to be no erasures made in these books. All original field books and printouts are to be submitted to CEHNC in accordance with paragraph 4.2, Submittal Schedules.

3.3.2 Digital Data.

3.3.3.1 General Design File Requirements:

3.3.3.1.1 An overall planimetric design file shall be created. The planimetric feature data shall be digitized into an Intergraph Microstation ".dgn" file at an elevation of zero. This file shall contain boundaries, the file name, and coordinates of the area of coverage.

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

3.3.3.1.2.1 Each sheet border and sheet-dependent element shall occupy a separate file and be referenced to the planimetric and topographic files.

3.3.3.1.2.2 The fast curve display must be off when digitizing.

3.3.3.1.2.3 Each file shall have a standard metric A-1 size drawing which is 841 mm by 594 mm (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, a magnetic north, a grid north, and a true north arrow, and be plotted at a horizontal scale of 1:2,000.

3.3.3.1.2.4 Each file shall be checked by viewing a top view to detect errors in element position.

3.3.3.1.2.5 The cell library used shall be attached.

3.3.3.1.2.6 A list of level assignments utilized shall be submitted. Refer to paragraph 3.4.7, "Digital Format for Intergraph Data Surveying/Mapping", for level assignments and additional information.

3.3.3.1.2.7 No digital data will be accepted until proven compatible with the CEHNC Graphics System. All revisions required to obtain compatibility with the CEHNC Graphics System shall be done at the AE's own expense.

3.3.3.2 Specific Design File Requirements:

3.3.3.2.1 The design file border sheet shall accommodate a scale of 1:2,000. All surface features shall appear in the design file.

3.3.3.2.2 In accordance with paragraph 4.9, the Government shall be provided with a copy of the design files on 8 mm, 2.3, 5.0 or 10.0 gigabyte magnetic tapes, or 3.5" floppy disks, or approved CD-ROM format. The CD-ROMs are preferred. The data to be submitted shall contain the final, corrected version of the design file. The tapes or disks shall be labeled, showing the project name, project number, date, company name, address and telephone number, and the number of files.

3.3.3 Digital Format for Intergraph Data Survey/Mapping:

3.3.3.1 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 product will be a usable and consistent CADD document.

3.3.3.2 Design File Requirements:

3.3.3.2.1 General. The required data shall be placed into Intergraph Microstation 3D design files.

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

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

3.3.3.2.4 Compress All Design Files: Design files shall be submitted 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 & grid. Fonts 1, 2, 3, 10, 23, 24 and 51 will be downloaded and unused levels will be off.

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

3.3.3.2.6 The use of font # 3 (straight up) for spot elevations above the datum (which has its origin as the decimal point of spot elevation) and the use of "slanted font # 61" for depths below the datum shall be a standard. If the slant font is not available, the use of "+" for above datum elevations and no sign for elevations below the datum shall be used for hydrographic surveys.

3.3.3.2.7 Each sheet shall be a standard metric A-1 size drawing, have a standard border, revision block, title block, index sheet layout, legend, grid lines and grid tic layout, scale bar, and True North, Grid North, and Magnetic North arrows with the differences between them 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. Note: A standard metric A-1 size drawing is 841 mm by 594 mm (33.1 inches by 23.4 inches).

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

3.3.3.4 Survey-Mapping Drafting Practices:

3.3.3.4.1 A sheet index for the project shall be prepared that includes enough of the planimetric data to indicate the sheet's geographical location in the project, 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 being cross hatched or heavily outlined. If required, a separate file may be utilized for the index.

3.3.3.4.2 All text, except contours will be font # 3.

3.3.3.5 Data shall be digitized and furnished to CEHNC in two primary 3D CADD files (planimetric) each being compatible with the other such that the files may be overlaid and used as a reference file. The primary files shall contain all survey data. The individual sheet design files, as required, will use the primary files 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 CD-ROMs containing all the source files required to produce the final drawings shall be provided. The level/feature information in Table 1 shall be used in creating these files.

3.3.3.6 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 and use of each is required. In addition, provide a description of how the individual design files are assembled to produce the final plots; i.e., design file name, reference file name(s), color table, etc.

3.4 (TASK 4) PERFORM OE REMOVAL

This task shall be accomplished in accordance with Section C, of the basic contract.

3.4.1 The contractor shall provide all necessary personnel and equipment or GFE if available and coordinated with the Huntsville Project Manager to perform OE clearance of the SOW stated sites and to dispose of all UXO on-site. This clearance action shall include all OE and all OE related scrap.

3.4.2 The contractor shall propose a planned, systematic approach to search and clear the project sites of OE that will result in optimum search effectiveness. The total acreage to be cleared ranges from 3 to 4 acres. This clearance may include a possible 4 foot trench and 9 150x100 feet grids. This methodology shall be outlined in the WP.

3.4.2.1 The TCRA Site shall be cleared to a depth of 4 feet. If an anomaly is detected below 4 feet, the on-site CEHNC Safety Specialist shall determine if deeper excavation is required. Work schedule should consider the low and high tides for the duration of the project. There are two opportune daily time durations for maximum work productivity on the tidal flat.

3.4.2.2 CEHNC-OE-DG shall provide the contractor with locations of TCRA surface ordnance sites found during the 1995 Site Investigation. All surface OE items shall be destroyed at these locations.

3.4.3 During subsurface operations, the contractor shall utilize a magnetometer capable of detecting a 90mm projectile at a depth of 4 feet.

3.4.3.1 Magnetometers shall be field tested daily to ensure they are operating properly. This shall be accomplished by planting an inert 90mm projectile 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.

3.4.4 All access/excavation/detonation holes shall be backfilled.

3.4.5 The contractor shall maintain a detailed accounting of all OE items/components encountered. This accounting shall include the amounts of OE, the identification and condition, depth located, disposition and location/mapping. This accounting shall be a part of the Removal Report.

3.4.5.1 The accounting system shall also account for all demolition materials utilized to detonate OE on-site.

3.4.6 If a scenario is encountered that precludes the contractor from detonating a UXO on site, an unidentified UXO is located, or suspected toxic chemical munitions are encountered, the on-site CEHNC Safety Specialist shall be notified, who in turn will request EOD Support.

3.5 (TASK 5) TURN-IN OF RECOVERED INERT ORDNANCE AND OE RELATED SCRAP

3.5.1 The contractor shall furnish all necessary personnel and equipment to turn-in all recovered inert ordnance items and ordnance related scrap. This task shall be accomplished as per Section C, of the basic contract.

3.5.2 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 the 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."

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

3.5.4 Should the servicing DRMO refuse to accept the OE related scrap, the contractor shall make arrangements with a local scrap contractor at no fee to the Government, to pickup the inert scrap material.

3.6 (TASK 6) PERFORM QUALITY CONTROL.

3.6.1 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.

3.6.2 The individual performing the UXO QC shall not be involved in the performance of Task 4 above. UXO QC shall be a separate function and is not envisioned as a full-time position. The UXO QC Specialist shall meet the minimum prerequisites as outlined in Section C, of the basic contract.

3.6.3 The execution of this Task shall conform to the approved Work Plan.

3.7 (TASK 7) PREPARE AND SUBMIT REMOVAL REPORT

The contractor shall accomplish this task in accordance with Section C, of the basic contract. At the conclusion of all field activities, the contractor shall submit a Final Report which shall consist of the following:

3.7.1 All original Surveying and Mapping Data from Task 3.

3.7.2 Detailed accounting by listed area of all UXO and OE related materials located and disposed of.

3.7.3 A system of typed daily journals of all activities associated with this SOW. A daily journal for the site shall be opened upon first arrival for field operations and closed after contractor demobilization at the project site.

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

3.7.5 QC documentation.

3.7.6 All DRMO turn-in documentation.

3.7.7 A minimum of 20 4" X 7" (10 X 15cm) color photographs shall be included in the report depicting major action items and UXO discoveries. The original Final Report furnished to CEHNC shall include original photographic prints. Photographs contained in draft submissions and copies of final submissions shall be color reproductions.

3.7.8 Public meeting written record (if public meeting is required).

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

3.8 CONTRACTOR QUALIFICATIONS:

The contractor shall furnish a staff that is qualified through education, training, and pertinent experience that shall accomplish the objectives and tasks of this SOW. Training requirements under 29 CFR 1910.120(e) apply to this project. See Section C, of the basic contract.

3.8.1 UXO personnel shall meet the qualifications outlined in Section C of the basic contract. Equipment operators shall be experienced on equipment operated.

3.8.2 Contractor person(s) conducting the Public Meeting shall have experience in public speaking and conducting public meetings.

4.0 SUBMITTALS: The contractor shall furnish copies of the Removal Report, as identified in paragraph 3.7 to each addressee listed below in the quantities indicated. The contractor shall use express mail services for delivering this Removal Report. Following each submission, comments generated as a result of their review shall be incorporated.

ADDRESSEE	COPIES
US ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE ATTN: CEHNC-OE-DG (MR. GLENN EARHART) PO BOX 1600 4820 UNIVERSITY SQUARE HUNTSVILLE, AL. 35807-4301	6
NATIONAL PARK SERVICE PARK RANGER C/O ASSATEAGUE ISLAND NATIONAL SEASHORE 7206 NATIONAL SEASHORE LANE BERLIN, MD 21811	2
US ARMY ENGINEER DIVISION, NORTH ATLANTIC ATTN: CENAD-FUDS MGR (MS. EILEEN BARRY) 90 CHURCH STREET NEW YORK, NY 10007-2979	2
US ARMY ENGINEER DISTRICT, BALTIMORE ATTN: CENAB-PP-E (MS. SHEILA BLOOM) P.O. BOX 1715 BALTIMORE, MD 21203-1715	5

4.1 SUBMITTALS AND DUE DATES

SUBMITTAL	DUE DATE
Draft Work Plan	April 19, 1998
Review Draft Work Plan	April 30, 1998
Final Work Plan	May 7, 1998
Approve Work Plan	May 12, 1998
Site Mobilization	May 13, 1998
Remediation	May 15, 1998
Demobilization	June 12, 1998
Draft Removal Report	June 16, 1998
Final Removal Report	July 28, 1998
Completion	August 11, 1998

4.2 Data items Status Report and Telephone/ Conversation Report are due monthly. The original of each of these reports shall be sent within 10 working days of the end of the reporting period by normal mail to:

US ARMY ENGINEER DIVISION, HUNTSVILLE
ATTN: CEHNC-OE-DG (Mr. Glenn Earhart)
4820 UNIVERSITY SQUARE
HUNTSVILLE, AL 35816-1822

4.3 Project Manager. The designated CEHNC Project Manager for this delivery order referred to in Task 1 is Mr. Glenn Earhart, Ordnance & Explosives Team; telephone 205-895-1577; fax 205-895-1378.

5.0 APPLICABLE REGULATIONS: See Section C, subsection 5.0, of the basic contract.

5.1 AR 385-40 with USACE Supplements, Accident Reporting and Records.

6.0 GOVERNMENT FURNISHED:

6.1 Right-of-entry.

6.2 Pertinent UXO Technical publications as required.

6.3 Project Archive Search Reports and any other available data.

6.4 Availability of government furnished equipment shall be coordinated through the CEHNC Project Manager.

7.0 SPECIAL INSTRUCTIONS:

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

7.2 If UXO is located within a grid during the UXO QA search, the contractor will be required to, again, search and clear the entire grid.

Memorandum for Record

To: Glen Earhart
From: Michael Winningham
CC: David Frandsen
Date: 05/07/98
Re: Area of Concern

This MFR is in reference to our telephone conversation on May 5th, in which you were informed that the known OE contaminated area as marked by the National Park Service, is the suspected burial trench. This was determined when the surveyors discovered the northing/eastings for the known OE contaminated area was within a few feet of the northing/eastings of the suspected burial trench. Therefore, based on our conversation, the surveyors have established a grid network that will encompass the burial trench (See Figure 1). Additionally, a 25' buffer to the east and west of the burial trench and a 150' buffer to the south and north of the burial trench has been include into the grid network.

HFA will only perform intrusive activities in those grids that are contaminated with OE, once the limits of the burial trench has been located, HFA will finish searching the grid, but will not search any other grids.

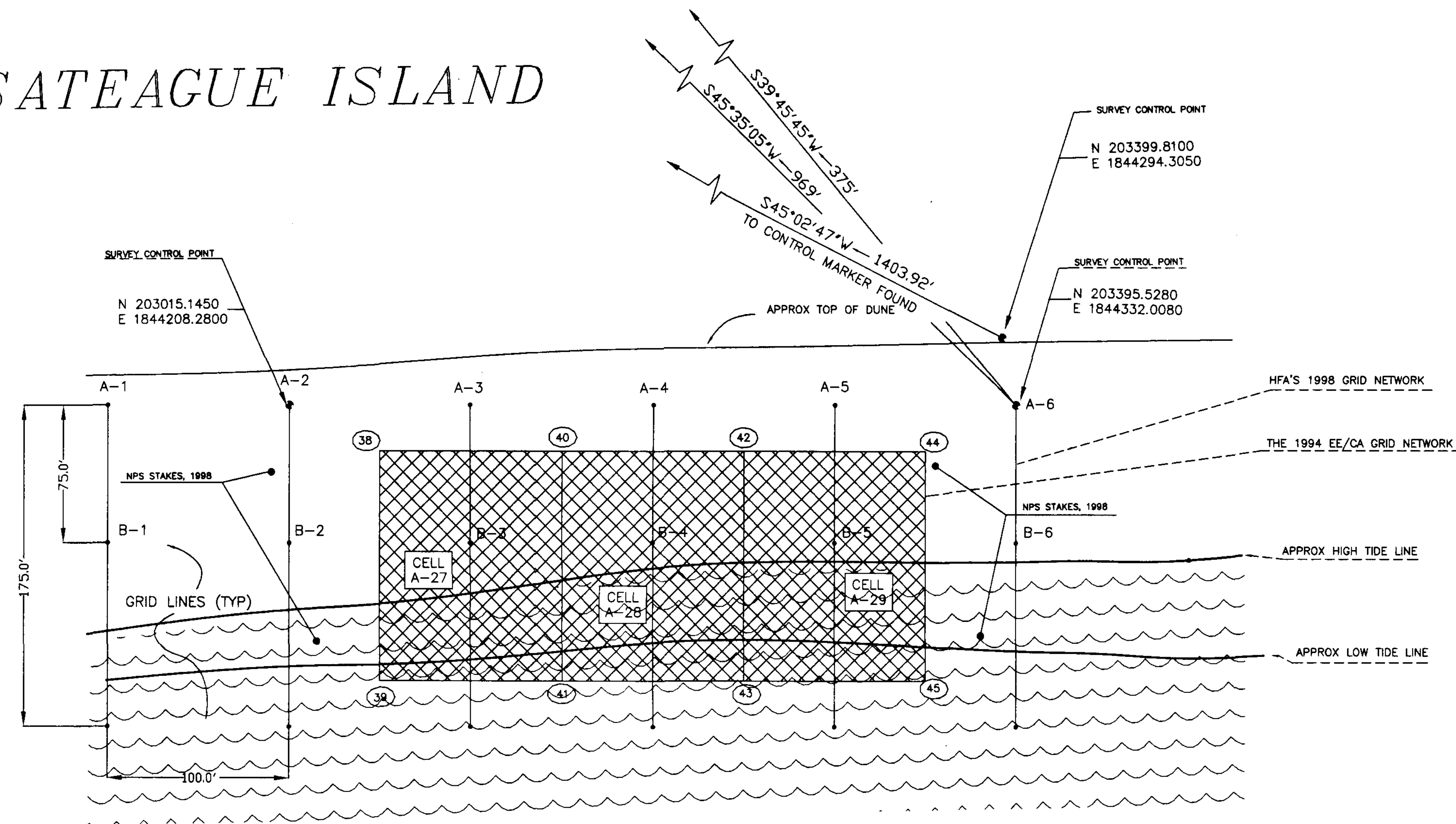
If you have any questions or concerns with this matter, please contact Dave Frandsen or myself at (301) 705-5044.

Michael Winningham

Appendix B

Site Map

ASSATEAGUE ISLAND

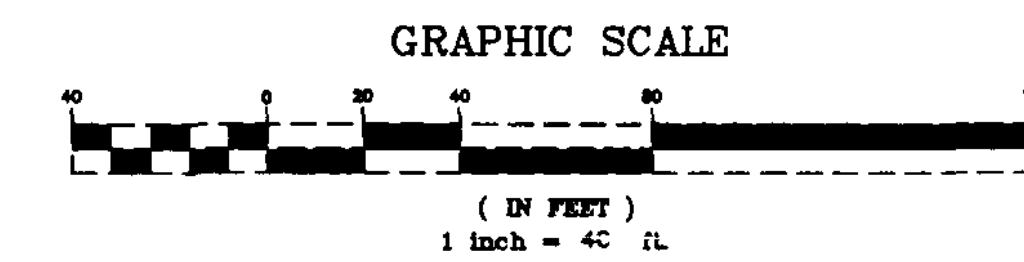
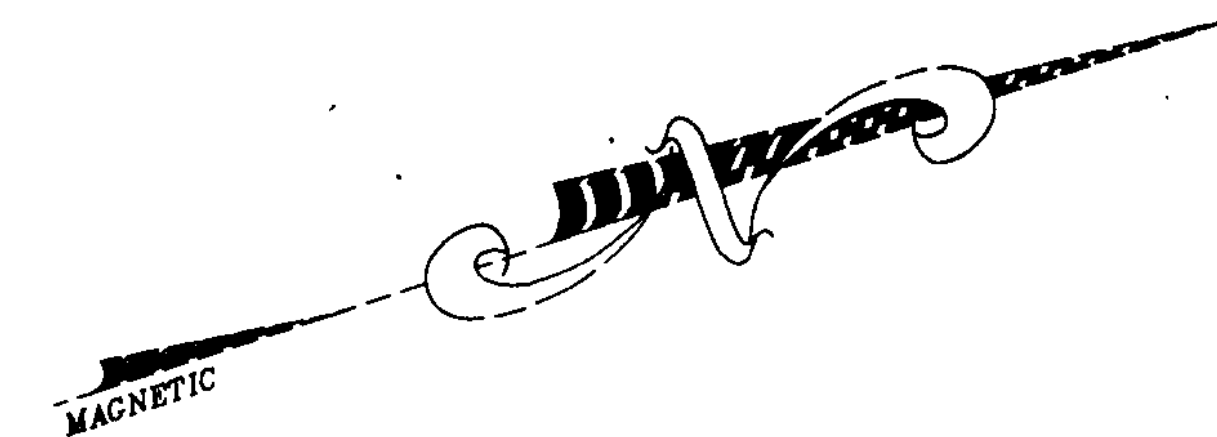


GRID	NORTHING	EASTING
A1	202920.05	1844177.97
A2	203015.14	1844208.28
A3	203110.24	1844239.21
A4	203205.34	1844270.14
A5	203300.43	1844300.45
A6	203395.52	1844332.01
B1	202896.79	1844248.65
B2	202991.95	1844280.23
B3	203087.04	1844311.16
B4	203182.26	1844340.47
B5	203277.23	1844371.77
B6	203372.33	1844403.95

ATLANTIC OCEAN

1994 GRIDS		
POINT NUMBER	MD. NAD 83, US SURVEY FEET	
	NORTHING	EASTING
38	203054.9600	1844247.5200
39	203016.3200	1844366.3800
44	203340.2300	1844340.3100
45	203301.5900	1844459.1900

AREA A & B SURVEY CONTROL				
POINT NUMBER	MD. NAD 83, US SURVEY FEET		MD. NAD 83, METERS	
	NORTHING	EASTING	NORTHING	EASTING
GPS-7	204898.44	1843741.66	62453.17	561973.58
NORTH BEACH-2	199313.24	1842219.35	60750.80	561509.58



LEGEND



1994 GRIDS

39 1994 GRID CELL CORNER

REFERENCE: CONTRACT DACA87-95-D-0027
TASK ORDER-0026
DATED MAY, 1998




ASSATEAGUE ISLAND
MARYLAND

HUMAN FACTORS APPLICATIONS, INC. CORPORATE OFFICES 4950 BUCKINGHAM GREEN, ROUTE 202 BUILDING 1, SUITE 2A MELLSBORO, PA 18928 PHONE: (610) 794-3332 FAX: (610) 794-7359 BRANCH OFFICE, VALDORF, MD PHONE: (301) 798-0944 FAX: (301) 798-7561	TIME CRITICAL REMOVAL ACTION ASSATEAGUE ISLAND, WORCESTER COUNTY, MARYLAND U.S. ARMY CORPS OF ENGINEERS, HUNTSVILLE DIVISION DACA87-95-D-0027 #0026	SCALE: 1 INCH = 40 FEET DRAWN BY: ISO A1 DATE: 15 SEPT 1998	MD 83, US STATE PLANE
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Appendix C

Safety Documentation


DAILY SITE SAFETY JOURNAL

DATE: 12 May 98	PROJECT: Assateague Island			
SUXOS: Phil Curry	PM: Dave Frandsen			
SSO/QC: Thomas Brandt				
AREA / ITEMS INSPECTED	SAT	UNSAT		
Proper work attire (PPE)	SAT			
Vehicle condition	SAT			
Emergency equipment	SAT			
Safe demolition procedures				
Field office, inside				
Field office grounds				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Last Work Days Events <input checked="" type="checkbox"/> Site Description <input checked="" type="checkbox"/> Work Area Description <input checked="" type="checkbox"/> Work Area Hazards <input checked="" type="checkbox"/> On-Site Emergency <input checked="" type="checkbox"/> Site Evacuation Procedures <input checked="" type="checkbox"/> Emergency Response Personnel <input checked="" type="checkbox"/> Emergency Telephone Numbers <input checked="" type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other _____ </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Safety Concerns <input checked="" type="checkbox"/> Personnel Protective Equipment <input checked="" type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____ </td> </tr> </table>			<input type="checkbox"/> Last Work Days Events <input checked="" type="checkbox"/> Site Description <input checked="" type="checkbox"/> Work Area Description <input checked="" type="checkbox"/> Work Area Hazards <input checked="" type="checkbox"/> On-Site Emergency <input checked="" type="checkbox"/> Site Evacuation Procedures <input checked="" type="checkbox"/> Emergency Response Personnel <input checked="" type="checkbox"/> Emergency Telephone Numbers <input checked="" type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other _____	<input type="checkbox"/> Safety Concerns <input checked="" type="checkbox"/> Personnel Protective Equipment <input checked="" type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____
<input type="checkbox"/> Last Work Days Events <input checked="" type="checkbox"/> Site Description <input checked="" type="checkbox"/> Work Area Description <input checked="" type="checkbox"/> Work Area Hazards <input checked="" type="checkbox"/> On-Site Emergency <input checked="" type="checkbox"/> Site Evacuation Procedures <input checked="" type="checkbox"/> Emergency Response Personnel <input checked="" type="checkbox"/> Emergency Telephone Numbers <input checked="" type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other _____	<input type="checkbox"/> Safety Concerns <input checked="" type="checkbox"/> Personnel Protective Equipment <input checked="" type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____			
Comments: <u>High surf, Rain and Windy. Site shut down due to weather.</u>				
-				
SSO SIGNATURE: 				


DAILY SITE SAFETY JOURNAL

DATE: 13 May 98	PROJECT: Assateague Island	
SUXOS: Phil Curry	PM: Dave Frandsen	
SSO/QC: Thomas Brandt		
AREA / ITEMS INSPECTED	SAT	UNSAT
Proper work attire (PPE)	SAT	
Vehicle condition	SAT	
Emergency equipment	SAT	
Safe demolition procedures		
Field office, inside		
Field office grounds		
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input type="checkbox"/> Work Area Description <input type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID </div> <div style="width: 45%;"> <input type="checkbox"/> Safety Concerns <input type="checkbox"/> Personnel Protective Equipment <input type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material </div> </div> <p><input checked="" type="checkbox"/> Other <u>ELECTRIC DEMO PROCEDURES</u> <input checked="" type="checkbox"/> Other <u>HEAVY EQUIPMENT</u></p>		
Comments: _____		
SSO SIGNATURE: 		


DAILY SITE SAFETY JOURNAL

DATE: 14 May 98	PROJECT: Assateague Island			
SUXOS: Phil Curry	PM: Dave Frandsen			
SSO/QC: Thomas Brandt				
AREA / ITEMS INSPECTED	SAT	UNSAT		
Proper work attire (PPE)	SAT			
Vehicle condition	SAT			
Emergency equipment	SAT			
Safe demolition procedures	SAT			
Field office, inside				
Field office grounds				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input type="checkbox"/> Work Area Description <input checked="" type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input checked="" type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other <u>SUN BURN</u> </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Safety Concerns <input type="checkbox"/> Personnel Protective Equipment <input type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____ </td> </tr> </table>			<input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input type="checkbox"/> Work Area Description <input checked="" type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input checked="" type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other <u>SUN BURN</u>	<input type="checkbox"/> Safety Concerns <input type="checkbox"/> Personnel Protective Equipment <input type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____
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Comments: _____				
SSO SIGNATURE: 				

DAILY SITE SAFETY JOURNAL

DATE: 15 May 98	PROJECT: Assateague Island			
SUXOS: Phil Curry	PM: Dave Frandsen			
SSO/QC: Thomas Brandt				
AREA / ITEMS INSPECTED	SAT	UNSAT		
Proper work attire (PPE)	SAT			
Vehicle condition	SAT			
Emergency equipment	SAT			
Safe demolition procedures	SAT			
Field office, inside				
Field office grounds				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input type="checkbox"/> Work Area Description <input checked="" type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other _____ </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Safety Concerns <input checked="" type="checkbox"/> Personnel Protective Equipment <input type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input checked="" type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____ </td> </tr> </table>			<input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input type="checkbox"/> Work Area Description <input checked="" type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other _____	<input type="checkbox"/> Safety Concerns <input checked="" type="checkbox"/> Personnel Protective Equipment <input type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input checked="" type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____
<input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input type="checkbox"/> Work Area Description <input checked="" type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other _____	<input type="checkbox"/> Safety Concerns <input checked="" type="checkbox"/> Personnel Protective Equipment <input type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input checked="" type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____			
Comments: _____				
SSO SIGNATURE: 				

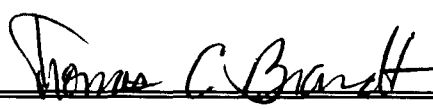
DAILY SITE SAFETY JOURNAL

DATE: 18 May 98	PROJECT: Assateague Island			
SUXOS: Phil Curry	PM: Dave Frandsen			
SSO/QC: Thomas Brandt				
AREA / ITEMS INSPECTED	SAT	UNSAT		
Proper work attire (PPE)	SAT			
Vehicle condition	SAT			
Emergency equipment	SAT			
Safe demolition procedures	SAT			
Field office, inside				
Field office grounds				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input checked="" type="checkbox"/> Work Area Description <input type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID </td> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Safety Concerns <input checked="" type="checkbox"/> Personnel Protective Equipment <input checked="" type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input checked="" type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material </td> </tr> </table> <p> <input checked="" type="checkbox"/> Other <u>Slips, Trips, and falls</u> <input type="checkbox"/> Other _____ </p>			<input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input checked="" type="checkbox"/> Work Area Description <input type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID	<input checked="" type="checkbox"/> Safety Concerns <input checked="" type="checkbox"/> Personnel Protective Equipment <input checked="" type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input checked="" type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material
<input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input checked="" type="checkbox"/> Work Area Description <input type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID	<input checked="" type="checkbox"/> Safety Concerns <input checked="" type="checkbox"/> Personnel Protective Equipment <input checked="" type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input checked="" type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material			
Comments: <u>Observed Track Hoe Operations.</u>				
SSO SIGNATURE: 				


DAILY SITE SAFETY JOURNAL

DATE: 19 May 98	PROJECT: Assateague Island			
SUXOS: Phil Curry	PM: Dave Frandsen			
SSO/QC: Thomas Brandt				
AREA / ITEMS INSPECTED	SAT	UNSAT		
Proper work attire (PPE)	SAT			
Vehicle condition	SAT			
Emergency equipment	SAT			
Safe demolition procedures	SAT			
Field office, inside				
Field office grounds				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input checked="" type="checkbox"/> Work Area Description <input type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other _____ </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Safety Concerns <input type="checkbox"/> Personnel Protective Equipment <input checked="" type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____ </td> </tr> </table>			<input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input checked="" type="checkbox"/> Work Area Description <input type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other _____	<input type="checkbox"/> Safety Concerns <input type="checkbox"/> Personnel Protective Equipment <input checked="" type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____
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Comments: <u>Observed teams during clearance, track hoe, and demo operations.</u>				
SSO SIGNATURE:				

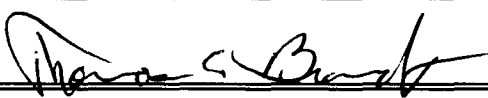
DAILY SITE SAFETY JOURNAL

DATE: 20 May 98	PROJECT: Assateague Island			
SUXOS: Phil Curry	PM: Dave Frandsen			
SSO/QC: Thomas Brandt				
AREA / ITEMS INSPECTED	SAT	UNSAT		
Proper work attire (PPE)	SAT			
Vehicle condition	SAT			
Emergency equipment	SAT			
Safe demolition procedures	SAT			
Field office, inside				
Field office grounds				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input checked="" type="checkbox"/> Work Area Description <input type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input checked="" type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other _____ </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Safety Concerns <input type="checkbox"/> Personnel Protective Equipment <input checked="" type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____ </td> </tr> </table>			<input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input checked="" type="checkbox"/> Work Area Description <input type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input checked="" type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other _____	<input type="checkbox"/> Safety Concerns <input type="checkbox"/> Personnel Protective Equipment <input checked="" type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____
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Comments: _____				
SSO SIGNATURE: 				

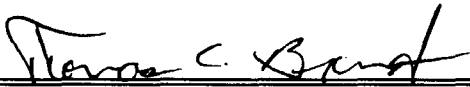
DAILY SITE SAFETY JOURNAL

DATE: 21 May 98	PROJECT: Assateague Island			
SUXOS: Phil Curry	PM: Dave Frandsen			
SSO/QC: Thomas Brandt				
AREA / ITEMS INSPECTED	SAT	UNSAT		
Proper work attire (PPE)				
Vehicle condition				
Emergency equipment				
Safe demolition procedures				
Field office, inside				
Field office grounds				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input type="checkbox"/> Work Area Description <input type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other _____ </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Safety Concerns <input type="checkbox"/> Personnel Protective Equipment <input checked="" type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____ </td> </tr> </table>			<input checked="" type="checkbox"/> Last Work Days Events <input type="checkbox"/> Site Description <input type="checkbox"/> Work Area Description <input type="checkbox"/> Work Area Hazards <input type="checkbox"/> On-Site Emergency <input type="checkbox"/> Site Evacuation Procedures <input type="checkbox"/> Emergency Response Personnel <input type="checkbox"/> Emergency Telephone Numbers <input type="checkbox"/> Directions to Hospital <input type="checkbox"/> First Aid <input type="checkbox"/> Heat / Cold Stress <input type="checkbox"/> Asbestos Awareness & ID <input type="checkbox"/> Other _____	<input type="checkbox"/> Safety Concerns <input type="checkbox"/> Personnel Protective Equipment <input checked="" type="checkbox"/> Safe Work Practices <input type="checkbox"/> Emergency Response Plan <input type="checkbox"/> Chemical Hazards <input type="checkbox"/> Emergency Equipment, Location <input type="checkbox"/> Emergency Equipment, by Type <input type="checkbox"/> Emergency Decontamination <input type="checkbox"/> Safe Work Practices - General <input type="checkbox"/> Site specific OE Safety Precautions <input type="checkbox"/> Site specific OE Identification Features <input type="checkbox"/> Liquid Contaminates / Landfill Material <input type="checkbox"/> Other _____
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Comments: <u>Scrap turn in and equipment pack out.</u>				
SSO SIGNATURE: 				


DAILY QUALITY CONTROL JOURNAL

DATE: 12 May 98	PROJECT: Assateague Island		
SUXOS: Phil Curry	PM: Dave Frandsen		
SSO/QC: Thomas Brandt			
MAG TYPE USED: Schonstedt	MAG SETTING USED: MAX		
AREA / ITEMS QC'ed	TEAM	SAT	UNSAT
Proper work attire (PPE)	1&2	SAT	
Morning Schonstedt check			
Vehicle condition	1&2	SAT	
Equipment condition	1&2	SAT	
Emergency equipment, first aid kit, burn kit, fire ext.	1&2	SAT	
Proper grid layout			
Proper search techniques			
Proper use of grubbing equipment			
Compliance with demolition procedures			
Proper tamping techniques, demo shot			
Team leaders daily paperwork			
Office paperwork			
Mapping and UXO data			
Field office, inside			
Field office grounds			
QCO SIGNATURE: 			

DAILY QUALITY CONTROL JOURNAL

DATE: 13 May 98	PROJECT: Assateague Island		
SUXOS: Phil Curry	PM: Dave Frandsen		
SSO/QC: Thomas Brandt			
MAG TYPE USED: Schonstedt	MAG SETTING USED: MAX		
AREA / ITEMS QC'ed	TEAM	SAT	UNSAT
Proper work attire (PPE)	1&2	SAT	
Morning Schonstedt check	1&2	SAT	
Vehicle condition	1&2	SAT	
Equipment condition	1&2	SAT	
Emergency equipment, first aid kit, burn kit, fire ext.	1&2	SAT	
Proper grid layout	1	SAT	
Proper search techniques	1	SAT	
Proper use of grubbing equipment			
Compliance with demolition procedures			
Proper tamping techniques, demo shot			
Team leaders daily paperwork			
Office paperwork			
Mapping and UXO data			
Field office, inside			
Field office grounds			
COMMENTS: Team 2 is the track hoe team. Test source was set.			
QCO SIGNATURE: 			

DAILY QUALITY CONTROL JOURNAL

DATE: 14 May 98	PROJECT: Assateague Island		
SUXOS: Phil Curry	PM: Dave Frandsen		
SSO/QC: Thomas Brandt			
MAG TYPE USED: Schonstedt	MAG SETTING USED: MAX		
AREA / ITEMS QC'ed	TEAM	SAT	UNSAT
Proper work attire (PPE)	1&2	SAT	
Morning Schonstedt check	1&2	SAT	
Vehicle condition	1&2	SAT	
Equipment condition	1&2	SAT	
Emergency equipment, first aid kit, burn kit, fire ext.	1&2	SAT	
Proper grid layout	1	SAT	
Proper search techniques	1	SAT	
Proper use of grubbing equipment			
Compliance with demolition procedures	1&2	SAT	
Proper tamping techniques, demo shot	1&2	SAT	
Team leaders daily paperwork	1&2	SAT	
Office paperwork			
Mapping and UXO data			
Field office, inside			
Field office grounds			
COMMENTS: The following grid was QC'd: A-1			
QCO SIGNATURE: 			

DAILY QUALITY CONTROL JOURNAL

DATE: 15 May 98	PROJECT: Assateague Island		
SUXOS: Phil Curry	PM: Dave Frandsen		
SSO/QC: Thomas Brandt			
MAG TYPE USED: Schonstedt	MAG SETTING USED: MAX		
AREA / ITEMS QC'ed	TEAM	SAT	UNSAT
Proper work attire (PPE)	1&2	SAT	
Morning Schonstedt check	1&2	SAT	
Vehicle condition	1&2	SAT	
Equipment condition	1&2	SAT	
Emergency equipment, first aid kit, burn kit, fire ext.	1&2	SAT	
Proper grid layout	1	SAT	
Proper search techniques	1	SAT	
Proper use of grubbing equipment			
Compliance with demolition procedures	1&2	SAT	
Proper tamping techniques, demo shot	1&2	SAT	
Team leaders daily paperwork	1&2	SAT	
Office paperwork			
Mapping and UXO data	1&2	SAT	
Field office, inside			
Field office grounds			
COMMENTS: The following grid's were QC'd: A-5, A-6			
QCO SIGNATURE: <i>Thomas C. Brandt</i>			

DAILY QUALITY CONTROL JOURNAL

DATE: 18 May 98	PROJECT: Assateague Island		
SUXOS: Phil Curry	PM: Dave Frandsen		
SSO/QC: Thomas Brandt			
MAG TYPE USED:	MAG SETTING USED:		
AREA / ITEMS QC'ed	TEAM	SAT	UNSAT
Proper work attire (PPE)	1&2	SAT	
Morning Schonstedt check	1&2	SAT	
Vehicle condition	1&2	SAT	
Equipment condition	1&2	SAT	
Emergency equipment, first aid kit, burn kit, fire ext.	1&2	SAT	
Proper grid layout	1	SAT	
Proper search techniques	1	SAT	
Proper use of grubbing equipment			
Compliance with demolition procedures	1&2	SAT	
Proper tamping techniques, demo shot	1&2	SAT	
Team leaders daily paperwork			
Office paperwork			
Mapping and UXO data	1&2	SAT	
Field office, inside			
Field office grounds			
Comments: The following grid's were QC'd: A-2, A-4,			
and B-6.			
QCO SIGNATURE: <i>Thomas C. Brandt</i>			

DAILY QUALITY CONTROL JOURNAL

DATE: 19 May 98	PROJECT: Assateague Island		
SUXOS: Phil Curry	PM: Dave Frandsen		
SSO/QC: Thomas Brandt			
MAG TYPE USED: Schonstedt	MAG SETTING USED: MAX		
AREA / ITEMS QC'ed	TEAM	SAT	UNSAT
Proper work attire (PPE)	1&2	SAT	
Morning Schonstedt check	1&2	SAT	
Vehicle condition	1&2	SAT	
Equipment condition	1&2	SAT	
Emergency equipment, first aid kit, burn kit, fire ext.	1&2	SAT	
Proper grid layout	1	SAT	
Proper search techniques	1	SAT	
Proper use of grubbing equipment			
Compliance with demolition procedures	1&2	SAT	
Proper tamping techniques, demo shot	1&2	SAT	
Team leaders daily paperwork	1&2	SAT	
Office paperwork			
Mapping and UXO data	1&2	SAT	
Field office, inside	1&2	SAT	
Field office, grounds	1&2	SAT	
Comments: The following grid was QC'd: B-1			
QCO SIGNATURE: <i>Thomas C. Brandt</i>			

DAILY QUALITY CONTROL JOURNAL

DATE: 20 May 98	PROJECT: Assateague Island		
SUXOS: Phil Curry	PM: Dave Frandsen		
SSO/QC: Thomas Brandt			
MAG TYPE USED: Schonstedt	MAG SETTING USED: MAX		
AREA / ITEMS QC'ed	TEAM	SAT	UNSAT
Proper work attire (PPE)	1&2	SAT	
Morning Schonstedt check	1&2	SAT	
Vehicle condition	1&2	SAT	
Equipment condition	1&2	SAT	
Emergency equipment, first aid kit, burn kit, fire ext.	1&2	SAT	
Proper grid layout	1	SAT	
Proper search techniques	1	SAT	
Proper use of grubbing equipment			
Compliance with demolition procedures	1&2	SAT	
Proper tamping techniques, demo shot	1&2	SAT	
Team leaders daily paperwork	1&2	SAT	
Office paperwork			
Mapping and UXO data	1&2	SAT	
Field office, inside			
Field office grounds			
Comments: The following grid's were QC'd: A-3, B2, B3, B4, and B5. With the tide being lower today an additional portion of B-6 was QC'd			
QCO SIGNATURE: <i>Thomas C. Brandt</i>			

DAILY QUALITY CONTROL JOURNAL

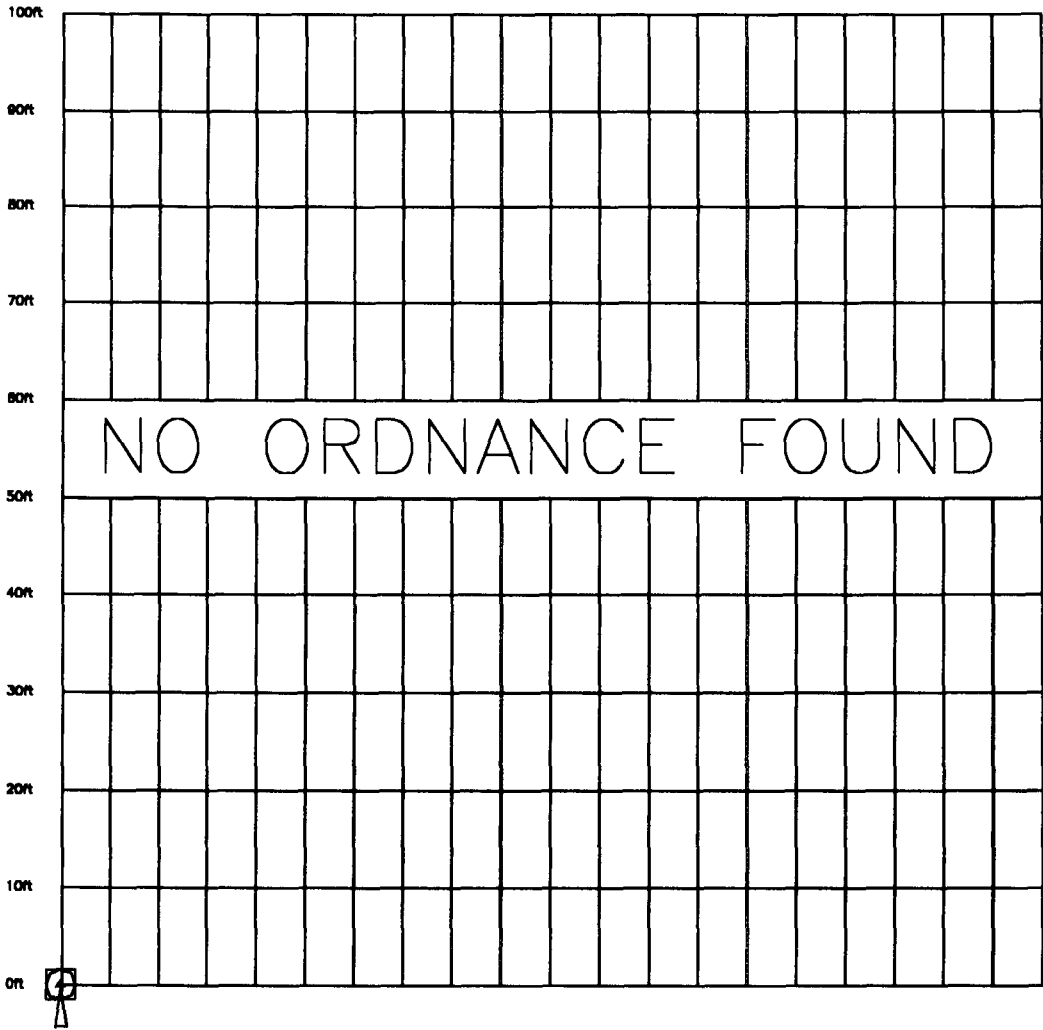
DATE: 21 May 98	PROJECT: Assateague Island		
SUXOS: Phil Curry	PM: Dave Frandsen		
SSO/QC: Thomas Brandt			
MAG TYPE USED: Schonstedt	MAG SETTING USED: MAX		
AREA / ITEMS QC'ed	TEAM	SAT	UNSAT
Proper work attire (PPE)			
Morning Schonstedt check			
Vehicle condition			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext.			
Proper grid layout			
Proper search techniques			
Proper use of grubbing equipment			
Compliance with demolition procedures			
Proper tamping techniques, demo shot			
Team leaders daily paperwork			
Office paperwork			
Mapping and UXO data			
Field office, inside			
Field office grounds			
Comments: Turned in Scrap and packed equipment.			
QCO SIGNATURE: <i>Thomas C. Brandt</i>			

Appendix D

Quality Control Documentation

Quality Control Documentation

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 LANE

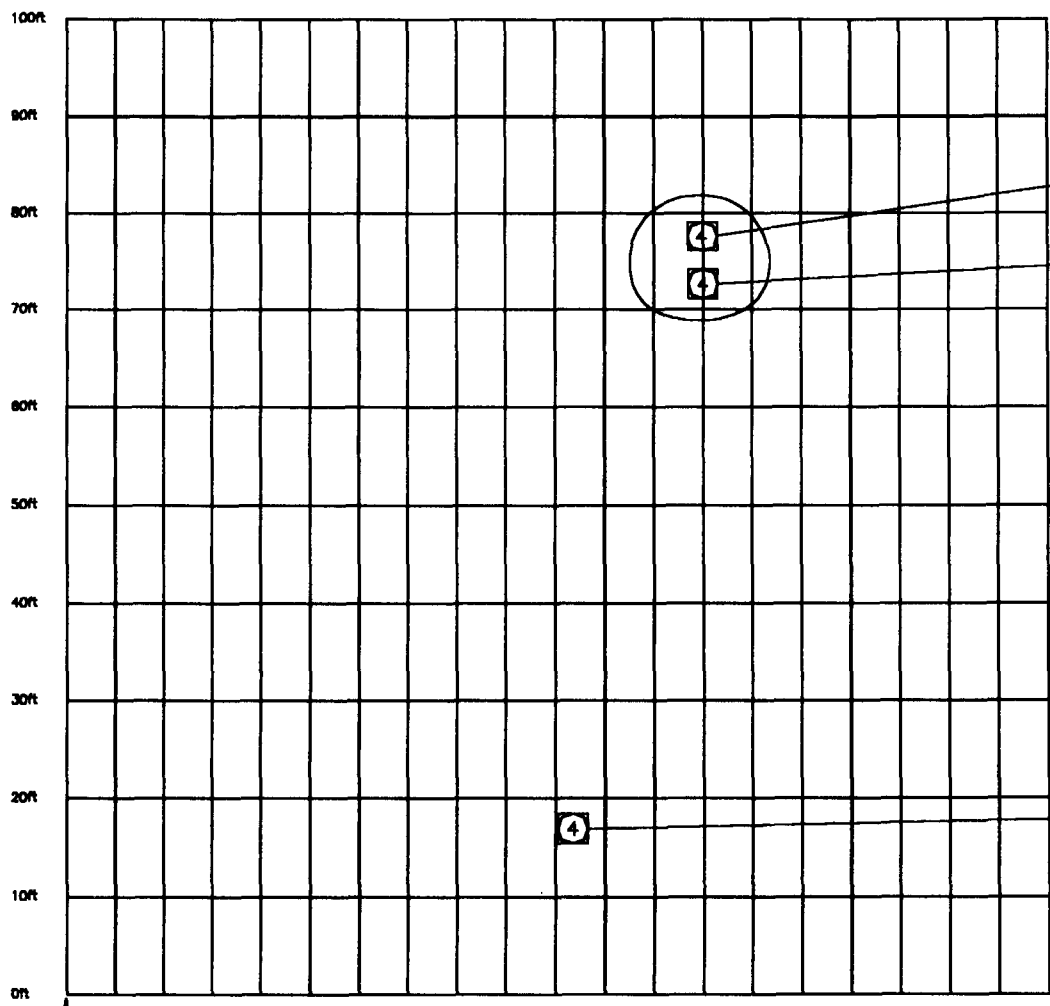


NORTHING 202820.05
EASTING 1844177.97

	<p>NOTE:</p> <p>Symbol Indicates Bury's Location</p> <p>Number Indicates Bury's Depth in Feet</p>
--	--

CONTRACTOR: Human Factors Applications, Inc. 700 Old Line Center, Suite 210 Waldorf, Maryland 20602-2513 Phone: (301) 705-5044 Fax: (301) 705-7561 Dave Frandsen Project Manager		DRAWING: <h2 style="text-align: center;">Grid A-1</h2>	
PROJECT TITLE: Time Critical Removal Action		PROJECT LOCATION: Assateague Island, Worcester County, Maryland	
CLIENT NAME: U.S. Army Corps of Engineers		CONTRACT NUMBER: DACA87-95-D-0027	
CLIENT NAME: U.S. Army Corps of Engineers		TASK ORDER: # 0026	
DATE: 12 June 1998	BY HFA: DJF	SCALE: 1" = 200'	PAPER SIZE: 8.5" x 11"
		DATUM: NAD 1983	

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 LANE



1 EACH
AN-MK23

20 EACH
2.25" ROCKET

1 EACH
2.25" ROCKET

NORTHING 203015.14
EASTING 1844208.28

	<p>NOTE:</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> <p>4</p> </div> <p>Symbol indicates Range & Location</p> <p>Number indicates Range Depth in Feet</p>
--	---

CONTRACTOR:
Human Factors Applications, Inc.
700 Old Line Center, Suite 210
Waldorf, Maryland 20602-2513

Phone: (301) 705-5044
Fax: (301) 705-7561

Dave Frandsen Project Manager

DRAWING:

Grid A-2

PROJECT TITLE: Time Critical Removal Action

PROJECT LOCATION: Assateague Island, Worcester County, Maryland

HFA, Inc. EOD Division, Ft. Devens, MA
Phil Curry Senior UXO Supervisor
Phone: (508) 796-2136/2566
Fax: (508) 796-3871

CLIENT NAME: U.S. Army Corps of Engineers

CONTRACT NUMBER: DACA87-95-D-0027

TASK ORDER: # 0026

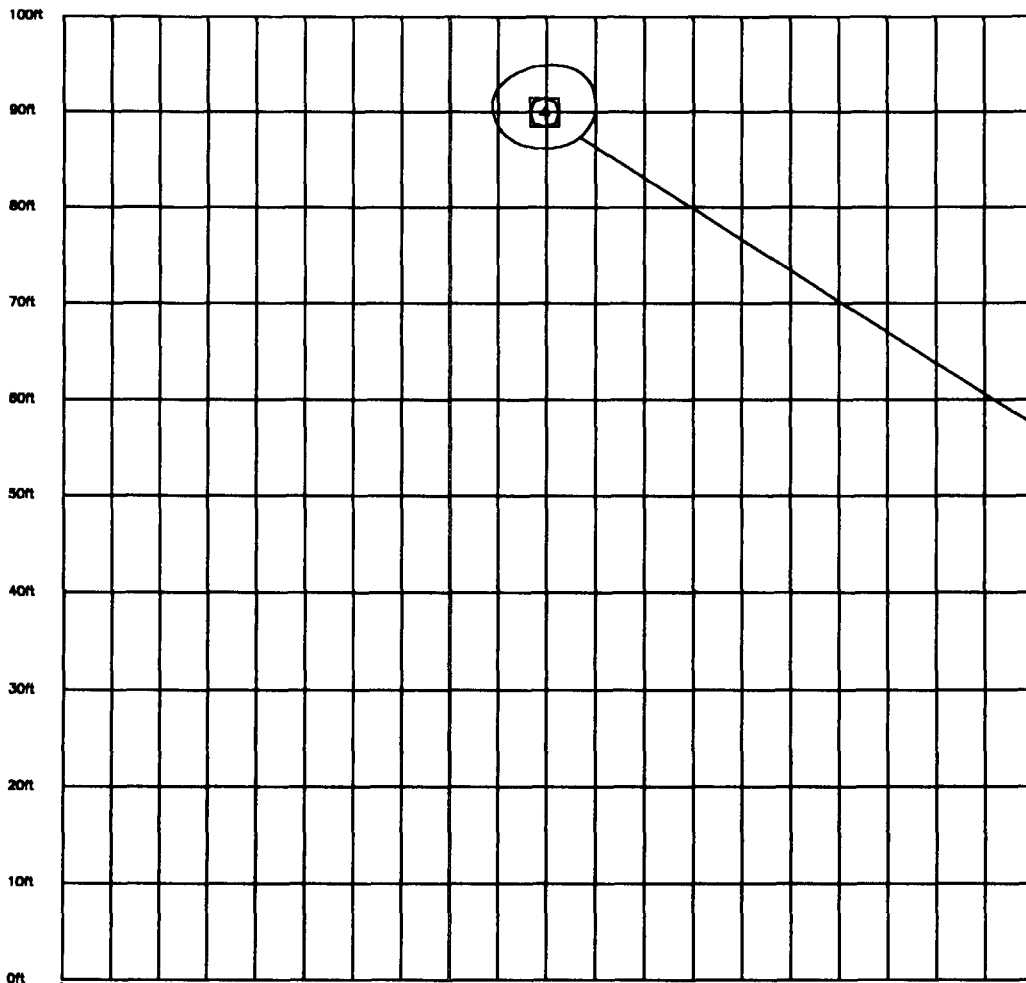
DATE: 12 June 1998 **BY HFA:** DJF

SCALE: 1" = 200'

PAPER SIZE: 8.5" x 11"



DATUM: NAD 1983

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 LANE



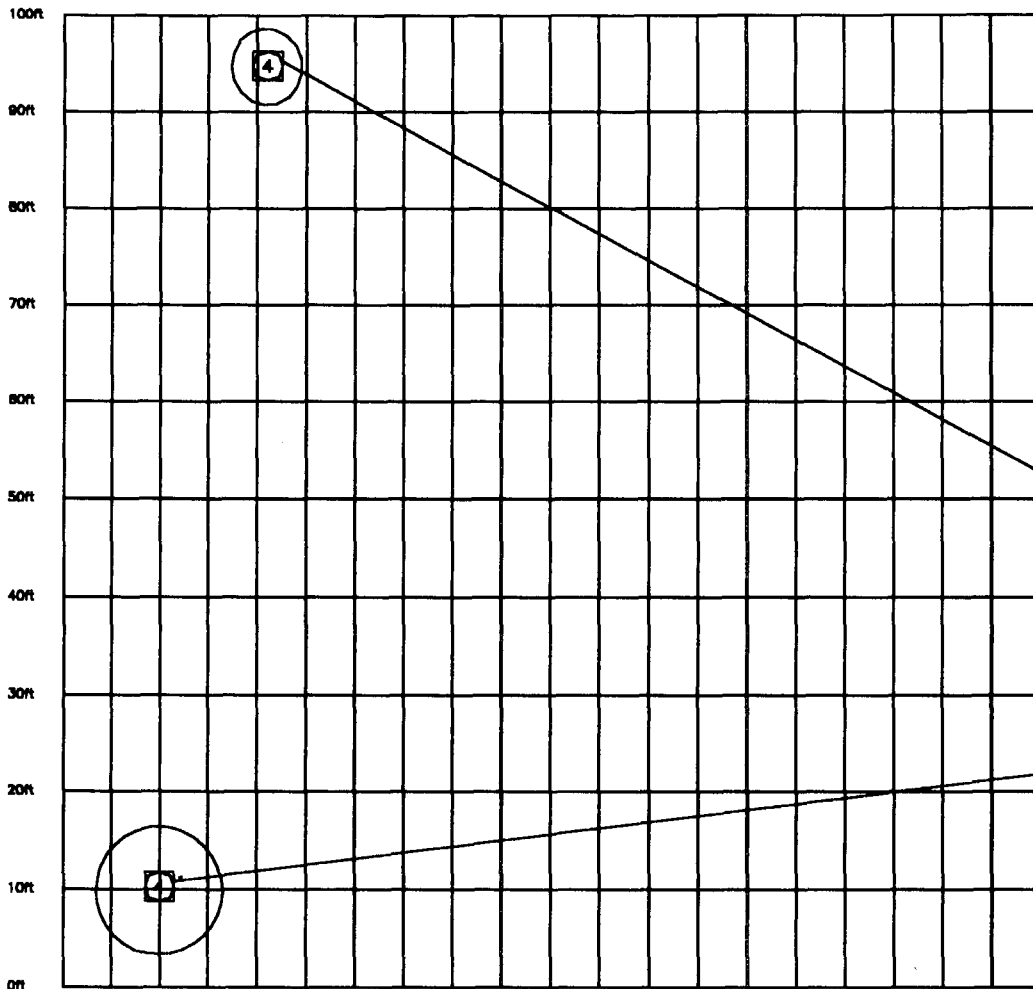
103 EACH
2.25" ROCKET

NORTHING 203110.24
EASTING 1844239.21

	NOTE:
	 Symbol indicates Item's Location Number indicates Item's Depth in Feet

CONTRACTOR: Human Factors Applications, Inc. 700 Old Line Center, Suite 210 Waldorf, Maryland 20602-2513 Phone: (301) 705-5044 Fax: (301) 705-7561 Dave Frandsen Project Manager	DRAWING: <h2 style="text-align: center;">Grid A-3</h2>
HFA, Inc. EOD Division, Ft. Devens, MA Phil Curry Senior UXO Supervisor Phone: (508) 796-2136/2586 Fax: (508) 796-3971	PROJECT TITLE: Time Critical Removal Action PROJECT LOCATION: Assateague Island, Worcester County, Maryland CLIENT NAME: U.S. Army Corps of Engineers CONTRACT NUMBER: DACAB7-95-D-0027
DATE: 12 June 1998 BY HFA: DJF	TASK ORDER: # 0026 SCALE: 1" = 200' PAPER SIZE: 8.5" x 11" DATUM: NAD 1983


20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 LANE



13 EACH
2.25" ROCKET

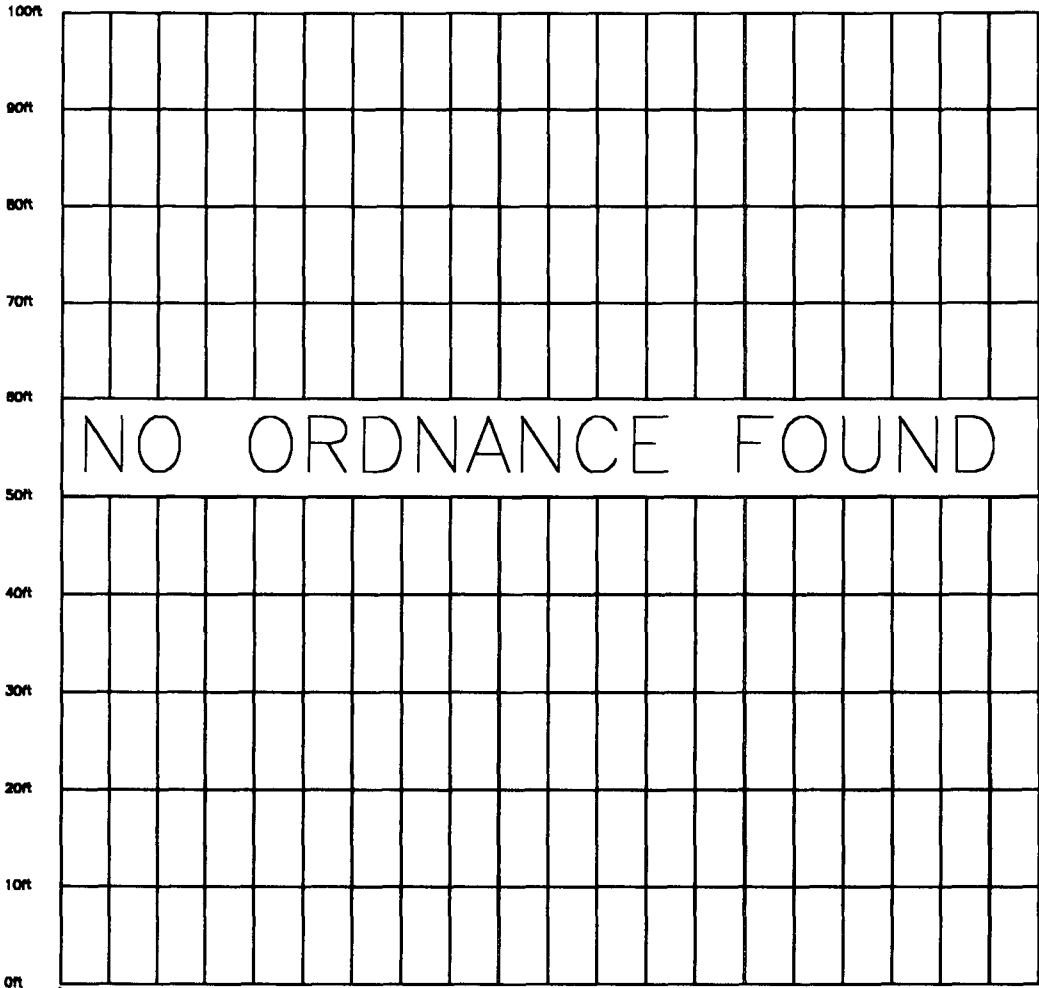
12 EACH
2.25" ROCKET

NORTHING 203205.34
EASTING 1844270.14

	<p>NOTE:</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> <p>4</p> </div> <p>Symbols Indicates Item's Location</p> <p>Number Indicates Item's Depth in Feet</p>
---	--

CONTRACTOR: Human Factors Applications, Inc. 700 Old Line Center, Suite 210 Waldorf, Maryland 20602-2513 Phone: (301) 705-5044 Fax: (301) 705-7561 Dave Frandsen Project Manager		DRAWING: <h2 style="text-align: center;">Grid A-4</h2>	
HFA, Inc. EOD Division, Ft. Devens, MA Phil Curry Senior UXO Supervisor Phone: (508) 796-2136/2566 Fax: (508) 796-3971		PROJECT TITLE: Time Critical Removal Action PROJECT LOCATION: Assateague Island, Worcester County, Maryland CLIENT NAME: U.S. Army Corps of Engineers	
DATE: 12 June 1998 BY HFA: DJF		CONTRACT NUMBER: DACAB7-95-D-0027	TASK ORDER: # 0026
		SCALE: 1" = 200'	PAPER SIZE: 8.5" x 11"
		DATUM: NAD 1983	

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 LANE

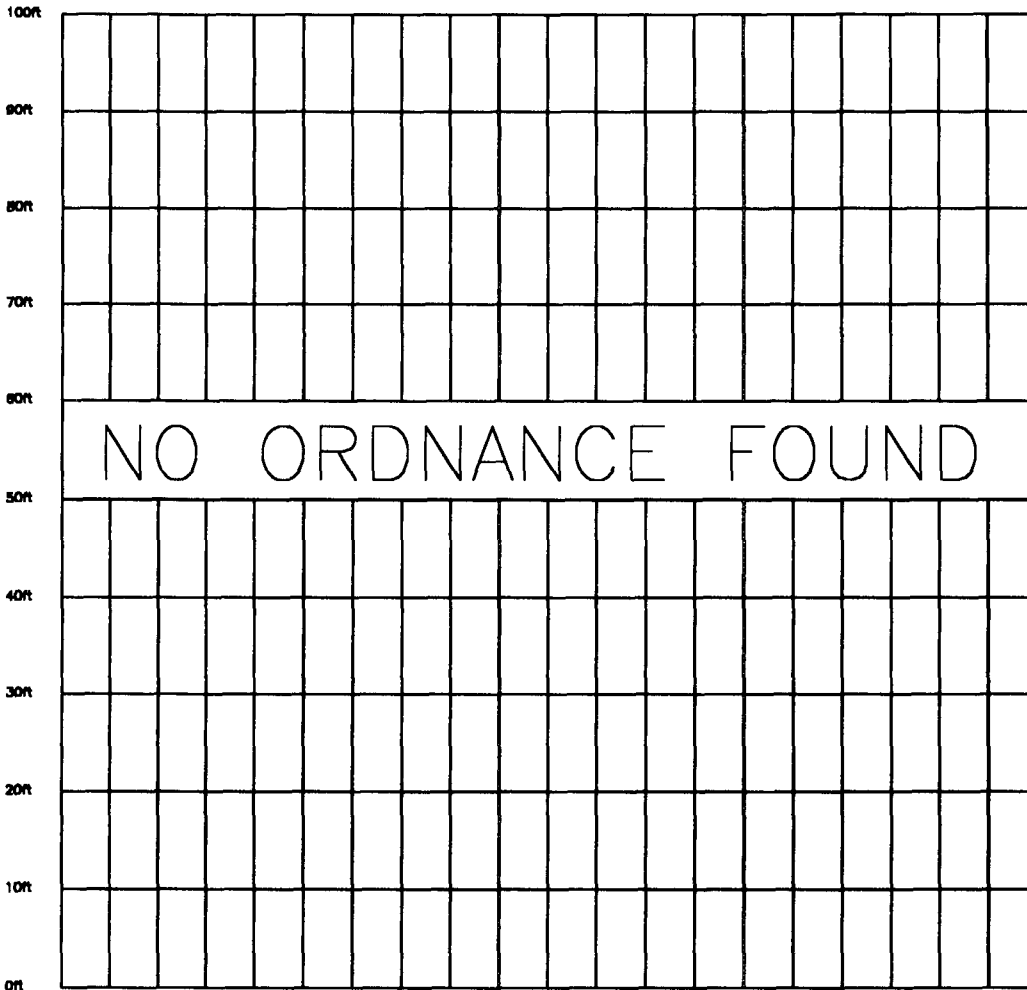


NUMBER 203300.43
DATE 1844300.45

	<p>NOTE:</p> <p> Symbol indicates Navy's Location</p> <p> Number indicates Navy Depth in Feet</p>
--	---

CONTRACTOR: Human Factors Applications, Inc. 700 Old Line Center, Suite 210 Waldorf, Maryland 20602-2513 Phone: (301) 705-5044 Fax: (301) 705-7561 Dave Frandsen Project Manager		DRAWING: <h2 style="text-align: center;">Grid A-5</h2>	
PROJECT TITLE: Time Critical Removal Action		PROJECT LOCATION: Assateague Island, Worcester County, Maryland	
CLIENT NAME: U.S. Army Corps of Engineers		CONTRACT NUMBER: DACA87-95-D-0027	
DATE: 12 June 1998		TASK ORDER: # 0026	
BY HFA: DJF		SCALE: 1" = 200'	
PAPER SIZE: 8.5" x 11"		DATUM: NAD 1983	

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 LANE

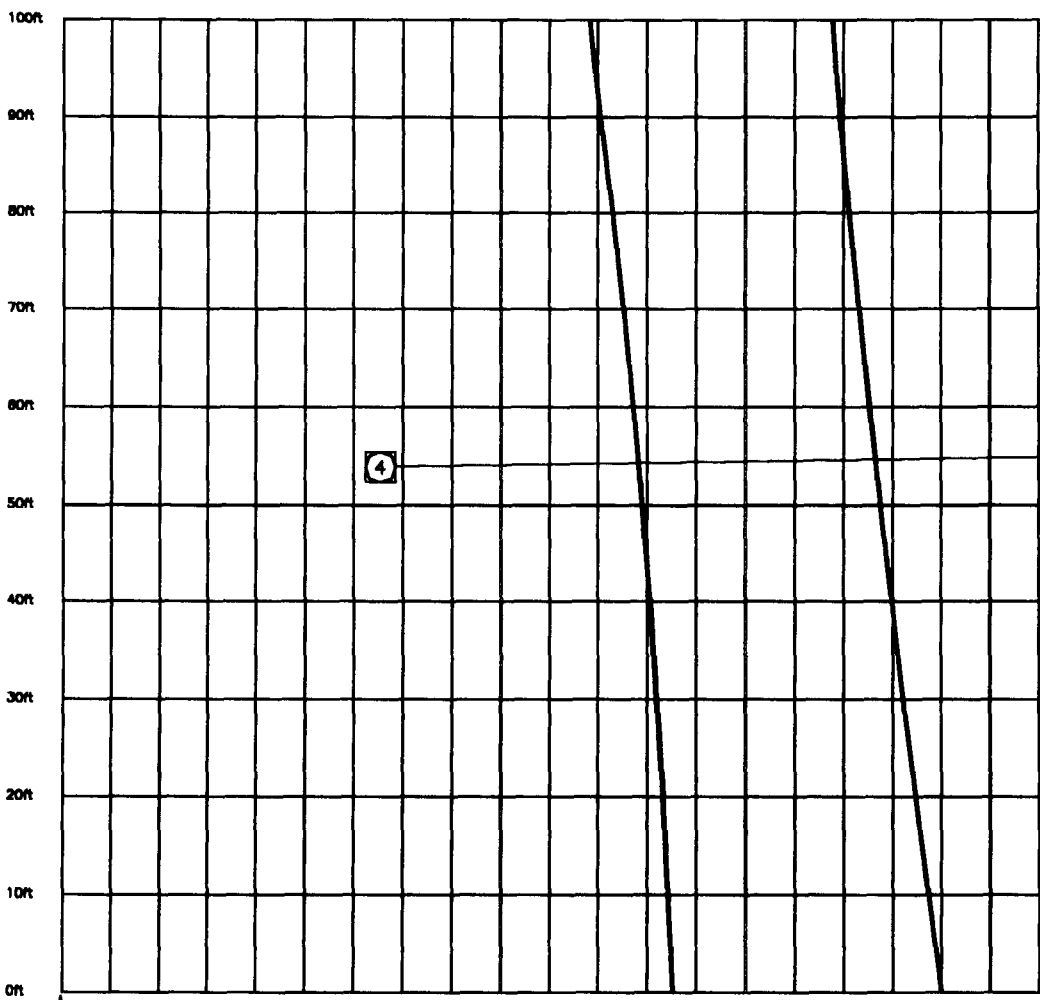


NORTHING 203396.52
EASTING 1844332.01

	<p>NOTE:</p> <p>Symbol Indicates Type of Location</p> <p>Number Indicates Burst Depth in Feet</p>
--	---

CONTRACTOR: Human Factors Applications, Inc. 700 Old Line Center, Suite 210 Waldorf, Maryland 20602-2513 Phone: (301) 705-5044 Fax: (301) 705-7561 Dave Frandsen Project Manager	DRAWING: <h2 style="text-align: center;">Grid A-6</h2>		
	PROJECT TITLE: Time Critical Removal Action		
HFA, Inc. EOD Division, Ft. Devens, MA Phil Curry Senior UXO Supervisor Phone: (508) 796-2136/2566 Fax: (508) 796-3971	PROJECT LOCATION: Assateague Island, Worcester County, Maryland		CLIENT NAME: U.S. Army Corps of Engineers
	CONTRACT NUMBER: DACA87-95-D-0027	TASK ORDER: # 0026	
DATE: 12 June 1998 BY HFA: DJF	SCALE: 1" = 200'	PAPER SIZE: 8.5" x 11"	DATUM: NAD 1983

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 LANE



1 EACH
5" ROCKET WARHEAD

NORTHING 202696.79
EASTING 1844248.65

APPROXIMATE
HIGH TIDE

APPROXIMATE
LOW TIDE



NOTE:



Symbol
Indicates
Mine's
Location

Number
Indicates
Mine Depth
in Feet

CONTRACTOR:
Human Factors Applications, Inc.
700 Old Line Center, Suite 210
Waldorf, Maryland 20602-2513

Phone: (301) 705-5044
Fax: (301) 705-7561

Dave Frandsen Project Manager

DRAWING:

Grid B-1

PROJECT TITLE: Time Critical Removal Action

PROJECT LOCATION: Assateague Island, Worcester County, Maryland

HFA, Inc. EOD Division, Ft. Devens, MA
Phil Curry Senior UXO Supervisor
Phone: (508) 796-2136/2586
Fax: (508) 796-3971

CLIENT NAME: U.S. Army Corps of Engineers

CONTRACT NUMBER: DACA87-95-D-0027

TASK ORDER: # 0026

DATE: 12 June 1998

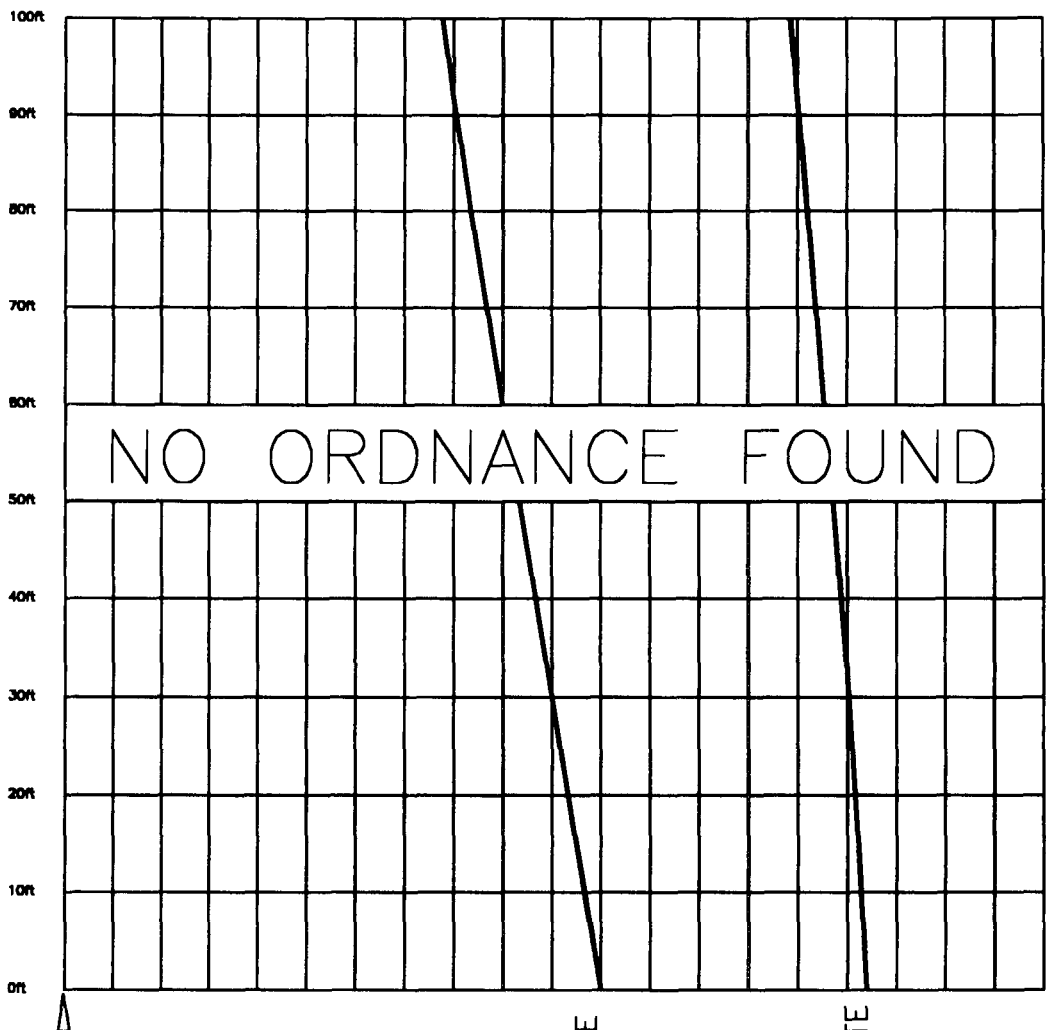
BY HFA: DJF

SCALE: 1" = 200'

PAPER SIZE: 8.5" x 11"

DATUM: NAD 1983

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 LANE



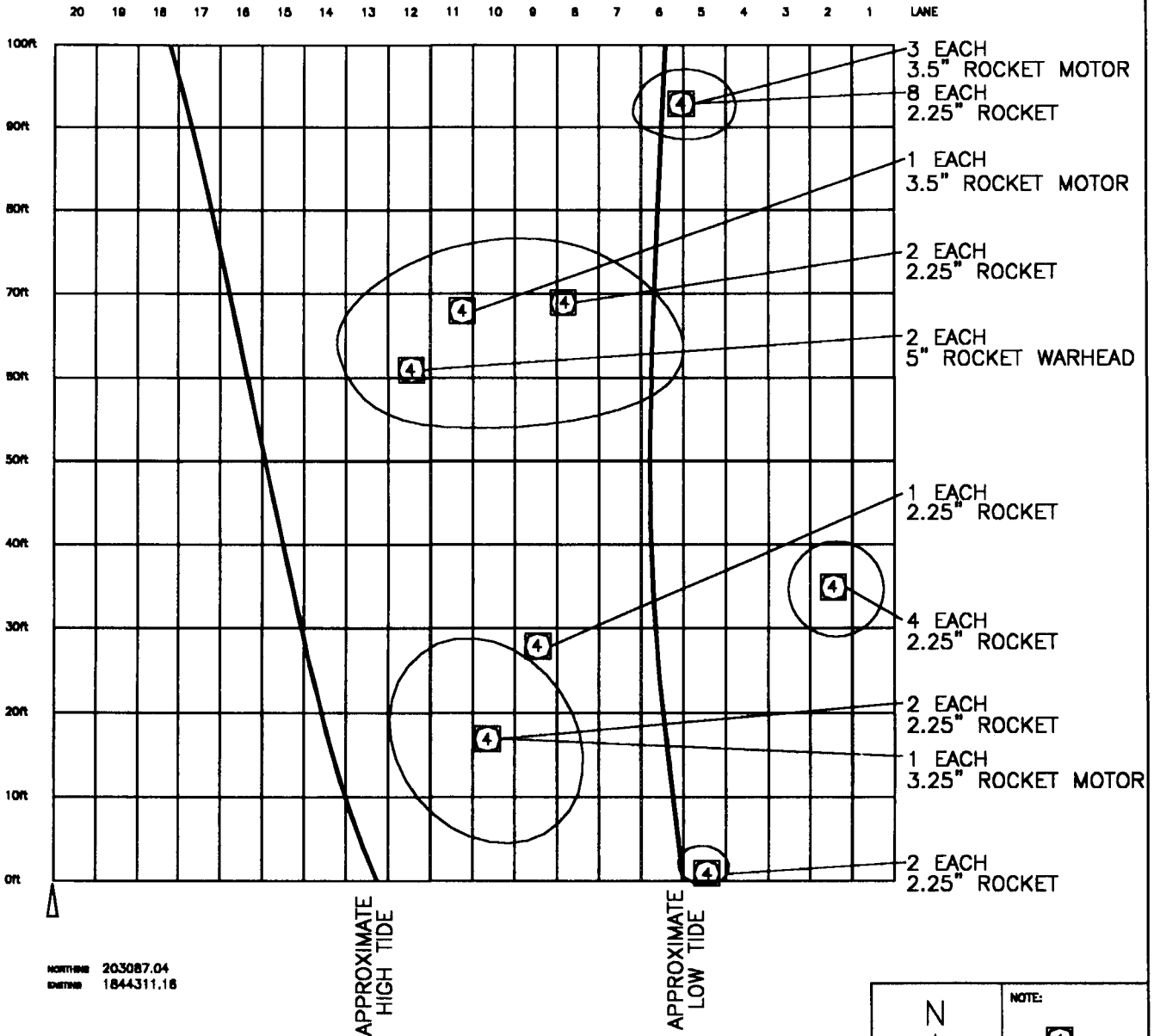
NORTHING 202901.95
 EASTING 1844280.23

APPROXIMATE
HIGH TIDE

APPROXIMATE
LOW TIDE

	NOTE:
	 Symbol Indicates Sonar Location Number Indicates Sonar Depth in Feet

CONTRACTOR: Human Factors Applications, Inc. 700 Old Line Center, Suite 210 Waldorf, Maryland 20602-2513 Phone: (301) 705-5044 Fax: (301) 705-7581 Dave Frandsen Project Manager		DRAWING: <h2 style="text-align: center;">Grid B-2</h2>	
PROJECT TITLE: Time Critical Removal Action		PROJECT LOCATION: Assateague Island, Worcester County, Maryland	
HFA, Inc. EOD DMelon, Ft. Devens, MA Phil Curry, Senior UXO Supervisor Phone: (508) 796-2136/2566 Fax: (508) 796-3971		CLIENT NAME: U.S. Army Corps of Engineers	
DATE: 12 June 1998		CONTRACT NUMBER: DACA87-95-D-0027	TASK ORDER: # 0026
BY HFA: DJF	SCALE: 1" = 200'	PAPER SIZE: 8.5" x 11"	DATUM: NAD 1983

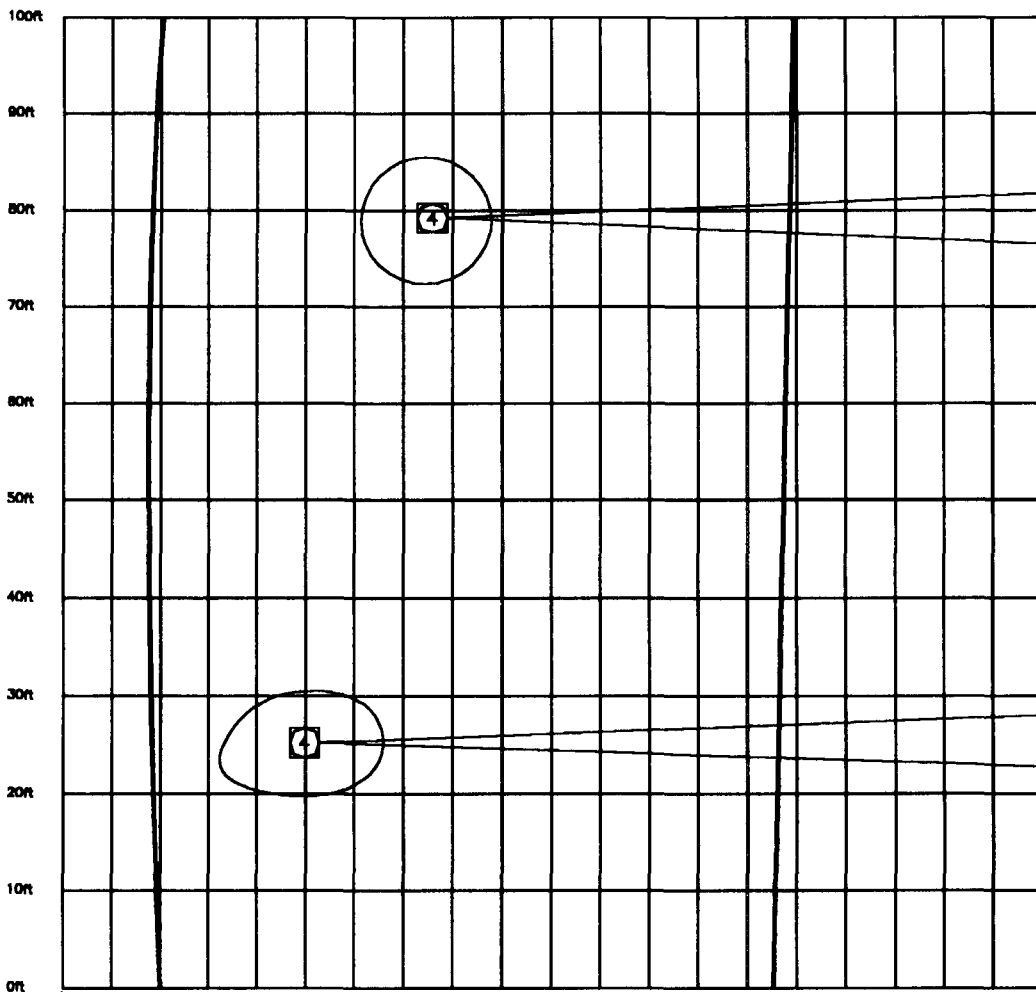


NORTHING 203087.04
 EASTING 1844311.18

	<p>NOTE:</p> <p> Symbol indicates Item's Location</p> <p>Number indicates Item's Depth in Feet</p>
--	--

CONTRACTOR: Human Factors Applications, Inc. 700 Old Line Center, Suite 210 Waldorf, Maryland 20602-2513 Phone: (301) 705-5044 Fax: (301) 705-7561 Dave Frandsen Project Manager		DRAWING: <h2 style="text-align: center;">Grid B-3</h2>	
PROJECT TITLE: Time Critical Removal Action		PROJECT LOCATION: Assateague Island, Worcester County, Maryland	
CLIENT NAME: U.S. Army Corps of Engineers		CONTRACT NUMBER: DACAB7-95-D-0027	
CONTRACT NUMBER: DACAB7-95-D-0027		TASK ORDER: # 0026	
DATE: 12 June 1998	BY HFA: DJF	SCALE: 1" = 200'	PAPER SIZE: 8.5" x 11"
		DATUM: NAD 1983	

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 LANE



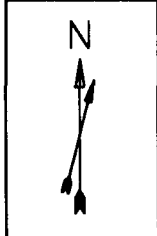
2 EACH
2.25" ROCKET
1 EACH
3.5" ROCKET MOTOR


29 EACH
2.25" ROCKET
3 EACH
3.5" ROCKET MOTORS

NORTHING 203182.26
EASTING 1844340.47

APPROXIMATE
HIGH TIDE

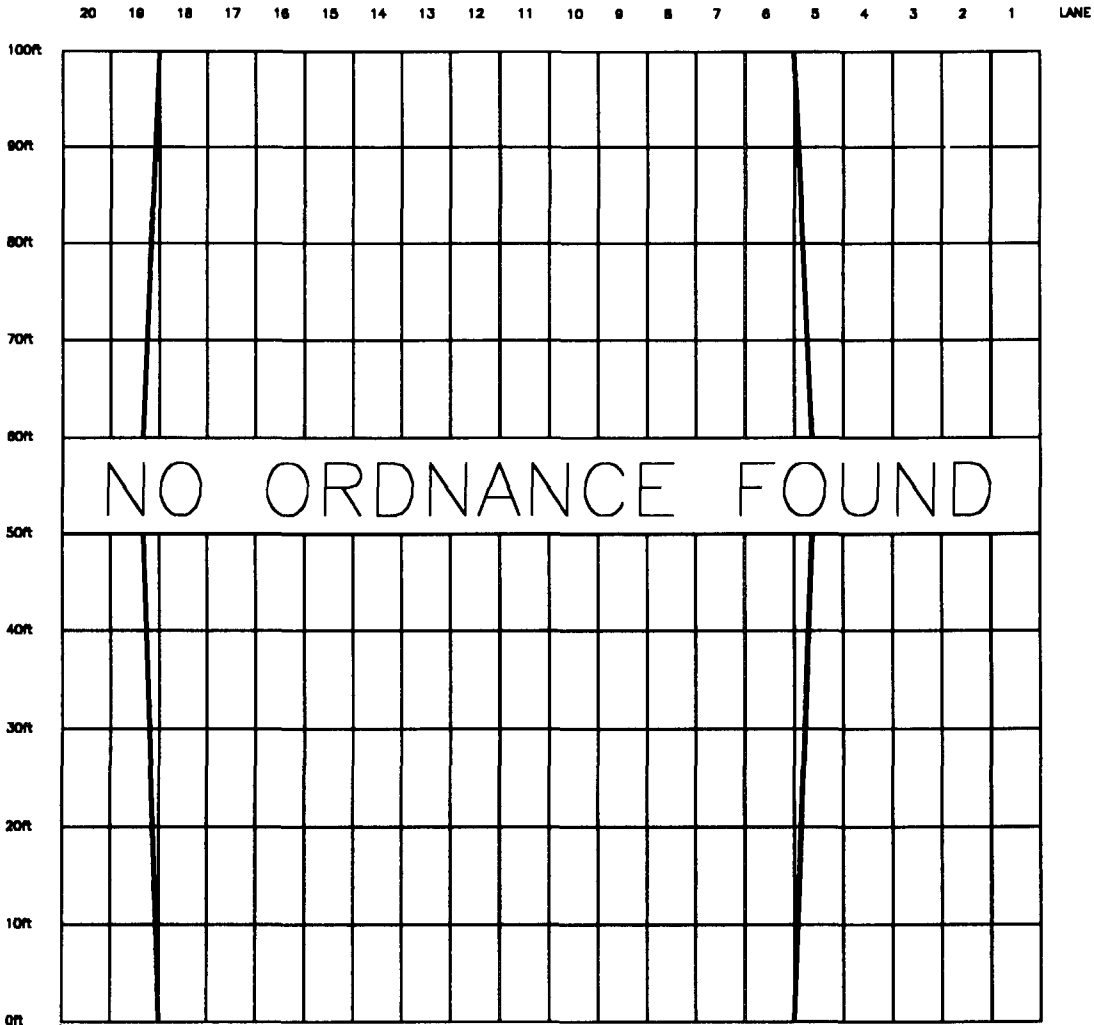
APPROXIMATE
LOW TIDE



NOTE:

Symbol Indicates Item's Location

Number Indicates Item Depth in Feet

CONTRACTOR: Human Factors Applications, Inc. 700 Old Line Center, Suite 210 Waldorf, Maryland 20602-2513 Phone: (301) 705-5044 Fax: (301) 705-7561 Dave Frandsen Project Manager		DRAWING: <h1 style="text-align: center;">Grid B-4</h1>	
		PROJECT TITLE: Time Critical Removal Action	
		PROJECT LOCATION: Assateague Island, Worcester County, Maryland	
HFA, Inc. EOD Division, Ft. Devens, MA Phil Curry Senior UXO Supervisor Phone: (508) 796-2136/2566 Fax: (508) 796-3971		CLIENT NAME: U.S. Army Corps of Engineers	
		CONTRACT NUMBER: DACA87-95-D-0027	TASK ORDER: # 0026
DATE: 12 June 1998	BY HFA: DJF	SCALE: 1" = 200'	PAPER SIZE: 8.5" x 11" DATUM: NAD 1983



NORTHING 203277.23
 EASTING 1844371.77

APPROXIMATE
HIGH TIDE

APPROXIMATE
LOW TIDE



NOTE:



Symbol
Indicates
Item's
Location

Number
Indicates
Bearing Depth
in Feet

CONTRACTOR:
 Human Factors Applications, Inc.
 700 Old Line Center, Suite 210
 Waldorf, Maryland 20602-2513

Phone: (301) 705-5044
 Fax: (301) 705-7581

Dave Frandsen Project Manager

HFA, Inc. EOD Division, Ft. Devens, MA
 Phil Curry Senior UXO Supervisor
 Phone: (508) 796-2136/2566
 Fax: (508) 796-3971

DATE: 12 June 1998 BY HFA: DJF

DRAWING:
 Grid B-5

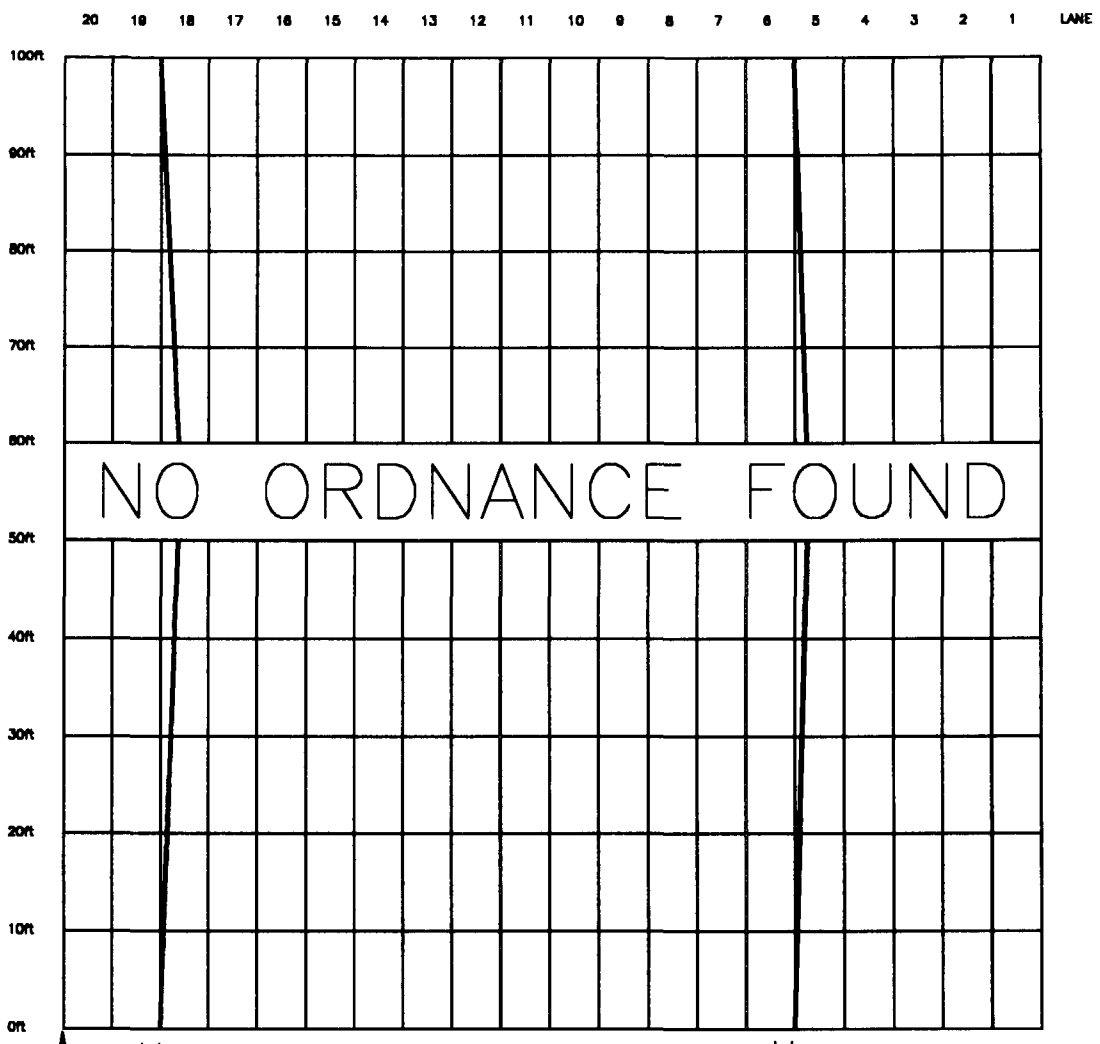
PROJECT TITLE: Time Critical Removal Action

PROJECT LOCATION: Assateague Island, Worcester County, Maryland

CLIENT NAME: U.S. Army Corps of Engineers

CONTRACT NUMBER: DACA87-95-D-0027 TASK ORDER: # 0026

SCALE: 1" = 200' PAPER SIZE: 8.5" x 11" DATUM: NAD 1983



NORTHING 203372.33
 EASTING 1844403.85

APPROXIMATE
HIGH TIDE

APPROXIMATE
LOW TIDE

	NOTE:
	 Symbol Indicates Item's Location Number Indicates Item's Depth in Feet

CONTRACTOR: Human Factors Applications, Inc. 700 Old Line Center, Suite 210 Waldorf, Maryland 20602-2513 Phone: (301) 705-5044 Fax: (301) 705-7561 Dave Frandsen Project Manager		DRAWING: <h2 style="text-align: center;">Grid B-6</h2>	
		PROJECT TITLE: Time Critical Removal Action	
		PROJECT LOCATION: Assateague Island, Worcester County, Maryland	
HFA, Inc. EOD Division, Ft. Devens, MA Phil Curry Senior UXO Supervisor Phone: (508) 798-2136/2566 Fax: (508) 798-3971		CLIENT NAME: U.S. Army Corps of Engineers	
		CONTRACT NUMBER: DACA87-95-D-0027	TASK ORDER: # 0026
DATE: 12 June 1998	BY HFA: DJF	SCALE: 1" = 200'	PAPER SIZE: 8.5" x 11" DATUM: NAD 1983

Grids With Ordnance Items

Date Cleared 5/15/98	Grid : A-4	X 10	Y 10	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 10	Y 10	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 10	Y 10	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 10	Y 10	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 10	Y 10	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 10	Y 10	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 10	Y 10	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 10	Y 10	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 10	Y 10	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						

Grids With Ordnance Items

Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/15/98	Grid : A-4	X 95	Y 20	Z 4	BIP No	Demo Date: 5/14/98
UXO Found: 2.25" Rocket				Demo Grid: A-1		
Comments: Item moved to A-1 X15-20, Y5-20, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors				Demo Grid: A-6		
Comments: Item move to A-6 X63, Y10, Z3						

Grids With Ordnance Items

Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Warhead					Demo Grid: A-6	
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors					Demo Grid: A-6	
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors					Demo Grid: A-6	
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors					Demo Grid: A-6	
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors					Demo Grid: A-6	
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors					Demo Grid: A-6	
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: AN-MK23					Demo Grid: A-6	
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors					Demo Grid: A-6	
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: AN-MK23					Demo Grid: A-6	
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors					Demo Grid: A-6	
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors					Demo Grid: A-6	
Comments: Item move to A-6 X63, Y10, Z3						

Grids With Ordnance Items

Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors				Demo Grid: A-6		
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors				Demo Grid: A-6		
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors				Demo Grid: A-6		
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors				Demo Grid: A-6		
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 17	Y 4	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Motors				Demo Grid: A-6		
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : A-2	X 75	Y 35	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket Warhead				Demo Grid: A-6		
Comments: Item move to A-6 X63, Y10, Z3						
Date Cleared 5/18/98	Grid : B-1	X 54	Y 67	Z 2	BIP No	Demo Date: 5/18/98
UXO Found: 5" Rocket Warhead				Demo Grid: A-6		
Comments: Item moved to A-6 X70, Y15, Z5						
Date Cleared 5/18/98	Grid : B-3	X 69	Y 39	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid : B-3	X 35	Y 7	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid : B-3	X 28	Y 42	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid : B-3	X 17	Y 4	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 3.25" Rocket Motor				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid : B-3	X 17	Y 4	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						

Grids With Ordnance Items

Date Cleared 5/18/98	Grid :B-3	X 17	Y 4	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid :B-3	X 35	Y 7	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid :B-3	X 1	Y 22	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid :B-3	X 93	Y 25	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 3.25" Rocket Motor				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid :B-3	X 93	Y 25	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid :B-3	X 93	Y 25	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid :B-3	X 93	Y 25	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid :B-3	X 93	Y 25	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid :B-3	X 93	Y 25	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid :B-3	X 1	Y 22	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid :B-3	X 69	Y 39	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid :B-3	X 35	Y 7	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid :B-3	X 61	Y 57	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 5" Rocket Warhead				Demo Grid: A-6		
Comments: Item Moved to A-6 X73, Y20, Z5						
Date Cleared 5/18/98	Grid :B-3	X 61	Y 57	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 5" Rocket Warhead				Demo Grid: A-6		
Comments: Item Moved to A-6 X73, Y20, Z5						

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Date Cleared 5/18/98	Grid : B-3	X 68	Y 54	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 3.25" Rocket				Demo Grid: A-6		
Comments: Item Moved to A-6 X73, Y20, Z5						
Date Cleared 5/18/98	Grid : B-3	X 69	Y 39	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid : B-3	X 69	Y 39	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid : B-3	X 69	Y 39	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid : B-3	X 69	Y 39	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid : B-3	X 93	Y 25	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid : B-3	X 35	Y 7	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/18/98	Grid : B-3	X 93	Y 25	Z 4	BIP No	Demo Date: 5/18/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Moved item to A-6 X63, Y5, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						

Grids With Ordnance Items

Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						

Grids With Ordnance Items

Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: AN-MK23				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						

Grids With Ordnance Items

Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						

Grids With Ordnance Items

Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						

Grids With Ordnance Items

Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 3.25" Rocket Motor				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 3.25" Rocket Motor				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						

Grids With Ordnance Items

Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 3.25" Rocket Motor					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						

Grids With Ordnance Items

Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6 X63, Y10, Z3						

Grids With Ordnance Items

Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : A-3	X 90	Y 50	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6 X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 79	Y 38	Z 3	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket					Demo Grid: A-6	
Comments: Item moved to A-6, X63, Y10, Z3						

Grids With Ordnance Items

Date Cleared 5/20/98	Grid : B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 79	Y 38	Z 3	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 79	Y 38	Z 3	BIP No	Demo Date: 5/20/98
UXO Found: 3.25" Rocket Motor				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 3.25" Rocket Motor				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 3.25" Rocket Motor				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid : B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket Warhead				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						

Grids With Ordnance Items

Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket Warhead				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket Warhead				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						

Grids With Ordnance Items

Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						
Date Cleared 5/20/98	Grid :B-4	X 25	Y 25	Z 4	BIP No	Demo Date: 5/20/98
UXO Found: 2.25" Rocket				Demo Grid: A-6		
Comments: Item moved to A-6, X63, Y10, Z3						

Delmarva Recycling, Inc.
H.D. METAL COMPANY

Recyclers Since 1936
Dealers In Scrap Iron, Metals & Paper

P.O. Box 1978 • Salisbury, MD 21802-1978
Phone 410/546-1111

WEIGHT CERTIFICATE

DATE 5-21-98

MAKE OF TRUCK CHEVY

LICENSE NO. NY TAG HERTZ RENTAL

ITEM SCRAP ORDINANCE

B/L _____

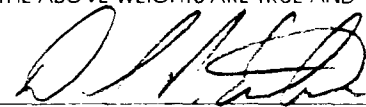
REMARKS NO VALUE

Gross Wt. 5,980

Tare Wt. 5,300

Net Wt. 680

THIS IS TO CERTIFY THE ABOVE WEIGHTS ARE TRUE AND CORRECT.

WEIGHMASTER 

W. M. LICENSE NO. _____

Delmarva Recycling, Inc.
H.D. METAL COMPANY

Recyclers Since 1936
Dealers In Scrap Iron, Metals & Paper

P.O. Box 1978 • Salisbury, MD 21802-1978
Phone 410/546-1111

WEIGHT CERTIFICATE

DATE 5-21-98

MAKE OF TRUCK CHEVY

LICENSE NO. PA TAG

ITEM SCRAP ORDINANCE

B/L _____

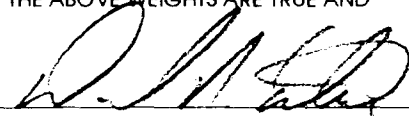
REMARKS NO VALUE

Gross Wt. 6300

Tare Wt. 5050

Net Wt. 1250

THIS IS TO CERTIFY THE ABOVE WEIGHTS ARE TRUE AND CORRECT.

WEIGHMASTER 

W. M. LICENSE NO. _____

**U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO**

TO: HFA, INC. DATE: 18 MAY 98 TIME: 1600

CONTRACT NUMBER: DACA87-95-D-0027 PROJECT LOCATION: ASSATEAGUE ISLAND,

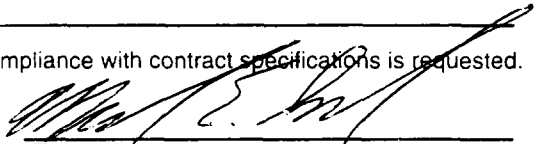
DO #: 0026 MD

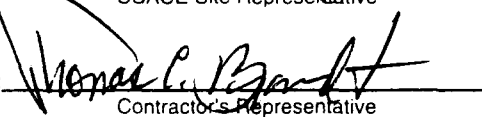
- SUBJECT ITEM(S)** (Check all that apply):
- Work Plan Quality Control
 - Safety Violation Other
 - Safety Comments

DESCRIPTION: THE FOLLOWING GRIDS PASSED
A GOVERNMENT QA CHECK: A-1, A-2,
A-4, A-5, A-6 (5 GRIDS TOTAL)

NOTHING
FOLLOWS

Prompt correction or compliance with contract specifications is requested.


USACE Site Representative

RECEIPT ACKNOWLEDGED: 
Contractor's Representative

ACTION TAKEN:

**U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO**

TO: HFA, INC. DATE: 19 MAY 98 TIME: 1630

CONTRACT NUMBER: DACA-87-95-D-0027 PROJECT LOCATION: ASSATEAGUE ISLAND,

DO #: 0026 MD

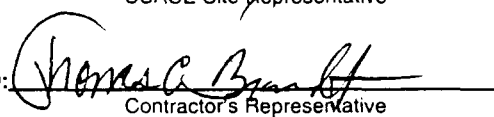
- SUBJECT ITEM(S)** (Check all that apply):
- Work Plan Quality Control
 - Safety Violation Other
 - Safety Comments

DESCRIPTION: THE FOLLOWING PORTIONS OF THESE
GRIDS PASSED A GOVERNMENT QA CHECK:

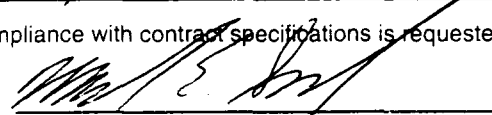
GRID B1: THE WESTERN 67 FEET FROM
THE SW CORNER & THE WESTERN 68 FEET FROM THE
NW CORNER. GRID B6: THE WESTERN 28 FEET
FROM THE SW CORNER & THE WESTERN 27 FEET
FROM THE NW CORNER (2 PARTIAL GRIDS)

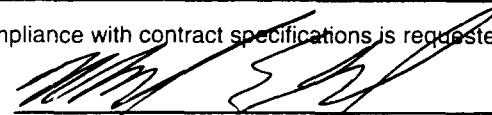
Prompt correction or compliance with contract specifications is requested.


USACE Site Representative

RECEIPT ACKNOWLEDGED: 
Contractor's Representative

ACTION TAKEN:

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE ORDNANCE AND EXPLOSIVE GROUP MEMO																				
TO: <i>HFA, INC</i>	DATE: <i>20 MAY 98</i>	TIME: <i>1630</i>																		
CONTRACT NUMBER: <i>DACA-87-95-D-0027</i>	PROJECT LOCATION: <i>ASSATEAGUE ISLAND, MD</i>																			
DO #: <i>0026</i>																				
SUBJECT ITEM(S) (Check all that apply): <input type="checkbox"/> Work Plan <input checked="" type="checkbox"/> Quality Control <input type="checkbox"/> Safety Violation <input type="checkbox"/> Other <input type="checkbox"/> Safety Comments																				
DESCRIPTION: <i>THE FOLLOWING GRID SECTIONS PASSED A GOVERNMENT QA CHECK. NOTE: ALL MEASUREMENTS ARE FROM NW + SW GRID CORNERS, HEADING EAST.</i>																				
<table border="1"> <thead> <tr> <th>GRID</th> <th>DISTANCE FROM NW CORNER</th> <th>DISTANCE FROM SW CORNER</th> </tr> </thead> <tbody> <tr> <td><i>B2</i></td> <td><i>54'</i></td> <td><i>62'</i></td> </tr> <tr> <td><i>B3</i></td> <td><i>54'</i></td> <td><i>49'</i></td> </tr> <tr> <td><i>B4</i></td> <td><i>44'</i></td> <td><i>43'</i></td> </tr> <tr> <td><i>B5</i></td> <td><i>41'</i></td> <td><i>38'</i></td> </tr> <tr> <td><i>B6</i></td> <td><i>33'</i></td> <td><i>34'</i></td> </tr> </tbody> </table>			GRID	DISTANCE FROM NW CORNER	DISTANCE FROM SW CORNER	<i>B2</i>	<i>54'</i>	<i>62'</i>	<i>B3</i>	<i>54'</i>	<i>49'</i>	<i>B4</i>	<i>44'</i>	<i>43'</i>	<i>B5</i>	<i>41'</i>	<i>38'</i>	<i>B6</i>	<i>33'</i>	<i>34'</i>
GRID	DISTANCE FROM NW CORNER	DISTANCE FROM SW CORNER																		
<i>B2</i>	<i>54'</i>	<i>62'</i>																		
<i>B3</i>	<i>54'</i>	<i>49'</i>																		
<i>B4</i>	<i>44'</i>	<i>43'</i>																		
<i>B5</i>	<i>41'</i>	<i>38'</i>																		
<i>B6</i>	<i>33'</i>	<i>34'</i>																		
NOTE: <i>B6 TAKES INTO ACCOUNT, NEW AREA SWPT + QC'D TODAY</i>																				
<input type="checkbox"/> Prompt correction or compliance with contract specifications is requested.																				
<div style="text-align: center;">  USACE Site Representative </div>																				
RECEIPT ACKNOWLEDGED: <i>Thomas C. Burchett</i> Contractor's Representative																				
ACTION TAKEN:																				
CEHNC FORM 948 (Revised) 1 APR 96 <i>COPY 1 - Contractor's Representative</i>																				

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE ORDNANCE AND EXPLOSIVE GROUP MEMO		
TO: <i>HFA, INC.</i>	DATE: <i>20 MAY 98</i>	TIME: <i>1630</i>
CONTRACT NUMBER: <i>DACA-87-95-D-0027</i>	PROJECT LOCATION: <i>ASSATEAGUE ISLAND, MD</i>	
DO #: <i>0026</i>		
SUBJECT ITEM(S) (Check all that apply): <input type="checkbox"/> Work Plan <input checked="" type="checkbox"/> Quality Control <input type="checkbox"/> Safety Violation <input type="checkbox"/> Other <input type="checkbox"/> Safety Comments		
DESCRIPTION: <i>THE FOLLOWING GRID PASSED A GOVERNMENT QA CHECK: A3 (ONE GRID TOTAL)</i>		
NOTHING FOLLOWS		
<input type="checkbox"/> Prompt correction or compliance with contract specifications is requested.		
<div style="text-align: center;">  USACE Site Representative </div>		
RECEIPT ACKNOWLEDGED: <i>Thomas C. Burchett</i> Contractor's Representative		
ACTION TAKEN:		
CEHNC FORM 948 (Revised) 1 APR 96 <i>COPY 1 - Contractor's Representative</i>		

CERTIFICATE FOR SCRAP TURN IN

Date: 21 May 98

To: HD Metal Company

Address: 909 Boundry Street

Salisbury, MD 21801

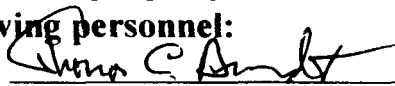
(410)546-1111

Dear Sir:

In regard to the turn-in of recovered ordnance, ammunition, and explosives related scrap and target related scrap the following applies:

In compliance with the basic contract between HFA, Inc and the U.S. Army Corps of Engineers, Huntsville Division, the following statement is provided.

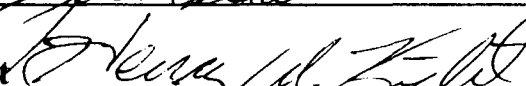
"I certify that the property listed hereon has been inspected by the following personnel:


T.C. Brandt  Site Safety Officer,

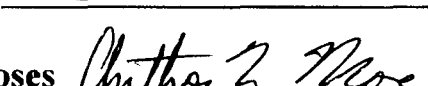
Phil Curry  Senior UXO Site Supervisor

Dale Alger  UXO Team Leader

Fred Allen  UXO Team Leader

Henry Kight  UXO Specialist

Dave Millar  UXO Specialist

Anthony Moses  UXO Specialist

James Wolfe  UXO Specialist

and to the best of our knowledge and belief, contains no items of a dangerous nature".

DOC. CONT.		BY FROM		STOCK NUMBER		QUANTITY		DOCUMENT NUMBER			SUPPLEMENTARY ADDRESS		DISTRIBUTION		POLY. SECT.		REC'D. DEL. DATE		UNIT PRICE		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A				HFA ASSATEQUE ISLAND				SHIP TO HD METAL COMPANY / 909 BOUNDARY ST. SALISBURY MD 21801				MARK FOR		PROJECT ASSATEQUE IS.		TOTAL PRICE					
F				WAREHOUSE LOCATION		TYPE OF CARGO	UNIT PACK	UNIT WEIGHT	UNIT CUBE	LFC	MFC	FREIGHT RATE		DOCUMENT DATE	MAY COND.	QUANTITY					
T				SUBSTITUTE DATA (ITEM ORIGINALLY REQUESTED)				FREIGHT CLASSIFICATION NOMENCLATURE													
W				ITEM NOMENCLATURE				SCRAP METAL													
2				INSPECTED BY AND DATE		TYPE OF CONTAINER		TOTAL WEIGHT		RECEIVED BY AND DATE		INSPECTED BY AND DATE									
3				PHIL RING 5/21/98						DELMARVA DUFF PAPER RECYCLING 1930 LBS 5-21-98											
4				INDEXED BY AND DATE		NO. OF CONTAINERS		TOTAL CUBE		WAREHOUSED BY AND DATE		WAREHOUSE LOCATION									
5																					
6				REMARKS: I certify 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.																	
7				PARTY DESTINATION ADDRESS		DATE SHIPPED															
8																					
9				TRANSPORTATION CHARGEABLE TO				SIGNATURE AND DATE OF RECEIVER'S SIGNATURE (AND DATE)				RECEIVER'S DOCUMENT NUMBER									
10				At No cost to the				GOVERNMENT													

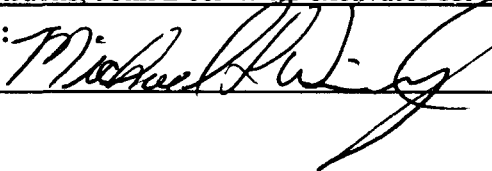
Appendix E

Daily Site Journals

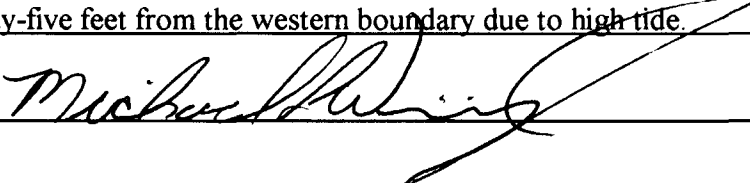
SUXOS DAILY JOURNAL

DATE: 5/22/98					PROJECT: ASSATEAGUE ISLAND				
SUXOS: PHIL CURRY					SSO: T.C. BRANDT				
					QC: T.C. BRANDT				
TOTAL GRIDS CLEARED: 0					TOTAL EXCAVATIONS:				
TOTAL UXO:					TOTAL SCRAP:				
MAG TYPE: SCHONSTEDT GA52-C					MAG SETTING: MAX				
CLIENT: CEHNC					CONTRACT: DACA87-95-D-0027				
FIELD OPERATION TIME: 5					GOV'T. DELAY TIME: 0				
WEATHER: PARTLY CLOUDY					TEMPERATURE: 88				
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ	
COMMENTS:									
All personnel demobed from the site. SUXOX turned in magazines and vehicles.									
SUXOS SIGNATURE: <i>Phil Curry</i>									

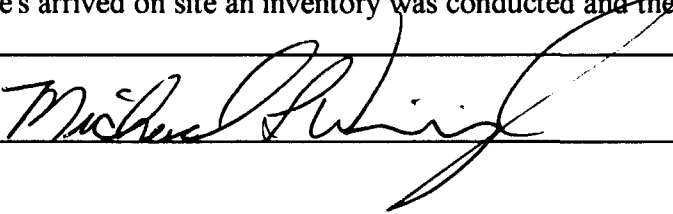
SUXOS DAILY JOURNAL

DATE: 5/4/98					PROJECT: ASSATEAGUE ISLAND				
SUXOS: PHIL CURRY					SSO: T.C. BRANDT				
					QC: T.C. BRANDT				
TOTAL GRIDS CLEARED: 0					TOTAL EXCAVATIONS:				
TOTAL UXO:					TOTAL SCRAP:				
MAG TYPE: SCHONSTEDT GA52-C					MAG SETTING: MAX				
CLIENT: CEHNC					CONTRACT: DACA87-95-D-0027				
FIELD OPERATION TIME: 8					GOV'T. DELAY TIME: 0				
WEATHER: CLOUDY/SHOWERS					TEMPERATURE: 68				
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ	
COMMENTS: Mike Wunningham and Mark Simmonds mobilized to the site. Meeting with Mr. John Burns (National Park Service Chief Ranger). Received equipment and placed in temporary storage. Received the following vehicles and heavy equipment: GMC Astro Van from Enterprise, 2 ea. Ford F150 pickup trucks, John Deer 490E excavator for Hertz Equipment rental.									
SUXOS SIGNATURE: 									

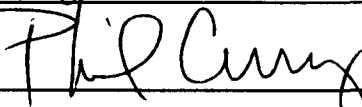
SUXOS DAILY JOURNAL

DATE: 5/5/98					PROJECT: ASSATEAGUE ISLAND			
SUXOS: PHIL CURRY					SSO: T.C. BRANDT			
					QC: T.C. BRANDT			
TOTAL GRIDS CLEARED: 0					TOTAL EXCAVATIONS:			
TOTAL UXO:					TOTAL SCRAP:			
MAG TYPE: SCHONSTEDT GA52-C					MAG SETTING: MAX			
CLIENT: CEHNC					CONTRACT: DACA87-95-D-0027			
FIELD OPERATION TIME: 10					GOV'T. DELAY TIME: 0			
WEATHER:					TEMPERATURE:			
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ
<p>COMMENTS: Surveyor's on site. Grid network complete this day. Magazine's arrived on site and grounding protection was installed by AET Electric. Surveyors started establishing the grid network for the known contaminated area. While setting the control points, the surveyors noticed that the coordinates for the known contamination area was the same as the coordinated for the burial trench. The surveyors verified that the known contaminated area was the burial trench. The CEHNC Project Manager (Mr. Glenn Earhart) was notified of the findings. Based on the new facts, it was determined that the grid network will overlay the burial trench with a buffer to the north and south of a hundred feet. The grid network was complete, however, the eastern boundary only extended out seventy-five feet from the western boundary due to high tide.</p>								
<p>SUXOS SIGNATURE: </p>								

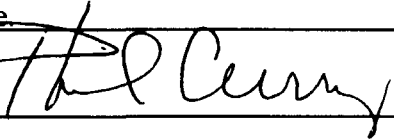
SUXOS DAILY JOURNAL

DATE: 5/6/98					PROJECT: ASSATEAGUE ISLAND				
SUXOS: PHIL CURRY					SSO: T.C. BRANDT				
					QC: T.C. BRANDT				
TOTAL GRIDS CLEARED: 0					TOTAL EXCAVATIONS:				
TOTAL UXO:					TOTAL SCRAP:				
MAG TYPE: SCHONSTEDT GA52-C					MAG SETTING: MAX				
CLIENT: CEHNC					CONTRACT: DACA87-95-D-0027				
FIELD OPERATION TIME: 10					GOV'T. DELAY TIME: 0				
WEATHER:					TEMPERATURE:				
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ	
COMMENTS: Explosive's arrived on site an inventory was conducted and they were stored in the explosive magazines.									
SUXOS SIGNATURE: 									

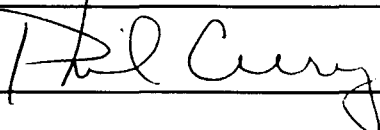
SUXOS DAILY JOURNAL

DATE: 5/11/98					PROJECT: ASSATEAGUE ISLAND				
SUXOS: PHIL CURRY					SSO: T.C. BRANDT				
					QC: T.C. BRANDT				
TOTAL GRIDS CLEARED: 0					TOTAL EXCAVATIONS:				
TOTAL UXO:					TOTAL SCRAP:				
MAG TYPE: SCHONSTEDT GA52-C					MAG SETTING: MAX				
CLIENT: CEHNC					CONTRACT: DACA87-95-D-0027				
FIELD OPERATION TIME: 0					GOV'T. DELAY TIME: 0				
WEATHER: RAIN/WINDY					TEMPERATURE: 50				
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ	
COMMENTS: The following personnel mobilized to the site this day: SUXOS Phil Curry, SSO/QC T.C. Brandt, Team Leader's Fred Allen, Dale Alger, UXO Specialist's, James Wolf, Anthony Moses, Dave Millar. SUXOS and SSO conducted a magazine inventory. Human Factors Applications, Inc Project Manager Dave Frandsen on site.									
SUXOS SIGNATURE: 									

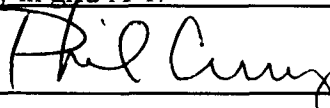
SUXOS DAILY JOURNAL

DATE: 5/12/98					PROJECT: ASSATEAGUE ISLAND			
SUXOS: PHIL CURRY					SSO: T.C. BRANDT			
					QC: T.C. BRANDT			
TOTAL GRIDS CLEARED: 0					TOTAL EXCAVATIONS:			
TOTAL UXO:					TOTAL SCRAP:			
MAG TYPE: SCHONSTEDT GA52-C					MAG SETTING: MAX			
CLIENT: CEHNC					CONTRACT: DACA87-95-D-0027			
FIELD OPERATION TIME: 5					GOV'T. DELAY TIME: 0			
WEATHER: RAIN/WINDY					TEMPERATURE: 50			
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ
COMMENTS: CEHNC Safety Rep on Site: Mike Slovak Performed administrative activities, site safety brief, work plan review. Conducted Equipment Check out. Met with Mr. John Burns (NPS Chief Ranger). Human Factors Applications, Inc President Liz Theisen, Project Manager Dave Frandsen, attended Media Day which was conducted by Baltimore District PAO, Miss Sheila Bloom PM, Mr. Glenn Earhart, CEHNC PM. Due to weather the media day briefing was held in the park office. The wind and rain would not allow removal activities to be conducted on the beach. The site was shut down at 1130. Henry Kight mobilized to the site.								
SUXOS SIGNATURE: 								

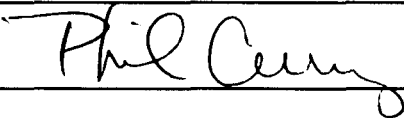
SUXOS DAILY JOURNAL

DATE: 5/13/98					PROJECT: ASSATEAGUE ISLAND				
SUXOS: PHIL CURRY					SSO: T.C. BRANDT				
					QC: T.C. BRANDT				
TOTAL GRIDS CLEARED: 0					TOTAL EXCAVATIONS:				
TOTAL UXO:					TOTAL SCRAP:				
MAG TYPE: SCHONSTEDT GA52-C					MAG SETTING: MAX				
CLIENT: CEHNC					CONTRACT: DACA87-95-D-0027				
FIELD OPERATION TIME: 10					GOV'T. DELAY TIME: 0				
WEATHER: RAIN/WINDY					TEMPERATURE: 56				
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ	
<p>COMMENTS: CEHNC Safety Rep on Site: Mike Slovak Team 1 conducted removal activities. Team 2 excavated several contacts in 3 grids all were non UXO. The tide is extremely high due to the storm. The B grids will have to wait until it moves through. HFA was informed at 1100 Baltimore District PAO that 3 local news stations would be visiting the site at 1200. SUXOS and CEHNC Safety Rep conducted interviews and a mag and flag demonstration.</p>									
<p>SUXOS SIGNATURE: </p>									

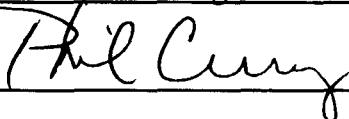
SUXOS DAILY JOURNAL

DATE: 5/14/98					PROJECT: ASSATEAGUE ISLAND				
SUXOS: PHIL CURRY					SSO: T.C. BRANDT				
					QC: T.C. BRANDT				
TOTAL GRIDS CLEARED: 3					TOTAL EXCAVATIONS: 28				
TOTAL UXO: 0					TOTAL SCRAP: 15				
MAG TYPE: SCHONSTEDT GA52-C					MAG SETTING: MAX				
CLIENT: CEHNC					CONTRACT: DACA87-95-D-0027				
FIELD OPERATION TIME: 10					GOV'T. DELAY TIME: 0				
WEATHER: CLOUDY/WINDY					TEMPERATURE: 59				
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ	
A-1	0	0	No	0	9	2	No	Yes	
A-5	15	0	No	0	3	0	No	Yes	
A-6	0	0	No	0	16	0	No	Yes	
COMMENTS: CEHNC Safety Rep on Site: Mike Slovak Team 1 continues clearance operations completing 2 grids. Team 2 excavates 2 grids. Demolition operations took place today in grid A-1.									
SUXOS SIGNATURE: 									


SUXOS DAILY JOURNAL

DATE: 5/15/98				PROJECT: ASSATEAGUE ISLAND				
SUXOS: PHIL CURRY				SSO: T.C. BRANDT				
				QC: T.C. BRANDT				
TOTAL GRIDS CLEARED: 1				TOTAL EXCAVATIONS: 5				
TOTAL UXO: 25				TOTAL SCRAP: 15				
MAG TYPE: SCHONSTEDT GA52-C				MAG SETTING: MAX				
CLIENT: CEHNC				CONTRACT: DACA87-95-D-0027				
FIELD OPERATION TIME: 10				GOV'T. DELAY TIME: 0				
WEATHER: SUNNY/WARM				TEMPERATURE: 75				
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ
A-4	15	25	No	0	5	0	No	Yes
COMMENTS: CEHNC Safety Rep on Site: Mike Slovak Team 1 continues clearance operations completing 1 grid. Team 2 excavates 1 grid. Demolition operations today in grid A-6.								
SUXOS SIGNATURE: 								

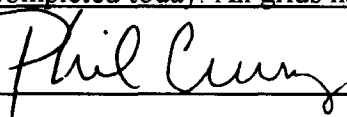
SUXOS DAILY JOURNAL

DATE: 5/18/98					PROJECT: ASSATEAGUE ISLAND				
SUXOS: PHIL CURRY					SSO: T.C. BRANDT				
					QC: T.C. BRANDT				
TOTAL GRIDS CLEARED: 5					TOTAL EXCAVATIONS: 96				
TOTAL UXO: 21					TOTAL SCRAP: 12				
MAG TYPE: SCHONSTEDT GA52-C					MAG SETTING: MAX				
CLIENT: CEHNC					CONTRACT: DACA87-95-D-0027				
FIELD OPERATION TIME: 10					GOV'T. DELAY TIME: 0				
WEATHER: SUNNY/WARM					TEMPERATURE: 80				
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ	
A-2	12	20	No	0	11	2	No	Yes	
B-1	0	1	No	0	18	0	No	Yes	
B-2	0	0	No	0	15	0	No	Yes	
B-5	0	0	No	0	37	0	No	No	
B-6	0	0	No	0	15	0	No	No	
COMMENTS: CEHNC Safety Rep on Site: Mike Slovak									
Team 1 cleared 5 grids. Team 2 excavated 3 grids. Demo operations took place today in grid A-6.									
SUXOS SIGNATURE: 									

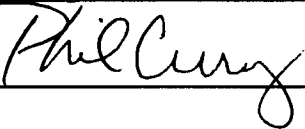
SUXOS DAILY JOURNAL

DATE: 5/19/98					PROJECT: ASSATEAGUE ISLAND				
SUXOS: PHIL CURRY					SSO: T.C. BRANDT				
					QC: T.C. BRANDT				
TOTAL GRIDS CLEARED: 1					TOTAL EXCAVATIONS: 33				
TOTAL UXO: 27					TOTAL SCRAP: 25				
MAG TYPE: SCHONSTEDT GA52-C					MAG SETTING: MAX				
CLIENT: CEHNC					CONTRACT: DACA87-95-D-0027				
FIELD OPERATION TIME: 10					GOV'T. DELAY TIME: 0				
WEATHER: SUNNY					TEMPERATURE: 90				
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ	
B-3	25	27	No	0	33	0	No	Yes	
COMMENTS: CEHNC Safety Rep on Site: Mike Slovak									
Team 1 cleared 1 grid. Team 2 excavated 1 grid. Demo operations took place today in A-6									
SUXOS SIGNATURE: 									

SUXOS DAILY JOURNAL

DATE: 5/20/98					PROJECT: ASSATEAGUE ISLAND				
SUXOS: PHIL CURRY					SSO: T.C. BRANDT				
					QC: T.C. BRANDT				
TOTAL GRIDS CLEARED: 2					TOTAL EXCAVATIONS: 65				
TOTAL UXO: 139					TOTAL SCRAP: 75				
MAG TYPE: SCHONSTEDT GA52-C					MAG SETTING: MAX				
CLIENT: CEHNC					CONTRACT: DACA87-95-D-0027				
FIELD OPERATION TIME: 10					GOV'T. DELAY TIME: 0				
WEATHER: SUNNY					TEMPERATURE: 90				
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ	
A-3	50	103	No	0	21	10	No	Yes	
B-4	25	36	No	0	44	0	No	Yes	
COMMENTS: CEHNC Safety Rep on Site: Mike Slovak Team 1 cleared an additional 6 foot on B-6. They also cleared sand from rocket motors for turn in to a local scrap dealer. Team 2 excavated 2 grids. Demo operations took place today in grid A-6. <u>Intrusive activities where completed today. All grids have been QC'd/QA'd.</u>									
SUXOS SIGNATURE: 									

SUXOS DAILY JOURNAL

DATE: 5/21/98					PROJECT: ASSATEAGUE ISLAND				
SUXOS: PHIL CURRY					SSO: T.C. BRANDT				
					QC: T.C. BRANDT				
TOTAL GRIDS CLEARED: 0					TOTAL EXCAVATIONS:				
TOTAL UXO:					TOTAL SCRAP:				
MAG TYPE: SCHONSTEDT GA52-C					MAG SETTING: MAX				
CLIENT: CEHNC					CONTRACT: DACA87-95-D-0027				
FIELD OPERATION TIME: 10					GOV'T. DELAY TIME: 0				
WEATHER: CLOUDY/THUNDER STORMS					TEMPERATURE: 90				
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ	
COMMENTS: CEHNC Safety Rep on Site: None Team 1 finished clearing rocket motors for turn in. Team 2 backed filled grids. Equipment was inventoried and shipped out along with Jet Perforators to Griffis AFB. Vehicles were washed.									
SUXOS SIGNATURE: 									

SUXOS DAILY JOURNAL

DATE: 5/22/98					PROJECT: ASSATEAGUE ISLAND				
SUXOS: PHIL CURRY					SSO: T.C. BRANDT				
					QC: T.C. BRANDT				
TOTAL GRIDS CLEARED: 0					TOTAL EXCAVATIONS:				
TOTAL UXO:					TOTAL SCRAP:				
MAG TYPE: SCHONSTEDT GA52-C					MAG SETTING: MAX				
CLIENT: CEHNC					CONTRACT: DACA87-95-D-0027				
FIELD OPERATION TIME: 5					GOV'T. DELAY TIME: 0				
WEATHER: PARTLY CLOUDY					TEMPERATURE: 88				
GRIDS CLEARED	TOTAL OE SCRAP	TOTAL UXO	BIP Y/N	SMALL ARMS	TOTAL DIGS	NON-OE SCRAP	HAZMAT LOCATED	B/H REQ	
COMMENTS:									
All personnel demobed from the site. SUXOX turned in magazines and vehicles.									
SUXOS SIGNATURE: <i>Phil Curry</i>									

Appendix F

Site Photographs



Assateague Island National Seashore is approximately 5 miles south of Ocean City, Maryland.



The Island is famous for its wild ponies that roam freely throughout the island.



Prior to conducting any intrusive operations an explosive storage magazine was placed in a remote and secure area.



The magazine was grounded and certified by a licensed electrician. Note the four antennas on top of the magazine, and the two grounding rods in the ground.



Clearance operations begin by laying out search lanes with ropes.



Each lane is then thoroughly search with a magnetometer. If a magnetic anomaly is located, it is marked with a yellow flag.



Some days the weather cooperates, and searching for anomalies can be enjoyable.



Some days the weather can cause field work to be extremely uncomfortable.



HFA UXO personnel searched each grid with magnetometers.



The wild ponies of Assateague visited the site several times during the project.



When large anomalies were discovered, a track hoe was used to investigate.



The track hoe was able to dig below the water table and remove the practice ordnance.



The track hoe dug up a practice 5 inch warhead and one of the UXO Specialist is removing it from the hole.



Two UXO Specialist begin to remove several practice ordnance items from the track hoe bucket.



After the practice ordnance items are recovered and visually inspected, they are placed into a shallow trench and prepared for explosive venting. This is done to ensure there is no explosive residue left in the items.



An explosive charge known as a jet perforator is used to blow a small hole through each piece of practice ordnance.



Some of the practice ordnance items required two jet perforators to ensure the item did not contain any explosive residue.



The jet perforator contains approximately 34 grams of explosives and is set off by placing detonating cord over the perforator's small detonator.



The detonating cord is strung through each perforator and then attached to a blasting cap.



These two UXO Specialist are using a galvanometer to check the bridge wire of the blasting cap to ensure it is intact and has the correct resistance to explode the explosive when it charged with electricity.



This UXO Specialist is using an electronic blasting machine to initiate the blasting cap and explode the perforators.



This 5 inch warhead has been shot with a jet perforator, note the small hole. The explosion also knocks all the rust and debris from the round also.



In the foreground is a 2.25 inch rocket. The two items to the rear are 5 inch warheads. These warheads are fitted to a 3.5 in rocket motor, not shown in the picture.



After the practice ordnance items were explosively vented they were re-inspected and place in the back of a pickup truck for temporary storage.



At the completion of all intrusive removal activities each ordnance item was re-inspected and then cut in half with an emergency access saw to ensure no explosive residue remained. No explosive residue was detected in any of the 212 items recovered during the project.

Appendix G

Video Tape, (Provided Separately)

Appendix H

Record of Environmental Consideration



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

CENAB-PL-E

19 March 1998

RECORD OF ENVIRONMENTAL CONSIDERATION

Project Title: Defense Environmental Restoration Program (DERP) for Formerly Used Defense Sites (FUDS), Assateague Island, Worcester, Maryland, and Accomack, Virginia, Site Number CO3MD09301- Time Critical Removal Action

Site Description: Assateague Island is a low, sandy, 36-mile long barrier island located directly south of the Ocean City Inlet in Worcester County, Maryland. The southern most tip of the island is located in Accomack County, Virginia. The island is designated as a National Seashore. In addition, there is a National Wildlife Refuge and a Maryland State Park located on the island. The state park and a portion of the National Seashore comprise the "developed zone" because that is the only area that has amenities for the public. The proposed action site is within this developed zone near the ranger station.

Background: Area A in figure 1, is a Formerly Used Defense Site (FUDS). It was used by the Navy and/or Army Air Corps as rocket/bombing ranges from 1944 to 1947. Ordnance and explosive wastes (OE) have been removed from this area in the past.

Proposed Action: The proposed action is a Time Critical Removal Action (TCRA) of ordinances and explosives (OE) on Assateague Island, Maryland. The project will involve the survey of the areas with ground-penetrating radar, and the removal of all ordnance. Potential actions might include subsurface soil testing to determine if contaminated soil or chemical warfare material are present, and if containers or contaminants are present, the removal, storage or disposal of materials may also occur. All excavated areas will be backfilled and restored once any removal actions are completed. The recommended action is a Time Critical Removal Action to a depth that is required to remove all currently identified OE from the beach area (expected depth is 2 - 3 feet). This includes the area of the February 1998 OE event and the trench identified in the 1995 Site Investigation Report. (See attached Enclosure 1, Chronology of Previous Findings). The proposed area for OE removal is approximately 3 - 4 acres. These actions will significantly reduce the risks to humans while serving and providing the public use of the site as currently permitted. Also, the Baltimore District, Huntsville Center, the NPS, the local Explosive Ordnance Detachment (EOD) unit and the regulatory community plan to establish a coordination network for a quick and thorough response to future OE actions at Assateague Island.

Duration of Proposed Action: April 1998 - May 1998

Reasons for Using Record of Environmental Consideration (REC): A REC is being used for the proposed action because the Department of Defense (DoD) has advised that DoD components are not required to comply with the National Environmental Policy Act (NEPA) procedural

requirements when undertaking a Defense Environmental Restoration Action (DERA) funded, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or other similar clean-ups. The overall NEPA mandate for a fully-informed and well-considered decision will be achieved through compliance with the National Contingency Plan (NCP) and the DERP statute, 10 U.S.C. 2701. The *Archives Search Report, Conclusions and Recommendations for Assateague Island* record (U.S. Army Corps of Engineers, Rock Island, 1994), the *Archives Search Report, Findings for Assateague Island* record (U.S. Army Corps of Engineers, Rock Island, 1994) and the *Site Investigation Report, Assateague Island, Worcester County, Maryland and Accomack County, Virginia* record (U.S. Army Corps of Engineers, Huntsville, 1995) were used to prepare this document. The following key environmental resources/issues were considered in preparing this record:

Environmental Considerations: The table below lists the key environmental resources/issues that were considered and potential impacts associated with each resource. A discussion of each resource area and potential impacts of the project is presented below.

Project: Assateague Island FUDS Worcester County, MD and Accomack County, VA Project # CO3MD09301	POTENTIAL IMPACTS OF PROPOSED PROJECT					
	NO IMPACT	ST	LT	LOC	WS	SI
LAND USE		X		X		
ENDANGERED SPECIES	X					
WETLANDS		X		X		
WATER QUALITY		X		X		
WILD AND SCENIC RIVERS	X					
FISH AND WILDLIFE		X		X		
PRIME AND UNIQUE FARMLANDS	X					
HAZARDOUS AND TOXIC SUBSTANCES	X					
CULTURAL RESOURCES	X					
AIR QUALITY	X					
TRAFFIC		X		X		
NOISE		X				
ENVIRONMENTAL JUSTICE (EO	X					

NOTE:

ST = Short Term

LT = Long Term

LOC = Local

WS = Wide Spread

SI = Significant Impact

a. Land-Use: The subject property is zoned recreational, and owned by the National Park Service. The area is a part of Assateague Island National Seashore and Assateague State Park.

Public use of the area includes, but is not limited to camping, picnicking, sunbathing and fishing. Public swimming, sunbathing and fishing take place in the vicinity of the OE find. Once the OE removal is complete the existing land use will resume.

b. Endangered Species: Coordination with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act confirms that the island is inhabited by two endangered animal species, the Peregrine Falcon (*Falco peregrinus tundrius*) and the Delmarva Fox Squirrel (*Sciurus niger ginereus*). The Piping Plover (*Charadrius melodus*), an endangered species, nests on Assateague Island, but is not present year-round, and is not found in the developed areas of the park. One reptile, the Atlantic Loggerhead Turtle (*Caretta*), is known to migrate past the island. Recent data suggests that the Assateague coast is relatively unimportant to loggerheads as nesting habitat and has little potential for increased use. Because the area of remediation is developed none of the listed species are expected to be located in the vicinity. Thus, there will be no impact to threatened and endangered species.

c. Wetlands: No non tidal wetlands are present within the proposed project area. Any areas to be disturbed during the remedial process that may be located within the inter-tidal zone will be restored to pre-existing conditions, thus any impacts in these areas will be temporary.

d. Water Quality: Ocean surface waters are located adjacent to the project site. Potential impacts to adjacent surface waters will be minimized by adherence to local, state, and Federal regulations regarding sediment and erosion control. Temporary turbidity may result during removal of OE. Turbidity will cease immediately following completion of the action.

e. Fish and Wildlife: Vertebrate species inhabiting the campground areas or invertebrates inhabiting inter-tidal or dune areas may be temporarily displaced during remedial actions. Individuals that are displaced will return to these areas shortly after the action is ceased. No permanent impacts will be sustained by any populations inhabiting the site.

f. Wild and Scenic Rivers: There are no designated Wild and Scenic Rivers located at or near the project area. Therefore, there will be no impacts to this resource.

g. Prime and Unique Farmlands: The project site is not located on prime and unique farmland. Therefore, there will be no impacts to this resource.

h. Hazardous and Toxic Substances: Actual or potential releases of hazardous substances from the project site, if not addressed by implementing response actions, may present an endangerment to human health, welfare and/or the environment. All remedial actions taken will be in consultation with local regulatory agencies to reduce the risk to human health, welfare and the environment. Disposal and transport of any hazardous waste removed from the project site will be conducted under all applicable local, state, and Federal laws and regulations.

i. Cultural Resources: A review of known and predicted cultural resources was performed for this project. The Maryland State Historic Preservation Officer concurred with the Baltimore District's determination that the Time Critical Removal Action would have no effect on cultural resources.

j. Air Quality: The proposed action was evaluated to determine if the Clean Air Act Conformity Requirements apply (58 Fed. Reg. 63214, November 30, 1994). The project is exempt from this regulation under Section 93.153 (d)(5) because "Direct emissions from remedial and removal actions carried out under the Comprehensive Environmental Response, Compensation and Liability Act (CERLA) and associated regulations [are exempt] to the extent such emissions either comply with the substantive requirements of the PSD/NSR permitting program or are exempted from other environmental regulation under the provisions of CERCLA and applicable regulations issued under CERLA." The proposed action will not have a significant adverse impact on air quality at Assateague Island.

k. Traffic: Temporary increases in vehicular traffic associated with the removal of the ordnance will have no lasting impact on the surrounding area. If it becomes necessary to establish an exclusion zone for safety reasons, there may be temporary road closures. If road closures are necessary, normal traffic flow will resume after any removal action is completed. Disposal and transport of any hazardous waste removed from the project site will be conducted by a licensed contractor under all applicable local, state and Federal law. Public vehicle access will not be restricted.

l. Noise: Other than the temporary presence of vehicles required to complete the removal action, the mobilization and implementation of response actions at the project site will not have a significant adverse impact.

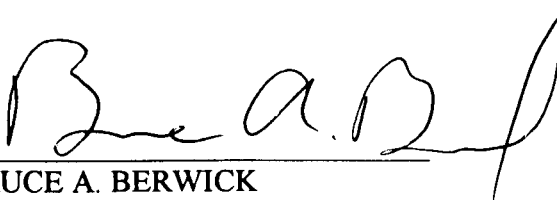
m. Environmental Justice (EO 12898): Executive Order 12898, dated February 11, 1994, requires Federal agencies to identify and address disproportionately high adverse effects to human health and the environment as a result of its activities on minority and low income populations in the United States. There are no low income or minority residential communities in the vicinity of the project area; therefore, there will be no impact to this resource. Removal of ordnance is expected to reduce risks to visitors to the National Seashore Park and benefit the environment.

Conclusion: Based upon a review of the proposed action and resources/issues described above, it has been determined that the Removal of Ordnance from the Assateague National Seashore Park will result in the enhancement of environmental quality by the removal of unexploded ordnance and surrounding chemical wastes; will present no environmentally controversial change to existing environmental conditions and is similar to actions previously examined which were found to have no significant environmental impacts. Additionally, DoD components are not required to comply with NEPA's procedural requirements when undertaking a DERA funded RCRA or CERCLA clean-up action. However, AR 200-2 states that a REC is used when the proposed action is exempt from NEPA.

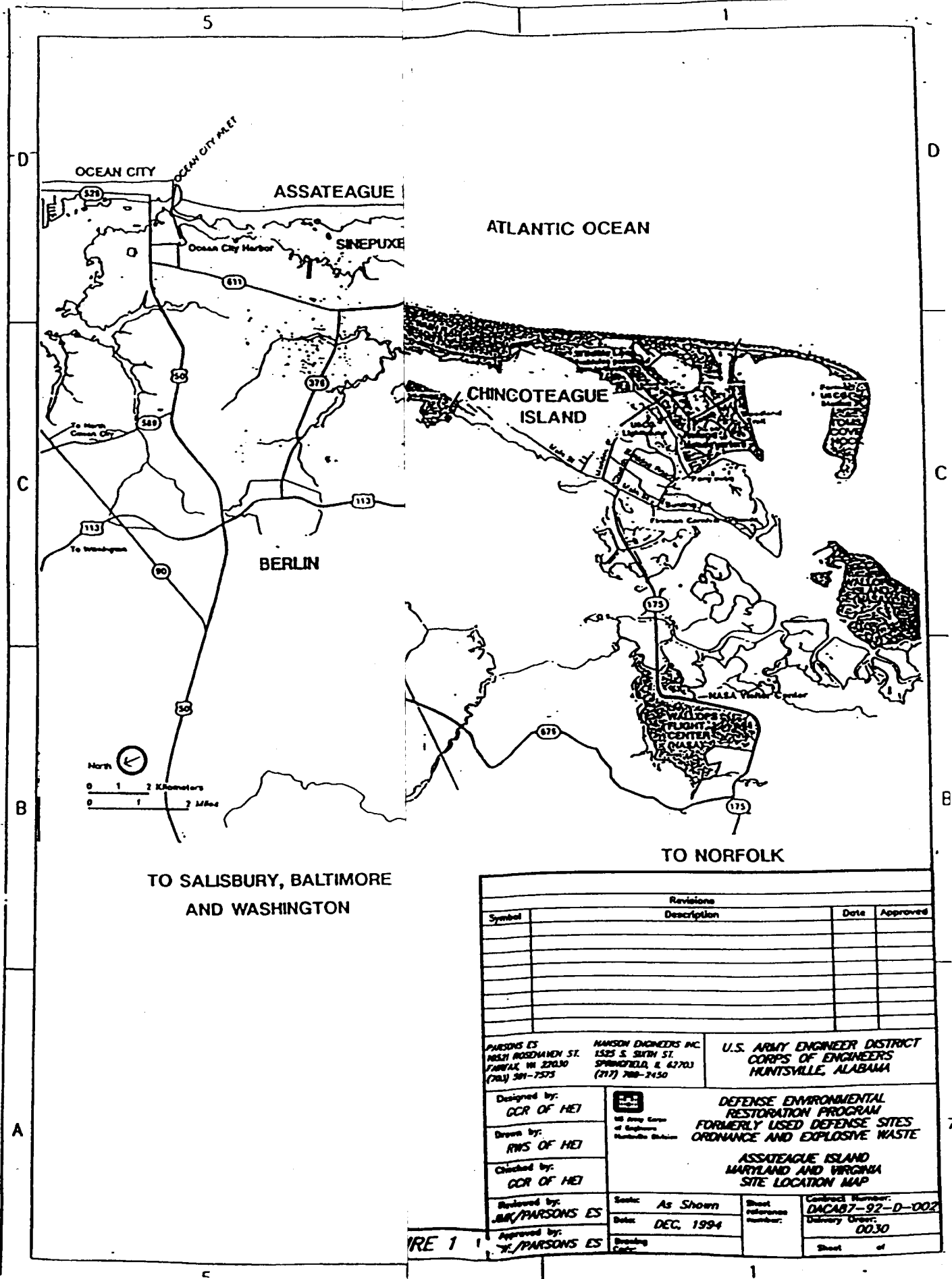
Date:

24 Mar 98

Approved By:



BRUCE A. BERWICK
Colonel, Corps of Engineers
Commanding



TO SALISBURY, BALTIMORE
AND WASHINGTON

TO NORFOLK

Revisions			
Symbol	Description	Date	Approved

PARSONS ES 18521 ROSEDAVEN ST. FAIRFAX VA 22030 (703) 391-7575	MARSON ENGINEERS INC. 1525 S. 34TH ST. SPRINGFIELD, IL 62703 (217) 788-2450	U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS HUNTSVILLE, ALABAMA	
Designed by: GCR OF HEI	U.S. Army Corps of Engineers Huntsville District	DEFENSE ENVIRONMENTAL RESTORATION PROGRAM FORMERLY USED DEFENSE SITES ORDNANCE AND EXPLOSIVE WASTE	
Drawn by: RWS OF HEI			
Checked by: GCR OF HEI			
Reviewed by: JMK/PARSONS ES	Scale: As Shown	Sheet reference number:	Contract Number: DACAB7-92-D-002
Approved by: JMK/PARSONS ES	Date: DEC. 1994	Delivery Order: 0030	Sheet of

FIGURE 1

Chronological Table of Previous Findings of Ordnances and Explosives:

Year	Activity	Findings
1988	Navy EOD deployed to north end of beach North Ocean Beach	Stinger-one rocket
1988- Jul	144 th EOD (Ft Meade) deployed	4- 5" rockets
1988- Jul	Navy EOD Mobile Unit took over operations Conducted underwater survey, discovered trench offshore	11 -2.25" rocket motors 11 - 2.25" rocket heads 2 -5" rocket heads (two suspect live found to be inert) 2 - 3.25" rocket motors Numerous ballistic tips No removal action taken
1991	HFA conducts site visit and research of site	5" rocket motor parts MK 43 practice bomb 20mm cannon casing Recommend large scale ordnance survey
1992	ISSI Unexploded Ordnance, Inc. conducted surface and subsurface survey of North Ocean Beach Area	Shipwreck, fencing & metal pipes. Low sensitivity magnetometers used. No ordnance or related items found.
1994	Rock Island District prepared Archive Search Report for HNC	Areas A, C & E confirmed areas of concern: EE/CA recommended Areas B &D potential areas of concern: Preliminary Assessments recommended
1994- 1995	Parsons Engineering Science for HNC & NAB -UXB International Conduct field work Magnetometers: only areas A &C Intrusive investigations: only in A & C Area B was investigated to locate offshore trench, no surveys were performed within D or E (except reconnaissance sweeps) A & C - land (350 acres each) B &D - water (300 acres each) E- remaining acres of site	Various munitions found : 20 - north area 109 - area west of dunes 36 - on shoreline in excavated area in north 0 - south area Areas No live ordnance found. Site Investigation completed, EE/CA suspended. ROD signed: No Further Action (NOFA).
1998	Navy EOD Norfolk called by NPS to investigate beach. USACE contacted and assigned lead agency under FUDS.	Approximately 200 items discovered in North Beach Area, Currently covered by sand. Developing Plan of Action for site.



DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

REPLY TO
ATTENTION OF

March 19, 1998

Planning Division

Dr. J. Rodney Little
State Historic Preservation Officer
Maryland Historical Trust
Division of Historical and Cultural Programs
100 Community Place
Crownsville, Maryland 21032-2023

Dear Dr. Little:

The purpose of this letter is to solicit comments from your agency regarding impacts, if any, to cultural/archeological resources in accordance with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulation, 36 CFR 800 "Protection of Historic Properties" for the removal of ordnance and explosives (OE) that were discovered on the seashore of Assateague Island, Worcester County, Maryland in February 1998. Telephone coordination with Ms. Susan Langley of your office on March 17, 1998 indicated the removal of ordnance in the project area was unlikely to have an effect on historic resources.

The U.S. Army Corps of Engineers, Baltimore District, is preparing a Record of Environmental Consideration (REC) in accordance with the National Environmental Policy Act (NEPA) for the removal action. The proposed action is to excavate the sand to an approximate depth of 2-3 feet, in order to remove all currently identified OE from the beach area. The removal action is currently scheduled to begin in April 1998. The project is located on the Assateague Island National Seashore in the developed zone south of the Assateague State Park in the vicinity of the ranger station (Enclosure 1). Previous discoveries of ordnance were made in the general vicinity of the most recent find. Coordination with your office on these previous finds indicated concurrence with our determination that there would be no effect on historic resources resulting from the removal of ordnance in this area (Enclosure 2).

Due to the similarity of this project and its location to previous removal actions, we request your concurrence with our determination of no effect on historic properties by March 20, 1998. Concurrence with these findings will complete the Section 106 process. If you have any questions regarding this matter, please contact me or my action officer, Ms. Carol L. Bernstein, at (410) 962-2942 or by fax (410) 962-4698.

Sincerely,

Harold W. Nelson
Dr. James F. Johnson
for Chief, Planning Division

Enclosures

Concur no historic properties present.

Dr. J. Rodney Little
Maryland Historical Trust
State Historic Preservation Officer



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

March 19, 1998

Planning Division

Mr. John Wolflin
Supervisor
U.S. Fish and Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, Maryland 21401

Dear Mr. Wolflin:

The purpose of this letter is to solicit comments from your agency regarding impacts, if any, to threatened or endangered species in accordance with Section 7 of the Endangered Species Act of 1973 (ESA)(87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) related to the removal of ordnance and explosives (OE) that were discovered on the seashore of Assateague Island, Worcester County, Maryland in February 1998. Telephone coordination with Mr. George Ruddy of your office on March 17, 1998 indicated there would likely be no impact on threatened or endangered species from the proposed removal action.

The U.S. Army Corps of Engineers, Baltimore District, is preparing a Record of Environmental Consideration (REC) in accordance with the National Environmental Policy Act (NEPA) for the removal action. The removal action will include excavation of sand to an approximate depth of 2-3 feet, in order to remove all currently identified OE from the beach area. The removal action is currently scheduled to begin in April 1998. The project is located on the Assateague Island National Seashore in the developed zone south of the Assateague State Park in the vicinity of the ranger station (see enclosed map). The property is a Formerly Used Defense Site (FUDS), project number CO3MD09301, and is currently owned by several local, state and Federal agencies as well as other private interests.

Due to the nature of this project and the upcoming spring and summer recreational seasons, we request that you review this information and provide any comments to our office by March 20, 1998. If you have any questions regarding this matter, please contact my action officer, Ms. Carol L. Bernstein, at (410) 962-2942 or by fax (410) 962-4698.

Sincerely,

Dr. James F. Johnson
Chief, Planning Division

Enclosures

Copy furnished:
Mr. Carl Zimmerman, National Park Service



**Maryland
Department of
Housing and
Community
Development**

*Division of Historical and
Cultural Programs*

100 Community Place
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<http://www.dhcd.state.md.us>

Parris N. Glendening
Governor

Patricia J. Payne
Secretary

Raymond A. Skinner
Deputy Secretary

March 18, 1998

Dr. James F. Johnson
Chief, Planning Division
Department of the Army
Baltimore District, U.S. Army Corps of Engineers
P.O. Box 1715
Baltimore, Maryland 21203-1715

RE: Time Critical Removal Action
Ordnances and Explosives
Assateague Island, Ocean City
Maryland

Dear Dr. Johnson,

This letter is in response to the request for comments faxed to this office yesterday in the form of a draft letter to Mr. J. Rodney Little, SHPO. Based on the information provided in the form of previous correspondence and maps, the location and removal of ordnances and explosives in the areas indicated are unlikely to have an effect on archaeological resources that are eligible for the National Register of Historic Places.

While we recognize the importance of removing these potentially hazardous materials, Mr. Larry Eastman of your office informed me that these materials were located about four weeks ago. Therefore, to be asked for comments two days before your deadline appears that more timely communication and coordination with this office is required. We had staff at the National Seashore on both February 12 and March 12 and could have checked the area for any potentially imperiled archaeological resources.

We request notification at least one week prior to the removal of the ordnances so as to have staff on site in the unlikely event unanticipated cultural remains are encountered, in compliance with 36 CFR 800.11. I understand that further plans involve activities in the nearshore waters and would remind you that under the *Agreement to Establish Concurrent Jurisdiction Over Lands Administered by the National Park Service Within the State of Maryland* (October 7, 1976), "The United States hereby retrocedes and relinquishes to the State of Maryland, and accepts from the State of Maryland, such measure of legislative jurisdiction both civil and criminal as is necessary to establish concurrent legislative jurisdiction between the State of Maryland and the United States over all lands, subaqueous lands and waters comprising the units of the National Park System in the State of Maryland described above." Hence further coordination and consultation with this office is necessary.



.../2

We are pleased to cooperate whenever and wherever possible with the National Parks Service and Corps of Engineers. If you have further questions or require more information, please feel free to contact me at 410-514-7662; fax 410-987-4071, or by e-mail: langley@dncd.state.md.us.

Sincerely,



Susan B.M. Langley, Ph.D.
State Underwater Archaeologist

/s/

cc. Mr. Marc Koenigs
Mrs. Howard Yerges
Mrs. Rick Savage
Ms. Beth Cole

18 March 1998

MEMORANDUM FOR DISTRICT COUNSEL, ATTN: CENAB-OC (Ms. Kristin Budzynski)

SUBJECT: Legal Review of Environmental Compliance (REC) Documentation for Assateague Island Ordnance Removal

1. References:

a. Meeting among Ms. Carol Bernstein, Mr. Mark Colosimo, and Ms. Shannon Smith, CENAB-PL-E, and Ms. Budzynski, CENAB-OC, 10 March 1998, subject: Legal Review of Environmental Compliance Documentation for Assateague Island Ordnance Removal and the appropriate level of NEPA documentation.

b. FONECON between Ms. Bernstein and Ms. Budzynski, 18 March 1998, subject: Legal Review of Environmental Compliance Documentation for Assateague Island Ordnance Removal and pre-coordination for expedited review of the REC.

2. The purpose of this memorandum is to provide a Record of Environmental Consideration (REC) (Encl) for the subject project for legal sufficiency review. This project is a Time Critical Removal Action (TCRA) and involves the identification and removal of ordnance and explosives found on Assateague Island. Coordination letters were faxed to resource agencies yesterday. We have received comments from the MD SHPO, but are awaiting formal comments from the U.S. Fish and Wildlife Service. A FONECON record will be attached to the REC to address USFWS comments.

3. As discussed and agreed to per Ref. 1b, Planning Division requests that you review this document and provide your legal sufficiency determination concurrent with the coordination effort. Per the referenced FONECON, Ms. Budzynski has agreed to review the document by 19 March.

4. This document has been technically reviewed and approved by Planning Division's Environmental Policy Advisor, Mr. Mark Colosimo.

5. Planning Division requests your response be provided to this office by 19 March 1998. If you can not meet this date or have any questions, please contact Ms. Bernstein at 2-2942.

Encls

ROBERT F. GORE
Chief, Planning and Environmental
Services Branch

CF:
PES Reading File


CB SMITH/tm/0695/CENAB-PL-E
CB COLOSIMO/CENAB-PL-E
CB BERNSTEIN/CENAB-PL-E
EASTMAN/CENAB-PL-E
GORE/CENAB-PL-E

MEMORANDUM FOR THE RECORD

SUBJECT: Assateague Island FUDS - Section 7 Consultation

1. Planning Division is preparing a Record of Environmental Consideration (REC) for the proposed removal of ordnance on a portion of the National Seashore on Assateague Island. Ordnance was found on island in February 1998.
2. To expedite the process for Section 7 consultation under the Endangered Species Act, I called Mr. George Ruddy of the U.S. Fish and Wildlife Service in Annapolis, Maryland. I explained to Mr. Ruddy the proposed removal action, location of the project site and our understanding of existing conditions at the site. The site is open shore line in the developed zone of the National Seashore, just south of the State Park.
3. By voice mail message, Mr. Ruddy indicated there would be no expected impacts on threatened or endangered species in the area and that Section 7 consultation could be considered complete.
4. A formal letter too FWS from Baltimore District is being prepared. Formal approval from FWS is expected.

Prepared by:


LARRY EASTMAN
Military Team Leader