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THE MEMPHIS DEPOT **TENNESSEE**

ADMINISTRATIVE RECORD COVER SHEET

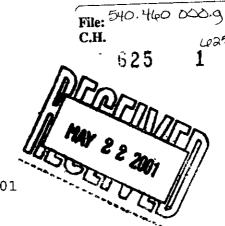
AR File Number 625



DEPARTMENT OF THE ARMY

HUNTSVILLE CENTER, CORPS OF ENGINEERS PO BOX 1600

HUNTSVILLE, ALABAMA 35807-4301



CEHNC-OE-DC (200-1c)

16 May 2001

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Notice of Completion - Chemical Warfare Materiel (CWM) Investigation/Removal Action at Defense Depot, Memphis, Tennessee (DDMT) (Dunn Field), Contract DACA87-97-D-0006, Task Order 0012, Modification 001204

- This letter serves as notice that all fieldwork associated with the CWM Site Investigation and Removal Action at Dunn Field has been completed.
- 2. A summary of the project tasks and accomplishments at Dunn Field is presented below. All site descriptions and locations were provided by the Engineering Evaluation/Cost Analysis (EE/CA) study. The investigation effort involved the recovery of chemical warfare material and was not intended for Hazardous, Toxic, and Radioactive Waste (HTRW) remediation. Only CWM concerns were eliminated. Three sites were investigated. sites are described below:
- Site 1 This site was investigated to recover reportedly buried chemical agent identification sets (CAIS). Historical documents suggested the CAIS might have been placed in PIGs (metal containment vessels exclusively used for CWM). The entire target area was excavated, but neither CAIS nor PIGs were recovered. In search of the CAIS, all soil was excavated and sifted, as delineated by the 1995 Archives Search Report (ASR) and Engineering Evaluation/Cost Analysis (1999). The only exception was a small area characterized as the Ashes and Metal, Truitt Map Pit #10, which was non-CWM, and only contained chemical warfare service items. The only chemical warfare service items found were empty K941 bottles and M-9 Chemical Detection tablets in vials. No CWM was found at the CAIS site. U.S. Army Engineering and Support Center, Huntsville (USAESCH) and the removal contractor revisited the ASR, and no information was found that indicates that a different site should be explored. Additionally, a Quality Assurance (QA) site was excavated to ensure that the site was completely explored.

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Only magnetic anomalies were excavated at the QA site. Using the best technology available for detection of anomalies, Site 1 was judged to be complete.

At the conclusion of the excavation at the original location without confirmed recovery of CAIS, USAESCH requested a confirmation geophysical survey to help validate the site location. The survey revealed a high ferrous (magnetic) area adjacent to the excavation boundary identified in the EE/CA. With joint concurrence of USAESCH and Defense Logistics Agency (DLA), additional excavation was performed in this area. Magnetic "hot" spots were unearthed. Non-CWM-related (ferrous) material was recovered, but neither CWM nor CAIS were recovered. Glass fragments, representative of broken CAIS sets were recovered, but due to the small size, positive identification of the glass shards was not possible. There was NO indication of the presence of chemical warfare agent (CWA) during excavation of this site. The site was closed and work proceeded with Site 24-A (Bomb Casing Area).

Site 24-A - This site is the confirmed burial location for 29 bomb casings that were used to transport mustard agent from Germany to the United States at the conclusion of World War II. Bomb casings were buried at this location (known as Site 24-A) after being drained into a neutralization pit. All twenty-nine casings were recovered. None of the bombs contained fusing, but two burster tubes were intact and physical investigation to prove the items free from explosives could not be performed. The force required to open the burster tubes would have subjected possible energetic material to excessive heat, shock, and friction, and presented an unacceptable risk to personnel. The two burster tubes were transported off-site for destruction through incineration. A significant quantity of soil contaminated with mustard degradation by-products was removed and treated in accordance with the Transportation and Disposal Plan approved by the Tennessee Department of Environment and Conservation. Foreign metallic debris was also removed from the excavation site. No mustard or other CWM was discovered at this site. After recovery of the 29 bomb casings

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and complete investigation of the pit area for CWM, the site was closed.

- c. Site 24-B This site was confirmed, through this effort, as the neutralization pit for the contents of the 29 bomb casings. Approximately 14 cubic yards of mustard contaminated soil was recovered. Soil containing mustard degradation by-products was also recovered. This soil was removed and disposed in accordance with the Transportation and Disposal Plan approved by the Tennessee Department of Environment and Conservation. After excavation of the pit area, the site was closed and site restoration commenced to restore the site to near original condition.
- 3. A pre close out site inspection was conducted on Friday, May 4, 2001, with Mr. John De Back (DLA), Mr. Clyde Hunt (DLA), Mr. Bob Torstrick (USAESCH Project Manager), Mr. Frank Johnson (UXB Project Manager), and Mr. Jim Dunkle (UXB) in attendance. After the pre close out inspection, the following site improvements were made:
- a. UXB personnel placed additional straw over areas where grass seed was planted and secured the straw in place.
- b. UXB personnel, with the aid of employees from a temporary employment service, policed the area and removed and properly discarded pieces of plastic sheeting, used as dust abatement for staged soil piles, and other foreign material introduced to the site as a result of this, removal action.
- c. All utilities were disconnected from the site office trailer, and the trailer was returned to the leasing agency.
- d. All investigative derived waste was removed from the site and disposed in accordance with the approved Transportation and Disposal Plan.
- e. Approximately two gallons of diesel-contaminated water was on-site at the time of the pre-close out inspection.

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Samples were collected and sent to an independent laboratory for Toxic Characteristic Leaching Procedure (TCLP) analysis. Sample results confirmed the presence of diesel fuel. The material was placed in a 55-gallon drum, profiled, and manifested for transportation. The material was removed from site on May 15, 2001, and shipped to a Resource Conservation and Recovery Act (RCRA) Subtitle C Landfill located in Emelle, Alabama. No other investigative derived waste is on-site.

- f. Personnel from the Edgewood Chemical and Biological Center removed the filter systems, and all other property under their ownership, from the Dunn Field Site on Friday, May 4, 2001.
- g. The condition of each of the three sites has been improved by the CWM removal effort.
- 4. Notes from the UXB Project Manager:
 - a. UXB replaced the hard-packed road near Site 1. (This road had been removed during the remediation). Additional gravel was added and two drainage pipes were installed. The USAESCH Project Manager and the Base Transition Coordinator accepted the replacement road as constructed.
 - b. A portion of the asphalt pad was removed to facilitate excavation of Site 24-A. The Base Transition Coordinator determined that replacement of the asphalt is not required. (The pad is to be removed as part of the remediation; thus, replacement costs would not be in the best interest of the government).
- c. Upon final site closure, all keys to the main gate are to be collected and turned over to Mr. Clyde Hunt (DLA).
- 5. All on-site work has now been completed. UXB is in the process of preparing the After Action Report. This report will

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be provided to you after it is complete. I will be glad to answer any questions that you may have concerning this report.

FOR THE DIRECTOR ORDNANCE AND EXPLOSIVES:

JOHN C. POTTER, Ph.D., P.E. Chief, Design Center for Ordnance and Explosives Directorate

DISTRIBUTION:

Headquarters, U.S. Army Corps of Engineers, ATTN: CESO-E (Mr. Harris Yeager), 441 G St, NW, Washington, D.C. 20314-1000

Headquarters, U.S. Army Technical Center for Explosive Safety, Defense Ammo Center, ATTN: SIOAC-ESM (Mr. Kurt Clasen), 1C Tree Rd, Bldg 35, McAlester, OK 74501-9053

Office of the Chief of Staff Army Safety Office, ATTN: DACS-SF (Jim Patton), 200 Army Pentagon, Washington, DC 20310-0200

Chairman, Department of Defense Explosives Safety Board, ATTN: DDESB-KO, 2461 Eisenhower Ave, Alexandria, VA 22331-0600

Memphis Depot Caretaker, ATTN: Mr. John De Back, 2163 Airways Blvd, Suite 137, Memphis, TN 38114-5210

Cdr, SBCCOM (ECBC), ATTN: AMSSB-RCB-C (Mr. John Ditillo), Bldg E 3942, Aberdeen Proving Ground, MD 21010-5424

Cdr, USATEU, ATTN: SMCTE (Mr. Dalys Talley), Aberdeen Proving Ground, MD 21010-5423

Product Manager for Non-Stockpile Chemical Materiel, ATTN: SFAE-CD-N (Tom Hoff), Aberdeen Proving Ground, MD 21010-4005 U.S. Environmental Protection Agency, ATTN: Mr. Turpin Ballard, Federal Facilities Branch, 61 Forsyth St, SW., Atlanta, GA 30303

Tennessee Department of Environment and Conservation, ATTN:
Mr. Jordan English, 2510 Mt. Moriah Rd, Suite E645, Memphis,
TN 38115-1520

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Investigation/Removal Action at Defense Depot, Memphis,

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Order 0012, Modification 001204

- Cdr, U.S. Army Engineer District, Mobile, ATTN: CESAM-PM-TA, (Mr. Harold K. Braun, Jr.), P.O. Box 2288, Mobile, AL 36628-0001
- Mr. Frank Johnson, UXB International, 21641 Beaumeade Circle Suite 301, Ashburn, VA 20147-6002

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