

APPENDIX A
Performance Work Statement

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**PERFORMANCE WORK STATEMENT
CHEMICAL WARFARE MATERIEL
SITE INSPECTIONS
AT MULTIPLE SITES
Revision 6, 30 June 2009**

Revision 6 (in bold):
-Adds Schilling AFB

1.0 OBJECTIVE: The objective of the CWM SI is to determine whether the individual project sites within the FUDS program warrants further response action due to Chemical Warfare Materiel (CWM), Chemical Agent (CA), Munitions and Explosives of Concern (MEC) and Munitions Constituents (MC) or no Department of Defense action indicated (NDAI).

2.0 BACKGROUND AND GENERAL STATEMENT OF WORK:

2.1 REGULATORY GUIDELINES: The work required under this Performance Work Statement (PWS) falls under the Defense Environmental Restoration Program - Formerly Used Defense Sites (DERP-FUDS). CWM, CA, MEC and MC potentially exist on properties formerly owned or leased by the Department of Army. USACE is conducting environmental response activities at FUDS in accordance with Engineer Regulation (ER) 200-3-1 and the *DoD Management Guidance for the Defense Environmental Response Program (DERP)*. USACE is conducting these activities in accordance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (NCP).

2.1.1 Uncontrolled CWM and MEC are a safety hazard and constitutes an imminent and substantial endangerment to the general public, on site personnel and the environment. The work associated with these Site Inspections shall be performed in accordance with the CERCLA Section 104, and the NCP, Sections 300.120(d) and 300.400(e). Additionally, the work under this task order will be conducted in full compliance with Department of Defense, Department of Army, US Army Corps of Engineers, state and local requirements regarding personnel, equipment, and procedures. 29 CFR 1910.120 shall apply to all actions taken at these sites.

3.0 PERFORMANCE WORK STATEMENT:

3.0.1 The following performance work statement will apply to all tasks/projects in this PWS:

The contractor shall perform the activities necessary to meet the objective in paragraph 1.0 of this PWS for CWM, CA, MEC and MC. Work shall be in accordance with (IAW) ER 200-3-1, the *DOD Management Guidance for the Defense Environmental Response Program (DERP) September 2001*, and Engineering Pamphlet (EP) 75-1-3. The contractor shall collect the minimum amount of information necessary to (i) eliminate from further consideration those sites that pose no significant threat to public health or the environment; (ii) determine the potential need for a time critical removal action; (iii) collect or develop additional data, as appropriate, for Hazard Ranking System (HRS) scoring by Environmental Protection Agency (EPA); and (iv) collect data, as appropriate, to characterize the release for effective and rapid initiation of the Remedial Investigation and Feasibility Study (RI/FS). The contractor shall also collect the appropriate data to complete the Munitions Response Site Prioritization Protocol (MRSP). The MRSP is applied to each Munitions Response Site (MRS), which for purposes of the SI is considered to be the same as the Munitions Response Area (MRA). The MRA is typically delineated by historic range boundaries as identified in the archives search report (ASR) and ASR supplement.

Methods to be used to achieve the specified objectives shall be determined by the Contractor.

3.0.2 Government Quality Assurance (QA): The Government will perform QA on all aspects of this task order. Any portion that fails QA will be redone at no cost to the Government. The Government's final Quality Assurance Surveillance Plan (QASP) will be developed based upon the Contractor's Quality Control Plan. A sample QASP is provided as Appendix A. The Contractor shall propose payment milestones for the duration of this project. The payment milestones shall be based on government acceptance of deliverables. The Contractor shall submit the appropriate QC documentation with each payment voucher as well as the Final Report. The Contractor shall submit a letter, following the

format provided in Appendix B, indicating milestones accomplished with each payment voucher.

3.1 QUALITY CONTROL: The Contractor shall implement an accepted Quality Control (QC) Program. The Quality Control Program shall include QC procedures for all aspects and types of work. The Contractor shall ensure that QC documentation is maintained, and provided in the Final Reports. If any Government QA review identifies a process failure or a work product failure, the contractor will be issued a Corrective Action Request (CAR). The Contractor shall provide full documentation detailing the cause of the failure, why it was not detected in the Contractor's QC Program, and how the problem was corrected. Failure can be defined as workmanship or work products not complying with the WP or not meeting project needs defined during TPP or other accepted industry practices or defined as not complying with basic safety concepts and other industry safety practices.

3.2 TASK 1 – PROJECT PLANNING – FFP/UNIT COST (UC): The objective of this effort is for the Contractor to perform necessary project planning to enable successful completion of the overall objective discussed Section 1.0.

3.2.1 Kick-Off Meeting: The Contractor shall attend a kick off meeting, after award, in Huntsville, Alabama for 1 day.

3.2.2 Program Master Schedule: The Contractor shall update and maintain the master schedule of all project activities. An initial schedule will be provided by USAESCH. The schedule shall be kept current and shall be maintained electronically. The electronic schedule database shall be available to team members and shall be password protected. The schedule shall list specific work milestones and shall incorporate current work and future projects. The use of colors or other visual features shall be utilized to distinguish between different functional elements, teams, work under progress, and future anticipated work. The master schedule shall be developed in close consultation with CEHNC.

3.2.3 Preliminary Assessment: The Contractor shall submit a Preliminary Assessment (PA) Report for project sites identified as needing a PA in the Table in paragraph 3.7. The Contractor shall prepare this document IAW CERCLA and ER 200-3-1.

3.2.3 Technical Project Planning (TPP): The Contractor shall implement the TPP process in accordance with EM 200-1-2, Technical Project Planning (TPP) Process, and Interim Guidance Document 01-02, 27 June 2001, Implementation of Technical Project Planning (TPP) For Ordnance and Explosives (OE) Formerly Used Defense Sites (FUDS) Projects. The Contractor shall provide documentation as required in the Interim Guidance.

3.2.4 Work Plan: The Contractor shall review and maintain the 'Final General Work Plan , Scoping and Security Study, Revision 3, March 2004', provided by USAESCH. The contractor may have to update the WP due to changes in Regulations in addition to contractor-specific information. Changes to the WP shall be prepared following the general format described in data item description (DID) MR-001. Deviations from this format will be accepted if they are for the purpose of consolidating topics into a single chapter or sub-chapter or for removing duplications. For each site, a site-specific Work Plan Annex and SAP annex shall be prepared.

3.2.5 Chemical Safety Submission (CSS): The Contractor shall submit and gain approval of a CSS that is a detailed and comprehensive document covering all aspects of the site Inspection IAW DID MR-070.

3.2.6 Geospatial Data: The Contractor shall update and maintain the GIS database supplied by USAECH in accordance with DID MR-005-07. The coordinate system for these tasks/projects shall be UTM Coordinates. All geo-referenced data shall be submitted in UTM Coordinates. Additionally, the contractor shall provide a password protected website for project data uploads and document distribution purposes. An appropriate sub-set of the GIS shall be packaged into a GeoDatabase and submitted on a CD ROM for review by USAESCH. Two interim deliveries shall be provided at agreed upon intervals (ex. after GIS database has been established) and one with the Site Inspection Report that includes information to support all findings and conclusions included within the Site Inspection Report. The Contractor shall provide additional unit cost per month for GIS and for the website.

3.2.7 Munitions Constituents and Environmental Sampling and Analysis: *The Contractor is to incorporate the FUDS SI Program SAP provided electronically by USAESCH with Contractor prepared amendment, to include contractor-specific/laboratory specific information and CWM/CA/Agent Breakdown Products in the General Work Plan (WP) discussed in Paragraph 3.2.4 and submit and gain approval. MC sampling and analysis shall be performed IAW Final Programmatic SAP, Contractor SAP Addendum, and applicable Site-Specific SAP. Any exceptions to the Programmatic SAP must be clearly indicated in the Site-Specific SAP. Contractor shall determine in consultation with their*

subcontractor laboratory appropriate analytical methodology to meet or exceed the data quality objectives provided in Table 1 of the Programmatic SAP. If these DQOs cannot be met with standard analytical methodology, provide recommendation for best value approach. Technical proposal shall provide laboratory's proposed reporting limits along with their method detection limits. It shall also describe laboratory's procedures for sub-sampling and sample preparation for explosives and any method variations to address analytes not addressed by routine methods, such as PETN and nitroglycerine. For aqueous samples, solid phase extraction rather than salting out extraction shall be used. The contractor shall address MC sampling and analysis requirements and deliverables IAW with DID MR-005-10, with the following exceptions:

3.2.7.1 The Contractor shall perform *environmental media* sampling *necessary to meet the objective in paragraph 1.0 of this PWS* in accordance with requirements described in DID MR-005-10. Analytical parameters should be evaluated and recommended for each site, to include those for CA, ABPs, and MC. The location of each sample shall be recorded to within one-foot accuracy.

3.2.7.2 Any deviations from the accepted SAP shall be documented in the DQCRs. Any deviations that may affect Data Quality Objectives (DQOs) shall be conveyed to USAESCH personnel [project manager (PM), technical manager (TM), project chemist, etc.] immediately.

3.2.7.3 Contractor submittals shall be IAW DID MR-005-10 except for the following:

3.2.7.3.1 Section 1.4 shall be modified as follows:

- Chemistry Data Package. The chemistry data package shall be provided to USAESCH on a project-by-project basis.

- Electronic Data Deliverable; G. All laboratory data for samples analyzed by commercial laboratories shall be submitted in the Staged Electronic Data Deliverable (SEDD) format. Details on the SEDD format are provided in SEDD Version 5.0 (or most recent version) specification located at <http://www.epa.gov/superfund/programs/clp/sedd.htm>. The EDD shall be provided to USAESCH on a project-by-project basis. SEDD Stage 2a is a mandatory submittal. SEDD Stage 2b should be provided if the laboratory is capable.

3.2.7.3.2 Section 2.8 shall be modified as follows: **2.8 ELECTRONIC DATA DELIVERABLE:** *Chemical data shall also be provided electronically by the Contractor in the SEDD format and as part of the Geographic Information System. The SEDD formatted deliverable will require data parsing for use in the Automated Data Review (ADR) software. Use of the ADR software will also require that the contractor develop a comprehensive library file for all of the methods to be analyzed under this SOW. A programmatic library file for the MMRP SI program has been developed, which is to be used as the Contractor's basis for this library's development. The library file will accurately reflect all of the analytical quality requirements as documented in the final SAP for this project and will be provided to both USAESCH and the sub-contract lab for use in screening EDD submittals. All electronic data submitted by the contract laboratory is required to be error-free, and in complete agreement with the hardcopy data. Data files are to be delivered both by e-mail and on high density CD accompanying the hardcopy data reports. The disk must be submitted with a transmittal letter from the laboratory that certifies that the file is in agreement with hardcopy data reports and has been found to be free of errors using the latest version of the ADR evaluation software provided to the laboratory. The contract laboratory, at their cost, will correct any errors identified by USAESCH. The Contractor is responsible for the successful electronic transmission of field and laboratory data under this SOW. The Contractor's laboratory is responsible for archiving the electronic raw data and sufficient associated hardcopy data (e.g., sample login sheets and sample preparation log sheets) to completely reconstruct the analyses that were performed for a period of ten years after completion of this contract, following the SDSFIE for data format and content for Environmental Hazard data Entity Classes and Tables.*

3.2.7.3.3 The USACE validation process has been replaced. The contractor shall use a laboratory that meets the requirements of the HTRW Chemical Data Quality Management (CDQM) Policy for Environmental Laboratory Testing (USACE, 2004), to include NELAP accreditation and self declaration of compliance with the DoD Quality Systems Manual (DoD QSM) (latest version). All laboratory requirements of DID MR 005-10 not related to the validation process continue to apply.

3.2.7.3.4 Information required for completion of main SI Report need not be duplicated in SI Report Appendix containing CHEMICAL DATA FINAL REPORT.

3.2.7.3.5 *Perchlorate.*

3.2.7.3.5.1 For project sites awarded up to and including Modification #2: December 2005, perchlorate analysis costs remain as per task order-specific unit rates established by Modification #1: 8 July 2005.

3.2.7.3.5.2 For project sites awarded subsequent to Modification #2, perchlorate analysis costs should not be priced based on a separate unit rate. Based on the new OSD Policy, perchlorate should be addressed in the same manner as other munitions constituents. Contractor should make their technical evaluation of sampling strategy for numbers of samples and appropriate munitions constituents analyses for each site taking this into consideration.

3.2.8 The following software is available upon request to support this task as government furnished software: ADR, Environmental Data Management System (EDMS), SEDD parser, and Forms II Lite. Use of the SEDD parser and ADR software is mandatory, use of EDMS and Forms II Lite are optional.

3.3 TASK 2 - SITE INSPECTION/FIELDWORK – T&M: The objective of this effort is to identify and characterize suspect CWM and/or CA contaminated areas IAW the approved WPs and CSS. Following acceptance of TPP, the government intends to convert this effort to Firm-Fixed-Price on a site by site basis.

3.3.1 Medical Support

3.3.1.1 The Contractor shall provide a Department of Transportation (DOT) approved ambulance ready to transport decontaminated casualties to the contract hospital during prescribed work hours for the duration of the intrusive Inspection and assessment, as required afterward, at intrusive sites. The ambulance shall be staffed by two state or National Registry of Emergency Medical Technician (NREMT), certified in advanced life support measures (paramedics). All paramedics that provide on-site support at intrusive sites shall have completed the Non-stockpile Chemical Medical Training within the last 6 months. This course is special medical training in chemical warfare agent casualty care, which is tailored to include instruction in all of the agents of concern at the intrusive sites. This course shall be updated annually, as necessary.

3.3.1.2 Paramedics shall evaluate and treat any casualty received at the decontamination line and they shall be responsible for transporting the casualty to the contract hospital. The paramedics shall also assist with the heat stress program and shall keep a medical health data sheet on each employee. The paramedic/ambulance provider shall be responsible for obtaining the necessary waivers for carrying and administering the necessary antidotes to the casualties.

3.3.1.3 The ambulance shall be equipped with supplies that are normally found on an ambulance, emergency medical equipment and supplies necessary to treat the agents of concern at intrusive sites and appropriate protocols.

3.3.1.4 The ambulance and paramedics shall be onsite during all intrusive activities and will be required to participate in the site-specific training, the table exercise and the pre-operational surveys prior to the start of intrusive operations. If a change is made to the work hours of the CWM team, the contract with the ambulance service will need to be changed to provide the same work hours as the field team. Information required by DA PAM 50-6 must be included in the contract with the ambulance service. The Contractor shall submit the subcontract with the ambulance service for review by the government. An example of a scope of work for ambulance and paramedic services can be obtained from the USAESCH safety office.

3.3.1.5 The Contractor shall provide the paramedics with a list of chemicals suspected to be onsite to which the workers could be exposed, along with a description of the potential health effects. USAESCH shall provide instructors to the Contractor to train the ambulance personnel in chemical agent casualty care.

3.3.2 Hospital Support

3.3.2.1 The Contractor shall provide hospital medical service for the duration of the intrusive fieldwork and assessment as required. The hospital shall provide treatment of all workers that are associated with the Intrusive Site Inspection. Workers include all U.S. Government agents and contract employees.

3.3.2.2 The hospital shall have available, during the hours of removal operations and assessment (as required), an adequate medical staff that has been trained in Chemical Warfare Materiel casualty care. The hospital and its staff shall provide required medical care after receiving decontaminated CWM casualties at the hospital.

3.3.2.3 The hospital shall have available all medical supplies necessary to treat chemical casualties from the site. This shall be based on the history of the site and will be updated as further information is obtained.

3.3.2.4 The Contractor shall ensure that a hospital representative is invited to participate in the tabletop exercise that will be conducted prior the start of intrusive work.

3.3.2.5 The information required by DA Pam 50-6 must be included in the contract with the hospital. The Contractor shall submit the subcontract with the hospital for review by the government. An example statement of work for the hospital can be obtained from the USAESCH safety office.

3.3.3 Pre-Operational Surveys and Exercises. The Contractor shall prepare for, coordinate and support as necessary, and participate in, as required, in pre-operational surveys and exercises consisting of: (1) Huntsville Survey, (2) DA Safety Pre-Operation Survey, and (3) the Table-Top Exercise.

3.3.4 CWM/MEC Accountability

3.3.4.1 The Contractor shall maintain a detailed accounting of all CWM/MEC items/components encountered. This accounting shall include the amounts of CWM/MEC, the identification and condition, disposition and location. This accounting shall be a part of an appendix to the Final Report. Any CWM/MEC found to contain CA or have an explosive hazard shall be considered an emergency response and shall be dealt with per the Standard Operating Procedures provided by USAESCH.

3.3.5 Site Restoration. The Contractor shall perform all site restoration activities required to return all disturbed areas to existing or better conditions. Site restoration requirements may include, but not necessarily be limited to, back fill and compaction with clean fill (as required), finish grading, seed and mulch.

3.3.6 Surveying. The Contractor shall perform location, surveying and mapping IAW DID MR-005-07.

3.3.7 Chemical Agent and Agent Breakdown Product Analysis: Air monitoring and On-site and fixed-base environmental media laboratory services will be provided by Edgewood Chemical and Biological Center.

3.3.8 Hazardous Waste

3.3.8.1 The Contractor shall collect, secure, store, and arrange for disposal of Investigative Waste (IW) either bulk and/or containerized materials (i.e. CAIS, chemical agent contaminated media, hazardous waste, and decontamination wastes, etc.) generated as a result of field activities. Project sites where the district has agreed to perform hazardous waste transportation and disposal the Contractor shall assist as necessary for a timely and smooth transition. The Contractor shall be responsible for the CAIS in accordance with the Memorandum from Mr. Davis dated April 24, 2007 Subject: Treatment of Chemical Agent Identification Sets as Hazardous Waste. The IW containers shall be staged, secured, labeled, sampled and analyzed (if required) IAW the approved work plan. CAIS items shall not be sampled and shall use generator knowledge for disposition. The Contractor shall recommend appropriate disposal actions for all waste items. The Contractor shall perform the IW disposal in a timely manner.

3.3.8.2 All activities involving this work shall be conducted in substantial compliance with the State, the US Environmental Protection Agency (EPA), the US Army Engineering and Support Center, Huntsville (CEHNC), the US Army Corps of Engineers (USACE), the Department of the Army (DA) and the Department of Defense (DoD) laws and regulations and guidance documents. The Contractor shall follow DID OE-005-13.01.

3.3.8.3 All media other than CAIS recovered from excavations where chemical agent has been identified shall be placed in a container capable of being sealed and heated in accordance with ECBC Standard Operating Procedure (SOP). After heating and retention, the container shall be monitored for chemical agent by ECBC. If monitoring reveals chemical agent vapors to be present, the Contractor shall package it for shipment after decontamination if necessary. The contractor shall dispose of the chemical agent contaminated media at an approved TSDF capable of accepting and treating waste. The Contractor shall provide all necessary personnel and equipment to accomplish the labeling, manifesting, transportation, and disposal of the chemical agent contaminated media. If results of the air, soil, and residue sampling indicate no contamination, the Contractor shall make provisions for proper disposal.

3.4 TASK 3 - SITE INSPECTION (SI) REPORTS – FFP: The Contractor shall prepare a Site Inspection Report per ER 200-3-1 and CERCLA. Each report shall identify the specific members and title of the Contractor's staff and subcontractors that had significant and specific input into the reports' preparation or review. The contractor shall also include a cover letter signed by an authorized person (preferably the person who signed the Task Order) of the company certifying, on behalf of the company, that the requirements of this Task Order have been met. SI Report format *is provided in Appendix D. The Contractor shall also include a recurring review plan IAW MR-110. . Contractor shall ensure all applicable items in the FUDS MMRP SI Report Checklist are addressed. The checklist can be found on the EKO MMRP Home page under Programmatic Information, Site Inspection Checklist.*

3.5 TASK 4 - PUBLIC INVOLVEMENT – FFP/UC: The objective of this effort is for the Contractor to provide professionals thoroughly familiar with the project, to arrange, prepare for and attend meetings, as required. Each meeting shall be assumed to be of one day duration. The Contractor shall be prepared to make presentations of proposed work, and summaries of work performed, as applicable, and shall entertain open discussions. In addition, the Contractor shall be prepared to show overheads or use other presentation techniques to convey plans, findings and recommendations, etc. The Contractor shall provide minutes and record of all meetings per DID MR-045. The contractor shall use the existing Public Involvement Plan for the site, to be provided by USAESCH, or prepare a Public Involvement Plan. For estimating purposes, the Contactor shall propose a meeting for each site indicated in section 3.11. The Contractor shall provide a typical unit cost per meeting for additional meetings. An updated Public Notice example is provided as Appendix E. Electronic copy may be obtained from the PM.

3.6 TASK 5 - PROJECT MANAGEMENT – FFP/UC: The objective of this effort is for the Contractor to perform project management activities necessary to maintain acceptable project control, to include, but not limited to the items listed below. Project duration is to be two years with the Contractor providing additional unit cost per month of in-field PM and unit cost per month of in-house PM.

3.6.1 Schedule. The Contractor shall submit a proposed Project Milestone/Payment Schedule in Primavera for acceptance by USAESCH. Changes to the schedule must be accepted by USAESCH.

3.6.2 Teleconferences. The Contractor shall participate in monthly CWM teleconferences with HQ, MM CX, Technical PM, District PM, and other contractors to discuss project status and any issues that have arisen during the SI phase of work. The Contractor will be prepared to present issue resolution alternatives as part of these discussions.

3.6.3 In-Progress Review Meetings. The Contractor shall prepare for and attend Quarterly In-Progress Review (IPR) meetings on the CWM SI *at various CONUS locations.*

3.6.4 Reports/Minutes, Record of Meetings. The Contractor shall prepare and submit a report/minutes of all meetings attended in accordance with DID MR-045.

3.6.5 Telephone Conversations/Correspondence Records. The Contractor shall keep a record of each phone conversation and written correspondence concerning this Task Order in accordance with DID MR-055. A copy of this record shall be attached to the Project Status Report.

3.6.6 Project Status Reports. The Contractor shall prepare and submit project status reports in accordance with DID MR-085 and include any other items required in the PWS.

3.7 SPECIFIC PROJECT SITES: The specific Projects are shown in the table below. An additional list of project sites is attached as Appendix C. This list will be used for optional future SI Projects based on funding and priority from DOD.

FUDS ID	FUDS Name	PIP Status	Training Materials Status	Preliminary Assessment
C02NJ097701	Atlantic City NAS	Incomplete	Incomplete	Required for Area W
B07KS000101	Marysville Chemical Site	Incomplete	Incomplete	Not Required
B07KS028602	Walker AAF	Incomplete	Incomplete	Not Required
K06AR0063	Stuttgart AFF	Incomplete	Incomplete	Not required
G04TN0172	Duck River CWS Plant/	Incomplete	Incomplete	Not required

	Monsanto			
I04FL0396	Orlando Range & Chemical Yard	Incomplete	Incomplete	Not required
B07KS025607	Schilling AFB	Incomplete	Incomplete	Not required

4.0 SUBMITTALS AND CORRESPONDENCE:

All deliverables shall be uploaded on to Engineering Knowledge Online (EKO),

4.1 COMPUTER FILES: All final text files generated by the Contractor under this task order shall be furnished to the Contract Officer in Microsoft Word 6.0 or higher software. Spreadsheets shall be provided in Microsoft EXCEL format. All final CADD drawings shall be in Microstation 95 or higher. All chemical sampling data submittals shall be IAW DID MR 005-10 except as noted above. All GIS data shall be in ESRI (ArcGIS), formatted to meet the GeoDatabase requirement set forth in the SDSFIE. Data error and format checking software (OE GIS data standard compliance) are available from CEHNC-ED-CS-P (GIS) office, upon request. Also, the GIS QC checklist is available upon request. These documents shall be submitted on CD or DVD.

4.2 PDF DELIVERABLES: In addition to the paper and digital copies of submittals, the final version of any and all reports and/or plans shall be submitted, uncompressed, on CD or DVD in PDF format along with a linked table of contents, linked tables, linked photographs, linked graphs and linked figures, all of which shall be suitable for viewing on the Internet. PDF files shall be produced from source documents wherever possible.

4.3 FORMAT AND CONTENT REPORTS: All drawings shall be of engineering quality with sufficient details. The submittal shall consist of 8 1/2" X 11" paper. The submittal covers shall consist of durable binders and shall hold pages firmly while allowing easy removal, addition, or replacement of pages. A title shall identify the site, the contractor, the CEHNC, and the date. The contractor identification shall not dominate the title page.

4.4 IDENTIFICATION OF RESPONSIBLE PERSONNEL: Each submittal shall identify the specific members and title of the Contractor's and subcontractor's staff that had significant input into the report's preparation or review. All final submittals shall be sealed by a registered Professional-In-Charge.

4.5 REVIEW COMMENTS: Various reviewers will have the opportunity to review submittals made by the Contractor under this contract. The Contractor shall review all comments received through the Technical or Project Manager/Contracting Officer and evaluate their appropriateness based upon their merit and the requirements of the PWS. The Contractor shall issue to the Project Manager a formal, annotated response to each. The Contractor shall not non-concur with a comment without discussing with the PM and/or comment maker.

4.6 PUBLIC AFFAIRS: The Contractor shall not publicly disclose any data generated or reviewed under this contract. The Contractor shall refer all requests for information concerning site conditions to the subject FUDS Geographic USACE Corps of Engineers District with a copy furnished to the Technical Manager. Reports and data generated under this contract are the property of DOD and distribution to any other source by the Contractor, unless authorized by the Contracting Officer, is prohibited.

4.7 SUBMITTALS: The contractor shall furnish copies of the plans, maps, and reports as identified in table below, or as specified in this PWS, to each addressee listed below in the quantities indicated.

The following addresses shall be used in mailing submittals:

ADDRESSEE	Submittals
Commander US Army Engineering and Support Center, Huntsville ATTN: CEHNC-OE-CW , Ms. Betina Johnson 4820 University Square Huntsville, Alabama 35816-1822	As directed by CEHNC PM
HQUSACE (cover letter only) ATTN: CESO-E, Ms. Blanca Roberts	As directed by CEHNC

441 G. Street Washington, DC 20314-1000	PM
<u>HOUSACE</u> <u>ATTN: CEMP-DE, Ms. Jeff Waugh</u> <u>441 G St. NW</u> <u>Washington, D.C. 20314</u>	<u>As directed by CEHNC</u> <u>PM</u>
<u>MM CX</u> <u>Commander</u> <u>US Army Engineering and Support Center, Huntsville</u> <u>Attn: CEHNC-OE-CX, Betina Johnson</u> <u>4820 University Square</u> <u>Huntsville, AL 35816</u>	<u>As directed by CEHNC</u> <u>PM</u>
HTRW CX Attn: CENWO-HX-G, Heidi Novotny 12565 W. Center Road Omaha, NE 68144	<u>As directed by CEHNC</u> <u>PM</u>
U.S. Army Engineer Districts and Divisions	As directed by CEHNC PM
USATCES ATTN: SMJAC-ESM 1 C Tree Road McAlester, OK 74501-9053	As directed by CEHNC PM
Program Manager for Chemical Demilitarization, Environmental Monitoring ATTN: AMSCM-ECN-ME APG-EA, MD 21010-5401	As directed by CEHNC PM
Program Manager for Chemical Demilitarization, Risk/Surety Management ATTN: AMSCM-ECN-SQ APG-EA, MD 21010-5401	As directed by CEHNC PM
Program Manager for Chemical Demilitarization, Public Affairs ATTN: AMSCM-ECN-P APG-EA, MD 21010-5401	As directed by CEHNC PM
Program Manager for Chemical Demilitarization, Product Manager, Non-Stockpile Chemical Material ATTN: AMSCM-ECN-SO, Mr. Steven Bird APG-EA, MD 21010-5401	As directed by CEHNC PM
COMMANDER RDECOM 5232 Fleming Road ATTN: SMCTE-OP Aberdeen Proving Grounds EA, MD 21010-5423	As directed by CEHNC PM
ECBC/Chemical Support Division 5183 Blackhawk Road Bldg E3942 AMSRD-ECB-CB-CP (Mr. John Ditillo) Aberdeen Proving Grounds EA, MD 21010-5423	As directed by CEHNC PM
Commander, Technical Escort Unit (TEU) ATTN: AMSRD-GBT-ADM (Mike Rehmert) 5232 Fleming Road APG, MD 21010-5423	As directed by CEHNC PM
COMMANDER SBCCOM ATTN: AMSCB-RA (LTC David Mukai) Aberdeen Proving Grounds EA, MD 21010-5423	As directed by CEHNC PM
Commander	

SBCCOM ATTN: AMSSB-ISR (WENDEL) 5183 Blackhawk Rd APG, MD 21010-5424	As directed by CEHNC PM
Regulatory Agencies	As directed by CEHNC PM

4.8 DOCUMENT DISTRIBUTION: For the purposes of determining when documents get submitted to specific organizations, the attached document distribution table is provided.

Document Description	HTRW CX		CW DC		District PM		MM CX		HQ USACE
	Hard Copy	CD	Hard Copy	CD	Hard Copy	CD	Hard Copy	CD	CD
CSM: Draft Working Final	2 2		3 3		6 6		6 6		1
TPP Memorandum: Draft Final Memorandum	1 1	2 2	1 1	3 3	1 1	6 6	1 1	2 2	1 1
SI Work Plan: Draft Draft Final Final	1 1 1	2 2 2	1 1 1	3 3 3	1 1 1	6 6 6	1 1 1	2 2 2	1 1 1
SI Report: Draft Draft Final Final	1 1 1	2 2 2	1 1 1	3 3 3	1 1 1	6 6 6	1 1 1	2 2 2	1 1 1

4.9 PERIOD OF PERFORMANCE: All work shall be completed two years after notice to proceed.

4.10 SUGGESTED MILESTONES:

- TPP Memorandum (accepted)
- Work Plan (accepted)
- Field Work Completed
- Final SI Report (accepted)

Milestones will be considered met or completed when the appropriate QC documentation has been submitted and QA completed and the submittal and/or product is accepted.

4.11 POINT OF CONTACT: Program Manager:

US Army Engineering and Support Center
CEHNC-OE-CW, Betina Johnson, 256-895-1238
P. O. Box 1600
4820 University Square
Huntsville, AL 35807
Betina.V.Johnson@hnd01.usace.army.mil

5.0 REFERENCES:

5.1 Basic Contract

5.2 USACE, 2004 - HTRW Chemical Data Quality Management (CDQM) Policy for Environmental Laboratory Testing, September 30, 2004

- 5.3** DoD Quality Systems Manual (DoD QSM) (latest version).
- 5.4** USEPA, 1992 - Guidance for Performing Site Inspections under CERCLA; Interim Final, September 1992, PB92-963375, EPA 9345.1-05
- 5.5** EM 200-1-3, Requirements for the Preparation of Sampling and Analysis Plans
- 5.6** ER 1110-1-263, Chemical Data Quality Management for Hazardous, Toxic, Radioactive Waste Remedial Activities
- 5.7** Policy on DoD Required Actions Related to Perchlorate, 26 January 2006,
<http://www.dodperchlorateinfo.net/newsroom/announcements/2006/documents/Outgoing%20Memo,%20Policy%20on%20DoD%20Required%20Actions%20Related%20to%20Perchlorate.pdf>.
- 5.8** DoD Interim Guidance on Sampling and Testing for Perchlorate, 5 February 2004,
<http://www.navylabs.navy.mil/Archive/PerchlorateInterim.pdf>.
- 5.9** DoD Perchlorate Handbook, March 2006,
<http://www.dodperchlorateinfo.net/efforts/policy/documents/Perchlorate%20Handbook%20Final%203-30-06.pdf>
- 5.10** DOD Memorandum on Definitions Related to Munitions Response Actions, 18 December 2003,
http://www.epa.gov/fedfac/pdf/MRP_Definitions_12-18-03.pdf.
- 5.11** Military Munitions Center of Expertise Technical Update Munitions Constituent (MC) Sampling March 2005.
- 5.12** "U.S. Army Corps of Engineers Safety and Health Requirements Manual," U.S. Army Engineer Manual EM 385-1-1, latest version
- 5.13** EP385-1-95a,"Basic Safety Concepts and Considerations for Ordnance and Explosives Operations", Latest version
- 5.14** "Environmental Chemistry and Fate of Chemical Warfare Agents." Southwest Research Institute. Prepared for Corps of Engineers, Huntsville Division, Latest version
- 5.15** "Field Manual on Environmental Chemistry and Fate of Chemical Warfare Agents." Southwest Research Institute. Prepared for Corps of Engineers, Huntsville Division, Latest version.
- 5.16** Army Regulation 385-40, Accident Reporting and Records with USACE Supplement, Latest version.
- 5.17** "Safety and Occupational Health Document Requirements for Hazardous Waste Site Remedial Actions," Engineer Regulations 385-1-92, Latest version.
- 5.18** Occupational Safety and Health Administration Standards (29 CFR 1910 and 1926).
- 5.19** "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities," NIOSH/OSHA/USCG/EPA, Latest version.
- 5.20** "Emergency Eyewash and Shower Equipment," ANSI Z-358.1, Latest version.
- 5.21** "Practices for Respiratory Protection," ANSI Z-288.2, Latest version.
- 5.22** "Test Methods for Evaluating Solid Wastes," EPA Pub. No. SW-846, Latest Ed.
- 5.23** "Annual Book of ASTM Standards," Current edition.
- 5.24** "CERCLA Compliance With Other Laws Manual. Parts I and II," U.S. Environmental Protection Agency (EPA). Latest version.

- 5.25** "Methods for Evaluation the Attainment of Cleanup Standards. Volume I - Soils and Solid Media," U.S. Environmental Protection Agency (EPA). Latest version.
- 5.26** "Methods for the Determination of Organic Compounds in Drinking Water," U.S. Environmental Protection Agency (EPA), Latest version.
- 5.27** "HTRW Cost Engineering," U.S. Army ER 1110-3-1301, Latest version.
- 5.28** Code of Federal Regulations. 40 CFR, Parts 190-299. latest edition.
- 5.29** "Hazardous Waste Operations and Emergency Response." Code of Federal Regulations. [n.d.] CFR 1910.120, Final Rule.
- 5.30** Department of Army Guidance for Addressing Potential Perchlorate Contamination, 11 June 2004, <http://www.epa.gov/fedfac/pdf/armygu0604.pdf>
- 5.31** "Compendium of Superfund Field Operations Methods," U.S. Environmental Protection Agency (EPA). Latest version
- 5.32** "Army Toxic Chemical Agent Safety Program," AR 385-61, Latest version.
- 5.33** "Toxic Chemical Agent Safety Standards," DA PAM 385-61, Latest version.
- 5.34** "Chemical Accident or Incident Response and Assistance (CAIRA) Operations," DA PAM 50-6, 17 Latest version.
- 5.35** "Occupational Health Guidelines for Evaluation and Control of Occupational Exposure to Mustard Agents H, HD, and HT," DA PAM 40-173, Latest version
- 5.36** "Chemical Surety," AR 50-6, Latest version.
- 5.37** EP 1110-1-18, Ordnance and Explosives Response, Latest version
- 5.38** ER 1110-1-8153, Ordnance and Explosives Response, Latest version
- 5.39** EM 1110-1-4009, Ordnance and Explosives, Latest version
- 5.40** EP 75-1-3, "Recovered Chemical Warfare Materiel (RCWM) Response", latest version
- 5.41** DA PAM 385-64, Ammunition And Explosives Safety Standards, latest version
- 5.4** AR 385-64, US Army Explosives Safety Program, latest version
- 5.43** Chemical Data Quality Management for Hazardous, Toxic, Radioactive Waste Remedial Activities, ER 1110-1-263, latest version
- 5.44** Chemical Quality Assurance for HTRW Projects, EM 200-1-6, latest version
- 5.45** National Contingency Plan, 40 CFR 300
- 5.46** DOD Regulation 6055.9 STD DOD Ammunition and Explosive Safety Standards
- 5.47** DOD 4160.21-M-1 Defense Demilitarization Manual
- 5.48** Department of Transportation (DOT) Hazardous Material Regulations 49 CFR 100-199
- 5.49** Occupational Health Guidelines For The Evaluation And Control Of Occupational Exposure To Nerve Agents GA, GB, GD, And VX, DA Pam 40-8

5.50 Formerly Used Defense Sites (FUDS) Program Policy, ER 200-3-1

5.51 *EPA Assessment Guidance for Perchlorate*, 26 January 2006, <http://epa.gov/newsroom/perchlorate.pdf>

5.52 *Policy on DoD Required Actions Related to Perchlorate*, January 26, 2006, <http://www.dodperchlorateinfo.net/>

5.53 *EP 75-1-2, MEC Support during HTRW and Construction Activities*, latest version

5.54 *DA, 2005a. Munitions Response Terminology*, April 21, 2005

5.55 *DA, 2005b. Working with Environmental Regulators and Safety Officials*, May 5, 2005

5.56 *The Sources, Fate, and Toxicity of Chemical Warfare Agent Degradation Products*, June 1999, Nancy B. Munro, et al.

Appendix A

Sample QASP

Provided electronically by USAESCH

Appendix B

To: Department of the Army
U.S. Army Engineering and Support Center, Huntsville
Corps of Engineers
4820 University Square
Huntsville, Alabama 35816-1822

Date: _____

Memorandum For Record

Subject: Milestone Approval
Project Name:
Project Location:
Contractor Name:
Contract Number:
Task Order Number:

In accordance with the requirements contained in the Statement of Work for the referenced contract, the undersigned agree that [Contractor Name] has submitted the completed Milestone No. _____ Contract Line Item No.: _____, Deliverable: _____ to their satisfaction.

Contractor Signature

_____, Date _____

CEHNC Project Manager/COR Signature

_____, Date _____

Contracting Officer Signature

_____, Date: _____

Appendix C
Master Project List

Provided electronically by USAESCH

Appendix D
SI Report Outline

Note that where outline refers to MEC and MC, report should also address CWM and CA, respectively.

TABLE OF ACRONYMS

GLOSSARY OF TERMS

Table of Contents (Government will provide example table of contents but allows for flexibility in the TOC)

EXECUTIVE SUMMARY

- Brief 1-2 page summary
- Include a table summarizing findings by MRA/MRS.
- Include small paragraph summarizing recommendations.

1.0 INTRODUCTION

- State that an SI was performed, the name of the agency performing it, and the authority under which it was conducted (authority language provided below):

The Department of Defense (DOD) has established the Military Munitions Response Program (MMRP) to address DoD sites suspected of containing munitions and explosives of concern (MEC) or munitions constituents (MC). Under the MMRP, the U.S. Army Corps of Engineers (USACE) is conducting environmental response activities at formerly used defense sites (FUDS) for the Army, DOD's Executive Agent for the FUDS program.

Pursuant to USACE's Engineer Regulation (ER) 200-3-1 (USACE, 10 May 2004) and the Management Guidance for the Defense Environmental Response Program (DERP) (Office of the Deputy Under Secretary of Defense (Installations and Environment), September 2001), USACE is conducting FUDS response activities in accordance with the DERP statute (10 USC 2701 et seq.), the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 USC §9601 et seq.), Executive Orders 12580 and 13016, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR Part 300). As such, USACE is conducting remedial site inspections (SI), as set forth in the NCP, to evaluate hazardous substance releases or threatened releases from eligible FUDS.

While not all MEC/MC constitute CERCLA hazardous substances, pollutants or contaminants, the DERP statute provides DOD the authority to respond to releases of MEC/MC, and DOD policy states that such responses shall be conducted in accordance with CERCLA and the NCP.

- State the FUDS property name, FUDS property and project numbers, and location (street address, city, county, State, latitude/longitude coordinates). If necessary, provide brief directions to the property.

- State the purpose, scope, and objectives of the SI (standard language provided below):

The primary objective of the MMRP SI is to determine whether a FUDS project warrants further response action under CERCLA or not. The SI collects the minimum amount of information necessary to make this determination, as well as it (i) determines the potential need for a removal action (ii) collects or develops additional data, as appropriate, for Hazard Ranking System (HRS) scoring by Environmental Protection Agency (EPA); and (iii) collects data, as appropriate, to characterize the release for effective and rapid initiation of the Remedial Investigation and Feasibility Study (RI/FS). An additional objective of the MMRP SI is to collect the additional data necessary to (±) complete the Munitions Response Site Prioritization Protocol (MRSPP).

2.0 PROPERTY DESCRIPTION AND HISTORY

- Identify and describe historic military operations (e.g., munitions manufacturing plant, Air Force or Navy base, Army WWII training camp, etc.) at the FUDS property, as well as the individual MRAs (e.g., mortar range, artillery range, open

burning/open detonation area, burial pit, etc.)/MRSs identified.

- Identify former owners and operators, years of operation, types of MEC and MC used and thought to be present, any MEC or MC treatment or disposal practices, containment features, if present, and quantities of MEC or MC used and thought to be present, if known or possible to estimate. Identify current owners and operators and current land use.

- Describe the area's physical setting (e.g., topography, climate, vegetation, and significant structures). Describe accessibility to MEC and MC and current institutional controls (e.g., fencing, signage, etc.). Briefly describe surrounding land uses and identify nearby populations.

- Include the appropriate portion of a USGS 7.5-minute topographic map locating the project and surrounding area. On the map, identify nearby surface water bodies and the nearest groundwater and drinking water wells, drinking water intake, residence, wetlands, and other sensitive environments, as applicable.

- If applicable, provide the dates, scopes, and general results of previous investigations for MEC and MC, including previous records reviews (Archives Search Reports (ASR) and results of subsequent range inventory (ASR supplement)) and any investigations conducted under USACE's hazardous, toxic, and radioactive waste (HTRW) program related to MC.

- If applicable, describe other land use that may have contributed to contamination, as well as regulatory history, if applicable, including RCRA status, permits, permit violations, and inspections by local, State, or Federal authorities. Discuss any occurrences of MEC found by citizens and any accidents, injuries, chemical exposures, or complaints.

3.0 SI TASKS

- Include a summary of agreements made in the first Technical Project Planning (TPP) session and contacts made with the State Historical Preservation Office, U.S. Fish and Wildlife Service, or other agencies coordinated with on cultural and natural resources considerations.

- Describe the results of any additional desk-top research or interviews conducted as part of the SI, by MRA, as applicable.

4.0 MEC Findings

- Summarize, by MRA, the investigative activities conducted for MEC and the results. Present data quality objectives (DQOs) of the SI and discuss whether they were satisfied.

- Identify specific MEC items found, wherever possible, and list them in a table, describing the results of the qualitative reconnaissance, as well as any geophysical studies, spatial analysis, aerial surveys, and footprint analysis (i.e., identification of MRA boundaries), if conducted. Include a map of the results of the reconnaissance inspections.

- Summarize previous MEC findings in a table. Include a map of MEC finds, and add locations to the CSM, or refer to a map in a previous report.

5.0 MIGRATION/EXPOSURE PATHWAYS AND TARGETS

GROUND WATER MIGRATION PATHWAY

- Describe the local geologic and hydro-geologic setting and features, (including the stratigraphy, geologic formations, aquifers, karst features, confining layers, and depth to each aquifer. Provide a description of the underlying unit with the lowest hydraulic conductivity, including its thickness. (Do not consider units within the first 10 feet below ground surface.)

- Discuss ground water use within a 4-mile radius of the MRAs. Identify the nearest private and municipal drinking water wells, including standby wells used at least once a year. Provide the number of wells, their locations, pumping rates, and the aquifer from which water is drawn. Identify wells in karst aquifers. Quantify drinking water populations served by wells within 4 miles, breaking out populations into the following distance categories: 0-1/4; >1/4-1/2; >1/2-1; >1-2; >2-3;

and >3-4 miles, including residents, students, and workers. Identify any municipal wells that are part of a blended system (ground water mixed with surface water), and provide the relative amount the wells contribute to the system. [Note: Where more than one MRS has been identified, measure the distance to ground water targets from them, as opposed to the MRA.]

- Indicate whether ground water within a 4-mile radius of the MRAs is used for any of the following purposes: irrigation (5-acre minimum) of commercial food or forage crops; watering of commercial livestock; ingredient in commercial food preparation; supply for commercial aquaculture; or supply for a major or designated water recreation area. If there are no drinking water wells, indicate whether aquifers are usable for drinking water purposes.

- Identify designated Wellhead Protection Areas (pursuant to Section 1428 of the Safe Drinking Water Act) and specify location.

- Note: Some of the information listed above may already have been collected during the preliminary assessment (PA), and if so, may be summarized from the PA. If not, the contractor may choose to utilize companies that specialize in providing or compiling environmental data to parties involved in real estate transactions.

- Discuss any previous ground water sampling results (analyzed for MC); provide dates of sampling events, well locations, and the depths and names of sampled aquifers. Summarize analytical results in a table and include sampling locations in the CSM in Appendix J or refer to a map in a previous report.

- List in a table each well or spring sampled during the SI, provide the depth from which it draws drinking water and the screened interval, quantify the population served by the well, if applicable, and identify its distance from the MRAs. Discuss SI ground water sampling results in terms of attribution of hazardous substances to DOD activities and comparison to background concentrations, as applicable. List in a table each sample and summarize analytical results. Include a map of sampling locations. ~~or~~ Identify drinking water wells exposed to hazardous substances, if present, and quantify the populations served by those wells, as applicable. If no groundwater samples were taken, explain. For example, sampling may not be supported by the CSM (no complete exposure route exists or no receptors are present), or it was decided in the TPP session that soil/sediment/surface water, etc. would be the focus of the SI because the project was already identified as requiring an RI/FS, and groundwater contamination could more effectively be addressed at that phase.

SURFACE WATER MIGRATION PATHWAY

- Describe the local hydrologic setting, including MRA location with respect to the nearest surface water bodies and potentially affected floodplains. Include a figure depicting surface water features and targets (fisheries, wetlands, etc.) Describe the overland and in-water segments of the surface water migration path, starting at the perimeter of the MRA and ending 15 miles downstream of the probable point of entry (PPE) of MEC/MC into surface water. Identify all water bodies within the in-water segment, and state the length of reach and flow or depth characteristics of each. Describe any tidal influence along the surface water migration path. Note: surface water includes perennially flowing man-made ditches as well as intermittently flowing ditches in areas with <20 inches of mean annual precipitation. For lakes, oceans, coastal tidal waters, and the Great Lakes, apply the 15-mile target distance limit as an arc. [Note: Where more than one MRS has been identified, measure the distance to all surface water targets from them, not the MRAs.]

- Add the surface water migration path to the CSM in Appendix J. Describe upgradient drainage areas (including predominant soil type), onsite drainage (including storm drains, ditches, culverts, etc.), discharges into surface water, and pertinent historical events, including floods, fish kills, and fishery closures.

- Indicate whether surface water within the 15-mile target distance limit supplies drinking water. Identify the location and state the distance from the PPE to each drinking water intake. Quantify the population served by the intake; identify blended systems (where surface water is mixed with ground water) and provide the relative amount that surface water contributes.

- Indicate whether surface water within the target distance limit contains recreational, subsistence, or commercial fisheries. Identify and state the distance from the PPE to each fishery; briefly characterize each.

- Identify sensitive environments present within or adjacent to the in-water segment. Include all sensitive environments

listed in Attachment 2 of the USACE guidance entitled "Screening Level Ecological Risk Assessments for MMRP SIs" (Army checklist for important ecological places). State the distance from the PPE to each sensitive environment. In addition, quantify the length of wetlands frontage along the surface water migration path within the following mileage categories downstream of the PPE: <0.1, 0.1-1, >1-2, >2-3, >3-4, >4-8, >8-12, >12-16, >16-20, >20 miles.

- Note: Some of the information listed above may already have been collected during the PA, and if so, may be summarized from the PA. If not, the contractor may choose to utilize companies that specialize in providing or compiling environmental data to parties involved in real estate transactions.

- Discuss any previous surface water and/or sediment sampling results (analyzed for MC), including dates, locations, and types of samples. Summarize analytical results in a table and include sampling locations in the CSM in Appendix J or refer to a map in a previous report.

- Discuss SI surface water and sediment sampling results. List in a table each sample and summarize analytical results. Identify surface water intakes, fisheries, and sensitive environments exposed to hazardous substances, if present at concentrations significantly above background; quantify the affected drinking water populations and fisheries (in pounds per year) and describe the exposed sensitive environments, including wetlands frontage, as applicable. If no surface water or sediment samples were collected, explain. For example, sampling may not be supported by the CSM (no complete exposure route exists or no receptors are present). Alternatively, surface water may not have been present to allow collection of a sample.

SOIL EXPOSURE PATHWAY

- Discuss any previous observations and sampling results of surface MEC or MC, including dates and locations. Summarize analytical results in a table and include sampling locations in the CSM in Appendix J or refer to a map in a previous report.

- Discuss SI surface soil samples. List each sample in a table and summarize analytical results. If soil samples were not collected, explain. For example, sampling may not be supported by the CSM (e.g., no surface soil sampling was planned for the FUDS because range activities were limited to the use of practice bombs with spotting charges. If field reconnaissance identified MEC debris associated with MEC other than practice bombs, the need for MC sampling was reassessed in the field).

- State the number of workers, residents, and students present on and within 200 feet of areas of observed surface contamination (hazardous substances within top 2 feet of surface soil) and identify the locations of the pertinent workplaces, schools, day care facilities, and homes. If there are no workers, residents, or students on or within 200 feet of observed contamination, state the shortest travel distance within 1 mile to any residence or school (accounting for natural barriers to travel on foot).

- State the number of people who live or attend school within 1 mile travel distance of areas of observed contamination, within the following distance categories: >0-1/4, >1/4-1/2, >1/2-1 mile. (Do not include those counted on or within 200 feet of area of observed contamination, as above.)

- Indicate whether any of the following terrestrial sensitive environments exist in the area of observed contamination:

- Terrestrial critical habitat for Federal designated endangered or threatened species; National Park; designated Federal Wilderness Area; National Monument

- Terrestrial habitat known to be used by Federal designated or proposed endangered or threatened species; National Preserve (terrestrial); National or State Terrestrial Wildlife Refuge; Federal land designated for protection of natural ecosystems; administratively proposed Federal Wilderness Area; terrestrial areas utilized for breeding by large or dense aggregations of animals

- Terrestrial habitat known to be used by State designated endangered or threatened species; terrestrial habitat known to be used by species under review as to its Federal status

- State land designated for wildlife or game mgmt; State designated Natural Areas; particular areas, relatively small in

size important to maintenance of unique biotic communities

- Describe how attractive/accessible the area of observed contamination is for public use, indicating whether the area is: designated for recreational use; area is regularly used for public recreation; accessible and uniquely used for recreation (e.g., vacant lots in urban areas); moderately accessible (e.g., some access improvements, such as gravel road) with some public recreation use; slightly accessible (e.g., rural area with no road improvement) with some public recreation use; accessible, with no public recreation use; physically inaccessible to the public, with no evidence of public recreation use.

AIR MIGRATION PATHWAY

- Identify for each MRA the potential for release of contaminated particulate to the air and conditions that may prevent release (area is covered by liquids, uncontaminated soil cover, or thick vegetation, or area is surrounded by windbreak, or source is totally enclosed in intact building or containers.) Describe the results of any air samples, if collected. If air samples were not collected, explain. For example, no air samples were collected because there are no known sources of air contamination associated with the historic DoD operations; Surface soil may present a source of particulate contamination; therefore surface soil samples were collected during the SI, as applicable). Discuss any previous observations of air releases or air sampling results, including dates, locations, sampling procedures, and meteorological conditions.

- Identify the location of and distance to the nearest resident, worker, or student within 1 mile of the source of particulate contamination.

- State the population within 4 miles of the sources of particulate contamination, including residents, students, and workers, broken out into the following distance categories: on a source; >0-1/4, >1/4-1/2, >1/2-1, >1-2, >2-3, >3-4 miles.

- Indicate all types of sensitive environments, using those listed in Attachment 2 of the USACE guidance entitled "Screening Level Ecological Risk Assessments for MMRP SIs" (Army checklist for important ecological places), within 4 miles of the source of particulate contamination, broken out into the same distance categories listed above for human populations.

- Indicate the total acres of wetlands within 4 miles of the source of particulate contamination, broken out into the same distance categories listed above for human populations

- For results of the MC investigation, summarize the number and type of samples collected in each MRA, including background samples, and identify specific hazardous substances, if detected. Describe observations made at each sampling location (presence of MEC, MEC scrap, MC bulk material, targets, craters, proximity of known or suspected MEC items, stressed vegetation, and nature of sample material if unusual characteristics are noted (e.g., high turbidity, discoloration, high organic matter content). List in a table each environmental sample collected and summarize analytical results. Include a map of sampling locations.

6.0 SCREENING-LEVEL RISK ASSESSMENT

- Provide discussion of risk from MEC. (i.e. likelihood of removing MEC from its original location, accessibility, detonation on contact, etc.). State whether or not it is believed that MEC may be present and why. Summarize the attributes of the potential MEC (type, how it functions, and potential hazard) Describe the potential receptors and how they may interact with the MEC. {Describe the potential hazards from potential MEC. Presence of MEC and any potential human receptors is normally sufficient to justify an RI/FS. More detailed explanation of hazards will be required to justify NDAI (if there is a potential MEC presence), TCRA, or NTCRA. }

- Provide sub-sections entitled "Screening Level Human Health Risk Assessment (HHRA)" and "Screening-Level Ecological Risk Assessment (ERA)." Discuss the conservative evaluation of the potential for adverse effects to human health and the environment due to MC contamination. This information is used to make recommendations for areas that do not pose a significant threat from MC, those that require further investigation, and those that may require a removal action. The HHRA will compare exposure point concentrations (highest detection or 95% upper confidence limit (UCL) if sufficient data exists) to health-based screening levels and will be consistent with USACE's Risk Assessment Handbook Vol. I: Human Health Evaluation (EM 200-1-4). The ERA shall be consistent with Steps 1 and 2 of the U.S. EPA guidance, Ecological Risk Assessment Guidance for Superfund (ERAGS): Process for Designing and Conducting

Ecological Risk Assessments.

- All complete pathways shown in the CSM (Appendix J) shall be addressed in this section.
 - Human
 - Ecological
 - MEC

7.0 SUMMARY AND CONCLUSIONS

- Briefly summarize the major aspects of the FUDS property, the MRAs (and the MRSs), and their histories that relate to the release or threatened release of MEC or MC and the exposure of human and ecological target populations. Briefly summarize principal migration pathways and targets of concern. [Note: Where MRSs have been identified, provide a summary for each.]
- Summarize sampling results, including MEC and MC found and detected in the MRAs as well as within the migration pathways.

8.0 RECOMMENDATIONS

- Summarize recommendations for further remedial response (RI/FS), removal response, or No Department of Defense (DOD) Action Indicated. Provide recommendations and the basis for these recommendations (from MEC and MC results) in tabular format

9.0 REFERENCES

- List, in bibliographic citation format, all references cited in the SI report.

APPENDICES

- Performance Work Statement – Electronic Only
- Technical Project Planning (TPP) Session Documentation/Meeting Minutes – Electronic Only
- Interview Documentation (pertinent teleconferences regarding site history or conditions; coordination on cultural and natural resources considerations)
- Field Notes and Field Forms
- Photo-documentation Log (As an attachment, provide photographs taken during the SI depicting pertinent observations such as MEC and MC source areas, containment conditions, stained soil, stressed vegetation, drainage routes, sample locations, and any MEC or munitions debris findings. Describe each photograph in captions or accompanying text. Key each photo to its location on the site sketch or CSM)
- Analytical Data – Electronic only, should include SEDD files and laboratory reports in pdf. – for all versions (Draft, Draft-Final, and Final) of the report
- Analytical Data QA/QC Report, to include all requirements from DID MR005-10 for Chemical Data Final Report that are not addressed elsewhere and the USACE-prepared Chemical Quality Assurance Report (CQAR)
- Geographic Information Systems Data – Electronic Only
- Geophysical Data, if applicable. (All raw and processed geophysical data and geophysical maps in their native format (Surfer, Geosoft Oasis montaj, Intergraph, or ESRI ArcView format) and/or as raster bit-map images such as BMP, JPEG, TIF, or GIF.) – Electronic Only; Maps hardcopy also.

- Conceptual Site Model

- Munitions Response Site Prioritization Protocol Evaluations (for each MRS)

- The protocol is being applied at the MRS level, because individual MRSs are to be delineated. For purposes of applying the Protocol herein, usually the MRS equals one MRA. [Note: Where MRSs have been identified and there is more than one MRS in the MRA apply the Protocol to individual MRSs, ensuring the total acreage adds up to the MRA acreage.]

- Directions section of the MRSPP sheets shall contain specific references and critical information used to develop the score for that particular table in the MRSPP.

- Do not use bolding to show selection. Use boxes or circles to show selection.

- Recommend printing the Table 20 rather than all the CWM tables for the printed copy. The other CWM tables provide no information if there's no known or suspected hazard.

- Include site name, FUDS Project ID, MRS identifier, and Appendix Pg # to each page. If the site is in the Range Inventory (i.e., has a number in the ASR Supplement), the Range Inventory designation/name should be included. Similarly, if there is an ARC number (see <http://deparc.egovservices.net/deparc/do/home>), it should be included.

- Need to provide guidance on what to do if no media sampled (no hazard or just leave blank)

- Table 9 (cultural and eco) shouldn't just refer to the ASR, but also the SI report, which presumably acquired more current and complete information than the ASR.

- Per the current draft (and all preceding drafts) of the Primer, "All contaminants of concern attributable to an MRS should be included. Naturally occurring compounds that are detected within established background concentration ranges are not included." Given that the contractor collected background (or "ambient") samples, it is unreasonable to include every detected metal in these worksheets.

- Reference Copies: Attach copies of communication records and other references gathered for additional HRS and MRSPP data (e.g., records of teleconferences with local water or county health departments on groundwater use; references for locating sensitive environments and population densities). Any site specific documents/reports used to formulate your recommendation (include other pertinent reference materials generated during the SI that are not otherwise cited or included in the Appendices. (e.g. Copies of previously issued reports, ASRs, other investigation reports (i.e. ATSDR, CDC, DHHS), etc) in electronic copy only. Include hard copies only of things produced as part of the SI effort (contact records, etc.) and critical excerpts from reference documents.

Appendix E

PUBLIC NOTICE

Request for information about the [Name of site]

Recently, the U.S. Army Corps of Engineers completed a Site Inspection at the former *Name of Site*. *One sentence that describes what took place at this site (i.e. chemical warfare training, live-fire, testing, etc.).*

Name of Site is one of many former military installations throughout the United States that will be reviewed under the Department of Defense's Munitions Response Site Prioritization Protocol. This protocol is used to assess sites that may have unexploded ordnance, discarded military munitions or munitions constituents, and to assign priorities for any additional investigation or munitions removal that may be required.

The evaluation criteria, including types of munitions that may be present, ease of access to the site and number of people living near the site, are available for public review in the Site Inspection Report located at *complete address of information repository*.

For more information or if you have additional information about past activities related to the *Name of Site*, please contact:

Project Manager
contact info here

or

PAO
contact info here