

Appendix C

Statement of Work MEC Support During Construction Activities [Project Name] [Project Location (City, STATE)]

1.0 General

1.1 The work required under this Statement of Work involves [standby support and avoidance of potential munitions and explosives of concern (MEC) during performance of construction activities] [subsurface removal of potential MEC in support of construction activities] (MEC support) on property currently or previously owned, leased, or otherwise possessed by the U.S. Department of Defense (DOD).

1.2 The contractor shall provide all labor, materials, and equipment necessary to perform [MEC standby support during] [subsurface removal in support of] construction activities in accordance with EP 75-1-2. The contractor shall furnish the required Unexploded Ordnance (UXO)-qualified personnel, equipment, instruments, and transportation, as necessary, to accomplish the required services and furnish to the government reports and other data, together with supporting material developed while providing MEC support services. During the implementation of MEC support activities, the contractor shall provide adequate professional supervision and quality control to ensure the quality, safety, and completeness of the work.

2.0 Background

2.1 MEC is a safety hazard that may constitute an imminent and substantial danger to the personnel performing construction activities, other nearby site personnel, and the public in general. The presence of MEC must be considered a possibility on all formerly used defense sites (FUDS) and active military installations. The surface danger zone of a range (active or inactive), the target area, the impact area, the ricochet area, and the secondary danger zones may contain MEC or similar items. MEC may be found on the surface or beneath the surface. The varying types of ammunition, angle of fire, and soil types preclude the accurate estimation of the depth of any subsurface MEC.

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2.2 Location of Work.

[Insert general and specific descriptions of project location]

2.3 Site History.

[Insert history of site utilization with special emphasis on types of military munition items that may be encountered]

2.4 Recovered Chemical Warfare Materiel (RCWM). During a comprehensive review of archival records, [no evidence/evidence] of the potential existence of RCWM or agent breakdown products on [Site Location] was discovered. In the event that RCWM or military munitions with unknown filters are encountered, all work shall immediately cease, and project personnel will be evacuated along cleared paths upwind from the discovery. A team consisting of a minimum of two personnel shall immediately secure the area to prevent unauthorized access. Reporting procedures shall be in accordance with paragraph 6.4.

3.0 Regulatory and Technical Requirements

3.1 MEC support activities shall be conducted in full compliance with U.S. Army Corps of Engineers (USACE), Department of the Army, and DOD requirements regarding personnel, equipment, and procedures. (All MEC operations shall emphasize anomaly avoidance, whenever possible, and be performed in a manner consistent with the Comprehensive Environmental Response, Compensation, and Liability Act and the National Oil and Hazardous Substances Pollution Contingency Plan. Therefore, the administrative requirements of Federal, state, or local permits are not required for implementation of any MEC procedures occurring entirely onsite, including onsite destruction, if required, but the substantive permit requirements shall be fulfilled.)

3.2 The provisions of 29 CFR 1910.120 shall apply to all MEC actions taken at this site. In addition, UXO personnel involved in performing MEC procedures will follow the provisions and work standards identified in EP 1110-1-18.

4.0 Specific Requirements

4.1 MEC support during construction activities may require only MEC standby support or a subsurface removal, depending on an assessment of the probability of encountering MEC and the level of confidence associated with the determination. If the probability of encountering MEC is low (e.g., current or previous land use leads to an initial determination that MEC may

be present), only MEC standby support shall be required. When a determination is made that the probability of encountering MEC is moderate to high (e.g., current or previous land use leads to a determination that MEC was employed or disposed of in the area of concern), UXO-qualified personnel shall conduct a subsurface removal of the known construction footprint and remove all discovered MEC. The level of effort for construction support is site/task-specific and will be determined on a case-by-case basis by the project delivery team (PDT) in coordination with the MM Center of Expertise (MM CX).

4.2 The work elements to be performed under this [contract] [delivery order] are listed below.

[Use only those paragraphs listed below that are applicable to the specific task]

4.3 Site Visit/Records Review. The contractor shall conduct a site visit, review pertinent records, and interview personnel knowledgeable of site conditions to collect sufficient information to develop a Work Plan and an Accident Prevention Plan/Site Safety and Health Plan (APP/SSHP) for the planned activities. This task is not intended to be an expanded archival search where new information is located or developed. Prior to conducting a site visit, an Abbreviated Site Safety and Health Plan (ASSHP) shall be prepared in accordance with the format provided in EP 1110-1-18 and submitted to the Contracting Officer for review and approval unless the site is under an existing APP/SSHP that addresses MEC. Site visit personnel shall be accompanied by a UXO-qualified technician (UXO Technician II) in areas potentially containing MEC or similar items. The contractor shall ensure that the site visit is fully coordinated and that all members of the site visit team comply with the accepted ASSHP.

4.4 Work Plan. The contractor shall not commence construction activities on sites with known or potential MEC until a site-specific Work Plan describing proposed MEC support procedures and the equipment to be used is prepared and accepted by the Contracting Officer. The Work Plan shall also include an APP/SSHP specifically addressing MEC operations. The Work Plan shall discuss UXO team composition in accordance with EP 75-1-2. The Work Plan and APP/SSHP shall promote safe and efficient operations while limiting potential exposure to MEC to a minimum number of personnel for a minimum amount of time and to the minimum amount of MEC. Construction activities shall only be accomplished following MEC support procedures defined in the accepted Work Plan.

4.4.1 Explosives Siting Plan (ESP). An ESP is required for MEC support during construction activities. Detailed information on preparing the ESP can be obtained from the MM CX. The

ESP discusses the proposed minimum separation distances for unintentional detonations, intentional detonations, and siting of critical project components. The ESP shall describe the basis of design, all design calculations, and proposed hazard mitigation measures to be implemented to protect the public, non-project personnel, and site workers from explosive hazards. The ESP will be reviewed by the PDT to ensure that the appropriate minimum separation distance criteria have been applied.

4.4.2 Geophysical Investigation Plan (If Required). The Geophysical Investigation Plan will be used to provide details of the approach, methods, and operational procedures to be employed in performing geophysical investigations at MEC sites. Detailed information on preparing a Geophysical Investigation Plan can be obtained from the MM CX.

4.4.3 Geophysical Prove-Out (GPO) Plan. The GPO Plan will provide details of the approach, methods, and operational procedures to be (1) employed to perform GPOs at MEC sites and (2) documented as part of the Geophysical Investigation Plan. The purpose of a GPO is to demonstrate and document the site-specific capabilities of the proposed survey platform, sensors, navigation equipment, data analysis, data management and associated equipment and personnel to operate as an integrated system capable of meeting the data quality objectives established by the PDT. Detailed information on preparing a GPO plan can be obtained from the MM CX.

4.4.4 Explosives Safety Submission (ESS). Construction activities involving removal of MEC in the construction footprint will require submittal and approval of an ESS. The purpose of the ESS is to ensure that all applicable DOD and Army regulations regarding safe and secure handling of MEC are followed. Detailed guidance on the preparation and approval process associated with the ESS may be found in EP 385-1-95b and the Department of Defense Safety Board's (DDESB's) "Memorandum Guidance for Clearance Plans."

4.4.4.1 MEC removal operations shall not begin on construction projects requiring an ESS until the ESS is approved by the DDESB and the contractor has been directed to incorporate changes resulting from ESS approval into the Work Plan. A copy of the approved ESS shall be maintained at the project site. All operations shall be executed in accordance with the approved ESS.

4.4.4.2 When an element of the accepted ESS changes, the ESS must be changed. The contractor shall prepare the proposed change and forward it to the Project Manager (PM), who will forward it to the MM CX for review. The MM CX will forward the proposed changes to the appropriate agency for approval. For a change that specifies less restrictive requirements

(e.g., reduction in exclusion zone), the contractor shall comply with the accepted ESS until the change is approved. When changes would be more restrictive (e.g., increase in exclusion zone), the contractor shall immediately implement the more restrictive measures.

4.5 Standby Support. If the probability of encountering MEC is low (e.g., current or previous land use leads to an initial determination that MEC may be present), only MEC standby support will be required.

4.5.1 A UXO team consisting of a minimum of two qualified UXO personnel (one UXO Technician III and one UXO Technician II) shall be used to provide standby support during construction activities in areas potentially containing MEC. The UXO team shall review any archival information available regarding the area of the proposed construction activities. If possible, the UXO team shall determine the probable types of MEC that may be encountered and specific safety considerations. The UXO team shall meet with on-site management and construction personnel and conduct a general work and safety briefing prior to commencement of any on-site activities.

4.5.2 The UXO team shall physically review the actual construction footprint with the on-site management of the construction contractor and discuss visual observations and potential areas of concern. In the event that MEC is discovered, the UXO team shall place flagging adjacent to the discovery for subsequent visual reference, select a course around the item, and lead project personnel out of the area.

4.5.3 The UXO team shall monitor all excavation activities in areas potentially contaminated with MEC. One member of the team will be positioned to the rear and upwind of the excavation equipment for continuous visual observation of activities. If the construction contractor unearths or otherwise encounters MEC with unknown fillers, all excavation activities will cease. The UXO team shall assess the condition of the MEC to determine if disposal action is required. Once MEC has been encountered in an excavation, no further excavation is allowed at that location until the explosives ordnance disposal (EOD) unit has removed the MEC. Excavation will not continue until a detailed assessment of the potential of encountering additional MEC is completed. If the PDT determines that the item was an anomaly and no other MECs are expected, then the excavation may continue. If the PDT determines through the available data that the probability of encountering additional MEC is moderate to high, then a subsurface removal of the construction footprint is required.

4.5.4 MEC Disposition. The UXO team is generally not tasked to perform MEC disposition during standby support of construction activities. In the event that MEC is encountered that

cannot be avoided or, based on its fuzing or current condition, presents an imminent hazard requiring immediate attention, the UXO team shall notify the local point of contact (POC) designated in the Work Plan. The UXO team shall not destroy any of the MEC encountered. The local POC will notify the appropriate authority of the MEC discovery, and the UXO team shall safeguard the site pending arrival of the appropriate authority.

4.5.4.1 On active installations, MEC disposition requests will normally require reporting to the Range Control Officer, Facility Engineer, Post Headquarters, or POC designated in the Work Plan.

4.5.4.2 On FUDS, the local POC will facilitate EOD response. If the local POC designated in the Work Plan is not the local law enforcement agency, the local POC will inform the local law enforcement agency of the discovery. The local POC will also contact the MM CX.

4.6 Subsurface Removal in Support of Construction Activities. A subsurface removal of the identified construction footprint is required when the probability of encountering MEC during construction-related excavation activities is moderate to high (e.g., current or previous land use leads to a determination that MEC was employed or disposed of in the area of concern). The subsurface removal process requires close coordination among on-site USACE management personnel, the construction contractor, and the UXO contractor. The UXO team shall physically review the actual construction footprint with other on-site management personnel and discuss visual observations and potential areas of concern. Subsurface removal actions must be accomplished in strict accordance with the approved Work Plan, including all subplans (e.g., APP/SSHP, ESP, and ESS, if required) and appendices.

4.6.1 The UXO team shall be familiar with these plans and shall review any archival information available regarding the area of the proposed construction activities. If possible, the UXO team shall determine the probable types of MEC that may be encountered and specific safety considerations. Prior to commencing subsurface removal activities, the UXO team shall provide a general work and safety briefing to all on-site personnel.

4.6.2 Underground Utilities. Utility clearance and/or excavation permits, if required, must be obtained prior to the commencement of any intrusive activities. The UXO team shall verify that all necessary excavation permits are on-site prior to commencing operations. The prime contractor is responsible for contacting the appropriate agency(ies) or company(ies) to mark the location of all subsurface utilities in the construction area. In the event that subsurface utilities are suspected in an excavation area, the UXO team must attempt to verify their

location. All located utilities shall be marked by paint, pin flags, or other appropriate means to visually delineate their approximate subsurface routing.

4.6.3 Area Preparation. Area preparation includes reduction and/or removal of vegetation that may impede or limit the effectiveness of subsurface removal actions. Vegetation reduction/removal may be accomplished through manual removal, mechanical removal, controlled burning, or defoliation. Selection of the appropriate land clearing strategy will be based on the type and concentration of vegetation, topography, drainage patterns, terrain and soil conditions, and the level of required environmental and natural resource protection.

4.6.3.1 Area preparation is not considered to be a MEC removal procedure; anomaly avoidance procedures shall be followed. The area preparation teams working in areas not previously surveyed for the presence and avoidance of MEC shall be accompanied by UXO-qualified personnel following procedures described in EP 75-1-2.

4.6.4 Surface Clearance. A surface removal may be required to remove any existing MEC from the surface of the work area. The disposition of recovered MEC is discussed in paragraph 4.6.7. In addition, all military munitions debris, target materials, and non-MEC-related materials which may interfere with a subsurface geophysical survey shall be removed from the surface of the work area and staged for later disposition. UXO teams shall complete all surface removal activities.

4.6.5 Geophysical Mapping/Analysis. A subsurface geophysical survey shall be conducted to identify and locate all anomalies. The various types of geophysical detection equipment are discussed in EP 75-1-2. A geophysical prove-out process shall be performed to select the geophysical instruments. Subsurface geophysical surveys may be completed using detection instrumentation with real time or post-processing identification and discrimination techniques. The geophysical investigation shall be performed in accordance with the Geophysical Investigation Plan contained within the Work Plan.

4.6.5.1 Subsurface geophysical surveys are not considered to be a MEC procedure; anomaly avoidance procedures shall be followed. The geophysical mapping teams working in areas not previously surveyed for the presence and avoidance of MEC shall be accompanied by UXO-qualified personnel following procedures described in EP 75-1-2. All anomalies shall be prominently marked with survey flagging or pin flags for subsequent intrusive investigation.

4.6.6 Anomaly Excavation. After the geophysical reacquisition, anomaly excavation operations are required to intrusively investigate and identify the source of all anomalies located during completion of the subsurface geophysical survey. During excavation operations, only those personnel absolutely necessary for the operation shall be within the exclusion zone. All anomaly excavation operations shall comply with the provisions of 29 CFR 1926 Subpart P.

4.6.6.1 UXO-qualified personnel shall manually complete anomaly excavations of less than 1 foot. If an anomaly is deeper than 1 foot, earth-moving machinery (EMM) shall be used to assist in excavation efforts unless site constraints or accessibility restrict or prohibit such use. EMM shall not be used to excavate within 12 inches of an anomaly. When an anomaly excavation gets within approximately 12 inches of an anomaly, the excavation must be completed manually.

4.6.6.2 Only UXO-qualified members of a UXO team may conduct manual excavation operations. A non-UXO-qualified member of the UXO team may operate EMM used to assist in anomaly excavations. If more than one EMM will be used within the same work area, the team separation distances required for multiple teams as described in EP 75-1-2 shall be used.

4.6.6.3 After the probable source of the anomaly is identified and removed, an approved geophysical instrument shall be used to validate the process. If the geophysical instrument does not continue to detect an anomaly, then the excavation shall be backfilled and restored in accordance with contract requirements.

4.6.7 MEC Destruction. The Work Plan shall include procedures for destruction of MEC recovered during construction activities. Destruction of MEC can be accomplished at one of three locations: in-place, on-site, or off-site. The decision regarding which technique to use is based on the risk involved in employing the disposal operation as determined by site-specific characteristics and the nature of the MEC recovered. Additional information on MEC disposal operations can be found in TM 60A-1-1-31.

4.6.7.1 In-place. As a general rule, in-place demolition (blow-in-place) is the preferred technique unless site conditions warrant transport of MEC that is acceptable to move to an alternate location. Information on recommended destruction procedures for individual MEC can be found in TM 60A-1-1-31. All detonation-in-place operations shall be conducted by electrical means to ensure maximum control of the site, except in situations where static electricity or electromagnetic radiation hazards are present. Non-electrical means may be used when the situation dictates.

4.6.7.2 Off-Site Transport. UXO that has been certified as safe-to-ship in accordance with TB 700-2 may be transported to an off-site UXO destruction location. Additional information is available from the MM CX.

4.6.7.2.1 A Transportation Plan detailing the route and procedures to be used during the transportation of the MEC shall be prepared as part of the Work Plan and accepted prior to engaging in any transport activities to ensure that all safety aspects of the movement have been addressed. The transport of UXO off-site must be performed in accordance with the provisions of EP 385-1-95a and EP 1110-1-18 and applicable state and local laws. Contractor personnel who, by contract requirement, are tasked with the responsibility of transporting or preparing shipments of MEC for transport over public roads shall meet all training requirements of 49 CFR 172 and applicable state requirements.

4.6.7.3 Hazardous Waste Manifest. A hazardous waste manifest (EPA Form 8700-22) is required when transporting MEC over public roads. This does not mean that MEC is considered a hazardous waste. Informational guidance on the hazardous waste manifest is provided in 49 CFR 172.205 and 40 CFR 262.20. Government personnel who are tasked to certify MEC on hazardous waste manifests will be trained in accordance with the requirements of DOD 4500.0-R, Defense Transportation Regulation, Part II, Cargo Movement, Chapter 204, Paragraph D.1.b. Government personnel who only certify hazardous waste (other than MEC) shipments, as a minimum, will be trained in accordance with DOD 4500.0-R, Defense Transportation Regulation, Part II, Cargo Movement, Chapter 204, Paragraph D.1.e. For planning purposes, if training is required, MEC training is initially 80 hours, with 40 hour refresher every 2 years. Hazardous Waste training is initially 36 hours with 8 hours refresher every 2 years.

4.6.7.4 Explosives Management. Explosives used for the destruction of MEC must be acquired and managed in accordance with EP 75-1-2 and applicable Federal, state, and local laws and regulations including, but not limited to, the following:

- ATF P 5400.7 and 27 CFR Chapter I
- DOD 6055.9-STD.
- 49 CFR 177
- 29 CFR 1910 and 1926.

- FAR 45.5.

4.6.7.5 Debris/Military Munitions Residue Management. The Work Plan shall include operational and quality control procedures for the processing, demilitarization, and disposition of inert ordnance, target materials, and military munitions residue which fall within the classification of Material Potentially Presenting an Explosive Hazard (MPPEH). Contact the MM CX for requirements of MPPEH processing and disposition.

4.7 Quality Control (QC)

4.7.1 The military munitions response contractor is responsible for the QC of all surface and subsurface removal activities and for ensuring that only those procedures and processes conforming to contractual requirements and accepted project plans are implemented. The military munitions response contractor shall develop a Quality Control Plan (QCP) outlining the quality activities to be used for continually assessing the implementation, effectiveness, compliance, and adequacy of operations.

4.7.2 A separate UXO Quality Control Specialist is not required on-site full-time for MEC support activities. However, the MEC support contractor shall perform quality control reviews of all field activities in accordance with the accepted QCP.

5.0 Submittal Requirements

5.1 Format and Content. All plans and reports shall be typewritten on standard size white paper. A front cover sheet shall be provided which includes the contractor's name and address, contract number, [delivery order number], name of the project, date of the plan, and title of the plan.

5.1.1 Chapters shall be numbered sequentially. Within each chapter, a decimal paragraphing system shall be used with each paragraph numbered sequentially, starting with the specific chapter number. Within each chapter, any figures, tables, and charts shall be numbered sequentially starting with the chapter number. Appendices shall be lettered alphabetically. Within each appendix, each page shall be numbered sequentially starting with the appendix letter. Drawings larger than 8-1/2 inches by 11 inches shall be folded to this size.

5.1.2 Every page of the plan shall be numbered sequentially starting with the specific chapter number and contain a footer containing the plan date, [and contract number] [contract number, and delivery order number.] When revisions to the plan are required, a revision date and amendment number shall be included in the footer.

5.2 Schedule. The contractor shall prepare and submit a project schedule of planned activities including plan preparation, submittal, and review; field operations; and reporting. The schedule shall identify all critical-path milestones.

5.3 Addressees and Quantities. The following addresses and number of required copies shall be used for all submittals:

ADDRESSEE	QUANTITY
[To Be Completed]	[xx]

6.0 Reports

6.1 Minutes of Meetings. The contractor shall prepare minutes of all meetings attended and submit them to the Contracting Officer within 7 calendar days after the meeting.

6.2 Correspondence. The contractor shall keep a record of each phone conversation and written correspondence affecting decisions relating to the performance of this [contract] [delivery order]. A summary of the phone conversations and written correspondence shall be submitted monthly to the Contracting Officer.

6.3 After Action Report. Upon completion of the MEC activities, the contractor shall prepare an After Action Report describing the activities completed, significant findings, and lessons learned that may assist development of future project plans. For those operations involving removal activities, the After Action Report will be in the form of a Site-Specific Final Report. More information on preparing that report can be obtained from the MM CX. The After Action Report shall be submitted to the PM and a copy forwarded to the MM CX.

6.4 Report of RCWM or Munitions with Unknown Fillers. The UXO team shall prepare a Chemical Event Report in accordance with AR 50-6 for the designated POC. Reporting requirements are identified in EP 75-1-3.

6.5 Mishap Reporting. All mishaps associated with execution of project activities shall be investigated and analyzed. Information reflected on the report forms is the basis used to investigate the accident, analyze the cause, and identify what corrective actions may be implemented to prevent similar occurrences.

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6.5.1 All mishaps shall be reported in accordance with USACE Supplement 1 to AR 385-40 and EM 385-1-1. Any mishap shall be reported on ENG Form 3394, Accident Investigation Report.

6.5.2 On FUDS, the contractor's UXO Safety Officer is responsible for mishap reporting. For contracts under the supervision of the district, mishaps will be reported to the district safety office. An information copy of the accident report will be forwarded to the MM CX. USACE district personnel will report through Command channels to the Headquarters, U.S. Army Corps of Engineers Safety and Occupational Health Office.

6.5.3 On active installations, the installation safety officer is responsible for reporting any explosive mishaps.

6.5.4 Incidents involving RCWM shall be reported in accordance with USACE Supplement 1 to AR 385-40. A site-specific POC will be identified and documented in accordance with the reporting requirements in paragraph 6.5.1.

6.6 Investigations. The U.S. Army Safety Center (USASC) maintains the prerogative to investigate Class A or Class B explosive mishaps (as defined in AR 385-40) on active installations. If USASC chooses to investigate, it is the lead agency. If USASC chooses not to investigate, the district is the lead agency.

7.0 Public Affairs

7.1 The contractor shall not publicly disclose any data generated or reviewed under this [contract] [delivery order]. The contractor shall refer all requests for information concerning site conditions to the local USACE district Public Affairs Office and send a copy of the request to the U.S. Army Engineering and Support Center, Huntsville. Reports and data generated under this [contract] [delivery order] are the property of the DOD and distribution to any other source by the contractor is prohibited unless authorized by the Contracting Officer.