

SCOPE OF WORK
for
MUNITIONS AND EXPLOSIVES OF CONCERN CLEARANCE
SITES 6596 AND 6603 AND FLOOD MITIGATION AREAS
MAKUA MILITARY RESERVATION
ISLAND OF OAHU, HAWAII

1.0 Location. This project shall consist of Munitions and Explosives of Concern (MEC) survey and clearance of two cultural resource sites, Site 6596 and 6603, as well as the recently flood-damaged interior roads and areas (henceforth, referred to as interior roads) inside the North and South Fire Break Roads located at the US Army Makua Military Reservation (MMR), Island of Oahu, Hawaii (Enclosure 1). Areas requiring MEC clearance include the archaeological sites (also referred to as cultural sites), including features within each site, existing and/or new roads and trails leading to each of the sites, and overlooks, or vantage points.

2.0 Authority.

- a. Section 106 of the National Historic Preservation Act of 1966, as amended;
- b. American Indian Religious Freedom Act (AIRFA); and
- c. Settlement Agreement and Stipulated Order, executed 4 October, 2001 (SASO).

3.0 Background and Scope of Work. The U.S Army Garrison, Hawaii, is mandated to provide access to cultural sites on MMR to Native Hawaiians in compliance with AIRFA and SASO. The purpose of this contract is to provide MEC clearance to allow access to two previously recorded archaeological sites at MMR, sites 6596 and 6603. These two sites have been assessed as candidates for cultural sites. MEC clearance (both surface and subsurface) to these 2 sites will allow for accessibility and human safety during cultural visits. The interior roads contained entirely within the North and South Fire Break Roads underwent surface erosion and damages from a recent storm and these areas need to be re-surveyed and cleared of MEC and MEC constituents. The U.S. Army has used MMR as a training range from the middle of the 1940's. Consequently, presence of MEC's on the range is inescapable, posing potential hazard to life and limb and safety issues for pedestrians in areas of MMR where MEC clearance has not been performed. Sites 6596 and 6603 are located out side the North Fire Break Road (Enclosures 2 and 3), in areas previously uncleared of MEC. The purpose of this task order is to provide MEC clearance survey to sites 6596 and 6603 and the interior roads to allow for pedestrian access. MEC clearance survey shall be conducted to identify MEC and constituents to a minimum depth of 12 inches (1 foot) below surface, expose any anomalies identified and perform appropriate MEC clearance effort. Clearance may go beyond the 1-foot depth for any MEC protruding subsurface below the one foot line. Areas for MEC clearance shall include roads and/or trails required to allow access to sites 6596 and 6603 and to vicinity of the sites necessary to provide vantage viewing of the sites. MEC clearance for the 2 sites and the interior roads shall include safe removal of all MEC munitions located and identified. The survey team shall minimally comply with Department of Defense Explosive Safety Board (DDESB) requirements for MEC clearance and, for sites 6596 and 6603, must include archaeologist(s) necessary to accompany MEC personnel to re-locate and identify the physical limits and feature(s) of Sites 6596 and 6603. It is very unlikely that MEC clearance of the interior roads will require archaeological

**SCOPE OF WORK for MUNITIONS AND EXPLOSIVES OF CONCERN CLEARANCE
SITES 6596 AND 6603 AND FLOOD MITIGATION AREAS, MAKUA MILITARY RESERVATION,
ISLAND OF OAHU, HAWAII**

support and accompaniment. The duration of the fieldwork is anticipated to be at most 6 weeks, depending on size of MEC personnel and accompanying archaeological team.

4.0 General. Contractor will provide MEC site safety and work plans for MEC clearance; pedestrian MEC location, identification, and clearance survey; pedestrian archaeological survey; and limited vegetation clearing. MEC clearance shall include debris removal and disposal. The services may include but are not limited to furnishing labor, transportation, equipment, material, supplies and supervision for archival research, site assessment, site characterization, terrestrial surface and subsurface surveys for MEC location and identification, archaeological survey, and GPS mapping and locating of MEC and archaeological sites and features. The Contractor shall also be required to conduct appropriate field surveys, site visits, interviews with knowledgeable persons, and prepare required safety and health plans, work plans, and related sub-plans. Other environmental support studies, if required, will be supplied by the US Army Garrison, Hawaii (USAG-HI).

5.0 General Work Tasks.

5.1 Coordinate with the Project Manager (PM) for project information.

5.2 Prepare a Site Safety and Health Plan (including Accident Prevention Plan) for all archaeological and MEC/HTRW activities.

5.3 Prepare a work plan and related sub-plans for all archaeological and MEC/HTRW activities.

5.4 Provide services for archaeological and MEC/ HTRW locations, identification, and assessment and MEC clearance.

5.5 Reporting.

6.0 Detailed Work Tasks.

6.1 Coordination with Project Manager (PM). The Contractor shall coordinate with the Project Manager (PM) to gather appropriate project information and references, scheduling, points of contact, site access, resolution of technical difficulties, conferences, and project status. A Technical Manager (TM) shall be identified for this task order. The PM shall be the specific point of contact for the task order. The TM shall be responsible for quality assurance and the technical portions of the task order.

6.2 Prepare Site Safety and Health Plan for MEC. The Contractor shall prepare a site safety and health plan (SSHP) that addresses field investigations and MEC clearance survey. No fieldwork shall be implemented without a site safety and health plan accepted by the Contracting Officer (CO), or the Contracting Officer's Representative (COR).

**SCOPE OF WORK for MUNITIONS AND EXPLOSIVES OF CONCERN CLEARANCE
SITES 6596 AND 6603 AND FLOOD MITIGATION AREAS, MAKUA MILITARY RESERVATION,
ISLAND OF OAHU, HAWAII**

6.3 Prepare Work Plan for MEC. The Contractor is required to prepare a work plan (WP) and related sub-plans that address the Contractor's method of accomplishing required services. The plan(s) shall identify MEC strategies, MEC identification surveys, and MEC location mapping. The work plan and related sub-plans shall be prepared in accordance with the guidance provided in the Data Item Descriptions (DIDs) for MEC clearance projects. No fieldwork shall be implemented without a work plan accepted by the CO or the COR. For this project, the work plan shall address the elements noted below, as applicable. Those elements that are not applicable shall be so noted:

- 6.3.1** EP 385-1-95, Basic Safety Concepts and Considerations for Munitions and Explosives of Concern (MEC) Operations dated 24 August 2005.
- 6.3.2** 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response dated 1 July 2003, shall apply to all MEC related actions at this site.
- 6.3.3** EM 385-1-1, Safety and Health Requirements Manual dated 15 November 2008.
- 6.3.4** DoD 4140.62 Management and Disposal of MPPEH dated 3 December 2004.
- 6.3.5** DoD Manual 4160.21.M Defense Demilitarization Manual.
- 6.3.6** DA PAM 385-64 Ammunition and Explosive Standards.
- 6.3.7** DoD 6055.9 Std. DOD Ammo and Explosive Safety Standards dated 5 October 2004.
- 6.3.8** TM 60A 1-1-31 EOD Surface Range Clearance General Info dated 19 December 1997.
- 6.3.9** Conventional Explosive Safety Submission for MEC Removal Action Supporting U.S. Army, Makua Military Reservation.
- 6.3.10** EP-75-1-2, Munitions and Explosives of Concern (MEC) Support during Hazardous, Toxic, and Radiological Waste (HTRW) and Construction Activities dated 1 August 2004.
- 6.3.11** EP 1110-1-18, Ordnance and Explosive Response, dated 24 Apr 00.
- 6.3.12** EM 1110-1-4009, Ordnance and Explosive Response, dated 15 Jun 07.

DID	Subject
MR 001	Work Plan
MR 005-03	Explosive Management Plan
MR 005-05	Geophysical Investigation Plan
MR 005-06	Accident Prevention Plan
MR 005-011	Quality Control Plan
MR 015.01	Accident/Incident Report
MR 030.01	Site Specific Removal Report
MR 085.01	Project Status Report
MR 080	Safety Exposure Report
OE-025.02	Personnel/Work Standards
MR 030	Site Specific Final Report
MR 100	Institutional Analysis and Institutional Control

**SCOPE OF WORK for MUNITIONS AND EXPLOSIVES OF CONCERN CLEARANCE
SITES 6596 AND 6603 AND FLOOD MITIGATION AREAS, MAKUA MILITARY RESERVATION,
ISLAND OF OAHU, HAWAII**

6.4 Provide Services for MEC Clearance and Archaeological Site Identification.

6.4.1 MEC Identification and Clearance. The Contractor will be expected to perform field investigations for MEC identification and clearance of the interior roads and cultural sites 6603 and 6596, including areas designated as potential path for access roads or trail to these sites, or feature(s) within each site, including vantage viewing points for the sites, and access roads to the vantage location(s). This work shall consist of surface and subsurface detection and identification of various types of MEC including but not limited to military munitions, unexploded ordnance, and explosive wastes; disposal of all MEC and MEC debris; geophysical surveys; placement of Siebert stakes at 5 foot intervals, or other USAG-HI approved demarcation to delineate cleared areas; GPS recordation and location mapping of cleared and excluded areas; and archival research to accomplish and complete the project. Width of existing roads or trails, which in some places may be overgrown with vegetation, shall also be surveyed to no more than 3 feet on either side of the road or trail. The interior roads shall be cleared to existing width. Vegetation clearing shall be required in some areas of the new and old trail and road building. Removal of any MEC will be undertaken in accordance with MMR Range Control procedures and manual. Contractor shall coordinate with POH, USAG-HI Cultural Resource Manager, and MMR Range Control to ensure protection and preservation of cultural site as well as ensure compliance with personnel safety issues in carrying out these activities. All NHPA Section 106/110 consultation and protection of cultural sites affected during this project will be performed by USAG-HI.

6.4.2 Perform Cleanup Action. The Contractor will be required to provide removal action for any MEC identified and located during the performance of the tasks specified in this contract. For the removal action, Contractor shall provide adequate qualified personnel to conduct the removal actions for the MEC. Work may include, but is not limited to: removal response for MEC found; removal of MEC/MEC Debris; disposal of MEC; and other techniques used to dispose or destroy MEC. In performing removal action, the Contractor shall adhere to established procedures and guidelines as presented in the work plan and subsidiary project plans of this task order as well as all applicable Federal, DoD, Army, State, or Local requirements. Removal actions may adversely impact the archaeological sites and this action shall require consultation, discussion, and strict adherence to protocol as established by the USAG-HI Cultural Resource Manager office and staff.

6.4.3 Contractor's Responsibilities. The Contractor shall use qualified personnel with appropriate expertise/discipline to conduct the MEC survey, clearance, and disposal as efficiently and economically as possible. Unless otherwise specified, the Contractor shall provide his/her transportation, lodging, and meals while conducting activities under this order.

6.5 Reporting. The Contractor shall prepare 2 sets of reports, one for the MEC clearance and the other for the archaeological portion of the field survey, to meet the following conditions and requirements. Reports shall be delivered in the quantity and by the date indicated in paragraphs 9.1 and 9.2. All reports and drafts shall be submitted to the COR at the U.S. Army

**SCOPE OF WORK for MUNITIONS AND EXPLOSIVES OF CONCERN CLEARANCE
SITES 6596 AND 6603 AND FLOOD MITIGATION AREAS, MAKUA MILITARY RESERVATION,
ISLAND OF OAHU, HAWAII**

Corps of Engineers, Honolulu District, Hawaii, (ATTN: CEPOH-PP-E), Building 230, Fort Shafter, Hawaii 96858-5440. Contractor shall submit written progress reports beginning 7 calendar days from the date of start of fieldwork, and submitted every week thereafter at the end of a work week. These reports shall follow 2 streams, one for MEC and the other for archaeological sites, and may be in a standardized format designed specifically for such reporting. These reports shall include, at a minimum:

6.5.1 Description of the work performed and quantitative statement of overall progress, including types of MEC/archaeological features or sites, and numbers identified, safety issues/concerns regarding the MEC/ archaeological features or sites, and percentage of work accomplished on each task.

6.5.2 Description of current problems that may impede performance and suggested corrective action.

6.5.3 A final report shall be submitted at the end of the project. The final report shall document the total number of MEC identified and removed and brief descriptions, as appropriate, of the archaeological and cultural sites identified and located. The report shall also include all information and data, issues and concerns, and all details and recommendations that will assist the Army in formulating management plans for both MEC and the cultural sites, including human safety and removal and disposal of MEC in future MEC clearance projects on MMR.

7.0 Period of Contract and Schedule. The contract shall be for a period of six (6) months from award. The following schedule and project milestones will apply.

Project Coordination Milestone	Calendar Days After Award	Est. % Work Completed	Action
Submittal of SSHP and WP	15	5	Plan/Letter to POH
Start of Fieldwork	30	15	Phone / E-mail
End of Fieldwork	120	65	Letter
Submit Draft Report	150	80	Report & Letter
Submit Final Report	180	100	Report & Letter

8.0 Equipment. Unless other wise specified, all equipment, materials, transportation, lodging, meals, and supplies shall be provided by the Contractor. Any non-perishable items purchased for the performance of this contract shall become the property of the U.S. Government.

**SCOPE OF WORK for MUNITIONS AND EXPLOSIVES OF CONCERN CLEARANCE
SITES 6596 AND 6603 AND FLOOD MITIGATION AREAS, MAKUA MILITARY RESERVATION,
ISLAND OF OAHU, HAWAII**

9.0 Report Format.

9.1 Draft Documents. Ten (10) copies shall be submitted to USACE to allow for review of format, content, and compliance with applicable contract provisions. Draft report comments will be returned to the Contractor for report finalization. Photographs included in the draft report need only be good quality photocopies.

9.2 Final Documents. Ten (10) bound, hard copies plus two (2) unbound hard copies, and five (5) digital copies of the final document (in .doc and .pdf format) shall be submitted to USACE. The final reports shall be in 8-1/2" x 11" page size. Stapling of the report will not be acceptable. Text and line drawing shall be clean, clear, and easily reproducible. All maps shall contain a scale in feet and meters. One unbound copy shall include original photographs. Laser or color reproduction of photographs is permissible. Two sets of all photos taken will be submitted on CD and two copies of the photolog will be submitted in hard copy. Two copies each of all archaeological field notes and of site forms will be submitted digitally and in hard copy (total of four submissions). The final reports will be rejected if the report does not conform to specifications, or if there are editorial or typographical errors, production flaws, format discrepancies or any other problem that cause them to be less than a professional manuscript. Any additional costs to review the report or bring it to acceptable quality will be at the Contractor's expense.

10.0 Meeting and Coordination. Conferences shall be held, as necessary, between the Contractor and the CO and COR to resolve contractual difficulties, and to brief the CO and COR of significant hazardous problems.

11.0 Special Conditions.

11.1 Professional Personnel. The Contractor shall employ, either directly or through subcontract, personnel adequate in numbers, skill, and qualifications to accomplish the work required in conformance with this SOW and schedule. Any changes to the personnel listed in the proposal shall be submitted in writing for approval by the CO and/or COR. The Contractor shall provide documents & certification validating the Contractor's personnel qualifications.

11.1.1 Principal Investigator/Project Manager/SUXOS. The professional aspects of the entire program shall be under the direct control of an MEC Principal Investigator/and/or Project Manager (PI/PM) and an archaeological PI/PM. The MEC Senior UXO Supervisor (SUXSO) shall have at least ten years experience in conducting surveys on ordnance contaminated property and shall have graduated from, at a minimum, the Surface Explosive Ordnance Disposal School in Indian Head, Maryland or the U.S. Army Bomb Disposal School at Aberdeen Proving Ground, Maryland. The SUXOS must have current blaster's licenses acceptable in the State of Hawaii. The archaeological PI/PM shall comply with Secretary of the Interior's standards for an archaeological PI. The MEC PM or SUXSO and the archaeological

**SCOPE OF WORK for MUNITIONS AND EXPLOSIVES OF CONCERN CLEARANCE
SITES 6596 AND 6603 AND FLOOD MITIGATION AREAS, MAKUA MILITARY RESERVATION,
ISLAND OF OAHU, HAWAII**

PI/Field Director shall be responsible for all data, studies, analyses, and reports undertaken in their respective areas of expertise.

11.1.2 Key Personnel. The key personnel shall include the Project Manager, PI, any subcontractors, supervisors, consultants, and staff. It will assume that the key personnel be continuously responsible for the conduct of and for close involvement with the technical efforts identified in this SOW. The key technical personnel identified in the technical proposal are considered essential to the successful completion of the work being performed by the Contractor under this contract. If, during the performance of this contract, the Contractor must utilize key personnel or specialized personnel other than those named in the technical proposal, such substitution shall not be made without prior written approval of the CO or COR.

11.1.3 Technical and Support Personnel. The Contractor shall ensure that adequate technical and support personnel are available and that all technical and support personnel are competent and experienced in the work proposed. The TEC III/TEC II personnel must have at least 2 current blaster's licenses among them that are acceptable in the State of Hawaii. The Contractor shall provide a list of key personnel for approval.

11.2 Supervision. During the course of the contract, the following situations shall require prior written approval by the CO or COR.

11.2.1 Any key personnel changes.

11.2.2 Reduction, at any time average over a monthly span, in the PI's ability to devote a minimum of 25 percent of his/her time to the project.

11.3 Subcontract. The Contractor shall not subcontract any portion of this contract to a party other than those identified in proposals submitted in response to this RFP without written authorization from the CO or COR.

11.4 Safety.

11.4.1 The Contractor shall at all times conduct operations in a safe manner and in accordance with the Corps of Engineers Safety and Health Requirements Manual (EM 385-1-1, latest Revision dated 15 November 2008). In addition, the Contractor shall follow the Standard Operating Procedures for ordnance safety as established by the U.S. Army Corps of Engineers, Huntsville Engineering and Support Center. Copies of both will be provided to the Contractor at time of contract award.

11.4.2 Contractor shall also ensure that all personal protective equipment (PPE) for all portions of the field work is in compliance with Army and DoD rules and regulations for military training ranges. PPE for this project may include flak jacket for upper body protection and kevlar helmet, in compliance with Schofield Barracks Range Control policy.

**SCOPE OF WORK for MUNITIONS AND EXPLOSIVES OF CONCERN CLEARANCE
SITES 6596 AND 6603 AND FLOOD MITIGATION AREAS, MAKUA MILITARY RESERVATION,
ISLAND OF OAHU, HAWAII**

11.4.3 Contractor shall submit, at the end of each month, to POH PM project work hours on POD Form 37-R in compliance with EM 385-1-1 (15 Nov 2008) Paragraph 01.D.05c. Work hours include all hours on the project where an employee is in an on-duty pay status. **11.5 Other Requirements.**

11.5.1 During the progress of the work, the Contractor may be called upon by the Government to produce preliminary study data and information that is deemed necessary to satisfy Government needs. The Contractor shall provide data from this project to the extent that such requests do not detract from the contractual objectives of the study.

11.5.2 The Contractor shall be prepared to support and participate in various public forums as specified by the Government. This may include but not be limited to, assistance in compiling presentation data and expert technical testimony during public information meetings, Restoration Advisory Board meetings, inter-agency coordination, and other activities as defined by the Government.

11.5.3 The Contractor shall be responsible for accuracy and validity of the data. In the event of controversy or court challenge of the report(s), the PI(s) may be placed under contract by the Government to testify on behalf of the Government in support of report(s) findings.

11.5.4 The Contractor shall be expected to properly, appropriately, adequately, safely, and thoroughly investigate all areas and sources of information pertinent to the objective analysis of the work tasks specified in this and each task order SOW. The report and execution of investigation shall be done in an objective and dispassionate manner delineating fact and opinion. Interpretations shall be presented as arguments clearly identifying assumptions, premises, biases, and logic. Hypotheses shall be identified as such. All technical terms used in the report shall be defined. Concise, but complete description detailing the data, methods, conclusions, and recommendations shall be based on professional judgments of recognized experts in their field of research.

11.6 Coordination. Contractor shall have to coordinate closely with MMR Range Control to establish times to conduct field investigations.

12.0 Release of Information. The information developed, gathered, and assembled in fulfillment of the contract required as defined in or related to the SOW shall not be released by the Contractor, his/her consultants, his/her subcontractors or their associates without prior coordination and approval by the Contracting Officer or his/her designee.

13.0 Use of Information. The information developed, gathered, and assembled in fulfillment of the contract requirements as defined or related to the SOW will become the complete property of the Government and shall, therefore, not be used by the Contractor for other purposes at any time without the written consent of the Contracting Officer or his/her designee.

**SCOPE OF WORK for MUNITIONS AND EXPLOSIVES OF CONCERN CLEARANCE
SITES 6596 AND 6603 AND FLOOD MITIGATION AREAS, MAKUA MILITARY RESERVATION,
ISLAND OF OAHU, HAWAII**

14.0 Contractor Release. The Contractor is required to submit his/her written and signed "Release of Claims" form to the Contracting Officer with his/her final bill for service rendered under the terms of this contract.

15.0 Contract Execution and Reports. The Contractor is expected to develop an objective final product for fulfillment of the terms of the contract. The Government expects that the Contractor shall properly, appropriately, and adequately include and thoroughly investigate all areas and sources of information pertinent to the objective analyses of the areas specified in the SOW.

16.0 GPS and GIS Requirements. This contract calls for the GPS recordation of areas cleared of MEC, and sections that could not be cleared due to anticipated impacts to cultural sites. Following are the requirements for geospatial data collection:

16.1 GPS (Global Positioning System)

16.1.1 All geospatial data will have GPS points taken with sub-meter accuracy.

16.1.2 The GPS points will be differentially corrected, and contain attribute detail on time and date of collection, as well as Positional Dilution of Precision (PDOP).

16.2 GIS (Geographic Information System)

16.2.1 All GIS project files (.mxd) will be viewable in ESRI software. Deliverables in MicroStation, MapInfo, GeoMedia, AutoCAD, or any other geospatial software format will not be accepted.

16.2.2 All GIS data will be delivered and viewable in ESRI format.

16.2.2.1 Interim data may be delivered in either shapefile (.shp) or personal geodatabase (Version 9) feature class format (.mdb).

16.2.2.2 Final data will be delivered in personal geodatabase (Version 9) feature class format (.mdb).

16.3 All final GIS data will be compliant with the most current Spatial Data Standards per the Interim Policy established by the U.S Army Assistant Chief of Staff for Installation Management dated 16 October 2001. If needed, the Spatial Data Standards (SDS) are available through the U.S. Army Corps of Engineers, Honolulu District.

16.4 All interim and final GIS data will include Federal Geographic Data Committee (FGDC) compliant metadata per Executive Order 12906 (April, 1994), as amended by Executive Order 13286 (March, 2003).

**SCOPE OF WORK for MUNITIONS AND EXPLOSIVES OF CONCERN CLEARANCE
SITES 6596 AND 6603 AND FLOOD MITIGATION AREAS, MAKUA MILITARY RESERVATION,
ISLAND OF OAHU, HAWAII**

16.4.1 FGDC-compliant metadata will be created and stored in either .xml or .met format.

16.4.2 Although not a FGDC requirement, the final metadata will include GPS base station and receiver parameters (base station location and frequency of signal, base station and receiver type used and antenna height).

16.4.3 GPS base station and receiver parameters will be stored in the FGDC-compliant metadata file under "Process Description."

16.5 Interim and final GIS data will be delivered in Universal Transverse Mercator (UTM) projection (in meters): Zone 4N. The datum will be North American Datum of 1983 (NAD83).

16.6 Final GIS Deliverables:

16.6.1 The Contractor shall provide two (2) final copies of all GIS data.

16.6.2 All geospatial deliverables (personal geodatabase feature classes) will be presented in digital format via Compact Disc (CD) medium.

**GOVERNMENT ESTIMATE for MEC Clearance of 2 Cultural Sites 6603 and 6593, and
Flood Damaged Areas, U.S. Army Makua Military Reservation, Oahu Island, Hawaii**

Estimated Total: \$288,400.00