Background on the Statement of Work Template for Quality Assessment at a Munitions Response Site

The following terms and definitions will be used in this document:

- **Quality Assurance** – Quality Assurance is the overall program that ensures that the final project results meet the project objectives. i.e Quality Assurance ensures that the right equipment is selected to measure for the MEC expected at the site and site conditions.
- **Quality Control** – Quality Control refers to the measures that are included in each project to verify that the project objectives are being met. i.e Quality Control ensures that the equipment is working properly, that completed work has met the data objective.
- **Quality Assessment** - Quality Assessment is a challenge to the effectiveness of the QA and QC programs. Quality Assessment is a means of verifying the quality of the results generated by the project. i.e. Quality Assessment will verify that the QC equipment tests are accurate by observation or repeat testing. Quality Assessment will ensure that geophysical data collected is repeatable by testing a portion of the area.

This Statement of Work Template is intended to assist the Munitions Response Program[1] (MRP) Remedial Project Manager (RPM) in developing the Scope of Work (SOW) which describes contract requirements for the Quality Assessment function at a Munitions Response Site (MRS). The requirement for quality programs comes from OPNAVINST 8020.15A/MCO 8020.13A "Explosives Safety Review, Oversight, and Verification of Munitions Responses" which tasks NAVFAC to develop quality assessment/quality control procedures for all munitions response actions.

The purpose of the MR Quality Assessment function is to help the Navy achieve its goal of ensuring an auditable, objective record is maintained for all aspects of MR activities conducted under its cognizance. This Quality Assessment program covers munitions response actions for conventional Material Potentially Presenting an Explosive Hazard and/or Munitions and Explosives of Concern (MPPEH/MEC) only. This SOW template does not address QA of Munitions Constituents (MC) sampling.

MRP Quality Assessment addresses explosives safety at a Munitions Response Site (MRS) and does not include chemical constituent release into the environment. Quality Assurance for munitions constituent chemical contamination is addressed under the Navy's Installation Restoration Program Quality Assurance program.

A Quality Assurance or Assessment program shall be independent of the contractor or agency executing the response action and is intended to objectively verify the adequacy of the contractor's Quality Control (QC) and the contractor's response actions. Quality Assurance or Assessment is ultimately the responsibility of the Navy MRP RPM. Quality Assurance and

[1] While the term "Munitions Response Program" and it's acronym "MRP" are used extensively throughout this document, the QA requirement is also applicable to munitions response actions that are outside the MRP, e.g., those taking place as part of a MILCON project.

Quality Assessment begin at project scoping with the proper technical requirements and continues through developing appropriate work plans, QC plans, and Explosives Safety Submissions (ESSs) to address explosives safety requirements. Quality Assurance is performed throughout all response phases and concludes with site closeout. A Quality Assurance Project Plan (QAPP) developed in conjunction with site work plans defines the Quality Assurance objectives. The DoD, along with other Federal Agencies has mandated the use of the Uniform Federal Policy (UFP)-QAPP. A sample MEC UFP-QAPP and an UFP-QAPP template are available on the MR portal, www.ert2.org\t2mrportal.

In the QC program, the contractor executing the response action maintains their own surveillance, oversight, and documentation of the project in order to verify the adequacy of the response action in meeting contractual requirements as defined in work plan, ESS, and other defining documents. Quality Assurance and Quality Assessment are performed by the Government to verify the contractor QC process and verify measurable components of the work. Quality Assessment builds confidence in the end results of the project. Quality Assurance, QC, and Quality Assessment programs are particularly valuable tools in building confidence with regulatory agencies and the public that hazards from MPPEH/MEC are being abated and work is being performed to a high standard. Quality Assessment is just one element of a Quality Assurance Program .

Quality Assessment is performed in the Installation Restoration Program on laboratories that receive field samples for chemical constituent analysis. A team visits the laboratory and assesses if the laboratory is complying with applicable requirements, and is technically capable of successfully performing the specified types of analytical testing. The team also assesses if the laboratory's quality assurance program and systems are being effectively implemented and have systematic controls and procedures necessary to ensure continued acceptable performance.

In the MRP, Quality Assessment is performed on the contractor performing the munitions response action. A team visits the project site to assess whether the contractor is complying with applicable requirements, and is technically capable of successfully performing the specified types of munitions response actions. The team also assesses if the contractor QC program is being effectively implemented and documented and verifies that the systematic controls and procedures necessary to ensure continued acceptable performance of the munitions response action are in place. Examples of Quality Control and Quality Assessment for various projects is presented in the table below.

The RPM has the choice of having the Quality Assessment function performed by a third-party contractor or by using available Navy resources, i.e., or the Naval Explosive Ordnance Disposal Technology Division (NAVEODTECHDIV) or some other Navy explosives safety experts. The POC for NAVEODTECHDIV is Tom Douglas at 301-744-5703.

Project example	**What QC may do…**	**What QA may do…**
General Applies to all MEC/MPPEH sites.	• Reviews all work daily for WP, ESS and NOSSA compliance • Verify all training documentation is accurate and in the files • Checks some percentage of MEC/MPPEH and MDAS determinations and ensures	• Review ESS and WP for consistency • Oversee work for WP and ESS consistency • Review training documentation • Review NOSSA checklist • Review documentation of

	documentation is complete • Document all QC measures and corrective actions taken daily.	MEC/MPPEH and MDAS • Examine 10% of MDAS to verify • Document all observations and checks on QC.
Surface sweep	• Checks some percentage of the area after sweep to verify clearance. Typically 10-20%	• Oversees QC or checks some percentage of QC cleared area.
Mag, Flag and Dig	• Verifies that equipment is working for the MPPEH expected at the site. • Makes sure equipment checks are done daily • Verifies that the accurate location of flagged items is documented	• Verifies equipment check process and QC. • Observes Mag, Flag and Dig process for compliance with ESS and WP • Goes over a portion (10-20%) of the area cleared by QC to confirm no anomalies were left.
Geophysical survey of an area	• Plant blind seeds that should be detected in the survey area and documents their detection. Plant approximately one seed per acre or one per decision unit. • Review the daily equipment checks.	• Plant blind seeds and document their detection. Approx. 10% of the QC seeds. • Oversee the daily equipment checks and review records.
Anomaly excavation based on geophysical survey	• Verify accurate reacquisition of geophysical anomaly locations. • Checks a percentage of cleared anomaly digs to verify work was done completely.	• Check some percentage of reaquired anomalies. • Goes over a portion (10-20%) of the anomalies cleared by QC to confirm no anomalies were left.
Soil excavation and screening for MEC	• Plant blind seeds in the soil to be excavated and track through the screening process to ensure it comes out in expected location. Typical number of seeds should have at least one found per day. • Verify and document that all QC seeds were found. Correct	• Plant a seed in the soil being excavated or screened and document where it gets screened out.. • Examine a percentage of the screened soil to verify screening criteria are met. • Verify that all QC seeds were found.

Three-Phase Control System

In understanding the role of Quality Assessment for a project it's important to understand the concept of three phases of control which is a key component for Quality Assurance, Control and Assessment. The three phases of control apply to each Definable Feature of Work.

The primary purpose of the Three-Phase Control System is to require the contractor to plan and schedule the work to ensure that they are prepared to start each new definable feature of work for an MR project. When Three-Phase Control System is performed as outlined in the specifications, success in completing the work to comply with requirements of the contract is

enhanced. The three phases of control are the core of the Quality Management System and are composed of preparatory, initial, and follow-up phases.

Preparatory Phase: This phase shall be performed prior to beginning work on each definable feature of work. It typically consists of a review of contract plans, checking to make sure all equipment has been tested and inspection points have been identified, and all preliminary work has been completed. For a MR project, identified inspection points might be detection of blind seeds or an agreed upon percent resurvey of each grid by the contractor's QC personnel.

Initial Phase: This phase is accomplished at the beginning of a definable feature of work. The Initial Phase will verify that control for the work developed for the project is implemented and the work is performed to the level of agreed to. The Initial Phase typically checks initial work performed and verifies the adequacy of controls to ensure full contract and data quality compliance. For a MR project this might include making sure all initial vegetation removal work meets the required specification (remove all vegetation less than 6 inches in diameter, etc) or for surface removal that all initial work to remove metal over a certain size meets the required specification.

Follow-up Phase: This phase consists of daily checks performed to assure continuing compliance with contract requirements, including safety and control testing, until completion of the particular feature of work. For an MR project this could include making sure the crews daily run the instrument verification strip to check equipment performance or that a resurvey of 10% of an area collects data that is a repeat of data collected by the work team. These checks are a matter of record in the contractors QC plan and will serve as a basis for defining the government's quality assessment.

Purpose and Scope of the NAVFAC MRP Quality Assessment

In order to satisfy the Chief of Naval Operations and/or Commandant of the Marine Corps (CNO/CMC) requirement, an MRP Quality Assessment program must be implemented for managing, assessing, communicating, controlling, and applying sampling and testing techniques at MRP projects.

The objectives of MRP Quality Assessment are to:

- Review and make appropriate recommendations to the contractor's written munitions response-related work plans, Standard Operating Procedures (SOPs), QC Project Plans, ESS, and other documents, as required by the contractor's SOW in advance of execution;
- Evaluate and document the quality of the contractor's munitions response actions;
- Conduct in-process Quality Assessment and provide oversight of contractor activities by reviewing personnel qualifications and ensuring consistency between the work plans, SOPs, and the approved ESS;
- Provide a report of findings concerning the adequacy of the contractor munitions response actions, including corrective actions when necessary; and
- Provide supporting documentation for final Naval Ordnance Safety and Security Activity (NOSSA) verification of all response actions taken, as required by OPNAVINST 8020.15(series)/MCO 8020.13(series).

Developing a Quality Assessment Surveillance Plan

The above objectives are to be documented in a project-specific Quality Assessment Surveillance Plan (QASP). It describes Quality Assessment procedures to be implemented for the specific munitions response project and should be developed to assess the planned field work. Quality Assessment activities shall be defined, planned, executed, and documented in accordance with the project-specific QASP. The plan can be developed using Navy resources or a third-party contractor. The QASP is usually developed and based the contractor's QC plan, the approved ESS, NOSSAINST 8020.15 (series) audit checklist, and the workplan for the project. This ensures that the level of effort in the Quality Assessment is commensurate with the level of effort for the project.

Automated Quality Assessment Program System (AQAPS)

NAVSEA and NAVFAC developed the Automated Quality Assessment Program System (AQAPS) tool to support Quality Assessment of MRP projects. RPMs can use AQAPS as a tool to assess the contractor's munitions response actions and ensure contractual requirements are met. The AQAPS is a database where Quality Assessment findings and observations are documented and stored. RPMs can use AQAPS to develop a series of questions to ask during the performance of Munitions Response project and to help develop content for the QASP.

Also embedded in the AQAPS software is the Quality Assessment Manual (QAM) dated August 30, 2001. The QAM provides step-by-step detailed instructions for conducting a successful Quality Assessment operation. The QAM consists of the Manual (Volume I), Administrative Standard Operating Procedures (Volume II), Forms and Templates (Volume III), and Operational Standard Operating Procedures (Volume IV). AQAPS is available on the NAVFAC MR Portal at www.ert2.org.

Navy MRP Quality Assessment Surveillance Team

The third-party contractor or Navy personnel comprise the Quality Assessment Surveillance Team. The Quality Assessment Surveillance Team supports the RPM by assessing the effectiveness of the contractor's munitions response activities. The Quality Assessment Surveillance Team is considered "essential personnel", as defined by NOSSAINST 8020.15 (series), and as such should be allowed into all areas of the project site as they conduct their field observations. A typical Navy MRP Quality Assessment Surveillance Team consists of a Quality Assurance/Assessment Manager; UXO Technician(s); and Geophysicist Technician(s) when applicable. You can refine your Quality Assessment Surveillance Team based on your project needs. In addition to the carrying out the objectives of the MRP Quality Assessment, the Navy MRP Quality Assessment Surveillance Team can provide support in:

- Reviewing NOSSAINST 8020.15C Audit Checklist and/or AQAPS to identify specific areas to focus on in the QASP for the specific munitions response project;
- Developing the QASP;
- Conduct field Quality Assessment to include placing blind seeds in the survey area or in a screening plant, developing a QA sampling plan for geophysical data collection, conducting intrusive investigation of anomalies, overseeing QC activities, verifying grids are cleared of anomalies;
- Verifying material potentially presenting an explosive hazard (MPPEH) that has been assessed and documented as safe per NAVSEA OP 5; and
- Documenting all QA work and any necessary corrections.

Scheduling and where the Quality Assessment fits into the project workflow

In order to perform the quality assessment, schedules between the MEC contractor and the third party quality assessment contractor need to considered. The basic process of how the MEC contractor and the third party QA contractor interact on a project is as follows:

1. MEC contractor awarded contract
2. MEC contractor submits schedule with time table for deliverables and specifies the number of field days.
3. Third party QA contactor given schedule with PWS for proposal and award.
4. MEC contractor submits scoping worksheets and scoping meeting (On complex projects the third party QA maybe involved in the scoping as well)
5. MEC contractor submits Draft WP/MEC QAPP. Third party QA contractor reviews and submits QA surveillance planning documents
6. MEC contractor submits Final WP/QAPP. Third party QA contractor submits final QA surveillance planning documents. Field work date set. Mobilize for work (emplace QA seeds if part of project).
7. Third party QA contractor mobilizes for quality assessment work once the MEC contractor has implemented field practices.
8. Field work complete.
9. Third party QA contactor submits Draft QA Surveillance Report
10. MEC contractor submits report deliverable. QA contractor reviews document.
11. Third party QA contractor submits final QA Surveillance Report

This process can change based upon the type of fieldwork being performed and whether any QA blind seeds are emplaced by the third party QA contractor. It is recommended to check the quality of the MEC contractor early in the fieldwork to identify and correct any deficiencies early in the process.

Statement of Work (SOW) Template

for

Quality Assessment

at a

Munitions Response Site (MRS)

FOR OFFICIAL DON USE ONLY **[INSERT DATE]**

Department of the Navy

NAVFAC [fill in the appropriate FEC]

Statement of Work (SOW)

Contract Number:

The statement of work shall be as outlined below and as described elsewhere in the basic contract number [insert].

QUALITY ASSESSMENT

MUNITIONS RESPONSE PROGRAM (MRP)

[Insert Installation/Site Name]

RPM Notes:

Prior to finalizing the SOW, remember to delete all notes. Text highlighted in yellow indicates where you need to provide information specific to your project.

Reference information is available at the Munitions Response Workgroup web portal at www.ert2.org

Clearly stated objectives should be developed for all MRP Projects (e.g. Preliminary Assessment/Site Inspections (PA/SI), Remedial Investigation/Feasibility Study (RI/FS), Removal or Remedial Actions, etc.). These objectives should be developed by the project manager with appropriate input from regulatory agencies and stakeholders. Once these objectives are defined, the contractor performing the work must develop detailed work plans describing the procedures and processes to be used during the project to meet these objectives. These work plans should also include a detailed project QC Plan (QCP) to provide adequate documentation that the processes and procedures described in the work plan were followed and the objectives of the project have been met. The QCP is a necessary part of any MRP project and forms the basis for development of a Quality Assessment program. The Quality Assessment program is intended to be independent of the contractor's QCP and is intended as a third party assessment of the work performed by the contractor. The Quality Assessment program should be sufficiently robust to allow verification of completion of all critical elements of the work. With the development of the MPPEH/MEC UFP-QAPP, much of the detail of the QCP is now included in the QAPP.

The Quality Assessment process ensures that the contractor is performing the QC as outlined in the QCP and the Quality Assurance Project Plan (QAPP) and ensures project goals will be met. RPMs should be aware that NOSSAINST 8020.15(series) describes a verification process and includes a self assessment checklist that looks for a robust Quality Assessment program.

The self-assessment checklist is intended to be used by project managers to evaluate their unexploded ordnance (UXO) contractor compliance with applicable environmental, safety, and occupational health requirements related to the management of munitions and explosives of concern (MEC) and/or material potentially presenting an explosive hazard (MPPEH). An example of some of the questions in the checklist include:

- ***Has the UXO contactor developed standard operating procedures (SOPs) to address all explosive operations being conducted?***
- ***Are multiple collection points separated by at least K11 based on the total net explosive weight of the MEC and/or MPPEH items in each collection point?***
- ***Are all structures or open areas used to store MPPEH site approved?***

These are just a few of the questions contained in the self assessment audit checklist. The RPM should review the entire list in NOSSAINST 8020.15(series) to determine which ones are appropriate for their site.

While not subject to formal regulatory review, the Government Quality Assessment process is a valuable tool to address regulator's concerns and should be communicated and coordinated with relevant regulatory agencies. Typical aspects of Quality Assessment include blind seeding of MPPEH/MEC surrogates in the survey area, sampling a representative set of grids cleared by the contractor to confirm the findings, and reviewing documents to ensure consistency between work plans and field applications. The ultimate Quality Assessment requirements should be determined and budgeted by the RPM.

1.0 OBJECTIVE

The objective of this task order is to perform Quality Assessment of the munitions response contractor(s) conducting Munitions and Explosives of Concern (MPPEH/MEC) investigations and response actions (removal or remediation) at Munitions Response Site(s) (MRS) [insert the site specific identifier] at [insert installation, City, State].

The purpose of this Quality Assessment is to provide the Navy RPM with processes for managing, assessing, communicating, controlling, sampling and acceptance testing activities and techniques, and to facilitate these processes. These activities and techniques, in combination with the objective data and the use of the Automated Quality Assessment Program System (AQAPS) tool, are intended to assess the contractor's MPPEH/MEC investigation/removal efforts and provide the Navy RPM a high degree of confidence that the work meets stated requirements. The Navy RPM will use this program to:

- Verify that approved Standard Operating Procedures (SOPs) for geophysical surveys, data processing and management, conducting intrusive investigations, etc. are followed during the execution of MRP projects
- Ensure project quality objectives (PQOs) identified in project planning documents (e.g. Remedial Investigation/Feasibility Study work plans, Remedial Action Work Plans, etc.) are attained by the contractor for the MRP project and that supporting documentation exists.

- Obtain objective evidence about the effectiveness of MPPEH/MEC removal operations;
- Verify/validate or evaluate data gathered during the project to ensure it meets data quality parameters defined in the contractor's project QC Plan (QCP) and Quality Assurance Project Plan (QAPP);
- Assure that appropriately qualified personnel are collecting data necessary to support project objectives;
- Assure that an audit trail of data is collected, documented, and maintained; and
- Document and preserve the Quality Assessment data gathered during this project.

The remedial action will be performed in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Sections 104 and 121; Executive Order 12580; and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). [RPM to identify other regulatory drivers for this project.]

2.0 SCOPE

The scope of this Task Order is to conduct all work required to complete the Quality Assessment for the site/s. Details of this scope are further defined in Section 4. All work must be performed following applicable and appropriate Department of Navy (DON) guidance and policy for munitions response actions and consider all site documentation, reports and work performed to date.

RPM Note: It is in the interest of all parties to identify any QC or Quality Assessment issues as early as possible in the project. To that end, Quality Assessment efforts should be scheduled as early as possible in the project to allow any needed corrective actions to be taken and reduce the possibility of re-work of areas because of QC or Quality Assessment issues.

This Quality Assessment is to:

- Document and verify the quality of the contractor's MPPEH/MEC investigation/removal activities.
- Review the contractor's written MPPEH/MEC-related work plans, SOPs, the contractor's QCP, QAPP, and other documents, as required by the contractor's Statement of Work (SOW). Based upon this review, the Quality Assessment plan will ensure that the procedures and plans developed by the contractor are being followed and the objectives of the project are being met.
- Verify the contractor's MPPEH/MEC investigation/removal activities are in accordance with Navy requirements and requirements in the SOW and individual Task Orders (TOs).
- Conduct in-process Quality Assessment and oversight of contractor activities as early as possible during the project, to ensure the quality of the MPPEH/MEC investigation/removal results. Based on information obtained from these assessments, report any concerns related to quality of work to the project manager as appropriate and discuss corrective actions.
- Verify with documentation that the final response action for a given MRS was completed in accordance with the approved Explosives Safety Submission (ESS).
- Ensure that all field processes are consistent and repeatable. This includes geophysical data collection, anomaly reacquisition, field data logs, equipment checks, and all QC procedures.
- Document and analyze Quality Assessment findings.

- Ensure that any discrepancies or problems found through the Quality Assessment program are consistently reported and that corrective actions are documented and their implementation is confirmed.

RPM Note: The RPM is responsible for ensuring that the corrective actions identified in the Quality Assessment are implemented by the contractor. The Navy MRP Quality Assessment Surveillance Team serves as an advisor to the RPM.

3.0 SITE BACKGROUND

3.1 Location

[Describe the location of the site/s and provide a brief description of the terrain and vegetation, any existing buildings or infrastructure, photo(s), and any other information to help describe the general location and attributes for the area. Provide references (if available) to reports or other information that would be relevant to the level of effort required to complete tasks, such as geophysical surveys and intrusive investigation.

RPM Note: The RPM should be clear in these sections whether the site is a Munitions Response Area (MRA), MRS, or multiple MRSs. This general breakdown should have resulted from the PA/SI, and RI/FS phases and the contractor will need to understand the limits of the work. The Navy may only be interested in performing a quality assessment on a single MRS within an MRA that contains multiple sites. Make sure this is clearly stated in your SOW. Workplans for the site will often help define the limits of the work. The level of detail provided to the Quality Assessment Surveillance Team should be of the same level as provided to the contractor for the site.

3.2 History

[Provide a brief history of the site and the reasons, known or suspected, for the potential presence of MPPEH/MEC/MC. Add subsections if there are specific areas of known MPPEH/MEC/MC and describe the types of munitions and filler if known. Include information on the source of MPPEH/MEC/MC at each site (disposal, range, manufacturing, etc). Depending on the extent of information available concerning the site, it may be appropriate to reference existing reports or documents rather than providing a complete summary in the SOW].

3.3 Safety

The presence of MPPEH/MEC represents a safety hazard and is considered to constitute an imminent and substantial endangerment to personnel and the local population due to its explosive potential. All activities involving work in areas potentially containing MPPEH/MEC shall be conducted with approval from the Naval Ordnance Safety and Security Activity (NOSSA) (Marine Corps Systems Command (MARCORSYSCOM) for Marine Corps Sites) and in accordance with NAVSEA Ordnance Pamphlet (OP) 5, NOSSAINST 8020.15(series) (or equivalent MCO for Marine Corps sites), and all other DoN and DoD requirements regarding personnel, equipment, and procedures. The contractor will perform all work in accordance with the approved ESS. Non-intrusive work done at an MPPEH/MEC site, outside of an ESS, will require a determination that an ESS is not required per NOSSAINST 8020.15(series) (or equivalent MCO for Marine Corps sites).

RPM Note: OP 5, Vol. 1, Rev 7 and NOSSAINST 8020.15(series) are the two key documents that will govern explosives safety on Navy sites. The Marine Corps, through MARCORSYSCOM, normally uses NOSSAINST 8020.15(series) for Marine Corps sites.

Technical Paper (TP) 18 from DDESB provides the personnel qualifications and experience requirements for the contracted UXO personnel who will be performing the UXO work. Work that includes the intentional contact with MPPEH/MEC will require an ESS through NOSSA/MARCORSYSCOM. The ESS includes an explosives safety site approval. Lead times for NOSSA/MARCORSYSCOM review and approval of these submittals must be considered in scheduling any munitions response action or work on a MRS. Advance notification to NOSSA/MARCORSYSCOM concerning these submissions is encouraged to expedite reviews and revision necessary prior to approval. The RPM should work closely with the MRP Workgroup for advice on MRP projects. NOSSA N53's phone number is 301-744-4450. MARCORSYSCOM PM Ammo's phone number is 703-432-4824. A discussion of the requirements for an ESS is provided in sections covering intrusive work.

3.4 Chemical Warfare Material (CWM)

The site is not suspected to contain Chemical Warfare Material (CWM). However, if suspect CWM is encountered during any phase of site activities, the contractor shall immediately stop work, withdraw upwind from the work area, secure the site and contact the Navy RPM. The contractor shall maintain site security until written direction is provided by the Navy regarding the procedure to be followed for performing further RI/FS work at the site. The RPM will coordinate with NOSSA/MARCORSYSCOM.

RPM Note: It is assumed the CWM is not expected to be encountered at most MRP sites and that this disclaimer is appropriate. The level of planning and protective measures required for projects that may result in encounters with CWM is significantly greater than projects without CWM. If you have a site with suspected CWM you should contact NOSSA N53 at 301-744-4450 (MARCORSYSCOM PM Ammo for Marine Corps sites at 703-432-8782). This Quality Assessment SOW is for conventional MPPEH/MEC removal projects only. It also does not include the additional requirements necessary to manage nuclear, biological, and chemical (NBC) weapons. Also excluded are any special handling or disposal considerations for depleted uranium penetrators.

3.5 Sites with Potential MPPEH/MEC/MC

3.5.1 Site 1

[Site 1, Former (OB/OD, Bombing, Firing, Small Arms, etc.) Range, comprises XYZ acres and is located in the (where) portion of the MRA. It was used for (destruction of military munitions including small arms, pyrotechnics, white phosphorus (WP), rockets, grenades and artillery ammunition, bombing practice, etc.) for X years. Describe the circumstances surrounding the MPPEH/MEC/MC activities in sufficient detail so that bidders will understand site circumstances. According to the PA/SI, RI/FS, historical records review, etc., the following MPPEH/MEC/MC are associated with this site:

- Small Arms
- Pyrotechnics
- Everything else in the inventory

[Provide a description of the property, for example: The property is (hilly, relatively flat, mountainous, etc.) with (dense, sparse, etc.) vegetation. A creek runs through the property from SE to NW and the land on either side of the creek for approximately 100 feet is very wet and

cannot be traversed by vehicle, etc. Include a description of any manmade infrastructure that is on the property.]

3.5.2 Site 2

[Same information for each of multiple sites, if multiple sites are part of the quality assessment program]

RPM Note: The purpose for the site descriptions is to provide the contractor with as clear a picture of the property as possible. A description of the MPPEH/MEC activities is essential so that they can evaluate the level of effort required to perform the Quality Assessment.

RPM Note: The RPM is encouraged to provide references to documents and information that may provide a more detailed account of site conditions and history than can be provided in the SOW site description. In addition, a scoping meeting should be with the contractor prior to their development of a proposal to allow the contractor to obtain all necessary data for development of the proposal. In the event that data necessary to accurately estimate the level of effort to perform the Quality Assessment is not available (e.g., number of acres to assess for the site) the RPM and contractor should agree to the assumptions that will be used in development of the proposal.

QUALITY ASSESSMENT DOCUMENTS AND FIELD WORK

RPM Notes:

When developing QC and Quality Assessment plans it is important to keep in mind that the objective of these plans and their execution is to ensure that agreed upon standards of performance for work conducted on the project have been met. The approaches used for verifying this should be consistent with the approach used to conduct the work to avoid setting inconsistent standards for production, QC, and Quality Assessment (e.g. similar MPPEH/MEC detection systems should be used for production, QC, and Quality Assessment phases of the project). Production refers to the initial field effort goal that the QC, Quality Assurance, and Quality Assessment are supporting. In addition, QC and Quality Assessment processes are best scheduled as early in the field work phase of the project, and in parallel with production phases of project work. Quality Assessment should not be scheduled after completion of production work. This will allow corrections to be made during the production processes, if necessary, and avoid the need for rework of major portions of work that were completed prior to QC or Quality Assessment review.

A Quality Assessment program consists of planning, implementation and assessment, and corrective action phases. In the planning phase, the Quality Assurance/Assessment Manager establishes the evaluation criteria and identifies the assessment activities that will be required, the data collection methods, and metrics to be captured. The planning phase of the Quality Assessment activities is based on and derived from the Project Quality Objectives (PQOs) specified in the contract or SOW. During the implementation and assessment phase the selected PQOs/DQEs and Question Sets generated by AQAPS will serve as the basis for collecting relevant data, recording, and analyzing findings. The implementation and assessment phase outputs include the Work Instructions and Quality Assessment Records (QAR). If a corrective action is required as a result of the implementation and assessment phase, a Correction Action Report (CAR) will be

initiated. The corrective action phase also includes follow-up, where the monitoring and verification of corrective actions takes place.

Quality Assessment planning should occur early in a MRP project. The means and methods by which performance criteria will be assessed should be clearly defined. Assessment of the contractor should take place in each phase of the CERLA process and in each of the process steps necessary to complete a phase. This includes reviewing the SOWs, work plans, QAPPs, SOPs, Geophysical System Verification setup, data management, and observation of the field crews for a project to make sure a high quality service/product is being delivered by the contractor. Establish acceptance criteria for each aspect of the project. In order to establish acceptance criteria for completed field work, such as anomaly removal, you will want to consider statistical sampling of the cleared property. Statistical sampling of the cleared property through a quality assessment survey and review is just one method that can be used to accept field clearance work. Other methods include blind seeding in the field and third party oversight in the field. Statistical sampling is one component of Quality Assessment and by itself is not sufficient for demonstrating conformance with all contract requirements. The RPM needs to ensure that all project data is complete and accurate and is documented sufficiently. RPMs must ensure quality throughout the CERCLA process by controlling the quality of each of the products from each of the phases.

On Navy MRP projects, two tools have been used to determine the statistical sampling of cleared property: MIL-STD 1916 and Visual Sample Plan (VSP). Both use attribute acceptance sampling, which is a statistical approach for establishing confidence in the cleanup effort. VSP software is available free at http://dqo.pnl.gov/vsp. MIL-STD 1916 has a handbook and charts that can also be found on the web. The Navy currently recommends the use of VSP, because all of the statistical assumptions are easily documented and can be provided to the public/regulators. MIL-STD 1916 is acceptable for use, but the statistical assumptions used to determine the attribute acceptance sampling may be much more difficult to explain to the public/regulator. It is important to coordinate with your stakeholders to determine how these tools will be used at your site.

4.0 MPPEH/MEC Quality Assessment

The Quality Assessment Surveillance Team shall work in conjunction with the Navy Technical Representative (NTR) and/or the RPM to provide field oversight of the MPPEH/MEC investigation/removal contractor(s) to ensure the investigation/removal actions are completed with high quality, in a safe environment, according to objectives, and within the specified timeframes. The Quality Assessment Surveillance Team will assess all MPPEH/MEC investigations/removal actions, for compliance with the approved ESS(s) and Work Plan(s). Each Quality Assessment Surveillance Team will consist of at least 2 qualified persons. The following specific field tasks are to be completed:

Documents – The Quality Assessment Surveillance Team will develop the Quality Assessment Surveillance Plan (QASP). The Quality Assessment Summary Report will summarize the findings from the Quality Assessment including:

- Quality assessment management reports;
- Quality assessment records;
- Quality assessment observations;
- Work instructions and question sets; and
- Corrective action records.

Quality Assessment – The Quality Assessment Surveillance Team will coordinate their activities with the NTR and/or RPM for all work being conducted to insure all MPPEH/MEC investigations/ removal actions are managed in accordance with DoD and DON requirements and the approved Work Plan(s) and ESS(s). The Quality Assessment Surveillance Team shall:

- Develop a QASP specific to the MRS and consistent with AQAPS;
- Review the accounting methodology for all MPPEH/MEC items or components and MPPEH encountered from field discovery to final disposition;
- Review daily logs and ensure the implementation of QC measures are in conformance with the Navy's QAPP and the Contractor's QCP;
- Review the progress schedule with regard to actual work completed;
- Ensure Quality Assessment requirements are documented;
- Provide an adequate Quality Assessment Surveillance Team (senior UXO Technicians) to conduct all field Quality Assessment activities to meet the required schedules and develop an assessment plan to monitor the contractor's performance; and
- Document all data, findings, corrections, and assessments in a summary report.

Members of the Quality Assessment Surveillance Team are considered "essential personnel", as defined by NOSSAINST 8020.15(series), and as such should be allowed into all areas of the project site as they conduct their field observations. The Quality Assessment Surveillance Team will consult with the NTR and/or RPM on any problems.

Corrective Actions - The Quality Assessment Surveillance Team shall advise the NTR and the RPM of any problems associated with the Munitions Response contractor's adherence to the approved ESS(s) and Work Plan(s). In addition, the Quality Assessment Surveillance Team will work with the NTR and the RPM to develop a corrective action plan to address any non-conformance issues.

Safety - The Quality Assessment Surveillance Team shall advise the NTR and the RPM of any incidents of project personnel not complying with site safety requirements. The Contractor shall provide technical advice to resolve the problems, including explosives safety hazards and changed conditions, in consultation with the NTR and RPM. The Quality Assessment Surveillance Team will provide a report of all problems and resolutions.

Site Meetings - The Quality Assessment Surveillance Team shall attend (**X percent or sufficient)** QC meetings, daily safety briefs, progress meetings, and other on-site meetings; and serve as a munitions response consultant to discuss principle construction features, requirements and any field problems.

RPM Note: The RPM will have to determine how much time the Quality Assessment Surveillance Team will be onsite. In the past between 10 and 15 % of contractor field days have been used to estimate the level of effort. The following language could be added to the SOW "For estimating purposes, assume 15 percent of contractor field work days are needed to perform QA surveillance requirements, attend meetings, provide field consultation to NTR and RPM"

RPM Note: ADMIN – QA – 01 Creating Quality Assessment Project Plans from AQAPS has an outline of QASP contents.

4.1 Develop a Quality Assessment Surveillance Plan (QASP)

The Quality Assessment Surveillance Team (contractor or government) shall develop a munitions response project-specific QASP that describes quality procedures to be implemented to support the planned field work. Quality Assessment activities shall be defined, planned, executed, and documented in accordance with the project-specific QASP. The QASP should include data forms to be used to by the Quality Assessment Surveillance Team to document field activities, site conditions, findings, and corrective actions taken. The QASP will have all the components included in the "Admin - QA – 01 Creating Quality Assessment Project Plans" from AQAPS.

The basic objective of the QASP is to establish and document the processes used to:

- Assess and objectively document the quality of the contractor's munitions response activities, including supporting documentation;
- Examine, assess, and report on the contractor's work plans, SOPs, QC program, worker qualifications, and other documents;
- Assess contractor in-process QC activities;
- Provide a timely, objective report that identifies any issues that relate to the adequacy and quality of the contractor response activities and provide suggestions for corrective actions; and
- Support final NOSSA verification as required by NOSSAINST 8020.15(series).

4.2 Develop a Quality Assessment Summary Report

The Quality Assessment Surveillance Team (contractor or government) shall develop a Quality Assessment Summary Report at the completion of the project which will address all activities performed under the QASP and include summary information on the project Quality Assessment, including copies of daily forms, site information, site data collected, and documentation of any corrections required through the Quality Assessment process.

RPM Note: The QASP and the Quality Assessment Summary report may be stand-alone documents or can be incorporated into the overall project work plans and summary reports. The RPM should coordinate Quality Assessment efforts and submissions with stakeholders.

5.0 PROJECT MANAGEMENT

The Quality Assessment Surveillance Team shall perform project management activities necessary to maintain project control and to meet reporting requirements, including but not limited to the following:

5.1 Schedule

The Quality Assessment Surveillance Team will prepare a comprehensive project schedule which shall be due within [insert weeks/months] after project award. The schedule will be prepared using MS Project and provided in hardcopy and electronically in native format and may be required as a .PDF file as well. The contractor shall coordinate critical deliverable dates with the RPM. [Insert any critical schedule requirements here, such as Federal Facility agreements or other agreements]

5.2 Meetings and Project Coordination

5.2.1 Pre-Bid and Kickoff Meetings

A pre-bid site visit [will/will not] be conducted by the Government. The pre-bid site visit will occur, [provide the date, time, assembly place, etc. for the visit]. The Government will prepare an abbreviated Site Safety and Health Plan to cover the site visit and, if the area has known MPPEH/MEC, provide a UXO-qualified safety escort. If necessary, a request for an ESS determination will be prepared by the government for submittal to NOSSA/MARCORSYSCOM prior to the site visit.

RPM Note: The need for a pre-bid site visit will depend on the information available from the PA/SI and/or RI/FS and the Quality Assessment Surveillance Team's familiarity with the site and your selected contract MPPEH/MEChanism. A pre-bid site visit may be required for contract MPPEH/MEChanisms where the SOW is sent to several bidders. An ESS may not be required if anomaly avoidance techniques are employed during the pre-bid site visit. The form for requesting that either NOSSA or MARCORSYSCOM determine whether an ESS is required or not is called an ESS Determination. It is included as an enclosure of NOSSAINST 8020.15(series).

The Quality Assessment Surveillance Team (contractor or government) shall attend a kickoff meeting/formal site visit at [insert site or Facilities Engineering Command (FEC)]. Attendees of this meeting may include the Navy RPM, Environmental Coordinators and others from the site and various FEC personnel. At a minimum, the contractor's Quality Assessment Surveillance Team Leader for this project shall attend. Regulators and stakeholders may be included as determined by the RPM. The agenda for this meeting will include discussions of roles and responsibilities, emergency response, health and safety, access to the site, project schedule, explosives safety, contracted deliverables, investigation methodology, and other issues related to the delivery order.

5.2.2 Project Meetings

The Quality Assessment Surveillance Team lead shall coordinate and attend [insert number] additional meetings at [insert location] to be held at the discretion of the RPM. Attendees normally include regulators and stakeholders. To the extent possible, it is recommended to schedule project meetings during times when the contractor's staff are already visiting [insert location] for project-related duties. Teleconference and web enabled meetings may also be necessary.

6.0 SUBMITTALS AND CORRESPONDENCE

6.1 Format for Reports

The reports shall consist of a black and white master adequate for printing and copying on 8 1/2" X 11" size paper. It is permissible to use foldout sheets as long as the eleven-inch vertical dimension is retained. Maps should be in color to easily distinguish the various features, however, the contractor must ensure that critical data are not lost if the map is reproduced in black and white. Deliverables, other than Draft, shall contain a "Response to Comments" (RTC) table indicating how each regulatory agency or contractor comment was addressed. All draft and final submittals must be letter quality; all pages must be numbered with chapter number followed by page number (1 1, 1 2, 1 3, 2 1, 2 2, 2 3, etc.). Appendix documentation submittals must be letter quality with all pages numbered (A 1, A 2, B 1, B 2 etc.).

6.2 Electronic Deliverables of Records

The electronic version/file of the preliminary/internal draft, draft final, and final after comments are addressed shall be submitted in both A) the native format, which Navy prefers be a Microsoft product, and B) Adobe Acrobat .PDF (or compatible) format. The .PDF version of all final deliverables (other than raw analytical and databases) must be a complete, mirror image of the hardcopy, and include appendices, maps, signature pages, etc. At completion of the project with the approved final Quality Assessment Summary Report submittals, the contractor will provide an electronic deliverable with a copy of all reports, meeting minutes, point papers, maps and map databases, and briefings. All electronic submittals will be certified "virus free" and include the statement "virus free" on the disk or transmittal message. The contractor shall verify with the RPM the appropriate data management requirements for electronic data deliverables. Note that draft ESSs are not to be distributed outside of the DON.

Naval Installation Restoration Information Solution (NIRIS) - The contractor shall obtain access to NIRIS and shall submit all tabular and spatial data and environmental restoration program (ERP) documentation to NIRIS in accordance with current NIRIS standard operating procedures (SOPs). All analytical data generated by the laboratory shall be reviewed by the Contractor's Project Chemist to ensure the validity of the reported data prior to submittal to NIRIS. All ERP documentation submittals for NIRIS shall be coordinated with the Command Environmental Restoration Records Manager ***[insert POC]***. All other NIRIS data submittals shall be coordinated with the Command NIRIS Regional Data Manager (RDM) ***[insert POC]*** for inclusion into NIRIS. NIRIS data and documentation shall include installation-wide data related to:

- Records management - the contractor shall submit all documentation in accordance with the Environmental Restoration Recordkeeping Program Manual, Appendix G, NAVFAC Contractor Work Instruction (https://niris.navfac.navy.mil/Document_Management/Knowledge_Base/Sop_Documentation/ER%20Recordkeeping%20Manual.pdf). Documentation shall include Administrative Record files, post decision files and site files.
- Environmental tabular data - the contractor shall submit all relevant environmental tabular data using the NIRIS Electronic Data Deliverable (NEDD) format as outlined in the current NEDD SOP. The contractor shall identify the appropriate NEDD tables to populate and obtain approval from the RPM to ensure completeness. ***[Note: The NEDD Selector in NIRIS shall be used by the contractor to identify the required tables that shall be populated by the contractor].***
- Environmental spatial data (i.e., ER site boundary information) – the contractor shall submit all spatial information in accordance with the current Non-NEDD Deliverable Submittal Guidelines (https://niris.navfac.navy.mil/Document_Management/Knowledge_Base/Sop_Documentation/03-000-04%20Non-NEDD%20Deliverable%20Submittal%20Guidelines.pdf)
- Land Use Control (LUC) information for Controlled Areas - the contractor shall submit all LUC data in accordance with the LUC Tracker User Guide. https://niris.navfac.navy.mil/Document_Management/Knowledge_Base/Sop_Documentation/04-USR-05%20LUC%20Tracker%20User%20Guide.pdf

6.3 Public Affairs

The Quality Assessment Surveillance Team shall not disclose any data resulting from actions in this contract to the news media, the public, regulatory agencies, or any other non-project-

involved personnel. The Quality Assessment Surveillance Team shall refer all press or public contacts to the RPM. The Quality Assessment Surveillance Team may not distribute reports or data to any other source, unless specifically authorized, in writing, by the Public Affairs Officer in accordance with NAVFAC Instruction 5720.10A. All project-related materials become permanent property of the United States Government.

6.4 Distribution

Deliverables must be approved by the RPM prior to distribution (see Table 1). [RPM should make below chart specific to your SOW]

Table 1. Schedule of Deliverables

Deliverable	# of Hard Copies/Disks			Due Date
	RPM	Activity/ Installation	Regulatory/ Other	
Quality Assessment Documents				
Project Schedule	1/1	0/0	0/0	2 weeks from award
Draft QASP	0/3	0/0	0/0	30 days from award
Gov't comments	?	?	?	1 week
Draft Final QASP	?	?	?	?
All review comments				
Final QASP	1/1	1/1	0/0	1 week
Draft Quality Assessment Summary Report	1/1	1/1	0/0	TBD
Gov't comments	?	?	?	1 week
Draft Final Quality Assessment Summary Report	1/1	1/1	0/0	TBD
All review comments				
Final Quality Assessment Summary Report	1/1	1/1	TBD	TBD

7.0 SPECIAL CONDITIONS

The Quality Assessment Surveillance Team will obtain written approval from the appropriate installation personnel [insert location and phone number] prior to obtaining photographic records, still or motion pictures, and aerial or ground photographs; in accordance with Public Law 18 U.S. Code 795 and applicable Station Regulations. The Government may provide a representative to act in an advisory capacity to prevent unauthorized disclosure of classified information.

Any oral directions, instructions, explanations, commitments and/or acceptances given by any government employee to the Quality Assessment Surveillance Team, shall not be construed by the Quality Assessment Surveillance Team as a change in scope to this delivery order. Any change in scope of work must be issued to the contractor, in writing, by the Contracting Officer in order to be binding to the government.

The primary POC for all communication with regulatory agencies and stakeholders for the MRP project shall be the RPM or someone specifically designated by the RPM to assume that role. In the event that regulatory agencies contact the QA Team for information, the QA team lead will refer them to the RPM. The Quality Assessment Surveillance Team shall provide copies of all project correspondence to the RPM as well as synopses of all phone conversations with regulators in a timely manner. The RPM is to be copied on all electronic correspondence with FEC and Installation/Activity representatives, and others as appropriate and as requested by the RPM.

The Quality Assessment Surveillance Team shall organize, furnish, maintain, supervise, and direct a work force, which, within the limitations of the provisions of the contract, is thoroughly capable and qualified to effectively perform the work set forth in this delivery order. The contractor will ensure that personnel have been appropriately trained for the tasks and duties assigned. The contractor will maintain and provide upon request, records of training and qualifications of individuals involved in the project.

The Quality Assessment Surveillance Team's employees and subcontractors shall become familiar with and obey installation regulations, including fire, traffic, and security regulations. Contractor personnel employed on the installation shall keep within the limits of the work (and avenues of ingress and egress), and shall not enter restricted areas unless required to do so and are cleared for such entry. The contractor's equipment shall be conspicuously marked for identification.

Identification badges and vehicle passes will be furnished without charge; application for and use of passes will be specified by [insert Installation/Activity] Installation Security when issued. Immediately report lost or stolen passes to [insert Installation/Activity] Installation Security and, in writing, to the Contract Specialist (CS) and RPM. Issuance will be coordinated through the RPM.

8.0 REFERENCES

References: (RPM to determine all that are applicable and add site specific references. The RPM should also update the list to include the most recent issuance of any document or instruction)

- **NAVSEA OP-5**, Vol. 1, Seventh Revision, "Ammunition and Explosives Ashore Safety Regulations for Handling, Storing, Production, Renovation and Shipping".
- **NOSSAINST 8020.15(series)**, "Explosives Safety Review, Oversight and Verification of Munitions Responses"

- OPNAV INSTRUCTION 8020.15A/MCO 8020.13A, “Explosives Safety Review, Oversight, And Verification of Munitions Responses” (Feb 2008)
- DDESB Technical Paper Number 18, dated December 2004
- Marine Corps Order P 8020.10A, “Marine Corps Ammunition Management and Explosives Safety Policy Manual” (for work performed at USMC installations)
- Automated Quality Assessment Planning System (AQAPS)
- Project QC Plan
- Department of the Navy Environmental Restoration Program Manual, August 2006
- Federal Regulation 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response (HAZWOPER)
- PA/SI, RI/FS report, Archives Search Report and other MRP reports related to the site
- PA/SI, RI/FS workplan(s) and ESS(s)
- Installation Master Plan
- IRP Initial Assessment Study/Preliminary Assessment/Site Inspection and other IRP reports related to the site
- Environmental Baseline Survey or Environmental Condition of Property
- Integrated Natural Resources Management Plan
- DoDD 4715.11E, Environment, Safety, and Occupational Health (ESOH) (March, 2005)
- Handbook on the Management of Munitions Response Actions, USEPA (Draft Final May 2005)
- Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA Section 120 (h) 42 U.S.C. Section 9620) and as amended by SARA of 1986
- Community Environmental Response Facilitation Act (CERFA), Public Law 102-426 (Oct 19, 1992)
- The National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Part 300, Chapter 40, CFR
- USEPA SW 846 Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Method 8330B Nitroaromatics, Nitramines and Nitrate Esters by High Performance Liquid Chromatography and Method 8321A Solvent Extractable Nonvolatile Compounds by High Performance Liquid Chromatography/Thermospray/Mass Spectrometry (HPLC/TS/MS) or Ultraviolet (UV) Detection
- USEPA Uniform Federal Policy for Quality Assurance Project Plans Manual, March 2005
- MIL-STD 1916, Attribute Acceptance Sampling Tables for Lot or Batch Inspection
- Visual Sample Plan

The Navy will provide an installation map of the subject property.

9.0 DEPARTMENT OF THE NAVY POINTS OF CONTACT

Remedial Project Manager (RPM):

Name:
Address:
Phone:
Fax:
Email:

Navy Technical Representative (NTR):

Name:

Address:
Phone:
Fax:
Email:

Contract Specialist (CS):
Name:
Address:
Phone:
Fax:
Email:

Activity/Installation Point of Contact (POC):
Name:
Address:
Phone:
Fax:
Email:

10.0 PERSONNEL QUALIFICATIONS

All members of the Quality Assessment Surveillance Team shall meet the minimum requirements for UXO Technician III or UXO QC Specialist. (*from the DDESB TP-18).*