

**BASIC CONTRACT  
STATEMENT OF WORK**

**for**

**WORLDWIDE ENVIRONMENTAL RESTORATION AND  
CONSTRUCTION (WERC)**

**CONTRACT: FA8903-04-D-8674**

**JUNE 26, 2003**

**Note: This AFCEE document has been modified by MWH to include Internet links to referenced supporting documents. It is intended for use as a reference document and in no way modifies AFCEE's WERC SOW.**

**TABLE OF CONTENTS**

<b><u>SECTION</u></b>	<b><u>TITLE</u></b>	<b><u>PAGE</u></b>
<b><u>1.0</u></b>	<b><u>SCOPE</u></b> .....	<b><u>4</u></b>
<b><u>2.0</u></b>	<b><u>APPLICABLE DOCUMENTS</u></b> .....	<b><u>4</u></b>
<b><u>3.0</u></b>	<b><u>GOVERNMENT FURNISHED INFORMATION, EQUIPMENT, AND PROPERTY (GFI, GFE, GFP)</u></b> .....	<b><u>5</u></b>
<b><u>4.0</u></b>	<b><u>MANAGEMENT, PLANNING, AND REPORTING REQUIREMENTS</u></b> .....	<b><u>5</u></b>
<b><u>4.1</u></b>	<b><u>WORK BREAKDOWN STRUCTURE</u></b> .....	<b><u>5</u></b>
	<i><u>4.1.1 WBS Requirements (Environmental Projects)</u></i> .....	<i><u>5</u></i>
	<i><u>4.1.2 WBS In CSI Format (Traditional Construction)</u></i> .....	<i><u>5</u></i>
<b><u>4.2</u></b>	<b><u>SCHEDULE AND PLANNING REQUIREMENTS</u></b> .....	<b><u>5</u></b>
	<i><u>4.2.1 Project Planning Chart and/or Construction Planning Chart</u></i> .....	<i><u>6</u></i>
	<i><u>4.2.2 Integrated Master Schedule</u></i> .....	<i><u>6</u></i>
<b><u>4.3</u></b>	<b><u>COST AND STATUS REPORTING</u></b> .....	<b><u>6</u></b>
	<i><u>4.3.1 Contractor's Progress, Status, and Management Report</u></i> .....	<i><u>6</u></i>
	<i><u>4.3.2 Funds and Man-Hour Expenditure Report</u></i> .....	<i><u>6</u></i>
	<i><u>4.3.3 Performance and Cost Report</u></i> .....	<i><u>7</u></i>
	<i><u>4.3.4 Contract Funds Status Report</u></i> .....	<i><u>7</u></i>
	<i><u>4.3.5 Cost/Schedule Status Report</u></i> .....	<i><u>7</u></i>
	<i><u>4.3.6 Cost Performance Report</u></i> .....	<i><u>7</u></i>
<b><u>4.4</u></b>	<b><u>MEETING AND CONFERENCE REQUIREMENTS</u></b> .....	<b><u>7</u></b>
	<i><u>4.4.1 Meeting/Teleconference Support</u></i> .....	<i><u>7</u></i>
	<i><u>4.4.2 Public Meetings and Hearings</u></i> .....	<i><u>8</u></i>
	<i><u>4.4.3 Conference Support</u></i> .....	<i><u>8</u></i>
<b><u>4.5</u></b>	<b><u>CONTRACTOR DOCUMENTATION</u></b> .....	<b><u>8</u></b>
<b><u>4.6</u></b>	<b><u>GEOGRAPHIC INFORMATION SYSTEM (GIS) DEVELOPMENT, PERFORMANCE, ANALYSIS AND IMPLEMENTATION SUPPORT</u></b> .....	<b><u>8</u></b>
<b><u>4.7</u></b>	<b><u>NOTIFICATION REQUIREMENTS</u></b> .....	<b><u>9</u></b>
<b><u>4.8</u></b>	<b><u>PERMITS</u></b> .....	<b><u>9</u></b>
<b><u>4.9</u></b>	<b><u>PHOTO DOCUMENTATION</u></b> .....	<b><u>9</u></b>
<b><u>4.10</u></b>	<b><u>REMOTE SITES</u></b> .....	<b><u>9</u></b>
<b><u>4.11</u></b>	<b><u>SITE ACCESS BADGES</u></b> .....	<b><u>9</u></b>
<b><u>4.12</u></b>	<b><u>WORKSITE ACTIVITIES AND COORDINATION</u></b> .....	<b><u>10</u></b>
	<i><u>4.12.1 Coordination of Activities</u></i> .....	<i><u>10</u></i>
	<i><u>4.12.2 Hazardous Material and Hazardous Waste Activities</u></i> .....	<i><u>10</u></i>
<b><u>5.0</u></b>	<b><u>CHEMISTRY REQUIREMENTS</u></b> .....	<b><u>10</u></b>
<b><u>5.1</u></b>	<b><u>QUALITY ASSURANCE</u></b> .....	<b><u>10</u></b>
<b><u>5.2</u></b>	<b><u>LABORATORY SELECTION</u></b> .....	<b><u>11</u></b>
<b><u>5.3</u></b>	<b><u>ANALYTICAL DATA MANAGEMENT</u></b> .....	<b><u>11</u></b>
<b><u>5.4</u></b>	<b><u>RECORD KEEPING</u></b> .....	<b><u>11</u></b>
<b><u>6.0</u></b>	<b><u>PLANS AND REPORTS</u></b> .....	<b><u>11</u></b>
<b><u>6.1</u></b>	<b><u>QUALITY PROGRAM PLANS</u></b> .....	<b><u>11</u></b>
<b><u>6.2</u></b>	<b><u>TECHNICAL PLANS AND REPORTS</u></b> .....	<b><u>12</u></b>
	<i><u>6.2.1 Technical Plans</u></i> .....	<i><u>12</u></i>
	<i><u>6.2.2 Technical Reports</u></i> .....	<i><u>13</u></i>

<b>7.0</b>	<b><u>SITE WORK</u></b>	<b>13</b>
7.1	<u>CONSERVATION</u>	13
7.2	<u>DEMobilIZATION</u>	14
7.3	<u>SITE CHARACTERIZATION</u>	14
7.4	<u>SITE PREPARATION</u>	14
<b>8.0</b>	<b><u>ENVIRONMENTAL REQUIREMENTS</u></b>	<b>14</b>
8.1	<u>COMPLETION OF CONCEPTUAL DESIGN</u>	15
8.2	<u>CONSTRUCTION</u>	15
8.2.1	<u><i>Pre-Final Inspection</i></u>	15
8.2.2	<u><i>Final Inspection</i></u>	15
8.2.3	<u><i>Delivery and Warranty</i></u>	16
8.3	<u>DEMOLITION</u>	16
8.4	<u>EMERGENCY RESPONSE</u>	16
8.5	<u>ENVIRONMENTAL RESOURCES PROGRAM INFORMATION MANAGEMENT SYSTEM (ERPIMS)</u>	16
8.6	<u>INNOVATIVE AND PROVEN TECHNOLOGIES</u>	17
8.7	<u>FUELING SYSTEMS</u>	17
8.8	<u>MAINTENANCE AND REPAIR</u>	17
8.9	<u>OPERATIONS AND MAINTENANCE</u>	17
8.10	<u>REMEDIAL PROCESS OPTIMIZATION</u>	17
8.11	<u>ORDNANCE REMOVAL AND SUPPORT</u>	18
8.12	<u>PRESUMPTIVE AND OTHER REMEDIES</u>	18
8.12.1	<u><i>Requirements</i></u>	18
8.12.2	<u><i>Regulatory Site Closure</i></u>	19
<b>9.0</b>	<b><u>TRADITIONAL REQUIREMENTS</u></b>	<b>19</b>
9.1	<u>CONSTRUCTION</u>	19
9.1.1	<u><i>Pre-Final Inspection</i></u>	20
9.1.2	<u><i>Final Inspection</i></u>	20
9.1.3	<u><i>Delivery and Warranty</i></u>	20
9.2	<u>DEMOLITION</u>	20
9.3	<u>EMERGENCY RESPONSE</u>	20
9.4	<u>MAINTENANCE AND REPAIR</u>	21
<b>10.0</b>	<b><u>POINTS OF CONTACT (POCS)</u></b>	<b>21</b>

## 1.0 SCOPE

This basic contract statement of work (SOW) defines the scope of a full range of construction and engineering activities to meet all customer requirements. This basic contract SOW will be tailored to identify specific task order (TO) requirements. SOWs or statement of objectives (SOOs) may be used on this contract.

This SOW encompasses the full range of methods and technologies supporting activities necessary to remedy site conditions in accordance with technical and regulatory requirements, to operate environmental systems, and to provide construction and ancillary services as required herein. Requirements will be primarily environmental but will also include traditional engineering needs as a secondary requirement. Requirements shall be carried out under TOs for various worldwide locations.

Construction and engineering activities may include environmental requirements, military family housing, light commercial projects, fuels projects, traditional military construction (MILCON) and P-341 projects, community development projects, and emerging requirements, such as homeland security and force protection projects.

The Contractor shall function as an integral team member in support of the AFCEE mission, to include the sharing of information with other AFCEE contractors, and cooperation with communities, regulators, and other government entities.

Requirements include efficient management of TOs including accurate, on-time submittals of contract deliverables and timely identification and solution of impediments to successful project execution. Technical requirements include early involvement in the process to allow for the development of the most cost-effective and technically sound solution. AFCEE will rely on the Contractor's expertise in recognizing and addressing problematic issues and successful execution of each TO. The Contractor shall perform all work in accordance with host nation, federal, state, and local statutes and regulations. Remedies shall conform to environmental permits, decision document requirements, or other legal requirements.

TOs may be Results Based Product Delivery, where desired outcomes of the work are identified without specifying the methods or technologies to be used. Contracted work is performed with minimal focus on government process and maximum focus on results. A Results Based Product Delivery TO enables the Contractor to select actions best suited to the site requirements, and ensures that best management practices and best available technologies are employed. The SOW or SOO will specify Results Based Product Delivery contracting requirements at the TO level.

## 2.0 APPLICABLE DOCUMENTS

The Contractor shall identify and comply with all applicable federal, state, and local statutes; [Air Force/Military/Host Nation instructions, manuals, handbooks, regulations, guidance, and policy letters](#); [Executive Orders \(EOs\)](#); [American Petroleum Institute \(API\) Codes](#); [National Association of Corrosions Engineers \(NACE\)](#); [National Fire Protection \(NFPA\)](#); [Steel Structures](#)

[and Painting Counsel \(SSPC\)](#); [National Electrical Code \(NEC\)](#); [Uniform Fire Code \(UFC\)](#); and [International Building Code \(IBC\)](#) including all changes and amendments in effect on the date of issuance of each TO. It is the Contractor's responsibility to identify and comply with all applicable requirements. In addition, the Contractor shall refer to the [AFCEE Technical Services Quality Assurance Program](#), the current version of [The United States Air Force Construction Management Implementation Guide](#), and [Guidance for Contract Deliverables \(GCD\)](#), current version, unless a previous version is specified in the TO. This GCD is a reference document to be used in the generation of contract deliverables. Base-specific documents shall be identified in each TO.

### **3.0 GOVERNMENT FURNISHED INFORMATION, EQUIPMENT, AND PROPERTY (GFI, GFE, GFP)**

To be specified in each TO.

### **4.0 MANAGEMENT, PLANNING, AND REPORTING REQUIREMENTS**

The Contractor shall implement a full range of construction and engineering activities as specified in each TO and in accordance with all applicable compliance documents. The Contractor shall supply all labor, equipment, and materials necessary to accomplish the work assigned unless otherwise specified in each TO. The Contractor shall perform management and planning functions, including performance measurement and fund status reporting, through the course of this effort.

#### **4.1 Work Breakdown Structure**

##### **4.1.1 WBS Requirements (Environmental Projects)**

The Contractor shall prepare and submit for approval a Work Breakdown Structure (WBS). The WBS shall be used to report the cost and schedule status for each environmental project. All tasks required under this type of TO shall be included in the WBS. (Contract Data Requirements List [CDRL] [B001](#))

##### **4.1.2 WBS In CSI Format (Traditional Construction)**

The Contractor shall prepare and submit for approval a WBS in the Construction Standard Institute (CSI) format for traditional construction activities. The WBS shall be used to report the cost and schedule status for each project. All tasks required under this type of TO shall be included in the WBS. ([CDRL B001](#))

#### **4.2 Schedule and Planning Requirements**

The Contractor shall provide schedules for tracking work progress as specified in each TO. The SOW for each TO will identify which of the following schedules is required. Project Planning

Charts (PPC) are recommended for less complex projects and Integrated Master Schedules (IMS) are recommended for more complex projects.

#### **4.2.1 Project Planning Chart and/or Construction Planning Chart**

The Contractor shall prepare and submit a PPC for approval. The PPC shall detail the project schedule and status through the use of Gantt charts, which shall depict percent complete for each task. The project schedule shall be reported using the approved WBS. ([CDRL B002](#))

#### **4.2.2 Integrated Master Schedule**

The Contractor shall prepare and submit an IMS for approval. The IMS shall detail the project schedule and status through the use of Gantt charts, and Critical Path Method (CPM) analyses. The project schedule shall be reported using the approved WBS. ([CDRL B003](#))

### **4.3 Cost and Status Reporting**

The Contractor shall provide cost and status reports. Cost and status reports are listed below in order of increasing complexity. Each TO will specify (1) if one or two of the following reports are required, and (2) if reports are required at the TO level or at the project level with a TO rollup. Contractor's Progress, Status, and Management Reports (CPSMR) with cost information are recommended for TOs under \$500,000. TOs under \$2M typically require either a Performance and Cost Report (PCR) or a Funds and Man-Hours Expenditure Report (FMER). TOs between \$2M-\$5M typically require a Cost/Schedule Status Report (C/SSR). Typically TOs over \$5M require a Cost Performance Report (CPR). A Contract Funds Status Report (CFSR) may be required in conjunction with a CPR or C/SSR. Each TO should be evaluated independently to determine specific requirements.

#### **4.3.1 Contractor's Progress, Status, and Management Report**

The Contractor shall prepare and submit a CPSMR. The CPSMR shall be used to review and evaluate the overall progress of the project, along with any existing or potential problem areas. The report shall be prepared in a Contracting Officer's Representative (COR)-approved format. The CPSMR shall include a summary of the events that occurred during the reporting period, discussion of performance, identification of problems, proposed solutions, corrective actions taken, and outstanding issues. Cost information may be included or omitted in this report as required in each TO. ([CDRL B004](#))

#### **4.3.2 Funds and Man-Hour Expenditure Report**

The Contractor shall implement and maintain a cost accounting system and prepare a FMER to correlate the status of expensed funds and man-hours against the progress of the work completed and the negotiated budget. The FMER and associated graphics shall detail the current project status and identify funds and man-hours required to complete the assigned tasks. ([CDRL C001](#))

### **4.3.3 Performance and Cost Report**

The Contractor shall prepare and submit a PCR. The PCR provides the current status and projected requirements for funds, man-hours, and work completion relative to the negotiated budget. ([CDRL C002](#))

### **4.3.4 Contract Funds Status Report**

The Contractor shall prepare CFSRs as specified in each individual cost reimbursement TO. The purpose of the CFSR is to update and forecast funding requirements, funding changes and budget estimates, identify funds in excess of TO which may be available for deobligation, and provide estimates of termination costs. ([CDRL C003](#))

### **4.3.5 Cost/Schedule Status Report**

The Contractor shall prepare C/SSRs, which summarize performance information for program management purposes as specified in each individual cost reimbursement TO. The CSSR contains contract data, including original and current contract values and management estimate at completion, performance data, and narrative explanations which present information on significant cost, schedule variances, contractual problems, or other areas of interest. ([CDRL C004](#))

### **4.3.6 Cost Performance Report**

The Contractor shall implement and maintain a performance measurement system to support the gathering of cost and schedule data for the purpose of determining program status as specified in each individual cost reimbursement TO. The WBS or equivalent task breakdown shall be used for reporting cost. The CPR presents the performance measurement baseline and actual cost and schedule performance against that baseline. Submittals shall include appropriate figures containing cost and related data for measuring project cost and schedule status. ([CDRL C005](#))

## **4.4 Meeting and Conference Requirements**

### **4.4.1 Meeting/Teleconference Support**

The Contractor shall perform a site visit and/or attend a preproposal conference, a postaward conference, preperformance conference, or preconstruction conference. The Contractor also shall attend and/or support meetings and teleconferences to discuss technical or regulatory issues and project progress and status. The Contractor shall prepare, and submit for review, presentation materials for meetings and an agenda. The Contractor shall prepare minutes for all meetings attended. ([CDRLs B005, B006, B007](#))

#### **4.4.2 Public Meetings and Hearings**

The Contractor shall present technical information and provide logistical support (e.g., advertising, facilities, audio-visual, handouts, report(s), recordings, verbatim transcripts, poster boards, translations, slides, synopses) for events and/or meetings in support of the government's position. ([CDRLs B005, B006, B007](#))

#### **4.4.3 Conference Support**

The Contractor shall develop conference programs, training sessions, and arrangements for government-sponsored conferences in support of environmental and traditional programs. ([CDRLs B005, B006, B007](#))

#### **4.5 Contractor Documentation**

The Contractor shall create and maintain a Master Document List (MDL) that includes all documents, whether the document is a deliverable or not, which are prepared during the course of the TO. The MDL and its documents shall be maintained in libraries readily available for submittal to the Government. All Material Submittals shall be accomplished in accordance with the instructions pertaining to [AF Form 3000](#), Material Approval Submittal. ([CDRL B008](#))

#### **4.6 Geographic Information System (GIS) Development, Performance, Analysis and Implementation Support**

The Contractor shall establish and/or update the GIS. GIS software shall be compatible with Environmental Resources Program Information Management System ([ERPIMS](#)) or other appropriate systems as specified. GIS software shall provide a repository system to store subsurface chemical data, contour concentrations of contaminants, query contamination at given sites over time, utility locations, and other requirements. The Contractor shall provide technical support of geographic (geospatial) data and data management systems. All data deliverables shall be provided in electronic format with a copy to AFCEE/MSC. The Contractor shall follow [Spatial Data Standards \(SDS\)](#) and the U.S. Federal Geographic Data Committee's (FGDC) [Content Standard for Digital Geospatial Metadata](#), and shall establish, augment, and/or update the system(s). Software in support of this effort shall conform with [AF/DoD standards](#) for systems design, development and planning procedures for the pertinent disciplines identified in the project tasks. Needs analysis shall include review of existing AF/DoD-owned systems for possible re-use and the analysis of current systems, recommending strategies for improvement. Various quality assurance methods shall be utilized to correct for data quality issues introduced during data collection and compilation. The Contractor shall submit Report of Findings detailing the acceptability of the data, and recommendations to improve the data quality and data quality assurance procedures. All new development (e.g., applications, code, documentation, diagrams) shall become the sole property of the Air Force. (CDRLs [A001](#), [B009](#))

#### **4.7 Notification Requirements**

The Contractor is required to notify the Contracting Officer (CO) and COR of critical issues that may affect the contract performance and/or human health and the environment. The types of issues that require notification include, but are not limited to, health risks, spills, and changes in critical personnel, and finding unexploded ordnance (UXO). As an example, if UXO were discovered during field activities, the Contractor would be required to immediately stop work, report the discovery to the base POC, CO, and COR, and implement the appropriate safety precautions. Field activities could not continue until clearance was received from the CO. On critical issues, verbal notification should be made immediately, followed by written notification as soon as practical. (CDRL [A002](#))

#### **4.8 Permits**

The Contractor shall develop, coordinate, and assist the installation in applying for and obtaining all host nation, federal, state, local, and other applicable permits, access (including off-base easements and leases), agreements, licenses, and certificates required to perform and complete each TO. The Contractor shall maintain a library of these documents at the Contractor's site office on base as well as the corporate facility handling each TO. The Contractor shall comply with all applicable permit conditions. (CDRL [A003](#))

#### **4.9 Photo Documentation**

The Contractor shall prepare digital photo documentation, including site(s) and building(s) under investigation and/or construction, field activities, and sample locations. Digital photos will be submitted in JPEG format unless otherwise specified in the individual TO. The contractor shall provide an index for each set of photographs submitted identifying the base, project number, contractor, and a brief description. Photography of any kind must be coordinated through the installation, customer, or facility Point of Contact (POC). (CDRLs [B010](#), [B011](#))

#### **4.10 Remote Sites**

The Contractor shall perform work as specified at remote locations. The Contractor shall be responsible for all personnel, supplies, equipment, and infrastructure (including, but not limited to, potable water, utility systems, housing, dining, transportation, and medical care) when there are no facilities and services available.

#### **4.11 Site Access Badges**

The Contractor shall obtain and monitor assigned security badges (used by both prime contractor and subcontractor staff) used during the duration of this contract. All security badges or passes shall be returned to the base POC upon expiration of the badge, upon completion of the project, or when possession of the badge is no longer necessary (e.g., upon removal of contracted personnel from specific projects).

## **4.12 Worksite Activities and Coordination**

### **4.12.1 Coordination of Activities**

The Contractor shall coordinate worksite activities with all applicable personnel to ensure the protection of human health and the environment; the prevention of damage to property, utilities, materials, supplies, and equipment; and the avoidance of work interruptions. The Contractor shall provide physical security to work areas with security equipment and personnel. The Contractor must comply with Occupational Safety and Health Administration ([OSHA](#)) safety and health regulations and local safety office requirements. The Contractor is required to provide the CO copies of any OSHA report(s) submitted during the duration of the TO. For areas not covered by OSHA, the contractor shall comply with host-nation laws and regulations regarding safety and health and the U.S. Army Corps of Engineers Safety and Health Requirements Manual, [EM 385-1-1](#). (CDRL [A001](#))

### **4.12.2 Hazardous Material and Hazardous Waste Activities**

The Contractor shall handle all hazardous materials and waste in accordance with applicable host nation, federal, state, and local requirements. The Contractor shall provide all hazardous materials use and hazardous waste disposal documentation to the installation POC, and shall register with the Hazardous Materials Pharmacy program (if available) at the installation to ensure appropriate and efficient tracking of the Contractor's hazardous material purchases, inventories, use, and releases such as required by the Emergency Planning and Community Right-to-Know Act ([EPCRA](#)), [EOs](#), or any installation reporting requirements.

The Contractor shall also comply with host nation, federal, state, and local requirements for any task involving the transportation of hazardous wastes and/or contaminated materials to off-site treatment, storage and/or disposal facilities. This includes [40 CFR 260](#), [49 CFR 172](#), [173](#), [178](#), [179](#) and all other applicable local, state, federal, and host nation transportation regulations.

## **5.0 CHEMISTRY REQUIREMENTS**

The Contractor shall be responsible for the quality of all required chemistry services performed. The Contractor shall ensure that all chemistry-related tasks are conducted in accordance with the project-specific Sampling and Analysis Plan (SAP). The Contractor shall identify a Project Chemist as key personnel in the project SAP. The Project Chemist will act as a POC on all chemistry-related issues and shall be responsible for ensuring that all Data Quality Objectives (DQOs) are met.

### **5.1 Quality Assurance**

The Contractor shall develop project-specific DQOs designed to ensure data of adequate quality are collected to support project decisions. DQOs shall be developed in accordance with [USEPA QA/G4](#), Guidance for the DQO Process (most recent version) and documented in the project SAP.

All laboratory services shall be conducted in accordance with the approved project QAPP. All field sampling shall be conducted in accordance with the approved project FSP. Samples shall not be submitted for analysis until the SAP and FSP are approved. The [AFCEE QAPP](#) serves as a guidance document in the development of the project specific QAPP.

The Contractor shall ensure that all requirements specified in the project SAP are met. If not met, the Contractor may be required to reaccomplish sampling at the Contractor's expense. The Contractor shall conduct audits, administer a performance evaluation sample program, verify and validate data, and perform corrective actions in accordance with the project SAP. For a TO requiring analytical work, the Contractor shall submit a Quarterly Lab Use Report. ([CDRL A001](#))

## **5.2 Laboratory Selection**

The Contractor shall select a laboratory with analytical capabilities sufficient for the methods specified in the SAP and adequate throughput capacity to handle the project's analytical workload during all field activities. The Contractor shall ensure that the selected laboratory meets all state and federal requirements, including state certification where appropriate.

## **5.3 Analytical Data Management**

The Contractor shall ensure that all hard copy and electronic data deliverables supplied by the laboratory are complete and adequate to support the quality and usability of the data. Raw data packages shall be submitted to the AFCEE upon request. Data packages shall include all information required to re-create the analysis, including correspondence with the laboratory regarding exceeding quality assurance/quality control (QA/QC) measurements and documentation of corrective actions. ([CDRL A001](#))

## **5.4 Record Keeping**

For each TO, the Contractor shall create and maintain in one location written and electronic records sufficient to recreate each sampling, analytical, testing and monitoring event, and shall make these records available to the government upon request. The Contractor shall maintain records of, and derived from, all activities outlined in the appropriate portion of the Quality Program Plan (QPP) supporting the generation of these sampling and analysis records. The Contractor shall also retain written calculations using information obtained from sampling, analysis monitoring, and testing activities, to include all raw data. All information shall be provided to the Government.

## **6.0 PLANS AND REPORTS**

### **6.1 Quality Program Plans**

The Contractor shall prepare, for AFCEE review and approval, a site-specific QPP for each TO. The Contractor must implement, maintain, and comply with the approved site-specific QPP.

The QPP shall include the Work Plan (WP), the Health and Safety Plan (HSP) (as required by [29 Code of Federal Regulations \(CFR\) 1910.120](#)), and the Environmental Sampling and Analysis Plan (SAP) as specified below. The SAP shall include the Quality Assurance Project Plan (QAPP) as appropriate, the Field Sampling Plan (FSP), and the Construction Quality Plan (CQP). Project DQOs shall be fully described as required in the individual TO. This section shall be tailored in each TO to meet current customer and regulatory requirements. The [AFCEE Model QAPP](#) and [AFCEE Model FSP](#) can be used as guidance documents. ([CDRLs A004, A005, A006, A007](#))

## **6.2 Technical Plans and Reports**

The Contractor shall provide technical plans and reports as defined at the TO level. The Contractor shall complete these documents according to the most appropriate industry standard.

### **6.2.1 Technical Plans**

- a. Community Relations ([CDRL A008](#))
- b. Work Plan. The Contractor shall prepare a Project Activities Work Plan that may include, but is not limited to, any or all of the following subsections as identified in each TO. ([CDRL A004](#))
  - 1) Site Security Plan
  - 2) Excavation Plan
  - 3) Spill and Discharge Control Plan
  - 4) Bench Scale Test Plan
  - 5) Asbestos Abatement Plan
  - 6) Air Modeling and Monitoring Plan
  - 7) Surface Water Management Plan
  - 8) Ground Water Management Plan
  - 9) Erosion Control Plan
  - 10) Emissions Control Plan
  - 11) Transportation Plan
  - 12) Remediation Management Plan
  - 13) Siting Analysis Plan
  - 14) Site Preparation Plan
  - 15) Demobilization and Closure Plan
- c. RPO Work Plan ([CDRL A009](#))
- d. Construction Quality Plan ([CDRL A007](#))
- e. Design Work Plan ([CDRL A009](#))
- f. Health and Safety Plan ([CDRL A005](#))
- g. Sampling and Analysis Plan ([CDRL A006](#))
- h. DD Form 1391 ([CDRL A001](#))
- i. Operations and Maintenance Plan ([CDRL A010](#))

- j. Innovative Technology Plan ([CDRL A009](#))
- k. Integrated Solid Waste Management Plan ([CDRL A009](#))
- l. Explosive Safety Plan ([CDRL A009](#))
- m. Test Plan ([CDRL A009](#))

## 6.2.2 Technical Reports

- a. Miscellaneous Technical Report ([CDRL A001](#))
- b. Analytical Data Report Package ([CDRL A001](#))
- c. Site/Project Summary ([CDRL A001](#))
- d. Production or Delivery Problem Report ([CDRL A002](#))
- e. Technical/Field Reports ([CDRL A011](#))
- f. Permits ([CDRL A003](#))
- g. Closure Reports ([CDRL A001](#))
- h. Investigation Report ([CDRL A001](#))
- i. Conceptual Site Model/Development Profile ([CDRL A001](#))
- j. Baseline Risk Assessment ([CDRL A001](#))
- k. Innovative Technologies Report ([CDRL A001](#))
- l. Integrated Solid Waste Report ([CDRL A001](#))
- m. Hazardous Materials Survey Report ([CDRL A012](#))
- n. Hazardous Material and/or Hazardous Waste Disposal Report ([CDRL A001](#))
- o. Design Plans ([CDRL A013](#))
- p. Shop Drawings and/or As-built Drawings ([CDRL A014](#))
- q. Design Specifications ([CDRL A001](#))
- r. Long-Term Operations/Long-Term Monitoring Report ([CDRL A001](#))
- s. Double Blind QA/AC Laboratory Proficiency Testing Program ([CDRL A001](#))
- t. Digital Imaging ([CDRL B010](#))
- u. Color Photograph Prints ([CDRL B011](#))
- v. Geographical Information Systems Updates ([CDRL B009](#))
- w. Computer Aided Design Drawings ([CDRL B012](#))
- x. Inspection Reports ([CDRL A001](#))
- y. Survey Reports ([CDRL A012](#))
- z. RPO Reports ([CDRL A001](#))

## 7.0 SITE WORK

The Contractor shall perform site preparation, incidental characterization and field investigation, conservation, and demobilization of sites as required in each TO.

### 7.1 Conservation

Activities shall be planned and implemented in a manner that protects existing site utilities, structures, surface features, service operations, monitoring and other types of wells, and the general site environment. This includes the protection of trees, shrubs and other vegetation not in the affected zone from dust damage, soil compaction, and physical contact with machines and

equipment. If appropriate, the Contractor shall conserve uncontaminated topsoil by removal, storage, or redistribution. All reasonable measures shall be taken to minimize and suppress fugitive emissions of dust, vapors, and other site materials during site work. All fill materials shall be non-contaminated. The Contractor shall conduct all operations and activities with the intent of reducing the amount of pollution generated. Specific areas to be focused on are generation of solid waste, use of hazardous materials, use of ozone depleting chemicals, generation of hazardous waste, and use of energy and water. The Contractor shall plan, construct, operate, maintain, optimize, and decommission systems necessary to control storm water run-on and run-off; and transport surface water drainage to a treatment plant, discharge location, or any other destination.

## **7.2 Demobilization**

The Contractor shall decontaminate equipment and facilities, decommission facilities as necessary, and restore the site. The Contractor shall remove any temporary facilities and implement erosion control measures such as seeding, mulch, sodding, and erosion control fabrics; restore roads, structures and utilities; and plant trees, shrubbery, grasses and other vegetation. The Contractor shall document and report on activities and train Government personnel to perform required maintenance, as requested.

## **7.3 Site Characterization**

The Contractor shall perform work that characterizes environmental conditions incidental to other requirements in each TO.

## **7.4 Site Preparation**

The Contractor shall perform site work as necessary to prepare sites for construction activities. Security and access controls shall be implemented to prevent unauthorized entry to sites and to protect wildlife from site exposure. The Contractor shall survey existing utilities to determine adequacy and need for modifications to support site activities. The Contractor shall obtain appropriate approvals and shall construct connections or new systems for electrical power, water, sewer, gas distribution, telephone, and other utilities, as required, to accomplish the activities specified in each TO.

## **8.0 ENVIRONMENTAL REQUIREMENTS**

The Contractor shall perform a full range of activities to meet all customers engineering and construction environmental requirements as described in each TO. Requirements may include completion of a conceptual design, construction, implementation, demolition, repair, emergency response, and operations and maintenance tasks for environmental engineering and construction needs.

The Contractor shall execute restoration, pollution prevention, compliance, conservation, design, and construction projects. The Contractor shall evaluate, complete, and modify designs, and

plan, install, construct, test, operate, maintain, monitor, optimize, and decommission any site in accordance with each TO. The Contractor shall perform work at remote sites and shall document all activities as stated herein.

The Contractor shall perform incidental support such as designing, planning, programming, scoping, studying, investigating, evaluating, and consulting on environmental engineering and construction efforts. The Contractor shall also provide training and operational support to Government and other contractor personnel regarding the operations and maintenance of equipment, systems, and facilities.

## **8.1 Completion of Conceptual Design**

A conceptual design (typically 10–30%) for environmental projects may be provided to the Contractor for completion of the design and then construction. This work may be provided in phases. The Contractor is accountable for all aspects of the final design under host nation, federal, state, and applicable local laws. All completed designs will be signed and sealed in accordance with all applicable requirements. Contractor shall complete project working drawings and the various plans and schedules, including a construction schedule, and obtain submittal approvals and permits. Working drawings and specifications shall comply with codes, laws, and the request for proposal (RFP). The working drawings shall be submitted for review as directed in the TO. The Contractor shall implement, coordinate, and execute all regulatory reviews, shall ensure technical adequacy of the final design, and shall provide quality control of all phases of the TO. Details on design requirements will be provided in each TO.

## **8.2 Construction**

The Contractor shall perform construction, restoration, emergency response, repair, enhancement, maintenance, and demolition of facilities, utilities, real property systems, and infrastructure in support of construction and engineering requirements as specified in each TO. Typical activities can consist of stand-alone projects, and construction in support of other projects. Shop drawings and other submittals shall be required for approval by the COR prior to beginning construction projects. Construction activities will be in conformance with local and Air Force standards and regulations. The Contractor shall erect or install support buildings, equipment enclosures, and storage facilities for construction materials and contaminated material awaiting disposal.

### **8.2.1 Pre-Final Inspection**

The Contractor shall conduct a pre-final walk through inspection and publish the pre-final inspection findings in a pre-final inspection report. Details will be provided in each TO.

### **8.2.2 Final Inspection**

The Contractor shall conduct a final inspection and publish the findings in a final inspection report in accordance with the format specified at the pre-construction conference and the

RFP/request for quote (RFQ). The inspection shall concentrate on the items identified at the pre-final inspection and recorded in the pre-final report. The final inspection report shall (1) certify that all items of the design have been implemented and that the construction is complete; (2) include a record of “signed and sealed” as-built drawings and specifications verifying that all development standards have been met. At the final inspection, the Contractor shall present a completed [DD Form 1354](#), Transfer and Acceptance of Real Property to the Base Civil Engineer (BCE) or other appropriate organization for signature and acceptance. Details will be provided in each TO. ([CDRLs A001, A013](#))

### **8.2.3 Delivery and Warranty**

The Contractor shall complete all inspection and commissioning requirements prior to final inspection. The warranty shall be issued in accordance with [FAR 52.246.21](#). Extended warranties offered by the Contractor and its subcontractors or suppliers may be accepted at the Government’s discretion.

### **8.3 Demolition**

The Contractor shall demolish facilities, systems, and other improvements as required in each TO. Demolition activities can be ancillary to other requirements or a stand-alone project related to environmental requirements. The Contractor shall conduct demolition efforts in conjunction with such activities as new construction or renovation, removal of outdated facilities, and site clearing from natural disasters. The Contractor shall perform surveys as part of demolition efforts.

### **8.4 Emergency Response**

The Contractor shall perform emergency response requirements. Emergency response may include response to hazardous incidents, emergency repairs to facilities, systems, improvements, or utilities in the course of executing TO requirements or as stand-alone activities. The Contractor shall perform emergency response to situations arising from project activities or actions from others.

### **8.5 Environmental Resources Program Information Management System (ERPIMS)**

The Contractor shall meet any Environmental Resources Program Information Management System ([ERPIMS](#)) data deliverable requirements as identified in each TO. The Contractor shall record and enter field and laboratory data into a computerized submission format in accordance with the ERPIMS Data Loading Handbook ([DLH](#)). The DLH is available for download at [http://www.afcee.brooks.af.mil/ms/msc\\_irp.asp](http://www.afcee.brooks.af.mil/ms/msc_irp.asp). The Contractor shall be responsible for the accuracy and completeness of all data submitted. All data submitted by the Contractor shall correspond exactly with the data recorded in the original laboratory reports and other documents associated with sampling and laboratory tasks. ([CDRL B009](#))

## **8.6 Innovative and Proven Technologies**

The Contractor shall plan, design, construct, operate and maintain, monitor, optimize, and decommission innovative environmental remediation technologies and other technologies depending upon site-specific characteristics. Innovative technologies shall be approved by the COR and coordinated with appropriate regulatory agencies prior to initiating site work.

These activities may require proven and/or innovative technologies and methods to accomplish the work. Innovative technologies and methods may include those listed in the reports of the Superfund Innovative Technology Evaluation ([SITE](#)) Program published by the U.S. Environmental Protection Agency (EPA), reports of the DoD Environmental Security Technology Certification Program ([ESTCP](#)), and those developed under sponsorship of the U.S. Air Force, and others.

## **8.7 Fueling Systems**

The contractor shall provide for the development and execution of work features related to receipt, storage, transfer, and delivery of fuel and fueling systems to meet fueling mission requirements. Work features will include MILCON, minor construction, repair, maintenance, and emergency response for fueling systems. The Contractor shall also be responsible for ancillary environmental assessment, remediation, restoration, and long-term maintenance of the environmental impacts due to impact of releases or spills.

## **8.8 Maintenance and Repair**

The Contractor shall perform maintenance and repair of facilities, systems, and utilities. Maintenance and repair can be performed incidental to other requirements or as a stand-alone project.

## **8.9 Operations and Maintenance**

The Contractor shall perform operations and maintenance (O&M) in support of construction requirements at specified locations. The Contractor shall be responsible for the operation, maintenance, monitoring, optimization, and evaluation of in-place environmental systems, as required. This will include all materials required to replace any exhaustible process materials required to operate and maintain the individual processes specified in the system O&M manuals, equipment manufacturer specifications, and as specified in each TO. The Contractor shall ensure that the operation of the environmental system is optimal and effective at achieving system goals. The Contractor shall also provide onsite personnel, materials, and equipment as required for long-term monitoring and operations.

## **8.10 Remedial Process Optimization**

The Contractor shall perform studies as needed to monitor and evaluate the remedial process in support of construction requirements. The Contractor shall plan, design, and implement

remedial process optimization ([RPO](#)) to ensure the effectiveness and efficiency of the remedial process. The Contractor shall gather feedback and other information for use in the decision process.) Key RPO tasks are described as follows.

- **Remedial Process Evaluation** - Develop 5-year reviews of remedial action records of decision (RODs) and demonstrations of remedial actions operating properly and successfully. ([CDRL A001](#))
- **RPO Scoping Visit** - Conduct base-wide assessments to identify opportunities to implement the RPO strategies. ([CDRL A001](#))
- **Evaluation of Remedial Systems and Environmental Equipment** - Conduct independent evaluation of remedial systems to determine their effectiveness. ([CDRL A001](#))
- **Monitoring Optimization** - Evaluate monitoring programs and plan, design and implement optimization of environmental monitoring programs in accordance with the [AFCEE long-term monitoring \(LTM\) guidance](#) and site- and project-specific DQOs. Perform temporal and spatial analysis of monitoring data using statistical and geostatistical software. ([CDRL A001](#))

## 8.11 Ordnance Removal and Support

The Contractor shall remove, render inert, destroy, recycle, and dispose of used or fired munitions, unexploded ordnance (UXO), and other explosive devices and materials. The contractor shall perform associated investigative work. Ordnance may contain or be within the proximity of chemical, biological, and radiological materials and wastes. The Contractor shall prepare an [Explosive Safety Plan](#) and obtain Air Force Safety and [DoD Explosive Safety Board](#) approval before any response actions are taken. Coordination with the Base/Installation's Explosive Ordnance Disposal (EOD) office or nearest DoD EOD office is required. The Contractor shall perform investigations and plan response actions to remove, transport, and dispose of UXO or munitions residue from exploded ordnance. Detection and identification may require applying innovative and proven technologies. Documentation may involve data inputs to a GIS, and reports of activities. Removal of UXO, other ordnance, and contamination associated with small arms, skeet, and practice ranges may be necessary to further remedial action at some sites. ([CDRL A001](#))

## 8.12 Presumptive and Other Remedies

The Contractor shall implement remedial actions, presumptive remedies, and other remedies.

### 8.12.1 Requirements

The Contractor shall obtain concurrence for presumptive remedial actions with appropriate primacy agencies through the COR or installation POC. In support of the remedy, the Contractor shall be required to determine contaminant fate and transport, and hydrogeologic properties; perform groundwater modeling, and perform any other modeling or technical analysis in support of multi-media requirements. The Contractor shall analyze and convert existing groundwater

monitoring wells for use as appropriate. The Contractor shall perform field investigations, risk assessments, and risk mitigation. The Contractor shall report on activities, modify designs and specification plans, and provide documentation. The Contractor shall conduct tests to evaluate the effectiveness of the technologies utilized and maintain optimum system performance. The Contractor shall develop O&M manuals for new and modified systems and components. When required, the Contractor shall develop, update, and implement a long-term O&M plan to maintain effectiveness of remedial systems operations. ([CDRL A010](#))

### **8.12.2 Regulatory Site Closure**

In support of remedial actions, the Contractor shall close sites in accordance with all applicable local, state and federal regulations, and agreements with host nations. The Contractor shall prepare the closure reports and other applicable documents and provide any supporting documentation and data required by the regulatory agencies. To satisfy closure requirements, the contractor may be required to do additional investigation, remediation, and/or documentation. Closure will be considered complete upon receipt of signed regulatory concurrence.

### **8.13 Radiological Waste Removal and Support**

Contractor shall remove, render inert, destroy, recycle, and dispose of radiological waste and materials. The Contractor shall perform associated investigative work as required.

## **9.0 TRADITIONAL REQUIREMENTS**

The Contractor shall perform a full range of activities to meet all customers engineering and construction requirements as described in each TO. Requirements may include construction, demolition, repair, emergency response, and operations and maintenance tasks for traditional engineering and construction needs.

The Contractor shall execute traditional engineering and construction projects. The Contractor shall plan, develop cost estimates, install, construct, test, operate, maintain, monitor, optimize, and decommission any site in accordance with each TO. The Contractor shall perform work at remote sites and shall document all activities as stated herein.

The Contractor shall perform incidental support such as designing, planning, programming, scoping, studying, investigating, evaluating, and consulting on traditional engineering and construction efforts. The Contractor shall also provide training and operational support to Government and other contractor personnel regarding the operations and maintenance of equipment, systems, and facilities.

### **9.1 Construction**

Upon approval of the CO or Administrative CO, the Contractor may commence on-site construction activities. The Contractor shall provide the manpower, equipment, material,

services, and transportation necessary to review, plan, develop and implement quality control and oversight services during the construction phase of each TO. Details regarding construction management requirements, inspection and testing, construction facilities and temporary controls, environmental protection, quality control system, construction quality control, and project closeout will be provided in each TO.

### **9.1.1 Pre-Final Inspection**

The Contractor shall conduct a pre-final walk through inspection and publish the pre-final inspection findings in a pre-final inspection report. Details will be provided in each TO. ([CDRL A001](#))

### **9.1.2 Final Inspection**

The Contractor shall conduct a final inspection and publish the findings in a final inspection report in accordance with the format specified at the pre-construction conference and the RFP/RFQ. The inspection shall concentrate on the items identified at the pre-final inspection and recorded in the pre-final report. The final inspection report shall (1) certify that all items of the design have been implemented and that the construction is complete; (2) include a record of “signed and sealed” as-built drawings and specifications verifying that all development standards have been met. At the final inspection, the Contractor shall present a completed [DD Form 1354](#), Transfer and Acceptance of Real Property to the Base Civil Engineer (BCE) or other appropriate organization for signature and acceptance. Details will be provided in each TO. ([CDRLs A001, A013](#))

### **9.1.3 Delivery and Warranty**

The Contractor shall complete all inspection and commissioning requirements prior to final inspection. The warranty shall be issued in accordance with [FAR 52.246.21](#). Extended warranties offered by the Contractor and its subcontractors or suppliers may be accepted at the Government’s discretion.

## **9.2 Demolition**

The Contractor shall demolish facilities, systems, and other improvements. Demolition activities can be ancillary to other requirements or a stand-alone project. The Contractor shall conduct demolition efforts in conjunction with such activities as new construction or renovation, removal of outdated facilities, and site clearing from natural disasters. The Contractor shall perform surveys as part of demolition efforts.

## **9.3 Emergency Response**

The Contractor shall perform emergency response services. The Contractor can perform emergency repairs to facilities, systems, improvements, or utilities in the course of executing TO

requirements or as stand-alone activities. The Contractor shall perform emergency response to situations arising from project activities or actions from others.

#### **9.4 Maintenance and Repair**

The Contractor shall perform maintenance and repair of facilities, systems, and utilities. Maintenance and repair can be performed incidental to other requirements or as a stand-alone project.

#### **10.0 POINTS OF CONTACT (POCs)**

POCs will be specified as appropriate for each TO.

#### **11.0 ABBREVIATIONS, ACRONYMS and TERMS**

Refer to the Acronym List posted on the WERC website for the abbreviations, acronyms, and terms commonly used.