

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE J - FFP	PAGE OF PAGES 1 of 2
2. AMENDMENT/MODIFICATION NO P00001	3. EFFECTIVE DATE 05 MAR 2001	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (if applicable)
6. ISSUED BY NSW/PKVC/A	CODE FA8903	7. ADMINISTERED BY (if other than item 6)	CODE 54404A
AIR FORCE MATERIEL COMMAND INTEGRATED SYSTEMS WING/IKV 3207 NORTH ROAD BROOKS AFB TX 78235-5383 NANCY L. TROYER (210) 536-4516 nancy.troyer@hqalcee.brooks.af.mil		DCMC SAN ANTONIO 615 EAST HOUSTON CT P O BOX 1040 SAN ANTONIO TX 78294-1040	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) PARSONS ENGINEERING SCIENCE INC 901 NE LOOP 410 SUITE 610 SAN ANTONIO TX 78209		9A. AMENDMENT OF SOLICITATION NO.	9B. DATED (SEE ITEM 11)
<div style="text-align: center; font-size: 2em; opacity: 0.5;">ORIGINAL</div>		10A. MODIFICATION OF CONTRACT/ORDER NO. F41624-00-D-8024	10B. DATED (SEE ITEM 13) 29 JUN 2000
		CODE UUNGS	FACILITY CODE
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS			
<input type="checkbox"/> The above numbered solicitation is amended as set forth in item 11. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing forms 11 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.			
12. ACCOUNTING AND APPROPRIATION DATA (if required)			
13. THIS ITEM APPLIES ONLY TO MODIFICATION OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.			
(X) A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: ( ) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. ITEM 10A B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(f). X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of the Parties D. OTHER (Specify type of modification and authority)			
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies in the issuing office.			
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings including solicitation/contract subject matter where feasible.) SUBJECT: Revised Statement of Work, Corrections and CDRL Additions Payment Office: HQ0339 DFAS-CO/West Entitlement Operation P O Box 182381 Columbus OH 43218-2381 Keith.Matowitz@hqalcee.brooks.af.mil			
15A. NAME AND TITLE OF SIGNER (Type or print) PETEC WALCH PROGRAM MANAGER		15B. NAME AND TITLE OF SIGNER (Type or print) KEITH G. MATOWITZ Contracting Officer	
15B. CONTRACT/ORDER NUMBER 		15C. DATE SIGNED 5 MAR 01	15D. UNITED STATES OF AMERICA BY
NSN 7540-01-152-8070 PREVIOUS EDITION UNUSABLE ComWrite Version 4.0.3 Created 20 Feb 2004 12:33 PM		STANDARD FORM 30 (REV 10-03) Prescribed by GSA FAR (48 CFR) 53.243	

1. This modification is issued to replace the Statement of Work, correct some paragraphs in the basic contract and add CDRLs to contract.

2. SECTION G, paragraph G007 ORDERING PROCEDURES (OCT 1999): Paragraph (e)(5) is changed to read as follows:

(5) The Contracting Officer will issue a unilateral delivery order which will include:

3. Exhibit A, CDRL A054, A055 and A056 are added to Section J.

4. Exhibit B, CDRL B025 and B026 are added to Section J.

5. Section J

<u>Document</u>	<u>Pages</u>
Exhibit A	103
Exhibit B	74
Attachment 1	53

<b>CONTRACT DATA REQUIREMENTS LIST</b> (1 Data Item)						Form Approved OMB NO. 0704-0188			
Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden, estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project(0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR NO listed in Block E.									
<b>A. CONTRACT LINE ITEM NO.</b> 0007 AND 0008			<b>B. EXHIBIT</b> A		<b>C. CATEGORY:</b> TDP                      TM                      OTHER MISC				
<b>D. SYSTEM/ITEM</b> 3P A&E				<b>E. CONTRACT/PR NO.</b> P00001 F41624-00-D-8024/BC /00		<b>F. CONTRACTOR</b> PARSONS ENG SCIENCE INC.			
<b>1. DATA ITEM NO.</b> A055		<b>2. TITLE OF DATA ITEM</b> TECHNICAL REPORT - STUDY/SERVICES				<b>3. SUBTITLE</b> QUARTERLY REPORT ON USE OF CHEMISTRY LABORATORIES			
<b>4. AUTHORITY</b> (DATA ACQUISITION DOC NO.) DI-MISC-80508			<b>5. CONTRACT REFERENCE</b> SOW PARA: 4.3.10.1			<b>6. REQUIRING OFFICE</b> AFCEE/ERC			
<b>7. DD 250 REQ</b> LT	<b>9. DIST STATEMENT</b> REQUIRED	<b>10. FREQ</b> ORTLY	<b>12. DATE OF FIRST SUB</b> BLOCK 16	<b>14. DISTRIBUTION</b>					
<b>8. APP CODE</b> A	<b>11. AOD</b> BLOCK 16	<b>13. DATE OF SUBSEQ SUB</b> BLOCK 16	<b>a. ADDRESSEE</b>		<b>b. COPIES</b>				
<b>16. REMARKS</b> Block 4: DID Tailoring: Only the following paragraphs are applicable: 10.2(a) and 10.2 (c)2.  Block 11: The As of Date shall be the end of the FY quarter.  Blocks 12 & 13: The Report shall include the name and location of the laboratory, the task order number of the work, and analysis, media, and number of samples. The Report shall be submitted no later than 20 calendar days after the end of the FY quarter. Sample format is attached.  Block 14: The reproducible copy shall be on CD-ROM in IBM-compatible format. The Air Force utilizes Microsoft 97 Products.  Block I: Signature authority is evidenced by Contract Officer signature on the modification document. Individual task orders shall have signatures.  Block J: This shall be the award date, however, approval dates shall be inserted for individual task orders.			<b>15. TOTAL ----&gt;</b>		<b>Draft</b>	<b>Final</b>			
			AFCEE/ERC		1	1	1		
			AFCEE/MSCD		LT	LT	0		
			HSW/PKVC		1	1	1		
			DCMA		0	1	0		
			SEE BLOCK 16						
					2	3	2		
<b>G. PREPARED BY</b> AFCEE/MSCD			<b>H. DATE</b>	<b>I. APPROVED BY</b>			<b>J. DATE</b>		
<b>17. PRICE GROUP</b> N/A		<b>18. ESTIMATED TOTAL PRICE</b>			Page <u>1</u> of <u>1</u> Pages				
				N/A					

<b>QUARTERLY TESTING LABORATORY UTILIZATION REPORT</b>						
Air Force Center for Environmental Excellence - Consultant Operations - AFCEE/ERC						
<b>Contractor:</b> CH2MHILL		<b>DATE:</b> 1-Jan-01				
LAB	LOCATION	T.O.	LAST QUARTERS ANALYSIS		# OF SAMPLES	
			ANALYSIS	MEDIA		
Test America Gabriel	Denver CO	5	8260	Groundwater	100	
	San Antonio TX	7	413.2	Groundwater	500	
<b>PROJECTED FOR NEXT QUARTER</b>						
Energy labs New England Testing	Sacramento CA	10	418.1	Groundwater	1000	
	Boston MA	12	413.2	Groundwater	500	

Sample Quarterly Report Format - CDRL A055





<b>CONTRACT DATA REQUIREMENTS LIST</b> (1 Data Item)					Form Approved OMB NO. 0704-0188		
Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden, estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project(0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR NO listed in Block E.							
<b>A. CONTRACT LINE ITEM NO.</b> 0009		<b>B. EXHIBIT</b> B		<b>C. CATEGORY:</b> TDP                      TM                      OTHER ADMN			
<b>D. SYSTEM/ITEM</b> 3P A&E			<b>E. CONTRACT/PR NO.</b> F41624-00-D-8024/BC /01		<b>F. CONTRACTOR</b> PARSONS ENG SCIENCE INC.		
<b>1. DATA ITEM NO.</b> B025	<b>2. TITLE OF DATA ITEM</b> PRESENTATION MATERIALS				<b>3. SUBTITLE</b> NOT APPLICABLE		
<b>4. AUTHORITY</b> (DATA ACQUISITION DOC NO.) DI-ADMN-81373			<b>5. CONTRACT REFERENCE</b>			<b>6. REQUIRING OFFICE</b> HSW/BC	
<b>7. DD 250 REQ</b> LT	<b>9. DIST</b> STATEMENT	<b>10. FREQ</b> BLK16	<b>12. DATE OF FIRST SUB</b> BLOCK 16		<b>14. DISTRIBUTION</b>		
<b>8. APP CODE</b> A	<b>REQUIRED</b> A	<b>11. AOD</b> N/A	<b>13. DATE OF SUBSEQ SUB</b> BLOCK 16		<b>a. ADDRESSEE</b>		<b>b. COPIES</b>
<b>16. REMARKS</b> Blocks 10, 12 & 13: Submit presentation materials on the date of program reviews. The first program review shall be held at the Mentor's facility 4 months after Task Order award. A second program review will be held by telephone 8 months after Task Order award. The final program review shall be held at the Mentor's facility during the 12th month of the Task Order period of performance.  Block I: Signature authority is evidenced by Contract Officer signature on the basic contract award document. Individual task orders shall have signatures.  Block J: On the basic contract, this shall be the award date, however, approval dates shall be inserted for individual task orders.  Addressee: 311 HSW/BC Attn: Janie Campos 8101 Arnold St., Bldg 1160 Brooks AFB, TX 78235					AFCEE/MSCD	LT	LT
					HSW/BC		1
					DCMC		1
					SEE BLOCK 16		
<b>15. TOTAL ----&gt;</b>					0	2	0
<b>G. PREPARED BY</b> AFCEE/MSCD			<b>H. DATE</b>	<b>I. APPROVED BY</b>		<b>J. DATE</b>	
<b>17. PRICE GROUP</b> N/A		<b>18. ESTIMATED TOTAL PRICE</b> N/A			Page <u>1</u> of <u>1</u> Pages		



**STATEMENT OF WORK**

**For**

**Architect-Engineering (A-E) Services to Support Environmental Programs  
of Interest to the Government**

**14 January 2000 15 February 2001**

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## SECTION C -- STATEMENT OF WORK

for

### A-E Environmental Services

#### 1. INTRODUCTION

This statement of work (SOW) defines requirements for A-E services for environmental programs and projects as assigned and in accordance with applicable regulatory guidance. Place of performance shall be at various Government installation(s) in the 50 United States, at various overseas Government locations, Government territorial possessions, and locations of interest to the Government.

##### 1.1 SCOPE

In carrying out work assignment(s) issued as a task order (TO) under the contract, the contractor shall: furnish the personnel, services, equipment, materials, facilities and other requirements necessary for, or incidental to, the performance of work set forth herein. Primary technical services shall be performed by individuals performing professional services that are licensed members of architectural and engineering professions, and individuals in their employ, including those who are recognized as technical consultants in their respective field. The contractor shall be capable of addressing and interpreting all aspects of environmental law and regulation, including the preparation and presentation of expert testimony if required. Pollution prevention is an important aspect of this contract and will be incorporated in individual task orders as appropriate. Some tasks may require access to or the review of classified material, as identified in individual orders. Some tasks may require planning and logistical support, to include on-site translation and/or interpretation, at various meetings and conferences worldwide. Task Orders will consist of the following types of services:

##### 1.1.1 Title I Services.

The contractor shall conduct all efforts necessary to prepare the design of restoration, pollution prevention, compliance, and conservation environmental projects. Title I efforts include all aspects of design such as preparation of contract plans, specifications, scheduling, cost estimates, and preparation of operating and design manuals. Title I efforts also encompass those efforts required to support and develop the design, including: planning and programming; program management; scoping; studies; investigations; evaluations; consultations; conceptual design; value engineering; and operation, monitoring and optimization of environmental treatment or control systems.

### **1.1.2 Title II Services.**

The contractor shall perform supervision, inspection, and oversight of environmental construction projects.

### **1.1.3 Other Environmental A-E Services.**

The contractor shall provide a full range of environmental management services necessary for the implementation of restoration, pollution prevention, compliance, and conservation environmental projects. These efforts include: planning and programming; program management; scoping; studies; services; investigations; evaluations; consultations; conceptual design; value engineering; and operation, monitoring and optimization of environmental treatment or control systems. As well as, other related services for the continuation of an existing environmental program or to establish an initial environmental program.

## **2. APPLICABLE DOCUMENTS**

Comply with all applicable (1) federal, state, and local environmental statutes, instructions, manuals, handbooks, regulations, guidance, policy letters, and rules (including all changes and amendments), and (2) Presidential Executive Orders, in effect on the date of issuance of each TO. For work at overseas locations, contractor shall also comply with all applicable host nation statutes and agreements. In addition, the contractor shall refer to the AFCEE Technical Services Quality Assurance Program, Guidance for Contract Deliverables (GCD), current version, unless previous version is specified in the task order. This GCD is a reference document to be used in the generation of contract deliverables. Base-specific documents shall be identified in each individual TO.

## **3. ADMINISTRATIVE AND MANAGERIAL REQUIREMENTS**

Perform management and planning functions, as well as performance measurement and cost status reporting, during the course of this effort as specified in each TO.

### **3.1 MEETINGS AND CONFERENCES**

#### **3.1.1 Post Award Meeting/Teleconference.**

After the issuance of a TO, attend a post award meeting/teleconference at the location specified by the Contracting Officer's Representative (COR). The purpose of the meeting shall be to become familiar with the work requirements, information, and/or site-specific data addressed under the TO. When required by the TO, shall participate in and/or facilitate an on-site meeting (charrette) to develop plan(s) and alternatives as a working initiative to proceed/formulate the work required by the TO. (CDRL B001, B002, B003)

### **3.1.2 Progress Meetings.**

Attend progress meetings with the installation and/or AFCEE representative(s), as specified in each TO. (CDRL B001, B002, B003)

### **3.1.3 Integration and Planning Meetings.**

Attend meetings during the project's phasing. The purpose of these meetings shall be to review program integration from the planning, environmental analysis, and design phase through the construction phase. It is through these channels, and oversight meetings detailed in the project action plan(s), that any recommended variations from the project plan(s) and specifications shall be identified. (CDRL A001, B001, B002, B003)

### **3.1.4 Attend Public Meetings and Hearings.**

Present technical information and provide logistical support (e.g., preparation of handouts, report(s), recordings, verbatim transcripts, slides, or synopsis of the meetings/hearings) for events and/or meetings in support of the Government's position. (CDRL B001, B002, B003)

## **3.2 REGULATORY/ PROFESSIONAL INTERFACE**

Assist in the application of general and site specific regulatory requirements that pertain to assigned AFCEE projects and maintain currency with changing DOD, Federal, State, local, and host nation statutes and regulations as follows:

### **3.2.1 Interactions.**

Assist AFCEE in interactions with: military and federal activities/agencies; state/local/host nation agencies; the public; and other interested parties during administrative or judicial proceedings related to the assigned AFCEE project. Assistance shall include providing presentation materials, agendas, minutes, publications, news releases, public notices, and maintain/update mailing list. (CDRL B001, B002, B003, B004, B005, B006, B007)

### **3.2.2 Comments.**

Assist AFCEE in project technical review, analysis, and discussions to integrate comments from federal, state, host nation, and local Governments on programs and related data and studies. Develop options for responses and prepare report(s) to communicate Government environmental priorities to regulatory agencies, consultants, interested parties, and other private/public/Government interest, as directed by AFCEE. (CDRL A002)

### **3.2.3 Interpretation.**

Assist AFCEE with the review and interpretation of new statutory and regulatory requirements and make recommendations for Government facility planning and

environmental policy integration as it applies to the assigned AFCEE project.  
(CDRL A002)

### **3.3 SPECIAL NOTIFICATION**

#### **3.3.1 Health Risks.**

Immediately report to the Contracting Officer and the Contracting Officer Representative (COR), via telephone or e-mail pursuant to TOs any issues or incidents which may indicate potential imminent risk to contracted, federal, or host nation personnel, or the public at large or the environment. Following the telephone or e-mail notification, a written notice with supporting documentation shall be prepared and delivered within three (3) working days to the Contracting Officer. Upon request of the Contracting Officer, or their COR, provide pertinent raw laboratory data within three (3) weeks of the telephone or e-mail notification, documenting the concern and risk. (CDRL A003)

#### **3.3.2 Identification and Change of Critical Contractor Personnel.**

Submit an organizational chart displaying key personnel involved in the effort and their respective labor categories as specified in each TO. Notify the COR of all professional personnel to work on specific tasks under the task order. Obtain COR approval of any proposed changes in project personnel along with the steps taken/proposed to ensure there are no impacts to the schedule or costs associated with individual tasks. Identify to the COR all subcontractors to be used under task orders issued pursuant to this SOW, prior to contract and work being initiated. Provide to the COR subcontractor qualifications prior to contract utilization. (CDRL A004)

#### **3.3.3 Unexploded Ordinance (UXO).**

If the potential for unexploded ordinances (UXO) exists, the contractor shall insure work site has been cleared of all UXOs prior to commencement of field activities. If UXOs are discovered during field activities, immediately report the discovery to the base point of contact (POC) and COR via telephone. Commencement of field activities cannot continue until clearance is authorized by the CO. (CDRL A003)

### **3.4 LABORATORIES**

Perform a laboratory subcontract pre-award audit before the laboratory receives project samples. Where applicable, the contractor shall use only qualified laboratories that have been audited and approved by the state in which the TO is performed. In addition, a follow-up audit shall be performed at a minimum of once per project that focuses on project specific requirements. All audit reports shall be made available to the AFCEE upon request. (CDRL A005)

### **3.4.1 General.**

Laboratories may be subject to on-site AFCEE audits of their Quality Assurance/Quality Control (QA/QC) protocols and procedures. All laboratories shall meet Data Quality Objectives (DQOs) specified in task order project-specific Sampling and Analysis Plan(s) (SAP). The labs shall perform QA/QC requirements as specified in the project/site specific SAPs. The analytical capabilities of the laboratory shall be sufficient for the methods specified in the SAP, and the laboratory shall have sufficient through-put capacity to handle the necessary analytical load during all field activities.

### **3.4.2 On-site Laboratories.**

An on-site laboratory may be utilized for the analytical methods required by the approved project/site specific SAP. The laboratory shall meet all applicable certification requirements for the necessary analysis methods prior to its implementation. On-site laboratories shall meet the DQO and QA/QC requirements specified in the site specific SAP. All proposed deviations from the above requirements shall be submitted in writing to the COR for concurrence prior to proceeding with the affected work. (CDRL A006)

## **3.5 WORK SITE REQUIREMENTS**

### **3.5.1 Safety Requirements.**

Responsible for protecting the lives and health of employees and other persons; preventing damage to property, materials, supplies, and equipment, avoiding work interruptions and complying with OSHA safety and health regulations and Base safety office requirements. All on-site workers (contractor and subcontractor) performing hazardous operations, including working with hazardous materials, must have completed the OSHA 1910.120 HAZWOPER training and/or other applicable training, plus annual refresher courses. Maintain documentation supporting training records and have written Health and Safety Plan on site available for workers and/or regulatory review. Provide the CO copies of any OSHA report(s) submitted during the duration of the TO. (CDRL A007)

### **3.5.2 Work-Site Maintenance.**

Maintain the work site to: prevent the spread of contamination, provide for the integrity of the samples obtained, provide for the safety of all individuals in the vicinity of the work site areas, and prevent the release of any contamination to the environment. The work site shall be well marked to prevent inadvertent entry into all work areas. Access to work areas shall be monitored and thoroughly controlled. Standard work zones and access points for controlled operations shall be established and maintained as the site conditions warrant. Ensure compliance with any federal, state, host nation, and local regulations and QA/QC protocols and procedures for decontaminating tools, equipment, or other

materials, as required. At all times, keep the work area free from accumulation of waste and hazardous materials. Remove non-essential equipment from the work site when not in use. The work-site shall be maintained to present an orderly appearance and to maximize work efficiency. Before completing the work at each sampling site, remove, from the work premises, any rubbish, tools, equipment, and materials that are not property of the Government. Properly dispose of all investigation derived waste. Upon completing the work, leave the area clean, neat, orderly, and return work site(s) to the original condition.

### **3.5.3 Minimize Impacts to Existing Operations.**

Use Global Positioning System (GPS) at all field locations to mark all points of the field investigation. GPS data will be recorded in a format compatible with the installation's Geographical Information System. The installation POC and the COR shall be consulted to properly position sampling locations (wells, borings, soil gas probes, etc.) with respect to site locations, to minimize the disruption of installation activities, to minimize disruption of natural and cultural resources, and to avoid penetrating underground utilities. The contractor shall coordinate all field survey operations with installation personnel to attain these objectives. Provide for the detection of underground utilities utilizing geophysical or other techniques. All necessary permits and coordination shall be completed prior to commencement of individual sampling operations. Frequent communication and coordination with installation personnel shall be necessary to accomplish these goals. (CDRL A008)

### **3.5.4 Storage.**

Responsible for security and weatherproofing of stored material and equipment. Equipment or materials used in the work, requiring storage on the installation, shall be placed at site(s) designated by the installation POC. At the completion of the work, all temporary fences and structures (used to protect materials and equipment) shall be removed from the installation unless directed otherwise by the COR. Clean the storage area of all debris and material, performing all repairs as required to return the site to its original condition. Maintain an inventory of Government property, a copy of Government property control procedures at the site, and dispose of Government property as directed by the CO.

### **3.5.5 Site Access Badges.**

Responsible for obtaining and monitoring assigned (used by his/her own staff) security badges 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).

### **3.5.6 Permits and Site Access Agreements.**

Provide technical support to the AFCEE in the identification and procurement of permits and/or access (including off-base easements and leases) agreements as required to implement a site-specific project. (CDRL A008)

## **3.6 WORK BREAKDOWN STRUCTURE**

Proposals, project schedules, and financial report(s) shall be organized according to the work breakdown structure (WBS) in Exhibit D to the basic contract. Tasks associated with non-remedial activities shall be tracked separately using the following WBS:

### **32.00.01 Professional Planning and Programming**

- .01. Planning Actions.
- .02. Programming Actions.
- .03. Program Management Integration.
- .04. Tracking of Performance Metrics and Quality Performance Indicators.
- .05. Statement of Work (SOW)

### **32.00.02 Task Order Scoping and Plan Development Services**

- .01. Site Survey.
- .02. Easement Survey.
- .03. Project Plans.

### **32.00.03 Studies and Services**

- .01. Community Involvement.
- .02. Conference Support.
- .03. Environmental Performance Support.
- .04. Environmental Information Management System Support Services.
- .05. Repository.
- .06. Administrative Record.
- .07. Management Action Plans.
- .08. Environmental Information Materials.
- .09. Risk Assessments.
- .010. Quality Assurance and Quality Control (QA/QC).
- .011. Environmental Impact Analysis Process (EIAP).
- .012. Environmental Baseline Surveys.
- .013. Natural and Cultural Resources Plans and Programs.
- .014. Base Comprehensive Planning.
- .015. Air Traffic and Air Space Analysis
- .016. Noise Management
- .017. Environmental Compliance Assessment and Management Program (ECAMP).

- .018. Air Quality.
  - .019. Hazardous Waste Management.
  - .020. Integrated Solid Waste Management.
  - .021. Hazardous Material Management.
  - .022. Pesticide Management.
  - .023. Petroleum, Oil, Lubricants (POL) and Other Storage Tank(s) Management.
  - .024. Polychlorinated Biphenyls (PCBs).
  - .025. Asbestos.
  - .026. Radon and Related Products.
  - .027. Water Quality.
  - .028. Lead-Based Paint and Lead.
  - .029. Integration of Compliance Assurance and Pollution Prevention.
  - .030. Compliance.
  - .031. Pollution Prevention.
  - .032. Prototype Processes.
  - .033. Precision Leak Testing.
  - .034. Resource Conservation.
  - .035. Noise and Vibration Studies
  - .036. Preliminary Assessments and Site Inspections (PA/SI).
  - .037. Remedial Investigation (RI).
  - .038. Low Level Radionuclide Activities.
  - .039. Informal Technical Information Reports (ITIRs).
  - .040. Feasibility Study (FS).
  - .041. Peer Review Support.
  - .042. Engineering Evaluation/Cost Analysis (EE/CA).
  - .043. Treatability Studies, Pilot Tests, Bench Scale Tests, Interim Remedial Actions.
  - .044. Proposed Plans (PP) and Records of Decision (RODs), Decision Documents (DD), and No Further Response Action Planned (NFRAP).
  - .045. Environmental Monitoring.
  - .046. Remedial Process Optimization.
  - .047. Remedial Action Operations.
  - .048. Warranty of Installed Equipment and Systems.
- 32.00.04 Technology (Demonstration) Evaluations
- .01. Initial Methodologies.
  - .02. Commercial and Emerging Technologies.
- 32.00.05 Miscellaneous Deliverables
- .01. Photo Documentation.
  - .02. Environmental Program Information Management System (Environmental IMS) Data Management.

**32.00.06 Title I Services**

- .01. Design.
- .02. Design Phases.

**32.00.07 Evaluation Support**

- .01. Title II Services.
- .02. Review of Deliverables.
- .03. Technical Evaluation of Response to Solicitations

**3.7 MANAGEMENT, PLANNING, AND REPORTING REQUIREMENTS**

Plan project activities, including the development, implementation, and maintenance of project schedules, events, status of resources, report(s) on the activities and progress toward accomplishing project objectives, and document for Government review and approval the results of the project efforts for each TO.

**3.7.1 WBS Requirements.**

Prepare and submit for approval a work breakdown structure (WBS) as specified in each individual TO. This WBS shall be used to report the cost and schedule status for each project. (CDRL B008)

**3.7.2 Integrated Master Schedule.**

Prepare and submit an Integrated Master Schedule (IMS) for approval. The IMS shall detail the project schedule and status through the use of Gantt charts, network logic diagrams, and PERT/CPM analyses. Schedule activities shall be reported by the approved WBS. (CDRL B009)

**3.7.3 Project Planning Chart.**

Prepare and submit a project planning chart (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. Schedule activities shall be reported by the approved WBS. (CDRL B010)

**3.7.4 Contractor's Progress, Status, and Management Report.**

Prepare and submit a Contractor's Progress, Status, and Management Report (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 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. (CDRL B011)

### **3.7.5 Performance and Cost Report.**

Prepare and submit a Performance and Cost Report (PCR). The PCR provides the current status and projected requirements for funds, man-hours, and work completion. (CDRL C001)

### **3.7.6 Funds and Man-Hours Expenditure Report.**

Implement and maintain a cost accounting system and prepare a Funds and Man-Hours Expenditure Report (FMER) to correlate the status of expensed funds and man-hours against the progress of the work completed. The FMER and associated graphics shall detail the current project status and identify funds and man-hours required to complete the assigned tasks. (CDRL C002)

## **4. WORK TASKS**

Perform work as specified in each TO. Multi-disciplinary technical capabilities may be required. Services to be performed include support to establish environmental programs, or for continuation of an existing program, including documentation to support funding and execution.

### **4.1 PROFESSIONAL PLANNING AND PROGRAMMING**

Review the installation's mission and supporting facility development requirements to establish program or project requirements. Develop a short term and long range plan of action to achieve compliance with the proposed mission, including regulatory requirements to satisfy current and future site, facility or environmental initiatives necessary to acquire the authority and resources necessary to accomplish the mission's planned work.

#### **4.1.1 Planning Actions.**

Review all available documentation and develop criteria to prioritize requirements, analyze projected environmental projects, provide execution options (funding release dates, obligation schedules and Notice to Proceed milestones), and accomplish other similar recommendations. The contractor shall prepare and submit a Report of Findings summarizing the program requirements, supporting justification, sources of information/interest/activities, with the potential to pose a risk to the project, including human health and/or impacts to the environment. Potential remedies, project funding support, execution timelines, and associated costs shall be provided. (CDRL A009)

#### **4.1.2 Programming Actions.**

Prepare and submit all documentation necessary to acquire the authority and resources to accomplish the work. Maintain a Record File of all actions taken and/or discussed in a secured location by project, by installation and by category of funding authorization. Proactive status reporting shall be maintained showing

the progress of every project assigned from its inception through final closure and project release. Specific project identifiers will be established (using established project numbering system for that installation) for each requirement. Prepare and submit report(s) summarizing the programming actions assigned, their status and highlight those items requiring resolution. All documentation shall be retained in an electronic database. All costing information regardless of its stage in development shall be secured as directed by the CO. (CDRL A010)

#### **4.1.3 Program Management Integration.**

Develop, coordinate, present, publish, and deliver the installation level and headquarters/command level planning, programming and budgeting submissions in support of the military's force structure, associated installation programs, and related projects. Together with the AFCEE POC, develop a master schedule to execute AFCEE support programs. (CDRL B012, B013)

#### **4.1.4 Tracking of Performance Metrics and Quality Performance Indicators.**

Measure the performance of installation(s) and major commands in their accomplishment of all environmental program goals. Assist in the development of performance metrics, including the tracking of data, development of report(s), and recommendation of improvements. (CDRL B014)

#### **4.1.5 Statement Of Work (SOW).**

Review the project documentation to initiate the project scoping, establish the scope of services required, formulate the cost estimating assumptions, develop the cost estimate and facilitate the review of the SOW with installation staff and/or regulatory representatives and provide recommendations through the AFCEE COR to the installation's headquarters. Prepare requested documentation (fully supported with a complete cost estimate and a planning schedule of events) to achieve a final and complete package for continued contracting action to include modifications required after award of the TO. (CDRL A011, C003)

### **4.2 TASK ORDER SCOPING AND PLAN DEVELOPMENT SERVICES**

Perform task order scoping and plan development services to include:

#### **4.2.1 Site Survey.**

Conduct site surveys to enable preliminary scoping of project issues. Visit the assigned site(s) and make all preliminary studies of the site/facility locations and accessibility, number of project locations, number and type of personnel required, number and type of site(s) and supporting data desired, special or modified project capabilities, issues, and procedures required, equipment required, and type of procedures to assure that the project activities comply with applicable requirements. (CDRL A012)

#### **4.2.2 Easement Survey.**

Determine, by registered land surveyor, all project easement locations. Prior to performing any off-base fieldwork or project activities, conduct a survey to determine the closest property line. After project activities, locate easements from closest property line. Establish permanent easement boundaries. Provide a 'metes and bounds' description and plot plan for each easement site. (CDRL A012)

#### **4.2.3 Project Plans.**

Each TO may require project and/or site-specific planning documents and development requirements. Comply with the specifications, procedures and methodologies [such as approved Federal Facilities Agreements (FFAs)] in the site/project specific plan(s). AFCEE COR shall approve (in writing) any proposed modification to, or deviation from, any activity described in these documents, following approval by the CO.

##### **4.2.3.1 Quality Program Plans (QPPs).**

Develop a QPP which will consist of any or all of the following:

###### **4.2.3.1.1 Work Plans.**

The AFCEE Technical Services Quality Assurance Program shall be used as guidance for all phases of work specified in each TO. Prepare test plan(s), including cost estimates. Specific work plan(s) to conduct site activities and analysis as part of future projects may also be specified. Restoration work plan(s) to conduct project analysis and activities may require adherence to data quality objectives (DQO) developed in conjunction with conceptual site model (CSM) and Risk Assessment protocols. (CDRL A013, A014, A015, A016)

###### **4.2.3.1.2 Health and Safety Plan.**

Prepare a Health and Safety Plan to comply with USAF, Occupational Safety and Health Administration (OSHA), US EPA, state, host nation, and local health and safety regulations regarding the proposed work effort. Utilize to the fullest extent possible existing corporate Health and Safety Plans, tailoring them to the current effort. Use US EPA guidelines for designating the appropriate levels of protection needed at the study site(s). Certify to AFCEE that the approved Health and Safety Plan has been reviewed with each employee and subcontractor's employees prior to the time each employee engages in field activities. (CDRL A017)

###### **4.2.3.1.3 Sampling and Analysis Plan (SAP).**

Prepare a SAP. The SAP shall consist of both a Field Sampling Plan (FSP) and a QAPP. If a SAP already has been prepared for a specific base, each TO may require the preparation of project/site specific addenda to the plan(s). SAPs in the Restoration program shall be prepared using the AFCEE Quality Assurance Program Plan (QAPP), AFCEE Technical Services Quality Assurance Program, and project Data Quality Objectives (DQOs). (CDRL A018)

#### **4.2.3.2 Design Work Plan.**

Develop a design work plan. The design work plan shall document the overall management and implementation strategy for design activities. It shall include the responsibilities and authorities of all organizations and key personnel involved in the design. Site-specific aspects of the proposed design work plan shall be detailed, and any deviations from the existing or previous RI/FS work plan shall be highlighted. Receive approval for the design work plan before proceeding to design. The design work plan shall detail the following areas: (CDRL A014, A019)

- a) Requirements for additional field data collection.
- b) Requirements for treatability/feasibility studies.
- c) Develop requirements for Permits/Access Agreements.
- d) Schedule for completion of the design.
- e) Design criteria.
- f) Tentative treatment schemes.
- g) Health and Safety Plan.
- h) Quality Assurance/Quality Control.
- i) Proposed stakeholder (community) information and outreach activities, per Emergency Planning and Community Right to Know Act (EPCRA)

### **4.3 STUDIES AND SERVICES**

Provide all labor, materials, and services necessary to deliver, for government review and approval, those studies and services that support environmental programs and projects at locations of interest to the Government. These activities include:

#### **4.3.1 Community Involvement.**

Support the installation community involvement program. Work includes community relations plan (CRP) preparation, internal as well as public meeting support and facilitation, media support, risk communication, strategic planning, management of an information repository, support of Government to Government Relations activities, Community Advisory Board (CAB) support, Restoration Advisory Board (RAB) support and other community outreach activities.

##### **4.3.1.1 Plan Production.**

Prepare plan(s) to support the community involvement program. These include but are not limited to the community relations plan (follow CRP guidance contained in OSWER Directive 9230.0-3B, "Community Relations in Superfund, A Handbook"), as well as management plan(s) and communication strategies for specialized community involvement programs, as required. Examples of such plan(s) include specific operable unit (OU) plan(s), property access plan(s), risk communication strategies, and private water supply testing plan(s). (CDRL A020)

#### **4.3.1.2 Supporting Activities.**

Support community involvement and outreach activities. This includes, but is not limited to, preparation of fact sheets, support of neighborhood, town, and other public meeting and other activities, posterboard sessions, conducting stakeholder interviews, support of news releases and public notices, media support, participation in risk communication, website support, training, and strategic planning and evaluation of the installation community involvement program. (CDRL B001, B002, B003, B004, B005, B006, B007, B015, B016, B017)

#### **4.3.2 Conference Support.**

Develop conference program, training sessions and arrangements for Government sponsored environmental conferences. (CDRL B001, B002, B003, B004, B005, B006, B007, B015)

#### **4.3.3 Environmental Performance Support.**

Provide technical support for all aspects of environmental management, engineering, and science technology including development and publication of training related materials, curriculum, and testing methods. Analyze Air Force and DOD environmental education and training programs to evaluate effectiveness and to recommend specific strategies for improvement. Provide expertise in all environmental management, engineering, and scientific areas to develop and maintain professional orientation and expertise. (CDRL A021, B001, B015)

#### **4.3.4 Environmental Information Management System Support Services.**

Provide technical information management expertise to assist in the development, production, implementation, updating, managing, and maintenance of environmental information management systems. Provide expertise to query Oracle, Microsoft Access, and other sophisticated relational database management systems (RDBMS)

##### **4.3.4.1 Database and System Development, Performance, and Recording.**

Provide information management expertise to the Air Force for environmental Information Management Systems itemized in task orders. Information Management Systems may address all aspects of information management including acquisition, storage, use (includes web-based formatting), transfer, and reporting of data. Work will include assessment of information needs and recommendations to improve business practices as well as work to develop, produce, implement, update, manage, and maintain environmental Information Management Systems. Work may be for establishing stand-alone systems, modifying existing systems, or for linking information in existing systems. Make maximum use of commercial off the shelf software when recommending and developing hardware and software solutions. Deliver documented programming code in its native application along with the developed system. Develop and

produce information management manuals and or tutorials for Information Management Systems and other documentation as needed for proper implementation of Information Management Systems. Provide detailed orientation for personnel to properly manage and control all aspects of Information Management Systems. (CDRL A021, B015, B016, B017)

#### **4.3.4.2 Computer Aided Design Drawings (CADD) and Geographic Information System (GIS) Development, Performance, and Recording Support Services.**

Provide technical support to installation(s), Major Commands, Operating Locations, and other sites of interest to the Government for environmental management CADD and GIS systems. Analyze current systems and recommend strategies for improvement. Establish and update the GIS as specified in each task order. GIS software shall be compatible with ERPIMS and shall provide a repository relational database to store site-specific data. The GIS database development program shall correct slight location changes introduced during data compilation, digitizing, conversion from one map projection to another, etc. Use quality assurance methods (approved by the Air Force in advance) to address: 1) On-site verification of some features, 2) Second party review of data upload, 3) Comparison of some features to related features in other data layers. Submit Report of Findings detailing the acceptability of the data and/or recommendations to improve the data quality and improve data quality assurance procedures. (CDRL B018, B019)

#### **4.3.5 Repository.**

Provide a repository of technical and regulatory documents applicable to the accomplishment of the task orders and maintain a database of due-in deliverables, their corresponding CDRLs, and an on-line inventory of data management processes to ensure compliance with applicable regulations and AFCEE requirements. (CDRL B020)

#### **4.3.6 Administrative Record.**

Prepare, compile, and maintain an Administrative Record containing pertinent information regarding project decisions. The Administrative Record shall consist of documents and correspondence as dictated by the project manager, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), etc. This task shall consist of two parts. The first is to review existing documentation and recommend documents and information to be included in the record, and to develop a proposed filing or organizing system. Present this information in an Administrative Record letter report for approval by the Government. The second part of this task is to compile the required bound copies and establish electronic copies of the Administrative Record, including all report(s), documents, correspondence, and other information currently available. The bound copies shall be maintained at areas to be designated by the Government. The electronic copy shall be maintained in the Chief of Engineer's office, the Base

Environmental Coordinator's office or the Base Planners office. An Administrative Record Index shall be prepared. (CDRL B020)

#### **4.3.7 Management Action Plans.**

Perform comprehensive development, analysis, and planning in support of installation and major command pollution prevention programs and plan(s). Incorporate compliance and pollution prevention (CAPP) and compliance through pollution prevention (CTP2) program initiatives and objectives into installation and major command policies, programs, and management action plan(s). Develop management action plan(s) so that projects and planning from compliance and P2 program areas such as air, water, hazardous materials/waste, affirmative procurement, and qualified recycling are fully incorporated. Perform timeline and program forecast development showing how current and out-year projects will progress CAPP programs toward achieving Air Force, major command, and installation goals. Integrate management action plan(s) with other compliance and P2 program planning documents. Prepare a Management Action Plan/BRAC Cleanup Plan to describe the overall approach, major tasks and scope, time sequencing of events, and major decision points to complete all environmental efforts to ensure consistency with the NCP. This Plan is intended as a planning document and management tool to track the progress of Environmental program efforts at a specific base. (CDRL A022)

#### **4.3.8 Environmental Information Materials.**

Prepare, revise, and update the installation(s) environmental information materials. Support management of information materials in paper and electronic form, including World Wide Web publication. (CDRL B001, B016)

#### **4.3.9 Risk Assessments.**

##### **4.3.9.1 Human Health Risk Assessment.**

Refer to the Risk Assessment Methods - Appendix D of the HQ AFCEE Guidance for Contract Deliverables and the Chemical and Site Specific Risk Assessment (CSSRA) toolbox for Contract Deliverables. Review and make recommendations to and/or prepare conceptual site models (CSMs) for risk assessment, Risk Screening Analyses (RSAs) and Full Risk Assessments (FRAs). Perform Risk Evaluation of Preliminary Remediation Goals and submit a Risk Evaluation of Remedial Alternatives in conformance with regulatory guidance. (CDRL A023)

##### **4.3.9.2 Ecological Risk Assessment.**

Refer to the Risk Assessment Methods - Appendix D of the HQ AFCEE Guidance for Contract Deliverables and the Chemical and Site Specific Risk Assessment (CSSRA) toolbox for Contract Deliverables. Review and make recommendations to establish, and/or perform an initial Ecological Risk Assessment to: document actual or potential effects of contaminants on protected wildlife species, habitats, or special environments; define the extent of the contamination; evaluate the

ecological effects of remedial alternatives; and develop the remediation criteria in conformance with regulatory guidance. (CDRL A023)

#### **4.3.10 Quality Assurance and Quality Control (QA/QC).**

Review, plan and/or develop QA/QC procedures and activities to ensure that AFCEE contractors and subcontractors are generating accurate and defensible data and analyses in support of AFCEE project/program activities. When QA/QC elements for emerging technologies are not available, the contractor shall develop them to meet program needs. The contractor shall perform technical analyses of site data and report(s) in accordance with documents required in section 2. The contractor shall analyze comments submitted by agencies with regard to the AFCEE project efforts, develop and present recommendations concerning program and process compliance programs, analyze technical data from project site(s); and develop or analyze existing conceptual and final project designs to ensure compliance with applicable laws, regulations, instructions, technical orders, and executive orders. For long term monitoring projects the contractor shall evaluate and recommend cost reduction strategies. (CDRL A005, A013, A014, A017, A018, A024)

##### **4.3.10.1 Double Blind QA/AC Laboratory Proficiency Testing (PT) Program**

The contractor shall appoint a single point of contact (POC, either the contractor Lead Chemist or Quality Assurance Officer for this contract) to coordinate the AFCEE Double Blind Proficiency Testing Program. The single POC shall report to AFCEE/ERC once per quarter on laboratories used for chemical analysis during the previous quarter and laboratories planned for use in the up-coming quarter. The report shall include the name and location of the laboratory, the task order number of the work, and analysis, media, and number of samples. AFCEE will select up to five sampling events per year for double-blind P.T. samples. AFCEE will provide the samples and the contractor POC shall coordinate inserting the double-blind PT samples into the sampling events. The contractor shall report the results of the PT sample analysis directly to AFCEE/ERC. (CDRL A055, A056)

#### **4.3.11 Environmental Impact Analysis Process (EIAP).**

Responsible for supporting AFCEE in activities such as the preparation of the Description of the Proposed Action and Alternatives (DOPAA), environmental assessments (EAs), environmental reviews (ER) for overseas locations, environmental impact statements (EISs), findings of no significant impact (FONSIs), Records of Decision (RODs), mitigation plan(s) and other associated documents that might be required. Perform activities such as data identification, data collection (including site visits and interviews), data development, and data interpretation; sampling and analysis; preparation of human health risk and environmental impact evaluations and reports; preparation of expert testimony; and preparation of material for and attendance at public meetings and public

hearings (including scoping meetings). (CDRL A009, A013, A024, A025, A026, B001, B002, B003, B021, B022, B023)

**4.3.11.1 Description of Proposed Action and Alternatives (DOPAA).**

Prepare or complete DOPAAs, review the informational accuracy of DOPAAs prepared by proponent organizations, and analyze the reasonableness of alternatives prepared by proponent organizations.

**4.3.11.2 Environmental Assessment (EA) and Findings of No Significant Impact (FONSI).**

Prepare EAs for specific actions, including activities such as obtaining and analyzing data to determine potential environmental impacts, preparing the text of the EA, preparing the text of the FONSI (if appropriate), and coordinating efforts with the appropriate federal, state and local agencies.

**4.3.11.3 Environmental Review (ER).**

Prepare ERs as required for activities outside of the U.S. in accordance with applicable guidance.

**4.3.11.4 Environmental Impact Statement (EIS) and Records of Decision (ROD).**

Prepare EISs as specified in individual task orders. Undertake activities necessary to prepare the documents assigned. Perform activities such as identifying, collecting and developing data for preparation of EISs, interpreting data, analyzing environmental consequences, writing the EIS, providing support material for any public meetings (including, but not limited to, audiovisual aids, supporting text, and other hearing-related printed materials), providing verbatim documentation of public hearings, preparing material responding to public comments and writing the ROD.

**4.3.11.5 Socioeconomic Impact Analysis Study (SIAS).**

Prepare Socioeconomic Impact Analysis Study (SIAS) in conjunction with base disposal and reuse actions. Additionally perform required activities such as obtaining and analyzing data and providing national, regional, and local area analysis of such topics as employment, population changes, economic effects, other socioeconomic effects of base disposal and reuse actions needed to develop and write the SIAS.

**4.3.12 Environmental Baseline Surveys (EBS).**

Review all available information and survey the condition of real property proposed by the AF to be acquired, transferred, leased, sold or otherwise conveyed. Perform activities such as the following as directed in each TO: document the nature, magnitude, and extent of any contamination of the subject property considered for acquisition or transfer, lease, sale, or other disposition and adjacent property; identify the presence of or any concerns associated with CERCLA excluded substances; identify the presence of or concern associated with any other non-CERCLA environmental issue that may affect the transfer or use of the subject property; and

provide notice when required under Section 120(h) of CERCLA of the type, quantity, and time frame of any storage, release or disposal of a hazardous substance on the property. (CDRL A008, A012, A013, A024, A027, A028, A029, B021, B022, B023)

#### **4.3.12.1 Phase I Environmental Baseline Surveys (EBS).**

The contractor shall, as directed, identify, obtain, and review all data, documents, and records relevant to determining the potential for present and past contamination of the property. The review shall include items such as: historical records; reports and data prepared as part of the Installation Restoration Program; environmental surveys or inspection reports; regulatory agency reports, notices of violation or noncompliance, or other similar records; current or discontinued permits; title, deed, other real property records; aerial photographs; and other available documents to ascertain prior uses of the real property that may have involved hazardous substances or otherwise contaminated the property. Inspect adjacent properties to determine condition and potential for contaminating the property subject to transfer. Interview personnel with knowledge of past and current activities on the property subject to transfer. Hazardous conditions to be considered shall include areas such as hazardous materials and waste use, storage, treatment, and disposal; presence of underground and above ground storage tanks, hydrant fuel systems, and oil/water separators; contaminated soil and groundwater; asbestos; radon; lead in paint or drinking water; and unexploded ordnance. Conduct visual inspections to determine or confirm the presence of an environmentally hazardous condition.

The contractor shall, as directed, identify, obtain, and review all data, documents, and records relevant to determining the presence of natural and cultural resources and other environmental considerations on the property. Resources and considerations include items such as historical resources, archaeological resources, wetlands and floodplains, threatened and endangered species, wellhead protection areas, sole-source aquifers, and prime and unique farmlands. The contractor shall, as directed, conduct visual inspections of property as necessary to identify and confirm the presence of environmental resources and considerations.

#### **4.3.12.2 Phase II Environmental Baseline Surveys.**

A Phase II Environmental Baseline Survey (EBS) will be conducted as directed by the Contacting Officer or described in each TO. The investigations involve (surface, subsurface, and aquifer sampling) to determine type, concentration, extent of contamination, contamination sources, and presence of ground water contamination. The scope of the Phase II EBS should be based on the recommendations presented in the Phase I EBS or as described in this TO. Environmental professionals qualified by training and experience to make technical professional determinations will prepare the Phase II EBS.

#### **4.3.12.3 Environmental Suitability Decision Documents (ESDD).**

Prepare an Environmental Suitability Decision Document (ESDD) as directed in individual task orders. The ESDD will include but not be limited to the following:

- A concise description of the environmental condition of the subject property.

- Property category code assigned to the various parcels or study areas associated the subject property
- Recommendations on restrictions on the use of the property that should be incorporated into the real estate interest transfer document
- Any certifications that may be required to transfer the property;
- Any covenants and/or warranties that must be incorporated into the real estate interest transfer document.

#### **4.3.13 Natural and Cultural Resources Plans and Programs.**

Review, revise, amend, or prepare the report(s) and plan(s) for the resource areas described below. Identify and follow the provisions of all applicable laws and regulations. (CDRL A013, A014, A017, A018, A019, A024, A026, A030, B022, B023)

##### **4.3.13.1 Integrated Natural Resource Management Plan.**

Identify, obtain, and review data, documents, and records relative to the preparation of natural resource report(s), survey(s), and integrated management plans (INRMP) with associated component plans, as needed. Plans (INRMP) and surveys shall cover such biological topics as: listed threatened and endangered species, Waters of the United States (WofUS), watershed protection, wetlands and floodplains, fish and wildlife resources, forestry and agricultural resources, land management and ecosystem management, grounds maintenance, and coastal zone and marine resources. Other resource areas of consideration are outdoor recreation and its impacts on natural resources, mineral, geological, and pedological (soil) resources. All data shall be incorporated into a geographic information system, as needed, to monitor progress towards goals established in the INRMP and component plans, and associated studies and reports. Contact and consultation with the following agencies, both state and federal, may be necessary in the preparation of plans, studies, and reports: United States Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), Federal Emergency Management Agency (FEMA), U.S. Geological Survey (USGS), Army Corps of Engineers (ACOE), National Park Service (NPS), Natural Resources Conservation Service (NRCS), state Fish and Game and Forestry offices, state Coastal Zone Commissions, state Natural Heritage Programs, county Cooperative Extension and local university biology departments. Whenever necessary, contact the appropriate host nation equivalents to the above-mentioned agencies.

##### **4.3.13.1.1 Threatened and Endangered Species.**

Review existing data, and contact appropriate state and federal agency for information on species and habitats of importance. Perform surveys in specified areas for the presence of listed species and/or habitat of species. Develop management plans to ensure protection of listed species and their habitat. Prepare or assist in the preparation of biological assessments for Section 7 consultation with the USFWS.

#### **4.3.13.1.2 Aquatic Resources (WofUS, wetlands, watersheds, and floodplains).**

Review existing data and contact appropriate state and federal agency for information on aquatic resources (WofUS, wetlands, watersheds, and floodplains), as needed. Apply the U.S. Army Corps of Engineers' 1987 Wetland Delineation Manual criteria to all wetland delineations and contact local COE districts to determine jurisdictional requirements. Assist with the development of aquatic resources management plans to protect the necessary resources, as needed.

#### **4.3.13.1.3 Coastal Zone Management.**

Review existing data and contact appropriate local, state, and federal agency for information and current requirements within the coastal zone. Determine any land use constraints for the installation and prepare Coastal Zone Consistency Determinations for activities within the coastal zone for compliance with the local Coastal Zone Management Plan. Determine any impacts to marine organisms (mammals, fish, and coral reefs) as they pertain to proposed project or survey; develop management guidelines for protecting those marine resources.

#### **4.3.13.2 Cultural Resources.**

Identify, obtain, and review data, documents, and records relative to the preparation of cultural resource report(s) and management plan(s) covering archaeological (prehistoric), historical, ethnographic, traditional, and paleontology resources on the installation and those resources immediately beyond the boundaries of the installation that might be affected by installation activities. Historic structures and resources include standing structures and other physical remains of historic significance. Traditional resources are topographical areas, features, habitats, plants, animals, minerals, or archaeological site(s) that contemporary Native Americans or other groups value presently, or did so in the past, and consider essential for the persistence of their traditional culture. Paleontology resources include important fossil evidence of past plant and animal life. Cultural resources of concern include properties listed on the National Register of Historic Places, properties potentially eligible to be included in the National Register, and sacred Native American site(s) and areas. Review installation and local report(s) and management plan(s) for cultural resources; review the National Register of Historic Places; contact and consult with the appropriate State Historic Preservation Officer to determine whether there are cultural resources on or near the installation; review cultural resource publications and data for the area, including publications and data at local university or college anthropology, archaeology departments, or in archaeological society files; contact local/state/ host nation regional archaeologists and historians to determine whether there are cultural resources on or near the installation; perform a cultural resources survey of the installation; and modify, update, or prepare a cultural resources plan for the installation or for individual site(s) or locations on the installation. Prepare Historic American Building Survey/Historic American Engineering Record (HABS/HAER). (CDRL A031)

**4.3.13.2.1 Archaeological Resources.**

Conduct archaeological investigations, including field surveys, to determine the existence of or potential for archaeological resources. At all times, safeguard archaeological site information to prevent disturbances or looting of site(s). Evaluate archaeological data developed vis-à-vis criteria for eligibility for listing on the National Register of Historic Places (National Register) and prepare nominations for the National Register. Prepare Historic American Building Survey/Historic American Engineering Record (HABS/HAER). (CDRL A031, A032)

**4.3.13.2.2 Historical Resources.**

Conduct historical resource surveys of project area, evaluate the historical resource data vis-à-vis criteria for eligibility for listing on the National Register and prepare nominations for the National Register. Prepare Historic American Building Survey/Historic American Engineering Record (HABS/HAER). (CDRL A031, A032)

**4.3.13.2.3 Traditional Resources.**

Consult with Native American and other groups to determine the existence or potential for traditional resources for the project area, and prepare plan(s) to provide for the protection of traditional resources as specified. Evaluate traditional resources in compliance with criteria for eligibility for listing on the National Register.

**4.3.13.2.4 Paleontology Resources.**

Consult with state, host nation, or regional geologists to determine the existence or potential for important paleontology resources for the project area, and prepare plan(s) to provide for the protection of such resources.

**4.3.13.2.5 Natural Resource Damage Assessment (NRDA).**

Collect, compile, analyze, report data using the prescribed methodologies presented in the Department of Interior NRDA Regulations (43 CFR Part 11 or 15 CFR Part 900), with the purpose of supporting NRDA activities or otherwise calculating monetary damages (monetary value of restoration) for injuries (harm, adverse impacts, loss) to natural resources. Develop plans to mitigate or compensate for natural resource damages.

**4.3.14 Base Comprehensive Planning.**

Update, prepare, develop, recommend, document, report, integrate, publish, deliver, and present installation General Plan(s), Master Plan(s), comprehensive composite plans, area and base development plan(s) (ADP/BDP), facility use survey (FUS), and space utilization plan(s) (SPACE-UP) using commercially available (off-the-shelf), non-proprietary electronic data management tool(s) that store, display, arrange, edit, compile, rectify, and present both historic and real-time data and analysis of existing, historic, and proposed facility development project(s). Task order activities shall include the acquisition, use, analysis, assembly, industry standardization, and delivery of rectified aerial photography

and cartographic mapping (digital) files for use by government/private/public sector offices. Project deliverables shall be organized for ease of access and use in digital and/or published formats. Task descriptions include, but are not limited to, the development and use of electronic media and data that supports base comprehensive plan(s), commander summaries, base and community development plan(s), base and community component plan(s), Air Installation Compatible Use Zone (AICUZ) plan(s), airfield obstructions summaries, utility system(s) service and capacity plans, transportation plan(s), capital improvement plan(s), landscape development plan, future facility development plan(s), explosive facility site plan(s), real-property/facility utilization survey(s) and plan(s), weapon system plan(s), for all activities and locations of interest to the government. (CDRL A013, A014, A017, A018, A019, A024, A026, A030, B022, B023)

#### **4.3.14.1 Land Use Planning and Analysis.**

Obtain and analyze land use data to determine the effect of proposals on existing and proposed land use plan(s); obtain, review, analyze, and report on land use documents and plan(s) to determine current and future land use on/near installation(s); obtain, review, analyze, and report on plan(s) and studies of future land use proposals; use these data and carry out and report on analyses to determine the effect of proposals on installation(s), local, and regional land use requirements; identify and recommend planning measures necessary to overcome problems identified; revise and update land use plan(s) in support of the Base Comprehensive Plan for installation(s).

#### **4.3.14.2 Base Capacity Analysis, Studies, and Reports.**

Prepare analysis of base carrying capacity to support facility use requirements, including airfield/ parking-ramp capacity studies; facility utilization assessments and study report(s); utility infrastructure; explosive safety quantity distance criteria; base environmental condition report(s); environmentally sensitive site analysis; report(s) on the presence of endangered species and their habitats; and report on natural and cultural resource survey(s) and supporting impact mitigation(s). Prepare incremental and summary analysis for Base Realignment and Closure (BRAC) activities.

#### **4.3.14.3 Project Environmental and Land Use Plans.**

Identify, analyze, evaluate, and report on project environmental, siting, and design considerations to support decisions on mission realignments; base/mission modifications, explosive safety site approvals, additions, closures; airspace designators, routes, ranges; and other mission support activities required by Air Force, allied service, and host/supporting nation missions.

#### **4.3.14.4 Comprehensive Planning Program.**

Review documentation to establish a systematic framework of decision making with regard to the development of an Investment Strategy for the physical, real property assets of the Government and related environmental programs. Analyze, gather and report on data that: validates planning task requirement(s);

establishes effective use of available resources through application of life-cycle cost techniques, includes impacts to the local community and anticipated local area growth; and provide analysis (report on) about the short-term and/or long-term development potential of state-of-the-art base planning tools (GIS/CADD) and their related decision making processes. Submit an annual report for Air Force Comprehensive Planning Requirements that summarizes the approach used, an analysis of the costing techniques applied, and the life cycle cost recommendations that support near-term advances that automate the day to day planning architecture of installation's electronic data management requirements. The report shall cover current planning, short range planning, and long range planning program execution, emphasizing those viable data and decision making techniques that support land use analysis, infrastructure improvement(s), equipment/system upgrade requirements, and selected recommendations for host system(s) management improvements.

#### **4.3.14.5 Airfield and Airspace Obstruction Analysis.**

Conduct inventory of objects within or in close proximity to airfield setback zones and imaginary airfield/airspace obstruction control surfaces. Apply criteria in AFM 32-10131, command supplements, NATO guidance, and other standards that determine if an object constitutes a permissible deviation, or requires a temporary/permanent waiver to airfield/airspace operating procedures. Coordinates with base Civil Engineering, airfield management, safety, flight operations, and allied interest as appropriate. Prepare a summary report, obstruction removal plan, and maps that accurately reflect the status of objects within the airfield/airspace zones. Prepare Military Construction Program or other project(s) to systematically correct non-permanent waivers. Prioritize obstacles requiring removal or relocation based on its potential hazard to aircraft operations. Obstructions found to be of high risk to aircraft operations shall be immediately resolved. Formally report and/or assist in the implementation recommendations that drive out issues and obstruction removal requirements for each activity responsible for implementing the obstruction removal plan. Prepare and implement an obstruction removal process as described in the TO.

#### **4.3.14.6 Transportation Planning and Analysis.**

Conduct activities to support analysis and development of transportation systems that improve material supply efficiencies and that reduce the whole cost of routine base transportation requirements.

##### **4.3.14.6.1 Traffic Engineering.**

Obtain, create, analyze, and report on local/regional data to determine the effects of proposed installation projects, mission changes and/or reuse of installation(s) on local and regional traffic systems. Identify, develop, report on, and obtain data from/for installation(s), counties, state, host nation, and local highway and transportation authorities for current and projected traffic volumes, levels of service, and roadway capacities. Obtain and review proposed highway improvement plan(s) and roadway capacity and level of service projections associated with proposed improvements. Obtain, review, analyze, and report on

existing land use documents and plan(s) to determine trips generated by the dominant land users. Conduct traffic counts at appropriate intersections and on roadways to supplement existing data when required to authenticate an assigned task. Use data standards and analyses to determine and report the effects of proposals on marginal roadway systems. Obtain, review, and analyze projected land use plan(s) without the proposed installation project, mission change, or the proposed base reuse alternatives, and determine the effect of projected future land use patterns on trip generation. Determine effects of installation projects, mission change, or proposed base reuse alternative on future land use and supporting transportation network. Determine and report on the significant effects of a new roadway or land use density proposals based on hourly, daily, seasonal, peak-hour traffic volumes and associated levels of service. Identify, recommend, and report on mitigation measures that reduce effects of proposals.

#### **4.3.15 Air Traffic and Air Space Analysis.**

Obtain, analyze, and summarize available airspace planning data to determine the effect of proposals on air traffic and air space utilization, includes the feasibility of proposals to use installation(s), range, and low-level-route related airspace for stand alone and joint-use commercial or general aviation activities. Obtain, review, analyze, and report on airspace management data for current and projected future commercial, general, and military aviation activities, such as air traffic volume, air space utilization, aviation support equipment, and passenger and air cargo volume; use data and analyses to determine and report on the effect of proposals on air traffic, air space utilization, equipment, and facilities; develop plan(s) for implementing proposals; recommend changes and mitigating measures necessary to overcome problems identified; and plan and carry out market analyses of using closing military bases as commercial passenger and air cargo facilities. (CDRL A013, A014, A024)

#### **4.3.16 Noise Management.**

Prepare aircraft noise analysis for environmental studies. Collect, record, and encode aircraft operational data, develop noise contours, and prepare Air Installation Compatible Use Zone (AICUZ) report(s) at selected installation(s)/site(s) in accordance with the latest version of AFH 32-7084, AICUZ Program Managers Guide. Model the noise effects of proposed aircraft flight and maintenance operational changes. Review noise analysis performed by others for accuracy, consistency, reasonableness and completeness. Perform spot analysis to determine the major noise contributors at specified noise sensitive locations. Document differences in noise exposure at specific site(s) due to changes in aircraft operations. Develop noise mitigation alternatives to reduce the effect of aircraft operations on noise sensitive locations. Analyze advantages, disadvantages and reasonableness of noise mitigation alternatives, and recommend most effective alternative(s). Develop noise reduction alternatives for specific locations including use of noise barriers, sound attenuation materials and other noise reduction techniques. Obtain

current aircraft flight and maintenance operational data through interviews with pilots, navigators, schedulers, base operations, air traffic control, radar approach control, aircraft maintenance, transient alert, flight support personnel, and other appropriate personnel. Develop noise contours using the latest suite of the NOISEMAP computer programs, including BASEOPS, NOISEMAP and NMPlot. Provide complete documentation of all data collected including detailed notes of all information collected during interviews, copies of all data sheets used to encode BASEOPS input files, and copies of all BASEOPS and NOISEMAP input, and output files used to produce the noise contours. Explain the methodology used in combining files if two or more NOISEMAP output files are used to produce the noise contours. Validate the accuracy, completeness and reasonableness of existing and projected aircraft noise data. Collect current and future (permitted) land use information and analyze it for compatibility with aircraft noise exposure and accident potential at selected installation(s)/site(s). Assist with planning, preparing and conducting the public release of AICUZ report(s). (CDRL A013, A014, A024)

#### **4.3.17 Environmental Compliance Assessment and Management Program (ECAMP).**

Perform technical activities and analyses to include management of the local program, internal and external evaluations encompassing all applicable ECAMP or The Environmental Assessment Manual (TEAM), assessment of evaluation results, and correction of deficiencies protocols at each designated governmental installation. Air Force Instruction (AFI) 32-7045 establishes the Environmental Compliance Assessment and Management Program (ECAMP). Under this program compliance with environmental laws is achieved through the use of comprehensive evaluation teams. (CDRL A013, A024, A027)

#### **4.3.18 Air Quality.**

Perform technical activities and analyses in support of requirements to comply with federal, state, host nation, and local air quality rules and regulations. Activities include: writing air permit applications; evaluating permit strategies; assisting Base personnel in negotiating permit conditions; developing and characterizing facility air emissions inventories; identifying all applicable and relevant regulations for each affected source, conducting Clean Air Act (CAA) compliance assessments and pollution prevention strategies; determining compliance status; evaluating record-keeping and reporting procedures; quantifying air emissions by implementing air models and using approved emission factors; preparing implementation plan(s); developing a quick reference guide for all activities required to maintain and assure compliance with permit conditions or the Base's air quality program; analyzing pollution control technologies; conducting cost and feasibility studies; performing stack sampling and analysis; performing New Source Review, Prevention of Significant Deterioration, risk management planning, and General Conformity Analysis and

Determinations, providing training support; conducting audits; and developing compliance plan(s). (CDRL A008, A013, A018, A024, A033, B015)

#### **4.3.19 Hazardous Waste Management.**

Perform technical activities and analyses in support of requirements to comply with all regulations governing the control of hazardous waste from its origin to ultimate treatment, storage, or disposal, such as RCRA, HSWA and AFI 32-7042, Solid and Hazardous Waste Management. Perform activities such as general technical support and report preparation, development of spill prevention and response plans, development and implementation of a waste tracking system, preparation of permit applications and annual reports, hazardous waste characterization and inventories, identifying treatment and disposal sites, compliance assessments and strategies, hazardous waste management training, and developing and maintaining the Hazardous Waste Management Plan, Hazardous Waste Contingency Plan and RCRA Closure Plan. (CDRL A013, A017, A024, B015)

#### **4.3.20 Integrated Solid Waste Management.**

Perform technical activities and analyses in support of requirements to comply with the integrated solid waste management program. Activities include: preparing applications for permits and licenses for on-base landfills; characterization of solid wastes; performing studies to assist the installation in complying with federal, state, host nation, and local regulations; preparing solid waste landfill survey plans and reports; preparing Municipal Solid Waste Landfill closure plans; defining requirements governing the separation of recoverable/non-recoverable wastes and the recycling of those materials; developing comprehensive recycling programs; and conducting activities to prepare program plan(s), surveys, educational and training materials for promoting recycling and composting, and affirmative procurement of recycled materials. Recycling and composting, and affirmative procurement includes identifying where recycled materials can be used in Governmental activities and surveying and determining sources of recycled materials for acquisition. (CDRL A008, A013, A024, B015)

#### **4.3.21 Hazardous Material Management.**

Perform technical activities and analyses in support of requirements to comply with the hazardous material management program. Hazardous material management includes activities such as the development or maintenance of hazardous materials control and/or tracking systems, identifying and inventorying hazardous materials, review and development of management plan(s) for hazardous materials storage and handling systems, development of health and safety plan(s) for the handling of hazardous materials, emergency preparedness studies in case of hazardous materials spills, preparation of Toxic Release Inventory (TRI) Form R's and conducting audits for compliance with federal, state, host nation, and local laws and regulations. Interface with local, state, host

nation, and federal officials as required in support of authorized hazardous material management programs. Comply with all DOD Hazardous Materials programs including hazardous materials and hazardous waste reduction programs. Comply with all regulations governing the transportation, handling, storage and use of hazardous materials such as the Hazardous Materials Act (HMA), CERCLA, TSCA, OSHA, the Air Force Hazard Communication Program (AFHCP), the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), and RCRA. (CDRL A013, A024, A034, A035)

#### **4.3.22 Pesticide Management.**

Conduct technical support activities in support of the management of pesticides such as conducting pesticide reduction opportunity assessments, preparing management action plans for reducing pesticide usage, preparing annual report(s), certifying and recertifying applicators, preparing recommendations and identifying measures for personal protection and pest control, and conducting audits to ensure compliance with environmental and health and safety regulations. Comply with all regulations governing the use, storage and handling of pesticides, rodenticides, herbicides and fungicides, such as the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), OSHA, and AFI 32-1053, Pest Management Programs. Whenever practicable, employ methods of pest management to reduce adverse environmental impacts on the surrounding ecosystem. (CDRL A013, A024)

#### **4.3.23 Petroleum, Oil, Lubricants (POL) and Other Storage Tank(s) Management.**

Perform technical activities and analyses in support of the management of tanks such as storage tank (including associated piping) management plan(s), spill prevention and response plans for petroleum and other hazardous substances (SPCC, FRP, Hazmat Plan, Integrated Contingency Plan), spill prevention and response plan training, and evaluations and upgrades of cathodic protection and corrosion control systems. Update closure documentation of all underground storage tanks, above ground storage tanks, other storage tanks and associated piping along with their associated site(s), spill history, federal, state, and local registration numbers, and other required information. (CDRL A013, A024)

#### **4.3.24 Polychlorinated Biphenyls (PCBs).**

Perform technical activities and analyses in support of requirements to comply with the Toxic Substances Control Act (TSCA) such as audits of equipment and materials; testing, and analysis of transformer oil, capacitor oil, paints, concrete and other non-liquid PCBs; record searches to determine the levels (i.e., whether they are regulated amounts) of PCBs that are present; preparing PCB management plan(s) to include recommending PCB equipment for replacement; and providing documentation of safe and compliant removal and disposition of PCBs. Comply with all regulations governing PCBs including 40 CFR 750 and 40 CFR 761. (CDRL A013, A024, A036)

#### **4.3.25 Asbestos.**

Perform technical activities and analyses in support of requirements to comply with federal, state, host nation, and local rules and regulations regarding asbestos. Conduct activities necessary to identify the presence of asbestos-containing material (ACM) in facilities and equipment and plan for its removal, encapsulation or enclosure in compliance with CAA, OSHA, TSCA and the Asbestos Hazard Emergency Response Act (AHERA). These activities may include tasks such as using certified inspectors, conducting visual surveys for the presence of ACM, sampling and analyzing material suspected of containing asbestos, or sampling and analyzing to determine levels of releases of asbestos to the workplace or ambient environment. Develop controls and protocols to minimize occupational exposure to asbestos. Develop asbestos operations and management plan(s) in accordance with AFI 32-1052, Facility Asbestos Management. (CDRL A013, A014, A024)

#### **4.3.26 Radon and Related Products.**

Perform technical activities and analyses in support of requirements to comply with the AF Radon Assessment and Mitigation Program (RAMP). Conduct pre-mitigation radon surveys, determine the status of compliance, determine sample priority and facility occupant risk, develop execution management plan(s), develop mitigation plan(s), conduct post-mitigation assessments and update the Toxic Substance Management Plan (TSMP) database. (CDRL A013, A024)

#### **4.3.27 Water Quality.**

Perform technical activities and analyses in support of requirements to bring installation(s) in compliance with drinking water and wastewater statutes, rules, and regulations. (CDRL A008, A013, A024, A037)

##### **4.3.27.1 Drinking Water.**

Conduct projects at installation(s) to bring the installation in compliance with drinking water statutes, rules, and regulations. Prepare installation documents such as Consumer Confidence Reports, Wellhead Protection Plan, and Source Water Protection Plans. Perform Safe Drinking Water Act regulation evaluation and assessment. Identify pollution prevention opportunities and suggested best management practices as a first choice to achieve compliance. Identify measures for implementation for inclusion in installations' comprehensive plans to prevent contamination of source water and treated water.

##### **4.3.27.2 Waste Water.**

Conduct projects at installation(s) to bring the installation in compliance with wastewater statutes, rules, and regulations. Conduct activities to include sanitary wastewater, surface water runoff, and industrial wastewater tasks. Conduct wastewater treatment system surveys. Review existing permits. Prepare National Pollutant Discharge Elimination System (NPDES) permits and other wastewater permit applications. Evaluate influent and effluent waste streams.

Identify, analyze and recommend surface water quality models and update operations manuals. Develop, update or implement a Stormwater Pollution Prevention Plan (SWP3) and obtain the NPDES permit to support the installation(s) SWP3. Develop, write, and update all required federal, state and local stormwater permits. Conduct site evaluations and environmental sampling as required to update the SWP3 and to identify, document, and comply with all federal, state, and local regulations under the CWA which apply to the site(s). Perform services necessary to conduct detailed sampling, analysis, and monitoring (SAM) operations that will provide profile information characterizing the stormwater pollution effluents.

#### **4.3.28 Lead-Based Paint and Lead.**

Perform technical activities and analyses in support of requirements to comply with federal, state, host nation, and local rules and regulations regarding lead-based paint and lead. Perform tasks in compliance with the current version of AF Policy and Guidance on Lead-Based Paint (LBP) in Facilities and all regulations governing LBP and other lead issues. Provide LBP and lead-related services such as preparation of management plan(s) and studies to identify, evaluate, manage, and abate LBP and lead. (CDRL A013, A024)

#### **4.3.29 Integration of Compliance Assurance and Pollution Prevention.**

Perform technical activities and analyses in support of the Compliance Assurance and Pollution Prevention program. Perform development of plan(s) (long-term, program area specific, or other) for accomplishment of Compliance Assurance and Pollution Prevention (CAPP). Support the integration of pollution prevention and environmental compliance programs through policy, guidance, training, and direct technical support to installation(s), major commands, and headquarters. Develop programming guidance and documentation for CAPP. Analyze and recommend improvement strategies for CAPP programs. (CDRL A013, A024, B015)

##### **4.3.29.1 Compliance Assurance and Pollution Prevention.**

Perform services necessary to implement, update and support the CAPP program. Conduct compliance site inventories. Develop, update, and support database tracking of these inventories. Assist in the relative ranking and prioritization of compliance site(s) by performing Operational Risk Management (ORM) and cost analysis to determine compliance burden.

##### **4.3.29.2 Compliance Through Pollution Prevention (CTP2).**

Provide reduction to, or the elimination of, the Compliance burden through P2 solutions and alternatives by addressing compliance site(s) and/or the processes. Perform engineering cost and feasibility analysis to recommend the most cost-effective pollution prevention solution. Perform life-cycle cost analysis as part of the solution analysis. Assist in development of technical planning, project development, cost estimation and analysis, and programming. P2 solutions shall include specific examples and case studies of successes and

failures, cost details, and impact on the compliance burden. Prepare and submit final report(s) for inclusion in the appropriate database as defined by the TOs, e.g. DENIX, CTP2 database.

#### **4.3.30 Compliance.**

Provide engineering and technical services to support the analysis, design, construction, operations, and maintenance of facilities, equipment, material, and processes related to ensuring compliance with federal, state, host nation, and local environmental regulations. Devise more efficient control technologies to meet evolving regulatory standards. Implement processes and management practices to prevent regulatory violations or unauthorized release of hazardous materials or waste to the environment. Analyze existing facilities, equipment, and processes and devise improvements, upgrades, or replacements. (CDRL A013, A024)

#### **4.3.31 Pollution Prevention.**

Provide engineering and technical services to support the pollution prevention program such as develop pollution prevention plan(s), establish inventories (annual volumes and on-hand) for hazardous materials and waste streams, conduct pollution prevention opportunity assessments, evaluate the economics and technical feasibility of process changes and recycling alternatives, develop and implement strategies for new P2 technologies and practices, and develop training and educational materials. (CDRL A013, A024, B015)

#### **4.3.32 Prototype Processes.**

Identify, evaluate, design, and prototype processes, equipment, and facilities which reduce hazardous material use, minimize the generation of hazardous wastes, minimize the use of hazardous materials, minimize or eliminate the use of materials, or improve environmental quality. As specified in each TO, review plans and specifications for facilities and infrastructure, and make recommendations for ways to make these projects more environmentally sustainable. (CDRL A013, A024)

#### **4.3.33 Precision Leak Testing.**

Conduct precision leak testing on underground storage tanks, above ground storage tanks, other storage tanks, POL hydrant lines, and sanitary and storm sewer lines. (CDRL A013, A024)

#### **4.3.34 Resource Conservation.**

Conduct surveys, pilot studies, and assessments leading to cost effective energy and water conservation and assistance in meeting mandated deadlines in implementing energy and water use minimization programs. (CDRL A013, A024)

#### **4.3.35 Noise and Vibration Surveys.**

Collect and analyze acoustic and/or vibration data from the survey site(s). These phenomena may be any of the following combinations thereof: sound (including ultrasonic and infrasonic), impact/impulse noise, specificity, positive and negative interference, ease and simplicity of calibration, operation and maintenance, cost and manpower requirement to operate and maintain the equipment. (CDRL A009)

#### **4.3.36 Preliminary Assessments and Site Inspections (PA/SI).**

Conduct PA/SI to define the project setting at an installation or supporting location and identify, document, report preliminary assessment of the site condition, restraints, local environmental conditions and contamination, and potential mechanisms for contamination migration. Includes the conduct of records searches and use of geophysical or other techniques to identify the presence and extent of any unexploded ordnance (UXO). Make preliminary studies, monitor locations for accessibility, potential number of project data sampling locations, number and type of personnel required, number and type of tests or data samples desired, special or modified equipment and procedures required, local conditions training and protective equipment required for project personnel, and type of site protocol or procedures required to assure that project activities comply with local site control procedures, US EPA or state NPDES regulations, or other laws, regulations or standards applicable to the project. (CDRL A029, A038)

##### **4.3.36.1 Preliminary Assessment (PA).**

Conduct a literature search to define the installation project setting and to identify potential project conditions, site(s), and resources to include the possibility of encountering UXO. The purpose of this effort is to develop a conceptual project/site model (CSM) for each location, present summary hypotheses regarding the local conditions, potential project alternatives, and their potential impact on sensitive site conditions, including human, project, and environmental issues of interest. Guidelines for the conceptual site model design are provided from several project perspectives, including AFCEE's Technical Services Quality Assurance Program and ASTM E1689-95. Sources of information include federal, state, host nation, and local agencies, base personnel and former employees, aerial photographs, academic institutions, and report(s) of previous project and site investigations. Document the findings in a preliminary assessment report. All references, personal communications, etc. shall be cited in an appendix to the report. (CDRL A038, A039)

##### **4.3.36.2 Site Inspections (SI).**

Visit the installation to ensure a complete understanding of site conditions. Coordinate this visit with the COR. Visit and inspect all site(s) identified in the Preliminary Assessment Report. Look for evidence of contamination at each site visited (e.g., leaking drums, vegetative stress, leachate seeps, geologic features, etc.). Where the PA Report finds the potential for encountering UXO, exercise

geophysical techniques or other methods to determine the presence and extent of UXO contamination. Observe the physical setting of each site visited to formulate specific recommendations concerning well and boring placement, use of geophysical techniques, refine the CSMs, and other aspects of the proposed field investigation. Document the findings in a site inspection report. The report shall document the results of all site investigations conducted and/or include recommendations(s) for additional work or no further action (NFA). (CDRL A029)

#### **4.3.37 Remedial Investigation (RI).**

Conduct a remedial investigation (RI) to characterize environmental conditions, define the nature and extent of contamination, and quantitatively estimate the risk to human health and the environment at various site(s) through the collection of geologic, geophysical, hydrogeological, ecological, chemical, physical, and hydrologic data, and environmental samples; the laboratory analysis of those samples for potential contaminants; the evaluation of the analytical results and field measurements with respect to quality control data; and the interpretation and analysis of validated data. The purpose of data collection, sample collection and laboratory analysis is to determine whether any contaminants generated from installation activities have entered the environment and pose a risk to human health or the environment. Data Quality Objectives (DQOs) shall be developed prior to sampling and shall be strictly enforced. The results shall be presented with the Risk Screening Analyses (RSAs) and/or the Full Risk Assessments (FRAs). The field investigation is used to determine the source of any identified contaminants, and the magnitude of contamination relative to Applicable or Relevant and Appropriate Requirements (ARARs) and any naturally occurring or background concentrations for specific compounds. The remedial investigation shall comply with the specifications, procedures, and methodologies presented in project-specific SAPs. Site(s), which pass RSA, shall be considered for NFA on the basis of the screening analysis. Site(s) which fail the RSA shall be evaluated via FRA to determine if remediation is required or the site can be referred for NFA. (CDRL A040)

##### **4.3.37.1 Remedial Investigation Reports.**

Prepare Remedial Investigation Report(s) in accordance with OSWER 9355.3-01, "Guidance for Conducting Remedial Investigation and Feasibility Studies under CERCLA," October 1988, as updated. The Report(s) shall include results of RSA and FRA, reflect regulatory agency comments to the corresponding Site Characterization Summaries and make recommendations for site disposition consistent with the results of risk assessments.

##### **4.3.37.1.1 Project Baseline Risk Assessment.**

For each site, use validated data supported by acceptable QA/QC results (as measured against AFCEE's Technical Services Quality Assurance Program requirements), the site's conceptual model, and the Chemical and Site Specific Risk Analysis (CSSRA) to estimate the project risk to the public's health and to the environment. Identify all Applicable or Relevant and Appropriate

Requirements (ARARs) that were not identified in previous report(s) for those project baseline descriptions identified during fact-finding, project modeling, and site investigation research. Identify site(s) posing minimal project risk, or no threat to the proposed mission, human health and welfare, or the local environment. Evaluate risk associated with subsistence activities where subsistence lifestyle is prevalent. For environmental project sampling where no further action is required (NFAR), using USAF ERP Guide for NFAR: A Resource for Making, Documenting, and Evaluating No Further Response Action Plan (NFRAP) Decisions (latest version). Use the results of the risk assessment in establishing remedial action objectives and developing remedial alternatives in the Feasibility Study. Provide the results of the baseline and/or ecological risk assessment in the Remedial Investigation (RI) Report. The Baseline Risk Assessment (BRA) will consist of the RSA and FRA. (CDRL A023)

#### **4.3.37.1.2 Conceptual Site Model.**

For each site, use validated data supported by acceptable QA/QC results (as measured against AFCEE's Technical Services Quality Assurance Program requirements) and site characterization information to develop or refine, based on newly collected data, the conceptual site model or development profile. The model/project-profile shall define the nature and extent of the projects scope. The AFCEE Technical Services Quality Assurance Program and ASTM E 1689-95 provides guidance in completing conceptual site models/profiles. The complexity and detail of the site model/profile shall be consistent with the nature of the site, its foreseeable problems, and the amount of site/area specific data available. Use the conceptual site model in the baseline risk assessment. (CDRL A039)

#### **4.3.38 Low Level Radionuclide Activities.**

Prepare background determination (the drive-over survey and/or background soil sampling/trenching) and perform site activities to determine the presence of potential contamination. Perform all work in accordance with established regulatory guidance and applicable federal standards for radionuclide cleanup. This includes the geophysical sampling required to determine the type and quantity of contamination. Sampling shall be conducted on the site to be remediated, as well as on excavated material following excavation/remediation activities by others. Submit Report of Findings outlining the site conditions, selected methods of remediation, and associated costs. (CDRL A009, A018, A024)

#### **4.3.39 Informal Technical Information Reports (ITIRs).**

##### **4.3.39.1 Analytical Data Report.**

Submit all analytical data, including QC results and cross-reference tables. (CDRL A024, A041)

#### **4.3.39.2 Accelerated Remediation Project Definition ITIR.**

For those site(s) identified during this effort as candidates for accelerated remediation, prepare a Project Definition ITIR. Prior to preparation of this document, prepare and submit an annotated outline for content and format approval by the AFCEE COR. This document shall contain at a minimum a Site Characterization Summary and all available qualitative and quantitative information necessary to define requirements for site remediation (e.g., construction and linear footage of piping associated with storage tanks, volume of contaminated soil, etc.). (CDRL A042)

#### **4.3.39.3 Site Characterization Summary - (SCS-ITIR).**

The Site Characterization Summary ITIRs shall serve as core documents for the RI report(s). Prepare and submit an annotated outline of each section of the ITIRs, prior to preparation. Prepare the report(s) as specified in the accepted annotated outlines. Prepare and submit newly revised portions of the working copy ITIR in order to make available current site characterization data. A prime objective shall be to incorporate any comments into the report in an on-going fashion in coordination with the COR and the base POC in order to minimize the volume of comments on the working copy and final submittals. The final summary shall contain all site(s) included in the effort. Prepare the report(s) to include the following components: (CDRL A039, A041, A042, A043)

- a. Source identification and contaminant delineation.
- b. Present results of Risk Screening Analysis and Full Risk Assessment and make recommendations for NFA accordingly.
- c. Identification and ranking of appropriate treatability/feasibility studies for listed site(s).
- d. Data and interpretations integrating the findings of the current study and all previous RI efforts at the site(s).
- e. Current isoconcentration plots of contaminants detected at each site, lithographs of each boring showing contaminants detected and relationship to other borings in the site, and cross-sections of the site showing contaminant distribution.
- f. Conceptual Site Model (CSM).

#### **4.3.40 Feasibility Study (FS).**

The FS may be performed concurrently with the RI. As much of the FS as possible shall be performed early in the RI/FS process and refined as additional RI data are obtained. Use the information from the RI and the baseline risk assessment to develop and evaluate remedial action alternatives for each site where identified risks to human health and/or the environment exceed acceptable levels negotiated by the Government and regulatory agencies. The FS should additionally explore opportunities to reduce or prevent injury to natural resources resulting from the implementation of clean-up activities. Prepare a Feasibility Study Report to include the detailed analysis of alternatives and reflect regulatory

agency comments to the corresponding Screening of Alternatives Technical Report. (CDRL A044)

#### **4.3.40.1 Alternatives Development.**

Establish project objectives and goals for promoting human and environmental balance. These objectives and goals shall be determined based on identified ARARs (Applicable or Appropriate and Relevant Requirements). Identify general project actions, applicable technologies based on site and project conditions, and combine project/mission/installation technologies that formulate distinct project development alternatives. Develop alternatives which eliminate, control, and reduce project risk. Where a variety of promising alternatives exist, screen the alternatives based on the projects potential efficiency and effectiveness, ease of implementation, and cost. Detail the process of development and screening of alternatives, and identify the alternatives selected for detailed analysis. Prepare an Initial Screening of Alternatives (ISA) Report to identify all the alternatives defined above. (CDRL A024)

#### **4.3.40.2 Alternatives Analysis.**

Conduct a detailed analysis of each alternative selected and identified in the ISA report. For resource remediation projects, use the methodology in OSWER Directive 9355.3-01 to evaluate each alternative against US EPA's nine criteria for conducting Feasibility Studies. For all projects, perform a comparative analysis to determine the relative performance between the more reasonable alternatives. Focus the analysis on sub-factors and criteria most pertinent to each site and the scope and complexity of the proposed project. Select a recommended alternative for each site or siting opportunity. Provide a summary of the detailed analysis of alternatives following task completion. Include summary tables of the individual and comparative analysis that shall be used in the projects Final Report. For those site(s) or conditions where site(s) are grouped together, where a preferred alternative is identified, prepare a decision document after the receipt of AFCEE review comments on the projects selection process. Propose a format for AFCEE approval. Prepare a Detailed Analyses of Alternatives (DAA) Report to describe the analyses of alternatives conducted. (CDRL A024)

#### **4.3.41 Peer Review Support.**

Prepare, document, and submit a peer review package. The package shall contain information to support: the project requirement; technology selected; associated costs; funding timeline; and other project data to support the work identified. (CDRL A024)

#### **4.3.42 Engineering Evaluation/Cost Analysis (EE/CA).**

Prepare EE/CAs as part of Action Memorandum Decision Documents. The EE/CA shall evaluate possible alternative technologies for removal actions for remediating an immediate or long-term threat at a CERCLA site. An EE/CA is

required by the NCP for any removal action which is determined to be non-time critical. (CDRL A045)

#### **4.3.43 Treatability Studies, Pilot Tests, Bench Scale Tests, Interim Remedial Actions.**

Conduct treatability studies, pilot tests, and/or bench-scale tests to determine optimum methods of contaminant delineation and/or removal of contaminants, and the degree of treatment anticipated using various processes. Pilot plant studies shall also be conducted to permit the Government to determine the feasibility of the implementation of various environmental processes at selected Government facilities. The work shall include the development and utilization of innovative remedial technologies, and cost estimates. Interim remedial actions will be performed as necessary. Prepare Test Plan(s) as required. (CDRL A013, A014, A015, A024)

#### **4.3.44 Proposed Plans (PP), Records of Decisions (RODs), Decision Documents (DD), and NFRAPs.**

Prepare the PP(s), DD(s), NFRAP(s) and ROD(s) using the format in OSWER 9355.3-02, and latest Air Force guidance for NFRAP preparation. The proposed plan shall be prepared utilizing format approved by the COR. Once Proposed Plan is distributed to the public and comments are obtained, prepare responsiveness summary report. Decision Documents shall contain responsiveness summary report. (CDRL A013, A025, A028, A046)

#### **4.3.45 Environmental Monitoring.**

Provide for the continuous and/or discrete measuring, sampling and analysis of groundwater, surface water, influent/effluent, air emissions, operational noise, soils, hazardous waste, hazardous materials, and any other environmental media as specified in each TO. The project shall include: development of site specific long-term monitoring plan(s), assistance in negotiating approval of long-term monitoring plan with project administrators, adherence to project specific DQOs, implementation of the approved long-term monitoring plan, and compliance sampling and analysis.

##### **4.3.45.1 Long-term Monitoring.**

Develop, update, and implement a long-term monitoring program in accordance with AFCEE LTM Guidance and program specific DQOs, and the AFCEE Remedial Process Optimization Guidance. Assess the data and propose updates to improve the effectiveness and efficiency of the monitoring program to meet program goals and make program decisions. Provide assistance negotiating acceptance and approval of the monitoring plan with regulators and other stakeholders. (CDRL A013, A024)

#### **4.3.47 Remedial Action Operations.**

The contractor shall operate, maintain and monitor environmental remedial systems. The contractor shall shutdown remedial systems that are new or subject to dynamic conditions. The contractor shall develop operational manuals and standard operating procedures for remedial systems. (CDRL A024)

#### **4.3.48 Warranty of Installed Equipment and Systems.**

Assist the Government in resolving warranty issues. Review documentation of installed equipment/systems and prepare an inventory database detailing their condition, equipment identifiers, equipment/system condition, scheduled maintenance, vendor sources for parts replacement, and warranty expiration dates. Supplement existing O&M documentation to provide a complete file. Prepare Report of Findings outlining the approach. Submit inventory database for review and acceptance. Submit Report of Findings outlining the equipment/system condition and selected improvements to optimize operation and associated costs. (CDRL A009, A021, A024)

### **4.4 TECHNOLOGY (DEMONSTRATION) EVALUATIONS**

Evaluate cost, performance, and applicability of methods (field/lab) and technologies for projects and provide a trade-off study of alternative approaches and technologies. Recommendations shall consider cost, schedule, protection of human health and the environment, public acceptance and technical risk.

#### **4.4.1 Initial Methodologies.**

Develop initial methodologies and follow-on execution programs for on-site auditing of industry laboratory and field operations, post-installation or post-remediation monitoring, site closure plan(s), and life cycle cost analysis of compliance, pollution prevention and remediation technologies. Analyze experimental designs and provide recommendations concerning adoption of these designs. Audit the performance of new technologies used in environmental and related efforts. (CDRL A013, A014, A024)

#### **4.4.2 Commercial and Emerging Technologies.**

Evaluate commercially available and emerging technologies and other project enhancement technologies. Survey and analyze cost and performance data on new and/or innovative project approaches that concern the adoption of these designs. Audit the performance of new technologies used in related efforts. (CDRL A024)

**4.3.45.2 Long-term Operations.**

Establish and implement a long-term operations plan. The plan shall require updating as requirements dictate. (CDRL A013, A024)

**4.3.46 Remedial Process Optimization.**

Perform all studies to monitor and evaluate the remedial process to plan, design and implement Remedial Process Optimization (RPO). The purpose of remedial process optimization is to ensure the effectiveness and efficiency of the remedial process through feedback of information into the decision process, and is described in the AFCEE RPO handbook. RPO strategies include (1) evaluate the accuracy of the conceptual site model and appropriateness of clean up goals and data quality objectives; (2) assess feasibility of remedial design/remedial action to meet clean up goals; (3) establish DQO decision rules, implement DQA (Data Quality Assessment), and create decision trees for clean-up goals, technology selection and performance evaluation; (4) optimize remedial action operation, performance monitoring, and long-term monitoring; (5) verify that field procedures and analytical protocols meet DQOs; and (6) streamline and standardize data management.

**4.3.46.1 Remedial Process Evaluation.**

The contractor shall perform all studies and evaluations to develop and produce 5-year reviews of remedial action records of decision and demonstrations of remedial actions operating properly and successfully. (CDRL A013, A024)

**4.3.46.2 RPO Scoping Visit.**

The contractor shall conduct base-wide assessments to identify opportunities to implement the RPO strategies.

**4.3.46.3 Evaluation of Remedial Systems and Environmental Equipment.**

The contractor shall conduct independent evaluation of remedial systems to determine their effectiveness. This includes the collection of data needed to assess the ability of the remediation system to remediate the site. Perform laboratory and field tests of environmental monitoring and testing equipment, to include validation of manual/instrumental methods, continuous monitors, analytical support and mathematical models using US EPA, ASTM, NRC, and/or equivalent procedures specified by the government. Prepare Test Plan as required. Prepare a Remedial Systems and Environmental Equipment ITIR. (CDRL A013, A015, A024, A042)

**4.3.46.4 Monitoring Optimization.**

The contractor shall evaluate environmental monitoring programs and plan and design optimization of environmental monitoring programs in accordance with the AFCEE LTM guidance and site- and project-specific DQOs. Perform temporal and spatial analysis of environmental monitoring data using sophisticated statistical and geostatistical software.

## **4.5 MISCELLANEOUS DELIVERABLES**

### **4.5.1 Photo Documentation.**

Prepare photo documentation. Include photo documentation of site(s) and building(s) under investigation, field activities, and sample locations. Photography of any kind must be coordinated through the installation POC. (CDRL B021, B022, B023)

### **4.5.2 Environmental Restoration Program Information Management System (ERPIMS) Data Management.**

Meet the data deliverable requirements of the Environmental Restoration Program Information Management System (ERPIMS). Shall be responsible for recording field and laboratory data into a computerized format as required by the most current version of the ERPIMS Data Loading Handbook (mailed under separate cover). In order to perform this task, use the latest version of the ERPIMS Quality Control Tool (ERPTOOLS/PC), a PC software utility (mailed under separate cover with software manual), to quality check ASCII data files and to check all data files for compliance with requirements in the ERPIMS Data Loading Handbook. This PC software is designed to assist in preparing the various ASCII data files and is available upon request at no cost.

#### **4.5.2.1 Individual ERPIMS data files.**

Individual ERPIMS data files (e.g. analytical results, groundwater level data, etc.), including resubmission's, shall be delivered with a transmittal letter in sequence according to a controlled time schedule as identified in the current version of the ERPIMS Data Handbook. Include a copy of the items of interest report, e.g., output from the ERPTOOLS/PC, for each ERPIMS file submission. The error report shall be submitted as hard copy with the transmittal letter. (CDRL B024)

#### **4.5.2.2 Deliverables.**

All data deliverables shall be sent to:

AFCEE/MSC  
Environmental Systems Support Team  
ATTN: ERPIMS Data Management  
3207 North Road  
Brooks AFB, TX 78235-5363

In addition, provide a copy of the transmittal letter to the Contracting Officer responsible for this contract. This letter shall identify the files included or otherwise omitted (with an appropriate explanation), the contract and task order number and the point of contact.

#### **4.5.2.3 Data Accuracy.**

Responsible for the accuracy and completeness of all data submitted. All data entered into the ERPIMS data files and submitted shall correspond exactly with the data contained in the original laboratory report(s) and other documents associated with sampling and laboratory contractual tasks.

#### **4.5.2.4 Evaluation.**

Each file prepared will be electronically evaluated by AFCEE/MS for format compliance and data integrity in order to verify acceptance. All files are required to be error-free and in compliance with the ERPIMS Data Loading Handbook. Any errors identified by AFCEE/MS in the submission shall be corrected.

### **4.6 TITLE I SERVICES**

Perform all surveys, plans, studies, evaluations, and investigations identified in Section 4 of this SOW as necessary to support design efforts.

#### **4.6.1 Design.**

The Government shall provide pertinent and available background information concerning the project (e.g., Feasibility Study, Focused Feasibility Study, Record of Decision). Review background data information for completion of an effective design. The major objective of a design project shall be the complete design of a practical and effective system(s) which meets the objectives of the project, maintains regulatory compliance, and incorporates pollution prevention initiatives. The design shall be submitted for review in one to four phases as specified: preliminary (30%), intermediate (60%), Draft 100%, and final (100%). The complete design shall be comprised as follows.

##### **4.6.1.1 Design Plans & Specifications.**

Develop clear and comprehensive design plan(s) and specifications which shall include the following: (CDRL A013, A019, A024)

- a) Discussion of design strategy and design basis.
- b) Discussion of important technical factors.
- c) Description of assumptions and their justification.
- d) Discussion of possible sources of error and references to possible O&M problems.
- e) Detailed engineering drawings.
- f) Tables listing equipment and specifications.
- g) Tables detailing material and energy balances.
- h) Appendices including:
  - Data/results of laboratory or field studies.
  - Sample calculations.
  - Derivation of equations.

#### **4.6.1.2 Cost Estimates.**

As part of the design, develop a detailed cost estimate for construction and implementation of the project. All work items shall detail labor, material, and other costs. Develop life cycle cost estimates for planning and budgeting. These cost estimates shall detail, by fiscal year, the various development costs, construction costs, operation & maintenance costs, and long-term monitoring costs. Identify the base year being used for the cost estimates. (CDRL A016)

#### **4.6.1.3 Project Schedule.**

As part of the design effort, develop a project schedule for construction and implementation. (CDRL B012, B013)

#### **4.6.1.4 Operation & Maintenance Plan.**

As part of the design effort, develop an operation and maintenance (O&M) plan to cover both implementation and long term maintenance. The plan shall include documentation for the comprehensive system, not simply for each component. The O&M plan shall include the following elements: (CDRL A017, A047)

- a) Equipment start-up procedures/specifications.
- b) Description of normal O&M.
- c) Potential operating problems.
- d) Contingency O&M should systems fail.
- e) Health & Safety Plan.
- f) Description of equipment.
- g) Routine monitoring and laboratory testing.

#### **4.6.2 Design Phases.**

The design shall be submitted for review in one or more phases, as specified. The following lists the various design submittal phases and the approximate percentage of the design which shall be completed at each phase. Submittals shall be reviewed by the Government and written comments shall be provided. Disposition of the comments shall be determined at the respective review meeting. Incorporate the results into the next required design phase submittal. (CDRL A013, A019, A024)

##### **4.6.2.1 Preliminary Design.**

Submitted at approximately 30% completion of the design at which time the technical requirements of the project have been addressed and outlined. Includes:

- a) Design plan(s) and specifications.
- b) Cost estimates.
- c) Project schedule.
- d) Design Analyses.

**4.6.2.2 Intermediate Design.**

Submitted at approximately 60% completion of the design. Includes:

- a) Design plan(s) and specifications.
- b) Cost estimates.
- c) Project schedule.
- e) Operations and maintenance plan.
- f) Design Analyses.

**4.6.2.3 Draft 100% Design.**

Submitted at approximately 100% design completion. Includes all design components as specified in the intermediate design phase.

**4.6.2.4 Final Design.**

Submitted at 100% design completion. Includes all design components as specified in the intermediate design phase.

**4.7 EVALUATION SUPPORT****4.7.1 Title II Services.**

Provide services related to specific or proposed construction project(s).

**4.7.1.1 Review Construction Submittals.**

Review the contractor's plan(s) and systematic quality assurance procedures as defined in a Quality Assurance Project Plan (QAPP). The QAPP shall be the basis by which the contractor develops a construction quality control plan to manage, control, and document compliance with design requirements. The QAPP shall include:

- a) Observations and tests used to monitor construction and the frequency of these activities.
- b) Responsibilities and authorities of all organizations and key personnel.
- c) Acceptance and rejection criteria; and
- d) Reporting and documentation requirements for the quality assurance activities,

Monitor and review the contractor's Health and Safety Plan (HSP), and Sampling and Analysis Plan (SAP). The SAP shall describe the process for obtaining data of sufficient quality and quantity to satisfy the data needs. Prepare and submit an evaluation of each of the contractor's plan(s). (CDRL A048)

**4.7.1.2 Field Oversight.**

Provide manpower, equipment, material, services, and transportation necessary for oversight services during the construction and operation of the project. Provide periodic progress reports summarizing the work efforts and any open

items requiring AFCEE resolution. Review submittals for compliance with the design. Meet and follow the site specific HSP of the contractor. (CDRL A049)

#### **4.7.1.3 Design Update.**

Maintain and update the design documents during construction. This is required to incorporate any changes to the design made during the construction phase to correct design deficiencies, incorporate new technologies, or adapt to previously unknown conditions. (CDRL A019, A024)

#### **4.7.1.4 Treatment, Storage, and Disposal Facility Audits.**

Evaluate the acceptability of potential treatment, storage, and disposal (TSD) facilities. (CDRL A013, A024)

#### **4.7.1.5 Pre-Final Inspection.**

Conduct a pre-final walk-through inspection of the completed project. The inspections shall involve the CO (or his/her designee), regulatory agencies, and other agencies with a jurisdictional interest. Document the pre-final inspection findings in a pre-final inspection report. (CDRL A050)

#### **4.7.1.6 Final Inspection.**

The pre-final inspection report shall be used as a checklist for focusing the final inspection on deficient construction items. Document the findings of the final inspection in a final inspection report according to the format specified at the pre-construction conference. The final inspection report shall certify that all items of the design have been implemented and that the project is complete and operational. The final inspection report shall include a record of as-built drawings and documentation (e.g., test results) verifying that performance standards have been met. (CDRL A019, A050, A051)

#### **4.7.1.7 Evaluation of Ongoing Actions.**

Performs on-site technical surveillance of field operations being performed by others. Provides integrated management oversight and technical assessment of ongoing field work. Assure conformance with the selected remedies and regulatory requirements. Provide an evaluation to ensure that remedies are performing as designed. (CDRL A050)

#### **4.7.2 Review of Deliverables.**

Assist AFCEE in the technical review of deliverables generated (under other TOs) and associated with selected TOs. Provide complete technical justification for each comment generated and participate in the technical discussion to resolve all open items. (CDRL A052)

#### **4.7.3 Technical Evaluation of Response to Solicitations.**

Assist in the technical evaluation of other contractor responses to solicitations. Provide complete information to establish the government's position for fair and reasonable compensation for the level of effort to be performed. Shall be

responsible for safeguarding proprietary and other sensitive information. (CDRL A053)

## 5. DATA MANAGEMENT

Collect, prepare, publish, and distribute the data in the quantities and types designated on the Contract Data Requirements List (CDRL). Designate a focal point who shall integrate the total data management effort and manage changes, additions or deletions of data items. Identify items to be added, recommend revisions or deletion of items already listed on the CDRLs as appropriate and maintain the status of all data deliverables.

## 6. GOVERNMENT POINTS OF CONTACT

Government POC shall be specified in each TO or provided under separate cover.

## 7. ABBREVIATIONS, ACRONYMS, AND TERMS

ACM	Asbestos Containing Materials
ACOE	Army Corps of Engineers
ADP/BDP	Area and Base Development Plan(s)
A-E	Architect-Engineering
AF	Air Force
AFCEE	Air Force Center for Environmental Excellence
AFH	Air Force Handbook
AFHCP	Air Force Hazard Communication Program
AFI	Air Force Instruction
AMERA	Asbestos Hazard Emergency Response Act
AICUZ	Air Installation Compatible Use Zone
ARAR	Applicable or Relevant and Appropriate Requirements
ASCII	American Standard Code Information Interchange
ASTM	American Society for Testing and Materials
BRA	Baseline Risk Assessment
BRAC	Base Realignment and Closure
CAA	Clean Air Act
CADD	Computer Aided Design Drawings
CAPP	Compliance Assurance and Pollution Prevention
CDRL	Contract Data Requirements List
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CO	Contracting Officer
COR	Contracting Officer Representative

CPSMR	Contractor's Progress, Status, and Management Report
CQP	Construction Quality Plan
CRP	Community Relations Plan
CSM	Conceptual Site Model
CSSRA	Chemical and Site Specific Risk Analysis
CTP2	Compliance Through Pollution Prevention
CWA	Clean Water Act
DAA	Detailed Analyses of Alternatives
DD	Decision Document
DENIX	Defense Environmental Network & Information Exchange
DIDs	Data Item Description(s)
DOD	Department of Defense
DODD	Department of Defense Directive
DODI	Department of Defense Instruction
DOPAA	Description of the Proposed Action and Alternatives
DOT	Department of Transportation
DQA	Data Quality Assessment
DQOs	Data Quality Objectives
EA	Environmental Assessment
EBS	Environmental Baseline Survey
ECAMP	Environmental Compliance Assessment and Management Program
EE/CA	Engineering Evaluation/Cost Analysis
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right To Know Act
ERP	Environmental Restoration Program
ERPIMS	Environmental Restoration Program Information Management System
ERPTOOLS/PC	ERPIMS Quality Control Tool (software)
ESDD	Environmental Suitability Decision Documents
FEMA	Federal Emergency Management Agency
FFA	Federal Facilities Agreement
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FMER	Funds and Man-Hours Expenditure Report
FONPA	Findings of No Practicable Alternative
FONSI	Finding of No Significant Impact
FRA	Full Risk Assessment
FS	Feasibility Study
FSP	Field Sampling Plan
GCD	Guidance for Contract Deliverables
GIS	Geographic Information System
GPS	Global Positioning System
HABS/HAER	Historic American Building Survey/Historic American

	Engineering Record
HAZWOPER	Hazardous Waste Operations and Emergency Response
HMA	Hazardous Materials Act
HSP	Health and Safety Plan
HSWA	Hazardous and Solid Waste Act
HTRW	Hazardous, Toxic, and Radioactive Waste
IMS	Integrated Master Schedule
INRMP	Integrated Management Plans
ISA	Initial Screening of Alternatives
ITIR	Informal Technical Information Reports
LBP	Lead-Based Paint
LTM	Long-term Monitoring
MAJCOM	Major Command
MAP	Management Action Plan
MWRS	Morale, Welfare, Recreation and Services
NATO	North Atlantic Treaty Organizations
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NFA	No Further Action
NFAR	No Further Action is Required
NFRAP	No Further Response Action Plan
NHPA	National Historic Preservation Act
NHRP	National Register of Historic Places
NMFS	National Marine Fisheries Service
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRC	Nuclear Regulatory Commission
NRCS	National Resources Conservation Service
NRDA	Natural Resource Damage Assessment
NRUA	Natural Resource Use Analysis
O&M	Operations and Maintenance
OEBGD	Overseas Environmental Baseline Guidance Document
OPA	Oil Pollution Act
ORM	Operational Risk Management
OSHA	Occupational Safety and Health Administration
OSWER	Office of Solid Waste and Emergency Response
OU	Operable Unit
P2	Pollution Prevention
P2OA	Pollution Prevention Opportunity Assessment
PA	Preliminary Assessment
PA/SI	Preliminary Assessment/Site Inspection
PC	Personal Computer
PCBs	Polychlorinated Biphenyls
PCOCs	Potential Chemicals of Concern

PCR	Performance and Cost Report
POC	Point of Contact
POL	Petroleum, Oil, Lubricants
PP	Proposed Plan
PPC	Project Planning Chart
QA/QC	Quality assurance and Quality Control
QAPP	Quality Assurance Project Plan
QC	Quality Control
QPP	Quality Program Plan
RACER	Remedial Action Cost Engineering and Requirements System
RAGS	Risk Assessment Guidance for Superfund
RAMP	Radon Assessment and Mitigation Program
RCRA	Resource Conservation and Recovery Act
RDBMS	Relational Database Management System
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RFP	Request for Proposal
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RMP	Resource Management Plan
ROD	Record of Decision
RPO	Remedial Process Optimization
RSA	Risk Screening Analysis
SAM	Sampling , Analysis and Monitoring
SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SCS	Site Characterization Summary
SCS-ITIRs	Site Characterization Summary ITIRs
SDWA	Safe Drinking Water Act
SI	Site Inspection
SIAS	Socioeconomic Impact Analysis Study
SOW	Statement of Work
SWP3	Stormwater Pollution Prevention Plan
TEAM	The Environmental Assessment Manual
TO	Task Order
TRI	Toxic Release Inventory
TSCA	Toxic Substances Control Act
TSD	Treatment, Storage and Disposal
TSMP	Toxic Substance Management Plan
US	United States
USAF	United States Air Force
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
UXO	Unexploded Ordnance
WBS	Work Breakdown Structure
WofUS	Waters of the United States