



**ANDERSEN AFB
GUAM**

**ADMINISTRATIVE RECORD
COVER SHEET**

AR File Number 251

251

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File: 17-01-48
G.L.

Attachment 1
Page 1 of 16
26 June 1996

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STATEMENT OF WORK
ENGINEERING EVALUATION/COST ANALYSIS
FOR
LANDFILLS 21, 23, AND 26, HAZARDOUS WASTE
STORAGE AREA 1, AND WASTE PILE 4
OPERABLE UNIT 4
AT
ANDERSEN AIR FORCE BASE, GUAM

Project AJJY96-7004

Contract Number: F41624-94-D-8052

Delivery Order 36 Modification 1

June 26, 1996

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STORAGE AREA 1, AND WASTE PILE 4
IN OPERABLE UNIT 4 AT
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**ENGINEERING EVALUATION/COST ANALYSIS FOR
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STORAGE AREA 1, AND WASTE PILE 4
IN OPERABLE UNIT 4 AT
ANDERSEN AIR FORCE BASE, GUAM**

1.0 INTRODUCTION

The purpose of this statement of work (SOW) is to provide services, technical man-hours, and materials for an Engineering Evaluation/Cost Analysis (EE/CA) for various sites and a removal action evaluation for one site in Operable Unit (OU) 4 at Andersen AFB, Guam. Additional services include the collection, testing, analysis, and reporting of contaminants present in soil and discarded drums.

1.1 SCOPE

1.1.1 In carrying out any work assignment issued the contractor shall furnish the necessary personnel, services, equipment, materials, and facilities and otherwise do everything necessary for or incidental to the performance of work set forth herein.

1.1.2 Primary services shall include services to perform site characterization assessments leading to the development of an EE/CA for Landfills 21 and 26, Hazardous Waste Storage Area 1, and Waste Pile 4 and a removal action evaluation for Landfill 23 at Andersen AFB, Guam.

1.1.3 Secondary services incidental to these services include topographical, electromagnetic surveys, soil gas surveys, test ditches/pits, trenches, and sampling of soil and drum contents necessary to obtain data to establish/verify the extent and parameters of remediation activities.

1.2 BACKGROUND

1.2.1 Base Background. The U.S. Army Air Corps built and maintained three air bases on Guam after the island was liberated from the Japanese in 1945. On October 7, 1949, North and Northwest Fields were redesignated Andersen AFB. Andersen AFB was used extensively during the Korean and Vietnam Wars for military logistical and air support. Currently it is the home for the Headquarters of the Pacific Air Force's 36th Air Base Wing, which comes under command jurisdiction of the 13th Air Force and Pacific Air Forces based at Hickam AFB, Hawaii.

Andersen AFB consists of several parcels of land located in the northern half of the island. The main base consists of the North and Northwest Fields. Most of the active operations take place in the North Field. Andersen AFB also occupies smaller areas, called annexes, south of the main base. The largest annexes are known as the MARBO Annex (Andy South) and the Harmon Annex. The annexes provide personnel housing and services such as communications, water, and petroleum storage.

1.2.2 Site Descriptions. OU 4 includes all sites located on the North and Northwest Fields and the Harmon Annex that are within the groundwater protection zone (GWPZ). This SOW is for efforts specifically at Landfills 21, 23, and 26, Hazardous Waste Storage Area 1, and Waste Pile 4 in OU 4.

1.2.2.1 Landfill 21 (Site 16): Landfill 21 is located in the Northwest Field, approximately 300 feet west northwest of the intersection of Guam Route 3 and M Street. The site is an abandoned borrow pit approximately 19 acres in size that was operated from the mid-1950s to 1963 for the disposal of sanitary wastes and construction debris, asphalt, various deteriorated drums, and the remnants of aboveground tanks. The site is now closed, covered with soil, and partially revegetated.

1.2.2.2 Landfill 26 (Site 21): Landfill 26 is located approximately 500 feet north of the intersection of D Avenue and 13th Street in the Northwest Field. The site is an abandoned quarry approximately 19 acres in size. The landfill was used between the mid-1950s and 1963. One report states that the landfill was also operated in 1966. Sanitary trash and construction debris were reportedly disposed of in trenches at this site. The site is presently inactive and partially covered with soil, forest, and grassland vegetation.

1.2.2.3 Hazardous Waste Storage Area 1 (Site 27): This site is a concrete pad located in the North Field at the southwestern corner of the intersection of Marine Drive and Marianas Boulevard and is approximately 1 acre in size. The storage pad was used as an outside storage area for petroleum, oil and lubricants (POL) and solvents from 1950 until the late 1970s. Hazardous wastes were also stored there from the late 1970s to late 1980.

1.2.2.4 Waste Pile 4 (Site 30): Waste Pile 4 is located adjacent to the new exploded ordnance disposal (EOD) incinerator east of Potts Junction Tank Farm and south of the intersection of A and B Avenues in the Andersen AFB ammunition storage area. The site is approximately 18 acres in size. Available information indicates that unexploded ordnance (UXO), waste oil, and solvents, both buried and on the surface, were disposed of at Waste Pile 4 from 1950 to 1970s. The site has not been investigated because of the danger posed by the possible presence of UXO.

1.2.2.5 Landfill 23 (Site 18): Landfill 23 is located on the Harmon Annex about 2,600 feet north of Harmon Village, and is estimated conservatively to be approximately 5 acres in size. This landfill was in operation in the late 1950s for the disposal of sanitary trash only. It is currently closed and overgrown with shrubs and sword grass.

2.0 APPLICABLE DOCUMENTS

2.1 HANDBOOK

The "HQ AFCEE Handbook for the Installation Restoration Program (IRP) Remedial Investigations and Feasibility Studies (RI/FS)," September 1993, hereafter referred to as the "Handbook" and incorporated herein by reference, provides guidelines for laboratory and field activities and applicable formats for project documents.

2.2 COMPLIANCE DOCUMENTS

The contractor shall comply with all federal, territorial, and local regulatory agency requirements, and applicable statutes, policies, and regulations, including those cited by reference below:

- a. Occupational Safety and Health Administration (OSHA) Act
- b. Department of Transportation (DOT) Regulations
- c. National Environmental Policy Act (NEPA)
- d. Clean Water Act (CWA)
- e. Safe Drinking Water Act (SDWA)
- f. Clean Air Act (CAA)
- g. Federal Water Pollution Control Act as amended by the CWA
- h. Endangered Species Act
- i. Toxic Substances Control Act (TSCA)
- j. Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments
- k. Comprehensive Environmental Response Compensation and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA)
- l. National Emission Standards for Hazardous Air Pollutants, Title 40, Code of Federal Regulation (CFR), Part 61, Subparts A and M, Environmental Protection Agency (EPA)
- m. Asbestos Standards, Title 40 CFR, Part 763, Subparts G and E, US EPA
- n. National Historic Preservation Act (NHPS)
- o. Fish and Wildlife Coordination Act
- p. Solid Waste Disposal Act as amended by RCRA of 1976
- q. Archaeological and Historical Preservation Act
- r. Flood Plain Management, Executive Order (EO) 11988 as amended by EO 12148
- s. Act for the Preservation of American Antiquities
- t. Archaeological Resources Protection Act
- u. Wilderness Act
- v. Protection of Wetlands Act
- w. Not Applicable
- x. Marine Protection and Sanctuaries Act
- y. Water Bank Act
- z. Coastal Zone Management Act
- aa. Coastal Barriers Resource Act
- ab. Not Applicable
- ac. Not Applicable
- ad. Federal Facility Compliance Act of 1992
- ae. Department of Defense Standard 6055.9, Ammunition and Explosives Safety Standards
- af. EO 12316, "Response to Environmental Damage," 14 August 1981
- ag. Other federal, territorial, and local regulations and statutes as applicable

2.3 GUIDANCE DOCUMENTS

The following documents are incorporated by reference herein as guidance:

- a. "Interim Guidelines and Specifications for preparing Quality Assurance Project Plans," Quality Assurance Management Staff (QAMS)-005-80, EPA, 1980
- b. National Fire Protection Association Standards, current editions
- c. EPA/625/8/8-87/014 September 1987, "A Compendium of Technologies Used in the Treatment of Hazardous Wastes."
- d. American Society for Testing and Materials (ASTM):
 - (1) ASTM D-1586 (1967)
 - (2) ASTM D-1587 (1974)
 - (3) ASTM D-4630 (1986)
 - (4) ASTM D-4629 (1986)
 - (5) ASTM F-480-88A (1981)
 - (6) ASTM D-2434 (1969)
- e. Water Measurement Manual, Bureau of Reclamation, 1967
- f. ANSI Z39.18, Information Sciences - Scientific and Technical Reports - Organizations, Preparation, and Production
- g. Remedial Action Cost Engineering and Requirements System, current version
- h. Air Force Engineering Technical Letters (AFETLs)
- i. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH/OSHA/U.S. Geological Survey/EPA, 1985)
- j. Test Methods for Evaluation of Solid Waste Physical/Chemical Methods, current edition, (EPA/SW846)
- k. Guidance for Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties, Interim Final U.S. Environmental Protection Agency (EPA/540/G-90/001); EPA Office of Solid Waste and Emergency Response (OSWER) Directive 9355.5-01, 4/90
- l. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (OSWER Directive 9355.3-01), 1988
- m. Risk Assessment Guidance and Superfund, Volume 1, Human Health Evaluation Manual (Part A), Interim Final (EPA/540/1-89/002), 1989
- n. Risk Assessment Guidance and Superfund, Volume 2, Environmental Evaluation Manual, Interim Final (EPA/540/1-89/001), 1989
- o. Test Methods for Evaluating Solid Waste (SW-846), Third Edition (1986), and 1987 updates
- p. Guidance on Remedial Action for Contaminated Groundwater at Superfund Sites (OSWER Directive 9283.1-2), 1988
- q. A Compendium of Superfund Field Operation Methods, (EPA/540/P-87/001; OSWER Directive 9335.0-14), December 1987
- r. OSWER 9345.0-01, Section 2.0 - Guidance for Conducting New Preliminary Assessments
- s. Model Environmental Impact Analysis Document (Disposal and Reuse), April 1992

- t. Model Socioeconomic Impact Document (Disposal and Reuse) Revision 2, July 1993
- u. Community Relations in Superfund. A Handbook (OSWER Directive 9230.0-3b)
- v. Guidance on Preparing Superfund Decision Documents: The Proposed Plan, The Record of Decision, Explanation of Significant Differences, The Record of Decision Amendment (OSWER 9355.3-02)

2.4 BASE-SPECIFIC DOCUMENTS

The following base/site-specific documents are available, upon request, under separate cover:

- a. Work Plan (WP) Addendum to OU 6 for OU 4
- b. Sampling and Analysis Plan (SAP) Addendum to OU 6 for OU 4
- c. OU 6 Basewide WP
- d. OU 6 Basewide SAP

3.0 GENERAL REQUIREMENTS

3.1 MEETINGS, CONFERENCES, AND SITE VISITS

3.1.1 Post Award Meeting. After the issuance of this delivery order (DO), the contractor shall attend a post award meeting at the base or other location specified by the Contracting Officer's Representative (COR). The purpose of the meeting shall be to familiarize the contractor with the work and/or potentially hazardous waste site addressed under this DO.

3.1.2 Progress Meetings. The contractor shall attend approximately four (4) progress meetings with the base Point of Contact (POC) and the Air Force Center for Environmental Excellence (AFCEE) personnel at Andersen AFB or other location specified by the COR.

3.1.3 Design Integration Meetings. Not Applicable.

3.1.4 Public Meetings. The contractor shall attend public meetings and hearings as identified by the COR, and present technical information or provide logistical support (e.g., preparation of handouts, reports, recordings of the meeting, or slides) to support USAF policy and position.

3.2 SPECIAL NOTIFICATION

3.2.1 Health Risks. The contractor shall immediately report to the COR, via telephone, any data or results generated during investigations that might indicate any potential imminent health risk to contracted or federal personnel, or the public at large. Following this telephone notification, a written notice with supporting documentation shall be prepared and delivered within three (3) working days. Upon request of the Air Force, the contractor shall provide pertinent raw laboratory data (e.g., chromatograms) within three (3) weeks of the telephone notification.

3.2.2 Change of Contractor Personnel. An organizational chart displaying key personnel involved in the effort and their respective labor categories shall be submitted with the first

monthly Status Report. The contractor shall notify the COR of all professional personnel to work on specific tasks under this DO. The contractor shall notify the COR of any significant changes in project personnel, along with the steps that the contractor is taking to ensure there are no impacts to the schedule or costs associated with individual tasks. The contractor shall also identify to the COR all subcontractors to be used under this DO prior to work being initiated. The contractor shall provide information about the qualifications of the subcontractors to the COR prior to utilization. (A001)

3.3 LABORATORIES

3.3.1 General. Laboratories used by the contractor shall be subject to on-site audits by AFCEE. All laboratories shall be capable of meeting Data Quality Objectives (DQOs) specified in the approved project-specific Sampling and Analysis Plan (SAP). The laboratories shall screen for analytes and perform Quality Assurance/Quality Control (QA/QC) requirements as specified in the SAP. All analyses shall be reported on a dry weight basis to facilitate comparison with the off-site laboratory data. The analytical capabilities of the laboratory shall be sufficient for the methods specified in the SAP, and the laboratory shall have sufficient throughput capacity to handle the necessary analytical load during all field activities.

3.3.2 On-Site Laboratories. The contractor may utilize on-site laboratories for screening purposes. 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. Laboratory Standard Operating Procedures (SOPs) and QC requirements shall be included in the SAP. All proposed deviations from the above requirements shall be submitted in writing to the Contracting Officer (CO) for concurrence prior to proceeding with the affected work.

3.3.3 Preliminary Laboratory Review Packages. For laboratories that have not been previously audited by AFCEE, the contractor shall submit a preliminary laboratory review package to AFCEE/ERC describing the information listed below for each laboratory to be used. This information will facilitate future laboratory review by the government. Prior approval of the laboratory is not a prerequisite to its use. Submit the following (A002):

- a. Laboratory-derived method detection limits, including data used for the calculations. One data set shall be sent for each applicable method (not each instrument, if more than one instrument is being used per method)
- b. A full set of acceptance criteria for recovery of surrogate standards and spikes, including the data used to make the calculations. One data set shall be sent for each applicable method (not each instrument, if more than one instrument is being used for a particular type of analysis)
- c. Instrument calibration curves for each applicable analytical method
- d. A copy of the laboratory's Quality Assurance Manual

- e. Performance evaluation results for the past two years

3.4 WORKSITE REQUIREMENTS

3.4.1 Safety Requirements. The contractor shall provide for protecting the lives and health of employees and other persons; preventing damage to property, materials, supplies, and equipment; and avoiding work interruptions. For these purposes, the contractor shall comply with Occupational Safety and Health Administration (OSHA) safety and health regulations.

3.4.2 Worksite Maintenance. The worksite shall be maintained as recommended in the Handbook so as to 1) prevent the spread of contamination, 2) provide for the integrity of the samples obtained, and 3) provide for the safety of federal workers, contracted personnel, and/or other individuals in the vicinity of the project areas.

3.4.2.1 The worksite 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 hazardous waste operations shall be established and maintained as the site conditions warrant. The contractor shall, at all times, keep the work area free from accumulation of waste materials. The contractor shall remove nonessential equipment from the worksite when not in use. The worksite shall be maintained to present an orderly appearance and to maximize work efficiency.

3.4.2.2 Before completing the work at each sampling site, the contractor shall remove from the work premises any rubbish, tools, equipment, and materials that are not property of the government. Upon completing the work, the contractor shall leave the area clean, neat, and orderly and return worksites to the original condition. The contractor shall also ensure compliance with any federal and territory regulations for decontaminating tools, equipment, or other materials as required.

3.4.2.3 The contractor shall be responsible for the handling, temporary storage, characterization, permitting, manifesting, transportation, and disposal of all investigation-derived wastes, including drilling fluids and cuttings, excavation material, storage containers, well development and purge water, personal protective equipment, and decontamination-related solids and liquids.

3.4.3 Operations Impact Minimization. The contractor shall mark the field locations of all points of ground penetration during the planning/mobilization phase of the field investigation. The base POC shall be consulted to properly position sampling locations (borings, soil gas probes, etc.) with respect to site locations, to minimize the disruption of base activities, and to avoid penetrating underground utilities. Additionally, the contractor shall be required to coordinate with other base personnel to attain these objectives. The contractor shall provide for the detection of underground utilities independent of base Civil Engineering services utilizing geophysical or other techniques. All necessary permits shall be obtained, and necessary coordination shall be completed, prior to commencement of individual sampling operations. Frequent communication and coordination with base personnel shall be necessary to accomplish these goals.

3.4.4 Storage. The contractor shall be responsible for the security of his equipment. Equipment or materials that require storage on base shall be placed at sites as designated by the base POC. The contractor shall be responsible for security and weatherproofing of any stored material and equipment. At the completion of the work, all temporary fences and structures that the contractor used to protect materials and equipment shall be removed from the base. The contractor shall clean the storage area of all debris and material and perform all repairs as required to return the site to its original condition.

3.4.5 Security. The contractor is responsible for obtaining and monitoring contractor security badges for all areas for 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). Photography of any kind must be coordinated through the base POC.

3.5 WORK BREAKDOWN STRUCTURE

The contractor shall prepare proposals, project schedules, and monthly financial reports organized according to the following work breakdown structure (WBS):

10 REMEDIAL INVESTIGATION/FEASIBILITY STUDY

- 10.01 RI/FS Scoping
- 10.02 Development of Alternatives
- 10.03 Site Characterization
- 10.04 Screening of Alternatives
- 10.05 Treatability Investigation. Not Applicable.
- 10.06 Analysis of Remedial Alternatives
- 10.07 Remedy Selection
- 10.08 Groundwater Monitoring Wells. Not Applicable.
- 10.09 Sampling and Analysis
- 10.10 Site Work and Utilities. Not Applicable.

4.0 WORK TASKS

Work tasks will include the accomplishment of field investigations to the degree required to support an EE/CA or no further action for the sites specified in this DO. All work will be conducted in accordance with the approved OU 4 and OU 6 WPs and SAPs with one exception. That exception is the deletion of the WP requirement for geophysical natural potential surveys to be conducted to determine the location of buried wastes.

4.1 DELIVERY ORDER SCOPING AND PLAN DEVELOPMENT

4.1.1 Presurvey. The contractor shall conduct a presurvey to enable preliminary scoping of environmental issues. The contractor shall visit the assigned sites and make all preliminary assessments of monitoring or sampling locations and accessibility, number of sampling locations,

number and type of personnel required. number and type of tests or samples desired. special or modified sampling equipment and procedures required. personal protective equipment required. and type of analytical protocol or procedures to ensure that the survey activities shall comply with applicable regulations. laws. or standards. The contractor shall prepare test plans. including cost estimates, as required.

4.1.2 Premobilization Survey. Not Applicable.

4.1.3 Plan Development. The contractor shall follow the approved Quality Program Plans (QPPs) for Andersen AFB. The contractor shall follow the approved project plans. including schedules, WPs, SAPs, and Field Sampling Plans (FSPs) for OU 4. The requirement in the plans for geophysical natural potential surveys is to be disregarded. Natural potential surveys have been found to be less reliable and more costly than electromagnetic surveys in locating buried wastes: therefore. they will not be conducted. In addition, the contractor shall follow the approved Management Action Plan (MAP) and Community Relations Plan (CRP). The contractor shall comply with the schedules. specifications. procedures. and methodologies of the signed FFA for Andersen AFB, Guam. The CO, AFCEE COR, and base POC shall be notified in writing prior to any modification to, or deviation from, any activity described in these documents. The contractor shall acquire approval from the CO. AFCEE COR and base POC for any deviation from the approved documents.

4.2 PRELIMINARY ASSESSMENT/SITE INSPECTION. Not Applicable.

4.3 REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS)

4.3.1 Remedial Investigation. The contractor shall conduct that portion of an RI that will sufficiently characterize environmental conditions, define the nature and extent of contamination, and quantitatively estimate the risk to human health and the environment, to support the development of an EE/CA and an Action Memorandum Decision Document or a removal action evaluation.

4.3.1.1 Remedial Investigation Report. Not Applicable.

4.3.1.2 Informal Technical Information Reports (ITIRs)

4.3.1.2.1 Analytical Data ITIR. The contractor shall submit all analytical data, including QC results and cross-reference tables, in a hard and/or electronic copy ITIR, using the format in Section 3 of the Handbook. (A003)

4.3.1.2.2 Accelerated Remediation Project Definition ITIR. If the site is identified during this effort as a candidate for accelerated remediation, the contractor shall deliver a Project Definition ITIR. Prior to preparation of this document, the contractor shall submit an annotated outline for content and format approval by the AFCEE COR. This document shall contain at a minimum a Site Characterization Summary (SCS) and all available qualitative and quantitative information necessary to define requirements for site remediation. (A004)

4.3.1.2.3 Site Characterization Summary - ITIR. Not Applicable.

4.3.2 Feasibility Study. The contractor shall use the information from the RI and the baseline risk assessment to develop and evaluate remedial action alternatives for each site where a threat to human health or the environment exists. The contractor shall follow the procedures specified in OSWER Directive 9355.3-01, "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," and the contractor shall employ streamlining methods wherever possible. The contractor shall develop and evaluate the minimum number of alternatives needed to provide a range of promising treatment and containment actions, and eliminate impracticable alternatives from further consideration early in the FS process. The scope and level of detail shall be consistent with the nature and complexity of site problems and as required to support the development of the EE/CA or removal action evaluation report.

4.3.2.1 Feasibility Study Report. Not Applicable.

4.3.2.2 Proposed Plans (PPs) and Records of Decision (RODs). Not Applicable.

4.3.2.3 Engineering Evaluation/Cost Analysis (EE/CA). The contractor shall deliver an EE/CA and an Action Memorandum for Landfills 21 and 26, Hazardous Waste Storage Area 1, and Waste Pile 4 as part of the Action Memorandum Decision Document. The contractor shall deliver a removal action evaluation report for Landfill 23. (A005)

4.4 REMEDIAL DESIGN. Not Applicable.

4.5 TREATABILITY STUDIES, PILOT TESTS, AND BENCH-SCALE TESTS. Not Applicable.

4.6 SUBTASKS

Subtasks shall include the following:

4.6.1 Conceptual Site Model (CSM). Not Applicable.

4.6.2 Ecological/Baseline Risk Assessment. For Landfills 21 and 26, Hazardous Waste Storage Area 1, and Waste Pile 4, use validated data supported by acceptable QA/QC results (as measured against QAPP requirements) to estimate numerically the risk posed by site contaminants to public health and the environment. The Handbook provides guidance in completing conceptual risk assessments. The contractor shall identify all Applicable or Relevant and Appropriate Requirements (ARARs) that were not identified in previous reports for those contaminants detected in environmental samples at each site. The contractor shall provide the results of the baseline and/or ecological risk assessment using the Handbook as guidance. (A006)

4.6.2.1 The contractor shall identify those sites posing minimal or no threat to human health, welfare, or the environment and for which no further action is appropriate. The contractor shall

use the results of the risk assessment in establishing remedial action objectives and developing remedial alternatives in the EE/CA. (A006)

4.6.3 Alternatives Development. Not Applicable.

4.6.4 Alternatives Analysis. Not Applicable.

4.6.5 Evaluation of Remedial Systems and Environmental Equipment. Not Applicable.

4.6.6 Administrative Record. Not Applicable.

4.7 OTHER ENVIRONMENTAL ACTIVITIES

The contractor shall conduct soil gas and electromagnetic surveys, surface and subsurface soil sampling, drum sampling, trench/test pit excavation, and other investigations, assessments, and/or designs leading to the development of an EE/CA for Landfills 21 and 26, Hazardous Waste Storage Area 1, and Waste Pile 4 and a removal action evaluation for Landfill 23. All work undertaken in accordance with this paragraph shall comply with the technical requirements of the approved OU 4 and OU 6 WP and SAP with the exception stated in paragraph 4.1.3. The contractor shall deliver reports, photographs, data, drawings, designs, and other documentation as required by this DO, documenting the results of various environmental investigations, assessments, designs, and/or analyses. (A007, A005)

4.7.1 Environmental and Occupational Noise/Vibration Surveys and/or Industrial Hygiene Equipment Evaluations. Not Applicable.

4.7.2 Miscellaneous Analyses. Not Applicable.

4.7.3 Environmental Monitoring. Not Applicable.

4.7.4 Sampling for Remedial Action. Not Applicable.

4.8 MISCELLANEOUS DELIVERABLES

4.8.1 Monthly Financial and Management Reports. The contractor shall submit financial and management reports utilizing the standardized WBS to describe the status of expenditure of funds correlated with the progress of the work completed. Reports shall provide current status and projected requirements of funds, man-hours, and work completion; indicate the progress of work and the status of the program and assigned tasks; and inform of existing or potential problem areas. (B001, B002, A008)

4.8.2 Project Schedules. The contractor shall deliver a computer-generated network analysis that is a detailed task plan for all WBS tasks for approval by the COR. The Network Analysis (e.g., Gantt, PERT, CPM) shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period of the DO. The Network Analysis shall show both serial and parallel subtasks leading to a

deliverable product/report, and shall show early and late start and completion date with float.
(B003)

4.8.3 Installation Restoration Program Information Management System (IRPIMS) Data Management. The contractor shall meet the data deliverable requirements of the IRPIMS. The contractor shall be responsible for recording field and laboratory data into a computerized format as required by the most current version of the IRPIMS Data Loading Handbook (mailed under separate cover). To perform this task, the contractor shall use the latest version of the IRPIMS QC Tool, 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 IRPIMS Data Loading Handbook. The IRPIMS Contractor Data Loading Tool (CDLT) is available on request. This PC software is designed to assist the contractor in preparing the various ASCII data files.

4.8.3.1 Individual IRPIMS data files (analytical results, groundwater level data, etc.), including resubmissions, shall be delivered with a transmittal letter by the contractor to AFCEE in sequence according to a controlled time schedule as identified in the current version of the IRPIMS Data Loading Handbook. The contractor shall include a copy of the QC Tool error report (i.e., output from the QC Tool) for each IRPIMS file submission. The error report shall be submitted as hard copy with the transmittal letter. (B004)

4.8.3.2 The contractor shall be responsible for the accuracy and completeness of all data submitted. All data entered into the IRPIMS data files and submitted by the contractor shall correspond exactly with the data contained in the original laboratory reports and other documents associated with sampling and laboratory contractual tasks.

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

4.8.4 Presentation Materials. The contractor shall prepare and present briefing packages at meetings coordinated by the Air Force. As part of the presentation materials, the contractor shall deliver paper copies of all slides and overheads. (B005)

4.8.5 Photo Documentation. The contractor shall deliver photo documentation as necessary to support other deliverables. Documentation should include photos of sites under investigation, field activities, and sample locations. (A009)

4.8.6 Meeting Minutes. The contractor shall be responsible for generating meeting minutes documenting all items discussed at the meetings, and shall include a list of meeting attendees. (B006)

5.0 DATA MANAGEMENT

The contractor shall collect, prepare, publish, and distribute the data in the quantities and types designated on the Contract Data Requirements List (CDRL). The contractor shall designate a focal point who shall integrate the total data management effort and manage changes, additions, or deletions of data items. In addition, the contractor shall identify items to be added, recommend revisions or deletion of items already listed on the CDRL as appropriate, and maintain the status of all data deliverables. Deliverables shall be in accordance with the applicable CDRLs.

6.0 GOVERNMENT-FURNISHED PROPERTY/INFORMATION

6.1 DOCUMENTS

6.1.1 The Handbook to Support the Installation Restoration Program (IRP) Statements of Work, Volume 1, referenced in this SOW, provides requirements for laboratory and field activities and applicable formats for project documents that shall be used as guidance by the contractor unless otherwise specified in this SOW. The latest version of the Handbook is dated September 1993 and will be provided upon request to the COR if required.

6.1.2 Copies of the WP and SAP Addendum to OU 6 for OU 4 and the OU 6 Basewide WP and SAP will be provided upon request to the COR.

7.0 GOVERNMENT POINTS OF CONTACT

The Government POCs shall be provided under separate cover by the CO

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