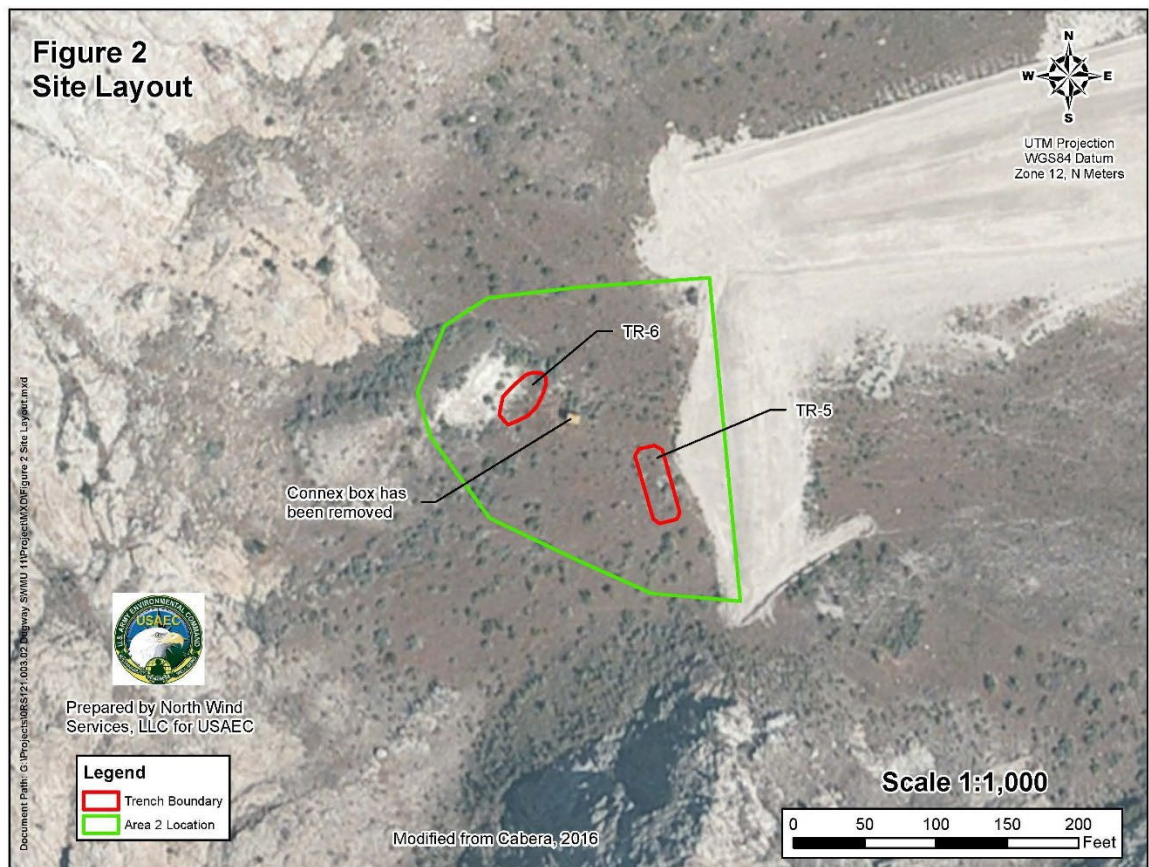


Performance Work Statement for:

Soils Remediation of Area 2 of SWMU 11

Dugway Proving Ground

Dugway Utah



From: Cabrera, 2016

Dugway, Utah

January 31, 2023

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Section 01 35 26	GOVERNMENTAL SAFETY REQUIREMENTS
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Section 01 35 45	CHEMICAL DATA QUALITY CONTROL
Section 01 50 00	TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS
Section 01 57 20	ENVIRONMENTAL PROTECTION
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ATTACHMENTS

Attachment 1	Bid Schedule
Attachment 2	Quality Assurance and Surveillance Plan
Attachment 3	Government Furnished Information
3.1	Final Record of Decision; Area 2 of SWMU-11; Dugway Proving Ground; Dugway, Utah (dated Dec 2021, Rev 0)
3.2	Final Feasibility Study; Area 2 of SWMU-11; Dugway Proving Ground; Dugway, Utah (dated Aug 2020, Rev 0)
3.3	Final Characterization Report; Area 2 of SWMU-11; Dugway Proving Ground; Dugway, Utah (dated Feb 2020, Rev 0) [Appendix E of Attachment 3.2]
3.4	Final Sampling and Extraction Report; Area 2 Solid Waste Management Unit (SWMU) 11; Trenches TR-5 and TR-6; Dugway Proving Ground; Dugway, Utah (dated September 2016)
3.5	Final implementation of Portions of the Work Plan for Remedial Investigation (RI)/Feasibility Study (FS) for Area 2 of Solid Waste Management Unit (SWMU) 11 (Work Plan); (dated August 2014)
3.6	Historical Site Assessment, for Solid Waste Management Unit (SWMU) 11 (dated 17 February 2011)
3.7	Final Phase II RCRA Facility Investigation Report, SWMU 11, Addendum; Dugway Proving Ground; Dugway, Utah (dated Aug 2009)
3.8	Final Phase I RCRA Facility Investigation Report, SWMU 11 data only, Volume 1/Text; Dugway Proving Ground; Dugway, Utah (dated October 1996)
3.9	Red Line Strike Out copy of PWS between Draft and Final Jan 31

ACRONYMS AND ABBREVIATIONS

AEC	Army Environmental Command
AHA	activity hazard analysis
ANSI	American National Standards Institute
APP	Accident Prevention Plan
ASME	American Society of Mechanical Engineers
BCY	bank cubic yards
bgs	below ground surface
BPA	blanket purchase agreement
BRP	Backfill and Restoration Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	constituent of concern
COR	contracting officer's representative
CQC	construction quality control
CQCP	Contractor Quality Control Plan
CR	government conformance review
CSM	conceptual site model
CY	cubic yards
DERP	Defense Environmental Remediation Program
DoD	Department of Defense
DOE	Department of Energy
DOT	Department of Transportation
DPG	Dugway Proving Grounds
DWMRC	Division of Waste Management and Radiation Control
EDMS	environmental data management system
EM	Engineer Manual
ER	Engineer Regulation
ERPIMS	Environmental Restoration Program Information Management System
ft	foot (feet)
FS	Feasibility Study
FSS	Final Status Survey

FSSSP	Final Status Survey Plan
GIS	geographic information system
GPS	Global Positioning System
GSR	green and sustainable remediation
HTRW	hazardous, toxic, and radioactive waste
ISOCS	In-Situ Object Counting System
IMC	intermodal container
ITR	independent technical review
KO	contracting officer
m	meter(s)
m ²	meters squared
MARSSIM	Multi-Agency Site Survey and Investigation Manual
MATOC	Multiple Award Task Order Contract
MoU	Memorandum of Understanding
NRC	Nuclear Regulatory Commission
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
pCi/g	picocuries per gram
pdf	portable document format
PAMP	Perimeter Air Monitoring Plan
POTW	publically owned treatment works
PMP	Project Management Plan
PPE	personal protective equipment
PWS	project work statement
QA	quality assurance
QA/QC	quality assurance/quality control
QASP	Quality Assurance and Surveillance Plan
QC	quality control
RA	remedial action
RAOs	remedial action objectives
Ra-226	Radium-226
RCP	Regulatory Compliance Plan
RCRA	Resource Conservation and Recovery Act

RFI	RCRA Facility Investigation
RI	Remedial Investigation
ROD	record of decision
RPP	Radiation Protection Plan
SARA	Superfund Amendments and Reauthorization Act
SOP	Site Operations Plan
SSHO	site safety and health officer
SSHP	Site Safety and Health Plan
SWPPP	Storm Water Pollution Prevention Plan
TARP	Threat Awareness and Reporting Program
T&D	transportation and disposal
TDS	total dissolved solids
Th-230	Thorium-230
DPG	Dugway Proving Ground
UDEQ	Utah Department of Environmental Quality
UFP-QAPP	Uniform Federal Policy-Quality Assurance Project Plan
USACE	U.S. Army Corps of Engineers
U.S. EPA	U.S. Environmental Protection Agency
Utotal	Uranium total (sum of isotopes U-234, U-235, and U-238)
WBS	work breakdown structure

n

1 GENERAL

1.1 Contract Award

The Dugway Proving Ground (DPG) will be remediated by United States Army Corps of Engineers (USACE) under the Defense Environmental Remediation Program (DERP). The site is located in Southern Tooele County, Utah (Figure 1).

This performance work statement (PWS) is being prepared for use with a performance-based firm fixed price contract to provide the requirements for execution of the contract and an understanding of the functions that the remedial action (RA) contractor (Contractor) may be required to perform.

It is expected that the remedial action contractor will be able to act as a consultant to provide guidance and make recommendations with minimal USACE direction as it relates to the work in the field and foreseen/unforeseen conditions encountered which will in turn improve performance and/or reduce project costs.

1.2 Project Work Statement

This PWS identifies services necessary to remediate contaminated soils at the DPG. The RA must meet criteria documented in the record of decision (ROD) (USACE 2022). Required remedial services may include, but are not limited to:

- Development and implementation of work plans
- Construction of support facilities (access, staging areas, etc.)
- Environmental monitoring, sampling, and analysis during the remediation.
- Civil surveying
- Radiological surveys
- Excavation, handling, and packaging of waste soils and debris
- Backfilling of excavated areas with fill materials (to be made available to the Contractor within 5 to 10 miles of the RA area)
- Site restoration
- Demobilization
- Preparation of reports and documentation
- Interaction with emergency response agencies
- Any other actions necessary to remediate DPG

The Bid Schedule included in Attachment 1 follows the required WBS. The Offeror shall provide costs down to at least one additional WBS level that may be organized at their discretion.

2 STATUTORY AUTHORITY, REGULATORY COMPLIANCE, AND ADMINISTRATIVE RECORD

2.1 Statutory Authority

The DPG is located in southern Tooele County, Utah. This project is authorized under DERP, which was established by Congress in 1986 to provide funding to cleanup active DoD sites that fall under the jurisdiction of the Secretary of Defense.

The Record of Decision (ROD) presents the U.S. Army (Army) Selected Remedy for Area 2 of SWMU-11 at DPG, Dugway, Utah. Records indicate Area 2 was never licensed by the U.S. Nuclear Regulatory Commission (NRC). During 2016, the Department of Defense (DoD) and the NRC finalized a memorandum of understanding (MoU) for the coordination of response actions for DoD sites containing radioactive material that are not licensed by the NRC (NRC-DoD MoU, 2016). The Remedy was selected pursuant to the MoU and in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, and to the extent practical, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) – 40 Code of Federal Regulations (CFR) Part 300, and the U.S. Environmental Protection Agency (EPA) Remedial Investigations (RI)/Feasibility Study (FS) Guidance 540/G-89/004 (EPA, 1988).

The ROD is based on the administrative record for Area 2 of SWMU-11.

2.2 Regulatory Compliance

The Contractor will comply with all applicable federal, state, and local regulations while performing radiological remediation services required by this PWS. The Contractor will bear sole responsibility for any non-conformance resulting from the actions or directions of their employees or subcontractor employees.

2.3 Administrative Record

The administrative record file for DPG contains documentation used in the decision-making process for the site. DPG maintains this administrative record, which is available for public review. Supporting agencies, consisting of the Utah Department of Environmental Quality (UDEQ) Division of Waste Management and Radiation Control (DWMRC) and the NRC, concur with the selected remedy.

Additional information for Area 2 of SWMU-11 can be found in the Administrative Record file located at the following location:

**Utah Department of Environmental Quality
Division of Waste Management and Radiation Control
195 North 1950 West
Salt Lake City, UT 84114-4880
801-536-0200**

2.4 Stakeholders

Principal project stakeholders are listed below.

- Property Owner
 - United States Army

- Army Environmental Command (AEC)
- Dugway Proving Grounds (DPG)

3 SITE BACKGROUND

In the DPG RCRA Facility Application, Area 2 of SWMU-11 was one of seven reported radioactive landfills. Historic records regarding radiological materials handling were summarized in the 2009 Phase II RCRA Facility Investigation (RFI) (Parsons, 2009). Specific records regarding radiological materials disposed at SWMU-11 are limited. The East Granite Holding Area (i.e., SWMU-11) is not identified in available literature as being associated with the testing of radiological munitions conducted at DPG in the 1950s and 1960s. Historical inspection records indicate that buried wastes in the SWMU-11 area consisted primarily of “contaminated rags and papers.” Inspection records from the U.S. Atomic Energy Commission indicate that low-level radioactive waste materials were repackaged for sea disposal in the Able Area. Waste from this activity may have also been disposed at the DPG burial area corresponding to SWMU-11 after the sea disposal program was discontinued. Available documentation states that operation of the DPG radioactive waste disposal facility was discontinued in the early 1960s and that materials were transferred offsite during 1962 (NRC, 2001). Historical records indicate that the latest potential use of the SWMU-11 area for radiation-related operations was 1977. By extension, the last potential opportunity for radiological material to be added to trenches TR-5 and TR-6 would also be 1977.

Radioactive waste materials from laboratory activities in other areas of DPG were stored in a CONEX container at SWMU-11 to protect individual storage containers from the elements. Materials stored in the CONEX container included Tritium and Carbon-14. In March 1980, contaminated glassware was removed from the CONEX by the DPG radiation safety officer and disposed at an off-site location. During the 2005 Phase II RFI, no waste remained in the CONEX container (Parsons, 2009). The CONEX container was determined to be radiologically clear and was removed in 2017 (Marsh, 2017).

3.1 Current Site Conditions

The FS (North Wind, 2020a) evaluated human and ecological receptors and exposure routes, established remedial action objectives (RAOs), developed ARARs, and evaluated six remedial alternatives to address site-related contaminants that pose an unacceptable risk to human health or the environment.

As presented in the ROD, the conceptual site model (CSM) provides an evaluation of human and ecological receptors and exposure routes and RAOs were established based on the known current conditions and the potential risks to human receptors identified during the FS.

The Proposed Plan presented the findings of the FS (North Wind, 2020a). The PP identified the Preferred Alternative for addressing radiologically impacted soil and debris at Area 2 of SWMU-11 as Alternative 4 – Excavation, Disposal, and Backfilling. Alternative 4 meets the threshold criteria (i.e., overall protection of human health and the environment and compliance with ARARs) and provides the best balance of tradeoffs among the six alternatives with respect to balancing and modifying criteria (i.e., long- and short-term effectiveness; reduction of toxicity, mobility, volume, and mass of contamination; implementability; and cost).

The Army selected Alternative 4 (Excavation, Disposal, and Backfilling) as the preferred remedy for Area 2 of SWMU-11. Excavation, Disposal, and Backfilling represents the best balance of tradeoffs between balancing and modifying criteria and will be protective of human health and the environment and will comply with ARARs.

3.2 Surrounding Properties

The DPG facility is bordered to the northeast by the Cedar Mountains and to the north-northwest by Wendover Air Force Range. DPG currently serves as the Army's designated Major Range Test Facility for chemical and biological defense.

SWMU-11, also known as DPG-011 and the East Granite Holding Area, is located in the remote southwest portion of DPG and covers approximately 3.4 acres within a small canyon on the east side of Granite Mountain. SWMU-11 is divided into two distinct areas: Area 1 and Area 2. Area 1 of SWMU-11 was previously evaluated and closed under the Resource Conservation and Recovery Act (RCRA) and corrective action requirements of the DWMRC. The focus of this PWS, Area 2 (0.86 acres) of SWMU-11 is a radiological disposal area of concern and consists of two trenches, TR-5 and TR-6, and the area adjacent to the trenches.

4 SITE CONDITIONS

4.1 Topography and Drainage

SWMU-11 is located at the mouth of a small, northeast-trending colluvial valley along the eastern side of Granite Mountain. The general topography at SWMU-11 is gently sloping down to the east, with an average elevation of 4,375 ft above mean sea level. The valley is flanked to the south by a small ridge of granite that extends from the main Granite Mountain area, and to the north and west by granite outcroppings characteristic of Granite Mountain. To the east, the valley is open to the broad expanse of the Dugway Basin. Granite Mountain is an isolated, north-south trending mountain block approximately 8 miles long × 6 miles wide. The southern two-thirds of the mountain are dominated by dark colored gneiss and gneissic granite with a thin sliver of schists and phyllites at the extreme southern end. The northern one-third of the mountain is made up of intrusive leuco-granitic rocks that form a gradational contact with the gneissic granite to the south. Quaternary-aged lacustrine, alluvium, and colluvium deposits are present along the flanks of Granite Mountain, including the small valley where SWMU-11 is located. Away from the mountain, the surrounding basin floor consists of aeolian sand and silt deposits, and Quaternary-aged playa and lacustrine sediments associated with deposits of ancient Lake Bonneville and older pluvial lakes (Parsons, 2009).

Groundwater in the area of SWMU-11 is part of the Dugway Valley aquifer system. Groundwater in this region is generally characterized by high total dissolved solids (TDS) and very flat hydraulic gradients. However, the flanks of Granite Mountain, including the SWMU-11 site, constitute a local recharge zone for basin groundwater. In these localized zones, groundwater is deeper and of higher quality than groundwater beneath the basin floor. As groundwater flows from the local recharge area toward the basin floor, it becomes increasingly laden with dissolved mineral constituents; consequently, the quality of groundwater becomes greatly diminished. Depth to groundwater near the eastern boundary of SWMU-11 is approximately 61 ft bgs based on water-level measurements from MW-01. An attempt to install a second groundwater well in the western portion of SWMU-11 near TR-5 did not reach saturated conditions but rather encountered competent granite bedrock from 72.5 ft bgs to the terminal drilling depth of 90 ft bgs. Groundwater flow at SWMU-11 is likely to the east or northeast based on the local topographic gradient present at the site (Parsons, 2009).

4.2 Nature and Extent of Contamination

The various DERP soil sampling efforts identified soils in the SWMU-11 with elevated levels of Radium-226 (Ra-226), Lead-214 (Pb-214), Bismuth-214 (Bi-214), Strontium-90 (Sr-90) Niobium-94 (Nb-94), and Cesium-137 (Cs-137).

Maximum detected concentrations within the excavation locations included 3,040 picocuries per gram (pCi/g) for Ra-226, 2,200 pCi/g for Pb-214, 2,100 pCi/g for Bi-214, 19.2 pCi/g for Sr-90, 8.9 pCi/g for Nb-94 and Cs-137 was not detected in Area 2 but is likely associated with metallic debris in TR-6.

4.3 Selected Remedy

Based on the requirements of CERCLA and the NCP, and on a detailed analysis of the response alternatives using the nine criteria, the Army selected Alternative 4 (Excavation, Disposal, and Backfilling) as the preferred remedy for Area 2 of SWMU-11. Supporting information is presented in the ROD.

The major components of the selected remedy for the SWMU-11 include:

- Excavating approximately of 572 cubic yards (CY) from both TR-5 and TR-6 to a depth of approximately 7ft below ground surface (bgs) so as to meet RAOs.
- Temporary staging areas will be used to prepare impacted soil and debris for disposal and transport; these areas will be graded to reduce the potential for ponding and collapse of trench walls, lined to prevent groundwater contamination, and bermed to prevent runoff.
- Establishing perimeter dust control measures, air monitoring and contamination control measures to monitor and control the discharge of surface water runoff and airborne dust from the excavation areas to local conveyances. This will be conducted for health and safety purposes during excavation.
- To ensure the excavation was completed to meet unrestricted (i.e., residential) standards, or UU/UE, confirmation surveys and soil sampling for radionuclides and a magnetometer survey will be performed to ensure all radiologically impacted materials have been removed.
- Backfilling with clean soil, contoured to promote surface water runoff in accordance with the approved site restoration plan.

The Contractor will be required to meet the RAO, as stated in the ROD, to demonstrate completion of the contract:

- Prevent direct contact to or external exposure from surface and subsurface soil and debris (i.e., metal tubes) contaminated with Radium-226, Strontium-90, Bismuth-214, Niobium-94, Lead-214, and Cesium-137 by human receptors, with consideration to current and reasonably anticipated future land uses. The radiological criterion for unrestricted release is a dose limit of 25 mrem/yr.
- Reduce the potential for migration of soil contaminated with Radium-226, Strontium-90, Bismuth-214, Niobium-94, Lead-214, and Cesium-137 to areas beyond the trenches (i.e., buffer zones surrounding the trenches, air, and groundwater).

5 REMEDIATION ACTIVITIES AND REQUIREMENTS

The Contractor is responsible for all remediation work to implement remedy as selected in ROD, which includes, but is not limited to, the activities described below. The location of site activities as presented in the ROD.

General

- Develop project work plans for USACE review and acceptance.
- Manage the project and provide construction quality assurance/quality control (QA/QC).
- Establish, maintain, and follow a safety and health program; prepare and implement Accident Prevention Plans (APPs) as required by Engineer Manual (EM) 385-1-1, 29 CFR 1910.120/29 CFR 1926.65, or other Occupational Safety and Health Administration (OSHA) related compliance plans pertinent to the work.
- Establish and follow analytical data quality procedures based on USACE, U.S. EPA, NRC and UDEQ guidance; perform multi-media radiological and chemical sampling and analysis.
- Maintain electronic files, data, maps, tables, databases, geographic information system (GIS) files, and project administrative files.
- Prepare reports and documentation during and after completion of the remedial activities.
- Provide public relations support.
- The Contractor is responsible for setting working hours. USACE and AEC will provide assistance in procuring base access. However, the Contractor is responsible for all day-to-day coordination.
- AEC will sign waste manifest as the generator. The Contractor will be responsible for ensuring that all waste is properly profiled and meets the requirements to be accepted and disposed at an approved licensed or permitted landfill.

Site Activities

- Document the condition of the site and all areas that will be used during or disturbed by the remedial action.
- Conduct property boundary and topographic surveys, as necessary, prior to site activities.
- Mobilize the required workforce and equipment.
- Install and maintain support facilities and air monitoring stations (including off-site air monitor). Implement radiological and construction site safety procedures; monitor worker exposures and environmental contamination spread through routine contamination control surveys.
- Operate and maintain air monitoring program to enable early detection and an emergency notification system of potential contaminant emissions prior to site activities and during the remedial action.
- Clear and grub the site to enable performance of the remedial action.
- Manage all storm water and decontamination water. The Contractor will acquire all discharge requirements (i.e. permits) with the UDEQ.
- Install drainage management techniques during construction, demobilization and restoration that preclude water and sediment transport off the site.
- Excavate and handle contaminated soil and debris.
- Transport and dispose of all contaminated soil and debris to an approved landfill disposal facility
- Conduct a Final Status Survey (FSS) in accordance with the Multi-Agency Site Survey and Investigation Manual (MARSSIM) to document attainment of the remediation goals.

- Contractor can assume there is clean backfill within 5 to 10 miles of site. It is Contractor responsibility to ensure backfill meets all local, state, and federal guidelines related to introduction of new contaminants. There are no geotechnical requirements for the backfill. The contractor may assume that track compaction is adequate for this isolated area.
- Conduct pre- and post- construction gamma walk-over surveys for work areas that may be impacted.
- Deconstruction of temporary measures used for the remedial action, including hauls roads and culverts.
- Demobilize the workforce and equipment from the site.

Detailed technical requirements are provided in Appendix A.

5.1 Mobilization and Preparatory Work

5.1.1 Pre-Mobilization Survey

The Contractor will conduct a pre-mobilization civil and radiation surveys of site areas that will be used or remediated in accordance with Appendix A (Section 02 61 13).

Pre-mobilization Survey to include air monitoring to establish baseline readings.

5.1.2 Submittals/Implementation Plans

The Contractor will develop and provide work plans and other submittals in accordance with this PWS and Appendix A - Unified Facilities Guide Specifications.

The following work plans must be prepared for USACE, AEC, and NRC review and acceptance:

- Project Management Plan, which includes Project Schedule
- Contractor Quality Control Plan (CQCP)
- Uniform Federal Policy - Quality Assurance Project Plan (UFP-QAPP) which should incorporate sampling and analysis procedures and FSS.
- A Site Safety and Health Plan (SSHP)/Accident Prevention Plan (APP) and a Radiation Protection Plan (RPP). The contractor may incorporate these “sub-plans” into a single document at contractor’s discretion.
- A Site Operations Plan (SOP) which at a minimum will identify how the contractor will address backfill and restoration, regulatory compliance, a water management, and waste management. The contractor may incorporate these “sub-plans” into a single document at contractor’s discretion.

Work plan requirements are provided in Appendix A. A draft version of each plan must be submitted to USACE and AEC for review and comment. All supporting plans should be submitted at the same time to USACE and AEC for a comprehensive review. The Contractor must complete an internal technical review (ITR) and editorial review before submitting the work plans. Table 1 provides a summary of work plan preparation and review durations. All USACE review comments and contractor responses will be transmitted via the ProjNet (DRChecks) system; stakeholders will be encouraged to use ProjNet (DRChecks) for review. The Contractor will be provided access to the system at the onset of work plan preparation.

Table 1: Document Preparation and Review Schedule

Activity or Milestone	Duration (Calendar days)
Contractor submits draft Document	---
USACE/AEC review	30
Contractor responds to comments, revises document, and issues revised draft work plan	15
USACE/AEC back check of revised draft work plan	15
Contractor makes revisions (if required) and issues draft final work plan	15
Stakeholder review (NRC and UDEQ DWMRC)	60
Contractor makes revisions (if required) and issues revised final work plan for USACE/AEC concurrence (10 days)	20
Stakeholder Backcheck (NRC and UDEQ DWMRC)	20
Total duration	175

Site mobilization must not occur until all required work plans and pre-mobilization submittals have been accepted as final by USACE, AEC and NRC (as applicable). All other work plans must be accepted for construction prior to any remediation work. Do not implement any field changes without prior acceptance from the contracting officer (KO).

5.1.2.1 Project Management Plan and Project Schedule

The Contractor shall develop and maintain a detailed Project Management Plan (PMP) in both draft and final approved versions. The PMP shall specify the schedule, general technical approach, resources, and communication required for the planning, execution, and completion of the project. The first draft of the PMP shall be due within thirty (30) calendar days of contract award and shall include a payment milestone plan. The draft PMP, proposed payment milestones, and subsequent revisions shall be subject to USACE review and approval. The final PMP shall be due within 14 calendar days of receipt of USACE/AEC comments on the draft PMP. A payment milestone shall be established for Government approval of the final PMP.

As part of the PMP the Contractor shall finalize the Quality Assurance and Surveillance Plan (QASP) (Attachment 2). The QASP sets forth the procedures and guidance that the COR will use in evaluating the technical performance of the Contractor in accordance with the terms and conditions of the PWS. The QASP objective is to define government procedures that will be used to verify that the appropriate performance and quality assurance (QA) methods are used to manage this contract. The purpose of the QASP is to ensure that the performance of specific activities and the completion of milestones are accomplished in accordance with all requirements set forth in the PWS.

The Contractor will develop a project management plan to include a critical path method schedule that identifies definable features of the project, start and completion dates, critical activities, and milestones.

5.1.2.1.1 *Contractor Quality Control Plan*

The Contractor will provide and maintain an effective quality control (QC) program to ensure that all documents and design activities required by this PWS are prepared and provided in a manner that meets professional engineering quality standards. The CQCP is the means by which the Contractor ensures that the construction (including subcontractors and suppliers) complies with contract requirements. The appropriate aspects of CQCP may be incorporated into the PMP at the Contractor's discretion.

USACE approval of the CQCP is conditional and will be predicated on satisfactory performance during construction. USACE may require the Contractor to propose changes in the CQCP and operations to obtain the quality specified. After USACE approval of the CQCP, the Contractor must notify the KO/Contracting Officers Representative (COR) in writing a minimum of seven calendar days prior to any proposed change and provide qualifications of the proposed replacement, if requested. Proposed changes will be subject to approval by the KO/COR.

5.1.2.2 *Uniform Federal Policy - Quality Assurance Project Plan*

UFP-QAPP will establish the project quality assurance plan for sampling, measurement, and analytical requirements associated with site remediation activities. It must follow the recommended format for quality assurance project plans outlined in the Uniform Federal Policy for Implementing Environmental Quality Systems – Evaluating, Assessing and Documenting Data Collection/Use and Technology Programs (Intergovernmental Data Quality Task Force 2005) and Appendix A (Analytical Laboratory Requirements and Data Deliverables and Section 01 35 45).

The approved UFP-QAPP will confirm the Contractor's understanding of the contract requirements for chemical data QC. It must:

- Delineate the QC methods the Contractor intends to use to ensure accurate, precise, representative, complete, legally defensible, and comparable data.
- Describe all parameter measurements for all matrices associated with the remediation.
- Clearly identify the Contractor's laboratories.
- Address all levels of sampling and analysis with enough detail to become a document that may be used as an audit guide for field and laboratory work.
- Be furnished to all laboratories and the Contractor's field sampling crew.

The UFP-QAPP must describe applicable data quality objectives, analytical methods and measurements, QA/QC protocols, and data assessment procedures for evaluating and identifying any data limitations. It must contain adequate technical detail and direction for field and laboratory personnel to understand project sample analysis, QC and data reporting requirements, analytical methods, required detection limits, QC requirements, and data validation and reporting requirements.

USACE requires the Contractor to collect external dose rate measurements and contamination surveys of waste containers to document and ensure compliance with Department of Transportation regulations.

5.1.2.2.1 *Final Status Survey Plan*

The Contractor will prepare a Final Status Survey Plan (FSSP) in accordance with the guidance contained in MARSSIM. The Final Status Survey will be performed prior to backfill to demonstrate the attainment of remedial goals. The FSSP may be incorporated into the UFP-QAPP, as opposed to a stand-alone document at the Contractor's discretion with the goal of minimizing redundancy between documents.

5.1.2.3 Accident Prevention Plan (APP)/Site Safety and Health Plan

The Contractor will prepare an APP/SSHP using the format provided in Appendix A of USACE EM 385-1-1. Include all applicable plans using the APP/SSHP Checklist as a guide. Specific APP/SSHP requirements are provided in Appendix A (Sections 01 35 26 and 01 35 29.13).

5.1.2.4 Radiation Protection Plan

Prepare a RPP to address the radioactive materials encountered at the project site. The RPP must be developed by a certified health physicist with at least ten years' experience in radioactive waste handling operations. The RPP must be commensurate with the scope and extent of the activities that must be performed for this PWS, and sufficient to ensure compliance with the provisions of the applicable standards including air monitoring. It must be signed by the certified health physicist and included as an attachment to the APP/SSHP or incorporated into the APP/SSHP at the Contractor's discretion with the goal of minimizing redundancy between documents.

5.1.2.5 Site Operations Plan

Site operations include all activities associated with the remedial action. Site operations occur after mobilization and before demobilization. The SOP must describe all aspects of the work and present the Contractor's proposed means, methods, and sequencing of the work. SOP requirements are provided in Appendix A (Section 01 50 00, subsection 1.4).

5.1.2.6 Backfill and Restoration

The Contractor shall identify means and methods for site restoration in accordance with this PWS. The plan must identify:

- Site grading and erosion control - final site grades, placement, and grading of borrow fill, and sedimentation and erosion controls used after final grading.
- Proposed fill sources – location of fill sources and soil types.
- Preconstruction testing of backfill materials - testing requirements for imported fill to document compliance with backfilling requirements identified in Appendix A (Section 02 61 13).
- Backfill placement requirements - includes the type of compaction equipment (e.g., track compaction), method of dumping and spreading the fill, fill lift thickness, moisture content, methods of breaking down any large clumps of soil (clay), and removal of oversized materials.
- QC requirements - methods to estimate placed moisture content, placed material classification (Unified Soil Classification System).
- Site restoration – methods for restoring areas of the site that were used during the remedial action (e.g., perimeter haul roads, decontamination area for workers and trucks, support area, etc.).
- Erosion /surface water runoff controls will be maintained during site restoration.
- Compaction of backfill -The contractor shall conduct basic compaction of the backfill soil. Soils will be placed into the excavations in nominal 18-24 inch loose lifts and mechanically compacted, compaction testing will not be required.

The backfill and restoration should be incorporated into the SOP. Technical requirements are provided in Appendix A (Sections 02 61 13).

5.1.2.7 *Water Management*

The SOP must describe and provide details of the Contractor's SWPPP or justification for a SWPPP not being required based on the anticipated extents of disturbance and any other applicable factors.

Any water (i.e., precipitation, run-on, used decontamination water, dust control water) coming in contact with the contaminated areas and excavations must be considered potentially contaminated. Contaminated water discharge and disposal must be performed in accordance with the requirements of the Contractor's accepted for construction SOP.

The Contractor must not discharge any water accumulated in the excavations or generated during site remediation directly or indirectly into any creeks, ditches, streams, washes, or waterways.

The Contractor must comply with the substantive requirements of all federal, state, and local regulations and/or guidelines, including but not limited to Utah Pollution Discharge Elimination System (UPDES) General Permit for Discharges from Construction Activities UPDES Permit No. UTRC0000.

If a SWPPP is required, it must:

- Identify potential sources of pollution that may be reasonably expected to affect the quality of storm water discharge from the remediation areas.
- Describe and ensure the implementation of practices that must be used to control surface water run-on and run-off from the remediation areas (including diversion of non-contaminated runoff around active work areas).
- Select appropriate best management practices from U.S. EPA 833-R-060-04 *Developing Your Stormwater Pollution Prevention Plan, A Guide for Construction Sites* (May 2007).
- Identify monitoring and reporting requirements.

5.1.3 *Setup/Construction of Temporary Facilities*

This activity includes procurement, setup, and construction of office trailers, storage area, decontamination facilities, staging areas and other temporary facilities. Site mobilization must not occur until all required work plans and pre-mobilization submittals have been accepted by USACE.

These activities include, but are not limited to:

- Installation of on-site security measures.
- Preparing lay down/staging areas for materials, equipment, decontamination area, office trailers, and sanitary facilities.
- Furnishing field office trailers and a decontamination facility.
- Furnishing site utilities such as water, electric, telephone, and internet service.
- Providing traffic controls (to include signage) in accordance with state, county, and local requirements.
- Identifying and marking all underground utilities within the work areas (the appropriate utility companies must be notified of the type of traffic and equipment travelling over the buried utilities).
- Procurement and set up of necessary tools, equipment, and materials.
- Installation of air monitoring stations and a meteorological system.
- Air monitoring, data analysis and reporting.

Requirements for temporary construction facilities and controls are provided in Appendix A (Section 01 50 00). Permit only authorized personnel to access the work area(s). Refer to Appendix A (Section 01 50 00).

5.1.3.1 Site Security

The Contractor will provide site security for all equipment, temporary facilities, and manpower. The Contractor must only permit authorized personnel to access the work area(s) as described in Section 13.

5.1.3.2 Project Signs

Provide and maintain a project construction and safety performance sign. The project name identified on the sign must be:

DUGWAY PROVING GROUNDS SITE REMEDIAL ACTION
DEFENSE ENVIRONMENTAL REMEDIATION PROGRAM

5.1.4 *OPTIONAL TASK – Additional Mobilization/Demobilization*

Contractor shall include costs to “stand down” for two to six months for unforeseen project delays that the Government concurs are outside of the Contractors reasonable control. Contractor shall include costs to stabilize the site for approximately two to six months, demobilize and remobilize when conditions allow.

This Optional sub-task is not meant to address natural disasters or other such force majeure events.

5.2 Monitoring, Sampling, Testing and Analysis

5.2.1 *Radiation Monitoring*

Procure, setup, test, and operate radiological monitoring equipment on the project site. Radiation monitoring activities must be performed from site mobilization through completion of site demobilization and must include, but not be limited to, the following activities:

- Establishing radiological controls.
- Initial baseline surveys during premobilization and post mobilization (note: gamma walkover survey data must be graphed and analyzed; the results must be provided to USACE as soon as possible).
- Routine periodic contamination control surveys of:
 - Haul roads
 - Office trailers and break area
 - Access point
 - Decontamination facilities
 - Storage area
 - Excavation
 - Incoming materials and facilities
 - Equipment and temporary facilities decontamination
 - Waste packaging and shipment
 - Sample shipment

All radiation monitoring activities must be performed in accordance with the government approved UFP-QAPP and accepted for construction RPP and requirements provided in Appendix A.

Nuclear Regulatory Commission (NRC) licensed radioactive measurement devices (e.g. density testing equipment) may be used on-site at the contractors discretion, though density testing is not required for

this contract. USACE must be notified prior to bringing the device(s) on-site and when they are removed from the site. Army authorization for NRC licensed devices is not necessary. If any radioactive sources or instruments (i.e. Troxler Compaction Tester) are brought on-site, the Contractor must complete a Form DA3337 and send it to the USACE Health and Safety Officer, per EM 385-1-1, page 6–12, Paragraph 06.F.01 (a–c) and EM 389-1-80, page 5–7, sections 5–8 (all).

5.2.2 Air Monitoring and Sampling

The Contractor must conduct perimeter air monitoring and sampling prior to mobilization and during site activities to provide early detection of potential COCs emissions and during remediation. The monitoring and sampling program must include an exposure notification plan used to alert the Contractor and the USACE COR of the need to implement contingent measures to reduce the potential for community exposure to COCs above established levels. Monitoring and sampling must include off-site background air monitoring before soil removal activities. Air monitoring and sampling must be performed in accordance with the Contractor's PAMP which has been accepted by the government and included with the approved SSHP.

Additional air monitoring and sampling requirements are provided in Appendix A (USACE Air Monitoring Requirements).

5.2.3 Sampling Surface Water/Groundwater/Liquid Waste

Water coming in contact with the contaminated areas (e.g., water accumulated within the excavations, used decontamination water, etc.) will be considered potentially contaminated. Collect water samples and send them to the analytical laboratory. Any discharge or disposal of potentially contaminated water must be performed in accordance with the government approved SOP, local discharge parameters and Appendix A (Section 01 57 23.01 41).

5.2.4 Soil Sampling

The Contractor will collect soil samples and ship them to the analytical laboratory. The samples include, but are not limited to:

- Final Status Survey soil samples.
- Off-site borrow fill.
- Sampling for waste characterization.

Refer to Appendix A (Sections 01 35 45 and 02 61 13).

Benching of excavation may be required for access to sidewalls within the excavation for confirmation sampling. The soil sampling plan should describe procedures to allow for reasonably anticipated access limitations (i.e., incorporate benching as necessary).

The Contractor shall collect adequate excavation sidewalls and floor samples in accordance with the FFSP for off-site analysis to determine whether the extent of excavation has met cleanup goals.

The contractor shall also collect adequate samples to meet landfill disposal facility waste acceptance criteria and comply with all federal, state, and local laws and regulations.

Demobilization samples should include:

- Wipe samples of equipment and temporary facilities that have been decontaminated, in order to return to standard use.
- Soils from temporary haul roads, staging areas, and decontamination areas.

Sampling of radioactive contaminated media must be performed in accordance with the government approved UFP-QAPP.

Laboratory analytical results must be provided to USACE, AEC for review and acceptance prior to placing clean backfill at the site.

5.2.5 Laboratory Chemical Analysis

This activity includes laboratory chemical analysis of, but not limited to:

- Borrow fill – analysis to comply with the government approved UFP-QAPP and accepted for construction BRP.
- Wastewater (if generated)- analysis to comply with the Government approved UFP-QAPP and accepted for construction Water Management Plan and in compliance with UDEQ discharge limits.

Provide laboratory chemical analysis of samples in accordance with the government approved UFP-QAPP and Appendix A (Sections 01 35 45 and 02 61 13). Maintain and routinely provide USACE with spreadsheets that track laboratory samples, including turnaround times, date results are expected, date results are received, sample results, estimated water release volumes, concentrations, and other pertinent information. Complete the electronic field data deliverable spreadsheet to document all information and samples collected in the field.

Off-site/Borrowed Backfill Example Sampling Parameters

Laboratory analytical results must be provided to USACE and AEC for review and acceptance prior to placing backfill at the site. The sampling frequency for backfill will be one sample per 250 cubic yards (CY) of fill material (up to 1,000 CY and then 1 sample per each additional 500 CY between 1,000 and 5,000 CY). Analytical testing of backfill materials from any borrow source will be analyzed for one or more of the following parameters (subject to change):

- Gamma Spectroscopy by method Ga-01-R
- Isotopic Thorium and Uranium by method A-01-R
- Metals analysis (TAL metals/mercury) by U.S. EPA method 6020A/7471B
- Hexavalent chromium by U.S. EPA method 7196A
- Total cyanide by U.S. EPA method 9012B
- Radium-226 by U.S. EPA method 903.0
- Metals by EPA method 6010B/7470/7473
- U.S. EPA Volatile organic compounds by U.S. EPA method 8260C
- Polychlorinated Biphenyls by U.S. EPA method 8082
- Pesticides by U.S. EPA method 8081A
- Semi-volatile organic compounds by U.S. EPA method 8270D

5.2.6 Radioactive Waste Analysis

This activity includes laboratory analysis of, but not limited to:

- Surface water and liquid waste .

- DERP contaminated material for waste profiling and to ensure disposal facility Waste Acceptance Criteria compliance.
- Wipe samples of equipment and temporary facilities that have been decontaminated - .

Radioactive waste analysis must be performed in accordance with the government approved UFP-QAPP, the accepted for construction SOP, and requirements provided in Appendix A. The Contractor must maintain and routinely provide USACE with spreadsheets that track laboratory samples, including turnaround times, date results are expected, date results are received, sample results, calculations, concentrations, air monitoring results, dosimetry results and other pertinent information. Radiological test results must be provided to USACE and AEC for review and approval prior to placing backfill at the site.

USACE requires the Contractor to collect external dose rate measurements and contamination surveys of waste containers to document and ensure compliance with Department of Transportation regulations.

5.3 Site Work

Prepare the site for remediation. Work includes clearing, grubbing, earthwork and site utilities.

Excludes any work involving contaminated or hazardous materials. Refer to Appendix A (Sections 01 50 00, 01 57 20, and 01 57 23.01 41).

Do not perform site work when a continuous area of standing water is present, which might increase the potential for contaminant migration during the remedial action.

5.3.1 Clearing and Grubbing

Remove vegetation, and other unsuitable organic material in accordance with the accepted SOP that may impede with the excavation. Minimize vegetation removal in the area as much as possible. If trees do need to be removed, root balls are considered comingled debris and should be disposed of with the waste.

5.3.2 Earthwork

In accordance with the SOP, any earthwork required to establish temporary construction facilities (e.g. handling areas, haul roads, equipment areas, etc.). Refer to Appendix A (Sections 01 50 00 and 02 61 13).

All haul roads, culverts, and temporary structures (if necessary) used for USACE remedial action will be dismantled and removed from the site after remedial action is complete. Utilities are the responsibility of the Contractor to locate and document and comply with any requirements to work in the vicinity.

This activity includes all labor, equipment, tools, and incidentals required to construct (if necessary) and maintain and remove temporary site haul roads in accordance with Appendix A (01 50 00).

5.3.3 Fencing

The Contractor will secure open excavations with temporary orange fencing or radiation warning rope. This activity includes all labor, equipment, tools, and incidentals required to construct and maintain temporary fencing in accordance with Appendix A (01 50 00).

5.3.4 Best Management Practices/Sediment Barriers

Install Best Management Practices including but not limited to silt fencing and/or straw bales to control site surface water in accordance with Appendix A (Section 01 57 23.01 41 SMALL PROJECT TEMPORARY STORM WATER POLLUTION CONTROL).

5.4 Contaminated Soil Removal

The work consists of excavation of contaminated soils to the clean-up limits presented in the ROD.

The Contractor will excavate and manage soils to the approximate excavation limits presented in the ROD. Staging or piling of material adjacent to the excavation areas is discouraged and direct loading is encouraged to the extent feasible.

The estimated base quantity amount of soil to be excavated and managed is approximately 572 bank cubic yards (BCY) as stated in the ROD. This is an estimate only and may vary based on soil conditions at the time of remediation. The contractor should use the information provided in the ROD, Feasibility Study and associated Characterization Report to independently estimate volume and total tonnage. The Contractor's performance will be graded on site cleanup and not upon the total volume of soil removed.

Confirmation sampling and analysis, in accordance with MARSSIM and the project FSSP must be performed to document removal of all contaminated soil. Extent of the excavation will end once the sidewall and floor surveys and sampling produces results below the cleanup goals. After completion of FSS, USACE and AEC must be given access to the excavated area to observe site conditions.

The Contractor should keep the excavated areas as dry as reasonably achievable (weather permitting) and maintain the excavated areas in a condition that is safe for workers. Once all targeted material is removed, the excavated area must be filled in with approved backfill material to match the surrounding ground surface. For scheduling purposes, the Contractor may assume that USACE and AEC will be available for inspection within two business days of receipt of final confirmation sample results.

All soils and material will be excavated as disposed off-site. Any large size debris (though not anticipated) will have to be reduced in size to meet waste acceptance criteria for transportation and disposal. Debris should be small enough to be handled by an excavator.

Technical requirements for excavation and handling of contaminated material are provided in Appendix A (Section 02 61 13). ***OPTIONAL TASK – Additional Contaminated Soil Removal (Above Base Quantity)***

The estimated base quantity amount of soil to be excavated and managed is approximately 572 BCY as stated in the ROD.

There is a possibility this amount may be exceeded based upon the confirmatory soil sampling results indicating contaminant levels above cleanup goals. Additional excavation would be required until cleanup goals are met. This Optional Task will be triggered in the event that necessary excavation volumes exceed 675 BCY total. This Optional Task is for additional cost associated with contaminated soil collection (excavation) of between 675 and 775 BCY of soil. This line-item cost comprises the additional soil excavation, additional sampling analysis, labor, general requirements, etc. that are included with excavation activities above base quantity.

Determination of excavated volume should be made based on weight of disposed material. The contractor must demonstrate in-place density of soil for award of this item and track progress towards total volume. Such work is for contracting and payment and not for regulatory review. Therefore, the contractor may present plan and results outside the UFP-QAPP.

This optional task may be exercised up to five times total, in 100 BCY increments. The contractor must reasonably plan for and anticipate this need, showing validity in advance to the government. The government will require approximately (2) business days to exercise each increment. Demobilization and remobilization costs shall not be incurred during award of the optional task(s).

5.5 OPTIONAL TASK - Transport and Disposal

Transportation and disposal of radiological, co-mingled¹, hazardous and/or non-hazardous waste may be performed by the Contractor (i.e this PWS) or under a separate Radioactive Waste Disposal (RWD) Blanket Purchase Agreement. The USACE may award Transport and Disposal (to include providing containers and necessary liners) under a RWD BPA to either Energy Solutions (W912DQ21A3000), US Ecology Holdings (W912DQ21A3001), or Waste Control Specialists (W912DQ21A3002). The Contractor may bid on transport and disposal at its discretion or leave this option as a “no-bid” without it being a negative reflection on the Contractor’s overall proposal. The Government will select the option that it determines to be the best overall value to the Government considering cost, risk and expected level of performance. The government will pursue (at governments discretion) the RWD BPA after making a selection for this scope of work. As such, the Contractor should clearly define assumptions related to packaging and container delivery so that the Government may incorporate them into the RWD BPA solicitation.

Regardless of which option the Government selects for Transport and Disposal the Contractor will be (1) required to be the primary point of contact for coordination of Transport and Disposal of all radiologically contaminated waste; (2) the Contractor shall package all waste; (3) the Contractor shall collect all waste characterization samples, prepare waste profiles and shipping papers etc.

The Contractor shall comply with federal, state, local, and Installation requirements for any task involving the generation, accumulation, inspection, management, and transportation of radiological, co-mingled, hazardous and/or non-hazardous wastes and/or contaminated materials to off-site treatment, storage and/or disposal facilities.

This includes 40 Code of Federal Regulations (CFR) 260, 49 CFR 172 through 179 and all other applicable federal, state, and local transportation regulations.

Waste characterization samples shall be collected and analyzed for appropriate disposal parameters in order to verify landfill acceptance. Excavated debris and soil shall be containerized and transported in accordance with applicable regulations and disposed off-site at an appropriate facility.

For base task bidding purposes, the Contractor should assume that disposal of co-mingled waste will not be required; and that the solidified sand and drums in TR-6 can be disposed as low-activity radioactive waste or non-hazardous waste. However, the Contractor shall be prepared to make arrangements to dispose of co-mingled or hazardous waste should the need arise, based on waste characterization sample results, in order to complete the project.

This issue is discussed further in the Characterization Report, “Phase II chemical data and noted an arsenic result of 155 milligrams per kilogram (mg/kg) from the TR-6 solidified sand from inside a drum. As a result, it was determined that TCLP analysis of the contents of drums within TR-6 may be warranted in future remedy implementation” (Northwind 2020).

The waste profile shall be provided for USACE, AEC and Installation (Dugway) review and approval prior to transporting the waste off-site. The Contractor will decontaminate the containers, complete the Department of Transportation (DOT) survey, and manifest for transportation. The Installation (Dugway) will provide an on-site representative to sign all waste manifests.

¹ “low-activity” and “co-mingled” are used in this PWS to avoid the suggestion that the waste in question is in any way previously Licensed; the terms suggest characteristics similar to “Low-level radioactive waste” or “mixed waste”.

5.5.1 *OPTIONAL TASK – Transport and Disposal of Co-mingled Waste*

The Contractor shall be prepared to make arrangements to dispose of co-mingled or hazardous waste should the need arise, based on waste characterization sample results, in order to complete the project. This optional task should include additional costs to dispose of TR-6 solidified sand drums and similar debris.

5.5.2 *OPTIONAL TASK – Additional Transport and Disposal (Above Base Quantity)*

The estimated base quantity amount of soil to be managed is approximately 572 BCY as stated in the ROD.

There is a possibility this amount may be exceeded based upon site conditions and presented in Section 5.4.1. Additional transport and disposal would be required until cleanup goals are met. This Optional Task will be triggered beyond base quantities in conjunction with Section 5.4.1.

This line-item cost comprises the additional soil transport and disposal, waste characterization, management, and labor that are incurred due to greater than anticipated cleanup volumes.

5.6 Site Restoration

Place clean backfill in the excavation(s) to match the surrounding ground surface and prevent ponding and minimize run-on in accordance with the approved BRP. Assume backfill available within 5 to 10 miles of site. Refer also to Appendix A (Section 02 61 13).

5.6.1 *OPTIONAL TASK – Site Restoration (Above Base Quantity)*

The estimated base quantity amount of restoration to be conducted is based on removal of approximately 572 BCY as stated in the ROD.

There is a possibility this amount may be exceeded based upon site conditions as presented in Section 5.4.1 in which case additional site restoration would be required. This Optional Task will be triggered beyond base quantities in conjunction with Section 5.4.1.

This line-item cost comprises the transfer and placement of backfill soil management, and labor that are incurred due to greater than anticipated cleanup volumes.

This optional task may be exercised up to five times total, in 100 BCY increments. The contractor must reasonably plan for and anticipate this need, showing validity in advance to the government. The government will require approximately (2) business days to exercise each increment. Demobilization and remobilization costs shall not be incurred during award of the optional task(s).

5.6.2 *OPTIONAL TASK – Off-site Backfill (Base Quantity)*

Place clean backfill in the excavation(s) to match the surrounding ground surface and prevent ponding and minimize run-on in accordance with the approved BRP. Assume backfill not available within 5 to 10 miles of site and base excavation amount to be procured from commercial vendor. Refer also to Appendix A (Section 02 61 13).

Would be awarded in addition to Task 6 as necessary.

5.6.3 *OPTIONAL TASK – Off-site Backfill (Above Base Quantity)*

Place clean backfill in the excavation(s) to match the surrounding ground surface and prevent ponding and minimize run-on in accordance with the approved BRP. Assume backfill not available within 5 to 10 miles of site and base excavation amount to be procured from commercial vendor. Refer also to Appendix A (Section 02 61 13).

This Optional Task will be triggered beyond base quantities in conjunction with Section 5.4.1.

This line-item cost comprises the transfer and placement of backfill soil management, and labor that are incurred due to greater than anticipated cleanup volumes.

Would be awarded in addition to Tasks 6, 6.1 and 6.2 as necessary.

5.7 Demobilization

The Contractor will complete work associated with the removal of temporary facilities, utilities, equipment, material, and personnel. Demobilization includes, but may not be limited to:

- Decontamination of equipment, tools, and supplies for unrestricted use or controlled as contaminated material for disposal.
- Decontamination and removal/demolition of any wastewater handling/treatment equipment.
- Sampling and analysis of any waste generated during decontamination activities.
- Disposal of used PPE and decontamination waste.
- Performing verification surveys on decontaminated equipment, tools, and supplies prior to release from the site (USACE, AEC, or NRC may also perform QA confirmatory surveys).
- Removal of all temporary facilities, security measures, access restrictions, and signage.
- Dismantling and disposal of erosion and sedimentation control measures as appropriate.
- Demolition, removal, and disposal of any installations used for temporary storage and loading of excavated materials.
- Demolition, removal, and disposal of temporary access roads, parking lots, and equipment laydown areas constructed for the project.
- Repair of any off-site areas damaged by the remedial activities.
- Demobilization of site personnel, equipment, tools, and supplies.
- Completion of all contract submittals and performance of post-work activities associated with closing out the contract, including final invoicing and payment certifications.

Demobilization will be considered complete only after USACE has verified that all activities authorized under the contract have been completed to USACE satisfaction.

5.7.1 *Post Removal Survey*

The Contractor will conduct a post-demobilization civil and radiation surveys of site areas that will be used or remediated in accordance with Appendix A (Section 02 61 13).

5.7.2 *Demobilization of Construction Equipment and Facilities*

The Contractor will dismantle and remove all temporary facilities from the site. Includes any office trailers, storage and decontamination facilities, and other temporary facilities and utilities. Includes transportation, manifests, tolls, permits, escort vehicles, drivers, and equipment operators.

5.7.3 *Submittals/Final Reports*

5.7.3.1 *Lessons Learned Report*

Prepare a Lessons Learned report for USACE approval in accordance with Appendix A (Section 02 61 13). Host a conference call with USACE to present and discuss lessons learned and value engineering issues after the draft report is submitted.

5.7.3.2 Remedial Action Completion Report

Prepare a Remedial Action Completion Report (RACR) for USACE approval in accordance with Appendix A (Section 02 61 13). The Final Status Survey Report will be included in the RACR.

5.8 General Requirements

5.8.1 Supervision and Management

The Contractor will provide personnel, associated vehicles, travel and per diem to perform supervision and management of the work.

5.8.2 Meeting/Conferences

5.8.2.1 Preconstruction Conference

- A. Contractor representatives who have a responsibility or significant role in accident prevention on the project shall attend the preconstruction conference. This includes the project superintendent, site safety and health officer, quality control supervisor, or any other assigned safety and health professionals who participated in the development of the APP/SSHP (including the activity hazard analyses (AHAs) and special plans, program and procedures associated with it).
- B. Discuss the details of the submitted APP/SSHP to include incorporated plans, programs, procedures, and a listing of anticipated AHAs that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the KO's representative as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, review, and acceptance of AHAs to preclude project delays.
- C. Deficiencies in the submitted APP will be brought to the attention of the Contractor prior to the preconstruction conference, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Do not begin work until there is an accepted APP/SSHP.

5.8.2.2 Coordination Meeting

The Contractor will meet with the KO/COR and discuss the *contractor's* QC system. During the meeting, a mutual understanding of the system details must be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both on-site and off-site work, and the interrelationship of the Contractor's management and control with the government's quality assurance (QA). Minutes of the meeting must be prepared by the Contractor, reviewed (for acceptance) by the government, and signed by both the Contractor and the KO/COR. The minutes will become a part of the project file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures that may require corrective action by the Contractor.

5.8.2.3 Conference Calls/Progress Meetings

Contractor will arrange and conduct conference calls/progress meetings during execution of the work to discuss schedule, budget, accomplishments, milestones, problems, and communications. The following frequencies will apply:

- Work plan preparation – monthly conference calls (or more frequently if necessary).
- Site work – weekly project meetings at the site and via teleconference with USACE.
- After demobilization - monthly conference calls until close out of contract (or more frequently if necessary).

Prepare a meeting agenda prior to each conference call/progress meeting. The agenda must include minutes of the previous call/meeting and a summary of work performed since the previous call/meeting. Submit the agenda electronically to the KO/COR no later than 12:00 pm of the preceding day and meeting minutes must be submitted electronically to the KO/COR no later than five days after the meetings.

5.8.3 Engineering, Surveying, and Quality Control

Contractor will provide personnel, associated vehicles, travel and per diem, supplies, equipment, engineering services, and construction QA/QC. *Costs for this subtask may be incorporated into execution of tasks above; specific costs for this sub task need not be presented.*

5.8.4 First Aid, Fire Protection, Traffic Control, and Security

Provide personnel, associated vehicles, travel and per diem, supplies, and equipment for:

- First aid in accordance with the accepted APP/SSHP and Appendix A (Section 01 35 29.13).
- Fire protection in accordance with the accepted SOP and APP/SSHP and Appendix A (Sections 01 35 26 and 01 35 29.13).
- Traffic control in accordance with the SOP and Appendix A (Section 01 50 00).

Costs for this subtask may be incorporated into execution of tasks above; specific costs for this sub task need not be presented.

5.8.5 Health and Safety

Contractor will provide all health and safety personnel, associated vehicles, travel and per diem associated with PPE, monitoring instrumentation, and emergency equipment. Contractor will provide PPE for government personnel visiting the site. See Appendix A (Sections 01 35 26 and 01 35 29.13). *Costs for this subtask may be incorporated into execution of tasks above; specific costs for this sub task need not be presented.*

5.8.6 OPTIONAL TASK – Value Added Items

Contractor shall consider other cost saving/risk reduction measures not specifically noted in this PWS. Costs for such measures, if appropriate should be proposed in this task by the contractor for Government consideration.

Additional Value Added items may be proposed (or not) at contractors discretion.

6 CONTRACTOR PROJECT STAFF ORGANIZATION, QUALIFICATIONS, AND RESPONSIBILITIES

6.1 List of Key Individuals, Qualifications, and Responsibilities

Key contractor personnel must be available for the project during the contract. This section describes specific titles. The Contractor may propose combining responsibilities, provided the individual can successfully execute the combined set of assigned responsibilities without conflicting priorities, the individual meets the minimum qualifications for both positions, the requirements for independence are retained when/where required, and the resulting organization is in the best interest of the project and the government. Independence cannot be compromised; it separates construction operations from safety functions and QA/QC from all other functions.

The following key individuals address the personnel requirements associated with these activities. The Contractor must also designate, in writing, a proposed alternate for KO approval for each key personnel

listed in the event that the original designee is unable to complete the project. Alternates must possess similar knowledge and experience as the primary and have the authority to act on behalf of the primary in the event of their absence.

It is expected that key Contractor personnel will participate in defining the Contractor's proposed activities, methods, and requirements. Personnel that must be on-site full time include the site superintendent, radiation safety officer, site safety and health officer, and waste manager.

6.1.1 Program Manager

The Contractor will designate a program manager who has ultimate responsibility for the overall management of the contract including safety, material accounting, reporting, waste disposal, cost, schedule, and technical quality. The program manager must be competent, experienced, and knowledgeable in the field of hazardous and toxic waste remediation and the specific activities identified in this contract. The program manager must have, as a minimum, the following qualifications and experience:

- A college degree from an accredited school in engineering, construction management, geology, chemistry, health physics, or a related field.
- Professional registration, in their respective field, where applicable or available, or certification as a project management professional.
- A minimum of ten years of experience with hazardous and toxic waste remediation, specific experience with radiological waste is preferred. Five of the ten years must have been in a management role.
- A minimum of two years contracting experience (additional experience is preferable) with a U.S. federal agency.
- Working knowledge of applicable federal, state, and local laws, regulations, and guidance as they apply to the region specified in this solicitation.

6.1.2 Project Manager

The Contractor will designate a project manager. The program manager may act as project manager with approval of USACE, if execution requirements are sufficiently limited. The project manager must be the primary contact for work performed on-site and must be responsible for the management and execution of the work in accordance with the PWS, approved work plans, and all federal, state, and local laws and regulations. The project manager must ensure that all work is planned, work packages are generated and approved, with participation from all applicable Contractor functional disciplines (i.e., occupational safety and health, industrial hygiene, data acquisition management, QA/QC, training, security, and crafts [equipment operators, labor, etc.]). The project manager must ensure that:

- All task prerequisites are complete.
- Hazards and hazard controls are identified and communicated to all personnel associated with the task.
- Equipment, tools, and materials necessary to perform the work are available, sufficient, and adequate.
- Calibration and testing are complete.
- Adequate staff is available to perform the work.
- Staff training and qualifications are complete.
- Personnel understand roles, responsibilities, and authorities including the bounding conditions that if challenged warrant work suspension.
- Any necessary exercises, simulations, mock-ups, etc., are successfully completed.

The project manager must demonstrate readiness to initiate work prior to mobilization, with readiness concurrence from all applicable Contractor disciplines including QA/QC oversight. The project manager must ensure all work performance requirements are implemented and adhered to during execution, internal assessments (self-checks) are routinely performed, and deficiencies identified, corrected, and communicated. The project manager must have, as a minimum, the following qualifications:

- A college degree from an accredited school in engineering, construction management, geology, chemistry, health physics, or a related field.
- A minimum of seven years project management experience, with a minimum of five years of experience on hazardous and toxic waste remediation projects, specific experience with radiological waste is preferred.
- A minimum of one project (additional experience preferable) for a U.S. federal agency, as the project manager.
- Working knowledge of applicable federal, state, and local laws, regulations, and guidance as they apply to the regions specified in this solicitation.

6.1.3 Site Superintendent

The Contractor will designate a site superintendent who is responsible for:

- Ensuring that equipment operators, craft and labor personnel are sufficiently trained and qualified to execute assigned tasks.
- Ensuring that all necessary equipment, tools, material, and personnel are identified.
- Ensuring that pre-use inspections, calibrations (if required), and QC measurements (if required), are complete and routinely performed as specified.
- Routinely assessing work activities to ensure tasks are performed in accordance with the PWS and work plan requirements.
- Participating in readiness evaluations prior to initiation of each definable feature of the work to ensure that all specified controls and requirements are implemented and enforced during performance of the work.
- The site superintendent must be on-site at all times that work is being performed.

The site superintendent must have, at a minimum, the following qualifications and experience:

- Ten years construction management experience, with a minimum of five years similar experience on hazardous and toxic waste remediation projects, specific experience with radiological waste is preferred.
- A minimum of five years of experience in the management or supervision of construction crafts.
- A minimum of one project (additional experience preferable) for a U.S. federal agency.
- Familiarity with applicable federal, state, and local laws, regulations, and guidance applicable to assigned tasks.

6.1.4 Site Safety and Health Officer

Designate a trained, qualified, and experienced site safety and health officer (SSHO) to ensure that all elements of the accepted APP/SSHP are implemented and enforced on-site. **USACE requests this position not be a combined position unless with the Radiation Safety Officer (RSO).** The SSHO must be on-site at all times that work is being performed, have the authority to stop work if unacceptable health or safety conditions exist, and encourage input from site personnel on safety issues. Minimum qualifications and duties for the SSHO are provided in Appendix A (Section 01 35 26).

6.1.5 Radiation Safety Officer

Designate a radiation safety officer (RSO) who is responsible for the development and implementation of the RPP. The RSO must be on-site at all times that work with potentially radiologically contaminated material is being performed. See Appendix A UFGS Section 01 35 26 for RSO responsibilities.

6.1.6 Construction Quality Control System Manager

Designate a construction quality control (CQC) system manager for the project who is responsible for overall management of the CQC System and has authority to act in all QC matters for the Contractor. The CQC system manager must be responsible for:

- Developing the CQCP.
- Ensuring compliance with the requirements in the PWS, the CQCP, and the contractor's Corporate QA Program.

The CQC system manager must oversee the contractor's determination of readiness to begin task activities, perform routine audits and assessments of work performance and ensure issues identified are documented in the contractor's corrective action management system. The CQC system manager must have final verification that all corrective actions have been completed. The CQC system manager must have authority to stop work whenever conditions adverse to quality are identified.

The CQC system manager must have the following minimum qualifications:

- A college degree from an accredited school in engineering, construction management, geology, chemistry, or a related field. In lieu of a college degree, a minimum of ten years of CQC management experience on comparable government contracts may be substituted.
- A minimum of seven years of experience in the development and/or implementation of QA Programs addressing requirements commensurate with ANSI/ASME NQA-1, 10 CFR Part 50, Appendix A, or similar International Organization for Standardization Standards, preferably as those apply to hazardous, toxic and/or radiological waste remediation.
- A minimum of nine semester hours, 12 continuing education units (or combination thereof) in an area relevant to hazardous and toxic waste remediation.
- Working knowledge of applicable federal, state, and local laws, regulations, and guidance.
- Completion of the course entitled "Construction Quality Management for Contractors" is considered a favorable qualification. This course is periodically offered and arrangements for attendance can be made via https://ulc.usace.army.mil/cqmlinks_grid_v2.aspx.

6.1.7 Waste Manager

The Contractor will designate a waste manager who will act as a single point of contact for all waste management regulatory matters and have overall responsibility for waste management and handling.

Duties to include: create manifest documents; ensure that DOT Conveyance surveys are completed and reviewed prior to offering USACE the manifest package for review & signature; ensure that bucket scale weights get logged for each shipment maintain records of all activities for daily QA reporting & project closure report; coordinates container movement along haul roads; conduct or delegate inspection of each waste package prior to departure (e.g., ensure all lids, end doors are secured, all markings/placards are affixed, no leaks from containers, and transport vehicle is operating properly); coordinate truck movement with full and empty containers; provide weight receipts to USACE; manage and report status of inbound & outbound trucks and/or containers; manage & submit waste acceptance receipts for each shipment.

6.1.8 *Project Chemist*

The Contractor will designate a project chemist who will ensure that all data quality objectives and responsibilities, sampling and analysis requirements, data documentation and validation requirements, and reporting requirements are attained. Responsibilities and minimum qualifications for the project chemist are identified in Appendix A (Section 01 35 45).

6.1.9 *Safety and Health Manager*

The Contractor safety and health manager will be a Certified Industrial Hygienist (CIH) with a minimum of ten (10) years safety work of a progressive nature with at least five (5) years of experience on similar projects, the 30-hour OSHA construction safety class or equivalent within the last five (5) years, an average of at least 24 hours of formal safety training each year for the past five (5) years. The safety and health manager will have over five (5) years of experience overseeing the safety and health program for employees working at Hazardous Waste Sites. See Appendix A UFGS Section 01 35 26 for responsibilities.

6.1.10 *Other Contractor Site Personnel*

The Contractor will provide sufficient field staff to safely and completely execute the work. Document the qualifications of all field staff prior to mobilization. Specify additional training, including site specific training, applicable to tasks associated with the project in accordance with the contractor's training and qualification program.

All field personnel must meet the training, medical surveillance, and safety and health program requirements specified in OSHA standard 29 CFR 1910.120, 29 CFR 1926.65, 29 CFR 1926.62, 29 CFR 1926.1101 and any other OSHA standards that are pertinent to the PWS. The Contractor must ensure that all personnel involved in the performance of the work meet all safety and health requirements and that adequate documentation is available for the KO/COR's review. If adequate documentation is not made available, affected personnel will not be allowed on-site. All field staff are responsible for understanding and complying with all requirements of the USACE accepted APP/SSHP and other OSHA compliance plans as may be appropriate for the particular work in the PWS.

6.2 *Contractor Corporate Staff*

This PWS requires a variety of support staff such as civil engineers, environmental engineers, surveyors, and regulatory specialists. All support staff must have appropriate Bachelor's degrees or training certificates, as applicable, and at least three years of experience comparable to their assigned tasks. The Contractor is responsible to obtain necessary staffing to meet the requirements for this PWS.

6.3 *Organizational Conflict of Interest*

Contractor and subcontractor personnel performing work under this contract may receive, have access to or participate in the development of proprietary or source selection information (e.g., cost or pricing information, budget information or analyses, specifications or work statements, etc.) or perform evaluation services which may create a current or subsequent Organizational Conflict of Interests (OCI) as defined in FAR Subpart 9.5. The Contractor shall notify the KO immediately whenever it becomes aware that such access or participation may result in any actual or potential OCI and shall promptly submit a plan to the KO to avoid or mitigate any such OCI. The Contractor's mitigation plan will be determined to be acceptable solely at the discretion of the KO and in the event the KO unilaterally determines that any such OCI cannot be satisfactorily avoided or mitigated, the KO may affect other remedies as he or she deems necessary, including prohibiting the Contractor from participation in subsequent contracted requirements which may be affected by the OCI.

7 DELIVERABLES AND SUBMITTALS

7.1 General Requirements

All work plans and reports must be written in accordance with the *Gregg Reference Manual (latest edition)* using Arial or Times New Roman (No. 12) font, left-aligned, with one-inch margins on all page sides or similar as agreed to by the COR. If guidance is unclear, the Contractor may refer to the *U.S. government Printing Office Style Manual* for resolution. Final reports must incorporate all review comments from regulators. Paper copies (only if required elsewhere in the contract) must be printed from a high-quality copier/printer. The text must be single spaced with all pages of the text numbered and printed on both sides. Photographs, plans, maps, drawings, and text must be clean and clear. Text and photographs must be suitable for copying and must be on standard 8½-inch by 11-inch paper or 11-inch by 17-inch paper unless otherwise agreed to by the COR. The final reports and summary tables must also be submitted in electronic form in text searchable portable document format (latest version of Adobe Acrobat) with bookmarks to the items in the table of contents. All electronic submittals must be fully text-searchable and compliant with Section 504 of the Rehabilitation Act of 1973.

All submittals must be compatible with Windows 10. Portable document format (pdf) files must use the latest version of Adobe Acrobat; include bookmarks and optical character recognition. Drawing files must be compatible with Bentley Corporation, Microstation V8i; Select Series 3, without any translation by the government. The file format (file name) must be “.DGN”. Feet and inches must be used as master units and subunits in the Microstation files unless specified otherwise. Drawing files must be 100 percent compliant with the latest release of the U.S. National Computer-Aided Design Standard unless specified otherwise.

Geographic Information System (GIS) files created for project use and reporting must be compatible with ESRI ArcGIS V10.5 or the most current version. All deliverables, such as shape files, layer files, raster data, geodatabases, etc., must be compliant with the Spatial Data Standard for Facilities, Infrastructure, and Environment standards. Spatial information or metadata must be compliant with the Federal Geographic Data Committee standards. Additional guidelines are available in EM-1110-1-2909, *Geospatial Data and Systems*. The Contractor’s logo must not be presented on any report covers, figures or drawings.

Design documentation and calculations/analyses must be submitted on standard 8½-inch by 11-inch paper. All drawings must be submitted in half-size and full-size. Each drawing sheet must contain a simple legend indicating placement of each sheet within the set. All drawings must incorporate the standard USACE outline/title block. One set of reproducible drawings must be provided with each draft report and work plan. Two additional sets of reproducible design drawings (24-inches by 36-inches) must be provided for each final report/work plan if hard copies are requested.

A requisite level of QC must be provided to ensure that all initial documents and submittals provided to the USACE satisfy the requirements of this PWS. All work plans, data packages, and reports will be reviewed by USACE and comments provided, where appropriate, using the ProjNet (DRChecks) system. The Contractor must respond to the review comments using the ProjNet (DRChecks) system and revise the affected document using tracked changes. See Table 1 for review timeframes.

The approved work plans will be considered living documents and may be required to change during the course of remediation.

7.2 Independent Technical Review

The Contractor will conduct an ITR of all products including, but not limited to, data, schedules, submittals, work plans, technical correspondence, and reports, must be performed prior to delivery to USACE. The review must be completed by an individual or individuals having experience in the disciplines involved with the product and who were not directly involved with development of the product. Individuals who will perform ITR must be documented in the CQCP.

The ITR must focus on conformance to the PWS, specifications, USACE correspondence, relevant guidance documents and reports.

7.3 Data

All data developed during performance of the work must be provided to USACE as requested for review and independent analysis. The data will be USACE property at completion of the work.

Sample acquisition, field measurements, radiological/chemical/geotechnical analyses and laboratory analyses must be conducted so that the resulting data meet and support data use requirements. The data must be acquired, documented, verified, and reported to ensure that the specified precision, accuracy, representativeness, comparability, completeness, and sensitivity requirements are achieved.

The Contractor shall create, maintain, and provide USACE Sacramento District personnel access to an environmental data management system (EDMS) during the duration of the project. The EDMS shall be used for the storage of environmental sampling data which can consist of, and is not limited to, sample locations (northing and easting); in-process remediation soil samples; soil samples; water sample data, air monitoring (fixed, moveable, and personal breathing zone) sample data and geotechnical data. Access to this EDMS will be provided to USACE via internet-based graphical user interface and will provide USACE personnel the ability to: sort environmental data, query environmental data, generate sample summary reports, generate analytical data reports with the ability to compare data to screening levels, the ability to export environmental data to a Microsoft Excel spreadsheet. All other data provided must conform to the ERPIMS data model, if an appropriate table format exists within the model. Provide all data in electronic tabular form. Handwritten scanned pages containing systematic data will not be accepted. Provide Adobe PDF files of any lab reports.

Submit all geospatial data generated under this PWS to the Sacramento District in Microsoft Access format in accordance with the USACE document, *Policies, Guidance and Requirements for Geospatial Data and Systems, ER-1110-1-8156* (September 2012 [or current version]):

(http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1110-1-8156.pdf).

Provide all figures and maps in electronic GIS format or Computer-Aided Design and drafting format as specified by USACE. The project related spatial data including maps, models, and associated collected or created data sets, must be submitted to the USACE. All spatial data must comply with, *Spatial Data Standard for Facilities, Infrastructure and Environment 3.0 Gold* (<http://www.sdsfie.org>).

7.4 Contractor Submittal Procedures

Submittal procedures are summarized in this section.

Within 30 workdays after receipt of a notice to proceed, complete and submit to the KO/COR, in duplicate, a submittal register as an attachment to the PMP. The submittal register must list all submittals and corresponding dates. In addition to the submittals identified in this PWS, furnish submittals for any

product or material to be used at the site and any proposed deviation from this PWS or the USACE-accepted work plans.

The CQC System Manager must review the submittal register at least every 30 calendar days and take appropriate action to maintain an effective system. Copies of the updated or corrected register must be submitted to the KO/COR at least every 30 calendar days. Payment will not be made for any material or equipment that does not comply with contract requirements.

The KO/COR may request submittals in addition to those identified in this PWS when deemed necessary to adequately describe the work. Units of weights and measures used on all submittals must be the same as those used in this PWS. Each submittal must be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

The CQC System Manager must check and approve all items prior to submittal. Proposed deviations from this PWS and USACE approved work plans must be clearly identified. The submittals must include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts, or curves; test reports; test cylinders, samples; operation and maintenance manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring USACE approval must be scheduled and made available prior to the acquisition of the material or equipment covered.

8 GREEN AND SUSTAINABLE REMEDIATION AND INNOVATIVE TECHNOLOGIES

It is USACE's goal to consider, to the extent practical, green and sustainable remediation (GSR) practices for work performed under the contract. It is also USACE's goal to utilize innovative technologies to the extent practical to reduce costs, expedite project schedules, minimize risk and maximize effectiveness. Statutory requirements take precedence over GSR/innovative technologies.

Where applicable, the Contractor must follow:

- USACE Interim Guidance 10-01 - *Decision Framework for Incorporation of Green and Sustainable Practices into Environmental Remediation Projects* (<https://www.hnc.usace.army.mil/Portals/65/docs/Directorates/EMCX/DECISION%20FRAMEWORK%20FOR%20INCORPORATION.pdf>).
- The 2012 Detailed Approach for Evaluating GSR on Army Environmental Projects, developed for the Department of Army Office of the Assistant Secretary for Installation Management, including completion of the Best Management Practices Checklists for each task order (<https://www.hnc.usace.army.mil/Portals/65/docs/Directorates/EMCX/Checklists/GSRcklist.pdf>).

To the extent practical, consider GSR practices to:

- Reduce the environmental footprint of project activities.
- Maximize sustainability.
- Reduce waste.
- Reduce energy and water usage.
- Increase energy efficiency and minimize the use of non-renewable energy.
- Conserve and efficiently manage resources and materials.
- Promote carbon neutrality.
- Reduce direct and indirect greenhouse gas and other emissions.
- Promote reuse and recycling.

- Fostering green and healthy communities and working landscapes which balance ecological, economic, and social goals.
- Integrate the remedy with the end use where possible and encouraging green and sustainable re-development.
- Maximize habitat value and create habitat when possible.
- Protect and preserve land resources.
- Minimize or eliminate pollution at its source.

The Contractor must implement GSR practices when and where they make sense, per DoD policy. During all phases of projects, consider and implement innovative technologies to:

- Reduce costs.
- Expedite project schedules.
- Minimize risk.
- Maximize effectiveness.

The Contractor is encouraged to develop, plan, and implement additional GSR/innovative technologies approaches to the work. All work plans and reports generated by the Contractor in performance of the work must document:

- The GSR and innovative technologies that were considered.
- The GSR and innovative technologies that were implemented.
- The reasons that the considered GSR and innovative technologies were or were not implemented.
- The anticipated and/or actual outcome (i.e., cost savings, better effectiveness, etc.) of implementing GSR/ innovative technologies.

9 PUBLIC AFFAIRS

Do not make available to news media or publicly disclose any data generated or reviewed under this PWS. When approached by the news media, public officials, etc., refer them to the AEC designated point of contact. Reports and data generated under this PWS will become the property of the government and distribution to any other entity by the Contractor is prohibited, unless specifically authorized in writing by the USACE KO/COR and AEC POC.

10 ON-SITE PRE-BID MEETING

On-site pre-bid meeting will be held at the DPG. Participation in the on-site pre-bid meeting is highly encouraged; while not mandatory the government may consider lack of participation to increase risk of poor performance.

The on-site pre-bid meeting is anticipated in mid- to late- February at the DPG site and is dependent on road conditions. The date/time will be identified in the request for proposal transmittal letter and subsequent communications. Safety shoes are required.

11 SCHEDULE AND PERIOD OF PERFORMANCE

The period of performance for completion of all work from Notice to Proceed is approximately two years. The Contractor will be considered substantially complete after demobilization. The initial draft RACR must be submitted within 60 calendar days of demobilization.

12 PAYMENT REQUESTS

The Contractor shall, at a minimum, provide the Government a consolidated progress report monthly, documenting the work in progress. The Contractor will not combine monthly reports. The report for any month shall be provided by the seventh day of the following month. This monthly report shall include an updated project schedule presented in a standard format (e.g., Gantt) as appropriate for conveying the schedule status and plan for the work. The report should be as concise as possible highlighting important progress, identifying potential issues (and plan for their resolution) as well as key upcoming activities or events. If no work is performed during this period, the Contractor shall indicate so in a brief report stating so. These reports shall be e-mailed to the USACE COR, USACE Technical Lead or Leads and the Dugway Technical Point of Contact. The report will list work accomplished during the month being reported, and it will report work expected to occur in the following month.

Payments shall be requested based on the mutually approved Milestone Payment Schedule included in the PMP. Invoices shall include all the necessary information, and all supporting documentation, and will be based on the work completed for each specific task under this PWS. The Contractor shall (concurrently) send a draft monthly progress and draft invoice for approval by the COR in portable document format (PDF) format to:

Amy Estey
US Army Corps of Engineers, Sacramento District 1325 J Street
Sacramento, CA 95814
(916) 557-7431
Amy.L.Estey@usace.army.mil

Once approved a signed copy will be submitted to the COR for processing by USACE. During the performance of this project, USACE shall make payments based on the invoices submitted for the work completed and found to be acceptable by USACE. No modification of the contract shall occur without coordination and approval in writing by the KO.

At the project conclusion the final invoice will include a Release of Claims that identifies the total value of the project along with final invoice value.

13 OPERATIONAL SECURITY

Operational security requirements are as presented in “IMCOMHQ_AT/OPSEC/IA_Coversheet_v2_04212016” paragraphs 1, 2, 2B, 4, 7 and 13.

13.1 AT Level I Training

This standard language is for contractor employees with an area of performance within an Army controlled installation, facility or area. All contractor employees, to include subcontractor employees, requiring access Army installations, facilities and controlled access areas shall complete AT Level I awareness training within 30 calendar days after contract start date or effective date of incorporation of this requirement into the contract, whichever is applicable and annually thereafter. The contractor shall submit certificates of completion for each affected contractor employee and subcontractor employee, to the COR or to the contracting officer, if a COR is not assigned, within 05 calendar days after completion of training by all employees and subcontractor personnel. AT level I awareness training is available at the following website: <http://jko.jten.mil>

13.2 Access and general protection/security policy and procedures.

This standard language is for contractor employees with an area of performance within Army controlled installation, facility, or area. Contractor and all associated subcontractors employees shall provide all information required for background checks to meet installation access requirements to be accomplished by installation Provost Marshal Office, Director of Emergency Services or Security Office. Contractor workforce must comply with all personal identity verification requirements (FAR clause 52.204-9 or NAF Clause BI.142, Personal Identity Verification of Contractor Personnel) as directed by DOD, HQDA and/or local policy. In addition to the changes otherwise authorized by the changes clause of this contract, should the Force Protection Condition (FPCON) at any individual facility or installation change, the Government may require changes in contractor security matters or processes.

13.3 For contractors that do not require CAC, but require access to a DoD facility or installation.

Contractor and all associated sub-contractors employees shall comply with adjudication standards and procedures using the National Crime Information Center Interstate Identification Index (NCIC-III) and Terrorist Screening Database (TSDB) (Army Directive 2014-05/AR 190-13), applicable installation, facility and area commander installation/facility access and local security policies and procedures (provided by government representative), or, at OCONUS locations, in accordance with status of forces agreements and other theater regulations.

13.4 iWATCH Training.

This standard language is for contractor employees with an area of performance within an Army controlled installation, facility or area. The contractor and all associated sub-contractors shall brief all employees on the local iWATCH program (training standards provided by the requiring activity ATO). This locally developed training will be used to inform employees of the types of behavior to watch for and instruct employees to report suspicious activity to the COR. This training shall be completed within 30 calendar days of contract award and within 05 calendar days of new employees commencing performance with the results reported to the COR NLT 30 calendar days after contract award.

13.5 For contracts that require OPSEC Training.

Per AR 530-1 Operations Security, the contractor employees must complete Level I OPSEC Awareness training. New employees must be trained within 30 calendar days of their reporting for duty and annually

thereafter. OPSEC Awareness for Military Members, DoD Employees and Contractors is available at the following website: <http://cdsetrain.dtic.mil/opsec/index.htm>.

13.6 Threat Awareness Reporting Program.

For all contractors with security clearances. Per AR 381-12 Threat Awareness and Reporting Program (TARP), contractor employees must receive annual TARP training by a CI agent or other trainer as specified in 2-4b of AR 381-12.

14 REFERENCES

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APPENDIX A
USACE SACRAMENTO DISTRICT TECHNICAL REQUIREMENTS AND
UNIFIED FACILITIES GUIDE SPECIFICATIONS

ATTACHMENT 1

BID SCHEDULE

(SEPARATE ATTACHMENT)

ATTACHMENT 2

QUALITY ASSURANCE SURVEILLANCE PLAN

ATTACHMENT 2 – QUALITY ASSURANCE SURVEILLANCE PLAN

Dugway Proving Ground; Area 2 of SWMU 11

October 2022

1 OVERVIEW

1.1 Introduction. This performance-based Quality Assurance Surveillance Plan (QASP) sets forth the procedures and guidance that the Contracting Officer's Representative (COR) will use in evaluating the technical performance of the Contractor in accordance with the terms and conditions of the PWS. A copy of the signed final QASP will be furnished to the Contractor so that the Contractor will be aware of the methods that the COR will use in evaluating performance for each task order under this contract.

The Contractor is responsible for the completeness and accuracy of all work performed under the task order, and for compliance with all parts of the contract. The government is relying upon the professional quality of the Contractor's work. All submittals are expected to go through an internal review process before being submitted to the Government. The Contractor shall correct all deficiencies relating to completeness, accuracy of work, compliance with the contract, task order, laws and regulations which are identified from their own quality control review, or by the Government.

1.2 Purpose. The QASP objective is to explain Government procedures to be used to verify that appropriate performance and quality assurance methods are used in the management of this performance-based contract. The purpose of the QASP is to assure that performance of specific activities and completion of milestones are accomplished in accordance with all requirements set forth in the PWS.

This QASP describes the mechanism for documenting noteworthy accomplishments or discrepancies for work performed by the Contractor. Information generated from COR's surveillance activities will directly feed into performance discussions with the Contractor. The intent is to ensure that the Contractor performs in accordance with performance metrics set forth in the PWS documents, the Army receives the quality of services called for in the contract, and the Army only pays for the acceptable level of services received.

The QASP details how and when the COR will monitor, evaluate, and document Contractor performance on the contract. The QASP is intended to accomplish the following:

1. Define the role and responsibilities of participating Army officials.
2. Define the key milestones/deliverables that will be assessed.
3. Define Exceptional, Very Good, Satisfactory, Marginal, and Unsatisfactory performance standards for key milestones/deliverables.
4. Describe the surveillance methodology that will be employed by the Army in assessing the Contractor's performance.
5. Describe the surveillance documentation process and provide copies of the form that the Army will use in evaluating the Contractor's performance.
6. Outline corrective action procedures.
7. Describe payment procedures.

This QASP will be revised and finalized by the COR and Contractor upon completion of the PMP in accordance with Section 4.1, Project Management, of the PWS.

2 ROLES AND RESPONSIBILITIES OF ARMY OFFICIALS

2.1 Contracting Officer.

The Contracting Officer (KO) has overall responsibility for overseeing the Contractor's performance. The KO is responsible for the day-to-day monitoring of the Contractor's performance in the areas of contract compliance, and contract administration; reviewing the COR's assessment of the Contractor's performance; and resolving all differences between the COR's assessment and the Contractor's assessment of performance. It is the KO that assures the Contractor receives impartial, fair, and equitable treatment under the contract. The KO is ultimately responsible for the final determination of the adequacy of the Contractor's performance. The KO is the only one authorized to obligate the Government on this contract.

2.2 Contracting Officer's Representative (COR).

The COR is responsible for technical administration of the project and assures proper Army surveillance of the Contractor's performance. The COR is responsible for monitoring, assessing, recording, and reporting on the technical performance of the Contractor on a day-to-day basis.

2.3 Technical Expertise and Subject Matter Experts.

The KO and COR may call upon the technical expertise of other Army officials and subject matter experts (SME) as required. These Army officials/SMEs may be called upon to review technical documents and products generated by the Contractor. Contracting Agency representatives will also conduct review of contract documentation such as invoices, monthly status reports, and work plans.

3 KEY MILESTONES/DELIVERABLES TO BE ASSESSED

Reference Table 8— Performance Milestone Table of the PWS for key milestones and associated deliverables.

Additionally, the Army will evaluate performance on the key quality control activities and events specified by the Contractor through the QASP.

3.1 Performance Standards for Key Milestones/Deliverables

Since price is fixed in the performance-based acquisitions utilized by the Army, the Contractor's performance will be evaluated by assessing the key milestones/deliverables described above according to five standards: quality, schedule, safety, management of key personnel and resources, and stakeholder concurrence. For each of these performance standards, the COR will assign one of five ratings of the Contractor's performance: exceptional, very good, satisfactory, marginal, or unsatisfactory as defined in Table A-1 of the QASP. Note: These performance standards may be modified to meet the needs of the Army.

Table A-1: QASP Performance Standards and Ratings Definitions

Performance Standard	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
Basic Definition	Contractor exceeds the performance requirements for the milestone, deliverable, or standard, with no substantive input from the government.	Contractor exceeds the performance requirements for the milestone, deliverable, or standard, with minimal input from the government.	Contractor meets the performance requirements for the milestone, deliverable, or standard, with moderate input from the government.	Contractor meets the performance requirements for the milestone, deliverable, or standard, with significant input from the government.	Contractor does not meet the performance requirements for the milestone, deliverable, or standard, after significant input from the government.
Performance Category: Quality of Product or Service					
Quality	Draft Final and Final deliverables are of excellent quality, approved as submitted, or with no substantive comments limited to grammar, spelling, or terminology.	Draft Final deliverables are of high quality and comments are mostly minor. Final deliverables are approved after one (1) round of Army comments on the Draft Final through acceptance of response to comments table and back check	Draft Final deliverables are of acceptable quality with only a few numbers of comments identifying major weaknesses. Final deliverables are approved after two (2) rounds of Army comments on Draft Final. No	Draft Final deliverables are of poor quality with a significant number of comments identifying major weaknesses or deficiencies. Final deliverables require more than two (2) rounds of Army comments on Draft Final before being approved.	Draft Final deliverables are of very poor quality and are rejected for re-submittal without comment. Final deliverables did not comply with contract requirements, or one or more document versions required more

Performance Standard	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
	<p>Army audit finds that the data collected and/or the work performed exceeds the requirement of the PWS. No deficiencies noted.</p>	<p>of Final report against original comments. No further revisions are required.</p> <p>Army audit of work does not identify any deficiencies that compromise the quality of the data collected or work performed.</p>	<p>further revisions are required.</p> <p>Army audit of work identifies deficiencies that do not compromise the quality of the data collected or work performed, and can be corrected.</p>	<p>(e.g., changes are required to the Final document due to inadequate incorporation of comments).</p> <p>Army audit of work identifies deficiencies that compromise the quality of the data collected or work performed, but was corrected.</p>	<p>than three (3) rounds of Army comments before being approved.</p> <p>Army audit of work identifies deficiencies that compromise the quality of the data collected or work performed, and cannot be corrected.</p>

Performance Category: Schedule					
Performance Standard	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
Schedule	Contractor Achieves milestone more than 90 days ahead of schedule (unless the COR waives this requirement), per criteria established in the PWS and the QASP.)	Contractor Achieves milestone less than 90 days but more than 30 days ahead of schedule (unless the COR waives this requirement), per criteria established in the PWS and the QASP.	Contractor achieves milestone according to the schedule (unless the COR waives this requirement), per criteria established in the PWS and the QASP.	Contractor achieves milestone more than 30 days but less than 90 days behind schedule (unless the COR waives this requirement), per criteria established in the PWS and QASP.	Contractor achieves milestone more than 90 days behind schedule (unless the COR waives this requirement), per criteria established in the PWS and QASP.

Performance Category: Safety					
Performance Standard	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
Safety	No significant safety deficiencies are reported during QA inspection of fieldwork. No lost time accidents or injuries are recorded during the fieldwork.	No more than one (1) serious safety deficiencies are reported during QA inspection of fieldwork. If any serious safety deficiency is noted during the project, appropriate investigation, corrective action, implementation, and written verification of the corrective action are provided to the Army. No lost time accidents or injuries are recorded during the fieldwork.	No more than two (2) serious safety deficiencies are reported during QA inspection of fieldwork. If any serious safety deficiency is noted during the project, appropriate investigation, corrective action, implementation, and written verification of the corrective action are provided to the Army. No lost time accidents or injuries are recorded during the fieldwork.	No more than three (3) serious safety deficiencies are reported during QA inspection of fieldwork. If any serious safety deficiency is noted during the project, appropriate investigation, corrective action, implementation, and written verification of the corrective action are provided to the Army. No more than one lost time accident or injury is recorded during the fieldwork.	More than three (3) serious safety deficiencies are reported during QA inspection of field activities, or a serious safety deficiency is reported but not properly investigated and corrected, or two or more lost time accidents or injuries is recorded during the fieldwork.

Performance Category: Management of Key Personnel and Resources					
Performance Standard	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
Management of Key Personnel and Resources	<p>All personnel proposed by the contractor were assigned to the project. Some personnel were substituted by higher qualified individuals.</p> <p>Zero (0) instances of resource management issues creating a negative impact to the activity.</p>	<p>All personnel proposed by the contractor were assigned to the project. Some personnel were substituted by higher qualified individuals.</p> <p>No more than one (1) instance of resource management issues creating a negative impact to the activity.</p>	<p>All personnel proposed by the contractor were assigned to the project. Some personnel were substituted by equally qualified individuals.</p> <p>Informal poor performance feedback on conduct of personnel is provided by the COR but are corrected.</p> <p>No more than two (2) instances of resource management issues creating a negative impact to the activity.</p>	<p>All personnel proposed by the contractor were assigned to the project. Some personnel were substituted by equally qualified individuals.</p> <p>Formal letter of poor performance feedback on conduct of personnel is provided by the COR but are corrected.</p> <p>No more than three (3) instances of resource management issues creating a negative impact to the activity.</p>	<p>All personnel proposed by the contractor were assigned to the project. Some personnel were substituted by lesser qualified individuals.</p> <p>Written request from KO requesting removal of assigned personnel for poor performance or notification of poor performance is provided by the COR and is not corrected.</p> <p>More than three (3) instances of resource management creating a neg impact to the activity.</p>

Performance Category: Stakeholder Concurrence					
Performance Standard	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
Stakeholder Concurrence	Contractor obtains concurrence on deliverables from all Army stakeholders to include USACE and the installation and from Federal and/or State regulators. This concurrence is obtained independently with little involvement and coordination required by the Government.	Contractor obtains concurrence on deliverables from all Army stakeholders to include USACE and the installation and from Federal and/or State regulators. This concurrence is obtained independently with limited involvement and coordination required by the Government.	Contractor obtains concurrence on deliverables from all Army stakeholders to include USACE and the installation and from Federal and/or State regulators. This concurrence is obtained with moderate involvement and coordination required by the Government.	Contractor obtains concurrence on deliverables from all Army stakeholders to include USACE and the installation and from Federal and/or State regulators. This concurrence is obtained with significant involvement and coordination required by the Government.	Contractor does not obtain concurrence on deliverables from Army stakeholders to include USACE and the installation and/or from Federal and/or State regulators.

Performance Standard	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
Performance Category: Cost Control (Applicable for Cost Reimbursement Contracts Only)					
NA	NA	NA	NA	NA	NA

If a milestone/deliverable as described in the QASP is rated as being of unsatisfactory quality at the time that the PMP deadline for the milestone/deliverable expires, the milestone/deliverable will automatically receive an unsatisfactory rating for timeliness. At no point will a milestone/deliverable receive an exceptional, very good, or satisfactory rating for timeliness if it is rated as being of unsatisfactory quality. Overall satisfactory performance on a milestone/deliverable requires ratings of satisfactory, very good or exceptional for the quality, timeliness, and safety standards.

4 SURVEILLANCE METHODOLOGY

The surveillance methods listed below will be used in the execution of this QASP.

4.1 Quality Assurance Inspection

All key milestones and deliverables will be evaluated through periodic inspection (e.g., on-site inspection, document review). The COR will document performance for each completed milestone/deliverable prior to payment, as described in Section 5.0 of the QASP.

4.2 Periodic Progress Inspection

At the COR's discretion, periodic inspections may be conducted to evaluate progress toward and/or completion of key milestones and deliverables. The COR may complete a periodic progress inspection if s/he believes that deficiencies exist that must be addressed prior to milestone/deliverable completion. While corrective action or re-performance will be required if necessary, the Contractor will not be financially penalized for unacceptable performance recorded in periodic progress reports, provided that final performance evaluation of the milestone/deliverable is deemed acceptable.

4.3 Customer Feedback

Additional feedback will be obtained through random customer feedback. To be considered valid, input must set forth clearly and in writing the detailed nature of the feedback, must be signed, and must be forwarded to the K O . The KO will maintain a summary log of all formally received customer feedback as well as a copy of each feedback in a documentation file.

5 SURVEILLANCE DOCUMENTATION

5.1 Quality Assurance Monitoring Form. The COR will use a performance evaluation form to record evaluation of the Contractor's performance for each milestone and deliverable in accordance with the methodology described in Sections 3.0 and 4.0 of the QASP. The COR must substantiate, through narratives in the form, all exceptional, very good, marginal, and unsatisfactory ratings. Performance at the satisfactory level is expected from the Contractor. At a minimum, the evaluation form will indicate actual and scheduled delivery times and number of reviews required to achieve the final product. The COR will forward copies of all completed performance evaluation forms to the KO and Contractor within one week of performing the inspection.

5.2 Corrective Action Process. When a milestone/deliverable receives an overall marginal or unsatisfactory rating, the Contractor will explain, within 15 days, in writing to COR why performance was marginal or unsatisfactory, how performance will be returned to satisfactory levels, and how recurrence of the problem will be prevented in the future.

5.3 KO Role in the Surveillance Process. The KO will review each performance evaluation form prepared by the COR. When appropriate, the KO may investigate further to determine if all the facts and circumstances surrounding the event were considered in the COR opinions outlined on the form. The KO will immediately discuss any marginal or unsatisfactory rating with the Contractor to assure that corrective action is promptly initiated.

5.4 Annual Performance Assessment. At the end of every year, the COR will prepare a written Contractor Performance Assessment Report (CPAR) for the KO summarizing the overall results of his/her surveillance of the Contractor's performance during the previous 12 months. This report will become part of the formal QA documentation.

5.5 QA File. The COR will maintain a complete QA file. This file will contain copies of all performance evaluation forms and any other related documentation. The COR will forward these records to the KO at termination or completion of the contract. All performance assessment forms, attachments and working papers must be marked "FOR OFFICIAL USE ONLY/SOURCE SELECTION INFORMATION - SEE FAR 2.101 AND 3.104" According to Freedom of Information Act Program, FAR 3.104, and 41 USC Sect. 423. Assessment reports may also contain information that is proprietary to the contractor. Information contained on the CPAR, such as trade secrets and protected commercial or financial data obtained from the contractor in confidence, must be protected from unauthorized disclosure. COR's shall annotate on the assessment report if it contains material that is a trade secret, etc., to ensure that future readers of the evaluations are informed and will protect as required. Contractor performance information is privileged source selection information. It is also protected by the Privacy Act and is not releasable under the Freedom of Information Act.

6 PAYMENT AND CORRECTIVE ACTION

6.1 Satisfactory Performance. Full payment for a milestone/deliverable will be provided upon verification of overall satisfactory performance, as rated on quality and schedule. This verification will be recorded in a performance evaluation form submitted to the KO specifying overall Contractor performance as satisfactory, very good, or exceptional for the milestone/deliverable.

6.2 Marginal or Unsatisfactory Performance. If a milestone/deliverable receives a marginal or unsatisfactory rating for the quality performance standard, re-performance is required until the milestone/deliverable receives a rating of satisfactory or better. This re-performance is required regardless of cost or schedule constraints that may result from the marginal or unsatisfactory performance, unless the KO has opted to terminate the contract. If a rating of satisfactory or better is not achieved, the Government may reduce the contract price to reflect the reduced value of the services in accordance with FAR 52.246-4(e).

6.3 Table A-1 in the QASP provides a sample of the minimum key elements planned for the QASP. The

final QASP will be developed with the COR and the contractor and will be based on the final PMP.

Additional Government surveillance activities may include, but are not limited to, the following:

- Work plan review and approval
- Participation in Technical Project Planning (or equivalent) sessions
- Oversight of survey & field activities
- Oversight of all waste management functions/responsibilities
- Review of all waste management documentation
- Separate/split laboratory QA samples
- Review and approval of all deliverables to regulatory agencies
- Review of quality control documentation
- Review of project safety record
- Adherence to the approved work plan
- Completion of ATOPSEC required training and adherence to ATOPSEC policy and procedures.

ATTACHMENT 2A – QUALITY ASSURANCE MONITORING FORM

QUALITY ASSURANCE MONITORING FORM

Date: ____/____/____

Work Task (Milestone/Activity): _____

Survey Period: ____/____/____ through ____/____/____

Method of Surveillance: COR Review

Evaluation of Contractor's Performance: _____

Evaluation

Corrective Action Required: ☐ Yes ☐ No

Narrative Discussion of Contractor's Performance during Survey Period:

Discussion

ATTACHMENT 2B - CORRECTIVE ACTION FORM FOR QASP

1) Work Task (Milestone/Activity): _____

2) Survey Period: _____ / _____ / _____ through _____ / _____ / _____

3) Description of the Failure/Deficiency that Precipitated the Corrective Action:

Description

4) Description of the Criterion that the Failure/Deficiency was Evaluated Against:

Description

5) Personnel Involved in the Identification of the Failure/Deficiency, Determination of the Appropriate Corrective Action, Approval of the Corrective Action, and Implementation of the Corrective Action:

Description

6) Description of the Corrective Action that was Required:

Description

7) Date/Time of Implementation of the Corrective Action: ____/____/____

Description

8) Follow-Up Information to Prevent Recurrence of Failure/Deficiency (i.e., Need for Revision of Procedures or Specifications):

Description

9) Personnel Responsible for Follow-Up Work:

Description

10) Planned Date for Follow-Up Surveillance: ____/____/____

11) Other

ATTACHMENT 3
GOVERNMENT FURNISHED INFORMATION
AVAILABLE VIA DOWNLOAD UPON REQUEST

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