FORA Independent Quality Assurance

FORA Quality Assurance Surveillance Plan

INTRODUCTION

In Spring 2005, the Army and the Fort Ord Reuse Authority ("FORA") entered into negotiations to execute an Army funded Environmental Services Cooperative Agreement ("ESCA") leading to the Early Transfer ("ET") of 3,500 acres of former Fort Ord property prior to regulatory environmental sign-off. In early 2007, the Army awarded FORA an ESCA Grant to perform munitions cleanup on the ESCA parcels and FORA also entered into an Administrative Order on Consent (AOC) with US Environmental Protection Agency ("US EPA") and California Department of Toxic Substance Control ("DTSC"), defining conditions under which FORA assumes responsibility for the Army remediation of the parcels. FORA then entered into a Remedial Services Agreement ("RSA") with LFR, Inc. to provide Munitions and Explosives of Concern ("MEC") remediation services and for both Pollution Legal Liability and Cost-Cap insurance policies for this remediation work. FORA will receive the property after US EPA approval and concurrence by the Governor of the State of California.

FORA, having the responsibility for management and quality of the ESCA remediation program, has developed this Quality Assurance Surveillance Plan ("QASP"). This QASP addresses specific Comprehensive Environment Response, Compensation, and Liability Act requirements pursuant to the terms and conditions of the ESCA Remediation Program ("RP") Programmatic and Site Specific Work Plans ("Work Plan") governing the removal of remnant munitions and explosives of concern on selected parcels on the former Fort Ord. FORA has selected Engineering Remediation Resources Group (ERRG) as the Quality Assurance Oversight Professionals to provide the ESCA third party QA oversight.

The QASP meets the following objectives:

- Sets forth procedures and guidelines that a Quality Assurance Oversight Professional will apply to monitor and evaluate the quality and safety of the LFR/Weston Team field work and related documentation under the ESCA Contract Documents.

- Outlines procedures for working with the LFR Team to develop and monitor their Quality Control ("QC")/Quality Assurance ("QA") Programs.

- Outlines procedures for correcting deficiencies and/or violations in the LFR Teams' performance.

PURPOSE

This QASP is a FORA developed and applied document used to assure that systematic safety and quality assurance methods are utilized in the management of the Fort Ord Environmental Services Cooperative Agreement (ESCA) Remediation Program. Its purpose is to assure that the LFR Team performs in accordance with the requirements set forth in the ESCA, that FORA receives the quality of services required by the ESCA, that the FORA Team's efforts are performed in accordance with all applicable safety requirements, and that FORA pays for the acceptable level of services received. This QASP will assure that the remediation methods utilized in the implementation of the Scopes of Work defined in the AOC and the ESCA and RSA Contract Documents, meet the quality requirements. In addition, the QASP will accomplish the following items.

- Define the roles and responsibilities of participating FORA staff;
- Document the evaluation methods that will be employed by FORA in assessing the LFR Team's performance;
- Provide the Surveillance Activity Checklist and Corrective Action Request (CAR) forms that will be used by FORA in documenting and evaluating the LFR Team's performance; and
- Insures that the LFR/Weston Team performs MEC remediation in accordance with the requirements set forth in the ESCA and RSA Documents,
- Insures that the LFR/Weston Team's efforts comply with the requirements set forth in each Quality Assurance/Quality Control (QA/QC) program, and
- Describe the process of performance documentation.

ROLES AND RESPONSIBILITIES

To fully understand the roles and the responsibilities of the parties, it is important to define the distinction between the Quality Control Plan (QCP), which is required by the ESCA, and the QASP. FORA is responsible for management and quality control actions necessary to meet the quality and safety standards set forth by the ESCA. As FORA's contractor, the LFR Team develops and submits its QCP (as part of the Work Plan) for Concurrence and acceptance by FORA and concurrence by EPA Region 9 and DTSC. Once approved, the LFR Team then uses the QCP as a guide to rigorously document the implementation of their required management, quality control and safety actions to achieve the specified results. The QASP on the other hand, is put in place to provide FORA surveillance oversight of the LFR Team's efforts to assure that they are timely, effective, safe, and are delivering the results specified in the ESCA.

FORA is responsible for management and quality control actions necessary to meet the quality and safety standards set forth by the AOC, ESCA and RSA Contract Documents

and each Work Plan. As FORA's contractors the LFR/Weston Team in conjunction with the Quality Assurance Oversight Professional develops and submits the QA/QC Program (as part of the Work Plan) for concurrence and acceptance by EPA and DTSC. Once approved, the LFR/Weston Team, under the oversight of the Quality Assurance Oversight Professional then uses the QA/QC Program as a guide to rigorously document the implementation of their required QA/QC management and quality control actions.

The QASP is in place to provide for Quality Assurance Oversight Professionals who have oversight and report to FORA on the LFR Team's MEC remediation efforts to assure that these efforts are effective and are delivering the highest quality results per the Work Plan QA/QC Program performance standards. Qualifications for the Quality Assurance Oversight Professionals are included at Appendix A. The QASP is not a part of the ESCA or RSA Contract Documents nor is it intended to duplicate the LFR/Weston Team's QA/QC Program.

The roles and responsibilities of key participations are outlined below.

FORA ESCA RP Program Manager - Mr. Stan Cook

- Responsible for overall management and responsibility for actions being executed under the ESCA and RSA Contract Documents so that regulatory site closure can be achieved.
- Provides overall guidance to the LFR Team when necessary or requested for purposes of ESCA clarification.
- Monitors contract performance
- Addresses problems and discrepancies with LFR Team.
- Oversees the implementation of the QASP.
- Reviews LFR Team submittals.
- Assures LFR Teams compliance with requirements set forth in ESCA.
- Performs periodic inspections of LFR Team compliance with DOD, DA, and USACE explosives safety requirements and explosives related procedures described in the ESCA.

FORA Quality Assurance Oversight Professional(s) - ERRG:

- Works under a FORA contract, under the FORA ESCA RP Program Manager.
- Performs on-site QA audits and inspections of MEC field activities conducted by the LFR Team. .
- Performs off-site QA audits of geophysical activities.
- Produces reports that summarize the documentation and evaluation of the QA/QC Program for use by the LFR Team, FORA, DTSC and EPA; and
- Suggests modifications to the QA/QC Program as requested.

EPA and DTSC

- Responsible for insuring that the ESCA RP MEC removal and documentation meets State and Federal requirements so that regulatory site closure can safely be achieved.
- Provides guidance to FORA and the LFR/Weston Team, when requested, so that MEC remediation and documentation can achieve timely site closure.

The US Army

- Conducts reviews of LFR/Weston Team submittals for compliance with DOD, and US Army explosives safety requirements.

METHODOLOGIES USED TO MONITOR LFR TEAM'S PERFORMANCE.

The LFR Teams performance will be evaluated in terms of how well the requirements of the ESCA are satisfied, the extent to which the work performed follows the approach outlined in the LFR Team's work plan, QCP and timeliness of scheduled milestone accomplishment. FORA will be monitoring the LFR Teams performance on a continuing basis.

SURVEILLANCE METHODOLOGY

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

100% Inspection - At the completion of all key milestones and deliverables, performance will be evaluated through 100% inspection (e.g., document review). FORA will document performance for each completed milestone/deliverable.

Periodic Progress Inspection - At FORA's discretion, periodic inspections may be conducted to evaluate progress toward and/or completion of key milestones and deliverables. FORA may complete a periodic progress inspection if FORA 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 LFR Team 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.

PERFORMANCE METRICS

Performance Metrics: The LFR Teams overall performance will be evaluated by FORA's Quality Assurance Oversight Professionals utilizing the metrics outlined below. In

general, the LFR Team's efforts will be evaluated in terms of how well the requirements of the contract and Performance Work Statement (ESCA) are satisfied.

Two categories - qualitative and quantitative have been established. Tasks that can be physically measured or evaluated are in the quantitative category, while tasks that are more subjective are in the qualitative category. Qualitative assessments/observations as observed by the Quality Assurance Oversight Professionals will be entered in the comments block of the Quality Assurance Report and or an appropriate checklist (if created and used). The Quality Assurance Report generated and submitted by the Quality Assurance Oversight Professionals may be used along with the Corrective Action Request, as a metric for improvement should corrective actions be necessary.

QUALITY ASSURANCE (QA) INSPECTION TECHIQUES

FORA will use surveillance by qualified personnel to observe and document the quality of the services and products that the ESCA Remediation Program in providing. The LFR Team's program quality performance will be primarily evaluated through the following methods:

- Review of Quality Control documentation and activities
- Qualitative review of Quality Control data for Instrument Functionality Checks
- Qualitative review of Quality Control root cause failure analyses, if any.
- Observe adherence to the approved explosive safety submissions
- Observe work plan implementation and adherence
- Observe field activities
- Participate in blind seeding of DGM areas and perform dig sheet review for detection and recovery of blind seed items.
- Review of MEC waste management documentation

Table 1 is the Surveillance Activities Table and contains a listing of the areas that the FORA's Quality Oversight Professionals may observe in the conduct of this QASP. The table contains the definable features of work and the related references, methods of surveillance, the QA documentation that will result and some performance indicators that may be used.

Table 2 contains an example of a quantitative metric and the associated standard that will be used to support the implementation of select Surveillance Activities. The quantitative metrics are based on a pass/fail criterion.

Table 1: Surveillance Activities Table

DEFINABLE FEATURE OF WORK	REFERENCE	METHOD OF SURVEILLANCE	DOCUMENTATION[1]	PERFORMANCE INDICATORS[2]
Work Plan Execution	• Work Plan	• Periodic Inspection (Monthly)	• Quality Assurance Report • Corrective Action Request • Checklists	• Compliance with approved plans • Personnel knowledgeable of plan requirements • Personnel meeting qualification • Resources managed effectively
Quality Control	• Work Plan	• 25% Random Review of Quality Control Documentation	• Quality Assurance Report • Corrective Action Request • Checklists	• Pass/Fail Rate on Quality Control Inspections • Root Cause Analysis and implementation documentation • Attaining project Data Quality Objectives (DQOs) • Blind Seed recovery rate • Spatial tolerances
Blast and Fragmentation Protection	• Work Plan • ESS • DOD 6055.9-STD	• Periodic Inspection (monthly)	• Quality Assurance Report • Corrective Action Request	• Appropriate Exclusion Zones Maintained • Non-Essential personnel not within exclusion zone • Engineering controls used and serviceable (if applicable) • Demolition shots use engineering controls (as applicable)

[1] Quality Assurance Checklists corresponding to specific features of work are located at the end of this plan.
[2] The list of performance indicators is not all inclusive but rather a guideline for major areas to use when assessing performance.

DEFINABLE FEATURE OF WORK	REFERENCE	METHOD OF SURVEILLANCE	DOCUMENTATION[1]	PERFORMANCE INDICATORS[2]
Material Potentially Possessing an Explosive Hazard (MPPEH) Handling	• Work Plan • DOD 6055.9-STD	• Periodic Inspection (quarterly)	• Quality Assurance Report	• Foreign items or MEC commingled with MEC • Security of certified Munitions Debis (MD)containers • Demilitarization complete • Venting accomplished
Soil Sifting	• Work Plan	• Periodic Inspection during activity	• Quality Assurance Report • Corrective Action Request	• Equipment serviceable and in good condition (screens) • Personnel knowledgeable in plan operation • Dust control (if applicable)

Table 2: Quantitative Tests and Metrics

Test[3]	Pass	Fail [4]
Blind Seeding	All Blind Seeds recovered.	If one or more items are missed then test failed. LFR Team shall resurvey grid and perform a root cause analysis of the failure.

[3] The frequency and intensity of these tests will vary. Initially the tests will be frequent and occur on the majority of the site. As the LFR Team established processes and procedures that document a proven track record of quality compliance, FORA may reduce the frequency/intensity of the tests.

[4] Failure require the performance of a root cause analysis to determine the cause of the failure and any corrective actions required.

QASP REPORTING FORMS

The following forms will be utilized in monitoring and evaluating the LFR Teams' performance under this ESCA.

Quality Assurance Reporting. The FORA QA Oversight professional(s) will conduct surveillance activities in accordance with this plan. All quality oversight surveillance activities will be documented on the Quality Assurance Reporting Form on a daily basis (as the minimum) while QA Oversight inspections occur. The form includes the following inputs:

- Method of Surveillance (Visual, Document Review, Inspection, etc)
- Observations Concerning the LFR Team's Performance
- Corrective Action Required: ☐ Yes ☐ No
- Evaluation of LFR Team's Performance During Surveillance Activities:

The QA Oversight Professional(s) may as needed supplement this form with trip reports or other methods of documentation as deemed appropriate. The form will be utilized by FORA to monitor and evaluate the quality control and compliance with the ESCA. If quality issues are noted and are severe enough a corrective action request form will also be completed.

Corrective Actions Requests: The PDT will issue a Corrective Action Request (CAR) Form when a deficiency or violation has occurred that warrants corrective action. The purpose of the CAR is to identify the deficiency or violation, determine a solution, and take actions to resolve and prevent future reoccurrence of the issue.

Safety: Safety inspections will be performed as outlined in the following paragraphs in order to evaluate the LFR Team's adherence to Safety and Health. The omission of specific items on the referenced forms does not release FORA from the ability to inspect or comment on a given situation or practice.

- Initial. An initial safety inspection will be performed prior to the execution of MEC response actions. The purpose of this inspection is to assure that all safety requirements of the LFR Teams' work plan have been addressed and execution of the efforts outlined in the work plan can proceed in a safe manner.

- Periodic. Periodic safety inspections will be performed.

QUALITY ASSURANCE OVERSIGHT REPORTING FORM

Date: ___/____/_____

Work Task (Milestone/Activity): _____

Survey Period: ___/____/_____ through ___/____/_____

Method of Surveillance (Visual, Document Review, Inspection, etc):

Observations Concerning the LFR Team's Performance

Observations:

Corrective Action Required: ☐ Yes ☐ No

Evaluation of LFR Team's Performance During Surveillance Activities:

Evaluation Discussion:

CORRECTIVE ACTION REQUEST	**NO.** *(1,2,3, etc.for the T.O.)*
FORA Representative: Date Issued: Issued to: Response Due: Site Name/Location:	
Nonconformance Type (circle one): Critical Major Minor	
Description of Condition Found:	
Apparent Cause:	
The LFR Team will provide the following information to the FORA PM by the "Response Due" date above.	
Actual Cause: (LFR Team will investigate and determine cause of condition reported above. Actual cause should be stated as specifically as possible)	
Action Taken to Correct Condition: (Corrective Action should address root cause, not the symptom)	
Action Taken to Prevent Recurrence:	
Action Taken to Monitor Effectiveness of Corrective Action: (Generate data as proof. State the monitoring method put in place and who is responsible for reviewing data.)	
LFR Team Representative Signature/Title/Date Signed: (Form must be signed before returning)	
(FORA Project Team Use Only) Review of Corrective Action: 1) Has condition improved? ___ Yes ___ No 2) Additional corrective action required? ___ Yes ___ No Comments: Completed form provided to Contracting Officer: (Date)	

QASP IMPLEMENTATION SCHEDULE

- During project mobilization, a one week MEC QA Oversight initial field visit will be performed.
- During the first year of MEC QA Oversight Services, three days of MEC QA Daily Field visits are assumed per month, for a total of 33 daily site visits.
- During years two through five of MEC QA Oversight Services, two days of MEC QA Daily Field visits are assumed per month, for a total of 24 daily site visits.
- During year six of MEC QA Oversight Services, one day of MEC QA Daily Field visits is assumed per month, for a total of 12 daily site visits.
- During the first year of Geophysical QA Oversight Services, 180 hours of Geophysical QA Oversight Services activities are assumed. Years two though six represent an approximate 10% decrease in the Geophysical QA Oversight Services review. This reduction is based on a review of the geophysical field work schedule provided by FORA.

UPDATE TO QASP IMPLEMENTATION SCHEDULE - YEARS TWO THROUGH SIX

- During years two through five of MEC QA Oversight Services, two days of MEC QA Daily Field visits are assumed per month, for a total of 24 daily site visits.
- During year six of MEC QA Oversight Services, one day of MEC QA Daily Field visits is assumed per month, for a total of 12 daily site visits.
- During the years two through five of Geophysical QA Oversight Services, 160 hours of Geophysical QA Oversight Services activities are assumed, to be supplemented as needed based on the work schedule provided by FORA.