

2.0 TECHNICAL MANAGEMENT PLAN

2.1 PROJECT OBJECTIVES

The objectives of this RI/FS include a comprehensive sampling methodology involving surface visual, geophysical and intrusive investigations to collect data to identify areas that require Remedial Action (RA) or identify areas where No DoD Action is Indicated (NDIA).

2.2 PROJECT ORGANIZATION

MARRS is responsible for conducting the RI/FS in compliance with all applicable policies and guidelines. CESPL is responsible for providing contract oversight and quality assurance. MARRS will conduct the data collection necessary to formulate recommendations for presentation in the RI/FS Report. Prior to finalizing the report, MARRS will incorporate comments received from CESPL, CEHNC, regulatory agencies, stakeholders, and the public.

MARRS and their subcontractor, Earth Tech will provide the qualified personnel required to support all activities of the RI/FS. These will include, but not be limited to: UXO-qualified personnel to provide MEC safety; field supervision, data processing crews, biologists, archeologists, MEC intrusive investigation teams, geophysical investigation teams, soil sampling crews, and surveyors. The disposal of MEC found on the site during operations will be performed by a UXO-qualified team.

The following sections provide a brief description of the overall project team and responsibilities assumed by MARRS. Figure 2-1 presents a project organization chart that illustrates how specific individuals and/or organizations will interact with each other throughout the project.

2.2.1 U.S. Army Corps of Engineers, Los Angeles District

USACE has been tasked to evaluate and determine the necessity of MEC risk reduction actions for all FUDS. CESPL is the sponsor of the Former BMA and has final approval over the RI/FS. The following consultants are under contract to CESPL during the RI/FS.

2.2.2 MARRS Services, Inc.

MARRS has been contracted to develop and perform the RI/FS for Former BMA. The roles and responsibilities of MARRS management for this RI/FS are discussed in the following paragraphs. Prior to and during field investigations, MARRS will be responsible for the following:

- Development of this RI/FS work plan and assurance that all work performed is in compliance with this approved RI/FS Work Plan and Scope of Work.
- All aspects of the field investigations and evaluation, including Munitions Constituents (MC) soil sampling.
- Administration and management of all aspects of the RI/FS field investigation, along with analysis of the field data collected.

- Ensuring minimal impact to sensitive flora and fauna and cultural/Native American resources.
- Generation of a RI/FS report that will evaluate the potential MEC risk, evaluate remedial alternatives, and recommend remedial actions.

2.2.3 Earth Tech

Earth Tech has been subcontracted by MARRS contracted to assist in the development of the RI/FS for Former BMA. The roles and responsibilities of Earth Tech for this RI/FS are discussed in the following paragraphs. Prior to and during field investigations, Earth Tech will be responsible for the following:

- Development of Chapters 5,6, and 7 of this RI work plan and assurance that all work performed within their scope is in compliance with this approved RI/FS Work Plan and Scope of Work.
- Assisting MARRS in field investigations and evaluation, including the siting of explosive magazines and the storage and disposal of MEC.

2.3 PROJECT PERSONNEL

It is MARRS policy to use a project-oriented approach to management for major contracts. MARRS' project management will consist of the PM, the Program Manager, the Contracts and/or Procurement Manager, Corporate Safety and Health Professional, and Quality Control (QC) Manager. Other project personnel include the Site Manager, Senior UXO Supervisor (SUXOS), the Unexploded Ordnance Site Safety Officer (UXOSO), the Unexploded Ordnance Quality Control Supervisor (UXOQC), the UXO Team Supervisor (UXOS), and the UXO technicians. Project administration consists of administrative staff, who will be responsible for all of the administrative requirements pertaining to the project.

Resumes of key project management and field personnel are presented in Appendix H. UXO personnel to include the SUXOS, UXOSO, UXOQC, UXOS (Tech III), and UXO Technician (Tech I/II) will be approved by CESPL, under a separate letter, prior to mobilization for field activities. Authorization documentation for the UXO personnel will be available at the site for inspection or verification, as required.

2.3.1 Project Manager

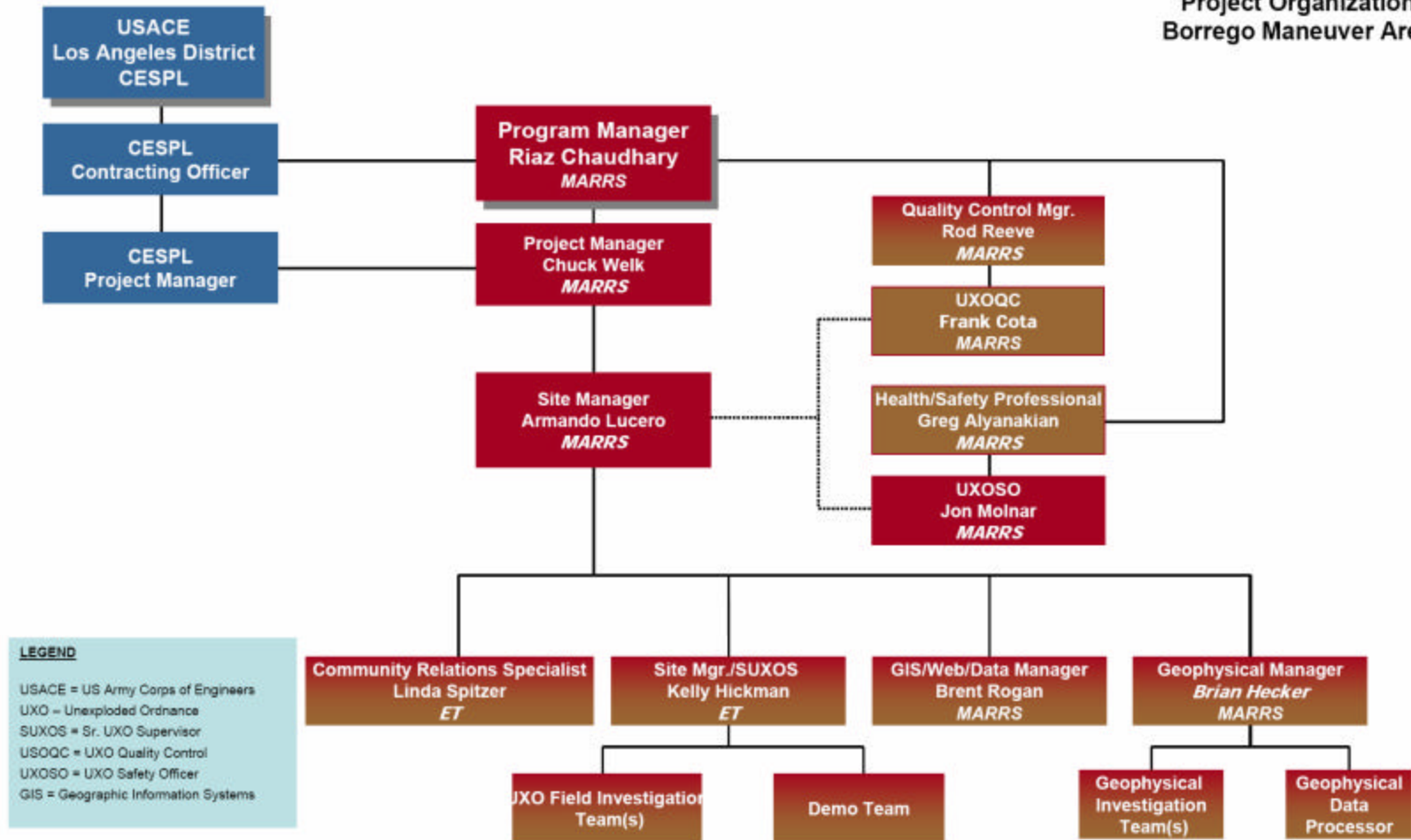
The PM, who will be responsible for the day-to-day management of project activities, will interact with MARRS personnel assigned to the project through a variety of means, including meetings, electronic mail (e-mail), formal correspondence, and telephones. Staff meetings were conducted at the beginning of the project to organize a project team and familiarize team members with the project scope and staff assignments. The PM will hold weekly meetings, or as required, to monitor staff performance, resolve problems, and verify that contract requirements are being met to the quality expectations of CESPL.

The PM will be responsible for monitoring the project budget using MARRS' cost accounting

system. Actual expenditures such as labor, other direct costs (ODC), and subcontractor costs are entered into MARRS' computer accounting system on a weekly basis. Printouts will be provided to the PM; these show actual expenditures with weekly and cumulative totals. The PM will review this information and interact with the project team to keep their performance on track. The PM will also inform the Program Manager on a weekly basis, or as required, of project performance, schedule, and budget.

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**Project Organization
Borrego Maneuver Area**



LEGEND
 USACE = US Army Corps of Engineers
 UXO = Unexploded Ordnance
 SUXOS = Sr. UXO Supervisor
 USOQC = UXO Quality Control
 UXOSO = UXO Safety Officer
 GIS = Geographic Information Systems

Figure 2-1. BMA Organizational Chart

2.3.2 Program Manager

The Program Manager will be responsible for monitoring the overall progress of the contract, reviewing monthly progress reports, and ensuring that MARRS' resources are available to the PM. The Program Manager will also maintain close communication with CESPL to assess client satisfaction with MARRS' performance on this Contract.

2.3.3 Contracts/Procurement Manager

The Contracts/Procurement Manager will also assist the PM and the Program Manager by coordinating expenditure documentation for the monthly progress reports, and CESPL contracts and invoicing.

2.3.4 Quality Control Manager

The QC Manager will be responsible for reviewing and updating the Quality Control Plan (QCP), as needed, and verifying compliance with the QCP. Compliance will be verified through audits (using the Standard QC Report Form in Appendix F) of the project activities by the QC Manager, who has the authority to require corrective actions and stop work (work stoppage will be coordinated with CESPL), as needed, to ensure compliance with the QCP. Completed QC Report Forms will be forwarded to CESPL.

2.3.5 Health and Safety Professional

The Corporate Health and Safety Professional is responsible for review and coordination of the Accident Prevention Plan (APP) and addenda, as required. Other Health and Safety Professional duties include Program Administration, Safety Audits, determination of personal protective equipment (PPE) requirements, and any other responsibilities identified in the APP.

2.3.6 Site Manager

The Site Manager will manage all MARRS and subcontractor activities at the project site and is responsible for field implementation of this work plan. This includes communicating site requirements to all personnel, ensuring that field supervisors and subcontractors enforce all provisions of the work plan and APP. Additional responsibilities include, but are not limited to:

- Coordinating all on-site field activities with CESPL, the Project SUXOS and other personnel at the site to preclude impacts to productivity and ensure compliance with the Work Plan and APP.
- Determining ingress/egress routes to work areas
- Implementing changes as directed by the PM
- Tracking equipment operation, with hours worked, idle, or down for repair
- Checking and accepting materials received at the site with statement as to acceptability, storage, and reference to contract requirements.
- Stopping work, as required, to maintain personnel and environmental health and safety

- Ensuring that daily/weekly deliverables are developed and delivered on schedule
- Reviewing deliverables/submittals with contract reference, by whom, and action taken
- Maintaining an up-to-date, informative, and complete daily project log describing work performed each day, including location, description, and worker(s); site conditions; visitors, or any other pertinent project occurrences.

2.3.7 Senior UXO Supervisor (SUXOS)

The SUXOS will ensure that field personnel conduct operations at the site in accordance with the work plan and in a systematic manner using proven operating methods and techniques. All activities will be conducted under the direction, supervision, and observation of the SUXOS (or a UXO Supervisor during the UXO escort activities). Additional responsibilities of the SUXOS include, but are not limited to:

- Authorize initiation of all demolition operations
- Certify MPPEH and munitions/range debris as ready for turn-in or disposal
- Coordinate on-site field activities (e.g., geophysical mapping and intrusive investigations) to preclude impacts to productivity and ensure compliance with the APP.
- Directly interface with, and relay safety and health concerns to, the MARRS Site Manager.
- Ensure that site operations are conducted in accordance with all relevant safety and health specifications, regulations, and standards.
- Manage the on-site manpower and equipment necessary to safely conduct the tasks associated with the field investigation.
- Perform a final inspection of the munitions debris (MD) and certify it to be free of any explosive hazard.
- Prepare and submit daily, a detailed accounting of activities performed each workday
- Upon completion of demolition and assuming there are no residual hazards, the SUXOS will authorize the resumption of site operations.

2.3.8 UXO Site Safety Officer (UXOSO)

The UXOSO will meet all applicable requirements of DDESB TP18, and will be approved for the project by CESPL. The UXOSO is responsible for implementing and enforcing the safety and health requirements listed in the APP. Additional responsibilities of the UXOSO include, but are not limited to:

- Analyze MEC and explosives operational risks, hazards, and safety requirements

- Conduct the UXO safety portion of any visitor orientation
- Conduct and document daily safety inspections and weekly safety audits
- Develop and implement corrective action plans to eliminate or mitigate hazards
- Monitor compliance with the safety measures contained in the APP and associated documents during disposal operations.
- Ensure the proper use of PPE in accordance with the requirements of the APP
- Establish and ensure compliance with site-specific safety requirements
- Investigate and document injuries, illnesses, accidents, incidents, and near misses
- Verify that the area around the operating site is clear of all nonessential personnel and that other UXO Supervisors have been notified prior to the start of disposal activities.
- Provide the UXO safety portion of training sessions or briefings
- Stop work if health and/or safety jeopardized or compromised

2.3.9 UXO Quality Control Specialist (UXOQC)

The UXOQC will meet all applicable requirements of DDESB TP18, and will be approved for the project by CESPL. The UXOQC is responsible for implementing and enforcing the QC Plan. The UXOQC responsibilities include, but are not limited to:

- Ensure MEC/Material Potentially Presenting an Explosive Hazard (MPPEH)/MD anomaly sources have been completely removed from all intrusive excavations.
- Review and verify correct/proper identification for all recovered MEC, MPPEH, or MD
- Check for defective or damaged equipment
- Conduct quality control inspections of all MEC- and explosives-related operations
- Verify appropriate personnel are being utilized during all field investigation activities
- Conduct examination of the quality of workmanship
- Maintain all inspection and surveillance documentation (e.g., QC reports, equipment standardization results and equipment maintenance results, nonconformance and corrective action documents).
- Perform and document daily inspections/surveillances of job site activities. Appropriate technical assistance will be provided to perform the inspections/surveillances, as

necessary, for the specific field investigation activities being performed.

- Verify all required equipment calibration has been performed and that inspection and standardization results comply with contract requirements and the Work Plan.

2.4 PROJECT COMMUNICATION AND REPORTING

To ensure that the work is consistent with the objectives of the RI/FS, MARRS will use the following guidelines in managing all project activity, and in communicating and reporting project status:

- A single Work Breakdown Structure (WBS) has been established that forms the basis for defining and assigning all work under this contract. This WBS will be included in required reports and invoicing to CESPL.
- All work will be planned and budgeted to support a hierarchy of schedules based on key project events.
- Generally, project work will not be performed until it has been properly planned and approved. In cases where immediate performance of work is required to support the contract schedule, respond to CESPL direction, or otherwise serve some critical purpose, the detailed planning and approval of the work will be agreed to by MARRS and CESPL.
- Cost and schedule status will be evaluated monthly to generate performance data and to provide integrated cost/schedule analysis.
- MARRS and subcontract personnel assigned to the project will have proven capabilities within their area of technical expertise, will be available for the duration of the contract, and will have previous experience on similar types of investigations and field projects.

As part of contract management, MARRS will prepare and submit weekly progress reports that describe the status of work that has been performed since the previous weekly report, work currently under way, and work anticipated to be conducted. The report will determine if current work is on schedule. If the work is not on schedule, MARRS will determine what actions need to be taken in order to get back on schedule.

MARRS will maintain a record of telephone conversations, e-mail, and written correspondence affecting the decisions relating to the performance of this contract. A summary of each telephone conversation and a copy of E-mail and written correspondence affecting the schedule or costs of the T.O. will be submitted to CESPL with the monthly progress report.

2.5 PROJECT DELIVERABLES

Table 2-1 provides a schedule of major deliverables anticipated for the RI/FS.

Table 2-1. Deliverable Schedule

Deliverable	Date of Completion
Draft RI/FS Work Plan	Completed
Draft Final RI/FS Work Plan	July 07, 2006
Final RI/FS Work Plan	TBD
RI/FS Field Investigation	TBD
Draft RI/FS Report	TBD
Draft Final RI/FS Report	TBD
Final RI/FS Report	TBD
Daily SUXOS/QC Activity Report	Submitted electronically to USACE Representative and CESPL PM NLT 1200 hrs the following workday
Weekly Progress Report (submitted during field work)	NLT close of business each Monday
Meeting Minutes	NLT 10 calendar days after meeting

RI = remedial investigation
NLT = no later than

2.6 PROJECT SCHEDULE

A tentative project schedule for the first phase of field activities of the RI/FS is presented in Figure 2-2. Field Project Tracking (schedule) will be performed with MS Project software. As changes to the schedule occur, it will be updated and distributed to the CESPL PM, Technical Lead, and on-site QAs. Copies will also be attached to the weekly reports as they are updated.

2.7 PERIODIC REPORTING

Weekly field reports will be submitted when field activities are occurring and will contain the information required in DID MR -085.

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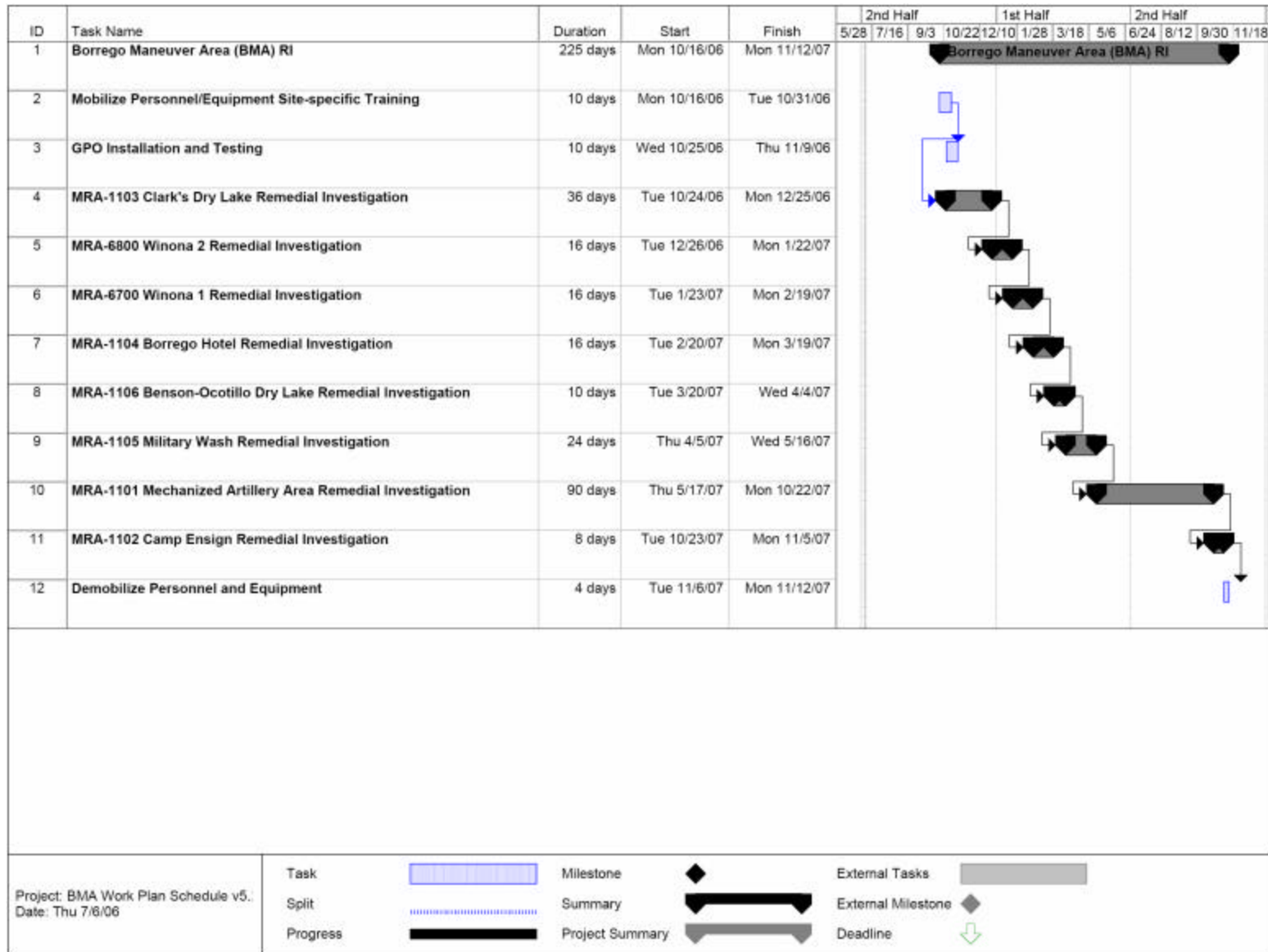


Figure 2-2. BMA R/FSI Fieldwork Schedule

2.8 COSTING AND BILLING

2.8.1 Scope

This section describes the procedures to be followed and defines the responsibilities of the PM to ensure efficient and effective cost tracking of project activities. The PM has access to MARRS' Management Information System (MIS), which contains project cost details that will be updated weekly. However, at times, the scope of field work necessitates more frequent tracking of costs. Accurate field cost tracking is also paramount to the process of invoicing CESPL.

2.8.2 Responsibilities

The PM, or a designated representative, will be responsible for tracking the costs associated with project field activities. The PM will be responsible for defining the field cost tracking mechanisms that will be followed by MARRS' personnel. The PM will also be responsible for reviewing and approving subcontractor daily reports and accepting material and equipment shipped to the project site.

2.8.3 Field Cost Tracking

The effectiveness of the cost tracking approach described hereafter is predicated on thorough and realistic planning at the start of the project, during which a systematic mechanism for accumulating and organizing costs is adopted. Key to this process is the preparatory work performed by the PM to define the work phases that allow for effective cost management while minimizing complexity of the cost tracking process.

Field cost tracking will be key in progress reporting, in that at any time, the PM will know the status of costs incurred compared with the total project costs. The costs will be grouped into the following four categories:

- MARRS labor charges
- MARRS equipment charges
- MARRS material charges
- MARRS miscellaneous charges

2.9 PROJECT PUBLIC RELATIONS SUPPORT

MARRS/Earth Tech will participate in public meetings to discuss project progress and activities. These meetings are to be held in the Borrego Springs area. The initial public meeting was conducted on 05/24/06. The date(s) of follow-on public meetings will be scheduled as necessary in accordance with the project schedule. MARRS/Earth tech will provide technical and logistical support for these meetings.

MARRS and their subcontractor(s) have been advised by CESPL not to publicly disclose any data generated or reviewed under this contract or any subcontract, unless specifically authorized by the CESPL contracting officer. When approached by any person or entity

requesting information about the BMA RI/FS, project personnel will defer to the CESPL contracting officer or CESPL public affairs office (PAO) for a response. Reports and data generated under this contract will become the property of the government. Distribution to any other source by MARRS is prohibited unless authorized by the CESPL contracting officer.

2.10 SUBCONTRACTOR MANAGEMENT

Prior to subcontract work being performed, the MARRS Contract Administrator will negotiate and prepare a subcontract that will detail all necessary and appropriate terms and conditions, including the SOW. All subcontractors will be approved by the CESPL Contracting Office Representative (COR) Once the subcontract is executed, periodic reviews will be held to ensure that contractual requirements and milestones are met. These reviews will cover contractual progress, technical progress, and cost and schedule status.

In addition to reviews, the subcontractor(s) may be required to prepare weekly/monthly technical progress reports that identify one or more of the following: (1) progress and status of work; (2) significant accomplishments during the reporting period; (3) comparison of actual, technical, and schedule progress versus planned progress; (4) status of all long lead/critical delivery items; (5) analysis of significant problems; (6) current expenditures and status of work in terms of labor and dollars spent versus budget; and (7) a summary of specific plans for the next reporting period.

The Subcontract Administrator will be responsible for subcontract control and will be the point of contact to provide a direct and formal line of communication between MARRS and the subcontractor. Responsibilities of the Subcontract Administrator are as follows:

- Preparation and maintenance of a subcontract file, including all information generated during negotiations.
- Work authorization records and maintenance
- Coordination of all documents required for internal administration
- Subcontractor coordination, including the receipt and transmission of all correspondence
- Review of subcontractor invoices prior to payment
- Liaison with the PM regarding all matters affecting the subcontract
- Modification of subcontracts as required to reflect changes in technical direction during the term of the subcontract.
- Monitoring the subcontractor's work to assess progress

Data generated by the subcontractor(s) as part of subcontract deliverables will be reviewed by technical staff assigned to that function. In the field, the MARRS Site Manager (or designee) will review deliverables from the subcontractor prior to delivery to CESPL.

2.11 MANAGEMENT OF FIELD OPERATIONS

MARRS Site Manager (or designee) will be responsible for all field operations. To ensure that the project staff maintains focus on safety and project goals, the Site Manager will hold daily operational staff meetings. The SUXOS will manage UXO field operations to include surface visual surveys, intrusive investigations and disposal operations. The Site Geophysicist will be responsible for the management of onsite geophysical field operations to include data acquisition, management, processing and target reacquisition. The GIS manager will be responsible for the management and presentation of geophysical target and field investigation data. Specific responsibilities of the management team are discussed earlier in this chapter. All work will be performed in accordance with this RI/FS Work Plan.

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