

# Project Management Handbook

United States Department of the Interior  
Bureau of Land Management



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## 1.0 INTRODUCTION

This Handbook is intended for the Department of the Interior's (DOI) Bureau of Land Management's (BLM) employees who conduct environmental cleanup, natural resource restoration, and physical safety hazard remediation of medium to long-term or complex projects, especially the Project Manager (PM) and others playing a management role. Generally, these types of projects are conducted under the Hazard Management and Resource Restoration (HMRR a.k.a. HazMat) and Abandoned Mine Land (AML) programs. This Handbook identifies and describes important project management responsibilities for the BLM's employees and provides guidance to ensure that the BLM's medium to long-term or complex environmental cleanup, natural resource restoration, and physical safety hazard remediation projects are completed in an efficient and cost-effective manner, and comply with all appropriate laws, regulations, and policies.

This Handbook provides project management guidance. It is not a replacement for, but rather a supplement to, the BLM's *Response Actions Handbook (NCP/CERCLA)* (H-1703-1) and the *National Environmental Policy Act (NEPA) Handbook* (H-1790-1).

The remainder of this Handbook covers the following:

### **Other BLM Handbooks to Use in Conjunction with the Project Management Handbook**

- *BLM's Response Actions Handbook (NCP/CERCLA)* (H-1703-1)  
[http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_manual.Par.629.92.File.dat/1703.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_manual.Par.629.92.File.dat/1703.pdf)
- *NEPA Handbook* (H-1790-1)  
[http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/blm\\_handbooks.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/blm_handbooks.html)

- ◆ **Chapter 2.0, Project Management Overview** provides information on project management, describes the BLM projects to which project management should be applied, explains the purpose and goals of project management for the BLM's projects, and presents the laws, regulations, etc. that give the BLM the authority to implement project management for environmental cleanup, natural resource restoration, and physical safety hazard remediation projects.
- ◆ **Chapter 3.0, Project Lifecycle** provides guidance on applying project management principles to the BLM's projects for the four general stages of project management: 1) Initiation and Development; 2) Planning; 3) Design, Execution and Control; and 4) Closeout and Monitoring.
- ◆ **Chapter 4.0, References** provides a list of technical references, including the BLM's handbooks, manuals, resource notes, technical notes, and other DOI/BLM documents, and links to the BLM's Washington and State Offices and related programs and other relevant agencies.
- ◆ **Appendices**, Appendix A – Glossary provides definitions for some of the major terms used throughout the Handbook, and Appendix B – Acronyms spells out the full term for each acronym and abbreviation used throughout the Handbook.

## 2.0 PROJECT MANAGEMENT OVERVIEW

This chapter presents an overview of project management and provides information pertaining to the following:

### ***Other Project Management Handbooks***

- Remedial Design/Remedial Action Handbook, EPA 540/R-95/059  
<http://www.epa.gov/superfund/cleanup/rdrabook.htm>

- ◆ Project Management in General – see Section 2.1;
- ◆ Applicable BLM Projects – see Section 2.2;
- ◆ Purpose and Goals of BLM Project Management – see Section 2.3; and
- ◆ Laws, Regulations, and Authorities – see Section 2.4.

### 2.1. Project Management in General

To encourage proper implementation of the requirements of applicable laws, regulations, and authorities at medium to long-term or complex environmental cleanup, natural resource restoration, and physical safety hazard remediation projects, the BLM requires its employees to apply basic project management principles.

Project management is the application of knowledge, skills, tools, and techniques to meet or exceed stakeholders' needs and expectations from a project. In addition to the BLM, stakeholders at environmental cleanup projects may include other regulators, other Federal and State agencies, and community, industry, and environmental groups. The key objective of project management is to make the most effective use of all resources to achieve the final goal within budget and on schedule while meeting performance requirements and obtaining stakeholder acceptance.

The PM is responsible for ensuring that project management processes and procedures are applied and used throughout the life of the project. The project management process generally involves the following four project phases (described in detail in Chapter 3.0):

- ◆ Initiation and Development – see Section 3.1;
- ◆ Planning – see Section 3.2;
- ◆ Design, Execution and Control– see Section 3.3; and
- ◆ Closeout and Monitoring– see Section 3.4.

### 2.2. Applicable BLM Projects

Project management principles and processes shall be applied for the following types of medium to long-term or complex projects:

- ◆ Environmental cleanup addressed under the Environmental Response, Compensation, and Liability Act (CERCLA);
- ◆ Natural resource restoration managed under the Natural Resource Damage Assessment and Restoration (NRDAR) program, addressed under CERCLA and the Oil Pollution Act (OPA); and
- ◆ Physical safety hazard remediation addressed under the NEPA process.

**Physical Hazards and CERCLA**

The BLM requires that all environmental cleanup and natural resource restoration sites be addressed under CERCLA to enable the BLM to recover costs associated with the cleanup or restoration. Physical safety hazards can be addressed under CERCLA if they are part of the response action; otherwise, they must be addressed under the NEPA process.

While project management principles apply to most medium to long-term environmental cleanup, natural resource restoration, and physical safety hazard remediation sites, some efforts may not warrant this more structured approach. For example, individual physical safety hazard mitigations, smaller removal efforts, and other routine, small site environmental cleanups may not warrant the same level of project management as complex projects of longer duration. Additionally, the BLM investigates all its known sites that present a potential risk to human health or the environment to determine if a structured project management approach is necessary.

In situations where the BLM is not the lead agency for a project or site, the BLM encourages its partners (or potentially responsible parties—PRPs) to follow project management principles. Further, BLM provides oversight to promote the application of these principles, at least to those portions of the project that the BLM maintains responsibility. It is important to note that the BLM still maintains responsibility for the portion of a project or lands under the BLM's jurisdiction, authority, or control.

### 2.3. Purpose and Goals of BLM Project Management

National BLM-wide processes and procedures for project management that are grounded in generally accepted project management principles will help ensure a consistent approach to accomplishing the BLM's mission of public land conservation through communication, consultation, and cooperation with Federal, State, and local partners. The BLM's three basic objectives for implementing project management requirements are improved financial management, communications, and quality.

- ◆ **Financial Management** – Project management processes and procedures help PMs control the cost of projects by implementing a well-defined schedule with budget and cost tracking mechanisms. Additionally, these practices help manage the scope more effectively, identify problems before they occur, and resolve issues quickly once they do occur, thus decreasing or eliminating additional time, energy, effort, and cost to the project due to unanticipated tasks and issues.
- ◆ **Communications** – A communications plan—including processes and procedures for helping PMs communicate efficiently and effectively with management, the project team, the community, partners, and other stakeholders—promotes cooperation among and by stakeholders, promotes consensus, and decreases or eliminates many conflicts arising from a lack of information.
- ◆ **Quality** – Quality management processes allow the team to implement quality control (QC) and quality assurance (QA) techniques to achieve explicitly stated goals and requirements, make decisions based on facts and accurate data, and measure accomplishments using established metrics.



## 2.4. Laws, Regulations, and Authorities

### *Laws, Regulations, and Other Federal Guidance*

- FMFIA (PL-97-255) <http://www.whitehouse.gov/omb/financial/fmfia1982.html>
- OMB Circular A-123 <http://www.whitehouse.gov/omb/circulars/a123/a123.html>
- GPRA (PL-103-62) <http://www.whitehouse.gov/omb/mgmt-gpra/gplaw2m.html>
- FLPMA <http://www.blm.gov/flpma/>
- NCP (40 CFR 300) [http://www.access.gpo.gov/nara/cfr/waisidx\\_05/40cfr300\\_05.html](http://www.access.gpo.gov/nara/cfr/waisidx_05/40cfr300_05.html)
- CERCLA (42 U.S.C. 9601) <http://www.gpoaccess.gov/uscode/index.html>
- OPA (33 U.S.C. 2701) <http://www.gpoaccess.gov/uscode/index.html>
- NEPA (42 U.S.C. 4321) <http://www.gpoaccess.gov/uscode/index.html>
- CWA (33 U.S.C. 1251) <http://www.gpoaccess.gov/uscode/index.html>
- NHPA (16 U.S.C. 470) <http://www.achp.gov/nhpa.html>

The following laws and regulations provide guidance for the BLM to implement project management.

- ◆ **Federal Managers' Financial Integrity Act (FMFIA) of 1982 (PL-97-255).** FMFIA requires that each executive agency establish internal accounting and administrative controls to provide reasonable assurances of the following:
  - Obligations and costs are in compliance with applicable law;
  - Funds, property, and other assets are safeguarded against waste, loss, unauthorized use, or misappropriation; and
  - Revenues and expenditures applicable to agency operations are properly recorded and accounted for to permit the preparation of accounts and reliable financial and statistical reports and to maintain accountability over the assets.

Issued under FMFIA's authority, the **Office of Management and Budget (OMB) Circular No. A-123** states that FMFIA encompasses program, operational, and administrative areas, as well as accounting and financial management and that management controls should be an integral part of the cycle of planning, budgeting, management, accounting, and auditing. The Circular defines management controls as the organization, policies, and procedures used to reasonably ensure the following:

- Programs achieve their intended results;
  - Resources are used consistent with agency mission;
  - Programs and resources are protected from waste, fraud, and mismanagement;
  - Laws and regulations are followed; and
  - Reliable and timely information is obtained, maintained, reported, and used for decision making.
- ◆ **Government Performance and Results Act (GPRA) of 1993 (PL-103-62).** GPRA holds Federal agencies accountable for using resources wisely and achieving program results. GPRA requires agencies to develop plans for what they intend to accomplish, measure how well they are doing, make appropriate decisions based on the information they gathered, and communicate information about their performance to Congress and to the public.

- ◆ **Federal Land Policy and Management Act (FLPMA) of 1976.** FLPMA established public land policy and guidelines for its administration. It also provided for the management, protection, development, and enhancement of the public lands.
- ◆ **National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR part 300).** The NCP “provide[s] the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and contaminants” (40 CFR 300.1). The NCP requires that the BLM (at sites where the BLM is the lead agency) designate an on-scene coordinator/remedial project manager (OSC/RPM) to direct response efforts and coordinate all other efforts at a project site. The BLM PM acts as the OSC/RPM at BLM-lead sites and is responsible for carrying out all of the required duties of the OSC/RPM. The NCP also provides specific requirements related to project management (Section 300.120(a)).
- ◆ **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. 9601, et seq.).** CERCLA was enacted to address risks to public health and the environment resulting from actual or potential releases of hazardous substances and to recover costs spent for cleanups from responsible parties.<sup>1</sup>
- ◆ **Oil Pollution Act (OPA) of 1990 (33 U.S.C. 2701, et seq.).** The OPA authorizes the BLM (acting as a trustee of natural resources) to present a claim for and seek the recover of monetary damages to restore natural resources that are injured by “oil” spilled into or affecting waters of the United States (Section 2706 (b)(1)). The term “oil” includes various forms of oil, petroleum, and mixed oil, but does not include substances designated or listed as hazardous substances under CERCLA, including oil when mixed with hazardous substances.
- ◆ **National Environmental Policy Act (NEPA) (42 U.S.C. 4321, et seq.).** NEPA establishes a process to review the environmental impacts of a proposed major Federal action and alternatives to the proposed action that could significantly affect the quality of the environment.
- ◆ **Clean Water Act (CWA) of 1972 (33 U.S.C. 1251, et seq.).** The BLM can use the provisions of the CWA to promote cooperative clean-up efforts at its sites (e.g., NRDAR, abandoned mines, and other mine sites) impacting water quality.
- ◆ **National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470).** The goal of NHPA is to have Federal agencies act as responsible stewards of the nation’s resources when their actions affect historic properties. The BLM uses NHPA authority to ensure protection of historic and archaeological properties where lands managed by the BLM may impact historic or cultural resources.

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<sup>1</sup> Executive Orders 12580 and 13016 delegated CERCLA authority and responsibility to the Secretary of the Interior to respond to actual or potential releases of hazardous substances on or affecting public lands administered by the BLM and to initiate cost recovery from responsible parties. Secretarial Order 3201 further delegated certain of these CERCLA authorities to the BLM Director, with State Directors being authorized to further delegate these authorities to the field.

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### 3.0 PROJECT LIFECYCLE

This Chapter describes the basic project management practices that shall be conducted for the BLM's projects where project management is required (see Section 2.2). For those projects where project management is not required, the BLM encourages the use of project management practices, and to that end, the guidance in this chapter can be adapted for use with any project size and type.

The project management process generally involves four project phases—described in detail in the following sections (also see Figure 1):

- ◆ Initiation and Development – Section 3.1;
- ◆ Planning – Section 3.2;
- ◆ Design, Execution and Control – see Section 3.3; and
- ◆ Closeout and Monitoring – see Section 3.4.

#### 3.1. Initiation and Development

The Initiation and Development Phase (see Figure 2) is the foundation for the entire project. In this phase, the HazMat and/or AML Coordinator in the field investigates the discovery of possible environmental incidents. If initial investigations indicate that there may be possible contamination or physical safety hazards and/or additional site characterization is necessary, a PM may be assigned and a Project Management Team may be established. Additionally, after informing management, the PM must notify the National Response Center (NRC) by calling 1-800-424-8802 when a release of a hazardous substance occurs in an amount equal to or exceeding its reportable quantity in any 24-hour period. Table 302.4 in 40 CFR 302.4 provides a list of reportable quantities of hazardous substances. There also may be State and local hazardous substance release reporting requirements.

The PM works to obtain funding for the subsequent activities through the State AML or HazMat Program Lead. The funding request must include a more detailed estimate for the fiscal year that the funding is requested. Although a cost estimate for the entire life of the project may not be feasible initially, the funding request can include a range and/or order of magnitude estimate for the entire project. Along with the funding request, the PM must submit an abbreviated schedule for the project. Once funding has been approved, the PM must prepare a Project Management Plan (PMP). The remainder of the Initiation Phase (and this section) is essentially devoted to the preparation of the PMP.

#### **Project Management Plan (PMP)**

The PMP is a written document designed to cover all project activities through completion and site closeout. It documents the procedures and processes that are in effect throughout the life of the project to ensure its successful completion.

Figure 1: BLM Project Management Process Overview for Medium to Long-term or Complex Environmental Cleanup, Natural Resource Restoration, and Physical Safety Remediation Projects

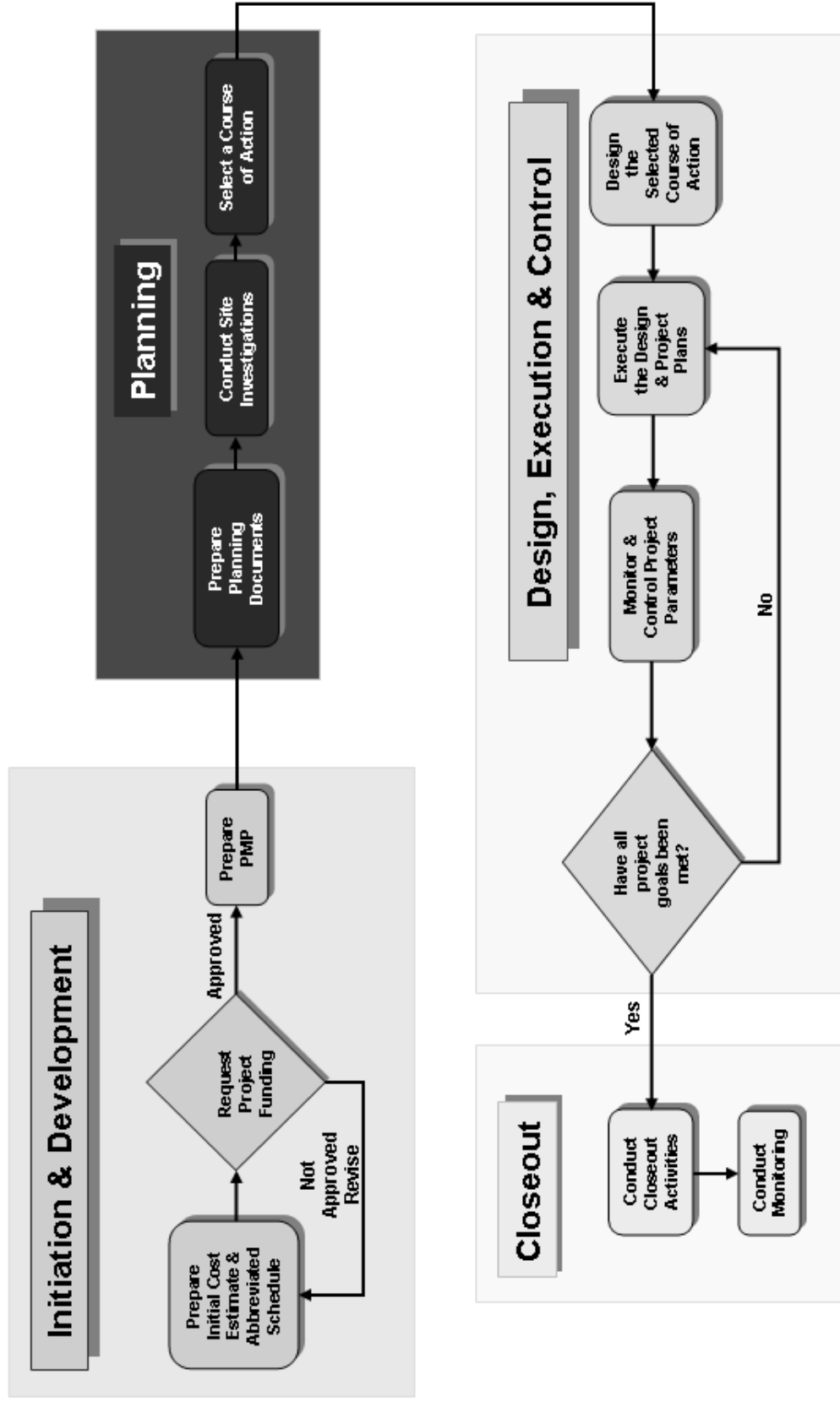
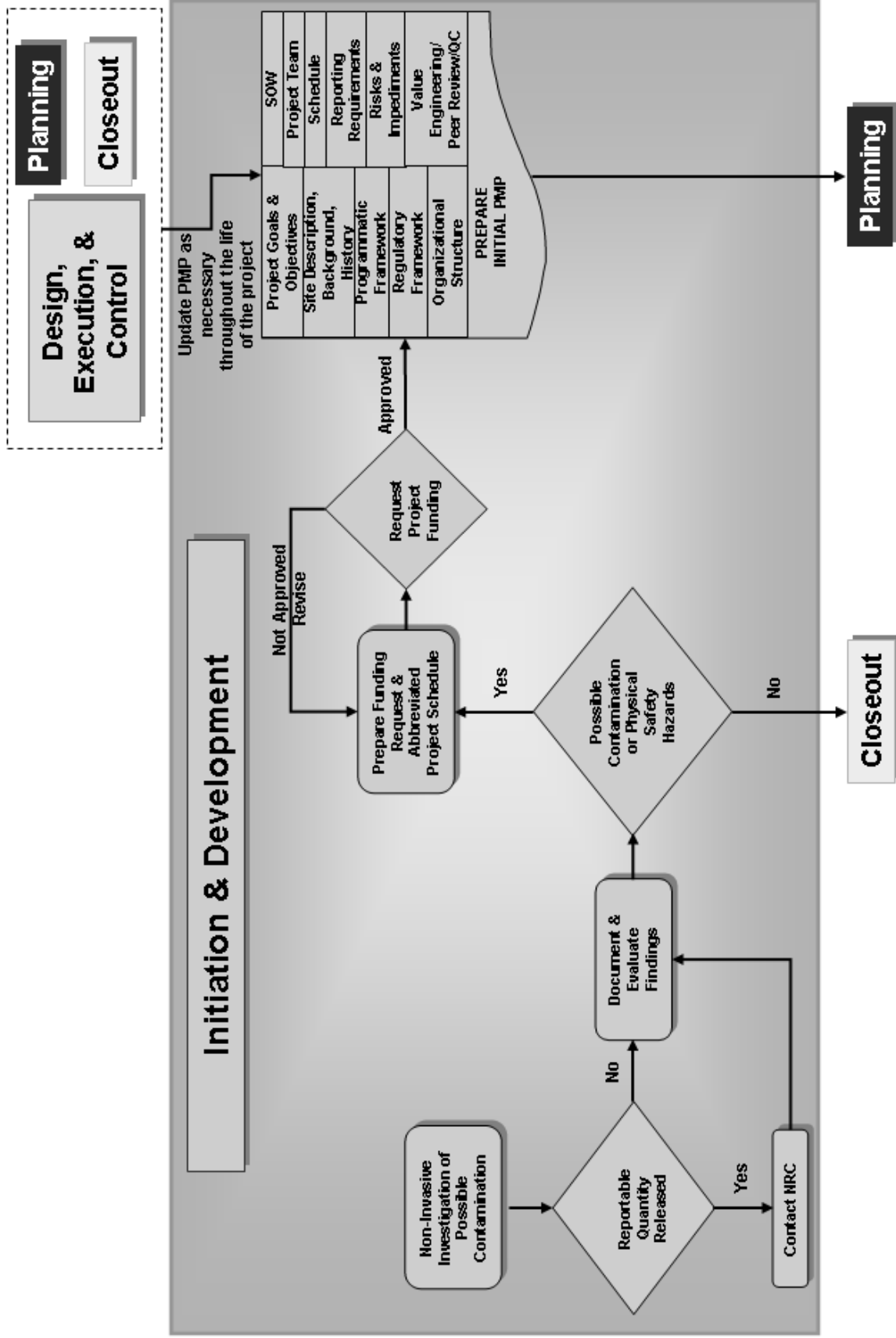


Figure 2: Initiation and Development Phase



A properly completed PMP does the following:

- ◆ Provides timely information to the project decision-makers to manage the project scope, costs, and schedule;
- ◆ Ensures the quality of the project outcomes, deliverables, and related data;
- ◆ Applies the applicable Federal, State, and local requirements; and
- ◆ Documents the role of the agency leadership and management team.

***Project Management Plan (PMP)***

Do not include any information in the PMP that should not be made available to the public (e.g., litigation or sensitive information). To identify such information check with the DOI Solicitor.

The PMP clearly identifies the project scope and budget estimate, and describes the responsibilities of all participants in the project execution. The PMP becomes the basis for commitment by all participants to deliver a quality project on schedule and within budget.

The PMP is a management tool for the PM and other team members. The PM works with the Project Management Team to develop an initial PMP after funding has been approved and to update the document as necessary throughout the life of the project. The PMP should contain all of the information described in this section, but the format can be modified to produce a PMP that most effectively serves the BLM, its partners, and other stakeholders throughout the project lifecycle. The PMP consists of the following:

***The BLM requires a PMP for the following types of medium to long-term or complex projects:***

- Environmental cleanup addressed under CERCLA;
- Natural resource restoration managed under the NRDAR program, as addressed under CERCLA and OPA; and
- Physical safety hazard remediation addressed under the NEPA process.

- ◆ Project Goals and Objectives – see Section 3.1.1;
- ◆ Site Description, Background, History – see Section 3.1.2;
- ◆ Programmatic Framework – see Section 3.1.3;
- ◆ Regulatory Framework/Enforcement Actions – see Section 3.1.4;
- ◆ Organizational Structure – see Section 3.1.5;
- ◆ Statement of Work (SOW) – see Section 3.1.6;
- ◆ Project Team Identification and Responsibilities – see Section 3.1.7;
- ◆ Schedule – see Section 3.1.8;
- ◆ Reporting Requirements – see Section 3.1.9;
- ◆ Risks – see Section 3.1.10; and
- ◆ Quality Control/Value Engineering/Peer Review – see Section 3.1.11.

The content and level of detail of the PMP will evolve during the life of the project. Some of the elements will be quite detailed while others may not necessarily apply to every project.

### 3.1.1. *Project Goals and Objectives*

The purpose of the project should be provided in this section of the PMP. Every project must have a goal or goals. Most projects requiring a PMP likely will have interim and long-term objectives to help attain the project goal(s). The interim objectives typically are those that will be completed during the fiscal year that funds have been requested. The long-term objectives can include completion of the different project phases, completion of various plans, and other anticipated tasks.

#### ***To Determine Goals and Objectives, Ask:***

- What is the cleanup standard to be achieved?
- Will the site be cleaned up or mitigated to an acceptable risk, regulatory requirement, or background levels?
- What will be the end land use (e.g., open space, recreational, or restricted)?
- Will there be long-term maintenance or operational requirements?
- When will the cleanup, restoration, and/or remediation action(s) be complete?
- When will the total project, including any monitoring requirements, be finished?

The PM works with the Project Management Team to identify and prioritize objectives that will be part of the overall project strategy. Project objectives often will change throughout the life of a project. The team periodically should review the project objectives to confirm or make any necessary changes and plan to modify funding requests during the next budget cycle.

### 3.1.2. *Site Description, Background, History*

This section of the PMP provides a project description and the information necessary to put the site in context. It should clearly identify the location and size of the site, and describe the results of any completed investigations including any contaminants of concern and risk factors. It is important that the site definition take into account what reasonably can be cleaned up with available funding. If the project area is too big, the project may never be completed; thus, a watershed may need to be divided into prioritized projects.

#### ***To Help Describe the Site, Ask:***

- What caused the contamination?
- When did the contamination occur?

### 3.1.3. *Programmatic Framework*

This section provides information regarding BLM's program areas (e.g., HazMat, AML) that will track the project, and the type of funding used for the project, including the amount and funding source. The Programmatic Framework should describe past and future budget requirements for the total project through cleanup and monitoring.

Because the BLM must provide documentation to the DOI for project funding and expenditures of projects funded through the Central Hazardous Materials Fund (CHF – see below), the PMP should provide this necessary information. The BLM's Washington Office issues and coordinates funding proposals and validates program documentation to ensure that project funding is used in a manner consistent with policy.

The various funding sources available to the BLM for environmental cleanup, natural resource restoration, and physical safety hazard remediation are as follows:

- ◆ **Central Hazardous Materials Fund (CHF)** can be used to conduct PRP searches, removal and remedial site evaluations, time critical and non-time-critical removal actions, remedial investigations, feasibility studies, designs, and cleanups. The CHF is managed by the DOI.
- ◆ **Soil, Water, and Air (1010) funds** can be used for PRP searches; site characterization and inventory enhancement; watershed analysis; coordination activities with present and future partnering entities; AML physical safety hazard remediation sites; and purchase of necessary field equipment or other essentials for program administration, safety education and outreach, and training.
- ◆ **Hazard Management and Resource Restoration (1640 base) funds** can be used for assessing hazardous materials, non-hazardous materials,<sup>2</sup> or AML sites; responding to hazardous materials or non-hazardous materials sites; monitoring and maintaining hazardous materials sites; evaluating PRPs for cost avoidance/recovery and processing these cases; and providing program support for protection of lives, resources, and property.
- ◆ **Special Cleanup Funds (SCF)** can be used to perform PRP searches, site assessments, sampling, investigations, removal actions, and other related hazardous materials cleanup activities. The SCF is an internal BLM funding source to manage specific safety hazards and conduct hazardous substance response actions that are not currently eligible for the CHF.
- ◆ **Natural Resource Damage Assessment and Restoration (NRDAR)** provides funding for the assessment of injuries to natural resources and services caused by releases of CERCLA hazardous substances and oil spills, including the development of restoration plans.

#### ***3.1.4. Regulatory Framework/Enforcement Actions***

The Regulatory Framework/Enforcement Actions section of the PMP contains information regarding the legislation and regulations authorizing the BLM to conduct the work defined in the PMP and describes the regulatory history of and laws being followed for the project. This typically includes at least the NCP and CERCLA (see Section 2.4), but may include other relevant laws and regulations, including State and local requirements.<sup>3</sup>

This section of the PMP also includes a description of the required or anticipated coordination with other Federal agencies and State and local governments. If the BLM is not the lead agency for the site, the PM should contact the appropriate regulatory agency. If applicable, describe any enforcement actions that have already been initiated (e.g., sending a CERCLA 104(e) information request to the PRPs).<sup>4</sup>

<sup>2</sup> Non-hazardous material sites refer to natural, man-made, and noncompliance situations that pose health, safety and/or environmental risk or wildfire risk to the public. Examples include cast away equipment, abandoned structures, unexploded ordnance, solid waste dumps, unstable slopes, potential rock slides, and caves.

<sup>3</sup> Check with the Solicitor to ensure that the PMP includes all applicable Federal, State, and local laws and regulations.

<sup>4</sup> Due to confidentiality, the names and any detail regarding the PRPs should not be included in the PMP; however, a general statement regarding what has been accomplished to date regarding PRPs should be included.



A key issue to address in this section of the PMP is the identification of Federal and State-defined Applicable or Relevant and Appropriate Requirements (ARARs). An ARAR may be either a Federal requirement or any State-promulgated requirement that is legally applicable, or relevant and appropriate to the contaminant, location, or other site circumstances (e.g., NEPA, Endangered Species Act). If the BLM is not the lead agency, the PM and the assigned solicitor should work closely with the lead regulatory agency early in the process to determine what ARARs apply.<sup>5</sup> Regulatory involvement will vary from site to site.

### 3.1.5. *Organizational Structure*

The Organizational Structure section of the PMP describes how the BLM and other Federal and State agencies will interact and work together throughout the life of the project. In this section of the PMP, identify the appropriate organizations and individuals authorized to perform work consistent with their assigned responsibilities. Include the agency name, organizational element within the agency, and name of the individual. If the PM is responsible for providing funds to any of these individuals, also include the appropriate resource code for that funding.

### 3.1.6. *Statement of Work (SOW)*

This section of the PMP describes the specific activities that will be conducted to achieve the goals stated in the beginning of the PMP (see Section 3.1.1). Initially, the specific tasks may not be determined, and more general statements regarding tasks can be included (e.g., reduce or eliminate existing arsenic exposure to recreational users).

#### ***Why is the SOW Important?***

When projects that have gone poorly or have broken down are reviewed, we often find that the project SOW and goals were not clearly defined.

Clearly and completely define and document the SOW. The SOW is necessary for executing a contract. The PM should provide complete and concise technical information for the SOW to the contracting officer (CO). The CO provides the SOW to prospective contractors for bid or proposal preparation. The following is a generic example of an SOW for engineering support services. The PM should decide with input from the CO what level of detail is necessary for each specific SOW:

- ◆ **Statement of Services/General Information** – Provide general information about the following:
  - Background – Discuss the regulatory and the BLM’s requirements that drive the project, and answer the question “Why does the project exist?”
  - Location – Indicate site coordinates and the U.S. Geological Survey (USGS) Quadrangle Quarter Section location.
  - History – Provide a brief site history, including major changes and applicable land uses.
  - Current Status – Include compliance dates and indicate if the site is on the Federal National Priorities List (NPL).
  - Previous Site Work – Summarize previous work undertaken at the site and provide complete references for all existing site reports.

<sup>5</sup> The U.S. Coast Guard maintains authority over accidents involving spills of hazardous materials in marine waters within its jurisdiction. Therefore, offshore incidents should be coordinated with U.S. Coast Guard. Spill containment and cleanup, however, is generally the responsibility of the parties involved.

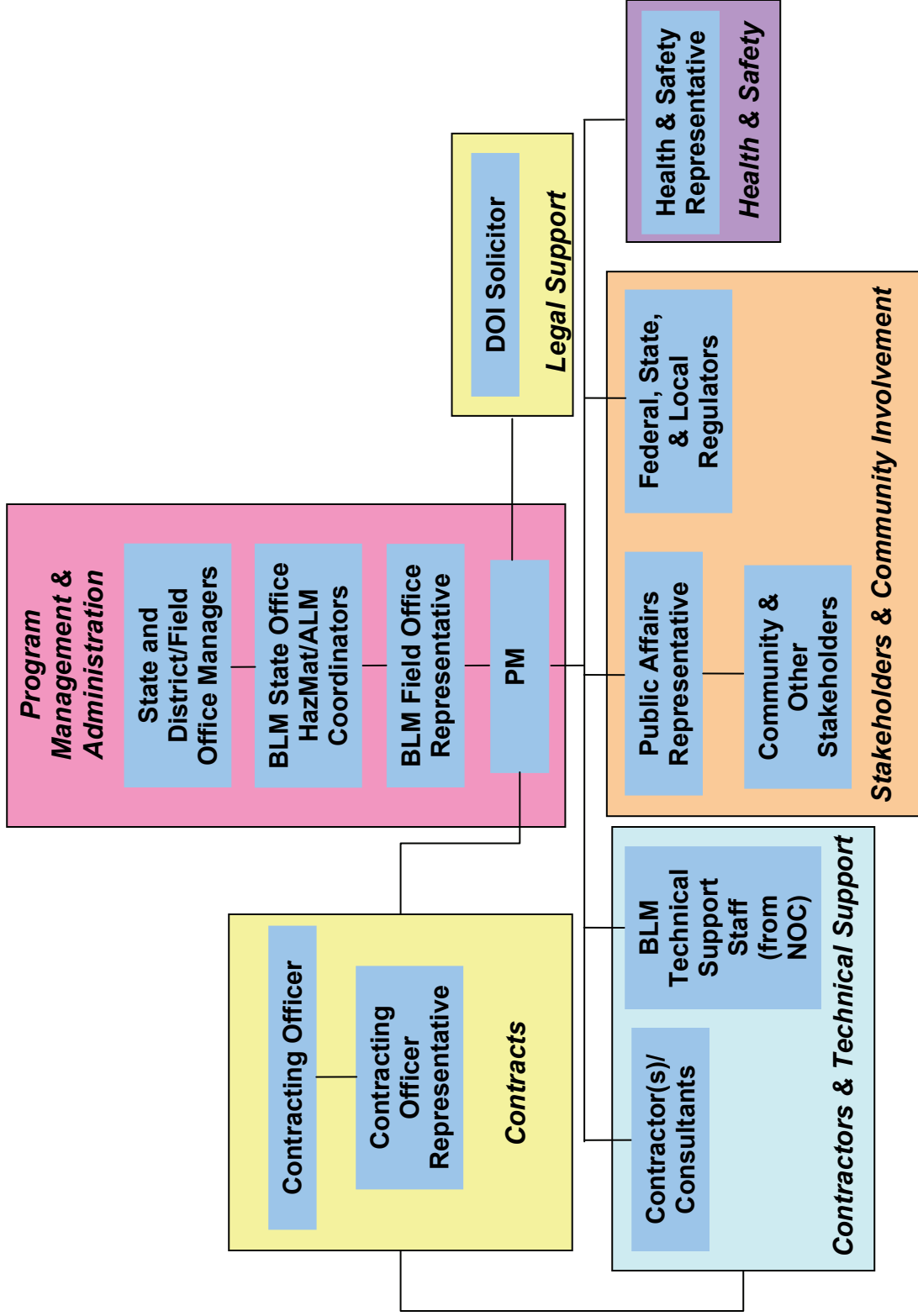
- ◆ **Objective** – State the objectives and goal of the SOW. For example *“The engineering consultant will provide the personnel, facilities, and materials required to analyze existing data, conduct site inspections, plan and conduct an Engineering Evaluation/Cost Analysis, etc. and all other general technical support needed until the objectives of the work described in the SOW are completed.”*
- ◆ **Site Description** – Provide a detailed site description or include it as an attachment to the SOW.
- ◆ **Scope** – Cover the general extent of the work the contractor will perform.
- ◆ **Detailed Description of Tasks** – Provide the specific instructions pertaining to the site work and management requirements, for example:
  - What the government will furnish/provide;
  - Data evaluation; and
  - Tasks required, including but not limited to, all tasks, deliverables, schedules, meetings, and report formats needed.
- ◆ **Deliverables and Schedule** – Provide specifics for the following for all project deliverables that are the contractor’s responsibility:
  - Deliverables required;
  - Method of delivery (e.g., e-mail, courier);
  - Schedule for delivery;
  - Quantities required;
  - Contractor’s responsibilities; and
  - Documentation format (e.g., printed or electronic).
- ◆ **Place and Period of Performance** – Specify where the work tasks are performed and the period of performance in hours, days, weeks, or months, as appropriate.
- ◆ **Special Considerations** – Discuss any security issues, the disclosure of information, and the confidentiality of written documents. Address meeting minutes, correspondence and monthly progress reports. The submittals section should discuss and describe the requirements for internal drafts, draft memos, final report, technical reports, monthly reports, points of contact, reviewers, and cost reporting.

### ***3.1.7. Project Team Identification and Responsibilities***

This section of the PMP includes a list of everyone participating in the project (i.e., the project team), team member roles, responsibilities, and contact information (i.e., address, phone, and fax). Initially, this list may contain only the Project Management Team (see Figure 3).

A multi-disciplinary project team is necessary to execute a site environmental cleanup, natural resource restoration, or physical safety hazard remediation project and may include the following members:

Figure 3: Typical Project Team Structure



- ◆ State and District/Field Office Managers;
- ◆ BLM State Office HazMat/AML Coordinators;
- ◆ BLM Field Office Representative;
- ◆ PM;
- ◆ DOI Solicitor;
- ◆ Public Affairs Representative;
- ◆ Federal, State and/or Local Regulators;
- ◆ Community and Other Stakeholders;
- ◆ Contracting Officer's Representative (COR);
- ◆ BLM Technical Support Staff from the National Operations Center (NOC);
- ◆ Contractor(s)/Consultant(s); and
- ◆ Health and Safety Representative.

Each of the BLM's offices may manage environmental cleanup, natural resource restoration, and physical safety hazard remediation projects differently, depending on site complexity and resources or expertise available. However, the tasks necessary to execute the projects are virtually the same, and the project team responsibilities can be grouped into the following categories:

- ◆ Project Management and Administration – see Section 3.1.7.1;
- ◆ Legal Support – see Section 3.1.7.2;
- ◆ Stakeholders and Partnerships – see Section 3.1.7.3;
- ◆ Contractors and Technical Support – see Section 3.1.7.4; and
- ◆ Health and Safety – see Section 3.1.7.5.

For large projects, there may be one or more individuals performing the various responsibilities in each of the above categories. For smaller projects, a single individual may fulfill the responsibilities in one or more categories.

### **3.1.7.1. Project Management and Administration**

The PM is responsible for coordinating programmatic-related aspects of the project (e.g., funding, reporting) with the State HazMat or AML Program. The State and District/Field Office Managers have some limited responsibilities related to specific project management.

#### ***Communicating with Washington***

Providing information to the BLM's Washington Office on current projects supports how and when funds are obtained for future work.

#### **State and District/Field Office Managers**

For those projects where project management is required, State and District/Field Office Managers responsible for the site, in consultation with the appropriate program lead(s)/coordinator(s), designate a qualified PM. The PM will form a Project Management Team that will be involved, as appropriate, throughout the life of the project. In addition to designating the PM, the State and District/Field Office Managers are responsible for making training available to all potential PMs, and providing the necessary tools and resources per the NCP.<sup>6</sup>

<sup>6</sup> Section 300.120(g)(1) of the NCP specifies that the lead agency should provide training to Project Managers and other response personnel to fulfill their responsibilities under the NCP.

**PM**

The PM is the team leader responsible for planning, organizing, budgeting, scheduling, coordinating, directing, and controlling the combined efforts of staff, contract services, and PRPs to accomplish project objectives. The PM should be involved in all phases of the project from problem definition through project design, implementation, and closeout. The PM must coordinate with the Washington Office and State and District/Field Office Managers through quarterly updates of the PMP and mid-year status updates.

The PM can move sites toward closeout by directing early, cost-effective cleanup, restoration, and/or remediation activities where possible and forging partnerships with stakeholders to achieve mutual cleanup/restoration/remediation goals.

Although specific PM responsibilities may vary by State and District/Field Office, the PM's role is defined by the following:

- ◆ Laws and regulations;
- ◆ Regulatory guidelines and criteria;
- ◆ Regulatory agreements; and
- ◆ BLM/DOI guidance documents.

To ensure that PMs have the necessary technical and other skills to manage environmental projects, the BLM recommends that PMs possess or can obtain a basic knowledge and understanding of the following:

- ◆ Project management principles;
- ◆ Project management skills;
- ◆ Leadership qualities; and
- ◆ Technical competence.

These capabilities may be achieved through a combination of education, training, and experience, including, but not limited to a 4-year degree in a science or engineering field from an accredited university and/or 5-years of experience in hazardous waste cleanups.<sup>7</sup>

***Project Management Principles***

Each PM should understand basic project management principles and the application of these principles for the successful completion of a project. Technical competence alone is insufficient because a large portion of the PM's job is comprised of non-technical components. The PM must perform his or her management functions with a foundation of basic project management principles, supplemented by a common-sense approach based on experience and effective use of scheduling and budgeting systems.

***Basic Project Management Skills***

A successful PM exhibits certain characteristics and conducts certain activities, including the following:

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<sup>7</sup> The guidelines for PM experience and education are based on EPA's All Appropriate Inquiry Rule definition of "environmental professional" (40 CFR Part 312).

- ◆ Having a concern about quality and performance;
- ◆ Possessing leadership ability;
- ◆ Anticipating possible project constraints;
- ◆ Staffing the project with quality people;
- ◆ Communicating frequently and effectively;
- ◆ Having effective work systems;
- ◆ Documenting the project decision-making process;
- ◆ Delegating authority when possible;
- ◆ Having Occupational Safety and Health Administration (OSHA) knowledge and risk management skills; and
- ◆ Being sensitive to interpersonal and interorganizational relationships.

#### ***Inexperienced PMs***

One of the best training methods for an inexperienced PM is to seek an apprentice relationship with an experienced PM, particularly before assuming first time responsibility for a project.

#### Leadership

A PM's personal attributes are as important as project management systems and procedures. The PM must develop a project team and lead, motivate, and inspire that team to give their best efforts to the project. Other PM leadership activities include the following:

- ◆ Setting a project's direction;
- ◆ Establishing a vision; and
- ◆ Developing and implementing strategies to achieve the project goals.

#### Technical Competence

Ideally, the PM should be competent in a discipline related to the project. A PM familiar with the technical aspects of a project should be equipped to make decisions regarding the project scope, schedule, and budget issues. Technically inexperienced PMs should select others to assist in technical aspects of project activities.

#### **3.1.7.2. Legal Support**

Although the PM's chain of command maintains lead project authority, the DOI Solicitor provides legal assistance, information, and recommendations in support of environmental cleanup, resource restoration, and physical safety hazard remediation activities. The DOI Solicitor has the following responsibilities, as necessary, related to project management:

- ◆ Keeping abreast of and interpreting current Federal, State, and local environmental cleanup laws and regulations, including ARARs;
- ◆ Reviewing all work to ensure compliance with NCP, CERCLA, NEPA, and their supporting regulations;
- ◆ Ensuring compliance with the terms of cleanup and other regulatory agreements;
- ◆ Participating in dispute resolution;
- ◆ Conducting regulatory correspondence;
- ◆ Negotiating and obtaining off-site property access;
- ◆ Identifying and pursuing affirmative cost-recovery/cost-sharing actions against PRPs; and
- ◆ Reviewing the project records to ensure appropriate documentation is included to comply with legal and departmental requirements.

The PM ensures that a Case File and, if necessary, an Administrative Record are prepared and maintained for each site. The Case File contains all documents relevant to response actions taken at a site; in contrast, the Administrative Record File is a public record required by law.

### **3.1.7.3. *Stakeholders and Partnerships***

One critical task of the PM is to coordinate site activities with stakeholders, including Tribal Nations, State and Federal agencies, and interested members of the local community. Another critical task of a PM is to bring together these key individuals to discuss and resolve technical, operational, and administrative issues at the site.

During the initiation and development phase, the PM can initiate stakeholder activities by identifying potential stakeholders and concerned agencies and developing an initial communications strategy. As the project develops, stakeholder and community involvement activities may become more complex. A public affairs representative should assist the PM with community involvement issues related to environmental response actions. Refer to the AML, NEPA, NRDAR, and Response Actions Handbooks for specific guidance on community involvement requirements.

Maintaining the trust of the local public and regulators is crucial to ensuring a successful project. Informal public open houses or workshops provide low-key but effective ways to communicate with stakeholders.

With limited funding and personnel, the BLM frequently must form partnerships with others to achieve its strategic goals. Therefore, partnering with Federal, State, local, and Tribal governments is a common practice. Additionally, to facilitate the efficient and effective use of resources, HazMat and AML personnel must coordinate their activities with other programs and offices within the BLM.

Partnerships help the BLM achieve a number of objectives in its planning process:

- ◆ Gain early and consistent involvement of stakeholders;
- ◆ Incorporate local knowledge of economic, social, and environmental conditions, as well as State and local land use requirements;
- ◆ Address intergovernmental issues;
- ◆ Avoid duplication of effort;
- ◆ Enhance local credibility of the planning review process;
- ◆ Encourage partnership and stakeholder support for planning decisions;
- ◆ Seek cost avoidance and cost recovery;
- ◆ Find practical cleanup solutions on mixed ownership sites; and
- ◆ Build relationships of trust and cooperation.

### 3.1.7.4. *Contractors and Technical Support*

Contractors can be used for a variety of activities, including but not limited to the following:

- ◆ Conducting investigations and environmental cleanups, natural resource restoration, and physical safety hazard remediations;
- ◆ Interpreting environmental data and reviewing technical documentation;
- ◆ Designing and installing remediation and monitoring systems; and
- ◆ Coordinating community involvement activities and meeting community involvement requirements.

#### **Example Contract Language**

- Corporate Experience—e.g., *Offerors will be evaluated on relevant prior experience. As a minimum, the offeror must have at least three years of corporate experience in performing similar work.*
- Qualifications of Key Contractor Personnel—e.g., *Offerors will be evaluated on the experience levels of the following Key Personnel: lead biologist, biologist, and botanist. The lead biologist must have at least five years of experience in performing similar studies, and a PhD from an accredited university.*

The PM, or whomever the PM delegates, will partner with the BLM or other CO assigned to support the project. There are three phases of the contracting process that require PM involvement: 1) pre-award planning, 2) source selection, and 3) post-award monitoring.

#### **Pre-Award Planning**

The following are the key responsibilities of the PM (or PM delegate) in pre-award planning:

- ◆ Developing a detailed SOW/performance work statement that will be incorporated into the resultant contract. The emphasis should be on performance-based work statements—i.e., telling the contractor what results/outcomes are needed, not how to achieve the desired outcome(s).
- ◆ Identifying any interim/final reporting requirements that the contractor will be required to submit as the contract progresses.
- ◆ Developing technical evaluation factors that will help the evaluation team (including the PM—or PM delegate—and the contracting office) select the best contractor.
- ◆ Developing an Independent Government Estimate for the contract. This should be based on an estimate of the number of labor hours and other costs that will be required to perform the work. The contracting office can provide hourly labor rates for different job classifications, based on Department of Labor statistics.

#### **Contracting Helpful Hints**

- During the study/characterization phase, use an engineering/consulting or services contract.
- For cleanup work, use a remediation service or construction contract.
- Remediation workers who do actual construction work are subject to the Davis-Bacon Act, which regulates wages and benefits.
- Workers on services contracts are subject to the Services Contract Act, which also determines wages and benefits.
- See the Department of Labor Website for additional information on the above acts regarding wages and benefits <http://www.dol.gov/>.
- Plan and allocate contingency funds to accommodate minor changes in the implementation phase.

The PM can sometimes obtain contracting services from their local or State BLM office or the PM may choose to utilize the personnel resources of the NOC or another governmental agency. The



NOC Division of Resource Services maintains the National HazMat/AML Contract in support of ongoing response-related work. NOC staff can provide SOWs, cost estimates, and Technical Proposal Evaluation Committee assistance.

The PM should ensure that all contract support is technically sound, cost-efficient and conforms to the BLM's policy and acquisition regulations. See the BLM Manual section *Acquisition* (MS-1510) [http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_manual.Par.98751.File.dat/1510.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_manual.Par.98751.File.dat/1510.pdf). The following are examples of some of the available contracting support options:

- ◆ BLM NOC (Denver)
- ◆ USGS
- ◆ Bureau of Reclamation
- ◆ Army Corps of Engineers

The Economy Act and Federal Acquisition Regulations (FAR) permit the BLM to order contract and technical services from other Federal agencies. However, regulatory requirements mandate that the following conditions and requirements be met prior to ordering these services:

- ◆ The agency must have capabilities or expertise not available within the BLM that would make it qualified to enter into or administer contracts;
- ◆ The BLM requesting agency has filed an approved Determination and Finding to document considerations of contract administration fees, procedures, and expertise; and
- ◆ The BLM requesting agency has entered into an Intergovernmental Order (IGO) or memorandum of understanding (MOU) with the non-DOI agency to provide a framework for issuing project orders. The IGO or MOU should cover funding, contract guidelines, management and oversight, progress reporting, and technical support.

### Source Selection

The technical evaluation of proposals typically is performed by representatives from the Project Management Team who are appointed by the CO as part of a Technical Proposal Evaluation Committee and may evaluate the following technical factors:

- ◆ Corporate or individual experience;
- ◆ Quality of technical proposals submitted;
- ◆ Past performance; and
- ◆ Other factors.

The contracting office may evaluate price and other non-technical factors. Ultimately, a CO will make a “best value” decision based on factors including technical merit, past performance, and price.<sup>8</sup>

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<sup>8</sup> The BLM uses IGOs to reimburse other Federal agencies outside the DOI for goods or services provided to the BLM. For more information see the Federal Acquisition Regulations, 48 CFR 17.5; the DOI Acquisition Regulation System, Part 1417; and BLM Manual Section 1510, Acquisition, Part 1510-17.

## Post-award Monitoring

After contract award, the CO may request that the PM nominate individual(s) from the Project Management Team to monitor contractor performance and/or act as the lead technical contact with the contractor. These individuals may be appointed by the CO as either Project Inspectors (PIs) or CORs, depending on their duties. The appointment letter issued by the CO will spell out specific duties. Note that PIs and CORs have specific initial and recurring training requirements.<sup>9</sup>

### 3.1.7.5. *Health and Safety*

The BLM's Health and Safety and HMRR Manuals (MS-1112-1 and MS-1703, respectively) describe the specific health and safety responsibilities for safety and health specialists, COs, and CORs. The CO and COR/PI are responsible for enforcing OSHA standards in the same manner as other contract requirements. The PM should maintain a close relationship with the COR/PI to ensure that contractor operations safeguard the public and government personnel and property. The designated site safety manager is responsible for the following:

- ◆ Developing, implementing, and monitoring compliance with a site Health and Safety Plan (HASP—see Section 3.2.1);
- ◆ Developing a contingency and emergency response plan; and
- ◆ Ensuring compliance with all of the BLM's safety policies.

### 3.1.8. *Schedule*

After a project is authorized, the PM should develop a detailed schedule and modify it as often as necessary. The primary reason for developing a schedule is to balance the requirements of time, cost, and risk. Schedules also help in evaluating alternatives, preventing communication problems, and controlling the project. The schedule also serves to provide management with up-to-date information on the project status. The schedule includes key dates (e.g., due dates, anticipated start and completion dates), and also specific dates and details for tasks that will be conducted during the current and/or upcoming fiscal year. It is acceptable to provide less detail and approximate dates for tasks that will begin after the current and/or upcoming fiscal year.

Consider the following guidelines when developing a project schedule:

- ◆ **Clearly identify all work items and dates.**
- ◆ **Connect dependent tasks through a system that links the work tasks together.** This process requires an understanding of those items that must be completed before another task can begin.
- ◆ **Identify time constraints.** If necessary, also identify restraints on resources.
- ◆ **Develop a project management summary schedule.** The summary schedule should encompass major partner and management requirements and identify milestones.

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<sup>9</sup> For more information regarding COR requirements see the *DOI Contracting Officer's Representative Program Manual* <http://www.doi.gov/pam/CORManual.doc>.

### 3.1.9. Reporting Requirements

This section of the PMP lists the required progress and other reports to satisfy funding requirements and applicable regulatory reporting requirements—the due date of each document should be included in the schedule. The PM is responsible for ensuring that all required documentation is prepared accurately and submitted on time. For detailed descriptions and instructions for preparing and submitting reports under CERCLA, NEPA, and NRDAR, please reference the respective handbooks.<sup>10</sup>

The PM should include reporting dates and requirements (e.g., quarterly or annual progress reports) in the schedule. Early on in the process, the PM should determine what reports and level of detail are required and describe the required content, format, and responsibilities in the PMP. Additionally, the PM should keep management informed in the following manner:

- ◆ Notify management before notifying the NRC of a release of a hazardous substance;
- ◆ Brief management regarding any orders, violations, or notices received for the project/site;
- ◆ Submit funding requests to management for review before submitting to the Washington Office; and
- ◆ Provide quarterly PMP updates and mid-year status updates to the Washington Office and State and District/Field Office Manager(s).

### 3.1.10. Risks

This section of the PMP describes typical risks often encountered at similar sites, as well as risks specific to the individual project. Risks can include the following issues:

- ◆ Change in PM
- ◆ Community Relations
- ◆ Equipment
- ◆ Funding
- ◆ Health and Safety
- ◆ Off-site Disposal
- ◆ Permits
- ◆ Schedule
- ◆ Site Security
- ◆ Technical Problems
- ◆ Weather

Conduct a risk review of the project to identify possible impediments to project completion. Assess each item based on its probability and severity to determine the items that pose the highest level of risk. Develop countermeasures to address the highest risk issues first.

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<sup>10</sup> Handbooks are located on the BLM Website at [http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/blm\\_handbooks.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/blm_handbooks.html).

Include in the PMP an estimate of the costs in terms of funds and/or delays if the potential risk becomes an actual problem, actions that will be taken to prevent the problem from occurring, and what will be done in response if the problem does occur.

### 3.1.11. *Quality Control/Value Engineering/Peer Review*

This section of the PMP describes the general quality control processes, such as reviewing project documents and data. A more detailed Quality Assurance Project Plan (QAPP) is required for ensuring the quality of sample collection, analysis, and data interpretation.

This section of the PMP should describe if value engineering (VE) is required and what the process entails. The VE process is typically done during the design or selection of the response action. If a VE is not going to be done for the site, an independent peer review should be made on the cleanup/restoration/remediation selection. Knowledgeable personnel from the PM's organization, other governmental agencies, or an independent contractor could conduct the review.

#### **Value Engineering**

An organized effort to analyze functions of construction projects, systems, equipment, facilities, services and investigations.

For additional information on VE:

- DOI Manual (369 DM1) [http://www.usbr.gov/pmts/valuprog/law\\_369-1.html](http://www.usbr.gov/pmts/valuprog/law_369-1.html)
- Remedial Design/Remedial Action Handbook ,EPA 540/R-95/059  
<http://www.epa.gov/superfund/cleanup/rdrabook.htm>

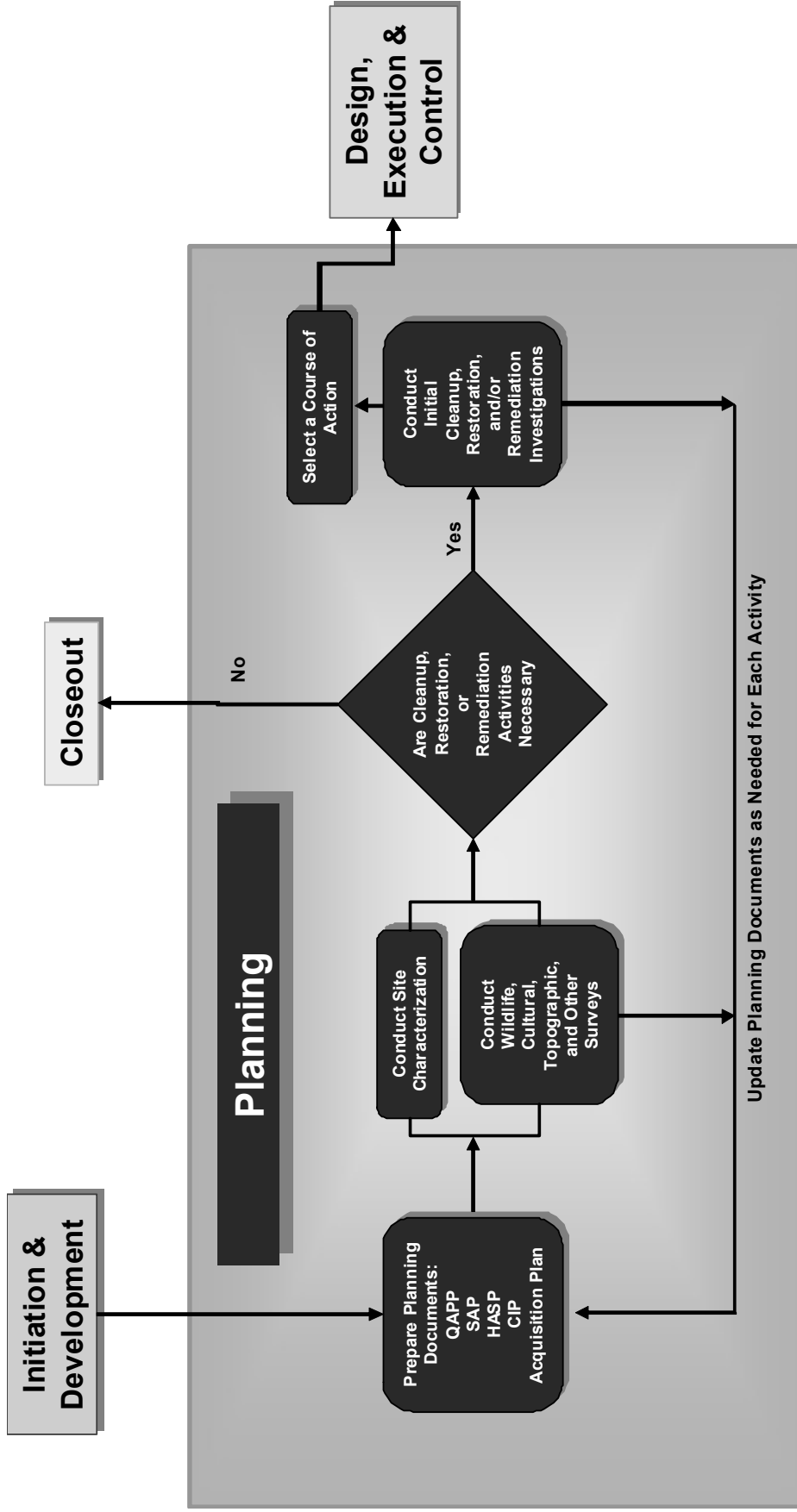
## 3.2. Planning

Planning is the most basic of all the PM's functions, and reduces the chance of implementation problems. During the Planning Phase (see Figure 4), the PM and project team use the project plans and risk management to support investigations and to update the planning documents that will be used during response.

For BLM's medium to long-term or complex environmental cleanup, natural resource restoration, and physical safety hazard remediation projects, the project-management planning phase involves the following activities:

- ◆ Preparation of Planning Documents – see Section 3.2.1;
- ◆ Site Investigation(s) – see Section 3.2.2; and
- ◆ Selecting a Course of Action– see Section 3.2.3.

Figure 4: Planning Phase



### 3.2.1. Preparation of Planning Documents

The PM develops the following documents:

**Work Plan** documents the decision and evaluation made during the planning phase and presents anticipated future tasks. It defines the scope and objectives of the site activities, including introduction, site background and physical setting, initial evaluation, and work plan rationale and tasks. It also serves as a valuable tool for assigning responsibilities and setting the project's schedule and cost.

#### Quality Assurance Project Plan

**(QAPP)** is a formal document describing in detail the necessary activities that must be implemented to ensure that the results of the work performed will

satisfy the stated performance criteria and that the data and subsequent analyses are of sufficient quantity and quality to represent the conditions at the site accurately. The QAPP should address quality throughout the entire project from planning, through implementation, to monitoring.

#### QA/QC References

- ANSI/ASQC E4-1994: *Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs*  
<http://www.asq.org/index.html>
- EPA - links to various quality assurance information (including example QAPPs)  
<http://www.epa.gov/fedfac/documents/qualityassurance.htm>  
<http://www.epa.gov/QUALITY/qapps.html>
- *The Uniform Federal Policy for Implementing Environmental Quality Systems (UFP-QS)* (EPA-505-B-04-900A), which is based on ANSI/ASQC E4-1994  
[http://www.epa.gov/fedfac/pdf/ufp\\_qapp\\_v1\\_0305.pdf](http://www.epa.gov/fedfac/pdf/ufp_qapp_v1_0305.pdf)

**Sampling and Analysis Plan (SAP)** is a site-specific document that provides the procedural and analytical requirements for projects involving the collection of water, soil, sediment, or biological samples taken to characterize areas of potential environmental contamination. Standard operating procedures (SOPs) to be used during the investigations should be included with the SAP (e.g., as an appendix). The SOPs describe, in item-by-item detail, the exact steps to be followed for each sampling procedure. Included in the SOPs are calibration and maintenance requirements for equipment to be used. Manufacturer's recommendations and usage manuals can serve as part of the individual SOPs.

#### Sampling and Analysis References

- *Hazardous Waste Site Sampling Basics* (BLM Technical Note 414, BLM/ST/ST-04/001+1703)  
<http://www.blm.gov/nstc/library/pdf/HazWaste414.pdf>
- *Sampling and Analysis Plan (SAP) Guidance and Template* (EPA)  
[http://www.epa.gov/region09/qa/pdfs/sap\\_ot6\\_pvt\\_v2.pdf](http://www.epa.gov/region09/qa/pdfs/sap_ot6_pvt_v2.pdf)

**Community Involvement Plan (CIP)** is a site-specific document that guides the BLM's community involvement efforts during a site cleanup, restoration, and/or remediation. The CIP describes site activities to the community by discussing past events and current concerns. The CIP helps the PM

plan how to be proactive early on in the process to enhance community acceptance of the proposed course of action. The PM should not wait until the final design to involve the community.

#### **Community Involvement References**

- Superfund Community Involvement Handbook (EPA)  
[http://www.epa.gov/superfund/community/cag/pdfs/ci\\_handbook.pdf](http://www.epa.gov/superfund/community/cag/pdfs/ci_handbook.pdf)
- Superfund Community Involvement Program Fact Sheet (EPA)  
[http://www.epa.gov/superfund/students/class\\_act/haz-ed/ff10.pdf](http://www.epa.gov/superfund/students/class_act/haz-ed/ff10.pdf)
- Superfund Community Involvement Toolkit (EPA)  
<http://www.epa.gov/superfund/community/toolkit.htm>

#### **Health and Safety Plan (HASP)**

helps ensure the health and safety of all on-site personnel and that all OSHA and the BLM's health and safety regulations and directives are followed while conducting all on-site activities. The HASP should include a description of potential or actual site hazards and the use of safe procedures and personal protective

#### **Health and Safety References**

- OSHA <http://www.osha.gov/>
- Occupational Safety And Health Standards  
[http://www.access.gpo.gov/nara/cfr/waisidx\\_06/29cfr1910\\_06.html](http://www.access.gpo.gov/nara/cfr/waisidx_06/29cfr1910_06.html)
- Occupational Safety and Health Programs for Federal Employees (Executive Order 12196)  
<https://www.denix.osd.mil/denix/Public/Legislation/EO/note27.html>
- Federal Agency Safety Programs and Responsibilities (PL 91-596) (Section 19) [http://www.usbr.gov/ssle/safety/pub\\_law.htm](http://www.usbr.gov/ssle/safety/pub_law.htm)

equipment (PPE) as a way to address these potential hazards. The PM or designated Health and Safety Officer prepares the HASP prior to visiting any hazardous waste or abandoned mine site. Reviewing existing site information prior to visiting the site can provide information on potential health and safety issues that may be encountered at the site (e.g., potential toxic chemicals still on site, location of wastes). After the initial site visit, the HASP will likely need to be revised or a new plan prepared to include any additional health and safety concerns noted during the site visit and to support the site sampling activities.

**Acquisition Plan** preparation is required by the FAR for individual contract procurements. The acquisition plan provides a comprehensive and concise picture of what is being procured, how the proposed acquisition will take place, and documents why the type or manner of procurement is the most appropriate for the acquisition planned.

### **3.2.2. Site Investigation(s)**

The PM uses the planning documents to conduct site investigation(s) during the planning phase. These investigations may include site characterization; wildlife, cultural, topographic, and other surveys; and initial remedial or restoration investigations.

**Site Characterization** involves assessing imminent and long-term safety and environmental hazards to characterize the concentration and extent of contamination. During site assessments, the BLM gathers information about safety and health hazards including physical safety hazards, contaminants of concern, exposure pathways, resource degradation, and potential receptors. The assessment process starts with a review of all available existing information and progresses to an on-site visit to

identify safety and health concerns and collect environmental samples, if necessary. Based on the toxicity of the affected pathways and the proximity of human and environmental receptors, the BLM conducts a more detailed site characterization and prepares a report of the results.

The PM is responsible for the following during the site characterization phase:

- ◆ Evaluate the site for any immediate health threat, including physical safety hazards, and plan an appropriate response;
- ◆ Acquire funding for the contract and obtain the release of funds so that services can be procured;
- ◆ Prepare an independent government cost estimate as part of the procurement process; and
- ◆ Brief the BLM State Office about the status, progress, goals, and time frame for each project.

#### **General Site Characterization References**

- BLM Information Bulletin No. RS-2000-021 (Nov 1999), *Site Characterization for Abandoned Mine/Mill Sites*, Modification 1  
[http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_information.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_information.html)
- EPA's *Preliminary Assessment guidance documents*  
<http://www.epa.gov/superfund/sites/npl/hrsres/#PA%20Guidance>
- *CERCLA Response Actions Handbook* (H-1703-1, 2001)

**Wildlife, Cultural, Topographic, and Other Surveys** help determine the potential impact the site may have on the surrounding area and any issues (e.g., bats) that should be addressed as a result of mitigating the site risk. For more information on the various surveys that may be conducted during site characterization, see the *AML Program Policy Handbook* (H-3720-1).

**Initial Cleanup, Restoration, and/or Remediation Investigations** are conducted after the site characterization to determine the relative risk from the site; evaluate technologies and alternatives for cleanup, restoration, and/or remediation; and determine what actions need to be conducted at the site. During this phase, the PM has the following responsibilities, as needed or required:

- ◆ Identify the study area;
- ◆ Estimate preliminary cleanup, restoration, and/or remediation alternatives and identify authorities with jurisdiction;
- ◆ Collect additional data if needed;
- ◆ Identify likely courses of action and specific areas of concern at the site;
- ◆ Identify the need for, and set priorities for time critical activities (i.e., CERCLA activities needed to address imminent or immediate health and safety threats) and continued monitoring requirements while conducting studies;
- ◆ Establish a Technical Review Committee with the BLM, U.S. Environmental Protection Agency (EPA), State and local agencies, as well as the local community; and
- ◆ Initiate a Case File.



### ***3.2.3. Selecting a Course of Action***

The information obtained during the site investigations is used in selecting the course of action to address identified issues at environmental cleanup, natural resource restoration, and physical safety hazard remediation sites. The PM is responsible for the following activities:

- ◆ Preparing appropriate decision document(s); and
- ◆ Soliciting and responding to the reviews and/or comments of all stakeholders and agencies, as necessary or as specified in the CIP.

The decision documents typically describe the course of action selection process, rationale, and decision, and provide an action/implementation plan that includes the following:

- ◆ Description of the technical parameters for the selected course of action;
- ◆ Cleanup/performance goals; and
- ◆ Standards for use during the design, execution, and control stage of the project.

## **3.3. Design, Execution and Control**

During this phase (see Figure 5) of project management, the PM and Project Management Team are responsible for the following activities:

- ◆ Designing the Selected Course of Action – see Section 3.3.1, including developing the cost estimate;
- ◆ Implementing the Design – see Section 3.3.2, including preparing and obtaining approval of the final design, obtaining permits and authorization, beginning construction activities, and executing construction contracts; and
- ◆ Monitoring and Controlling Project Parameters – see Section 3.3.3, including periodically reporting results and initiating the project change process as necessary.

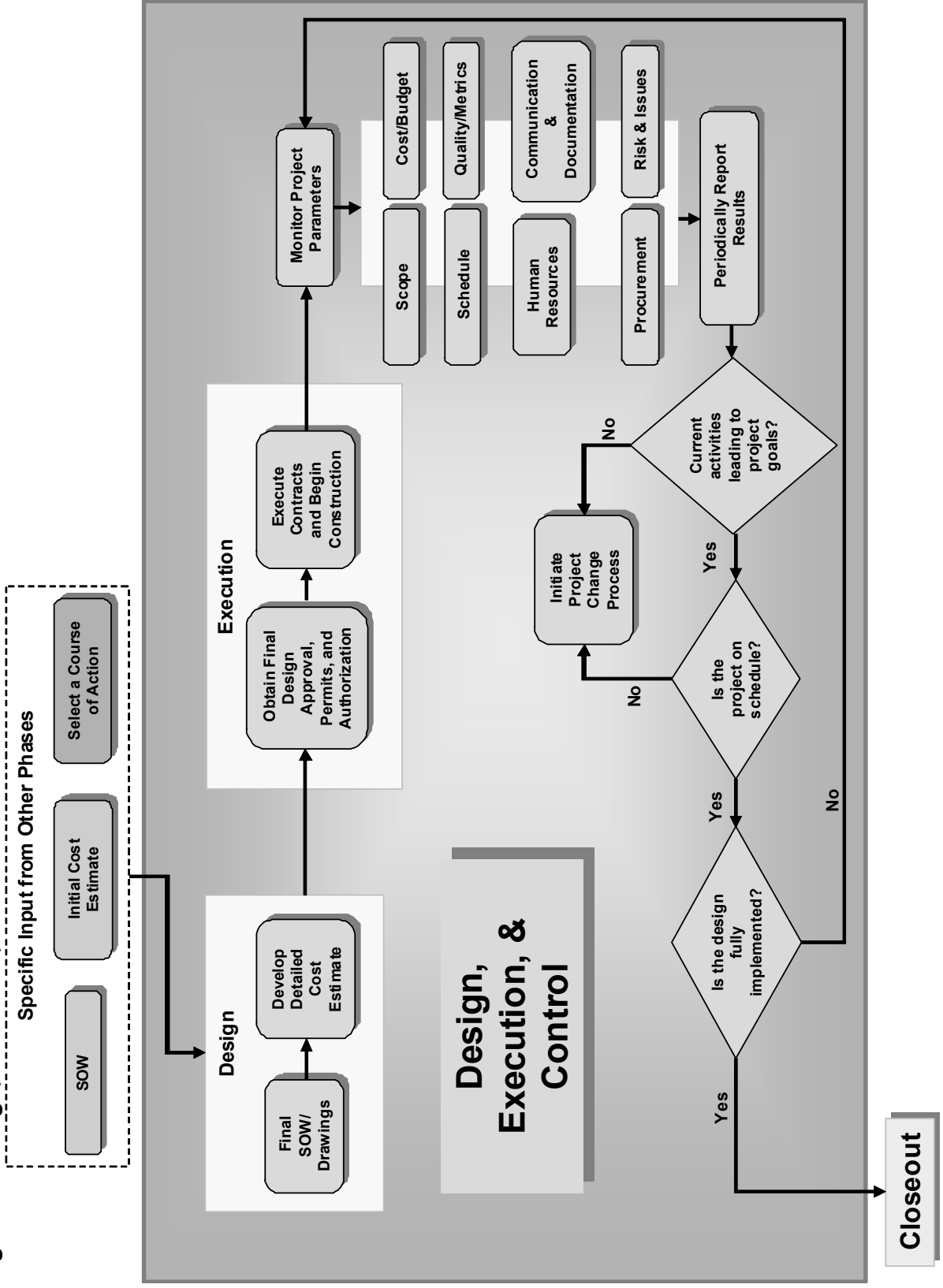
### ***3.3.1. Designing the Selected Course of Action***

The PM specifies all the work that the site remediation/construction contractor must do (see Section 3.1.7.4 for information on contracting). A written specification or SOW providing information about the site work, final detailed construction drawings, and a cost estimate are required (see Section 3.1.6 for information on preparing a SOW). During this phase, the PM's responsibilities shift from studies to response activities. Because of the more traditional engineering aspects of the design work, the PM should enlist the technical advice/input of engineers.

#### ***PM Design Inputs***

- Identify and document design inputs.
- Ensure design inputs are selected by the appropriate/qualified personnel (may not be the PM).
- Specify and approve design inputs on a timely basis and to the level of detail necessary and appropriate.
- Identify, approve, document, and control changes from the approved design and reasons for the changes.

Figure 5: Design, Execution, and Control Phase



### Develop a Detailed Cost Estimate

The PM should develop cost estimates that cover the entire site cleanup effort from beginning to end and should be reconciled with fiscal year funding. Budgeting involves making a professional judgment about expected future requirements, determining when those requirements will be accomplished, and estimating the costs to complete those requirements. Many tools and resources are available to help develop, define, and budget individual project requirements. These resources include the combined experience of the project team, the experience of other PMs, the NOC, and various guidance documents, databases, and electronic bulletin boards. The following are two specific examples of tools available to the PM for estimating project costs:

#### **Cost Estimating References**

- BLM Cost Estimating Guide Available from the NOC
- RACER information available at <http://www.p2pays.org/ref/01/00047/4-02.htm>
- RS Means cost estimating documents available for purchase at <http://www.rsmeans.com/>

- ◆ **The BLM Cost Estimating Guide** provides instructions for preparing estimates for environmental projects, including a step-by-step process for assembling the various estimate components. The cost data is derived from the RS Means Building and Equipment Rental sections. RS Means also has an annual environmental remediation cost data reference set that is valuable in determining costs. Obtain further information on the BLM Cost Estimating Guide from the NOC.
- ◆ **RACER** (Remedial Action Cost Engineering and Requirements) is a parametric cost modeling software system based upon generic engineering solutions that were derived from historical project information. When an estimate is prepared under RACER, the generic solutions are tailored by adding site-specific parameters and project-specific conditions. RACER has the capability to perform “what-if” cost comparisons. A variety of options and solutions can be entered into the system to come up with the difference in cost. The estimates provide current capitol and long-term costs. Obtain further information on RACER from the Washington Office.

### **3.3.2. Implementing the Design**

At this stage of the project, the PM ensures the implementation of an effective design that is protective of human health and the environment, remediates physical safety hazards, or otherwise restores the site to the previously selected goals. During implementation, the PM typically obtains final design approval, required permits and authorization, and executes the construction contract.

#### **Final Design Approval, Permitting, and Authorization**

Specific PM activities will depend on the type of site (i.e., environmental cleanup, resource restoration, or physical safety hazard remediation), the BLM’s role (e.g., lead, partnering, or PRP monitoring), and the extent of cleanup, restoration, and/or remediation required at the site; however, the PM will likely have to conduct and/or complete some or all of the following typical general activities during implementation:

- ◆ Ensure funds are approved and available for at least the current fiscal year to prevent work stoppage;
- ◆ Obtain all required authorization (e.g., notice to proceed; State and/or District/Field office approval);

- ◆ Conduct implementation phase community involvement activities, as necessary (e.g., notify community of contractor selection);
- ◆ Notify local and State authorities of plans and obtain necessary work permits, if required;
- ◆ Ensure all parties (e.g., State and local partners, PRPs, other Federal agencies) understand and agree to their responsibilities and roles during construction;
- ◆ Arrange for site security, post signs, and erect physical barriers (e.g., fences), as necessary; and
- ◆ Conduct final inspection and acceptance of contractor project plan, design specifications, schedule, etc. in conjunction with the COR and PI.

### **Contract Execution and Construction**

The CO conducts the solicitation of the construction contract (see Section 3.1.7.4 for additional information on contracting) using the detailed design plans and specifications package prepared in the design phase (see Section 3.3.1), and can post the solicitation to FedBizOpps.gov.<sup>11</sup> The PM or PI is on site during project construction and start-up to conduct the following activities:

- ◆ Ensure compliance with the design;
- ◆ Witness and accept documentation of goods, materials, and equipment;
- ◆ Inspect completed and ongoing work (e.g., each segment, important check points); and
- ◆ Otherwise monitor the contract for compliance with its stated objectives and project parameters.

### **3.3.3. Monitoring and Controlling Project Parameters**

Throughout the project, the PM monitors and measures progress toward the objectives, evaluates what remains to be done, and takes the corrective actions to allow the team to meet its objectives. These activities control the project parameters to ensure compliance with criteria established during the development and planning phases. To ensure the course of action is implemented correctly, on time, and within budget, the PM must monitor the following project parameters:

- ◆ Scope – monitor contractor activities and stop those activities outside of the agreed upon scope or alter contracts to include revised scope;
- ◆ Cost/Budget – monitor the actual expenses against the proposed costs and adjust activities or budget as soon as possible once expected and actual costs significantly deviate;
- ◆ Schedule – monitor the baseline schedule and critical path against current progress and alert appropriate stakeholders if critical path schedule is delayed;
- ◆ Quality Assurance – monitor analytical results against QAPP and have field samples reanalyzed if quality control samples are outside of QC parameters;
- ◆ Personnel – modify number and type of personnel as needed to help maintain budget or schedule;

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<sup>11</sup> FedBizOpps.gov (<http://www.fedbizopps.gov/>) is the single government point-of-entry for Federal government procurement opportunities exceeding \$25,000. Government buyers are able to publicize their business opportunities by posting information directly to FedBizOpps via the Internet. Through one portal—FedBizOpps—commercial vendors seeking Federal markets for their products and services can search, monitor and retrieve opportunities solicited by the entire Federal contracting community.

- ◆ Communication and Documentation – ensure documents are distributed to appropriate stakeholders and hold additional meetings if issues arise;
- ◆ Procurement – monitor deliverables against specifications and requirements detailed in the SOW and have contractor modify deliverables as needed; and
- ◆ Risks and Issues – monitor risks previously identified.

### Periodically Report Results

During the implementation phase, the PM should refer to the PMP to ensure that all reporting requirements are met. To help meet these requirements, the PM should conduct some or all of the following activities, as necessary:

- ◆ Maintain regular communications with contractors, stakeholders, and other team members, (including Health and Safety officer to ensure site safety);
- ◆ Conduct routine visits to the site, especially during and near the completion of significant construction events;
- ◆ Request immediate written explanation of all variances from the design, schedule, and budget (present for approval/reauthorization/additional funding as necessary);
- ◆ Provide routine updates to the community, if required or necessary (e.g., fact sheets, public meetings, web site updates); and
- ◆ Review contractor monthly invoices and progress reports.

### Initiate Project Change Process

Because there are likely to be unexpected events, issues, and situations that arise during cleanup, restoration, and remediation activities, the PM should follow the BLM's established contracting process for changes to the original design and procedures (i.e., change management process). Generally, the State and District/Field Offices, and possibly the Washington Office, must approve any necessary funding changes. The work plan should include a detailed description of the change management process.

Based on monitoring and reporting activities, the PM obtains data and information about the direction of the project that indicates one of three outcomes:

- ◆ Project activities are proceeding toward the goals and objectives in a timely manner;
- ◆ Project activities are proceeding toward the goals and objectives, but **not** in a sufficiently timely manner; or
- ◆ Project activities are **not proceeding** toward the goals and objectives.

If monitoring and reporting activities indicate either of the last two outcomes, the PM should develop modifications to the PMP and seek approval of any project changes. Once the design for the selected course of action is fully implemented, the PM closes out the project.

### 3.4. Closeout and Monitoring

#### 3.4.1. Initial Closeout

The ultimate goal of any project is successful site closeout (see Figure 6). The final opportunity for a closeout decision to be made is after determining that a site no longer poses unacceptable risks to human health or the environment. Closeout occurs when the BLM—in conjunction with other regulatory agencies, as appropriate—certifies that all cleanup, restoration, and remediation actions and activities at a site, except final long-term monitoring, if required, are complete. The PM documents the decision to terminate cleanup, restoration, or remediation actions at a site. Once the goals and objectives for the project appear to have been met (e.g., data indicate that contaminant concentrations are decreasing, adits and other openings have been closed), the PM and project team conduct or ensure that the contractor conducts the following activities:

***The decision to seek site closeout may occur at any point during the project, for instance:***

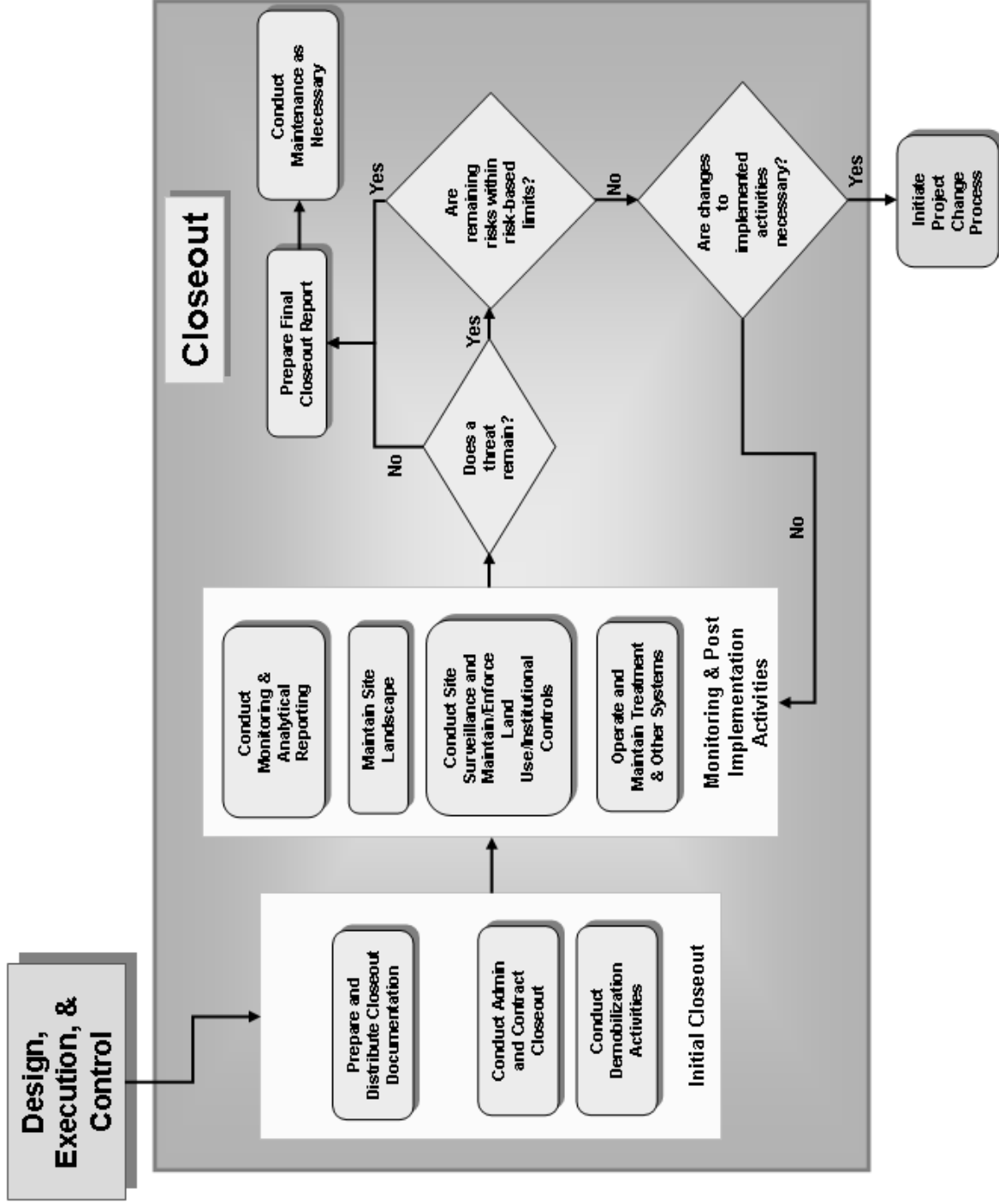
- Initial non-invasive investigations indicate that there are no hazardous substances or physical safety hazards present.
- Site investigation or characterization show that there is no possibility of direct contact with hazardous substances, fire or explosion; no hazardous substances are migrating or likely to migrate from the site; and no physical safety hazards exist.
- Baseline risk assessment shows that there is no significant threat to public health or the environment.
- No action/site closeout is the selected course of action.
- The end of successful cleanup, restoration, or remediation or post-project activities.

- ◆ Conduct demobilization activities, including removing equipment and machinery, temporary buildings and structures, other materials no longer necessary to complete site activities, and site debris, and ensure the contractor disconnects temporary utilities and cleans roadways or other public access areas;
- ◆ Conduct administrative and contract closeout, including transfer of all contractor final documentation associated with construction (e.g., log books, and records); and
- ◆ Prepare the maintenance and monitoring plan.

#### 3.4.2. Monitoring & Post Implementation Activities

The BLM requires post-closure monitoring to maintain and measure the long-term effectiveness of the selected course of action and to confirm that the goals and objectives of the project actually have been and continue to be met. When the final cleanup, restoration, or remediation activities have been completed, the PM develops a SOW that is 1) applicable to the site's post-project activities, and 2) optimizes the implemented course-of-action operations and long-term monitoring programs. The monitoring program generates the data necessary to demonstrate adequate progress towards cleanup goals or the maintenance of resource restoration and physical safety hazard remedies.

Figure 6: Closeout Phase



The following typical activities are conducted during the monitoring phase:

- ◆ Ongoing monitoring and analytical reporting (e.g., ground water and air monitoring);
- ◆ Maintaining site landscape;
- ◆ Site surveillance for restricted areas and adherence to land use/institutional controls,<sup>12</sup> and
- ◆ Treatment and other system operation and maintenance.

The BLM's environmental cleanup, resource restoration, and physical safety hazard remediation sites often involve unique conditions that limit the ability to provide a universal chemical contamination monitoring process; however, any monitoring program must ensure that the selected course of action remains protective of public health and welfare and the environment.

Monitoring plans should be designed to allow comparison of results with model predictions that supported the selected course of action. The following components typically are included in the monitoring plan:

- ◆ Statement of goals;
- ◆ Current monitoring system and activities;
- ◆ Frequency and anticipated duration of monitoring;
- ◆ Specific field procedures (e.g., purging, sampling, decontamination, record keeping);
- ◆ Analytical methods, sample handling requirements (e.g., containers, preservation), QA/QC sample collection rates;
- ◆ Data handling and reporting procedures; and
- ◆ Decision criteria (including exit strategies) and review process to periodically evaluate and optimize all of the above.

Additionally, the monitoring plan should contain sufficient details to answer the following questions:

- ◆ Data Types: Will physical, chemical, or biological samples be collected?
- ◆ Temporal considerations: Will monitoring be conducted over the long- or short-term, and what are the anticipated start and end dates?
- ◆ Frequency: For each sample type and location, will monitoring data be collected on a daily, weekly, monthly, or other basis?
- ◆ Endpoints: Is the remediation endpoint based on the final concentration (e.g., heavy metal concentration in adjacent stream) or risk factors?
- ◆ Specific endpoints: Will the BLM monitor specific constituents of concern (for concentration endpoints) and human health or ecological endpoints for risk factors (e.g., hikers, or bats)?
- ◆ Decision Rule Endpoints: What monitoring criteria will result in the continuation, end, or modification of the monitoring program and/or cause additional cleanup, restoration, and/or remediation action?

Site characterization reports, risk assessments, and course of action design and decision documents provide site activity information to help answer the above questions and prepare the monitoring plan.

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<sup>12</sup> Institutional controls are non-engineering site management techniques or strategies used to protect human health and the environment (e.g., fencing, zoning, health education, easements, and other deed restrictions).



The PM ensures that the monitoring results are evaluated to determine if the corrective action has been successful. The PM also does the following:

- ◆ Verifies no further cleanup, restoration, or remediation actions are planned;
- ◆ Prepares and signs the final report and compiles the necessary technical support documents to justify the decision;
- ◆ Discusses the closeout rationale with regulators, if necessary; and
- ◆ As necessary, submits the decision document to all involved local, State, and Federal agencies and requests written confirmation within a specified time period.

#### ***Post-Closure Monitoring References***

- *Guidance For Monitoring At Hazardous Waste Sites: Framework For Monitoring Plan Development And Implementation* (EPA) <http://www.epa.gov/tio/download/char/oswerdirective9355jan04.pdf>
- *Roadmap to Long-Term Monitoring Optimization* (Table 2.2.1, EPA) <http://www.epa.gov/tio/download/char/542-r-05-003.pdf>
- *Guide to Optimal Groundwater Monitoring* (Naval Facilities Engineering Service Center) <https://portal.navfac.navy.mil/pls/portal/url/ITEM/2C9C59FE61114DBAE0440003BA8967D9>

## 4.0 REFERENCES

### 4.1. Technical References

#### BLM Handbooks

Although the Handbook versions provided below were current at the time this document was written, updates may have occurred. The most recent versions of the BLM's Handbooks are available at [http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/blm\\_handbooks.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/blm_handbooks.html).

- ◆ *AML Program Policy Handbook* (H-3720-1)  
[http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_handbook.Par.14160.File.dat/h3720-1.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_handbook.Par.14160.File.dat/h3720-1.pdf)
- ◆ *CERCLA Response Actions Handbook* (H-1703-1, 2001)
- ◆ *Guidelines for Conducting Tribal Consultation* (H-8120-1) 12/3/2004  
[http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_handbook.Par.86923.File.dat/h8120-1.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_handbook.Par.86923.File.dat/h8120-1.pdf)
- ◆ *NEPA Handbook* (H-1790-1, 11/25/1988, Release 1-1547)  
[http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_handbook.Par.47884.File.dat/h1790-1.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_handbook.Par.47884.File.dat/h1790-1.pdf)
- ◆ *Safety and Health for Field Operations: BLM Manual Handbook* (H-1112-2) 8/9/2006  
[http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_handbook.Par.30414.File.dat/h1112-2.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_handbook.Par.30414.File.dat/h1112-2.pdf)
- ◆ *Safety and Health Management Manual Handbook* (H-1112-1) 11/08/01
- ◆ *Solid Minerals Reclamation Handbook* (H-3042-1, 1992)

#### BLM Manual Sections

Although the Manual section versions provided below were current at the time this document was written, updates may have occurred. The most recent versions of the BLM's Manual Sections are available at [http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/blm\\_manual.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/blm_manual.html).

- ◆ *Abandoned Mine Land Program Policy* (MS-3720)  
[http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_manual.Par.89663.File.dat/3720.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_manual.Par.89663.File.dat/3720.pdf)
- ◆ *Acquisition* (MS-1510, Release 1-1664, 6/15/2000)  
[http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_manual.Par.98751.File.dat/1510.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_manual.Par.98751.File.dat/1510.pdf)
- ◆ *Cost Recovery* (MS-1270-2, Release 1-1639, 6/23/1994 )  
[http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_manual.Par.7819.File.dat/1270.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_manual.Par.7819.File.dat/1270.pdf)
- ◆ *Hazard Management and Resource Restoration* (MS-1703, Release 1-1704, 10/3/2006)  
[http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_manual.Par.62992.File.dat/1703.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_manual.Par.62992.File.dat/1703.pdf)

- ◆ *Tribal Consultation Under Cultural Resources Authorities* (MS-8120, Release 8-74) 12/3/2004  
[http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_manual.Par.80216.File.dat/8120.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_manual.Par.80216.File.dat/8120.pdf)
- ◆ *Safety* (MS-1112-1, Release 1-1665) 6/16/2000  
[http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_manual.Par.37732.File.dat/1112.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_manual.Par.37732.File.dat/1112.pdf)

### BLM Resource Notes

In addition to those listed below, other Resource Notes developed after the preparation of this Handbook may be available at <http://www.blm.gov/nstc/resourcenotes/resnotes.html>.

- ◆ *Efficient Permanent Closure of Abandoned Mine Safety Hazards on BLM-Managed Lands* (Issue 73, by Christopher Ross, 8/27/2004) <http://www.blm.gov/nstc/resourcenotes/rn73.html>
- ◆ *Potential Responsible Party Search* (Issue 57, 1/7/02)  
<http://www.blm.gov/nstc/resourcenotes/rn57.html>

### BLM Technical Notes

In addition to those listed below, other Technical Notes developed after the preparation of this Handbook may be available at <http://www.blm.gov/nstc/library/techno2.htm>.

- ◆ *Hazardous Waste Site Sampling Basics* (Technical Note 414), December 2004  
<http://www.blm.gov/nstc/library/pdf/HazWaste414.pdf>
- ◆ *Passive Treatment Systems for Acid Mine Drainage* (Technical Note 409), April 2003  
<http://www.blm.gov/nstc/library/pdf/TN409.PDF>
- ◆ *Risk Management Criteria for Metals at BLM Mining Sites* (Technical Note 390), October 2004  
<http://www.blm.gov/nstc/library/pdf/TN390v04.pdf>

### Other DOI/BLM Documents<sup>13</sup>

- ◆ *Contracting Officer's Representative Program Manual*, DOI, March 2007  
<http://www.doi.gov/pam/FAC-CManual32007.doc>
- ◆ *Engineering Geology Field Manual*, Chap. 12, 2<sup>nd</sup> ed. Vol. 1, 1998, reprinted 2001, DOI, Bureau of Reclamation <http://www.usbr.gov/pmts/geology/geoman.html>
- ◆ *Guide to Agreements* <http://www.blm.gov/natacq/tools/ib2005118.htm>
- ◆ *Reclamation Safety and Health Standards*, Section 21, DOI Bureau of Reclamation, May 2002  
<http://www.usbr.gov/ssle/safety/RSHS/rshs.html>
- ◆ BLM Information Bulletin No. RS-99-108 (07/14/99), *Site Characterization for Abandoned Mine/Mill Sites* <http://www.blm.gov/nhp/efoia/narsc/1999/IB/RSIB1999-108.pdf>
- ◆ BLM Information Bulletin No. RS-2000-021 (Nov 1999), *Site Characterization for Abandoned Mine/Mill Sites*, Modification 1 <http://www.blm.gov/nhp/efoia/narsc/1999/IB/RSIB2000-021.pdf>

<sup>13</sup> At the time this Handbook was written, the Solid Minerals Division was developing underground site entry guidance. Field personnel should follow the most recent available guidance for underground site entry.

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## 4.2. Links to the BLM State Offices and Related Programs

### BLM Offices and Programs

BLM Homepage with links to State, District and Field Offices <http://www.blm.gov>

Division of Solid Minerals <http://www.blm.gov/nhp/pubs/brochures/minerals/>

Hazardous Materials Management [http://www.blm.gov/nhp/what/g\\_hazmat.html](http://www.blm.gov/nhp/what/g_hazmat.html)

Land and Minerals Records-LR2000 Reports <http://www.blm.gov/lr2000/>

National Acquisition Homepage <http://www.blm.gov/natacq/>

National Landscape Conservation System <http://www.blm.gov/nlcs/index.html>

National Safety Office <http://web.blm.gov/internal/wo-700/wo740/index.html>

National Operations Center <http://www.blm.gov/nstc/>

National Training Center <http://www.blm.gov/ntc/st/en.html>

### 4.3. Links to Other Agencies

Environmental Protection Agency (EPA) <http://www.epa.gov>

Mine Safety and Health Administration (MSHA) <http://www.msha.gov/>

Occupational Safety and Health Administration (OSHA) <http://www.osha.gov/>

U.S. Forest Service (USFS) <http://www.fs.fed.us/>

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## Appendix A – GLOSSARY

The following glossary provides definitions for terms and descriptions that are used in this Handbook. This glossary does not supersede definitions in relevant laws or regulations.

### -A-

**Abandoned Mine Land (AML) Program:** The BLM's program that focuses on reclaiming hardrock abandoned mine lands on or affecting public lands administered by the BLM. The primary goal of the program is to remediate and reduce actual or potential threats that pose physical safety risks and environmental degradation. The BLM applies risk-based criteria and uses the watershed approach to establish project priorities. The program also works to return mine-impacted lands to productive use(s).

**Applicable or Relevant and Appropriate Requirements (ARARs):** ARARs are State, local, and Federal standards that are directly applicable or may be considered relevant and appropriate to the circumstances on the site. ARARs include clean-up standards, standards of control, and other environmental protection requirements, criteria, or limitations. These standards are an inherent part of the scoping process, but will affect the long-term remediation, especially in identifying clean-up standards and complying with land use regulations.

### -C-

**Contracting Officer (CO):** A Federal employee delegated authority to award, administer, and terminate contracts, purchase orders, delivery orders, task orders and modifications; obligate Government funds; and make determinations and findings

**Contracting Officer Representative (COR):** A Federal employee appointed in writing, delegated limited responsibilities by a CO to perform specified contract management duties related to technical oversight and administration of a specific contract. BLM PM's often are CORs.

### -G-

**Government Performance and Results Act (GPRA):** GPRA (PL-103-62, Aug. 3, 1993, 107 Stat. 285) holds Federal agencies accountable for using resources wisely and achieving program results. GPRA requires agencies to develop plans for what they intend to accomplish, measure how well they are doing, make appropriate decisions based on the information they have gathered, and communicate information about their performance to Congress and to the public.

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**-H-**

**Hazard Management and Resource Restoration (HazMat or HMRR) Program:** The BLM administrative program with emphasis on management of hazards on public lands to reduce risks to visitors and employees, restore contaminated lands, and carry out emergency response actions.

**Hazardous Substances:** CERCLA term identifying those substances designated pursuant to section 1321(b)(2)(A) of Title 33, or 42 U.S.C. 9602, or listed in 40 CFR 302 or 355.

**Hazardous Substance Release:** Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant).

**-I-**

**Institutional Controls:** Institutional controls are non-engineering site management techniques or strategies used to protect human health and the environment (e.g., fencing, zoning, health education, easements, and other deed restrictions).

**Intergovernmental Order (IGO):** Agreement between Federal agencies for reimbursement of goods or services provided.

**-N-**

**National Priorities List (NPL):** EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under Superfund. The list is based primarily on the score a site receives from the Hazard Ranking System.

**-P-**

**Performance Measures:** Indicators to be used in measuring or assessing the relevant outputs, service levels, and outcomes of each program activity.

**Potentially Responsible Party (PRP):** Any individual or entity, including current and past owners, operators, transporters, arrangers, or generators who may be liable for clean-up costs for hazardous substances under CERCLA Section 107(a) or for injuries to natural resources on public lands from hazardous substance releases.

**Project:** An organized set of work activities with a defined beginning and end that is performed within an envelope of resources constraints and directed toward a specific objective.

**Project Management:** The process of creating, monitoring, and controlling the scope of work.

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**Project Management Plan (PMP):** A written document designed to cover all project activities through completion and site closeout, including the following:

- Project Goals and Objectives
- Site Description, Background, and History
- Programmatic Framework
- Regulatory Framework/Enforcement Actions
- Organizational Structure
- Scope of Services/SOW
- Project Team Identification and Responsibilities
- Schedule
- Reporting Requirements
- Risks and Impediments
- Value Engineering/Peer Review/Quality Control

**Project Manager (PM):** The person who creates and manages the project team, acts as the focal point of communications, maintains a clear vision of the final objective, and coordinates the individuals, organizations, technology, money, equipment, time, and other resources to ensure the project is completed successfully (i.e., on time and within budget).

-Q-

**Quality Assurance/Quality Control:** A system of procedures, checks, audits, and corrective actions to ensure that all design and performance, environmental monitoring and sampling, and other technical and reporting activities are of the highest achievable quality.

-V-

**Value Engineering:** An organized effort to analyze functions of construction projects, systems, equipment, facilities, services, and investigations.

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## Appendix B – ACRONYMS

AML	Abandoned Mine Land
ARAR	Applicable or Relevant and Appropriate Requirement
BLM	Bureau of Land Management
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CHF	Central Hazardous Materials Fund
CIP	Community Involvement Plan
CO	Contracting Officer
COR	Contracting Officer Representative
CWA	Clean Water Act
DOI	Department of the Interior
EPA	U.S. Environmental Protection Agency
FAR	Federal Acquisition Regulation
FLPMA	Federal Land Policy and Management Act of 1976
FMFIA	Federal Managers' Financial Integrity Act
GPRA	Government Performance and Results Act of 1993
HASP	Health and Safety Plan
HMRR (aka HazMat)	Hazards Management and Resource Restoration
IGO	Intergovernmental Order
MOU	Memorandum of Understanding
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NOC	National Operations Center
NPL	National Priorities List
NRC	National Response Center
NRDAR	Natural Resource Damage Assessment and Restoration
OMB	Office of Management and Budget
OPA	Oil Pollution Act for 1990
OSC/RPM	On-scene Coordinator/Remedial Project Manager
OSHA	Occupational Safety and Health Administration
PI	Project Inspector
PM	Project Manager
PMP	Project Management Plan



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PPE	Personal Protective Equipment
PRP	Potentially Responsible Party
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RACER	Remedial Action Cost Engineering and Requirements
SAP	Sampling and Analysis Plan
SCF	Special Cleanup Funds
SOP	Standard Operating Procedure
SOW	Statement of Work
USGS	United States Geological Survey
VE	Value Engineering