United States Environmental Protection Agency

Office of Solid Waste and Emergency Response

EPA

DIRECTIVE NUMBER: 9355.1-1

TITLE: DRAFT -- Federal-lead Remedial Project Management Handbook, January 1986

APPROVAL DATE: January 27, 1986

EFFECTIVE DATE:

ORIGINATING OFFICE: Office of Emergency and Remedial Response

☐ **FINAL**

☒ **DRAFT**

STATUS:

Finalization of this book is not anticipated until Superfund is reauthorized

REFERENCE (other documents):

9355.2-2 -- DRAFT - State-lead Remedial Project Management Handbook, January 1986

United States Environmental Protection Agency
Washington, DC 20460

EPA OSWER Directive Initiation Request

Interim Directive Number: 9355.1-1

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Approved for Review

Signature of Office Director:

Date:

Title

DRAFT -- Federal-Lead Remedial Project Management ~~Manual~~ Handbook, JANUARY 1986, ~~December 1985~~

Summary of Directive

Assists the EPA Remedial Project Managers (RPMs) in managing Federal-lead remedial response projects. Describes in detail the responsibilities of the RPM during the planning, design, construction, operation, and close-out of remedial response projects. Supplements the Remedial Project Manager (RPM) Handbook for State-Lead Projects, which provides assistance to RPMs in overseeing State-lead, Federally-funded remedial response projects conducted under cooperative agreements (CAs).

Type of Directive *(Manual, Policy Directive, Announcement, etc.)*: Manual

Status: ☑ Draft ☐ Final ☑ New ☐ Revision

Does this Directive Supersede Previous Directive(s)? ☐ Yes ☐ No Does It Supplement ~~Previous~~ Directive(s)? ☑ Yes ☐ No

If "Yes" to Either Question, What Directive *(number, title)*

9355.2-1 ~~Remedial Project Manager (RPM) Handbook for State-lead Projects~~ Draft State-Lead Remedial Project Manager's Handbook

Review Plan

☑ AA-OSWER ☐ OUST ☑ OECM ☐ Other *(Specify)*
☑ OERR ☑ OWPE ☑ OGC
☐ OSW ☑ Regions ☐ OPPE

This Request Meets OSWER Directives System Format

Signature of Lead Office Directives Officer: Nancy Livingstone

Date: 12/19/85

Signature of OSWER Directives Officer:

Date:

EPA Form 1315-17 (10-85)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 27 1986

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Draft Federal-Lead Remedial Project Management Handbook (OSWER Directive Number 9355.1-1)

Draft State-Lead Remedial Project Management Handbook (OSWER Directive Number 9355.2-1)

FROM: Henry L. Longest II, Director
Office of Emergency and Remedial Response (WH-548)

TO: Addressees

The attached draft guidances have been prepared under the direction of my staff to assist EPA Remedial Project Managers (RPM's) in managing Federal-lead and State-lead Superfund remedial projects. The handbooks describe in detail the responsibilities of the RPM during each phase of the project: RI/FS, design, construction, operation and site close-out. The handbooks are intended to be used as a quick reference on actions to be taken, and they also serve to direct the RPM to more detailed discussions found in other guidance.

I would appreciate your review and written comments on the draft handbooks by February 28, 1986. Regional review might best be accomplished by your designation of a staff member as the review coordinator. This individual would then distribute copies and consolidate comments from remedial and enforcement staff, Regional Counsel, financial management, grants administration, and community relations staff. Comments regarding the scope, content, clarity, and applicability are encouraged.

Incorporation of comments into a revised draft will begin after February 28, 1986. Because of the potential impact that the reauthorization of Superfund may have on the contents of the handbooks, finalization of the drafts is not anticipated until after a new Superfund bill is passed. Questions and comments on the State-lead handbook should be directed to Kathleen Taimi (FTS/202-382-2449, Mail Code: WH-548E). For the Federal-lead handbook, contact Steve Hooper (FTS/202-475-6707, Mail Code WH-548E).

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SUPERFUND FEDERAL-LEAD REMEDIAL PROJECT MANAGEMENT HANDBOOK

JANUARY 1986

DRAFT

HAZARDOUS SITE CONTROL DIVISION
OFFICE OF EMERGENCY AND REMEDIAL RESPONSE
U.S. ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

OSWER DIRECTIVE NO. 9355.1-1

BOOZ·ALLEN & HAMILTON INC.

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1. INTRODUCTION

Large, public works projects are developed generally in four sequential phases: planning, design, construction, and operation. These four phases also characterize the systematic application of clean-up activities in Federal-lead Superfund remedial response projects at hazardous waste sites identified on the National Priorities List (NPL). The project planning phase for remedial actions at a hazardous waste site includes initial planning activities and the Remedial Investigation and Feasibility Study (RI/FS). This is followed by a decision on the appropriate remedial action and then by the remedial design (RD) phase in which the selected technology concept(s) is developed into engineering specifications for application. After the RD is complete, the construction or remedial action (RA) phase proceeds. Construction is frequently followed by an extended period of treatment system operation (and in some cases, system modification) until clean-up is accomplished. In the case of complex remediation needs, there may be more than one construction action and operational system, each requiring a planning and design effort. Once clean-up is achieved, the close-out process is initiated for deletion of the site from the NPL. Deletion from the NPL marks successful completion of the remedial response project.

The most effective way to successfully complete of a remedial response project is to vest responsibility for the project in a single individual within EPA – the Remedial Project Manager (RPM). The term, "RPM" is defined in the *Federal Register* (November 20, 1985) as "... the Federal official designated by EPA ... to coordinate, monitor, or direct remedial activities..." under Subpart F of the *National Oil and Hazardous Substances Pollution Contingency Plan (NCP)*. Previously, an individual in this role was known as a Regional Site Project Officer (RSPO).

This handbook has been prepared to assist the EPA RPMs in managing Federal-lead remedial response projects. It describes in detail the responsibilities of the RPM during the planning, design, construction, operation, and close-out of remedial response projects. It is designed to complement another EPA handbook, called the *Superfund State-Lead Remedial Project Management Handbook*, which provides assistance to RPMs in overseeing State-lead, Federally funded remedial response projects conducted under cooperative agreements (CAs).

This handbook is intended to provide the RPM with quick reference information on what actions need to be taken during each step of the remedial process. Much of the information presented is drawn from existing EPA policy and guidance documents including, for example:

- *Guidance on Remedial Investigations Under CERCLA*, June 1985
- *Guidance on Feasibility Studies under CERCLA*, June 1985
- *Superfund Remedial Design and Remedial Action Guidance*, February 1985
- *State Participation in the Superfund Remedial Program*, February1984
- *REM/FIT Management Plan: An Illustrated Guide*, April 1983.

The chapters that follow are the product of an effort to compile into a single document all the relevant information related to the RPM's roles and responsibilities for managing remedial response actions.

1.1 STRUCTURE OF THE HANDBOOK

The handbook addresses all phases of the remedial planning and implementation process (except pre-NPL listing activities) from project start-up to site close-out and NPL deletion. Exhibit 1-1 illustrates these phases as well as specific activities which occur during the remedial planning and implementation process. The upper portion of the diagram identifies those activities which are generally performed by the remedial planning (REM) contractors or the U.S. Army Corps of Engineers (USACE) under EPA oversight; and the lower portion shows activities performed by EPA. The exhibit portrays the general order in which these activities should occur during the remedial response project. This order provides the basis for the organization of the handbook. The subjects of the individual chapters are briefly described below.

- Chapter 2, Project Management Concepts -- provides the RPM with information concerning basic project management concepts and relates these concepts to practice in the remedial response process. This chapter provides a background for the more program-specific discussions in the remaining chapters.

- Chapter 3, Initial Project Planning and Start-Up -- describes the project planning efforts conducted by the RPM for the period through initiation of the RI/FS. It identifies overall project planning activities required before starting a remedial project and presents procedures for issuing work assignments to the REM contractor.

- Chapter 4, Remedial Investigation and Feasibility Study -- provides a description of RPM responsibilities during RI/FS. It also discusses the RPM's responsibility for ensuring an efficient transition to the Record of Decision (ROD) stage and to RD.

- Chapter 5, Record of Decision and Transition to Design -- addresses RPM responsibilities during the development, review, and approval of the ROD which documents the Agency's selected remedial alternative. It also outlines the preliminary activities required for initiation of the RD phase.

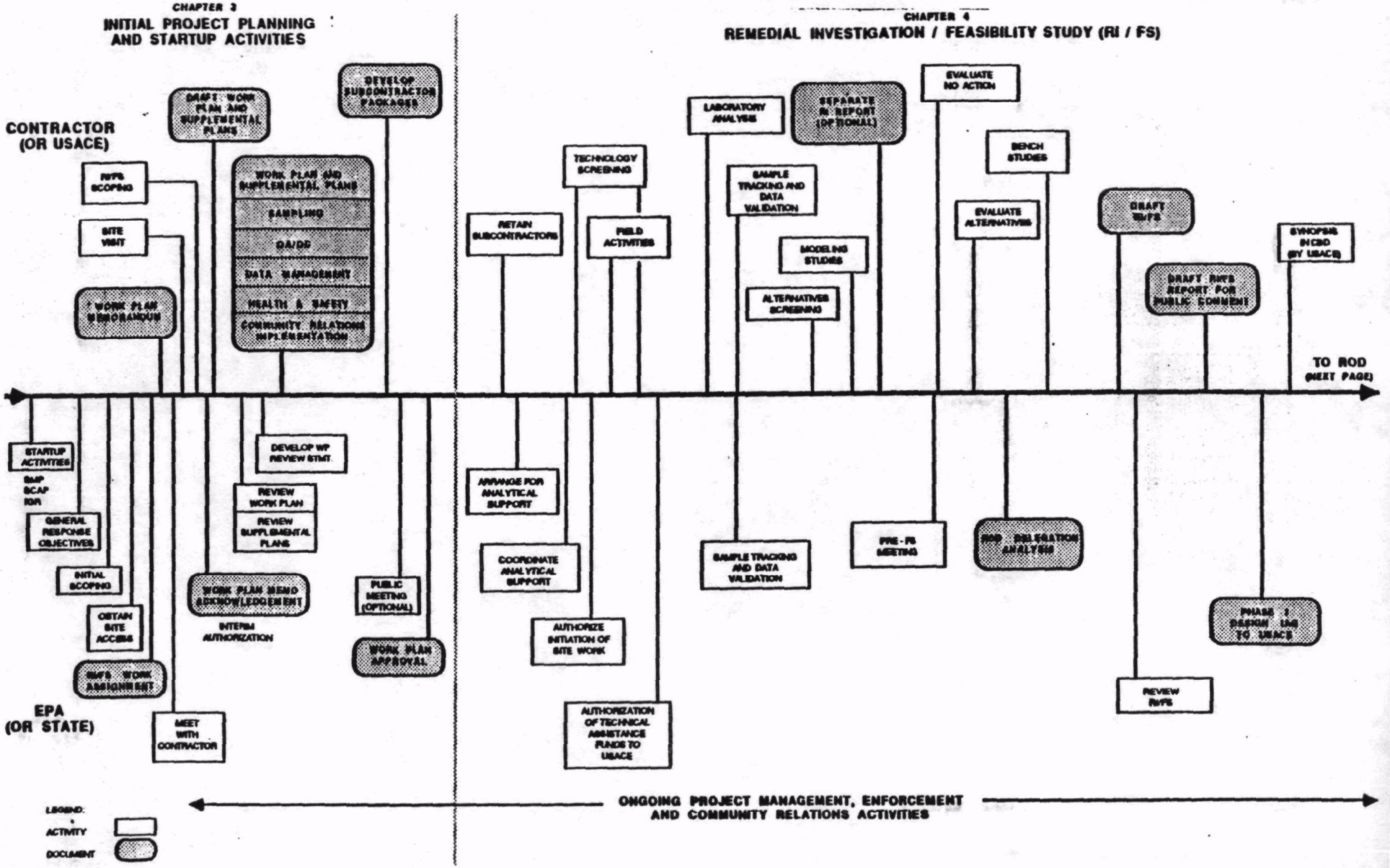
- Chapter 6, Remedial Design -- discusses the RPM's activities during the development of the RD. It provides a checklist of specific activities in which the RPM must initiate and supervise action, promote and coordinate oversight, and act in a review/advisory capacity.

- Chapter 7, Remedial Action -- outlines RPM responsibilities during the implementation of the RA. It also discusses the RPM's role during the start-up and initial operation of treatment systems constructed as part of the remedy.

- Chapter 8, Site Closeout -- reviews the procedures followed in closing out a site and identifies the specific responsibilities of the RPM in assisting with their implementation. Its scope includes the RPM's role in operation and maintenance (O&M) and in site closeout and NPL deletion.

EXHIBIT 1-1

Remedial Site Chronology (Federal-Lead)



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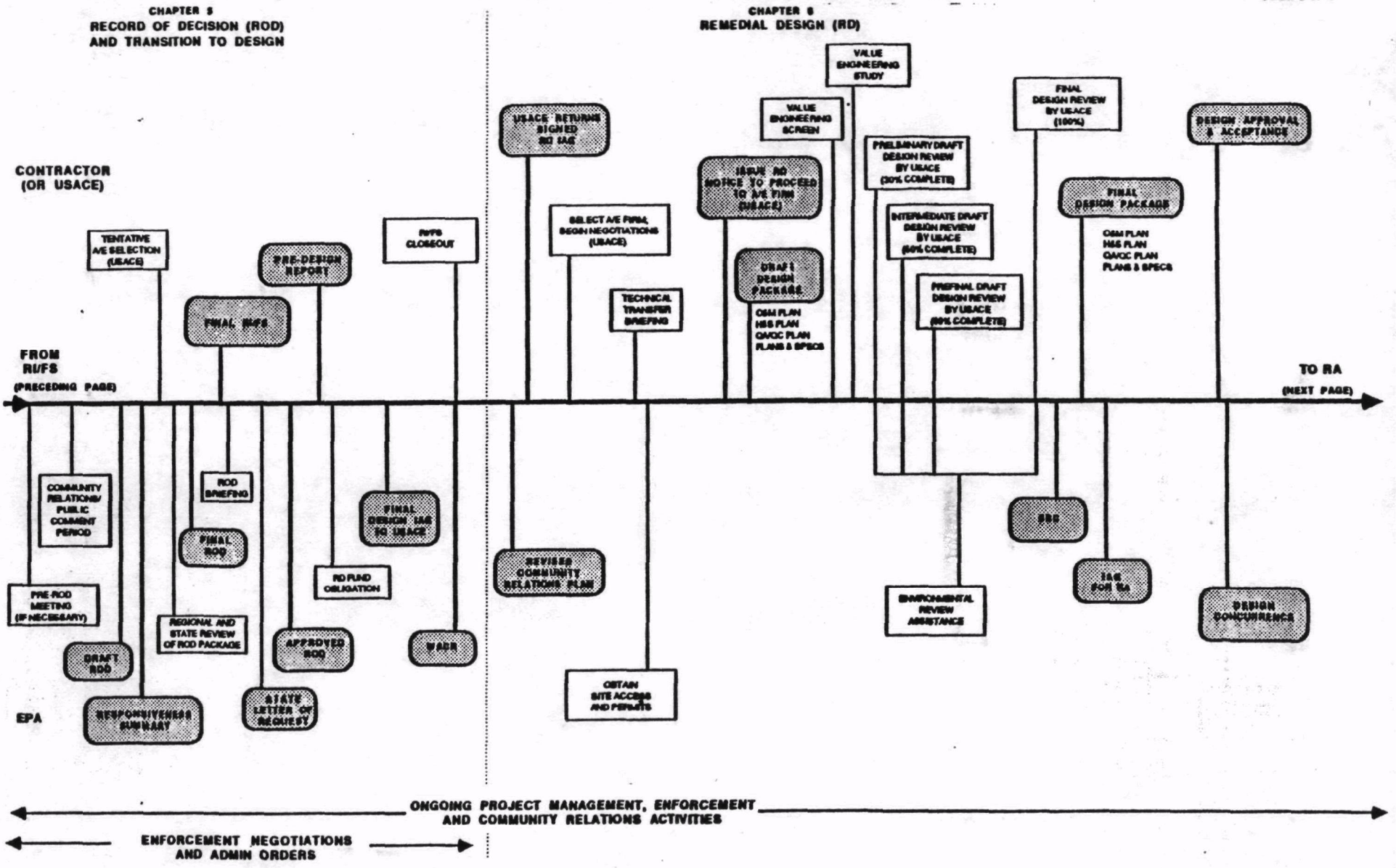

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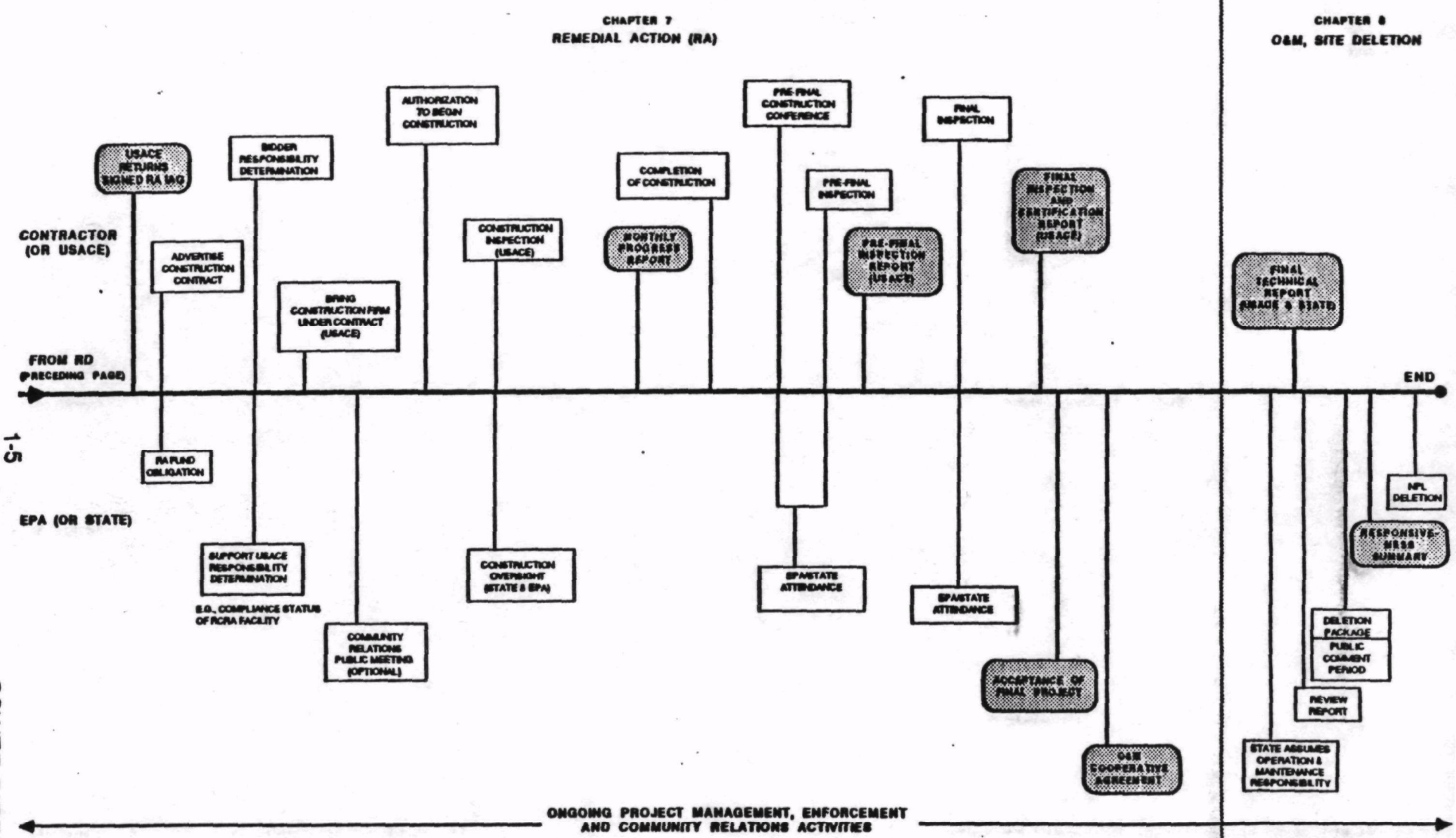


In each of these chapters, additional EPA guidance documents are referenced to direct the RPM to pertinent background and supplementary information. Sample documentation and specific procedures for processing forms and obtaining approvals have been highlighted. Management interactions between the RPM and the USACE, the affected State, and EPA community relations and enforcement personnel are also appropriately noted.

1.2 USING THE HANDBOOK

The handbook is organized according to the sequence of activities associated with the remedial planning and implementation process. Individual chapters provide the RPM with information for each major phase of the remedial response project. This arrangement assists the RPM in approaching in discrete, manageable steps what can be administratively and technically a complicated and lengthy effort in total.

The handbook is not intended to replace the many detailed guidance documents from which it was developed. A list of these documents is contained in the Bibliography in the back of this handbook. The RPM should have these available for ready access.

The handbook can serve as a training tool for new EPA RPMs and other EPA personnel (e.g., community relations and enforcement staff). It is an information resource for individuals outside of the Agency, such as REM contractor, USACE, and State personnel. It should help clarify the many technical and management tasks required to complete a Federal-lead remedial response project, and assist in their coordination in EPA's Superfund remedial response program.

2.2 PLANNING, MONITORING, AND CONTROL

Project planning is the process of identifying the scope, schedule, budget, and resources needed to effectively achieve project objectives. Monitoring and control are the observation of technical performance, comparing actual versus planned performance, and taking corrective action as needed. A number of project management functions are required to plan, monitor, and control project activities. Exhibit 2-2 presents the sequence of these functions which are described in the remainder of this section.

2.2.1 Planning

The elements of project planning are defined as follows:

- Establishing scope -- Determining project objectives and identifying discrete tasks needed to achieve the objectives.
- Scheduling -- Identifying timeframes for each task and the overall project.
- Budgeting -- Assigning costs to individual tasks and the total project.
- Organizing -- Arranging personnel and other resources to achieve the project objectives.

In each of the above elements, consideration must be given to funding/resource constraints that might affect project implementation. Methods of conducting each of the project planning elements are outlined in the following paragraphs.

2.2.1.1 Establishing Scope

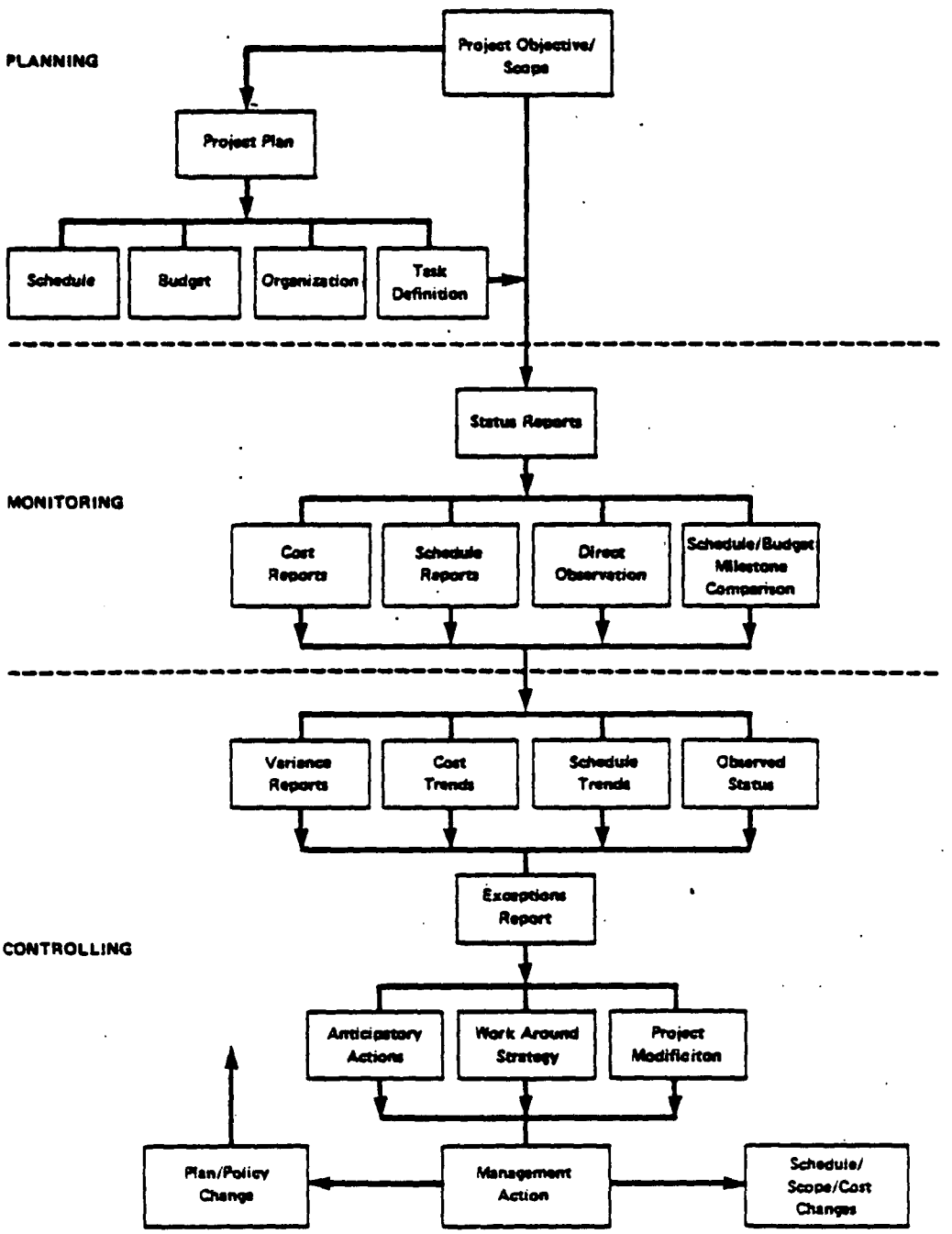
The RPM's role in project scope development is to determine the conceptual approach for the entire project to accomplish the ultimate goal of selecting and implementing the site remedy. The RPM provides direction to the REM contractor in identifying project objectives and constraints. Following preparation of the detailed work plan by the REM contractor, the RPM reviews the defined scope, schedule, and budget to ensure their conformance with the statement of work and regional program goals. Each task in the work plan must be sufficiently detailed to convey an understanding of project goals to those responsible for performing the work and to provide the basis for project schedules and budgets.

2.2.1.2 Scheduling

Scheduling is a key component of planning, management and control since establishment of a realistic project schedule is an integral part of the RPM's responsibility to complete program targets (e.g., Record of Decision [ROD] approval) on time. Scheduling is necessary to anticipate when project resources such as funding or analytical support will be needed. It also allows projects to be scheduled to take advantage of external factors such as construction seasons. Depending on the size and complexity of the project, a variety of project scheduling systems may be used. These include milestone checks, bar charts, and critical path method diagrams. Each is discussed below and illustrated in Exhibit 2-3.

EXHIBIT 2-2

Sequence of Performance of Project Management Functions



2. PROJECT MANAGEMENT CONCEPTS

The remediation of uncontrolled, hazardous waste sites is a technically complex process of long duration. Further, the remedial project is subject to many technical, economic, policy, and institutional constraints, and a number of responsibility transfers occur during the course of the project. The activities and deliverables which comprise a Superfund hazardous site remediation project are presented in Exhibit 1-1. Exhibit 2-1 provides an overview of the typical schedule, process constraints, and primary participants in a Superfund site remedial response. Because of the complexities, constraints, and numerous parties involved in a site remediation project, close project management and oversight are necessary for successful project completion.

An attempt is made throughout this handbook to define the role and responsibilities of the RPM relative to other participating parties. The purpose of this chapter is to introduce some basic project management concepts and to relate these to the Superfund site remediation process. The reader should bear in mind that, during certain phases of the project, many of the project management tools discussed here will actually be used by others (such as the remedial planning (REM) contractor project manager). Even so, the RPM, in an oversight and coordination role, must know enough about these project management concepts and tools to provide input, where appropriate, and use the output, when available.

In the following paragraphs, the basic concepts of project management as applied in both the public and private sectors for studies, engineering designs, and construction activities are discussed.

2.1 GENERAL PROJECT MANAGEMENT FUNCTIONS

Project management is the bringing together of individuals, institutions, firms, technologies, money, equipment, time, and other resources in accordance with a plan so as to achieve a set of objectives. Project management is accomplished most effectively by placing the responsibility for project success in the hands of a single individual, the project manager. The project manager is responsible for carrying out two types of project management functions: (1) planning, monitoring, and control and (2) directing, coordinating, and communicating. The project manager carries out the management functions using common sense approaches, based on experience, supplemented by "tools of the trade" such as scheduling, budgeting, or reporting systems.

In reality, the project manager is held accountable for all aspects of the project, but seldom has the strength of authority or the control over externalities to "require" that the project proceed according to plan. This is certainly the case for Superfund projects and the RPM. Thus, the RPM must develop a strongly pro-active approach to project management. The pro-active approach is to look ahead, which includes developing anticipatory actions, work-around strategies, and modifications to work plans in order to accommodate the changes, surprises, and problems that are certain to occur as the project progresses. The project manager needs to keep a clear vision of the final objective -- successful completion of the project on time and within budget -- without getting into a reactive, crisis-management mode. The successful project manager must be an organizer and a negotiator, have a knowledge of technologies, and possess well-developed interpersonal skills. Above all, the project manager must view problems and setbacks as challenges to be overcome. A list of project management references is included in the Bibliography at the end of this handbook. The more important project management functions are discussed below.

EXHIBIT 2-1

Remedial Process

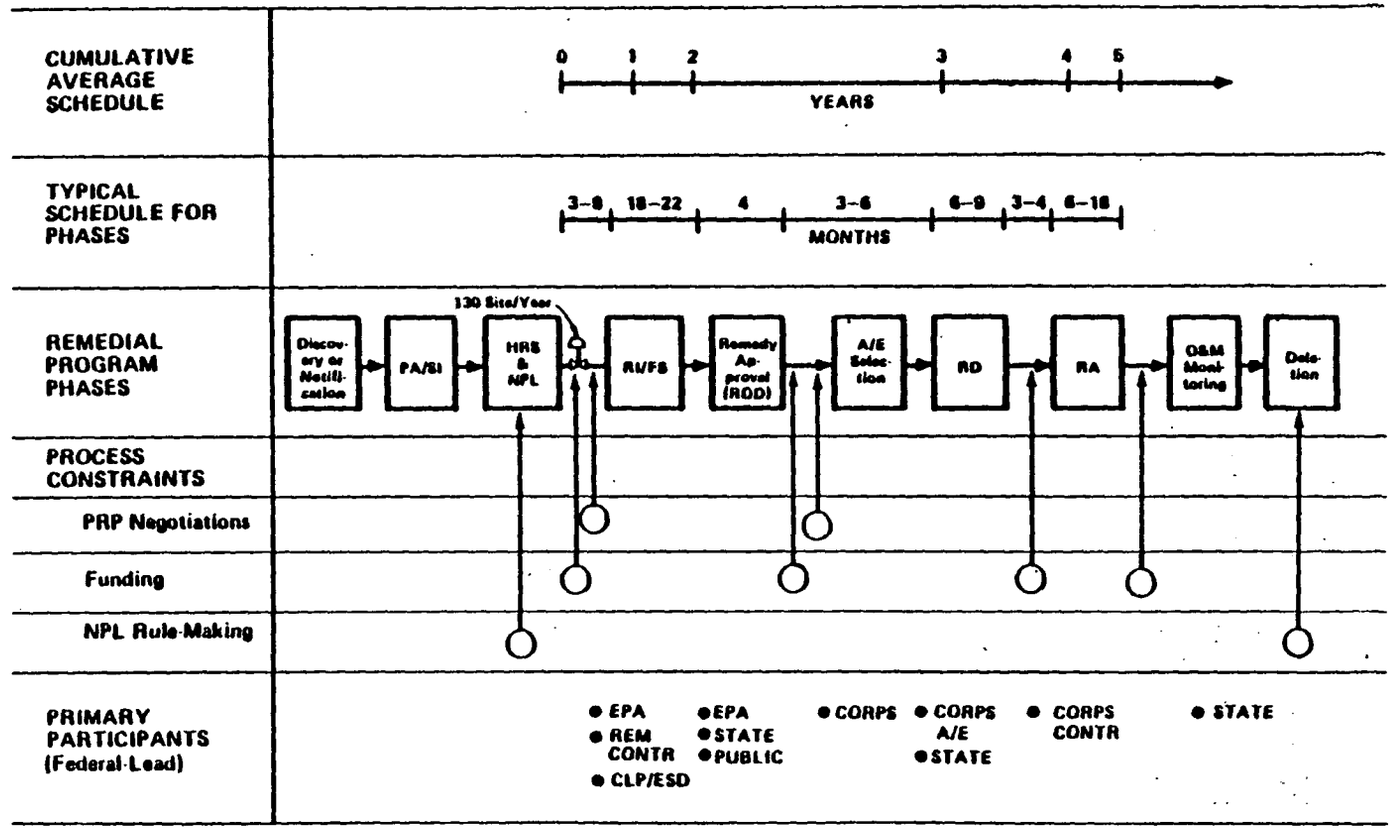
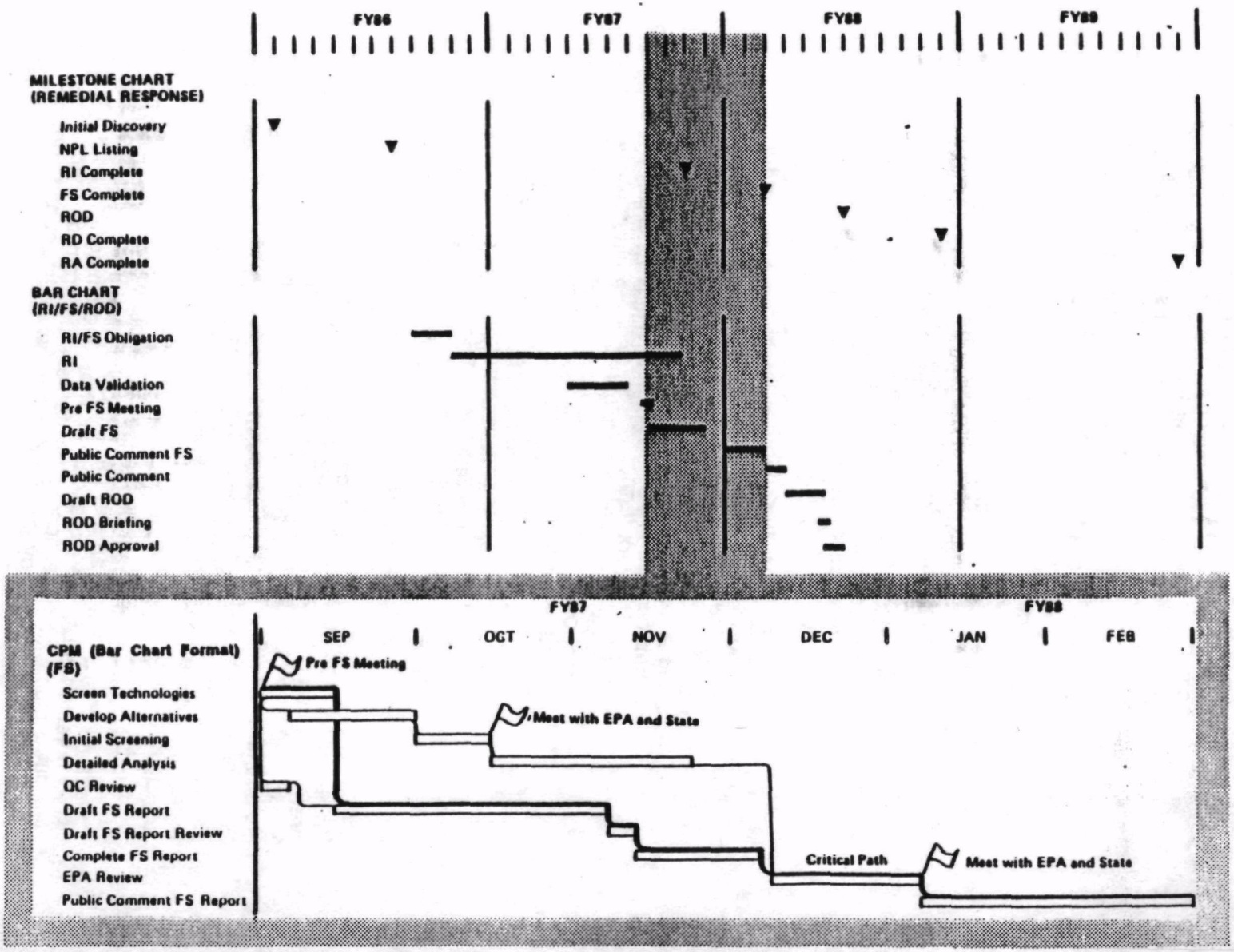


EXHIBIT 2-3

Scheduling Techniques



- Milestone Charts -- Milestones are major events in the progress of a project and can be used as checkpoints to indicate whether the project is moving forward on schedule. Milestone charts identify the target completion date for each major activity. The milestone chart may include budget information, an indication of the responsible individual, and a means of comparing actual versus planned schedule results. The method is best for small, short-duration projects with few participants and little interrelationship between activities. The shortcoming of this tool is that it forecasts only completion dates. On complex projects, this may lead to uncertainty about when an activity should begin.

- Bar Charts.-- This scheduling method is slightly more complex than milestone charting. The bar chart (often referred to as a Gantt chart) presents the list of activities along the left side with a sequence of horizontal bars denoting scheduled start and finish dates for each activity. The shortcoming of this method as a scheduling tool is that it does not completely reflect interrelationships among activities, nor does it indicate which activities are most critical to project completion. The bar chart is a frequently used scheduling method for the RI/FS.

- Critical Path Method (CPM) Diagrams.-- The critical path scheduling method overcomes some of the limitations of the bar chart method by integrating activity interrelationships and schedules. The method consists of systematically identifying all project task interrelationships using a task interface diagramming method. The duration of each task is then defined and the tasks are put in schedule form using either bar chart or network format. Finally, critical tasks are determined and the path between them is highlighted in the diagram. Determination of critical path by manual analysis is feasible on projects with less than 100 tasks. For projects with greater than 100 tasks, microcomputer CPM software packages are now available. Although the major advantage of this method is the definition of task interrelationships and critical activities, the main disadvantage is that CPM diagrams are sometimes hard to read and time-consuming to update. They are, if properly maintained, a very good forecaster of upcoming tasks and can be used to make changes in work flow and thus avoid slippage in the final completion date.

Since each of these techniques can be used for different management functions, all three (or a combination) can be used in the Superfund remedial response process. Exhibit 2-3 shows an example of how each scheduling technique may be used. The milestone chart can indicate key events from site discovery through remedial action. This can provide a status summary of individual sites or can be combined to show status at a number of sites. The milestone chart can be used by the RPM and regional management to indicate where sites are in the remedial response process at any point in time.

The bar chart generally is used to expand the level of detail provided by the milestone chart. For example, the remedial investigation/feasibility study (RI/FS) and ROD milestones can be expanded to show the timing and sequence of activities that the RPM must complete or track to achieve program targets. This provides the key scheduling tool for use by the RPM in his management and control functions.

At the most detailed level of project planning, individual contractors may use CPM networks to schedule and control individual projects with large numbers of tasks. Contractors will use this technique to manage individual tasks at a greater level of detail than can be included in the bar chart. However, the key milestones identified by the RPM's bar chart must be included in the contractor's CPM.

Taken together the three scheduling techniques result in an integrated site scheduling approach. The milestone chart sets the program objectives for a site which are then incorporated in the increasingly detailed bar chart and CPM diagram. The level of detail for each technique is tailored to the intended use.

2.2.1.3 Budgeting

Budgets set the cost of the work outlined in the scope and schedule. Establishing the project budget is always a highly project-specific process depending on the nature of the project and the organization executing it. Project budgets can be prepared by one of the following general methods:

- Top-Down Budgeting – In this method, a pre-set total project budget is broken down into the individual task budgets.. Top-down budgeting is most frequently applied to projects where funding availability is a major constraint, or the project tasks cannot be well defined prior to implementation. Estimates can be prepared using generic project costs or historical averages for similar projects. The advantage is that initial budgets do not need to include detailed information on all the project tasks, which prevents the need for guess work. This method is often the basis for cost estimates included in the Superfund Comprehensive Accomplishments Plan (SCAP). An example of a top-down budget is the fee for an engineering design which may be a set percentage of total construction costs.

  Disadvantages of this method are that it makes reliable monitoring and control difficult since detailed task budgets are not available, and it fails to examine project objectives to ensure that the most effective project approach is being used.

- Task-Based Budgeting – This method involves starting from "zero" to build individual task budgets. These are then summed to obtain the total project budget. Task-based budgeting is used when a predetermined budget has not been imposed. This requires that the project scope be well defined and can be broken down into individual tasks. Two of the most common task-based budgeting techniques used are unit-cost budgeting and staffing-level budgeting.

Unit-cost budgeting is commonly used in construction projects when quantities are reasonably well defined. A detailed estimate of component quantities is developed and multiplied by the unit cost. Appropriate contingencies are added to obtain the total project budget. However, the need for detailed estimates of quantities makes this technique less suited for engineering studies.

The staffing-level approach is often appropriate for more labor-intensive projects such as engineering studies. This approach involves estimating the labor hours required for each project task and then applying labor rates, overhead, and contingencies to obtain a total budget estimate.

The RPM must be familiar with both top-down and task-based budgeting techniques since they are used at different points in the Superfund program. Top-down budgeting is used for overall program planning to distribute the annual remedial action budget to individual RI/FS, design, and remedial action projects. This is often accomplished by using standard budget numbers for the different project types. On the other hand, the actual budget found in the work plan for the RI/FS is usually a staffing-level, task-based budget.

One issue with which the RPM must deal with in the budget planning process is the need to project funding for future activities at a site. Since the entire remedial response program spans several years and is made up of numerous projects, the RPM will be asked to prepare budget estimates for out-year activities such as design or construction. These estimates are subject to a number of uncertainties. For example, inflation rates can change and the actual remedy is often not known when the initial budget is estimated.

2.2.1.4 Organizing

The method of organizing personnel and other resources to accomplish the project objectives is highly variable depending upon the type and size of project and objectives to be accomplished. In most cases, a pyramidal hierarchy is the organizational form selected, with the project manager at its apex. This arrangement vests the accountability for total project execution in a single individual, even though a large number of individuals may be directly responsible for the execution of specific project tasks. This requires a project manager who is willing to accomplish goals through delegation and requires an organizational structure with good channels of communication.

Although many REM contractor project teams are organized in this traditional way, the RPM must operate within a different organizational structure. The RPM is the principal contact between EPA and the remedial contractor. The RPM's management responsibilities involve working with a number of organizations within and outside EPA. The RPM does not directly manage site activities, but rather carries out management responsibilities by interpreting EPA policy and procedures as they apply to the site and coordinating the participation of the numerous involved parties who do not communicate directly with each other. This role of the RPM as coordinator is defined further in a later section of this chapter.

2.2.2 Monitoring

The primary method for monitoring site project activity is comparison of actual events to the schedule and budget developed in the planning phase. This can be accomplished by progress review meetings in conjunction with obtaining regular reports on project status so that the actual schedule and budget can be compared to the planned targets. These reports must therefore:

- Provide estimates of progress of each task toward its objective
- Estimate or detail project expenditures
- Determine the schedule status of each task
- Determine the budget status of each task
- Determine the overall schedule and budget status.

Monitoring and reporting of Superfund project schedules can be conducted using bar chart, milestone, and CPM scheduling techniques. Milestone scheduling is generally more suited for monitoring key remedial response activities that can be conducted independently of other activities. This method is more useful to monitor

performance rather than to identify adverse schedule impacts as is the case with bar charts and CPM networks. For example, planned completion dates can be compared to actual dates and variances identified. Bar charts and/or critical paths can be used when durations of sequential activities are related and delays in earlier tasks can impact follow-on tasks. The bar chart and CPM techniques help identify critical dates on related tasks that must be met in order to complete the overall project on schedule. The RPM may use this information in the short term to ensure that critical milestones of the current project are met (e.g., remedy approval). These techniques can also be used for long-term management by advising regional management of schedule delays that could affect schedule and budget decisions in follow-on work (e.g., remedial design [RD] and remedial action [RA]).

Monitoring and reporting of the budget status will depend upon the intended use of the information. The RPM will generally use budget reports for two purposes. First, to assure that a particular activity is being accomplished according to its overall schedule and within its budget ceiling. Second, to identify when budget variances occur that require additional project funding. This may result in a modification to the regional SCAP. Techniques to control schedule and budget variances are discussed in the following sections.

In addition to the normal process of monitoring the schedule and budget, the RPM must perform a variety of other monitoring functions, depending upon the phase of activity at a given site. Examples of events to be monitored include:

- Performance of the remedial contractor's scope of work, e.g., review of contractor deliverables to ensure technical quality
- The U. S. Army Corps of Engineers (USACE) design and construction contractor selection process
- The review of construction change orders.

This handbook describes many of the monitoring and reporting methods by which the Agency and individual Regions track progress for specific site remedial actions and provide necessary management support and review of the work. These will not be restated here.

2.2.3 Control

Trend analysis allows the project manager to gauge the importance of variances that are identified from the schedule and budget reports obtained through monitoring activities. Study of schedule and budget trends, in addition to direct observations of project performance, can be highly informative, particularly where update reports on the schedule and budget are available on a regular basis. Changes in cash flow trends as a function of time, a steady deterioration in schedule status or deliverable quality, and negative trends in progress toward completion with coincident higher than planned cash flow are indicators of a project with potential problems.

Project progress meetings on project deliverables and schedule and budget reports can identify variances from the plan that are either long-term trends or immediate events. The process by which the project manager responds to a particular management issue will vary based on the nature of the problem. Control is by definition pro-active, rather than a passive process (as is monitoring) and must be rigorous in dealing with factors having potential negative impact on achievement of task or overall project objectives.

Variances can be avoided or controlled by taking preventive or corrective actions. The three basic types of actions may be summarized as follows:

- Anticipatory Actions -- Modify external factors in such a manner that project variances do not occur
- Work-Around Strategies -- Respond to an existing negative variance, usually schedule or budget, to accommodate changes, but at no impact to the overall project plan
- Plan Modifications -- Accommodate variances by altering project budget, schedule, or scope.

(Note: Anticipatory actions and work-around strategies are generally preferred to plan modifications.)

Control measures the RPM may take usually involve one or more of the above actions. The following are a few examples of such measures:

- Anticipatory Actions
  - Request USACE assistance in technical oversight of remedial contractor efforts to facilitate the transfer of responsibility to USACE at the design phase.
  - Manage or limit external reviews.
  - Coordinate analytical needs with Contract Laboratory Program (CLP) activity.
  - Increase direct observation of field activity to ensure that program requirements are being met and avoid otherwise unnecessary field efforts.
  - Be aware of upcoming project milestones and associated EPA reviews or approvals.
- Work-Around Strategies
  - Use additional laboratory support to ensure timely turnaround of sample data.
  - Streamline requirements for contractor work products to avoid repetition of data or other information.
- Plan Modifications
  - Issue work assignment amendments to adjust the budget and/or schedule resulting from work scope changes.
  - Revise the SCAP for subsequent year funding.
  - Revise the milestone or bar chart schedule (e.g., delay RD/RA one construction season).
  - Revise critical path endpoints or schedule milestones for a specific project plan.

Exhibit 2-2 shows the relationship of project planning, monitoring, and controlling functions. As the exhibit illustrates, the functions are interrelated and all must be employed to achieve effective project management. Each involves techniques applied at various stages in the project execution. However, the final areas of RPM responsibility to be discussed -- directing/coordinating/communicating -- continue throughout all project stages.

2.3 DIRECTING, COORDINATING, AND COMMUNICATING

As a general rule, the larger the project budget, the more important is the coordinating and communicating function of the project manager. The RPM needs to coordinate project activities at several levels: internal coordination with offices providing services to the project (e.g., analytical data reviews) and offices responsible for other environmental laws (e.g., Resource Conservation And Recovery Act and Toxic Substances Control Act). Without this input at the appropriate times, project delays could occur. Close coordination between the RPM and contractor is also needed to make sure that the project objectives are being met. In addition, such coordination will help the RPM and contractor identify and correct problems before they adversely impact the project. Finally, the RPM needs to coordinate all major activities with the State in order to avoid misunderstandings and delays. By keeping the State informed, the RPM can increase the likelihood of prompt State reviews and beneficial input at various project decision points.

Communication among the RPMs within the Agency is also important. Innovative solutions to complex problems have been developed through experiences at various sites. RPMs should learn from these experiences by communicating with other RPMs and Headquarters staff to anticipate or avoid similar problems.

Since a large portion of the work is being done by private contractors who are not always familiar with all program policies and goals, the coordinating and communicating skills of the RPM are a major factor in project success.

Implicit in successfully meeting the objectives of any project is attaining a high-quality result. The unique problems associated with Superfund sites require the RPM to play a key role in ensuring project quality. The RPM is the single EPA individual responsible to direct the contractor staff in a number of technical and policy areas. Areas in which the RPM must be knowledgeable in order to ensure the technical quality of site-related work include:

- Sampling and analysis of contaminated media
- Environmental fate and transport analysis
- Risk and exposure assessment
- Evaluations of remedial technologies
- Environmental impact evaluation
- Cost estimation
- Remedial design and construction considerations.

In addition to these technical areas, the RPM must be familiar with environmental regulations and policies that will affect how the technical considerations are applied to a particular site. By integrating technical, regulatory, and policy areas, the RPM can provide adequate quality assurance review of project activities and be effective in the directing, coordinating, and communicating role.

The management skills and tools described in this chapter can be applied to all phases of the remedial response process. The following chapters discuss the detailed responsibilities of the RPM as they relate to the individual phases of site activity.

This chapter has introduced the RPM to basic management concepts and related them to practices in the Superfund remedial response process. The next chapter, Chapter 3, provides a description of the RPM's responsibilities for planning the RI/FS, processing a work assignment, and beginning preliminary work on the RI/FS.

3. INITIAL PROJECT PLANNING AND START-UP ACTIVITIES

In Chapter 2, some basic concepts of project management were introduced. These concepts included planning, monitoring and control, directing, coordinating and communicating. The focus of this chapter is project planning and its relationship to monitoring and control. This chapter generally addresses activities to be performed before and during the early stages of the remedial investigation and feasibility study (RI/FS). It is divided into four major sections:

- Development of a project plan
- Miscellaneous activities required before starting the RI/FS
- Remedial investigation (RI) scoping of general response objectives
- Procedures for issuing work assignments to a remedial planning (REM) contractor.

Exhibit 3-1 illustrates all the activities which occur during the initial project planning and start-up phase of a remedial response. The top half of the diagram represents those activities which are the responsibility of the REM contractor or U.S. Army Corps of Engineers (USACE) and the bottom those which are the responsibility of EPA.

The RPM responsibilities described in these sections are based largely on information contained in existing EPA guidance documents, particularly:

- *State Participation in the Superfund Remedial Program*, February 1984, (called *State Manual*)
- *Procedures for Initiating Remedial Response Services*, Draft, July 1984.

For additional background information on any of the subjects discussed in this chapter, the RPM should review these two documents.

3.1 DEVELOPMENT OF A PROJECT PLAN

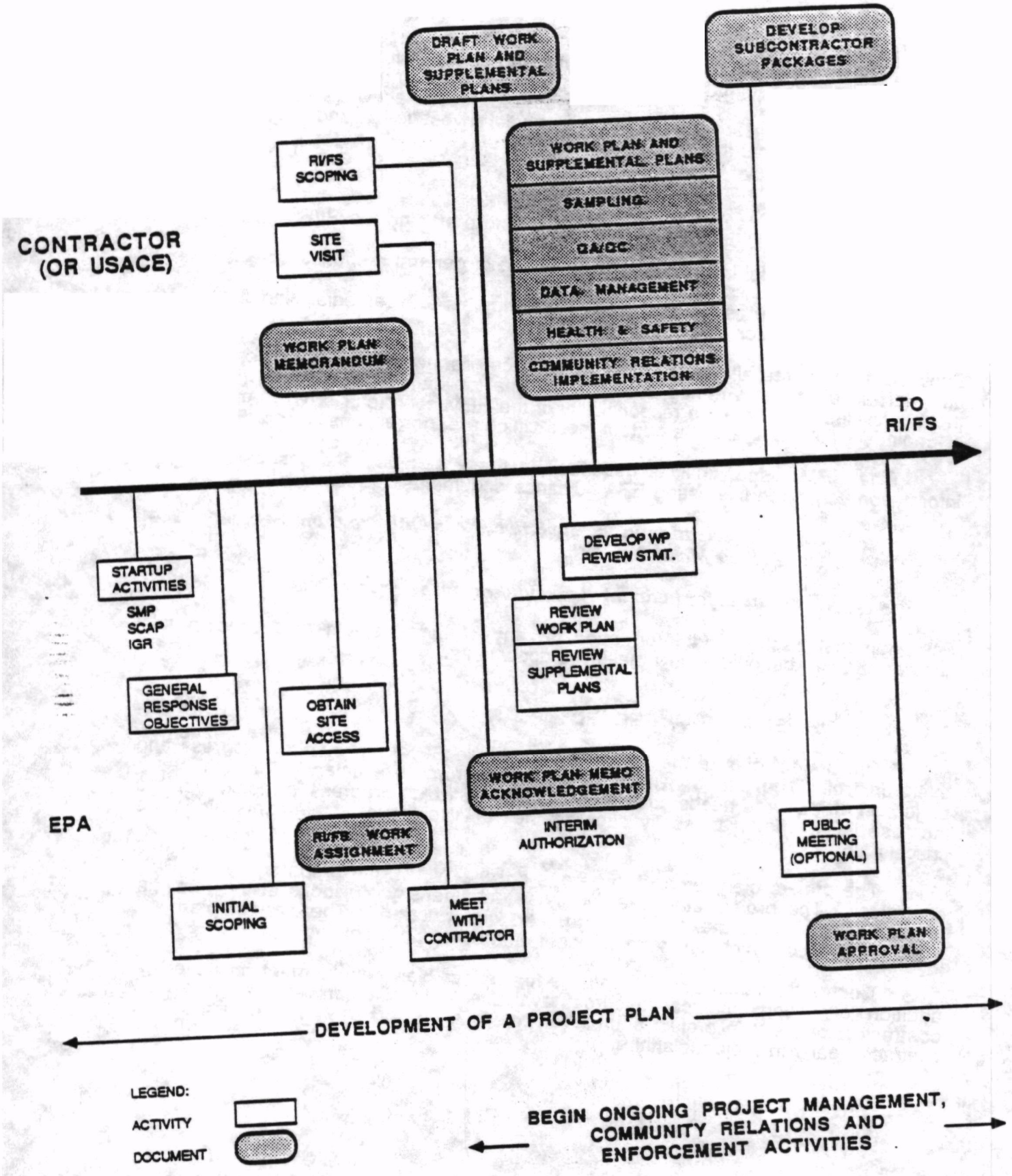
The project plan is the means by which the RPM can monitor progress and exert control. The use of a project plan can promote efficiency through better projection of resource needs, provide a baseline by which progress is monitored, and increase RPM effectiveness by allowing the RPM to focus on elements along the critical path.

The project plan referred to here is not the Work Plan prepared by the REM contractor. The project plan is an in-house document which looks at the remedial project as a whole: planning, design, and construction. The project plan is a management tool which ties scope, budget, and schedule together.

Contractor assistance is available for project plan development, however. In addition to making technical resources available to the Region, the use of a REM contractor to assist in project plan development is a good way to involve the REM contractor early in project planning.

EXHIBIT 3-1

Initial Project Planning and Start-Up Activities



The project plan should be dynamic in order to respond to changing project and program needs. The plan provides a baseline against which progress is monitored. Analysis of the results from project monitoring leads to action (control) which can include revision of the project plan. Revision of the project plan should occur frequently enough to respond to changing needs and circumstances but not so frequently so as to lose its advantage as a baseline.

Two additional points should be considered when developing a project plan. First, the plan is only the means to the ultimate objective which is the timely remediation of hazardous waste sites at reasonable cost. Second, the simpler the planning tool is to use, the more it will be used and the more useful it will become.

The following approach to the development of a project plan is a suggested approach which reflects good management practice. It is not the only approach that might be followed, however. Each site has unique objectives and circumstances and a site management plan should reflect this. On the other hand, some similarity in plan format and output is desirable in order to enhance ease of use. The format of a project plan can vary from the completely narrative to that of a collection of diagrams and tables. The suggested approach is a mixture of the two. The basic organizational structure of the project, the project objectives, the delineation of responsibility between involved parties, and other items of this nature might best be put in narrative form with diagrams. These items tend to change less during the course of the project. Items which change more frequently such as schedule milestones and budget figures are more appropriately put in a spread sheet for ease of manipulation. The data base format should be the same for all projects in order to allow the site-specific information to be combined into program planning reports. The remaining discussion focuses on the data base portion of the project plan, the format of which is common to all project plans.

The baseline project plan needs to encompass all the goals, criteria, limitations, and constraints imposed on the site project. It should be the best estimate of the activities and resources necessary to complete the site work available to the RPM at the time the estimate is made. The monitoring process should be designed to report on the actual expenditures of the resources necessary to accomplish each activity within the project. The reporting format should match the planning format so that variances can be quickly identified and analyzed by management. Whether the variance is over or under plan, management must decide one of two things: Have conditions changed such that the initial plan needs to be modified or can procedures be changed to conform activities to the baseline plan at some time in the future? The continuing process of going through these steps will contribute significantly to successful completion of the program.

In any program, the data base of planning and monitoring information originates with the smallest unit within the program (here it is the specific project site activities), and "rolls up" to provide reports to various levels of management as required. The foundation of the program planning function is the project plan. This planning document is the vehicle and communication link among the RPM, EPA Regional management, and the contractors. It contains all information necessary to identify, plan, and monitor the key elements of each project. An outline format of a project plan is provided in Exhibit 3-2. The project plan is the standard tool by which all site projects can be monitored. Its flexible format will provide a common data base for program management staff to use in the analysis and control of program delivery. During the execution of site work, a project plan will be updated for any one of the following reasons:

- There is significant new information to necessitate a change in the scope, schedule, or cost of an individual project site.

EXHIBIT 3-2

Project Plan Outline

1. Project Description

   a. Project name
   b. Project identification number
   c. Project location
   d. EPA Region responsible
   e. EPA RPM responsible
   f. Project plan number and date

2. Major Milestones and Constraints

   a. Identify and set target durations for all major milestones (i.e., pre RI/FS, RI, FS, ROD, etc.)

   b. Identify and schedule all activities to be accomplished at the next milestone

3. Labor and Cost Estimates

   a. Estimate contractor cost required per activity or milestone

   b. Estimate CLP usage

   c. Estimate the cost of design and construction of the clean-up procedures

4. Data Entry Forms

- Scope, schedule, or cost vary significantly from plan.
- A key milestone is reached in the site project schedule.

Three months after each prior revision, the project plan should be reviewed to ensure that the most recent data are being used in the plan. This is illustrated in Exhibit 3-3, a flowchart showing the project plan interface with the remedial process. The flags on the right-hand side indicate major milestones that should be planned and tracked as part of project monitoring. Arrows in the left-hand column identify the strategic points within the overall process where project planning should be conducted or updated. The project plan is the mechanism for the planning process, and should be revised at approximately the points indicated by Project Plan 1, 2, 3, etc.

Progress reports could be prepared on each individual site project within the program. The reports could contain current performance data such as labor and expenses to date as well as projected cost and time to project completion. This data would be incorporated in a project data base in the same format used for the project plan. Status reports from the data base can provide users with actual versus planned status information for each project element. This makes forecasting possible to anticipate future activities as well as to identify the need for changes in current activities to keep the project on schedule. The cycle of project plan development, monitoring, and analysis for a site as it moves through the remedial program "pipeline" is shown in Exhibit 3-4.

The project plan is intended to be a "living document". Each revision or update of its components should bring the site cleanup time and cost picture into clearer focus. Casual revisions to a project plan should be avoided since it is a baseline plan to be followed, to the maximum extent possible. However, when significant new pieces of information are available that materially alter the project parameters, they should be incorporated into the baseline plan and be reflected in either a scope, schedule or cost change.

A list of milestones and activities that could be tracked for each of the five project plans (shown in Exhibit 3-4) is presented in Appendix A. As the project moves through remedial response, the focus of the planning, monitoring, and control activities moves sequentially through the project plans.

For Project Plan 1, only the pre-RI/FS activities would be planned in detail. Each of the other major milestones would be treated as one activity unless enough data were available to subdivide them into more discrete elements. Project Plan 2 would be done at the beginning of the RI/FS phase and would include the information outlined below. Note that only the milestone start and finish dates and total costs are included for activities preceding and following the RI/FS.

Project Plan 3 would be done after the FS and would include detailed schedule and cost information for the public comment/Record of Decision (ROD) process.

After completion of ROD and enforcement activities, Project Plan 4 would be prepared and would include schedule and cost data for the remedial design (RD) phase.

Finally, Project Plan 5 would be prepared to outline the remedial action (RA) activities. Again, only summary milestone and cost data would be provided for preceding activities.

EXHIBIT 3-3

Project Plan Interface with the Remedial Process

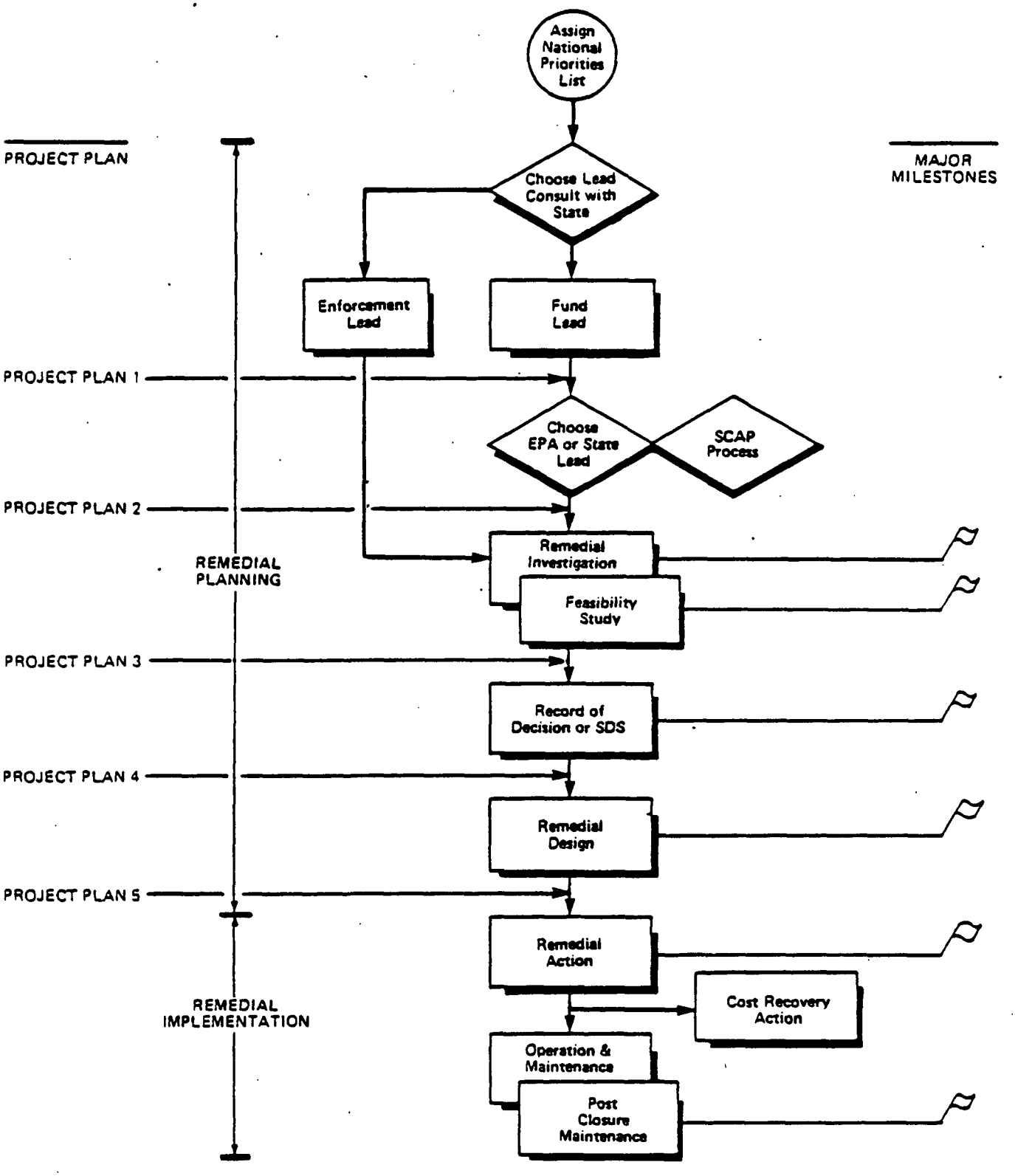
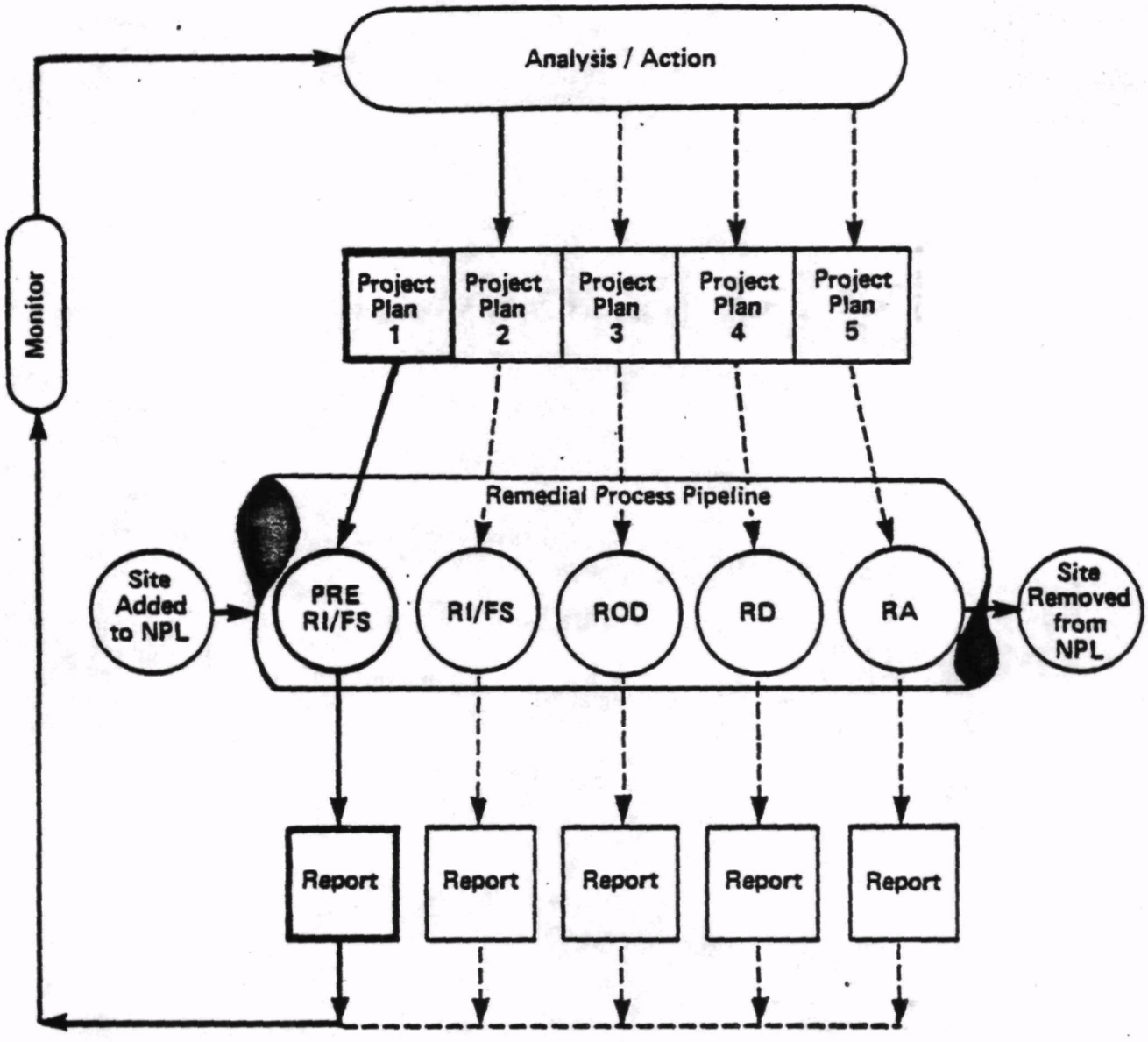


EXHIBIT 3-4

Project Planning, Monitoring, and Control Cycle



Possible Parties Involved in Developing each Project Plan

Project Plan 1	Project Plan 2	Project Plan 3	Project Plan 4	Project Plan 5
• RPM	• RPM	• RPM	• RPM	• RPM
• State	• REM CNTR	• USACE	• USACE	• USACE
• REM CNTR	• RSCC	• REM CNTR	•	•
• Enforcement Staff	•	• ORC	•	•
•	•	• Enforcement Staff	•	•
•	•	• RCRA Staff	•	•
			•	•

3.2 MISCELLANEOUS ACTIVITIES REQUIRED BEFORE STARTING RI/FS

Prior to the development of the remedial planning work assignment, there are several preliminary actions with which the RPM will be involved. The RPM should consider the duration and appropriate starting times for these actions as discussed in the following narrative. Generally, these actions should be started in the quarter preceding the quarter in which the work assignment is planned in order to allow enough time. A few of these preliminary actions are shown in Exhibit 3-1 and are included among those listed below:

- Coordination of activities with enforcement/cost recovery staff
- Input to the Superfund Comprehensive Accomplishments Plan (SCAP)
- Procurement of site access and permits
- Initiation of intergovernmental review procedures
- Coordination with community relations staff
- Initiation of remedial planning activities through a State letter of request.

This section will discuss the RPM's specific responsibilities for each of these initial activities. Exhibit 3-5, on the following pages, summarizes these responsibilities.

3.2.1 Coordination of Activities with Enforcement and Cost Recovery Staff

The RPM is responsible for assisting in the development of enforcement and cost recovery actions against potentially responsible parties (PRPs). A key determination to be made at this point is the extent to which the PRPs are going to participate in the RI/FS process. Should the PRPs be willing to perform the RI/FS, then the project should be conducted as an enforcement-lead project. If not, the project can continue as a Federal-lead project, and enforcement actions will involve three major activities:

- Sharing and receiving information about PRPs with State and EPA enforcement staff to determine the viability of an enforcement action
- Establishing site files and documenting all steps taken during the remedial response to support any future cost recovery actions
- Working closely with the REM contractor to make sure that the contractor's Regional Manager is aware of the provisions regarding enforcement, cost recovery, and the contractor's responsibilities for providing evidence and documentation.

It is important that the RPM meet with Regional enforcement staff early in the remedial planning process to provide any relevant information on the site which may be of use in developing a possible cost recovery case against a PRP. During this meeting, the RPM should also obtain clarification from enforcement staff who will have primary responsibility for collecting and maintaining documents which may become evidence in a cost recovery action. This responsibility is assumed by the RPM in some Regions, while in others it is assumed by enforcement staff.

EXHIBIT 3-5

Initial Activities

ACTIVITY	RPM RESPONSIBILITIES	REFERENCES
1. Coordination of activities with enforcement/ cost recovery staff	• Share information about responsible parties with State and EPA enforcement staff to determine the viability of an enforcement action • Establish site files and document all steps taken during the remedial response to support any future cost recovery actions • Work closely with the REM contractor to make sure that the contractor's Regional Manager is aware of the provisions regarding enforcement, cost recovery, and the contractor's responsibilities for providing evidence and documentation.	*CERCLA Enforcement Attorney's Manual*, December 1983
2. Input to the Superfund Comprehensive Accomplishments Plan (SCAP)	• Ensure that the proposed project is adequately funded by the SCAP • Provide site-specific activity and financial information and schedules to the Regional SCAP representative • Review the SCAP and initiate adjustments and/or amendments when necessary • Review current and potential SCAP schedule commitments with REM contractor.	"FY 1985 Superfund Implementation Plan," August 27, 1984
3. Procurement of site access and permits	• Support the State in obtaining site access and permits - Identify all permits that may be required - Meet with State representative to discuss strategies - Obtain legal advice from the Office of Regional Counsel • Foresee project delays and added cost attributable to limited site access or permit problems.	

EXHIBIT 3-5

Initial Activities (Continued)

ACTIVITY	RPM RESPONSIBILITIES	REFERENCES
4. Initiation of intergovernmental review procedures	• Initiate intergovernmental review of all remedial projects - Monitor SCAP to determine the time of projected obligation - Formally notify the single point of contact (SPOC) in the State of the proposed action at least one quarter prior to planned start date - Prepare written explanation and response to the State's comments • Ensure that the Federal-lead agreement package contains the following required materials: - A copy of the notification letter sent to the State - A copy of the State recommendation and the response to the SPOC - Other letters commenting on EPA's proposed action.	*State Manual*, Appendix D, February 1984 40 CFR Part 29
5. Coordination with community relations staff	• Assist in development and review of the Community Relations Plan (CRP).	*Community Relations in Superfund: A Handbook*, September 1983
6. Initiation of remedial planning activities through a State letter of request	• Review the State letter of request and provide comments to the Regional Administrator, if necessary	*State Manual*, February 1984

The collection and maintenance of proper documentation and the development of quality site files are critically important to the development and implementation of a successful enforcement and cost recovery action. In general, quality site files are also essential to successful project management. Potential evidence concerning the site and PRPs must be noted and documented before the response activity or the passage of time may obscure or destroy it. Physical evidence essential at trial must be collected and preserved appropriately. The RPM should make sure that Regional files document and support all actions taken at the site. Documentation should be sufficient to identify the sources and circumstances of site problems and PRPs, provide an accurate account of Federal costs incurred, and demonstrate actual and potential impacts to public health and welfare or to the environment. Files should include a signed copy of the Decision Memorandum. Other communications, memoranda, and relevant documents may also be included in the file, as appropriate. For additional details on record maintenance in the Superfund program, the RPM should consult:

- *Suggested Regional File Structure, Superfund Priority Sites and Priority Site Candidates*, May 1982
- Appendix E of the CERCLA Enforcement Attorney's Manual *Cost Recovery Actions Under CERCLA*, August 1983
- Appendix U of the *State Manual.*

The RPM should contact the contractor's Regional Manager to make sure that the contractor is aware of the provisions regarding enforcement, cost recovery, and the contractor's responsibilities for providing evidence and documentation. These procedures are summarized in the next chapter on RI/FS and are fully described in the *National Enforcement Investigation Center (NEIC) Policies and Procedures Manual*, May 1978 (revised February 1983).

3.2.2 Input to the Superfund Comprehensive Accomplishments Plan

The SCAP is an EPA management plan which lists site-specific Superfund financial allocations for each fiscal year. Prior to the beginning of a fiscal year, each Region must draft and submit a site-specific list of remedial activities, schedules, and estimated costs. Several months before the fiscal year, the RPM should begin work on the SCAP by estimating the costs that will be required for each site. RPMs should become familiar with the FY 1986 SCAP.

The draft SCAP undergoes a series of Regional and Headquarters reviews and revisions before finally being approved by the Assistant Administrator for the Office of Solid Waste and Emergency Response (AA/OSWER). An important RPM responsibility is providing site-specific activity and financial information and schedules to the Regional representative who compiles, adjusts, and amends the SCAP, as well as making the REM contractor aware of the SCAP commitment and schedule as they apply to the contractor.

It is important for the RPM to make sure the project funding needs are reflected in the SCAP. The RPM also is responsible for initiating SCAP adjustments and amendments when necessary. For example, as soon as it is known that the planned project budget will exceed the funds provided in the SCAP, the RPM should request an adjustment through the Regional SCAP coordinator. Adjustments are modifications to the SCAP which neither alter the number of activities originally set forth nor exceed the Regional advice of allowance (e.g., replacing one RI/FS with another of equal magnitude). Amendments are modifications that increase or decrease the "new starts" targets or exceed the Regional quarterly advice of

allowance (e.g., when an RI/FS scheduled to start during the first quarter will not begin until the second).

3.2.3 Obtaining Site Access and Permits

The primary responsibility for obtaining site access and permits rests with the State. The RPM should, however, be prepared to support the State in this effort. It is important that all necessary permits for site access be identified as early as possible through joint discussions between the RPM and the State representative so that unnecessary project delays can be avoided.

The RPM should contact the State representative who is responsible for these tasks and discuss which permits may be required for the project, as well as strategies for avoiding delays and obtaining site access. The RPM should consult with the Office of Regional Counsel (ORC) to obtain legal advice on gaining access to sites for which the State does not have authority, such as public utility, railroad, and Federal lands rights-of-way.

Site access may be delayed when approval authority for right-of-way access is located in a distant place. The RPM should be aware of this possibility and should plan accordingly. Site access, even when granted, may be limited to certain hours of the day (e.g., midnight until 5 a.m.) which may affect schedules and costs (i.e. overtime) for a project.

3.2.4 Initiation of Intergovernmental Review Procedures

The RPM is responsible for initiating intergovernmental review of all remedial projects. This involves two sets of procedures, one to be followed for States which have developed a formal review process that includes the Superfund program and one to be followed for States which have not. For further details on intergovernmental review the RPM should consult Appendix D of the State Manual. The RPM must be particularly concerned with:

- Identification of the designated State's single point of contact (SPOC) and the State's review procedures
- Formal notification of the SPOC, if one has been designated at least one quarter prior to the RI/FS obligation quarter identified in the SCAP
- Provision of appropriate review opportunity to the State within overall project requirements (e.g., submitting documents to all reviewing entities, briefing critical State staff, etc.)
- Preparing EPA's "accommodation or explanation" of the process recommendations, if one is transmitted through the SPOC. This means that EPA must do one of the following:
  - Accept the State recommendation
  - Reach a mutually agreeable solution
  - Provide the SPOC with a written explanation for not implementing the recommendation.

In the latter case, the RPM must prepare a letter for the Regional Administrator's signature, informing the SPOC of the reasons for non-accommodation; a copy of each non-accommodation should be sent to the Chief, Grants Policy and Procedures Branch (PM-216), EPA, Washington, D.C. 20460, (202) 382-5268. If the

situation is controversial, the RPM must consult with this Branch Chief before taking action.

The RPM must include the following materials pertaining to the review in the Federal-lead agreement package:

- A dated copy of the letter notifying the SPOC of a proposed remedial project
- A copy of the State recommendation, if any, and the Regional Administrator's response to the SPOC, if the recommendation differs from EPA's proposed action
- Any other letters commenting on EPA's proposed action, including opinions of reviewers differing from the State recommendations

The RPM also is responsible for summarizing the results of the intergovernmental review in the Decision Memorandum which is prepared as part of the concurrence package for each remedial response agreement.

3.2.5 Coordination with Community Relations Staff

The RPM is responsible for contacting the Regional Superfund Community Relations Coordinator (RSCRC) to provide information and assistance, if necessary, in developing and reviewing the Community Relations Plan (CRP). It is important that the RPM closely monitor development of the CRP to ensure that it is prepared in a timely manner and addresses critical site issues. If this is not done, initiation of on-site activities may be unnecessarily delayed.

3.2.6 Initiation of Remedial Planning Activities Through State Letter of Request

When EPA has lead responsibility for remedial planning activities at a site, two options are available for initiating the project:

- The State may submit a letter requesting that EPA undertake remedial planning activities at the site, or
- EPA and the State may enter into a remedial response agreement.

It is left to the discretion of Regional and State staff to select the appropriate vehicle for the project at the site in question. However, the State letter requesting EPA assistance is the simplest, most direct, and most commonly used approach. Additional guidance on preparing and executing Superfund-State remedial response agreements is provided in the State Manual and the forthcoming Superfund Remedial Response Agreements Regulation, 40 CFR Part 37.

The State letter of request is a written statement verifying that State officials are aware of the requirements of the proposed remedial activities, in a generic sense, and requesting that EPA undertake the project. A remedial response agreement between EPA and a State defines the scope of work for the project and the responsibilities of the respective parties.

In almost all cases, the selected option is the State letter of request, and the RPM's only responsibilities are to review the letter and to provide comments to the Regional Administrator, if necessary. The RPM should make certain that the letter stipulates the following:

- The State will participate in community relations activities associated with the project.

- The State will secure site access and any required permits in a timely manner.

- Representatives of the State will meet with EPA Regional personnel to discuss progress of the project and, if required, exchange site information.

- In the case of a publicly owned site, the State will pay at least 50 percent of the costs of the remedial action (10 percent for privately owned sites) at the time CERCLA-funded remedial action is undertaken at the site.

- The State will assure its assumption of all future operation and maintenance, the scope of which will be agreed upon prior to initiation of the remedial action.

If there are problems with the letter, the RPM should contact the State Project Officer (SPO) designated in the letter to discuss and resolve these problems.

3.3 RI SCOPING OF GENERAL RESPONSE OBJECTIVES

Prior to developing work plans and conducting the RI/FS, there are two crucial steps that shape the execution of these subsequent project planning and RI/FS activities:

- RI Scoping involves the collection and analysis of existing site data; this sets the basis for developing the RI sampling plan based on outstanding data needs such as the data necessary to define the "problem" and to evaluate alternative solutions

- General Response Objectives, or classes of response, should be identified in order to focus the scope of the RI/FS.

Each of the activities is discussed in detail in:

- *Guidance on Remedial Investigations Under CERCLA*, June 1985
- *Guidance on Feasibility Studies Under CERCLA*, June 1985.

These documents will hereafter be referred to as the *RI Guidance* and *FS Guidance*, respectively.

Historically, the RI/FS has often been planned and executed in a series fashion (first the final Work Plan, then the RI, then the FS), usually with a single sampling event. This approach, combined with the frequently slow turnaround for laboratory analyses, sometimes resulted in a situation where the RI was not sufficient to support the FS, causing delays and problems in technical quality. Therefore, the RI/FS planning process has been evolving to a closed-loop approach where the anticipated data needs of the FS were used in the RI scoping and determination of sample needs. The anticipated FS data requirements were determined from an early screening of alternatives, combined with a focus on those alternatives which appeared most reasonable for the site conditions. This approach has been described in the RI and FS guidance documents.

This process continues to evolve, and EPA is considering further steps to streamline the RI/FS and improve technical quality. These steps include a greater focus on early alternatives screening; multiple sampling events, each providing feedback to the RI scoping and determination of additional data needs; increased analytical alternatives, such as field screening; and possible revisions to the work authorization and planning process. These changes are referred to collectively as the phased RI/FS approach.

The phased RI/FS approach is in the pilot stages. The RPM and the SPO or Regional Project Officer should keep this emerging approach in mind as they consider the scope of the RI/FS and general response objectives. They should try to visualize the possible operable units and the technologies most likely to be applicable, and should work with the REM contractor to be sure the scope of the RI is sufficient to support an evaluation of these technologies.

RI Scoping is conducted by the remedial planning contractor. The RPM should ensure that the contractor receives all relevant site information. This may include:

- Preliminary Assessment and Site Inspection (PA/SI) data.
- Technical Assistance Team (TAT) information
- Emergency response removal action data
- Contractor files
- State files.

In addition, the RPM should inform the REM contractor of:

- Site and study area boundaries, if known
- Objectives of the study
- Schedule requirements
- Enforcement status and related implications of sample analysis techniques
- Special site or study conditions.

The RPM should also oversee RI scoping by reviewing RI scoping outputs such as:

- Site descriptions
- Site history
- Chronology of significant events
- Site maps.

Based on preliminary site information, the RPM and RPO should identify general response actions, or classes of response, without necessarily identifying specific technologies. General response actions should include the "no action" alternative as a baseline against which other actions can be measured. Examples of general response actions include the following:

- No action
- Containment
- On-site treatment
- Off-site disposal.

A more extensive list of general response classes is provided in the *FS Guidance*. The general response objectives identified will shape the objectives of the RI site characterization and the evaluation of remedial alternatives.

3.4 PROCEDURES FOR ISSUING WORK ASSIGNMENTS TO REM CONTRACTOR

All remedial response services for Federal-lead projects are obtained through the issuance of a work assignment to one of the EPA REM contractors by the EPA Contracting Officer (CO). A work assignment defines the tasks the contractor is expected to perform to complete the job. Three basic steps are involved:

- Step 1 -- Development and issuance of the work assignment package
- Step 2 -- Completion of interim work assignment activities
- Step 3 -- Approval and implementation of the contractor work plan

This section will discuss the responsibilities of the RPM for each of these steps. It will also discuss some of the problems that might be encountered in developing and issuing a work assignment and ways to avoid unnecessary delays.

3.4.1 Step 1 -- Development and Issuance of Work Assignment Package

Exhibit 3-6 illustrates the process for developing and issuing a work assignment package. As the exhibit shows, the RPM is responsible for preparing and assisting the RPO in preparing the work assignment package. The package consists of four elements:

- A work assignment cover sheet
- An interim work assignment statement of work (SOW)
- A complete work assignment SOW for the entire project
- A procurement request/requisition (PR).

In order to avoid delays, it is essential that complete work assignment packages be submitted. The RPM's responsibilities for each of these elements are discussed below.

3.4.1.1 Work Assignment Cover Sheet

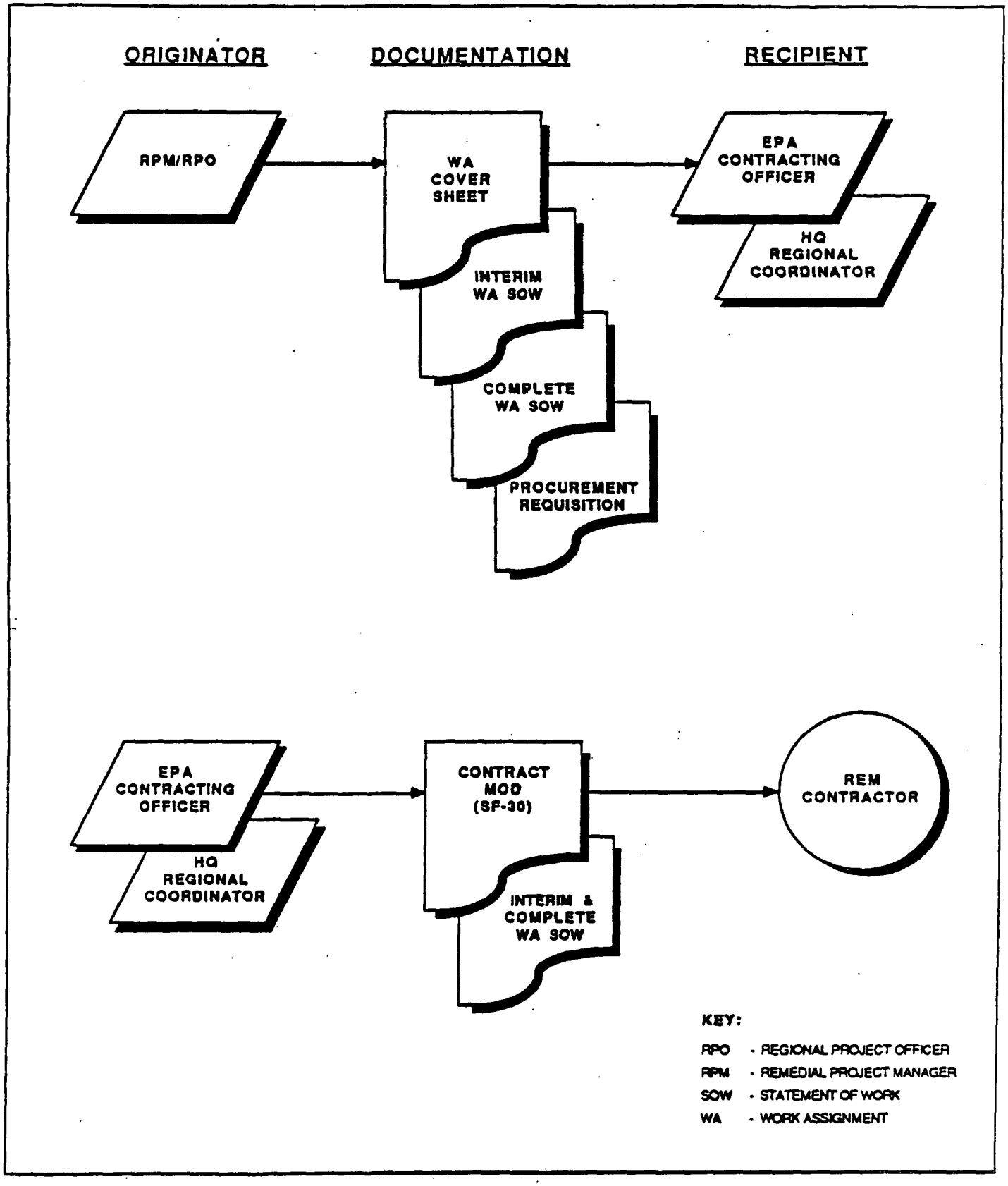
The RPM is responsible for preparing the work assignment cover sheet, which is a one-page summary of basic information about the individual work assignment. A sample cover sheet is shown in Appendix B. It includes such items as the name and address of the contractor, the contract number, the name of the site, the work assignment number, the authorized level of effort, (both for the interim authorized activities and for the complete work assignment) the period of performance, and the names, addresses, and phone numbers of the EPA CO, PO, RPM, and RPO. The names and phone numbers for current COs and POs are presented in Appendix C.

In preparing the cover sheet, it is very important that the RPM take extra care to ensure that all items are completed accurately. Incorrect or incomplete information such as a missing site name, work assignment number, or signature may cause unnecessary delays in processing and issuing the work assignment.

Most of the information necessary for completing the cover sheet is self-explanatory. However, there are two items which require further explanation: 1) the work assignment number and 2) the level of effort (LOE). The work assignment is numbered according to the system described below:

EXHIBIT 3-6

Development and Issuance of the Work Assignment Package



Sample Work Assignment Number: 01-9L33

01 denotes the first work assignment issued under the contract

9 denotes Region 9

L denotes the activity to be executed. Only the letters and numbers shown below may be used:

L = Remedial Investigation/Feasibility Study
N = Remedial Design
R = Remedial Action
S = Operation and Maintenance (O&M) and Monitoring
X = Monitoring responsible party remedial actions
9 = Remedial support and management
7 = General Superfund support and management

33 denotes the site numbered 33 in the Region.

The first two digits of the work assignment number should be left blank since these numbers are assigned sequentially by the CO. The remaining digits in the number are self-explanatory.

Information on the LOE can be obtained from the interim work assignment SOW and the complete work assignment SOW, as described below.

3.4.1.2 Interim Work Assignment Statement of Work

The interim work assignment provides the RPM with a great amount of flexibility by allowing the timely start of preliminary activities during the development, review and approval of the overall work plan. In this way the project can get off to a quick start. Also, these preliminary efforts which may include some field activities, can be used as input into the RI scoping process, thereby improving the quality of the work plan.

The RPM is responsible for preparing the interim work assignment SOW which defines the interim authorized tasks the contractor is expected to perform under the work assignment. Typically, these include such things as:

- Development of a work plan
- Collection and evaluation of existing data
- Development of a health and safety plan
- Development of a quality assurance/quality control (QA/QC) plan
- Topographic mapping
- Development of a sampling plan
- Preliminary sampling, sample screening or other field tasks.

A copy of a sample interim work assignment SOW is shown in Appendix D.

The interim work assignment SOW also defines the authorized hours to be expended on the interim authorized tasks. The RPM is responsible for providing the estimated hours for professional level of effort, to complete each of the interim authorized tasks. Exhibit 3-7 has been developed to assist the RPM in formulating these estimates. The exhibit contains estimated hours for professional LOE, based on information in existing work plans that have been developed for RI/FS

EXHIBIT 3-7

Estimates of Labor Hours Required to Complete Interim Work Assignment Tasks for Simple, Moderate, and Complex Sites*

	Simple	Moderate	Complex
Work Plan Preparation	100-160	120-400	360-700
Collection and Evaluation of Existing Data	40-80	60-160	120-200
Health and Safety Plan Preparation	30-60	50-100	80-200
QA Project Plan Preparation	30-60	60-120	100-180
Topographic Mapping	40-80	80-120	100-150
Sampling Plan Development	80-100	100-200	200-300
Program Management/Community Relations	40-160	120-200	160-320

* Estimates are based on data from previous experience with performance of similar tasks.

activities at sites that can generally be classified as either "simple," "moderate," or "complex", with regard to the magnitude of the required remedial response activities. The RPM should use these estimates as guidance only, rather than as strict upper or lower limits for accomplishing a particular activity.

3.4.1.3 Complete Work Assignment SOW

The RPM is also responsible for developing the complete work assignment SOW, which defines the remaining tasks the contractor is expected to perform under the full work assignment. It should contain the following elements:

- Site background
- Nature and extent of problem
- Summary of work accomplished to date
- Purpose of the work
- Description of the services to be performed
- Required deliverables
- Reporting requirements

The SOW should be sufficiently detailed to define what must be done under the activity, yet not so detailed as to reduce the contractor's flexibility in developing an effective work plan to respond to EPA's needs. To assist the RPM in developing activities and tasks for the complete work assignment SOW, the RPM should refer to Appendix A of EPA's *Management Plan and Operating Procedures: Remedial Planning/Field Investigation Team Zone Contracts*, OERR, October 1982. This appendix provides a summary of activities/tasks that may be performed by any of the existing REM contractors and can be used as guidance in developing the activities/tasks to be included in the complete work assignment SOW. However, the coverage of individual REM contracts may vary somewhat, so the RPM should alternately refer to the appropriate REM contract to ensure that the activities specified in the work assignment SOW are within the scope of the contract SOW. Questions may be addressed to the HQ Regional Coordinator or PO.

3.4.1.4 Procurement Request/Requisition

The PR (EPA Form 1900-8) is used to order the specific tasks and activities defined in the interim and final SOWs. The RPM is responsible for preparing the PR and obtaining all necessary approvals and signatures. The only part of the PR which the RPM will need assistance in preparing is the section on accounting information (account number, appropriation, and Document Control Number). The RPM should contact the Regional Financial Management Division for this information. A sample copy of a PR is shown in Appendix E.

3.4.1.5 Issuance of Work Assignment Package

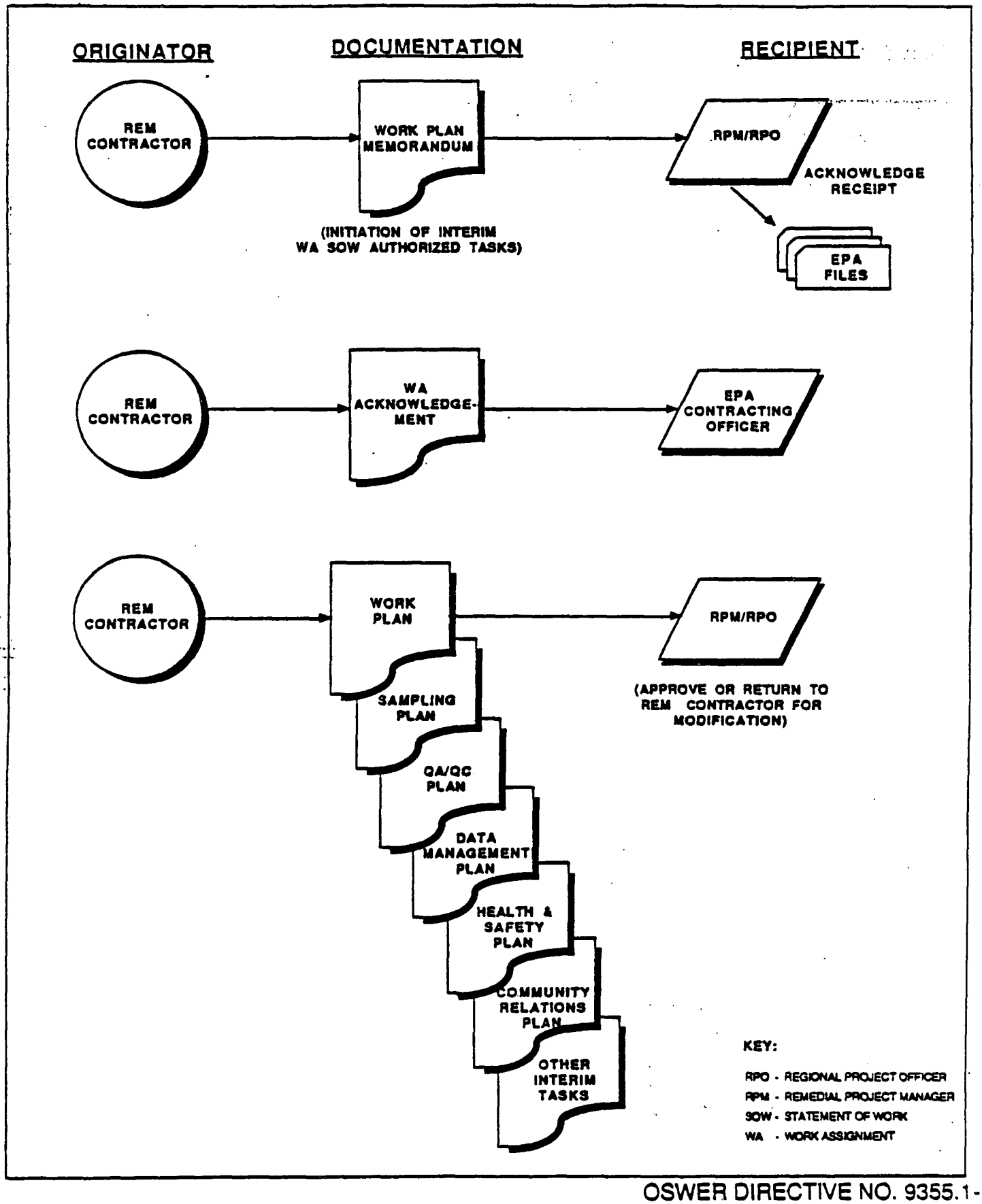
When the four elements of the work assignment package are all completed, the RPM is responsible for sending the package to the Contracting Officer with copies to the HQ Regional Coordinator and HQ PO. If the CO or PO has any questions concerning the package, the RPM is responsible for resolving these questions. The CO will then issue the work assignment to the specified REM contractor.

3.4.2 Step 2 - Completion of Interim Work Assignment Activities

Exhibit 3-8 illustrates the process followed in completing interim work assignment activities. As the exhibit shows, the RPM is responsible for reviewing the work plan memorandum which is developed and submitted by the REM contractor. As

EXHIBIT 3-8

Completion of Interim Work Assignment Activities



described in Section 3.4.1.2 above, the work plan memorandum describes the scope of work for the interim work assignment level of effort and cost estimates for completing the interim work assignment, and a schedule of interim work assignment SOW deliverables.

The contractor is responsible for submitting the work plan memorandum within 20 days of receiving the work assignment. It is EPA's intent that the work plan memorandum process be quick and simple. In most cases, the memorandum should be submitted in less than 20 days. The RPM should maintain frequent contact with contractor personnel who are responsible for developing the work plan memorandum to make sure that they receive any inputs needed and complete the work plan memorandum within this 20 day period. The RPM should arrange a meeting with the contractor's Regional Manager a few days after the contractor has had an opportunity to review the interim work assignment SOW. At this meeting, any outstanding concerns regarding the work assignment should be discussed and resolved. The RPM should also make certain that the contractor has initiated work on the interim authorized tasks while the work plan memorandum is being prepared. The contractor should be reminded that work is to begin immediately on all interim authorized tasks such as development of the QA/QC plan and the data management plan.

When the work plan memorandum is received, the RPM should make sure that it includes the following components:

- A cost estimate for interim activities detailing effort by level and discipline, travel costs, other direct costs, support services, and any subcontracting
- A schedule for all deliverables to complete the interim work assignment, including the work plan.

The RPM should pay particular attention to the labor hours and costs proposed by the contractor to make sure that they do not vary substantially from those provided in the interim work assignment authorization. If they do vary by 50 percent or more over the interim estimate, the RPM should notify the contractor's Regional Manager to discuss and resolve these differences. If the RPM agrees with the contractor that an increase in labor hours and/or costs above the amount provided in the interim authorization is justified, the RPM must obtain written approval from the CO.

Following review of the work plan memorandum, the RPM is responsible for providing to the contractor written acknowledgement of receiving the work plan memorandum and for sending copies to the HQ Regional Coordinator and PO. This review should take no more than five work days.

After the work plan memorandum acknowledgement is returned to the contractor, the RPM should remind the contractor's Site Manager that the draft work plan, described in the following section, for the complete work assignment should be submitted to the Regional office as soon as it is completed, even though the remaining authorized interim tasks may not yet be completed. This will expedite approval of the work plan and initiation of tasks under the complete work assignment SOW by allowing Regional review to commence as soon as possible.

3.4.3 Step 3 - Approval and Implementation of Contractor Work Plan

The contractor is responsible for submitting to the Regional office several interim SOW deliverables according to the schedule contained in the work plan memorandum. These may include, but are not limited to, the following:

- Work plan
- Health and safety plan
- Quality assurance project plan
- Site sampling plan
- Community relations plan.

The most significant of these is the work plan, which describes how the contractor plans to accomplish all the activities and tasks outlined in the complete work assignment SOW.

Before proceeding to the administrative mechanics of work plan approval, it is important to discuss the process of work plan review. This is because the quality of the work plan is crucial to the successful completion of the RI/FS.

The objective in reviewing a work plan is to obtain a plan by which a timely, least cost, high quality RI/FS can be accomplished. Note that most of the tasks in the RI/FS can be examined from a standpoint of technical quality, budget, and schedule. These three standpoints form an excellent basis from which to evaluate the work plan.

Some technical considerations include: the purpose, scope, and methodology for each task; the proposed quantity and distribution of ground water, surface water, soil, air, and other samples; the spacing and depth of soil borings and monitor wells; types of analyses proposed, looking ahead to technologies that may be evaluated; use of bench and pilot scale studies; the use of ground water or other models; and the general relationship between the pathways to receptors, the likely alternatives, and the scope of the RI/FS. While reviewing the technical aspects of the plan, the emerging "phased RI/FS" approach -- the use of multiple sampling events to provide feedback for the determination of further sampling needs, increased use of analytical alternatives such as field screening, and a greater focus on early alternatives screening -- should be kept in mind.

When examining the work plan from the standpoint of budget, consideration should be given to overall cost, unit costs, and quantities of such items as well footage, the use of equipment and other resources, and the proposed level of effort for each task. Cash flow scheduling, cost control, and reporting measures should be reviewed to see if cost overruns can be detected early on.

The schedule and organization of the project should be reviewed to ensure that task durations seem reasonable, no resource conflicts exist, the sequence of tasks seems appropriate, and events are scheduled in appropriate seasons. For instance, field sampling should probably not be scheduled for the middle of a New England winter nor should high ground water table conditions be sought in August. Sampling may also be coordinated with the seasonal variations of the Contract Laboratory Program (CLP) workload. It is especially important at this point to be aware of which tasks are on the critical path and give those tasks due consideration. The REM contractors sometimes use the critical path method (CPM) when planning the RI/FS. The CPM output could be a useful tool for review of the work plan, if it is available. Finally, the RPM should pay special attention to the presence of periods for the review of deliverables and milestone review meetings.

The previous paragraphs presented some of the aspects which should be considered during the review of the work plan. The RPM's role during the work plan review is discussed here. The RPM's primary role during the work plan review is that of a focal point and coordinator. Copies of the draft work plan are generally sent out to technical specialists within EPA such as geohydrologists, toxicologists, chemists, and biologists for review within their respective areas of specialization. The

actual approach may vary from Region to Region or from site to site, but the principle is valid -- the technical aspects of a multidisciplinary study plan should be reviewed as much as possible by a multidisciplinary team. In this way, the RPM has access to a larger pool of knowledge and experience.

The RPM also must coordinate the review with other involved parties within and outside EPA. For instance, EPA enforcement, community relations, air program, laboratory support, and legal staff should provide input. Also, in most cases, one or more State agencies provide some comment at the work plan review stage. Finally, the USACE should be brought into the review process at this time. This is done using seed money funded through a technical assistance IAG.

It is important to keep the review moving and this becomes especially difficult when outside agencies or other groups within EPA are involved because they are not directly under the RPM's influence, authority, or control. The RPM should establish a reasonable review schedule and see that it is met. Ensuring that other participants adhere to the schedule will require a combination of negotiating skill and diplomacy. The work plan review process typically takes about 120 days. EPA would like to see this duration reduced to 90 days.

The RPM may also provide direct review of certain aspects of the work plan such as budget, scheduling, and "specific" or "selected" technical areas. One approach to doing this is to mentally review the project and try to anticipate problems based on personal experience. For the less experienced RPM, another approach would be to learn from past experience on other RI/FSs. Comparisons can be made by looking at actual durations of similar tasks and by calculating unit quantities such as soil borings/acre, ground water samples/cubic meter of aquifer, dollars/foot of well installed. In this way, the RPM can become familiar with how costs, appropriate amounts of sampling, and which approaches and methodologies work under various circumstances. Some conclusions as to the relationship between sample intensity, methodology, and the quality of the RI/FS may be tentatively drawn from those RI/FSs from which RODs have been developed,.

Another possible approach to the review of the work plan is that of a Regional team of experienced RPMs, technical specialists, and others who convene for the review, bringing to the effort experience and insights derived from past and current RI/FSs. An early site visit for one or more of the members is recommended.

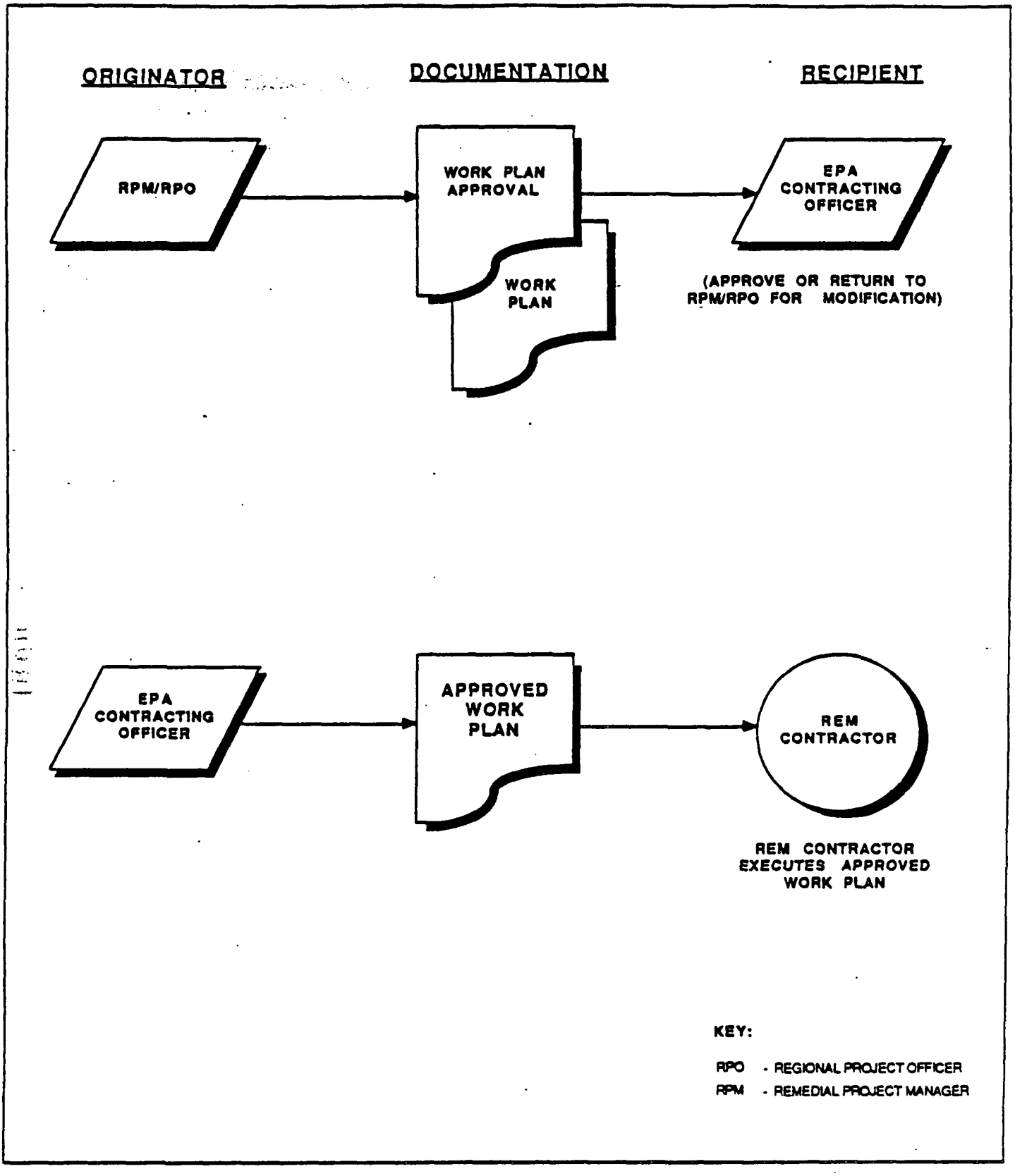
Finally, for very complex or extraordinary sites, a Delphi review process can be used to supplement the normal work plan review. In the Delphi review, the Delphi manager circulates copies of the work plan to members of a review panel especially selected for the site in question. These panel members can be EPA staffers or contractor personnel. The panel members independently review the document and submit comments to the Delphi manager who then generates a consensus report. The Delphi review is similar to the review done by the RPM, except that a wider pool or reviewers is involved.

Exhibit 3-9 illustrates the process for approval and implementation of the contractor work plan. As shown, the RPM is responsible for receiving and reviewing the work plan and then forwarding it through the Regional Project Officer (RPO) to the EPA CO for approval, if it is judged to be satisfactory in meeting the requirements of the complete work assignment SOW.

If the work plan is acceptable, the RPM should forward it to the RPO for review and approval. The RPM should also sign a work plan approval form (see Appendix F for an example) and forward it along with the work plan to the RPO. The work plan approval form is initiated by the contractor.

EXHIBIT 3-9

Approval and Implementation of the Contractor Work Plan



If the RPO approves the work plan, he will sign the work plan approval form and forward it either directly to the EPA CO or to the contractor's Regional Manager who will, in turn, forward it to the CO through the contractor's Zone Project Management Office. In the case of the REM II contractor, the work plan approval form is forwarded to the National Program Office. The exact procedures followed by the RPO will vary depending on the particular contractor involved. The RPO should also forward a copy of the work plan approval form to the PO.

If the RPM or RPO disagrees with the work plan, the RPM will contact the contractor to explain the reasons for the disagreement and to discuss what modifications in the work plan will be necessary to correct the problems. Once the modifications are completed, the RPM and RPO will both sign the work plan approval form and the RPO will submit it, along with the work plan, either to the EPA CO or to the contractor's Regional Manager.

In reviewing the work plan, the RPM must make sure that the total funding specified in the plan is within that of the original PR. If it is not, a PR for the incremental costs must accompany the work plan approval form, or only partial approval can be provided pending an increase in funding. A work assignment amendment form must also be recieved from the contractor and passed on. Any increases in funding in the PR must also be consistent with SCAP resource ceilings.

If the EPA CO has any questions about the work plan, the RPM should be prepared to address these questions in order to make the work plan acceptable. In those instances where modifications to the work plan are necessary, the RPM should discuss the suggested revisions with the contractor.

• • • • •

This chapter has provided a description of the RPM's roles and responsibilities for planning the RI/FS, processing a work assignment, and beginning preliminary work on the RI/FS. The next chapter, Chapter 4, discusses the RPM's duties in overseeing the execution of the RI/FS, leading to the selection of a remedy, which is covered in Chapter 5.

4. REMEDIAL INVESTIGATION/FEASIBILITY STUDY

The remedial investigation (RI) and feasibility study (FS) are interdependent processes. The activities conducted during the RI and FS generally are performed concurrently, with each project influencing the execution of the other. The RI largely involves data collection, data analysis, and site characterization, while the FS emphasizes alternatives evaluation and decision-making.

During the Federal-lead RI/FS project, the remedial planning (REM) contractor conducts the various activities necessary to characterize the hazardous waste site and to evaluate alternatives to remedy the situation. The RPM oversees the REM contractor to ensure that all RI/FS activities are conducted in an effective and timely manner, and in accordance with relevant EPA policies and regulations. While the previous chapter emphasized the activities required to plan and initiate an RI/FS project, this chapter describes the RPM's duties required to ensure that the RI/FS is completed as specified in the work assignment statement of work (SOW) and approved work plan. This chapter is divided into four major sections dealing with RPM activities during the RI/FS:

- Ongoing project management
- Site characterization
- Alternatives screening and evaluation
- Review and approval of the RI/FS Report(s).

The chapter concludes with a discussion of the RPM's responsibility to carry the results of the RI/FS project through the Record of Decision (ROD) stage (Chapter 5) and on to the Remedial Design (RD) phase.

Exhibit 4-1 depicts the concurrent activities of the RI and FS processes. Detailed information on the RI and FS processes can be found in two key guidance documents:

- *Guidance on Remedial Investigations Under CERCLA*, June 1985 (called *RI Guidance*)

- *Guidance on Feasibility Studies Under CERCLA*, June 1985 (called *FS Guidance*).

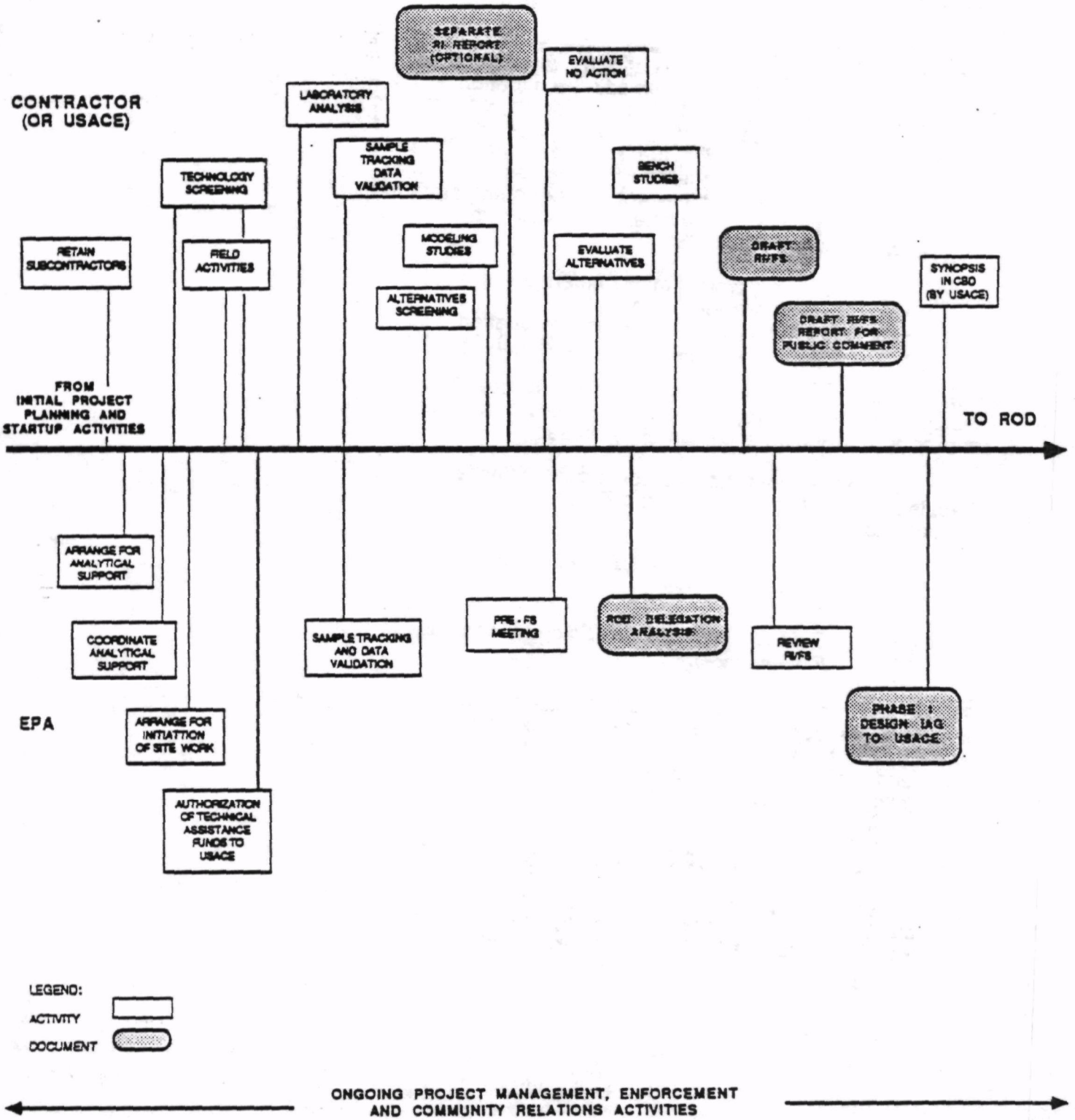
These documents provide detailed assistance for the overall RI and FS processes. Individual site conditions govern the extent of data collection and analysis for each RI and FS activity, and review of specific options is beyond the scope of this handbook. The reader is encouraged to rely heavily on the *RI Guidance* and *FS Guidance* in conducting this phase of the remedial response project.

4.1 ONGOING PROJECT MANAGEMENT ACTIVITIES

Oversight and management of a Federal-lead RI/FS project require a number of project management activities. Many are common to all phases of the remedial process. Those for the RI/FS are outlined below.

EXHIBIT 4-1

Remedial Investigation/Feasibility Study (RI/FS)



4.1.1 Technical Progress Oversight

Oversight of technical progress is one of the main responsibilities of the RPM during performance of the RI/FS. The RPM should firmly establish lines of communication with the contractor and should identify key project milestones. The RPM should monitor and guide the progress of the RI/FS. The attainment of project milestones can be monitored in the following ways:

- Conduct site visits
- Review progress reports, payment vouchers, and work products
- Communicate frequently with the contractor.

The RPM should attempt to anticipate problems, especially those affecting major milestones. Should problems occur, the RPM should work with the contractor to develop solutions. Also, the RPM should inform the contractor of changes in EPA policy that impact performance of the RI/FS.

Some control by EPA and the RPM over contractor performance is made possible through the Award Fee process. By keeping ongoing records of contractor strengths and weaknesses during performance of RI/FS activities, the RPM develops the basis for Award Fee determinations. Description of the Award Fee process is provided in EPA's *REM II and REM/FIT Amended Contract Award Fee Evaluation Plans*, July 1984.

4.1.2 Preparation and Processing of Work Assignment Amendments

Work assignment amendments are generally required if there are major changes in the technical direction, the schedule, or the amount of resources required to complete the project. Examples include the following conditions:

- The objectives of the project are to be changed (e.g., from an evaluation of source control alternatives to an evaluation of management of migration measures).
- The amount of assistance is to be changed.
- The scope of the project is to be substantially changed (e.g., to characterize a larger site area than originally approved).
- A rebudgeting of indirect costs is needed to absorb increases in direct costs.

The RPM should use progress reports and meetings to track the technical and financial status of the project. In this way, the RPM can anticipate the need for work assignment amendments and avoid project delays.

The RPM has the following work assignment amendment responsibilities:

- Meet with the contractor to discuss potential work assignment amendments
- Seek innovative ways to control costs
- Ensure that the work assignment is consistent with the approved Superfund Comprehensive Accomplishments Plan (SCAP)

- Approve and process the contractor Work Assignment Amendment Package, and forward the package to the EPA Regional Project Officer (RPO)

- Maintain the signed copy of Work Assignment Amendment Package in the Regional project file.

The procedures for preparing and processing a work assignment amendment are shown schematically in Exhibit 4-2. In general, a work assignment amendment request should be initiated for each modification needed. However, in the case of minor modifications, several may be combined into one amendment.

4.1.3 Coordination with State

Throughout the RI/FS process, the RPM should coordinate with State officials to inform them of site progress and to receive their input. For example, the RPM should:

- Modify appropriate agreements with the State when there are significant changes in the scope of work

- Submit periodic progress reports for State review

- Invite State officials to participate in site visits

- Oversee State involvement if the State has entered into a Cooperative Agreement for management assistance

- Coordinate State review of RI/FS Reports

- Ensure the State's involvement with community relations activities.

As the RI/FS process is completed, the RPM must initiate the intergovernmental review process and prepare to amend appropriate agreements with EPA which relate to the next phase of the cleanup. For further information on the State's involvement in Federal-lead remedial projects, consult the *State Manual*.

4.1.4 Data Reporting and Record Keeping

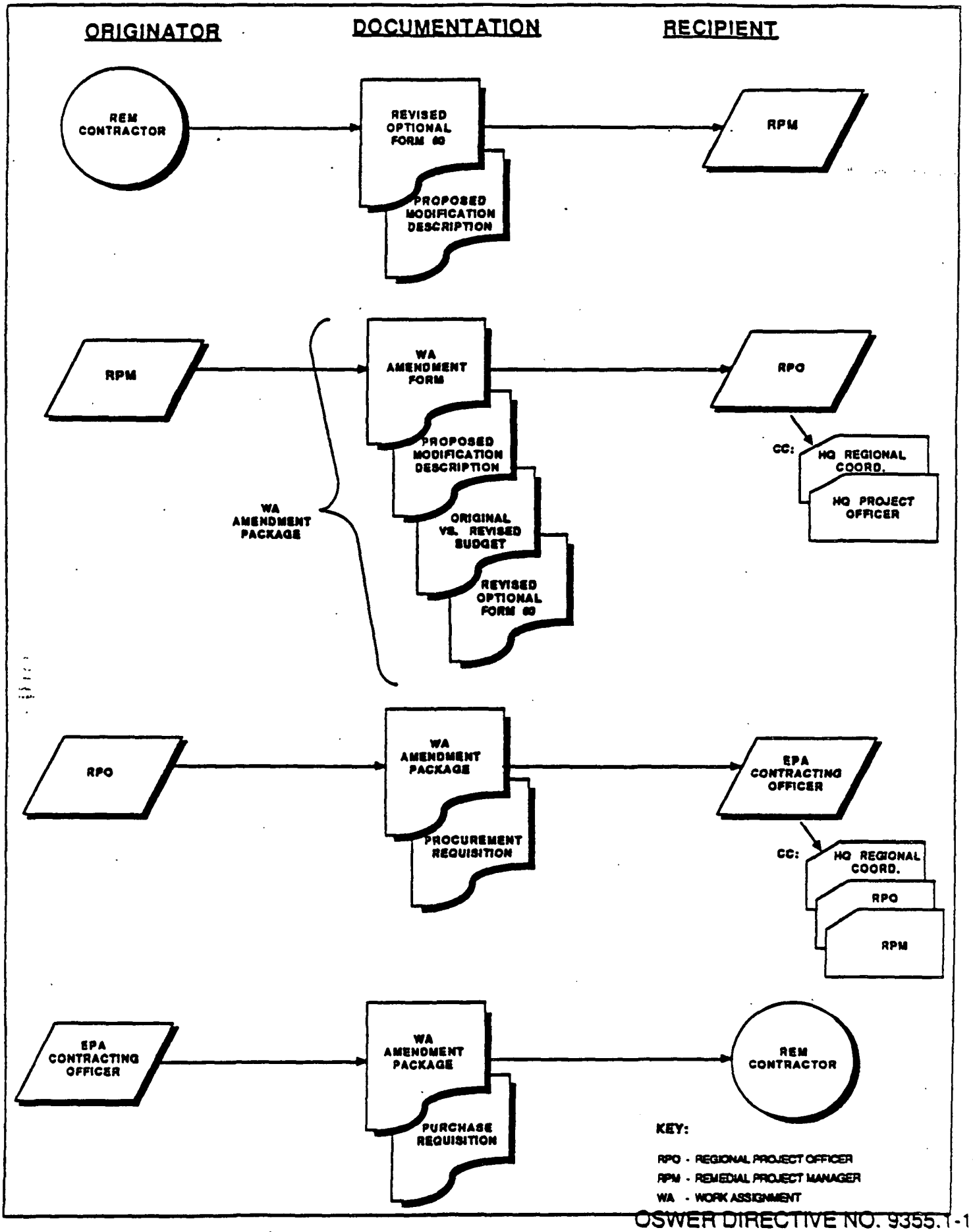
Throughout the RI/FS process, the RPM is responsible for maintaining thorough, accurate records. These assist project management and provide documentation for future cost recovery actions, as well as possible external audits. Also, the RPM may need to supply information for updating EPA's automated data management systems.

The RPM must maintain site files, including documentation that will support cost recovery actions. The type of information needed for cost recovery is described in *Cost Recovery Actions Under CERCLA*, September 1983. This manual also presents a suggested file structure. Examples of documentation relevant to the RI/FS that should be maintained include:

- Contractor work plans and progress reports
- On-site logs, notes, and manifests
- Analytical laboratory reports
- RI reports
- Alternatives evaluation reports.

EXHIBIT 4-2

Work Assignment Amendment Procedures



For additional assistance in maintaining documentation, the RPM should consult the data management chapter of the *RI Guidance* and Appendix U of the *State Manual.* At the completion of the RI/FS, EPA Regional enforcement staff members may ask the RPM to assist in preparing a Cost Recovery Summary.

Periodically, the RPM must become involved with reviewing or updating information developed for use in one of EPA's automated data systems. The following are the major systems of concern, along with relevant RI/FS input/review requirements:

- CERCLIS (CERCLA Information System) -- combines the Emergency and Remedial Response Information System (ERRIS) and Project Tracking System (PTS) and is used to track major accomplishments at candidate and actual National Priorities List (NPL) sites. Activity start and completion dates for RI/FS must be entered. The RI/FS start date is when the contractor's work plan is approved. The RI completion date is when the final RI Report is submitted to EPA, or when validated data are received from the contractor. The FS completion date is when the final FS Report is released to the public. (When RI/FS is funded as one project, there is one completion date.)

- SCAP -- is the official information system from which the Assistant Administrator for the Office of Solid Waste and Emergency Response (AA/OSWER) identifies funding needs for proposed Superfund activities. Activities must be on the approved SCAP to receive funding. The RPM should coordinate with the Regional SCAP contact to ensure that information provided is accurate and adequate for determining site funding needs. Particular attention must be given to ensure that RD activities are identified on the SCAP before the estimated RD start date.

- FMS (Financial Management System) -- is used by the Office of Emergency and Remedial Response (OERR) Funds Control Center to prepare monthly and ad hoc financial status reports on the remedial program. RPMs may be asked to review these reports for accuracy.

Additional guidance is available for each of the above systems. Regional contacts or Headquarters staff responsible for each data system can supply these documents and can provide additional guidance as needed.

4.1.5 Coordination with Other Regional Staff

Throughout the course of the RI/FS, the RPM must maintain close contact with both Regional enforcement and community relations staffs. The RPM's role is that of a project advocate and facilitator. Coordination with enforcement staff can involve the following actions:

- Transmit any information discovered during the RI/FS that helps identify potentially responsible parties (PRPs)

- Review schedules of PRP negotiation windows

- Assist with the preparation of Notice Letters to PRPs

- Ensure maintenance of any confidential information obtained during the RI/FS

- Participate in negotiations with PRPs following completion of the RI/FS.

the concurrent FS. Typically, site characterization involves collecting existing data concerning a site (part of RI scoping), collecting new data through field studies, and following up initial field studies with additional investigations, if required, to complete site characterization.

The RPM must actively oversee site characterization activities to the extent necessary to be confident that the contractor meets the objectives of the project. The RPM also must be assured that all activities are conducted in accordance with approved work plans and with EPA policy and regulations.

4.2.1 RI Scoping

RI scoping involves gathering and reviewing all existing site data to characterize the site and to determine additional data needs, including the need for bench or pilot studies. RI field studies are then designed to collect information to fill these gaps. RI scoping is conducted prior to work plan development. The RPM's responsibilities during RI scoping have been discussed in Chapter 3 of this handbook.

4.2.2 Field Activities

The RPM should take an active role in oversight of field activities. Periodic site visits should be conducted to observe such activities as well drilling, sample collection, and sample shipment. Field activities must follow approved work plans, particularly the quality assurance project plan (QAPP) and site safety plan. The RPM can obtain technical support for overseeing field activities from the Environmental Service Division (ESD).

Three common problems which cause project delays during this phase of the RI are:

- Inadequate experience in contractor or subcontractor personnel impacting technical performance
- Timeliness of analytical support process
- Sufficiency of data to support decisions on remedial action.

Discussion of these problems is presented below along with suggestions for reduction or alleviation.

Poor technical performance by the REM contractor and subcontractors due to inexperienced personnel can delay the RI/FS. For example, inexperience with sampling techniques, sample quality assurance methods, and chain-of-custody procedures can result in "lost" or unusable samples. Typical sampling errors include:

- Contaminated samples
- Non-homogeneous sample matrices
- Incorrect sample packaging for transport
- Insufficient sample volumes
- Insufficiently labeled samples
- Incomplete sample traffic reports.

If the RPM suspects that sampling is being done improperly, the RPM should immediately contact ESD for support and consultation.

Well drillers who normally install water supply wells or geotechnical drillers who perform soil borings for foundation studies may cause delays because they are

Coordination with community relations staff during the RI/FS may involve the following activities:

- Participate in public meetings
- Develop fact sheets
- Schedule and coordinate public comment period following FS draft report completion.

The RPM should also maintain close coordination with the Office of Regional Counsel (ORC) and other appropriate regional staff. At sites where a removal action has taken place, coordination with emergency response personnel is crucial. (OERR is currently developing guidance for remedial projects requiring an emergency response.)

4.1.6 U.S. Army Corps of Engineers Technical Assistance

For Federal-lead sites, the U.S. Army Corps of Engineers (USACE) will provide technical assistance to EPA, upon request, during the RI/FS. Assistance from the USACE during the RI/FS serves two purposes:

- Assures that proposed remedial actions can be engineered and constructed
- Assures a smooth transition of the site to the design and construction stages, which the USACE typically leads.

Types of review assistance activities that may be requested include:

- Review of work assignments or subcontracting packages
- Participation in the FS
- Participation in project meetings
- Technical review of reports, plans, and specifications.

The USACE also may become much more involved in projects that require specialized technical expertise, such as those projects that involve dredging.

Technical assistance from the USACE is obtained through Interagency Agreements (IAGs). Generic IAGs for technical assistance during RI/FS projects should be executed by the Regions with the USACE Missouri River Division (MRD). To obtain technical assistance for a specific RI/FS project, the RPM must prepare and issue a site-specific work assignment to USACE-MRD under the established IAG. Current EPA procedures and sample work assignment forms are provided in Appendix G.

4.2 SITE CHARACTERIZATION

Site characterization is one of the main functions of the RI process. The objective of site characterization is to collect and analyze sufficient information to determine the need for remedial actions, the extent of any remedial action, the feasibility of remedial action alternatives, and conceptually plan the remedial action. Site characterization activities provide the data to support the evaluations made in

unfamiliar with the special precautions, requirements, and health and safety aspects of hazardous waste work. The RPM should review the REM contractor's plans concerning subcontractors to ensure that qualified assistance is used at the site.

The analytical support process is another potential cause of delay during site characterization. The process includes appropriate selection of data needs (data quality objectives), review and approval of sampling plans and QAPPs, the analysis of samples, and the validation of results. The RPM, as the project facilitator, can take certain actions to reduce or work around these delays:

- Coordinate closely with the ESD regarding the timing for review of sample plans and QAPPs, the schedule for sampling, the availability of CLP services, and the responsibility and schedule for validation of data.

- Implement the concept of data quality objectives (EPA currently is preparing the *"Data Quality Objectives and Sample Plan Guidance,"* which will discuss alternative analytical approaches) to tailor the number of samples, the types of analyses, and the level of quality assurance/quality contro (QA/QC) to the decisions that must be made.

Other actions the RPM can take include:

- Review sampling plans for the proposed approach and, for example, request specific fractions rather than full priority pollutant scans, when appropriate.

- Encourage the use of field screening and mobile laboratory units.

- Utilize laboratories outside of the Contract Laboratory Program (CLP) - REM, in-house or subcontract -- when needed to meet particular project requirements.

The discovery near the end of the FS that the data developed during the RI are insufficient to support an evaluation of the alternatives can cause significant project delays. This situation is most likely to occur when a single sampling event is used, and the sample turn-around time is great. This situation also can result from the taking of too few samples in an attempt to reduce RI costs. In either case, not fully knowing the extent of contamination or finding some last minute surprise can have serious impacts on the FS schedule. For this reason, the use of the phased RI/FS approach is strongly encouraged. This emerging approach, already mentioned in Chapter 3, can be briefly described as: (1) early screening of alternatives to help define data needs and the scope of the RI, (2) multiple sample events, each contributing subsequent definitions of data needs, and (3) the use of analytical alternatives (such as field screening) to more quickly determine subsurface conditions.

The *"Data Quality Objectives and Sample Plan Guidance,"* currently in preparation, will discuss alternative analytical approaches.

4.2.3 Supplemental RI Data Needs

The RPM must carefully review the data and meet with the REM contractor at the earliest opportunity to determine the need for further sampling. This review process should be initiated at the sample collection or field analysis stage. If additional work is needed, it must be done with minimal overall schedule impact. The RPM and the contractor must determine the following:

- Are the validated data sufficient to meet the objectives of the RI?
- Are the validated data adequate for purposes of remedial alternatives evaluation?
- Are the validated data sufficient to support enforcement or cost recovery actions?

If not, the RPM and the REM contractor must develop an approach for collecting additional data to complete the site characterization.

It also may be determined that bench studies are necessary to further characterize a site or to evaluate potential remedies that have survived the screening process. (Bench studies also may be conducted as part of the RD.) If bench studies are required, the contractor must develop a tentative experimental plan as part of the RI statement of work. In some cases, the bench study work plan cannot be finalized until some RI data are available. Also, the bench studies generally should be limited to alternatives that have survived the screening process. Objectives of the study must be clearly specified. The RPM should coordinate the review of the experimental plan to ensure that the following are present:

- Clearly defined set of objectives
- Detailed work plan by task
- Completion schedule
- Labor-cost estimates
- QAPP
- Health and safety plan
- Data management plan.

4.3 ALTERNATIVES SCREENING AND EVALUATION

Alternative screening and evaluation is the foundation of the feasibility study portion of the RI/FS. Using site-specific data from the pre-RI and the RI activities, remedial alternatives within the general response categories* are developed and evaluated in terms of:

- Technical feasibility
- Environmental impacts
- Public health impacts**
- Institutional impacts
- Costs.

The screening of alternatives is a multi-stage process that begins early during the course of the RI. The reader is encouraged to review the more detailed discussions in the *RI Guidance* and the *FS Guidance*.

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* For a discussion of general response categories, consult the *FS Guidance* and Chapter 3 of this handbook.

** An enforcement-lead FS also must include an Endangerment Assessment, which is similar to a public health impact analysis, but involves more formal documentation needed to support an enforcement case; consult the *FS Guidance* for further information.

The RPM provides input at several points in the alternatives screening and evaluation process in order to ensure that a reasonable selection of alternatives is considered. "Reasonable" implies not looking at the whole universe of alternatives to the detriment of the cost and schedule of the FS, while at the same time not examining so few alternatives that viable options are not considered. Generally, the RPM provides input to the process during:

- The RI scoping and development of response objectives
- The RI, as data become available
- The pre-FS meeting, where the RI results are reviewed and the FS scope is established
- The FS, as alternatives are evaluated in detail.

The RPM needs to develop a sense of what technologies are currently available and appropriate for application at the site, while also staying knowledgeable of the emerging technologies that are becoming available. The RPM also must be cognizant of EPA policy changes that may affect technology selection.

4.3.1 Technical Oversight During Feasibility Study

The RPM must ensure that feasible remedial alternatives are given proper consideration, are presented in a fashion amenable to decision-making, and are evaluated on schedule by the contractor. The RPM should arrange for periodic meetings with the contractor, State, and possibly the USACE, (including the pre-FS meeting) to discuss progress, to identify types of alternatives, to highlight possible issues, to plan the RI/FS review, and to identify any additional data needs, including bench and pilot studies.

4.3.2 Compliance with Other Environmental Statutes

As a general rule, the Agency's policy is to *attain* or *exceed* applicable or relevant environmental and public health standards in CERCLA response actions unless specific mitigating circumstances exist. [See "*CERCLA Compliance With Other Environmental Statutes*," October 2, 1985, and the *National Oil and Hazardous Substances Pollution Contingency Plan (NCP)*, November 20, 1985.] Additionally, other relevant standards, criteria, advisories, or guidance *must be considered* in fashioning CERCLA remedies. The RPM must be aware of new policy developments. This can be done by reviewing ROD abstracts and updates, and by communicating with the Headquarters Regional Coordinator.

In general, as part of the FS at least one alternative for each of the following considerations should be evaluated within the requirements of the *FS Guidance* and be presented to the decision-maker:

- Alternatives for treatment or disposal in an off-site facility, as appropriate (See "*Procedures for Implementing CERCLA Delegations for Off-site Response Actions*," May 6, 1985).
- Alternatives which *attain* applicable or relevant and appropriate Federal public health or environmental standards.
- As appropriate, alternatives which *exceed* applicable or relevant and appropriate public health or environmental requirements.

- Alternatives which do not attain applicable or relevant and appropriate public health or environmental standards but will reduce the likelihood of present or future threat from the hazardous substances and that provide significant protection to public health and welfare and the environment. This must include an alternative which closely *approaches* the level of protection provided by applicable or relevant and appropriate requirements.

- A no action alternative.

The RPM is responsible for ensuring that the FS addresses each of the above categories of alternatives. It may be necessary to inform the REM contractor of applicable or relevant and appropriate standards. State representatives should advise the RPM of any State requirements or standards as well.

In situations where the chosen remedial alternative does not attain or exceed the applicable or relevant standards, the FS, and ultimately the decision documents, must state the reasons. The RPM must ensure that this requirement is addressed and should seek advance concurrence from AA/OSWER for a waiver from consistency with other environmental laws.

4.3.3 ROD Delegation

On March 3, 1985, the Administrator signed Superfund Delegation Authority (14-5) setting forth the authority for the AA/OSWER to delegate selection of remedy responsibility to the Regional Administrators (RAs) on a site-specific basis. All site remedy selections will be delegated unless the circumstances below exist:

- Potential Fund balancing (where the total cost of all site response is expected to exceed $40 million)

- Potential public interest exception

- Precedent setting or nationally significant circumstances

- Innovative technologies.

Consultation with the AA/OSWER is required for sites involving:

- Ground water contamination due to multiple sources

- Betterment (when the State's preferred remedy is more expensive than the cost-effective alternative)

- Fund balancing

- Public interest exception.

To determine whether it is appropriate to delegate the remedial alternative selection, the RA quarterly submits a letter to the AA/OSWER recommending which selections should be delegated, will require AA/OSWER consultation, or should be retained by the AA/OSWER. The letter should include the criteria for the recommendation. Delegation letters can be prepared as early as RI completion, but must be submitted before the FS Report goes out for public comment.

The RPM may be asked to prepare the delegation letter and transmit it to the appropriate Regional personnel, particularly ORC, for review. The letter, signed by the RA, is then submitted to Headquarters (AA/OSWER with a copy for the Regional

Coordinator). Upon receipt of a letter of recommendation, OERR will promptly evaluate RA recommendations and prepare for AA/OSWER signature a ROD delegation memorandum which lists sites for which remedy selection has been delegated. The memorandum will be sent to RAs at least one week before the new quarter begins.

If delegation with consultation is granted, the RPM will forward the ROD package or summary of the key issues to OSWER for consultation prior to ROD signature by the RA. Consultation may begin with a final draft FS Report prior to public comment or may occur immediately prior to ROD signature. Consultation generally should begin between the RPM and the Headquarters Regional Cooordinator and end with a final request by the RA and a response by the AA/OSWER or his designee.

4.4 REVIEW AND APPROVAL OF RI/FS REPORT(S)

The RI/FS Report(s) is the final product of the RI/FS process*. It summarizes the findings of the RI and presents the alternatives evaluated during the FS. The report also should reflect the alternative recommended by EPA at the time of its publication. It is the RPM's responsibility to ensure that the report(s) is complete and is presented in a format that facilitates the ROD process. The RPM must also coordinate the review and approval of the report(s). To accomplish these activities the RPM should:

- Meet with the REM contractor to discuss report format and contents
- Coordinate report reviews with the State
- Coordinate report reviews with appropriate EPA personnel (Regional and Headquarters)
- Coordinate report reviews with the USACE, as appropriate
- Coordinate with community relations personnel to make the draft report available for the 3-week public comment period
- Coordinate the review and approval of the final RI/FS Report (The RI/FS Report is sometimes finalized during or after the ROD process.)

Information regarding RI/FS Report content and format is presented in the *RI and FS Guidances*.

4.5 TRANSITION TO RECORD OF DECISION AND REMEDIAL DESIGN

As the RI/FS draws to a close there are a number of activities initiated to ensure a smooth, expeditious transition to the next phases of the remedial process. The transitional activities include:

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* Separate reports for RI and FS may be developed depending on the project-specific requirements.

- Pre-ROD Meeting should be held prior to submitting the RI/FS Report for public comment, in order to anticipate issues and to develop a schedule for approving the selected remedial alternative. The pre-ROD meeting usually includes representatives from:

  - EPA Regional program offices (Superfund, RCRA, Enforcement, ORC, air, water, etc.)
  - EPA Headquarters (Regional Coordinator)
  - State
  - USACE.

  The RPM should develop a list of attendees as early as possible and plan the schedule well in advance of the meeting.

- Three-Week Public Comment Period is held to receive input on the draft RI/FS Report. The RPM must coordinate the public comment period with the Regional Superfund Community Relations Coordinator. Following this period, the RPM prepares a responsiveness summary addressing the comments received.

- Phase I Design is initiated in order to expedite the USACE selection of a contractor for designing the selected remedy. Phase I Design activities can take two to three months; accordingly, they should be started well in advance.

These transitional activities are discussed in more detail in the following chapters concerning the ROD and RD. In addition, the RPM should consult other appropriate guidance materials.

* * * * *

This chapter has provided a description of the RPM's roles and responsibilities for conducting and completing the RI/FS. The next chapter, Chapter 5, discusses the RPM's duties during the ROD process (approval of the remedy) and transition to RD, which is covered in Chapter 6.

5. RECORD OF DECISION AND TRANSITION TO DESIGN

Preparation and approval of the Record of Decision (ROD) are crucial steps in the remedial process. A ROD* is required for all remedial actions financed with monies from the Trust Fund. The ROD documents the Agency's remedial alternative decision-making process and demonstrates that the requirements of CERCLA and the *National Oil and Hazardous Substances Pollution Contingency Plan (NCP)* have been met. The ROD also provides the basis for future cost recovery actions that may be taken under CERCLA.

The RPM has an extremely important role in the ROD process and transition to design. The RPM, in a sense, engineers the ROD process which bridges the site characterization and alternatives evaluation of the remedial investigation/feasibility study (RI/FS) to the design and implementation of the remedial action. The activities which take place during this phase are shown in Exhibit 5-1. This chapter describes the activities of the RPM and others during the ROD process and transition to design. These include:

- Ongoing project management
- The ROD process (preparation through approval)
- Transition to remedial design (RD)
- RI/FS closeout.

In coordinating the preparation, review and approval of the ROD, the RPM must work closely with the representative from the Office of Regional Council (ORC) assigned to the project. The project attorney assures the legal sufficiency of the Regional ROD process and document, while the RPM assures program compliance and technical sufficiency.

Many Regions are now using a ROD Project Team concept which has proven to be successful. The ROD Project Team would consist of the RPM and representatives of the following:

- RI/FS contractor
- State
- ORC
- Enforcement program
- Other relevant EPA programs.

By including all these members in a team, the ROD process can be greatly expedited since relevant concerns are uncovered early and can be resolved quickly.

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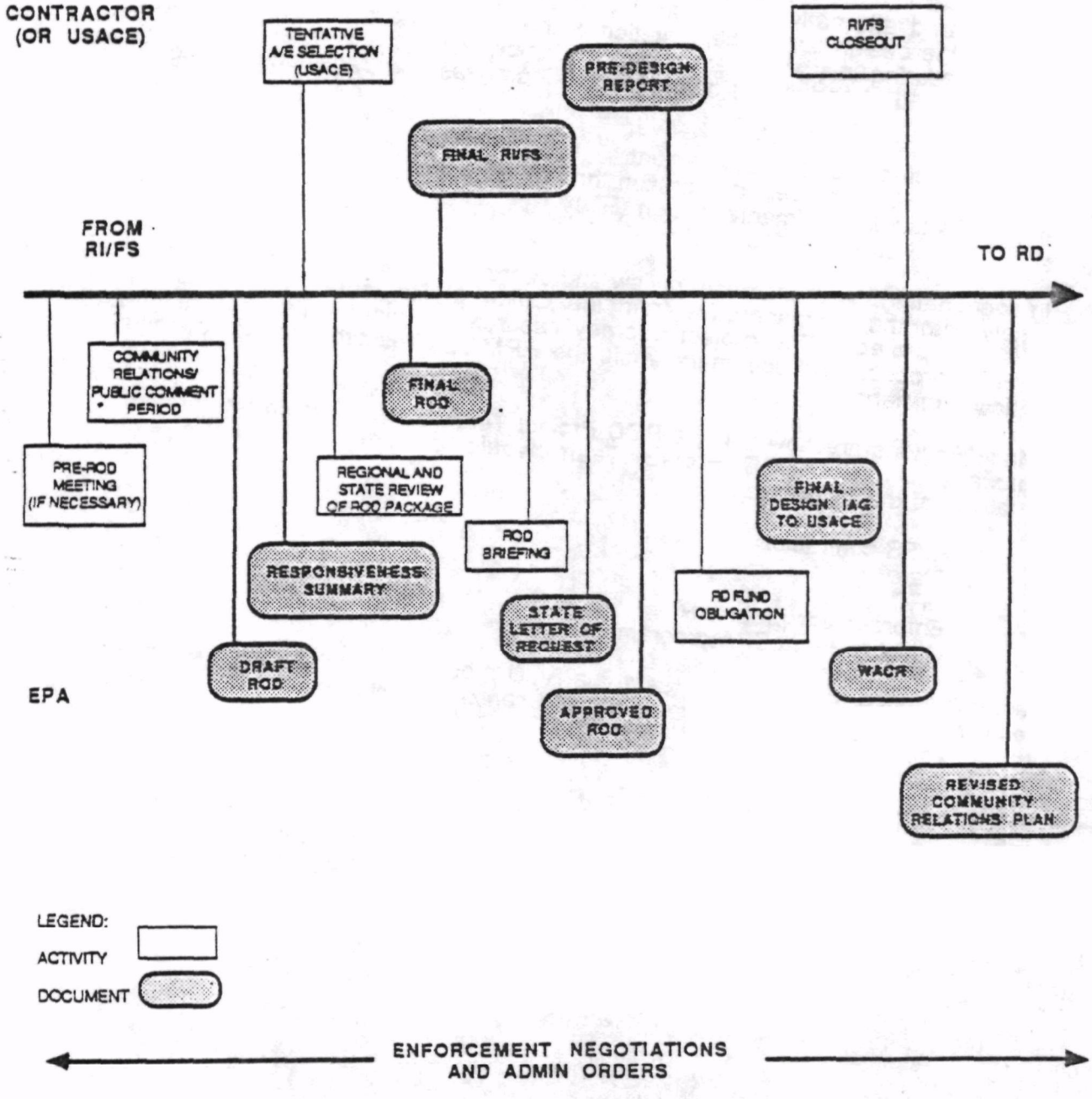
* For enforcement-lead sites, a Negotiations Decision Document (NDD), followed by an Enforcement Decision Document (EDD), will be prepared (see *"Preparation of Decision Documents for Approving Fund-Financed and Potentially Responsible Party Remedial Actions Under CERCLA,"* February 27, 1984, hereafter referred to as the *ROD Guidance*).

EXHIBIT 5-1

Record of Decision (ROD) and Transition to Design



5.1 ONGOING PROJECT MANAGEMENT ACTIVITIES

During the course of the ROD process there are a number of ongoing project management activities that are necessary to ensure a smooth process and transition from RI/FS to RD. These are outlined below.

5.1.1 Coordination with State

Throughout the ROD process, the RPM should coordinate with State officials to inform them of progress and to receive their input. A State representative also can be a member of the ROD project team. Specifically, the RPM should:

- Modify any agreements with the State for RD
- Involve the State in the remedy selection
- Solicit State comments on the draft ROD, Responsiveness Summary, and supporting documentation
- Invite State officials to participate in pre-ROD and ROD briefings
- Ensure State (60-day) intergovernmental review for RD (occurs during public comment period on the draft RI/FS Report); if a formal intergovernmental review process has not been established, or if the process does not include the Superfund program, the RPM must forward copies of the draft RI/FS to appropriate State officials.

Most importantly, the RPM must obtain the State's concurrence on the recommended alternative. This should be documented in a letter from the appropriate State official to the Regional Administrator (RA). The RPM should make it clear to State officials that the State must make assurances to provide all future maintenance and that the State will pay 10 percent (at least 50 percent for publicly owned sites) of remedial implementation (e.g., remedial action) costs associated with the selected remedy.

5.1.2 Data Reporting and Record Keeping

During the ROD process, the RPM must maintain full documentation of all site data and must pay particular attention to any confidential information that, if released, may compromise EPA's ability to negotiate with potentially responsible parties (PRPs). Documents relevant to this phase of the remedial process include:

- ROD Delegation Analysis Summary
- Draft ROD
- Responsiveness Summary
- Intergovernmental review comments
- State concurrence letter
- Final ROD.

In addition, all written correspondence concerning the ROD process should be kept, as well as written documentation of any important conversations.

The RPM must ensure that the approved Superfund Comprehensive Accomplishments Plan (SCAP) budget includes sufficient funding to cover the costs of the RD for the selected remedy. The RPM should also look beyond to the remedial action funding needs at this time.

The CERCLA Information System (CERCLIS) data management system must also be updated to include information relevant to the ROD process. Planned ROD

start dates for all sites with expected RD obligations during the upcoming fiscal year should be entered at the time of the final SCAP submittal (August 31). Additionally, actual ROD start and completion dates are to be entered. The ROD start corresponds to the date the FS Report goes out for public comment, and the ROD completion date corresponds to the date the ROD is signed by the RA or Assistant Administrator for the Office of Solid Waste and Emergency Response (AA/OSWER). The RPM should ensure that accurate information is transmitted to the regional contact working with the CERCLIS system.

5.1.3 Coordination with Regional Staff

During the ROD process it is important that the RPM coordinate closely with key Regional staff members on the planning of the ROD, the resolution of issues, and the schedule for ROD signature. These staff members and their roles during the ROD process are described below:

- Enforcement may be actively identifying or negotiating with PRPs to conduct the remedial action. The RPM must maintain close communications with enforcement staff so as not to compromise their position nor duplicate their efforts.

- Regional Counsel is responsible for ensuring that all enforcement sensitive issues are properly presented and that the requirements of CERCLA, the NCP, and other environmental laws and regulations have been met. The ORC must concur on the ROD before it is presented for approval.

- Resource Conservation and Recovery Act (RCRA) Program staff must review the ROD for a remedial action involving the treatment, storage, destruction, or disposal of hazardous wastes to ensure consistency with RCRA regulations and technical standards. The RPM should refer to the recent off-site policy, *"Procedures for Planning and Implementing Off-Site Response Actions"*, May 6, 1985.

- Community Relations staff should verify that all community relations plan (CRP) activities regarding public comment on the RI/FS are complete. The RPM should coordinate with community relations staff when preparing the responsiveness summary and provide input to the revised CRP based on the approved ROD.

- Other Regional Program staff, from such programs as the Office of Drinking Water and the Office of Pesticides and Toxic Substances, should verify that the recommended remedy is consistent with other environmental statutes, regulations, or program activities.

5.1.4 Coordination with Headquarters and Other Interested Parties

Headquarters involvement with the ROD process will vary depending on whether ROD approval authority has been delegated to the RA (see Section 4.3.3 in the previous chapter) and on the complexity of technical and policy issues regarding the site. In either case, an open dialogue and exchange of information should be maintained between the Region and Headquarters. The Headquarters role at this point is that of a facilitator. The primary point of contact for the RPM is the Federal-lead Regional Coordinator in the Hazardous Site Control Division (HSCD). The names and telephone numbers of Federal-lead Regional Coordinators are given in Appendix H. Similarly, staff members fromORC must communicate with their counterparts in Headquarters.

Depending on the site-specific situation, other Federal agencies such as the Centers for Disease Control, the Federal Emergency Management Agency, or the U.S. Army Corps of Engineers (USACE) may become involved in reviewing appropriate documents.

5.2 ROD PROCESS

The RPM is responsible for preparing the ROD and coordinating its review and approval. The existing ROD process for Federal-lead sites is illustrated in Exhibit 5-2. Each of these activities is described below with appropriate guidance for the RPM.

5.2.1 Pre-ROD Meeting

As mentioned at the end of Chapter 4, the RPM should arrange and coordinate a pre-ROD meeting with ORC, enforcement, and other appropriate personnel to discuss the draft RI/FS Report prior to its availability for public comment. If a ROD team concept is used, all team members should attend the pre-ROD meeting. Two purposes of this meeting are to identify data gaps in the RI/FS and develop a schedule for completing the ROD process. Data gaps should be minimal if the RPM closely monitored the contractor's preparation of the RI/FS. It is important to identify and begin to resolve issues associated with the alternatives. A pre-ROD briefing for Headquarters staff, prior to transmittal of the RI/FS Report for public comment, may be necessary for technically complex sites or when significant policy issues exist. For example, when the selected remedy does not attain or exceed applicable environmental standards, a pre-ROD briefing for Headquarters staff is required.

5.2.2 ROD Package

Concurrently with the RI/FS Report public comment period, the RPM should prepare a draft ROD. The content and format for the ROD are described in Exhibit 5-3 (see also the ROD Guidance). The RPM should have been reviewing previously approved RODs on an ongoing basis. At this time, the RPM should focus on RODs with similar issues by using the ROD key word index available in the *Superfund ROD Update* or *ROD Annual Report*.

The ROD Package consists of:

- ROD
- Summary of Remedial Alternative Selection
- Responsiveness Summary.

The following three sections describe these ROD Package elements.

5.2.2.1 ROD

The ROD is a short document (2-5 pages), signed by either the RA or AA/OSWER, that officially documents the remedy selected. It has three sections:

- Documents Reviewed – lists the documents reviewed in selecting among remedial alternatives; this list would include but is not limited to the RI/FS Report, the Summary of Remedial Alternatives Selection, and the Responsiveness Summary

- Description of Selected Remedy – describes the major components of the remedy and operation and maintenance requirements (if applicable)

EXHIBIT 5-2

The ROD Process

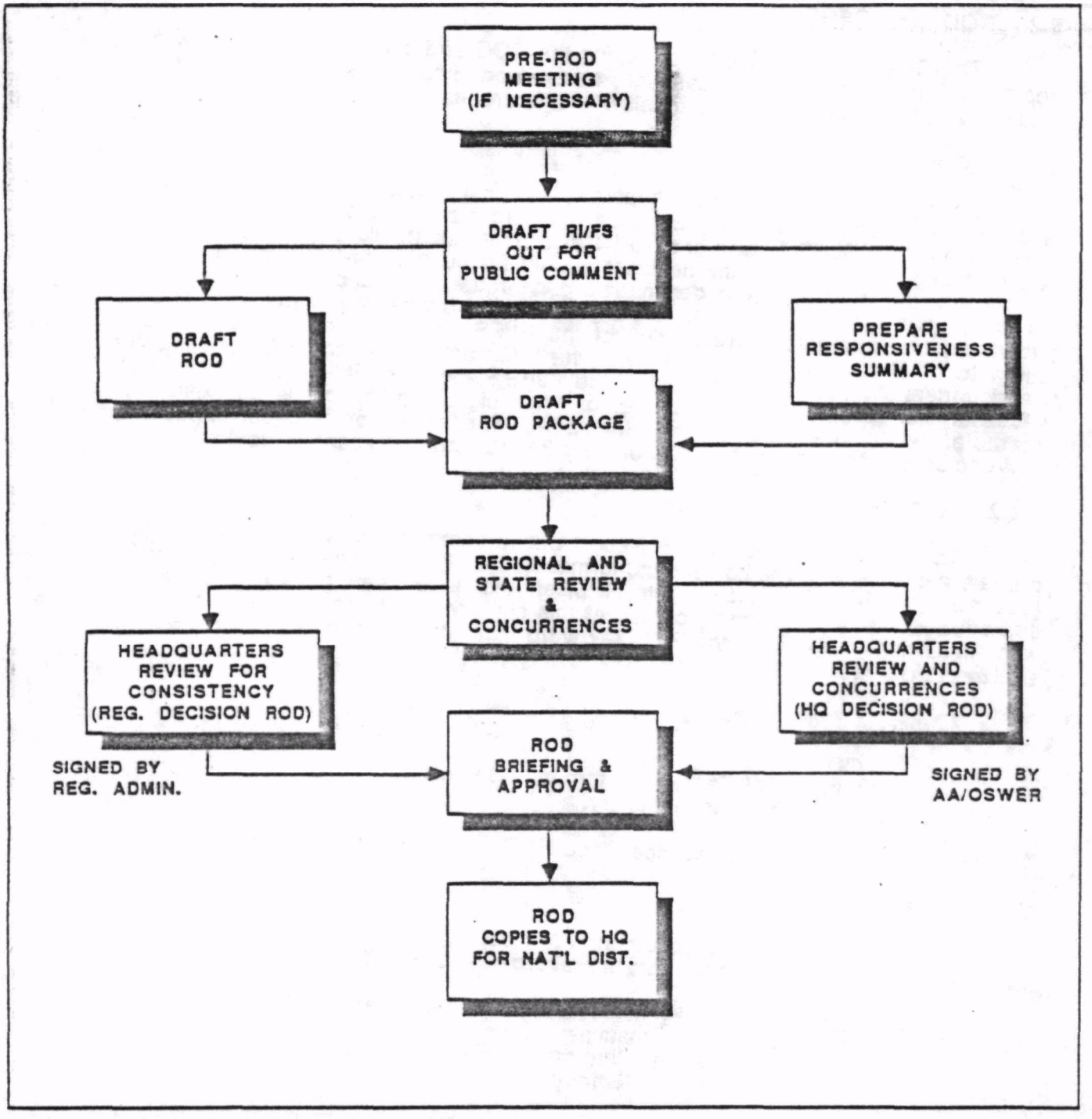


EXHIBIT 5-3

Record of Decision

Remedial Alternative Selection

SITE: [Site name, location]

DOCUMENTS REVIEWED

I am basing my decision primarily on the following documents describing the analysis of cost-effectiveness of remedial alternatives for the [site name]:

- [Site name] Remedial Investigation
- [Site name] Feasibility Study
- Summary of Remedial Alternative Selection
- Responsiveness Summary
- [Other relevant reports or documentation of the remedy selection process]

DESCRIPTION OF SELECTED REMEDY

- [List major components of remedy]
- [List operation and maintenance requirements if funding will be requested]

Note: Care must be taken to list all documents used to reach the final decision. Secondary references included in the listed documents need not be listed here.

DECLARATIONS

Consistent with the Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA), and the National Contingency Plan (40 CFR Part 300), I have determined that the [description of remedy] at the [site name] is a cost-effective remedy and provides adequate protection of public health, welfare, and the environment. The State of [State name] has been consulted and agrees with the approved remedy. [Include the following if appropriate.] In addition, the action will require future operation and maintenance activities to ensure the continued effectiveness of the remedy. These activities will be considered part of the approved action and eligible for Trust Fund monies for a period of [insert funding period not to exceed 1 year].

I have also determined that the action being taken is appropriate when balanced against the availability of Trust Fund monies for use at other sites. [Include the following sentence if remedy involves off-site action.] In addition, the off-site transport, storage, destruction, treatment, or secure disposition [use appropriate wording based on actual remedy] is more cost-effective than other remedial action, [include the following if appropriate] and will create new capacity to manage hazardous waste, [include the following if appropriate] and is necessary to protect public health, welfare or the environment.

Note: Language for Fund-balancing waivers or waivers from other environmental regulations will be worked out on a site-specific basis.

- Declarations -- This section documents that the decision is consistent with CERCLA and the NCP, that it is cost effective, and provides adequate protection of public health, welfare, and the environment.

The content and format for the ROD are further described in Exhibit 5-3.

5.2.2.2 Summary of Remedial Alternative Selection

The Summary provides detailed information on the remedial alternatives reviewed during the FS and ROD process. The Summary of Remedial Alternative Selection must discuss:

- Consistency with section 300.68(g) through (i) of the NCP
- No action alternative
- Extent of remedy and compliance with other environmental statutes
- Cost estimates
- Cost-effectiveness evaluation
- Off-site transport, storage, treatment, destruction or disposal of hazardous wastes (if applicable) and compliance with CERCLA section 101(24)
- Responsiveness Summary
- Operation and maintenance (O&M).

Other topics that may be appropriate depending on site-specific conditions should also be included in the Summary text.

In order to expedite the ROD process, as much as possible of the ROD Package should be prepared during the public comment period. Usually, the RPM can draft most of the ROD Package; the exception is the Responsiveness Summary. The Region may choose to use the remedial planning (REM) contractor staff and resources to assist in preparing the ROD Package. Drafting the ROD Package at this time tends to clarify thinking and brings issues to the surface.

5.2.2.3 Responsiveness Summary

Following completion of the public comment period, a Responsiveness Summary which addresses all comments submitted by the public, PRPs, and States should be prepared as an attachment to the ROD. The Responsiveness Summary is often prepared by the REM contractor, but ultimately the RPM is responsible for ensuring its accuracy and completeness. The Responsiveness Summary documents for public record:

- Comments raised during the public comment period on the RI/FS Report
- How EPA considered and responded to these concerns.

Further information on the format and content of a Responsiveness Summary is presented in Appendix I. In preparing the Responsiveness Summary, the RPM should coordinate closely with the community relations staff to obtain their input. The draft ROD and the selected remedy may need to be revised in response to public comment.

5.2.3 Draft ROD and Responsiveness Summary Review

The State and appropriate Regional program offices must review and concur on the draft ROD and responsiveness summary. The State's concurrence should be documented in a letter from the appropriate State official to the RA or AA. The Regional review process should include all concerned offices, but at a minimum should include ORC and the enforcement staff. The RPM should also submit a copy of the draft ROD and Responsiveness Summary to Headquarters.

The key to an efficient review process is the early involvement of the concerned reviewers. By seeking State, ORC, enforcement, and other relevant inputs (e.g., Headquarters) during the RI/FS, the RPM can minimize the occurrence of last minute issues and concerns. Headquarters will usually review the draft ROD to ensure consistent decision-making among the Regions and adherence with the latest Agency policies.

5.2.4 ROD Approval

The last step in the ROD process is the ROD briefing to obtain the RA's or AA's approval of the recommended action. The format and contents for ROD briefing materials are presented in Appendix I. The RPM usually prepares the briefing materials (sometimes with REM contractor support) and may be asked to present them to the RA. The RPM should consider attending one or more other ROD briefings in the Region as a preparatory exercise.

For RODs which must be approved at Headquarters, the RPM should prepare and coordinate the State and Regional review prior to submission to EPA Headquarters. The RPM must ensure that the official submission is sent to the AA/OSWER, and should include a cover memorandum from the RA. The memorandum should summarize the proposed project and present the State and Region's recommendation to approve the action. A copy of the complete submission should be sent directly to the Director, HSCD.

During the briefing for the RA or AA/OSWER, a number of last-minute questions or issues may arise. This usually results in accelerated activity as the RPM coordinates and facilitates the resolution of these last-minute issues. Once these issues are resolved, the RA or AA/OSWER signs the ROD.

5.3 TRANSITION TO DESIGN

During the ROD process, there are a number of steps the RPM can take to ensure a smooth transition to the RD. If all activities are coordinated properly, the lag time between ROD approval and RD initiation can be minimal. To accomplish this transition the RPM must:

- Have initiated Phase I design with the USACE no later than the beginning of the public comment period
- Draft and finalize site-specific design Interagency Agreements (IAGs) with the USACE (ideally, this should be available for signature concurrently with the ROD)
- Oversee preparation by the REM contractor of the Pre-Design Report (see Chapter 6)
- Provide remedial planning information (including Pre-Design Report) to the USACE in order to initiate design.

These activities are discussed in the next chapter and in the *Superfund Remedial Design and Remedial Action Guidance*, February 1985.

5.4 RI/FS CLOSEOUT

Following completion of all work as specified in the work assignment and the approved work plan, including the Pre-Design Report, the REM contractor is responsible for notifying the RPM that the project can be closed. The RPM then prepares and processes the required project closeout documentation. This documentation includes:

- Work Assignment Completion Report
- Work Assignment Closeout Form
- Final Completion Voucher.

In practice, the final closeout is often delayed because of late receipt of subcontractor invoices. Further information on project closeout is given in *Procedures for Initiating Remedial Response Services* ,Draft, July 1984.

5.4.1 Work Assignment Completion Report

The Work Assignment Completion Report (WACR) is a three-page form which describes the contractor's performance on the work assignment. Separate copies are completed by both the contractor and the RPM. The WACR package then becomes part of a subsequent Award Fee evaluation package. The RPM's responsibilities are as follows:

- Ensure that the contractor submits a WACR immediately upon notification of completion of the project
- Ensure that WACRs are filled out properly:
  - Do they identify trends or recurring difficulties relating to the areas in which performance can be improved in future assignments?
  - Do they address performance with respect to project planning, technical activities, schedule and cost control, reporting, and resource utilization and effort?
- Prepare a WACR for each completed work assignment
- Obtain the signature and approval of the EPA Regional Project Officer (RPO) on each WACR. This also involves coordinating with the RPO in recommending a percentage of the Phase II Award Fee
- Submit copies of all WACRs to the Headquarters Regional Coordinator and Headquarters Project Officer for review and use in determining Award Fee recommendations
- Solicit input from Regional, State, or other personnel involved with the site in completing the WACR.

The RPM should contact the contractor site manager to discuss any problems which occur in the preparation and submission of the WACR.

A copy of a WACR is shown in Appendix J. Additional information on the WACR can be found in EPA's *REM II and Revised REM/FIT Contract Award Fee Performance Evaluation Plans*, July 1984.

5.4.2 Work Assignment Closeout

The work assignment closeout form (See Appendix J for a sample copy) is initiated by the REM contractor site manager and submitted to the RPM. The RPM then is responsible for completing the form and for indicating whether the work assignment is completed and the project closed or whether it is incomplete and requires additional work. The RPM should send the form to the RPO for review, approval, and signature. If the RPM or the RPO feels that the assignment has not been completed, this is indicated on the form and it is sent back to the REM contractor site manager with an explanation of what additional work will be required. The RPM should immediately contact the site manager to discuss any problems that need to be resolved before the assignment can be considered closed. Following approval by the RPM and the RPO, the RPM should send the closeout form back to the contractor who is responsible for submitting copies to EPA Headquarters. The RPM should also retain a copy of the form for the Regional files.

Although the format of the closeout form will vary slightly from contractor to contractor since each uses its own form, the information on the form is essentially the same for all contractors.

Another important aspect of RI/FS closeout is the REM contractor's compilation of the site files prior to their submittal to EPA. At this time, the exact procedures and requirements for this ability are not yet determined. Contact the Headquarters Regional Coordinator or REM Deputy Project Officer for guidance (or assistance) in file preparation.

5.4.3 Final Invoice

The final invoice for the project is submitted by the contractor to the RPM along with the WACR and the work assignment closeout form if available. In some cases, the invoice may be delayed until final subcontractor invoices are received. It is the RPM's responsibility to make sure that the invoice is completed correctly, is site-specific, and includes a clear itemization of labor, travel, subcontracting and other direct costs. Any problems with the final invoice should be discussed with the contractor site manager as soon as they are identified. Signing the invoice indicates that all work for which payments are claimed has actually been performed. The RPM sends the final invoice to the RPO for signature. The RPO then sends the final invoice to the Headquarters Project Officer for processing and payment.

* * * * *

With the approval of the ROD and closeout of the RI/FS work assignment, the remedial response project moves forward to remedial design and implementation of the remedial alternative selected. Chapter 6 discusses remedial design, including the transition from the RI/FS stage. Chapters 7 and 8 discuss final implementation of the remedy and closeout of the remedial response project, including deletion from the National Priorities List.

6. REMEDIAL DESIGN

During Federal-lead Remedial Design (RD) and Remedial Action (RA), the U.S. Army Corps of Engineers (USACE) will serve as contract manager for design and construction of the EPA-approved remedy. In a few special cases, other Federal agencies, such as the Department of Interior or the Department of Energy, may assume this role.* The USACE will perform the following basic tasks:

- Solicit and select contractors to perform RD and RA activities
- Review and approve RDs
- Monitor construction activities.

However, the RPM retains responsibility for overseeing RDs and RAs at Federal-lead Superfund sites.

This chapter discusses the RPM's role and responsibilities during the development of an RD. It discusses specific activities for which the RPM must initiate and supervise action, promote and coordinate oversight, and act in a review/advisory capacity. The *Superfund Remedial Design and Remedial Action Guidance* , February 1985 (referred to as *RD/RA Guidance*), contains a detailed description of the RD/RA process and is the primary reference document for this and the following chapter on RA. As in other chapters, Exhibit 6-1 highlights the major activities that occur during this stage of a remedial response and thus provides a foundation for the following discussion. In addition, Exhibit 6-2 provides a detailed, graphic representation of the Federal-lead RD process.

6.1 ONGOING PROJECT MANAGEMENT ACTIVITIES

Numerous ongoing project management activities are common to all phases of RD and RA. Specific actions required during the RD process are outlined below.

6.1.1 Coordination with State

During the RD phase, the RPM should coordinate with State officials to apprise them of site progress and to receive their input on all aspects of the RD. This should include review of the design as it is developed. The RPM should make every effort to involve the State in design review, since the State ultimately must assume responsibility for the remedy after its implementation.

In initiating RD activities at a Federal-lead site, the EPA RPM must work closely with State officials to process the appropriate Superfund response agreement. The RPM and State officials should refer to the *State Manual* for specific information for the initiation, execution, and amendment procedures for agreements.

The State is responsible for obtaining site access and any required permits. The RPM should assist in and coordinate these activities to see that access is obtained.

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* During fiscal year 1986, the remedial planning (REM) contractors may perform design and act as construction contract managers on several projects on a pilot basis.

EXHIBIT 6-1

Remedial Design (RD)

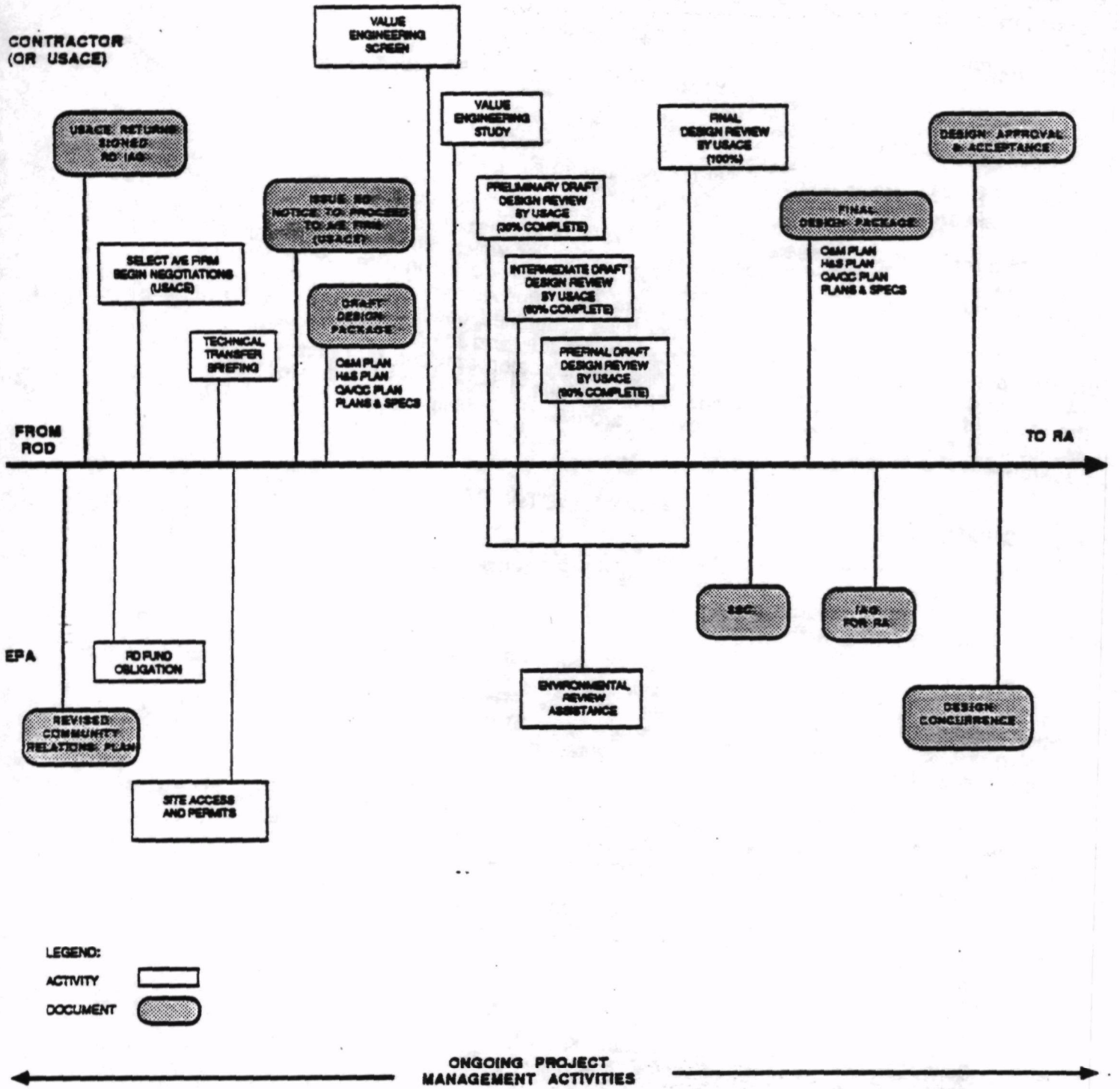
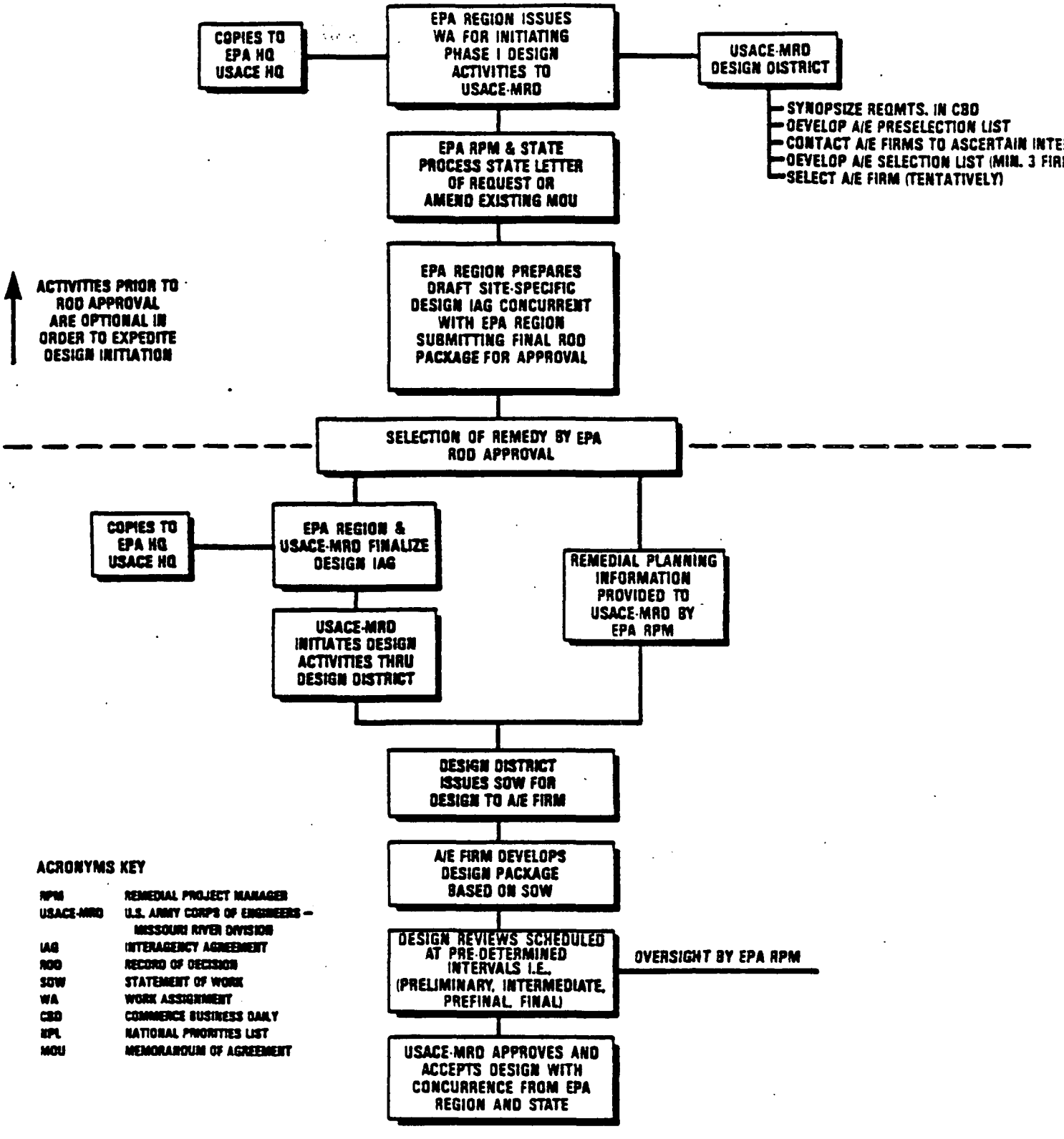


EXHIBIT 6-2

Federal-Lead Remedial Design Activities



6.1.2 Reporting and Record Keeping

The RPM is responsibile for maintaining thorough, accurate records during the RD. This includes site files and relevant documentation that will support potential cost recovery actions. The RPM also may be requested to assist in preparing a cost recovery summary at the completion of the RD.

One continuing RPM responsibility is the periodic updating of information for EPA's automated data systems. These systems include:

- CERCLIS (CERCLA Information System) -- RD start (date RD funds were obligated) and end dates (dates implementation contract was advertised) must be entered.
- SCAP (Superfund Comprehensive Accomplishments Plan) -- Since this system is the official mechanism through which the Assistant Administrator for the Office of Solid Waste and Emergency Response (AA/OSWER) identifies funding needs for proposed Superfund activities, the RPM must coordinate with the Regional SCAP contact to ensure that accurate information on RD activities appears on the SCAP prior to the RD start. The SCAP must be updated as the RD progresses so that funding needs for the subsequent RA are identified in a timely fashion.
- FMS (Financial Management System) -- provides monthly and ad hoc financial status reports on the remedial program, which the RPM must review for accuracy.

6.1.3 Technical Progress Oversight

The RPM is responsible for overseeing technical progress during the RD. The RPM should review all contractor progress reports to ensure that progress reported coincides with actual performance. One particularly valuable oversight tool is the RD schedule. The RPM should closely track RD progress against the agreed-upon project schedule to determine whether problems exist. Significant, persistent delays or accelerations may indicate the need to adjust the project schedule. EPA's REM contractors may be tasked to provide technical assistance in this effort.

In addition, the RPM should work closely with USACE officials to oversee the architectural and engineering (A/E) contractor's activities during all phases of the design preparation. The RPM should establish milestones for design review that will coincide with specific events in the RD. Representatives of the USACE and the A/E firm should be present at these meetings to discuss progress and cite problems, if any. Good, informal communication among all participants in the RA, facilitated by the RPM, also can prove invaluable to project oversight.

6.1.4 Coordination with Community Relations

The RPM must maintain communication with the Regional community relations staff in order to coordinate:

- Participation in public meetings
- Development of fact sheets
- Issuance of press releases
- Establishment of local information repositories
- Public comment period (optional).

This will ensure that the public is involved in the decision-making process during the RD. The RPM also should encourage State involvement with community relations activities.

Based on input from the public participation process described above, the site Community Relations Plan (CRP) must be revised, as necessary, to reflect knowledge of citizen concerns and involvement. An updated fact sheet and public notice of completion of the engineering design must be prepared and distributed as part of the ongoing community relations process.

6.2 REMEDIAL DESIGN PROCESS

In addition to the responsibilities outlined above, the RPM has direct involvement in many of the key phases of RD, such as design initiation, preparation of the statement of work (SOW) for the USACE which is attached to the Interagency Agreement (IAG), and conducting various reviews. These responsibilities are outlined in the following sections.

6.2.1 Work Assignment Issuance and Tentative A/E Selection

The RPM should initiate the selection process for obtaining the A/E firm for RD prior to the final Record of Decision (ROD) approval. A work assignment is to be developed and issued, consistent with the standing IAG, to the USACE-Missouri River Division (MRD) to initiate the Phase I design. The Phase I design will be based on the draft Feasibility Study (FS) Report, and will serve as the basis for further action. Phase I design activities typically require 10 weeks to complete. Therefore, they generally should be initiated no later than the start of the public comment period.

Phase 1 design activities usually include:

- Synoposize requirement in Commerce Business Daily
- Designate A/E pre-selection and selection boards
- Develop an A/E pre-selection list
- Contact A/E firms to ascertain interest in project
- Apprise the A/E selection list
- Tentatively select an A/E firm.

The USACE also keeps a number of A/E firms constantly available by means of an "open-ended" contract. With this type of contract, the USACE tasks an A/E firm, which is on a predetermined list, with a site-specific assignment, thereby expediting the selection process by avoiding site-specific Phase I activities. This type of contract has both an annual, nationwide cost ceiling and a site-specific cost ceiling, and is generally used on smaller projects where timing is critical. Should the "open-ended" contract be used, the Pre-Design Report is employed to bring the A/E firm up to speed as quickly as possible. Funds can be routed quickly to the A/E firm through the USACE by means of technical assistance funding. Contact the appropriate Regional Coordinator in EPA Headquarters for further information on the use of the "open-ended" contract.

A generic IAG is established for all RD assignments to be conducted within each fiscal year. As a result, only a work assignment is needed to initiate site-specific RD activity. A sample work assignment and IAG for Phase I design are provided in Appendix K. It is the RPM's responsibility to oversee the preliminary A/E selection process conducted by the USACE and to offer technical assistance and review as needed. For example, the RPM should encourage the use of women's or minority businesses, where appropriate.

6.2.2 Design Initiation

Following the selection of a remedy and approval of the ROD or Enforcement Decision Document (EDD) by the designated EPA official, design activities are initiated. The RPM must provide the following assistance to the USACE.

6.2.2.1 Approved ROD/EDD and Final RI/FS Report

The RPM must provide a copy of the approved ROD/EDD and the final RI/FS Report(s) to the USACE as soon as possible after ROD/EDD approval.

6.2.2.2 Pre-Design Report

The Pre-Design Report describes the engineering parameters and institutional concerns of the selected remedy. The report, prepared by the REM contractor, consolidates all pertinent information needed for transferring the project to the USACE.

The RPM is responsibile for overseeing the preparation and transmittal of the Pre-Design Report. As a general guideline, the report should be completed within two weeks following remedy selection, with the cost limited to approximately five percent of the FS cost. If the remedy selection took a long time and the REM contractor was idle, more than two weeks may be required. In addition, project-specific considerations may determine that the costs of preparing this report exceed the five percent guideline. It is EPA's intention that the Pre-Design Report be completed as quickly as possible and that it generally be a compilation and condensation of existing work which would not require significant new effort. Exhibit 6-3 presents a suggested outline for the Pre-Design Report.

6.2.2.3 Site-Specific Design IAG (Phase II Initiation)

The RPM must finalize the required site-specific design IAG to initiate Phase II activities by the USACE-MRD. A draft site-specific IAG should have been submitted concurrently with submittal of the final ROD package for approval. After the design IAG is executed, the RPM forwards copies to both EPA Headquarters and USACE Headquarters. USACE-MRD then will initiate design activities through the appropriate design district. The RPM should monitor all design activities.

A sample site-specific design IAG is included in Appendix K. This document includes a SOW prepared by the Region for the USACE. The form is to be completed by the RPM, signed by the Regional Administrator or designee, and submitted to USACE-MRD for approval. The site-specific design IAG can be signed at the same time as the ROD. Details concerning preparation of the IAG SOW and additional USACE responsibilities are provided in the Superfund RD/RA Guidance.

6.2.2.4 Statement of Work Preparation

The SOW for RD is prepared by the USACE and requires that the design contractor develop final construction plans and specifications to accomplish an RA as defined in the ROD/EDD. Elements of the SOW include:

- Plans and Specifications required to comply with certain standards and submissions:
  - Preliminary design (30 percent complete)
  - Intermediate design (60 percent complete)

EXHIBIT 6-3

Suggested Outline for Pre-Design Report

1. Site Description

2. Summary of Selected Remedy

   - Description of remedy & rationale for selection
   - Performance expectations
   - Site topographic map & preliminary layouts
   - Preliminary design criteria & rationale
   - Preliminary process diagrams
   - General operation and maintenance (O&M) requirements
   - Long-term monitoring requirements

3. Summary of Remedial Investigation and Impact on Selected Remedy

   - Field studies (air, surface water, ground water, geology)
   - Laboratory studies (bench scale, pilot scale)

4. Design/Implementation Precautions

   - Special technical problems
   - Additional engineering data required
   - Permits & regulatory requirements
   - Access, easements, rights-of-way
   - Health & safety requirements
   - Community relations activities

5. Cost Estimates and Schedules

   - Implementation cost estimate (order of magnitude, + 50%/-30%)
   - Preliminary estimate of annual O&M cost and duration
   - Project schedule (design, construction, permits & access)

6. Appendices

   - Reports, data summaries, etc.

- Prefinal design (95 percent complete)
- Final design package (100 percent complete)
- Correlating plans and specifications
- Selecting off-site treatment, storage, and disposal facilities
- Compliance with the requirements of other environmental statutes
- Equipment startup and operator training plans

- Additional Studies necessary to supplement existing technical data (e.g., bench and pilot studies)
- Operation and Maintenance defined and cost estimates prepared
- Quality Assurance Project Plan (QAPP) developed to identify quality control and assurance responsibilities of the contractor, EPA, and the Federal agency
- Site Safety Plan (SSP) developed in response to site-specific data to protect on-site personnel and surrounding communities from the physical, chemical, and/or biological hazards of the site.

Detailed instructions for developing the SOW are found in Appendix B of the *Superfund RD/RA Guidance.*

6.2.2.5 A/E Selection Oversight

The RPM is responsible for overseeing A/E firm selection by the USACE to ensure that there are no potential conflicts of interest based on involvement of potentially responsible parties (PRPs) at the site. Interested contractors are required to provide information regarding conflict of interest, which the RPM must evaluate prior to execution of a contract between the USACE and the A/E firm. During the process of USACE selection of an A/E firm for RD, the RPM should remain informed of the USACE's bidder responsibility determination.

6.2.2.6 Technical Transfer Briefing

A technical transfer briefing between the REM contractor and the USACE design contractor must be scheduled and coordinated by the RPM prior to initiating RD. This will help to facilitate project transfer and resolve any outstanding issues or questions. The RPM should invite State and local officials and other EPA staff members to participate, as appropriate.

6.2.2.7 Obtaining Permits and Site Access

The RPM is ultimately responsible for identifying all required permits and obtaining site access agreements. However, attaining access to the site and adjacent properties, as well as any rights-of-way and easements necessary to implement RA, is a State responsibility. The RPM must encourage the State to take action during Phase I activities to obtain any required permits or site access agreements for both the RD and RA in order to avoid delays in implementing the RA. This is very important to implementing the project according to its schedule. First, access must be obtained for RD field work. Then, during the window provided as the RD progresses, access must

be secured for RA activities. The USACE will not open bids submitted for the RA unless site access is secured.

The permits and approvals that may be required for a project depend on the circumstances of the particular project, but might include, for example:

- Permits. All on-site and off-site RAs must comply with the substantive requirements of applicable and relevant laws and standards identified in the ROD/EDD. While environmental permits are not required for on-site RAs, any receiving facility for material taken off site must possess all appropriate environmental permits identified in the ROD/EDD. Obtaining any necessary, non-environmental construction permits is the responsibility of the RD A/E firm or construction contractor.

- Site Access. Access to sites where cleanup actions require short- or long-term use of adjoining property or property within the site boundaries owned by parties other than the remedial site owner, may require obtaining access agreements from, or negotiation of rights-of-way with, the property owners. The same is true of property along proposed pipeline routes. In order to ensure that bid opening and remedial construction will not be delayed due to disputes with property owners, it is essential that such agreements be obtained prior to completing of RA.

Any purchase of easements or property are considered RA activities, requiring State cost share.

The RPM must coordinate closely with the RD A/E firm to define access needs for the RA. If voluntary access cannot be obtained and resistance from property owners is encountered, the State should make every effort, to the extent of its legal authority, to secure site access. If necessary, EPA may be required to exercise its statutory authority under section 104 of CERCLA, in which case an appropriate access order for entry may have to be secured from a court having legal jurisdiction.

Property access agreements must cover the duration of the cleanup and associated operation and maintenance (O&M), as necessary. The RPM is responsible for overseeing all site access negotiations and agreements regardless of whether they are obtained through Federal or State channels.

6.2.3 Design Development and Review

The USACE has the primary responsibility for the review, approval, and acceptance of the final plans and specifications. As stated in section 6.2.2 above, the plans and specification should be submitted in several stages. The RPM, together with State officials, must provide environmental and technical assistance to the USACE at each stage of the design review.

6.2.3.1 Environmental Review

The RPM must coordinate the environmental review to ensure that the specifications include all elements necessary to address compliance with the environmental and public health standards identified in the ROD/EDD. The environmental review will ensure that currently accepted environmental control measures and technology are utilized during construction, and that the O&M plan, QAPP, and SSP specifications are adequate. The RPM may solicit the assistance of other EPA personnel to review the design plans and specifications. For example, the Emergency Response Team (ERT) may review SSPs.

6.2.3.2 Technical Review

Technical review of the prefinal design is the responsibility of the USACE, with concurrence by EPA.

6.2.4 Approval of Design

The USACE-MRD has the authority to approve and accept the final design. However, the EPA RPM is responsible for coordinating the final review and for obtaining concurrence from EPA and State officials.

6.2.5 Major Design Changes

The EPA RPM is responsible for ensuring that the design package being developed by the USACE and its A/E contractor is consistent with the ROD. If major design changes are observed that would significantly alter the remedy approved in the ROD, the RPM should notify the USACE design Project Officer (PO) in writing to temporarily halt design activities. Further, the RPM should immediately notify the EPA official who has been delegated ROD responsibility. Examples of major design changes are included in the *RD/RA Guidance*. The official must determine whether the design changes warrant a ROD amendment. Minor design changes, consistent with the approved ROD, may be approved by the design PO with concurrence from the EPA RPM.

For Fund-financed projects, the USACE should conduct a value engineering screening during the RD, where there is a potential to save substantial costs during the RA. In a value engineering screening, an RA project is examined to determine minor modifications or refinements, such as in materials specifications and/or quantities, which may result in reduced costs. It usually consists of reviewing the project design, listing high cost items that have a potential for cost savings, and considering the use of potential, viable alternatives that do not reduce the effectiveness of the design. Value engineering screenings, however, must be limited to consider only those project refinements that would not significantly alter or change the remedy as approved in the ROD.

The USACE will notify EPA of those RA projects that were found in the screening to be candidates for formal value engineering studies. Further, the USACE will identify potential affects of the formal study on the project schedule and provide an estimate of additional funding requirements, if any. The RPM is responsible for reviewing the results of the value engineering screening to ensure that refinements considered do not alter the remedy as described in the ROD, nor diminish its effectiveness. EPA's REM contractors may be tasked to assist in this review. If additional funding is required for the formal value engineering study, when found appropriate, the RPM must ensure that sufficient money is made available through the SCAP and added by amendment to the IAG.

6.2.6 Coordination of Remedial Action Agreements

In order to initiate the RA, the RPM must work with the State to prepare and execute a Superfund State Contract (SSC) for all Federally managed remedial actions which do not have a Cooperative Agreement (CA) in place to provide all applicable State assurances (e.g., cost sharing, site access, O&M). Preparation of the appropriate agreement should be initiated during the RD phase; execution of the SSC must coincide with the completion of RD.

When the RD package is complete and the final RA cost estimate is available, a site-specific IAG for the RA is prepared and executed by the EPA Regional office and the USACE-MRD. Refer to the *RD/RA Guidance* for information on the development of

RA cost estimates. The RPM should forward copies to EPA Headquarters and to USACE Headquarters. A sample site-specific IAG for RA is shown in Appendix K.

In addition, the RPM must work with the State to either amend an existing CA or develop a new CA application to provide assurances for O&M cost sharing. The RPM and the State should proceed with this CA as soon as reliable cost estimates for O&M are available; however, the CA does not need to be executed until the RA itself is underway. The RPM must concur with the State on the plan for O&M prior to initiation of the RA. The RPM should ensure that, at a minimum, the O&M plan includes the following:

- A description and duration of O&M activities
- Operational performance standards
- A contingency plan for abnormal occurrences
- Safety requirements for O&M activities
- Staffing requirements
- Equipment and material requirements
- Annual O&M costs
- Description of site use and disposition of facilities following completion of O&M.

See Chapter 8 for a more detailed discussion of O&M.

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This chapter described the RPM's responsibilities for oversight of the RD. The following chapter describes the RPM's responsibilities for maintaining oversight of all RA activities.

7. REMEDIAL ACTION

Following the completion and approval of the remedial design (RD) package, action is taken to implement the remedial action (RA). The conclusion of the previous chapter described the preliminary activities which must be conducted by the RPM in initiating the RA. These include execution of the required agreement (e.g., Superfund State Contract (SSC)) between EPA and the State and completion of a site-specific Interagency Agreement (IAG) (See Appendix K). Upon execution of the IAG by the U.S. Army Corps of Engineers (USACE), RA implementation can begin, starting with the solicitation and award of an implementation (e.g., construction) contract, continuing through completion of interim and final inspections and certifications, and culminating with acceptance of the final project. Exhibit 7-1 graphically shows the sequence of activities that normally are undertaken in implementing an RA.

The purpose of this chapter is to outline the RPM's responsibilities in ensuring that the RA is implemented in accordance with the approved design. Although primary responsibility for the actual implementation rests with the USACE, the RPM must stay involved to the extent possible in order to participate in and coordinate required inspections, reviews, and approvals. As in other chapters in this handbook, ongoing project management activities are first described, followed by a more specific elucidation of responsibilities tied to RA activities.

7.1 ONGOING PROJECT MANAGEMENT ACTIVITIES

As in all stages of remedial response, numerous ongoing project management activities are common to all portions of RA implementation. Specific activities required during RA are outlined in this section.

7.1.1 Permits and Site Access

During the RD phase, the RPM should have ensured that all required permits were identified and site access agreements obtained for design implementation. The RPM is responsible for ensuring compliance with all permits and the requirements of access agreements. It is the State's responsibility to attain access to the site and adjacent properties, as well as rights-of-way and easements necessary to implement the RA. Even so, the RPM should ensure that site access agreements are negotiated because the USACE will not open the RA for bids unless site access has been secured. Further information on this subject has been provided in Chapter 6.

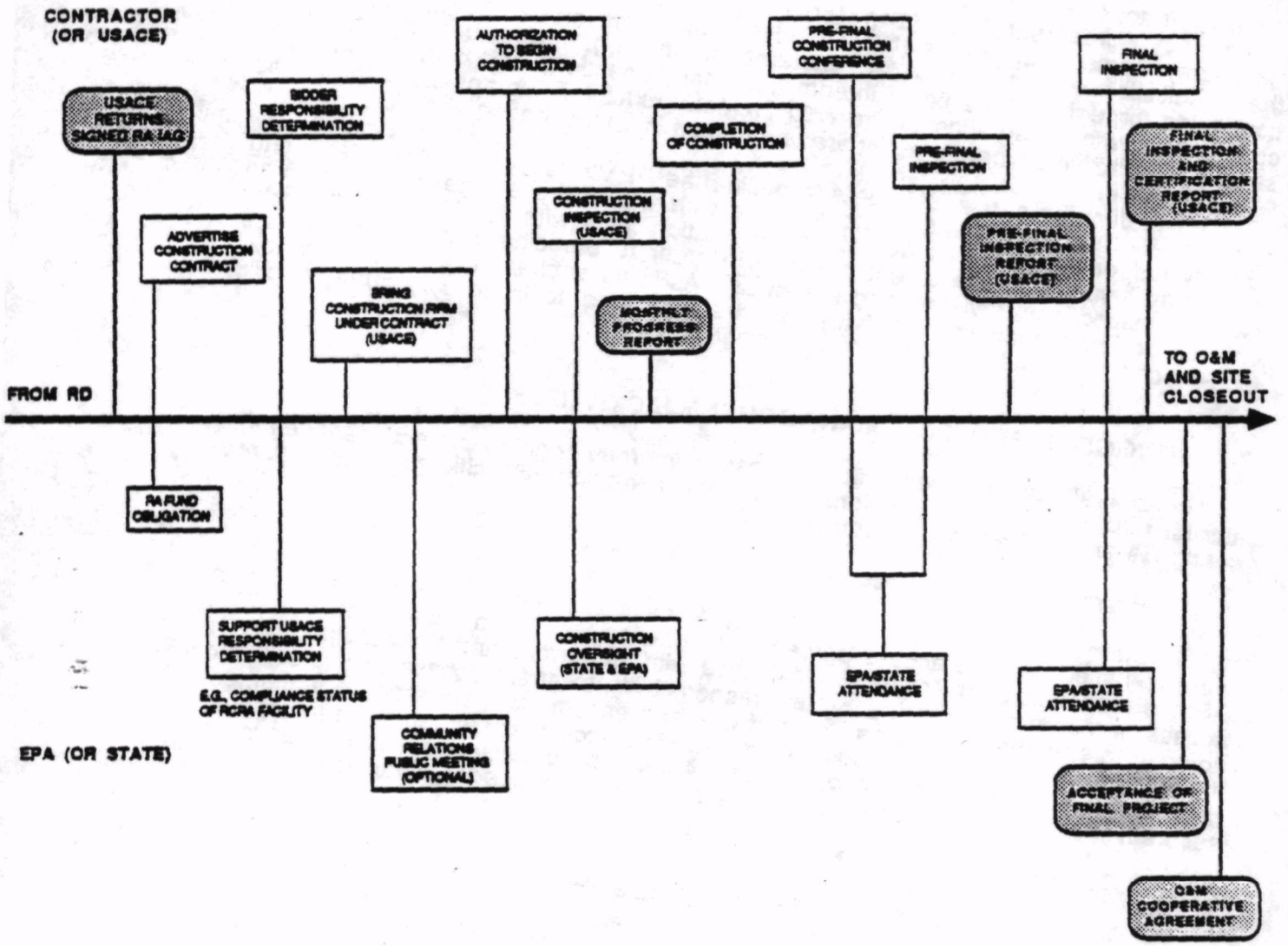
7.1.2 Coordination with State

During the RA phase, the RPM should coordinate with State officials to inform them of progress and to obtain their input on all aspects of the RA. It is very important that States be kept informed of site work during the RA. This will help to ease the transition period during which the State assumes responsibility for the completed remedy. The RPM should:

- Coordinate State review of contractor bid documents
- Prepare amendments to the Superfund response agreement (e.g., SSC), as necessary

EXHIBIT 7-1

Remedial Action (RA)



LEGEND:

ACTIVITY

DOCUMENT

ONGOING PROJECT MANAGEMENT, ENFORCEMENT AND COMMUNITY RELATIONS ACTIVITIES

- Ensure that the State provides its cost share in accordance with the payment schedule in the SCC
- Coordinate State participation in inspections, conferences, and other reviews
- Assist in preparing amendments to the Cooperative Agreement (CA) for operation and maintenance (O&M), if required.

In addition, the RPM should coordinate and facilitate the State's involvement in all community relations activities.

7.1.3 Reporting and Record Keeping

Throughout the RA the RPM is responsibile for maintaining thorough, accurate records. The RPM must maintain site files and relevant documentation for the purposes of future cost recovery actions, as well as possible external audits. The RPM also must ensure that the USACE and RA contractor maintain relevant documentation.

Periodic updating of information for EPA's automated data systems is a continuing responsibility of the RPM. These systems include:

- CERCLIS (CERCLA Information System) -- Start (date the implementation contract was awarded) and end dates (date of final acceptance and beneficial occupancy) for the RA must be entered.
- SCAP (Superfund Comprehensive Accomplishments Plan) -- The RPM should coordinate with the Regional SCAP contact to ensure that the information on the SCAP is accurate and adequate to maintain RA activities.
- FMS (Financial Management System) -- The RPM must review for accuracy the monthly and ad hoc financial status reports on the RA.

7.1.4 Change Orders/Claims Review and Approval

Problems may arise in the course of the RA concerning implementation of the design. Among these may be change orders and claims. Change orders are written orders issued in response to a request for an addition to, deletion from, or revision of the project specification. The need for change orders usually arises when the RD is insufficient, for whatever reasons, to meet site conditions, and it is necessary to modify the RA within the original scope approved in the Record of Decision (ROD). A claim may arise when a request for a change order, submitted by a contractor engaged in the RA, has been denied or not handled according to pertinent procurement requirements and policies.

The USACE is responsible for processing change orders and claims in accordance with USACE procurement procedures. The USACE's project manager has the authority to approve any change order up to 20 percent of the project contingency fund which is available for unforeseen site conditions. Any change order exceeding 20 percent of the contingency fund requires RPM approval. The RPM will be notified in writing by the USACE's project manager if a total of 75 percent of the contingency fund is expended. In order to exceed 75 percent of the project contingency fund, the RPM must provide written approval. The RPM should identify changes or new conditions requiring additional funding as soon as their need becomes apparent, and must ensure that the money is available through the SCAP process.

7.1.5 Coordination with Community Relations

The RPM is responsible for informing the Regional community relations staff of any changes in RA activities or progress which could affect the level of concern or information needs of the community. The RPM must request assistance from the Regional community relations staff on any specific community relations activities required during construction, and for ongoing activities such as participation in public meetings and development of fact sheets and/or press releases.

7.2 PROCUREMENT OF RA CONTRACTOR

The USACE is responsible for reviewing bid documents for RA activities to determine whether or not the bidders are both *responsive* to the requirements of the bid solicitation (i.e., Are the bid bonds provided in the proper form and amount? Is the required insurance binder provided?); and *responsible* (i.e., Does each bidder possess the capability and experience as required in the solicitation to perform the RA in a safe and timely manner at the price bid? Is there any potential conflict of interest?). It is the USACE's responsibility to review construction contractors' bid packages and award the RA contract. The RPM will coordinate with the USACE to provide assistance throughout the contract award process.

7.3 CONSTRUCTION MONITORING AND INSPECTIONS

The USACE is responsible for assigning a full-time inspector(s) to be on-site during all construction activities. The RPM will make oversight visits at intervals determined by the RPM according to the complexity of the project. The USACE is responsible for inspecting all on-site construction activities to verify compliance with all contractual and environmental requirements and with health and safety procedures. Upon review of construction activities all discrepancies must be noted. The USACE also acts as EPA's agent by signing Resource Conservation and Recovery Act (RCRA) hazardous waste manifests. The RPM may be requested to assist in resolving discrepancies, conducting site inspections, and enlisting State support on such matters, as appropriate.

7.4 REVIEW OF PROGRESS REPORTS

The RPM is responsible for reviewing monthly progress reports submitted by the RA contractor and the USACE. EPA will use these progress reports to monitor the remedial construction activities. The content of these reports will be sufficient to develop a chronological record of all site activities and should include the following elements:

- Estimate of the percentage of the project completed and the total project cost to date
- Summaries of the following items for the reporting period:
  - Work performed on the site
  - Community relations activities, including community contacts, citizen concerns, and efforts to resolve any concerns
  - Change orders and claims made on the contract
  - Problems or potential problems encountered.

- Status of the contingency fund to date (Fund-financed RA only)
- Projected work for the next reporting period
- Copies of contractor daily reports, change orders, RCRA manifests, and laboratory/monitoring data.

7.5 REMEDIAL ACTION COMPLETION AND ACCEPTANCE

The remaining two steps required to complete the RA are:

- Conduct prefinal conference and inspection
- Prepare final inspection and certification report.

The RPM's responsibilities for the final technical report, O&M assurances, site closeout, and deletion from the National Priorities List (NPL) are discussed separately in Chapter 8.

7.5.1 Prefinal Conference and Inspection

As the project nears completion, a prefinal construction conference and inspection will be conducted. Participants in the prefinal construction conference and inspection should include the RPM, State officials, construction contractor, the USACE, and the design A/E firm (optional).

The conference will be scheduled and chaired by the USACE. The objective of the conference is to discuss procedures and requirements for project completion and closeout.

The prefinal inspection will consist of a walk-through inspection of the entire project site. The RPM and the State should inspect the completed site work to determine whether the project is complete and consistent with the contract documents. The RPM and the State should identify and note any outstanding construction items discovered. The USACE will prepare a prefinal inspection report for submission to the RPM and the State.

7.5.2 Final Inspection and Certification Report

Upon completion of any outstanding construction items, a final inspection will be conducted. The prefinal inspection report should be used as a checklist by the RPM and the State, with the inspection focusing on the outstanding construction items identified in the prefinal inspection. The contractor's demobilization activities should be completed, except for equipment and materials required to complete outstanding construction items. The RPM and the State should confirm that all outstanding items noted in the prefinal inspection report have been resolved. (If any items remain unresolved, the inspection will be considered a prefinal inspection, requiring another prefinal inspection report.)

Upon satisfactory completion of the final inspection, the USACE will prepare a final inspection/certification report. The RPM and the State should review the report jointly. If the RPM and the State concur with the findings of the final inspection/certification report, the Regional Administrator will provide written notice of EPA's acceptance of the completed project.

7.6 TRANSITION TO OPERATION AND MAINTENANCE

As the RA nears completion, the RPM must prepare for transition to O&M. As mentioned previously, the State always assumes sole responsibility for O&M and EPA may provide cost sharing for a period not to exceed one year. In order to ensure a smooth transition, the RPM should meet with the State-lead RPM responsible for the site and the State's representative to discuss transition roles. This meeting should occur early in the RA phase.

When the RA includes construction of a treatment system, questions may arise regarding whether the facility start-up and shakedown period are part of the RA or part of O&M. In some cases, shakedown may last several months.In most cases, the facility shakedown period will be considered part of the RA. Remedy effectiveness must be demonstrated prior to submitting the final technical report for the RA completion. Since the State assumes the title to any facilities constructed during the RA, the State may be unwilling to accept the facility until treatment effectiveness can be demonstrated. During the shakedown period, the State is encouraged to:

- Oversee operational testing of the system to ensure treatment effectiveness
- Conduct operator training
- Adjust the O&M procedures manual to reflect actual operating conditions/parameters
- Develop more accurate O&M costs.

• • • • •

Chapters 6 and 7 have highlighted the RPM's major responsibilities for design and construction of the selected remedial alternative. Although for most sites primary on-site responsibility for these two phases has been delegated to the USACE, which acts as EPA's contract manager, the RPM has the overall responsibility for ensuring that the remedy implemented meets the environmental, technical performance, regulatory/legal, and institutional requirements discussed in the RI/FS report. The final chapter of this handbook, Chapter 8, focuses on provisions for remedy O&M, NPL deletion, and site closeout.

8. SITE CLOSEOUT

This chapter discusses the procedures followed in closing out a site and the specific responsibilities of the RPM in assisting with the implementation of these procedures. It is divided into two major sections:

- Operation and Maintenance (O&M)
- Site Closeout and National Priority List (NPL) Deletion.

It does not discuss procedures and responsibilities for closing out a remedial investigation/feasbility study (RI/FS), since these were already discussed in Chapter 5.

Exhibit 8-1 illustrates the activities which occur during O&M, site closeout, and NPL deletion. The top half of the diagram represents those which are the responsibility of the U.S. Army Corps of Engineers (USACE) or the remedial action contractor and the bottom those which are the responsibility of EPA and the State.

Much of the information used for preparing this chapter was derived from the EPA manual entitled *State Participation in the Superfund Remedial Program (State Manual)*, February 1984, and an EPA memorandum entitled *"Interim Procedures for Deleting Sites from the National Priorities List,"* March 27, 1984. For additional background on the subjects discussed in this chapter, the RPM should review these two source documents.

8.1 OPERATION AND MAINTENANCE

Following completion of a remedial action (RA), the State must assume responsibility for any O&M requirements associated with the remedy. This will begin the period during which EPA shares in the costs of O&M, a period not to exceed one year based upon the date of project completion. This date is certified in the RA final inspection report and is formally approved by the Assistatnt Administrator for the Office of Solid Waste and Emergency Response (AA/OSWER).

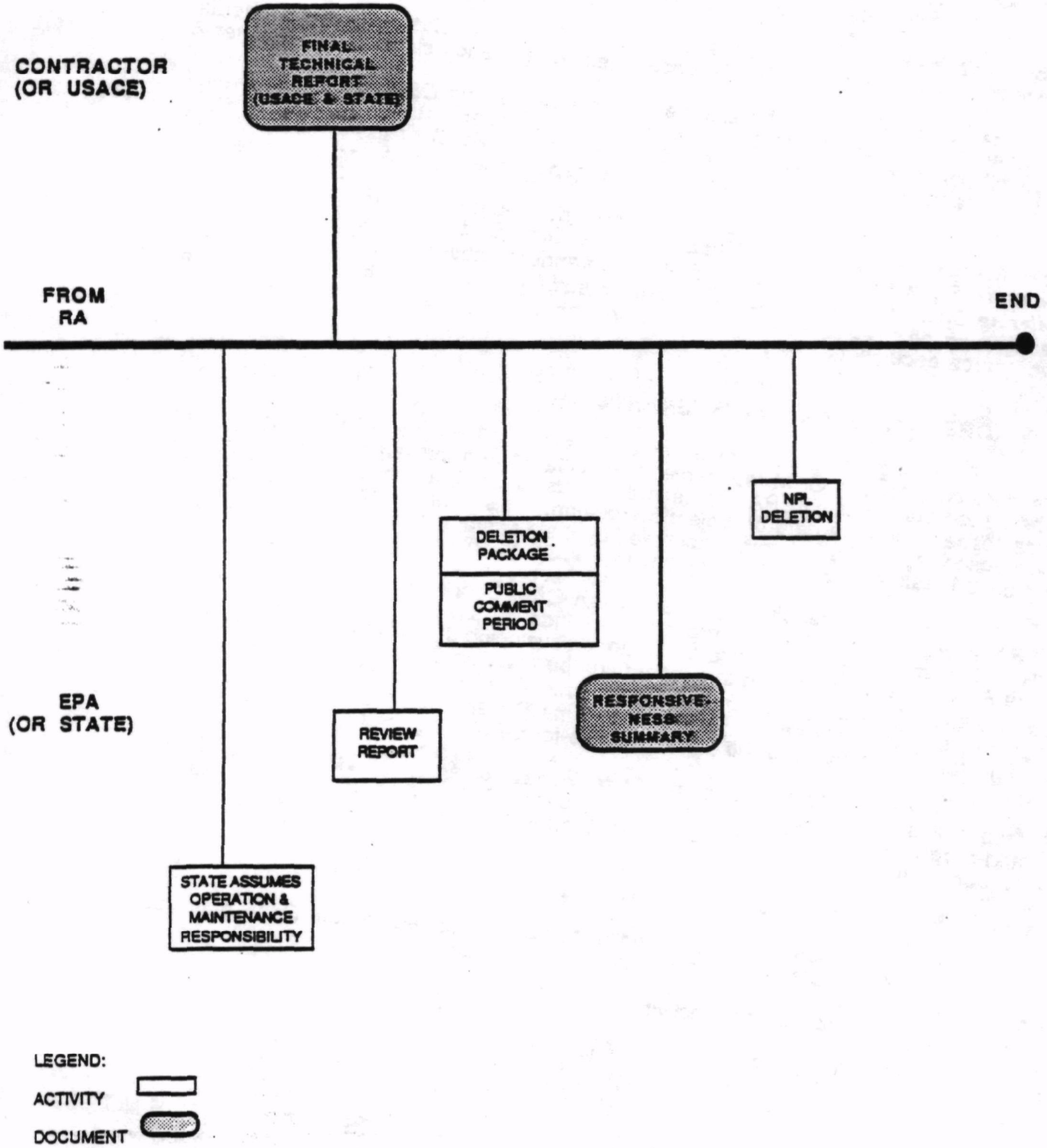
The State is required to enter into an O&M Cooperative Agreement (CA) with EPA in order to obtain any approved EPA funds for sharing in the O&M costs. The RPM is responsible for assisting the State in developing the O&M CA. A description of the RPM's responsibilities in this regard can be found in Chapter 3 of the *State Manual* and the *RPM Handbook for State-Lead Projects*. The RPM should review both of these guidance documents prior to completion of the RA and make arrangements to meet with State personnel who will be responsible for developing the O&M CA.

In addition to assisting the State in developing the O&M CA, the RPM is responsible for overseeing implementation of the CA in terms of technical, financial, and programmatic commitments agreed upon in the CA. This includes the following responsibilities:

- Monitor agreement provisions
- Review the tasks and schedule contained in the O&M plan (see Chapter 6) and the CA
- Track financial activities
- Modify the CA.

EXHIBIT 8-1

O&M, Site Closeout, and NPL Deletion



Below is a detailed description of the RPM's responsibilities in carrying out each of these activities. It is important to note that although EPA will share O&M costs for a period not to exceed one year, the RPM is responsible for monitoring O&M activities for the entire duration of O&M. Exhibit 8-2 summarizes these responsibilities.

8.1.1 Monitor Agreement Provisions

The RPM must ensure that both EPA and the State meet all provisions in the CA. This includes both general assistance provisions and Superfund program provisions. The RPM is responsible for accomplishing and/or coordinating the commitments made by EPA. Any problems in complying with the provisions must be handled by the RPM, usually through consultation with appropriate sources in the Region, State, or Headquarters.

8.1.2 Review the Tasks and Schedules Contained in the O&M Plan and the CA

While it is the State's responsibility to implement the tasks in the O&M plan, it is the RPM must actively review these tasks and their schedules. This should be done through formal and informal information sources such as site visits, telephone calls, the State's monthly or quarterly reports, and written correspondence with the State Project Officer (SPO). Key elements of the RPM's review strategy should be as follows:

- State reporting by exception, as soon as it is noticed that any task in the O&M plan may not be accomplished. The RPM should come to an agreement with the SPO that any actual or anticipated deviations from the schedule in the O&M plan and any problems or anticipated problems which may adversely affect the schedule will be reported to the RPM immediately. The RPM will then be responsible for assisting the SPO in correcting the deviations and/or problems, either through personal support or though the support of other personnel in the Region.

- Telephone discussions as needed between the RPM and the SPO to assess progress in accomplishing key tasks and to identify problems affecting the implementation of these tasks. The RPM is responsible for working with the SPO to correct any problems identified.

- Formal quarterly or informal monthly review by the RPM of State progress reports to assess progress in implementing tasks in the O&M plan. The RPM is responsible for contacting the SPO to discuss and resolve any problems identified in the progress reports.

- Site visits by the RPM on an as-needed basis. The objective is to assess task progress against schedules in the O&M plan, identify problems or issues adversely affecting progress and schedules, and develop corrective actions to resolve these problems. Timing of these visits should be based on phone calls with the SPO or information contained in State progress reports.

EXHIBIT 8-2

Operation and Maintenance

ACTIVITY	RPM RESPONSIBILITIES	REFERENCES
1. Monitor agreement provisions	• Ensure that all provisions in the CA are met	*State Manual*, February 1984
2. Review the tasks and schedules contained in the O&M plan and the CA	• Monitor tasks and schedules - State reporting by exception - As-needed phone discussions with the SPO - Monthly or quarterly review of State progress reports - Site visits on as-needed basis	*State Manual*, February 1984
3. Track financial activities	• Ensure that the State implements the O&M program within its financial commitments in the CA budget - Review State drawdowns on the letter of credit on a quarterly basis - Oversee any transfer of funds from one activity to another - Maintain a complete file of all financial activities - Compare actual cost data in the Financial Status Report with cost data in the O&M plan and the CA	*State Manual*, February 1984
4. Modify the CA	• Review the amendment application for technical and/or financial accuracy and program consistency	*State Manual*, February 1984

8.1.3 Track Financial Activities

Once the O&M CA has been executed, the RPM, along with the appropriate Regional financial management personnel, is responsible for ensuring that the State implements the O&M program within its financial commitments in the CA budget. This responsibility pertains only to the O&M cost-sharing period; therefore, the RPM is responsible for monitoring technical activities only.

The RPM should review State drawdowns on the letter of credit on a quarterly basis. The RPM should contact appropriate Regional financial management personnel for this information. The RPM may request that the SPO submit a copy of the standard financial report directly.The RPM should determine whether:

- Expenditures correspond to technical progress
- Expenditures are excessive in terms of project needs
- CA account structures are being followed.

Drawdowns should be only for EPA's percentage of funding (e.g., 90% of total costs). Equipment expenditures must be conducted in accordance with EPA's procurement regulations, 40 CFR Part 33; *OMB Circular A-102* (available from the Regional grants office); and Appendix T of the *State Manual.*

The RPM is responsible for keeping a complete file of all financial activities, as well as entering appropriate financial data into the CERCLA Information System (CERCLIS) data base. The CERCLIS data base should include the O&M start date which corresponds to the date of final acceptance of remedy and the O&M completion date which corresponds to the termination of O&M cost-sharing period.

Within 90 days after completion of the O&M cost-sharing period, the State is required to complete a Financial Status Report EPA (Form 269) and submit it to the RPM. The RPM should compare the data in this report with those in the O&M plan and CA to make sure that actual expenditures are in line with planned expenditures. If they are not, the RPM should contact the SPO to discuss any problems that need to be resolved.

If the RPM and SPO see the need for additional, unanticipated O&M funds, the RPM should assist the SPO in developing an application for CA amendment (see *State Manual*).

8.2 SITE CLOSEOUT AND NPL DELETION

Upon the satisfactory conclusion of the RA, the site is closed out and recommended for deletion from the NPL. The RPM is responsible for assisting in both of these activities. In site closeout, the RPM is responsible for reviewing the final technical report submitted by the USACE-RA contractor. For NPL deletion, the RPM is responsible for assisting in the preparation of the advanced public notification and the NPL deletion package. The following two sections describe the specific responsibilities of the RPM for these two activities. Exhibit 8-3 summarizes these responsibilities.

EXHIBIT 8-3

Site Closeout and NPL Deletion

ACTIVITY	RPM RESPONSIBILITIES	REFERENCES
1. Final technical report	• Ensure the report is submitted within 60 days after the completeness of the RA has been confirmed	*Superfund Remedial Design and Remedial Action Guidance*, February1985
	• Review the report for adequacy and appropriateness	
2. Deletion of the site from the NPL	• Assist in preparation of the advanced notification statement	*"Interim Procedures for Deleting Sites from the National Priorities List,"* March 27, 1984
	• Assist in preparation of the NPL deletion package	
	- Development of the overview memorandum	
	- Description of the site and remedy	
	- Description of how the site qualifies for the deletion criteria	
	- Collection of relevant documentation	
	- Preparation of a technical briefing for Headquarters	

8.2.1 Final Technical Report

If it has been decided that a final technical report will be required at the completion of the RA, the RPM is responsible for ensuring that the report is submitted within 60 days after the completeness of the RA has been confirmed. The RPM should stay in frequent contact with the USACE and the State to make sure that this occurs. The RPM should be prepared to provide the USACE/State with assistance and support, if required, in producing the report.

In reviewing the final report, the RPM should make sure that the following elements are discussed:

- Synopsis of the work defined in the statement of work (SOW) and a certification that this work was performed
- Explanation of any modifications to work in the SOW and why these were necessary for the project
- Listing of the criteria, established before the RA was initiated, for judging the functioning of the remedy and explanation of any modification to these criteria
- Results of site monitoring and inspection, indicating that the remedy meets the performance criteria
- Explanation of the O&M (including monitoring) to be undertaken at the site.

If the discussion of any of these elements is insufficient, the RPM should contact the USACE representative who was responsible for preparing the report and explain what modifications need to be made, including any additional information which may be required. The most important requirement is that the report provide sufficient information to judge the effectiveness of the remedy and to assess whether at least one critierion for deleting the site from the NPL has been met (see next section for a description of these criteria).

8.2.2 Deletion of the Site from the NPL

Regions can recommend deletion of a site from the current NPL at any time after the RA is complete and after consultation with the State. A site can be deleted when either of the following criteria has been met:

- All appropriate Fund-financed response under CERCLA has been completed and EPA has determined that no further cleanup by responsible parties is appropriate at that time
- Based on a remedial investigation, EPA had determined that the release poses no significant threat to public health or the environment and, therefore, taking of remedial measures is not appropriate at that time. This would have lead to a No Action Record of Decision (ROD).

The process of recommending a site for deletion consists of two major steps:

- Preparation of an advanced notification statement
- Preparation of an NPL deletion package.

The RPM's involvement in these two activities is discussed below. Additional information can be obtained by consulting the EPA memorandum entitled *"Interim*

Procedures for Deleting Sites from the National Priorities List", March 27, 1984. (Note: the procedures for deleting sites from the NPL are currently undergoing revision; consult the Headquarters Regional Coordinator for current procedures.)

8.2.2.1 Advanced Notification

An advanced notification statement is required to inform the public of EPA's intent to prepare a site for deletion. The statement is prepared and issued to the public two weeks before a three-week comment period. During this three-week comment period, the public is given the opportunity to comment on the notification statement. The Region is responsible for preparing a responsiveness summary of these comments and a summary of how the Region responded to these comments.

Primary responsibility for preparing the advanced notification statement rests with the Regional Office of Public Affairs/Superfund Community Relations Coordinator. The RPM should work closely with the Regional Office of Public Affairs/Community Relations Coordinator to provide appropriate assistance and support in order to ensure that the notification statement is prepared as required. This may include the following:

- Assistance in preparing a Responsiveness Summary of public comments received in response to the notification statement
- Assistance in identifying the location in the community of relevant documents for public review (this information should be included in the notification statement)
- Assistance in preparing a description of the closeout plan for the site and in delineating the O&M procedures to be implemented and the monitoring program.

8.2.2.2 Deletion Package

The Regional NPL Coordinator is responsible for preparing a deletion package and submitting it through the Regional Administrator to Headquarters for review and concurrence. The RPM is responsible for assisting the NPL Coordinator in this effort. Therefore, it is important that the RPM develop a close working relationship with the NPL Coordinator and be prepared to provide assistance regarding the technical aspects of the site.

The NPL Coordinator may request assistance from the RPM in the following areas:

- Development of the overview memorandum that will be a part of the deletion package
- Description of the site and the implemented remedy
- Description of how the site qualifies for one or more of the deletion criteria
- Collection of relevant documentation to support the deletion recommendation in the package
  - FS Report
  - ROD
  - Progress reports
  - Post-closure monitoring plan

- O&M plan
- Responsiveness summary
- Final technical report

- Preparation of a briefing for Headquarters, if requested, on complex technical aspects of the site.

Once the deletion package has been completed, the NPL Coordinator is responsible for obtaining Regional concurrences and approvals and transmitting the package to HSCD.

• • • • •

Following deletion from the NPL, the site is technically closed out with respect to the Federally-funded remedial response that was undertaken. However, the RPM is cautioned to establish, maintain, and safeguard all information collected during the entire remedial response in well-organized site files, such as those emphasized throughout this handbook. All information pertaining to the site must be carefully documented to support any future legal or cost recovery actions taken. These actions may occur years after the data have been gathered. Thus, it is crucial that records be sufficiently detailed and protected to provide a complete and accurate history of the remedial response. In addition, well-organized information will aid the RPM in answering inquiries from Congress or the general public under Freedom of Information Act requests, should they be filed.

APPENDIX A

Project Plan Milestones

Project Plan 1

Milestone	Actual Schedule (Start/Finish)	Actual Cost	Generic Schedule (Start/Finish)	Generic Cost
Pre RI/FS				
Intergovernmental review				
General response objectives/SOW for RI/FS				
SCAP allocation				
Enforcement				
Site access				
Funding obligation				
RI/FS work assignment				
Work plan memorandum				
Contractor/EPA meeting				
Receipt of work plan and supplemental plans				
Review of work plan and supplemental plans				
_____				
_____				
_____				
Approval of work plans				
RI/FS				
Public Comment/ROD				
RD				
RA				

Project Plan 2

Milestone	Actual Schedule (Start/Finish)	Actual Cost	Generic Schedule (Start/Finish)	Generic Cost
Pre-RI/FS				
RI/FS				
Public meeting				
Coordination of Analytical support				
REM contractor work plan test 1				
REM contractor work plan test 2				
o				
o				
o				
Validation of data				
Technical assistance funds (to COE, if needed)				
Pre-FS meeting				
Draft RI/FS delivered				
ROD delegation analysis				
Design assistance fund to COE				
RI/FS review				
Pre-ROD meeting				
_____				
_____				
_____				
Delivery of public comment FS				
Public Comment Period/ROD				
RD				
RA				

Project Plan 3

Milestone	Actual Schedule (Start/Finish)	Actual Cost	Generic Schedule (Start/Finish)	Generic Cost
Pre-RI/FS				
RI/FS				
Public Comment/ROD				
Notification of public comment period				
Start of public comment				
Notification/negotiation with PRP				
Draft ROD				
Coordination with other regional offices (OW, OSW, ORC)				
Responsiveness summary				
State review				
Design assistance funds to Corps of Engineers (COEDA)				
ROD briefing				
Final ROD				
Final community relations plan				
_____				
_____				
_____				
ROD signature				
RD				
RA				

Project Plan 4

Milestone	Actual Schedule (Start/Finish)	Actual Cost	Generic Schedule (Start/Finish)	Generic Cost
Pre-RI/FS				
RI/FS				
Public Comment/ROD				
RD				
Pre-design report				
RI/FS closeout				
Funding obligation				
A/E award				
Tech transfer briefing				
Site access permits				
Notice to proceed				
Community relations				
30% design review				
60% design review				
Pre-final (95%) design review				
Final design review				
Value engineering				
_____				
_____				
_____				
SSC signature				
RA				

Project Plan 5

Milestone	Actual Schedule (Start/Finish)	Actual Cost	Generic Schedule (Start/Finish)	Generic Cost
Pre-RI/FS				
RI/FS				
Public Comment/ROD				
RD				
RA				
Funding obligation				
Advertisement for bid				
Pre-bid meeting				
Bidder responsibility determination				
Confirmation of compliance of disposal facility with RCRA, TSCA, and CWA				
Award				
Pre-construction meeting				
Community relations				
Authorization to proceed				
Submittal of contractor safety plan				
Construction oversight				
Progress report 1				
Progress report 2				
o				
o				
Completion of construction				
Pre-final inspection				
Final inspection				
Final acceptance				
Certificate of completion				
Warranty				
Operation & maintenance cooperative agreement				
Final technical report				
_____				
_____				
_____				
Deletion from NPL				

APPENDIX B

Example Work Assignment Cover Sheet

APPENDIX B

Example Work Assignment Cover Sheet

A. Contractor:	Camp, Dresser & McKee 7630 Little River Turnpike Suite 500 Annandale, VA 22003	
B. Contract Number:	68-01-6939	
C. Site/Title:	Del Norte, CA/RI/FS	
D. Assignment Number:	01-9L33	
E. Statement of Work:	Attached	
F. Level of Effort (Work Hours):	1248 Interim Authorization 6500 Total Estimate	
G. Period of Performance	In SOW	
Contracting Officer	Ulrike Joiner Environmental Protection Agency 401 M Street, S.W. Washington, D.C. 20460	**Phone** 382-2302 (PM-214F)
Contracting Officer Approval	_____	**Date** _____
Project Officer	Linda Boornazian Environmental Protection Agency 401 M Street, S.W. Washington, D.C. 20460	**Phone** 382-4997 (WH-548E)
Regional Project Officer	Keith Takata Environmental Protection Agency Region IX 215 Freemont Street San Francisco, CA 94150	**Phone** 415-974-8910
Signature	_____	**Date** _____
Remedial Project Manager	Tom Mix	**Phone** 415-974-8150
Signature	_____	**Date** _____

APPENDIX C

Names and Telephone Numbers of REM Contracting Officers and Project Officers

APPENDIX C

Names and Telephone Numbers of REM Contracting Officers and Project Officers

Contract	CO/PO	Telephone
REM/FIT (Zone 1)	Ron Kovach, CO Bill Kaschak, PO	201-382-3201 201-382-3248
REM/FIT (Zone 2)	Vince Gonzales, CO Nancy Willis, CO	201-382-2090 201-382-2347
REM II	Ulrike Joiner, CO Linda Boomazian, PO	201-382-2302 201-382-7997
REM III	Ron Kovach, CO John Kingscott, PO	201-382-3201 201-382-7996
REM IV	Vince Gonzales, CO Nancy Willis, PO	201-382-2090 201-382-2347

APPENDIX D

Example Interim Work Assignment SOW

APPENDIX D

Example Interim Work Assignment SOW

Del Norte County Pesticide Storage Area

Initial Tasks

Task 1. Site Evaluation (72 Hours)

- Review and Evaluate Existing Information and Data
- Review Aerial Photography
- Review Local Geography and Hydrology

Task 2. Site Survey (112 Hours)

- Conduct Field Survey and Prepare Site Topographic Map
- Subcontractor Authorization
- Site Visit

Task 3. Development of Site-Specific Plans (448 Hours)

All Administrative Activities Prior to Full Field Work Including:

- Quality Assurance Project Plan (QAPP)
- Site Management Plan
- Data Management Plan
- Health and Safety Plan
- Sampling Plan
- Community Relations Plan
- Schedule and Costs
- Work Plan Development

Task 4. Site Soil Survey (296 Hours)

- EM 31 Survey
- Field Sampling
- Field Sample Analyses

Task 5. Additional Requirements (320 Hours)

- Report on EM 31 Survey
- Evaluation and Report on Chemical Analyses and Soil Contamination
- QA/QC Audit
- Attend Meetings, Briefings as Needed

Total Project Hours: 1,248
Estimated Cost: $75,000.00

APPENDIX E

Sample Procurement Request/Requisition

PROCUREMENT REQUEST/REQUISITION
(Please read instructions on reverse before completing the form)

1. DATE	2. DATE REQUIRED	PAGE OF

3a. ORIGINATOR (Name)	b. PROG ELEM	4. DELIVER TO:	5a. PROJECT MANAGER (Name)	
c. TELEPHONE NO. / c. MAIL CODE	d. DIVISION		b. TELEPHONE NO.	6. PROCUREMENT OFF.

7. PROCUREMENT OFFICE USE ONLY
☐ ORAL ORDER – ORDER NO.

PURCHASE AUTHORITY/CONTRACT NO.	DISCOUNT TERMS	PERSON TAKING ORDER/QUOTING		FOB POINT
VENDOR NAME AND ADDRESS		DATE	TELEPHONE	DELIVERY
		CONTRACTING/ORDERING OFFICER		TELEPHONE

8. FINANCIAL DATA a. APPROPRIATION	9. SERVICING FINANCE OFFICE

FMO USE (b)	DOCUMENT CONTROL NO. (c)	ACCOUNT NO. (d)	OBJECT (e)	DOLLAR AMOUNT (f)
1 2 3 4 5 6 7 8 9 10 11 12 13 14	15 16 17 18 19 20	31 32 33 34 35 36 37 38 39 40	41 42 43 44	45 46 47 48 49 50 51 52 53 54 55 56
2				
2				
2				

10. AMOUNT OF MONEY SHOWN AS COMMITTED IS:	11. CONTRACTING OFFICE	12. PLANNING ID NO.
☐ ORIGINAL ☐ DECREASE ☐ INCREASE	☐ AUTHORIZED ☐ NOT AUTHORIZED TO EXCEED BY 10% AMOUNT SHOWN	

STOCK OR ITEM NO. (13)	DESCRIPTION (14)	QUANTITY (15)	UNIT OF ISSUE (16)	UNIT COST (17)	AMOUNT (18)

19. SUGGESTED CONTRACTOR/VENDOR	21. SIGNATURE OF ORIGINATOR	DATE
	22. SIGNATURE OF PROP MGT OFFICER/DESIGNEE	DATE

20. RECOMMENDED PROCUREMENT METHOD	23. ACCOUNTABLE PROPERTY	24. NOT AVAILABLE FROM EXCESS
☐ COMPETITIVE ☐ NONCOMPETITIVE (Justification attached)	☐ INITIALS	☐ INITIALS

25. APPROVALS

a. BRANCH/OFFICE	DATE	c. FINANCE	DATE
b. DIVISION/OFFICE	DATE	e. OTHER	DATE
c. FUNDS LISTED ABOVE ARE AVAILABLE AND RESERVED	DATE	f. OTHER	DATE

EPA Form 1900-8 (Rev. 2-78) PREVIOUS EDITION IS OBSOLETE.

COPY 2 - FINANCE - COMMITMENT

APPENDIX E

Sample Procurement Request/Requisition

APPENDIX F

Example Work Plan Approval Form

APPENDIX F

Example Work Plan Approval Form

SPM

DATE: _____

FROM: _____

TO: _____

WA NO.: _____

SITE NAME: _____

ACTIVITY: _____

INSTRUCTIONS FOR PROCESSING "WORK PLAN APPROVAL"

1) SPM initiates and submits form to RPM
2) RPM completes form, gets REM-RPO signature and returns form to SPM
3) SPM forwards completed form to ZPMO*
4) ZPMO* delivers form to EPA HQ
5) EPA HQ processes/approves form and returns to ZPMO*
6) ZPMO* notifies SPM of approval

* NPMO FOR REM II

RPM

___ Approval for entire work plan:

Budget $ _____

LOE Hours _____

Estimated Completion Date _____

___ Partial approval:

Tasks Approved _____

Budget $ _____

LOE Hours _____

___ Not approved:

COMMENTS: _____

_____

_____

_____ _____

RPM Signature/Approval/Date REM-RPO Signature/Approval/Date

EPA HQ

___ Approved as submitted
___ Approved with changes
___ Approved pending funding
___ Partial Approval
___ Not Approved

_____

REM-DPO Approval Signature/Date

___ Approved as submitted
___ Approved with changes
___ Approved pending funding
___ Partial approval
___ Not approved

_____

CO Authorization Signature/Date

APPENDIX G

Procedures for Processing Superfund Interagency Agreements with the U.S. Army Corps of Engineers

MEMORANDUM

SUBJECT: Procedures for Processing Superfund Interagency Agreements with the U.S. Army Corps of Engineers

FROM: Paul F. Nadeau, Chief
Remedial Action and Contracts Branch

TO: Addresses

The Authority for Approving and Awarding Superfund Interagency Agreements (IAGs) with the U.S. Army Corps of Engineers (USACE) was delegated to the Regions effective October 1, 1984. The delegation include the generic IAGs for technical assistance (TA) and Phase I design (DA), along with the site specific IAGs for remedial design (RD) and remedial action (RA).

Sample IAGs are attached to provide guidance in processing and funding the IAGs with the USACE. The procedures are briefly summarized below. The Region should refer to the draft Superfund RD/RA Guidance for additional information on the IAGs.

Generic IAGs for TA and DA should be established by the Regions with the USACE Missouri River Division (MRD). The total amount of funds obligated in each generic IAG should be the sum of all TA or DA shown in your approved SCAP for first and second quarters. Site specific work assignments will then be issued to USACE-MRD under the established generic IAGs. The TA work assignment should be issued around the completion of the remedial investigation, and the DA work assignment should be issued about the time the feasibility study is made available to the public. The Region should complete the blocks marked with an "asterisk" on the sample IAG. The sample work assignment should be completed at the time of issuance.

Site specific IAGs for RD and RA will be prepared, approved and issued by the Region to the USACE-MRD. The IAG for RD should be executed after ROD approval, and upon RD completion the IAG for RA should be executed. The Region should complete the blocks marked with an "asterisk" on the sample IAGs, as well as filling in the appropriate information on the sample scope of work.

Any administrative questions concerning the IAGs should be addressed first to your Management Division, and if necessary to Billie Perry of OERR at 475-8906. Any technical questions should be addressed to Randall Kaltreider of my staff at 382-2448.

INTERAGENCY AGREEMENT/AMENDMENT Part I — GENERAL INFORMATION	3. Type of Action New Agreement	4. Program Abbreviation *
5. Name and Address of EPA Organization *	6. Name and Address of Other Agency Department of Defense U.S. Army Corps of Engineers (USACE) Engineering Division, Missouri River Omaha, Nebraska 68101-0103	
7. Project Title Technical Assistance Activities - FY 1985		
8. EPA Project Officer (Name, Address, Telephone Number) *	9. Other Agency Project Officer (Name, Address, Telephone Number) William Mulligan FTS/864-7227 USACE, Engineering Division, Missouri River P. O. Box 103, Downtown Station Omaha, Nebraska 68101-0103	
10. Project Period 10/01/84 - 09/30/85	11. Budget Period 10/01/84 - 09/30/85	

12. Scope of Work (Attach additional sheets, as needed)

This agreement obligates no more than $ * and generally no more than $10,000 per project (except as described under Section 27, Special Conditions) to the USACE for technical assistance to EPA during EPA lead phases of remedial response activities. Such activities, consistent with the Memorandum of Understanding between the USACE and the EPA, may include:

1. Reviewing work plans developed by the contractor and providing comments and suggestions on the proposed work.

2. Technical review of investigation/feasibility study.

3. Providing comments on all plans and specifications for the cleanup.

4. Attending status briefings. The USACE will participate in site specific status briefings whenever such meetings are deemed necessary by the regional project officer.

5. Reviewing other contractor products. These products may include such things as sampling plans, plans and specifications for drum and bulk waste removal, and draft and final reports on the remedial investigation or the feasibility study.

13. Statutory Authority for both Transfer of Funds and Project Activities CERCLA, E.O. 12316 & the Economy Act of 1932, as amended (31USC1535)	14. Other Agency Type Federal

FUNDS	PREVIOUS AMOUNT	AMOUNT THIS ACTION	AMENDED TOTAL
15. EPA Amount		*	
16. EPA In-Kind Amount			
17. Other Agency Amount			
18. Other Agency In-Kind Amount			
19. Total Project Cost		*	

20. Fiscal Information

Program Element	FY	Appropriation	Doc. Control No.	Account Number	Object Class	Obligation/Deobligation Amt
TFAY9A	85	68/20X8145	*	*	25.76	*

OSWER DIRECTIVE NO. 9355.1-1

21. Budget Categories	Total Item Estimated Cost to Date
ersonnel	$
ringe Benefits	
ravel	
Equipment	
Supplies	
Procurement/Assistance	
Construction	
Other	
Total Direct Charges	$Breakdown not available.
ndirect Costs: Rate 0000 % Base 0000	Will be provided as part of
Total	request for reimbursement.
(EPA Share 100 %) (Other Agency Share 0 %)	$ *

equipment authorized to be furnished by EPA or acquired with EPA funds? ☐ Yes ☒ No
entify all equipment costing $1,000 or more)

Are any of these funds being used on extramural agreements? ☐ Yes ☒ No *(See Item 21)*

☐ Grant, ☐ Cooperative Agreement, or ☐ Procurement

Contractor/Recipient Name *(if known)*	Total Extramural Amount Under This Project	Percent Funded by EPA *(if known)*

PART III — PAYMENT METHODS AND BILLING INSTRUCTIONS

24. ☒ Disbursement Agreement:

☒ Reimbursement — Request for reimbursement of actual costs will be itemized on SF 1081 or SF 1080 and submitted to the Financial Management Office, Environmental Protection Agency, 26 West St. Clair, Cincinnati, OH 45268:
☒ Monthly ☐ Quarterly ☐ Upon Completion of Work

☐ Advance — Only available for use by Federal agencies on working capital fund or with appropriate justification of need for this type of payment method. Unexpended funds at completion of work will be returned to EPA. Quarterly cost reports will be forwarded to the Financial Management Office, Environmental Protection Agency, 26 West St. Clair, Cincinnati, OH 45268.

☐ Allocation Transfer — Used to transfer obligational authority or transfer of function between Federal agencies. Must receive prior approval by the Office of the Comptroller, Budget Division, Budget Formulation and Control Branch, EPA Headquarters.

25. ☐ Reimbursement Agreement

Other Agency's IAG Identification Number	Billing Instructions and Frequency
Billing Address	

OSWER DIRECTIVE NO. 9355.1-1

The other agency covenants and agrees that it will expeditiously initiate and complete the project work for which funds have been awarded under this agreement.

27. Special Conditions:

Work assignments for technical assistance will be initiated via a letter signed by the _____ or his designee. The letter will identify the particular site, provide the necessary account numbers, and describe any adjustments, including increases in the site dollar ceiling ($10,000) and/or changes to the scope of work.

EPA acting as manager of the Hazardous Substance Response Trust Fund, requires current information on CERCLA response actions and related obligations of CERCLA funds for these actions. In addition, CERCLA authorizes EPA to recover from responsible parties all government costs incurred during a response action.

(See Attachment A)

Part V — OFFER AND ACCEPTANCE

NOTE: 1) For disbursement actions, the agreement/amendment must be signed in duplicate and one original returned to the Grants Administration Division for Headquarters agreements and to the appropriate EPA IAG administration office for Regional agreements within 3 calendar weeks after receipt or within any extension of time as may be granted by EPA. The agreement/amendment must be forwarded to the address cited in Item 28 after acceptance signature.

Receipt of a written refusal or failure to return the properly executed document within the prescribed time may result in the withdrawal of the offer by the Agency. Any change to the agreement by the other agency subsequent to the document being signed by the EPA Action Official which the Action Official determines to materially alter the agreement/amendment shall void the agreement/amendment.

2) For reimbursement actions, the other agency will initiate the action and forward two original agreements/amendments to the appropriate EPA program office for signature. The agreements/amendments will then be forwarded to the appropriate EPA IAG administration office for acceptance signature on behalf of the Environmental Protection Agency. One original copy will be returned to the other agency after acceptance.

EPA IAG Administration Office *(for administrative/management assistance)*	EPA Program Office *(for technical assistance)*
28. Organization/Address	29. Organization/Address

Decision Official on Behalf of the Environmental Protection Agency Program Office		
30. Signature	Typed Name and Title	Date

Action Official on Behalf of the Environmental Protection Agency		
31. Signature	Typed Name and Title	Date

Authorizing Official on Behalf of the Other Agency		
32. Signature	Typed Name and Title	Date

EPA Form 1610-1 (Rev. 8-84)

TECHNICAL ASSISTANCE AUTHORIZATION FORM

AUTHORIZATION IS HEREBY GIVEN TO INITIATE TECHNICAL ASSISTANCE WORK AS DESCRIBED IN IAG # DW96******-01-0. THE FOLLOWING INFORMATION IS PROVIDED FOR COST TRACKING PURPOSES:

SITE NAME _____

REGION _____

EPA SITE I.D. # _____

HQ TECHNICAL PROJECT OFFICER _____ PHONE

REGIONAL SITE MANAGER _____ PHONE

PERIOD OF PERFORMANCE _____ FROM _____ TO

ACCOUNTING INFORMATION

	DOCUMENT CONTROL NO.	IAG NO.	SUPERFUND ACCOUNT NO.	OBJECT CLASS CODE	NOT TO EXCEED AMOUNT
DEOBLIGATE FROM	*****DW96*****0105TFA***L002576				$*****
OBLIGATE TO:	*****DW96*****0105TFA***L**2576				$*****

_____ (Title) _____ DATE

_____ EPA PROJECT OFFICER _____ DATE

_____ (individual who certifies funds) _____ DATE

Original to: Richard Ruhe, EPA
Cincinnati, OH

cc: William Mulligan, USACE

Noel Urban, USACE

Paul Nadeau, EPA

Ivery Jacobs, EPA, Room 3623M
Financial Reports and Analysis Branch

27. SPECIAL PROVISIONS (continued)

In order to help assure successful recovery of CERCLA funds, the USACE shall maintain site specific accounts and documentation of the following:

- Employee hours and salary (timesheets)
- Employee travel and per diem expenses (travel authorizations, paid vouchers, and treasury schedules)
- Receipts for materials, equipment, and supplies
- Any other costs not included in the above categories.

In the event of a cost recovery action, within three weeks from the date of a request from EPA or the Department of Justice (DOJ), the USACE will provide to EPA or DOJ site specific costs and copies of the back-up documentation which supports those costs. The USACE will provide EPA with a contract for obtaining such site specific accounting information and documentation. This cost information and documentation must also be available for audit or verification on request of the Inspector General.

Reimbursement is contingent upon receipt and approval by EPA of monthly progress and financial reports by site, containing an accounting of funds and status of activities.

The USACE will provide technical review comments for each site to the Regional Technical Project Officer.

Mr. William Mulligan
U.S. Army Corps of Engineers
Engineering Division, Missouri River
P.O. Box 103, Downtown Station
Omaha, Nebraska 68101-0103

Dear Mr. Mulligan:

This letter serves to initiate a work assignment for the U.S. Army Corps of Engineers (USACE) for technical assistance to the U.S. Environmental Protection Agency (EPA) at the following Superfund site:

_____

Assistance will be given for EPA lead phases of remedial response activities. Such activities must be consistent with Interagency Agreement No. DW96******-01-0 between the USACE and EPA. Funding for costs incurred while providing these services to EPA, authorized under the authority of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), is not expected to exceed:

$_____

Enclosed is the Technical Assistance Authorization Form. This document contains the necessary account numbers that apply specifically to this work assignment. These numbers must be used on all financial and management reports.

Sincerely yours,

_____
(Title)

Enclosure

cc: Richard Ruhe
Noel Urban
Paul Nadeau
Ivery Jacobs

APPENDIX H

Federal-Lead Regional Coordinators

APPENDIX H

Federal-Lead Regional Coordinators

REGION		TELEPHONE
I	Steve Hooper Bill Kaschak	201-475-6689 201-382-2348
II	John Kingscott	201-382-7995
III	Linda Boornazian Elizabeth Woodson	201-382-7997 201-475-8246
IV	Linda Boornazian Elizabeth Woodson	201-382-7997 201-475-8246
V	Nancy Willis Carol Lindsay	201-382-2347 201-475-6704
VI	Randy Kaltreider	201-382-2448
VII	John Kingscott	201-382-7995
VIII	Randy Kaltreider	201-382-2448
IX	Steve Hooper	201-475-6689
X	Steve Hooper	201-475-6689

APPENDIX I

ROD Materials: Responsiveness Summary and ROD Briefing Materials

APPENDIX J

Work Assignment Completion Report and Work Assignment Closeout Form

EPA WORK ASSIGNMENT COMPLETION REPORT (WACR)

1. CONTRACT NO.	2. WORK ASSIGNMENT NO.	3. EPA REGION

4. CONTRACTOR/SUBCONTRACTOR(S)	5. CONTRACTOR SITE MANAGER *(Name and Phone No.)*
	6. RPM *(Name and Phone No.)*
	7. WORK LOCATION *(Site Name & State)*

8. BRIEFLY DESCRIBE SCOPE OF WORK:

9. DESCRIBE CONTRACTOR'S PERFORMANCE:

10. UNUSUAL PROBLEMS/OCCURRENCES AFFECTING CONTRACTOR'S PERFORMANCE:

11. PHASE I AVAILABLE	12. PHASE I PAID	13. PHASE II AVAILABLE	14. PHASE II AWARD RECOMMENDED?
			☐ YES RECOMMENDED SIZE: _____ % (0-100%)
			☐ NO

15. STATE SPECIFIC REASONS FOR RECOMMENDATION FOR PHASE II AWARD: *(Additional pages may be attached if necessary)*

RPM	REM RPO	HQ EVALUATION COORDINATOR
Signature and Date	*Signature and Date*	*Signature and Date*

Distribution:
HQ Evaluation Coordinator (Original)
Contracting Officer (Copy)
REM RPO (Copy)
RPM (Copy)
Contractor (Copy)

EPA WORK ASSIGNMENT COMPLETION REPORT (WACR)

CONTRACT NO.	WORK ASSIGNMENT NO.	EPA REGION

PROJECT SCHEDULE AND COST INFORMATION WORKSHEET

APPROVED WORK PLAN AND WA AMENDMENT DATES	LOE & EXPENSE COST	SUBCON-TRACTING POOL COST	TOTAL PLANNED COST	PLANNED COMPLETION DATE	ACTUAL COMPLETION DATE
_____ WORK PLAN APPROVAL DATE					
_____ Amendment 1					
_____ Amendment 2					
_____ Amendment 3					
_____					
_____					
_____					
_____					
_____					
_____					
_____					
_____					
_____					
_____					
_____					
_____					
TOTAL PLANNED COST					
TOTAL ACTUAL COST					
VARIANCE					

Distribution:
HQ Evaluation Coordinator (Original)
Contracting Officer (Copy)
REM RPO (Copy)
RPM (Copy)
Contractor (Copy)

EPA WORK ASSIGNMENT COMPLETION REPORT (WACR)

CONTRACT NO.	WORK ASSIGNMENT NO.	EPA REGION

PERFORMANCE CRITERIA RATING WORKSHEET

PERFORMANCE CRITERIA	RATING	SUPPORTING COMMENTS
PROJECT PLANNING - ORGANIZING (E.G., WORK PLAN DEVELOPMENT, DATA REVIEW) - SCHEDULING - BUDGETING	_____5 _____4 _____3 _____2 _____1	
TECHNICAL COMPETENCE & INNOVATION - EFFECTIVENESS OF ANALYSES - MEET PLAN GOALS - ADHERE TO REGS. & PROCEDURES - APPROACH CREATIVITY/INGENUITY - SUPPORT COE, STATE, ENFORCEMENT - EXPERT TESTIMONY	_____5 _____4 _____3 _____2 _____1	
SCHEDULE & COST CONTROL - BUDGET (HOURS & COST) MAINTENANCE - PRIORITY/SCHEDULE ADJUSTMENTS - COST MINIMIZATION	_____5 _____4 _____3 _____2 _____1	
REPORTING - TIMELINESS OF DELIVERABLES - CLARITY - THOROUGHNESS	_____5 _____4 _____3 _____2 _____1	
RESOURCE UTILIZATION - STAFFING - SUBCONTRACTING - EQUIPMENT, TRAVEL, ETC.	_____5 _____4 _____3 _____2 _____1	
EFFORT - RESPONSIVENESS - MOBILIZATION - DAY-TO-DAY - SPECIAL SITUATIONS (E.G., ADVERSE/ DANGEROUS CONDITIONS)	_____5 _____4 _____3 _____2 _____1	

Distribution:
HQ Evaluation Coordinator (Original)
Contracting Officer (Copy)
REM RPO (Copy)
RPM (Copy)
Contractor (Copy)

Example Work Assignment Closeout Form

WORK ASSIGNMENT CLOSEOUT

INSTRUCTIONS FOR PROCESSING "WORK ASSIGNMENT CLOSEOUT"

1) SPM initiates and submits form to RPSO.
2) RPSO completes form, gets REM-RPO signature and returns form to SPM.
3) SPM forwards completed form to ZPMO (ATTN: A.ZPM-Admin.). SPM retains copy for project file.
4) Original form sent to ZPMO for contract file.
5) ZPMO sends copies to REM-OPO and CO, EPA HQ.

SPM

DATE: _____

FROM: _____
RPM REMEDIAL PROJECT MANAGER

TO: _____
REM—Deputy Project Officer

WA NO.: _____

SITE NAME: _____

ACTIVITY: _____

RPM

_____ Assignment completed and project can be closed.

_____ Assignment incomplete.

Additional work required: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____
RPM Approval Signature/Date

_____
REM-RPO Approval Signature/Date

ZPMO

cc: CO, EPA HQ

CHEMSHELL
6/8/84

APPENDIX K

Sample Work Assignment and Interagency Agreements

Mr. William Mulligan
U.S. Army Corps of Engineers
Engineering Division, Missouri River
P. O. Box 103, Downtown Station
Omaha, Nebraska 68101-0103

Dear Mr. Mulligan:

This letter serves to initiate a work assignment for the U. S. Army Corps of Engineers (USACE) to select an architectural/engineering firm to design the remedial action at the following superfund site:

_____

The selected activities must be consistent with the Interagency Agreement No. DW96******-01-0 between the USACE and the Environmental Protection Agency (EPA). Funding for costs incurred while providing these services to EPA, authorized under the authority of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), is not expected to exceed:

$_____

Enclosed is the Phase I Design Authorization Form. This document contains the necessary account numbers that apply specifically to this work assignment. These numbers must be used on all financial and management reports.

Sincerely yours,

_____
(Title)

Enclosure

cc: Richard Ruhe
Noel Urban
Paul Nadeau
Ivery Jacobs

AUTHORIZATION FORM FOR PHASE I DESIGN

AUTHORIZATION IS HEREBY GIVEN TO INITIATE THE FIRST PHASE OF DESIGN WORK AS DESCRIBED IN IAG # DW96930***-01-0. THE FOLLOWING INFORMATION IS PROVIDED FOR COST TRACKING PURPOSES:

SITE NAME ______________________________

REGION ______________________________

EPA SITE I.D. # ______________________________

HQ TECHNICAL PROJECT OFFICER ______________________________
PHONE

REGIONAL SITE MANAGER ______________________________
PHONE

PERIOD OF PERFORMANCE ______________________________
FROM TO

ACCOUNTING INFORMATION

	DOCUMENT CONTROL NO.	IAG NO.	SUPERFUND ACCOUNT NO.	OBJECT CLASS CODE	NC EX AI
DEOBLIGATE FROM:	******	DW96******010	5TFA***N00	2576	S**
OBLIGATE TO:	******	DW96******010	5TFA***N**	2576	S**

______________________________ ______________
(Title) DATE

______________________________ ______________
EPA PROJECT OFFICER DATE

______________________________ ______________
(individual who certifies funds) DATE

Original to: Richard Ruhe, EPA
Cincinnati, OH

cc: William Mulligan, USACE

Noel Urban, USACE

Paul Nadeau, EPA

Ivery Jacobs, EPA, Room 3623M
Financial Reports and Analysis Branch

Please read instructions on pages 4 and 5

US ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

INTERAGENCY AGREEMENT/AMENDMENT
Part I — GENERAL INFORMATION

1. IAG Identification Number	2. Funding Location by *
3. Type of Action: New Agreement	4. Program Abbreviatio *

5. Name and Address of EPA Organization
*

6. Name and Address of Other Agency
Department of Defense
U.S. Army Corps of Engineers (USACE)
Engineering Division, Missouri River
Omaha, Nebraska 68101-0103

7. Project Title
First Phase Design Work - FY 1985

8. EPA Project Officer *(Name, Address, Telephone Number)*
*

9. Other Agency Project Officer *(Name, Address, Telephone Number)*
William Mulligan FTS/864-7227
USACE, Engineering Division, Missouri River
P. O. Box 103, Downtown Station
Omaha, Nebraska 68101-0103

10. Project Period	11. Budget Period
10/01/84 - 09/30/85	10/01/84 - 09/30/85

12. Scope of Work *(Attach additional sheets, as needed)*

This agreement obligates no more than $ * and generally no more than $7,000 per project to the USACE to initiate the selection of Architectural/Engineering firms for the engineering design phase of Federal lead remedial action projects. The USACE will perform all action necessary to retain an A/E firm for engineering design, including the following:

Phase I -

- Synopsize requirement in Commerce Business Daily
- Designate A/E pre-selection and selection boards
- Develop A/E pre-selection list
- Contact A/E firms to ascertain interest in project
- Approve A/E selection list
- Tentatively select A/E firm

13. Statutory Authority for both Transfer of Funds and Project Activities
CERCLA, E.O. 12316 & the Economy Act of 1932, as amended (31USC1535)

14. Other Agency Type
Federal

FUNDS	PREVIOUS AMOUNT	AMOUNT THIS ACTION	AMENDED TOTAL
15. EPA Amount		*	
16. EPA In-Kind Amount			
17. Other Agency Amount			
18. Other Agency In-Kind Amount			
19. Total Project Cost		*	

20. Fiscal Information

Program Element	FY	Appropriation	Doc. Control No.	Account Number	Object Class	Obligation/ Deobligat
TFAY9A	85	68/20X8145	*	*	25.76	*

OSWER DIRECTIVE NO. 9355.1-1

PART II — APPROVED BUDGET

21. Budget Categories	Total Itemization of Estimated Cost to Date
(a) Personnel	$
(b) Fringe Benefits	
(c) Travel	
(d) Equipment	
(e) Supplies	
(f) Procurement/Assistance	
(g) Construction	
(h) Other	
(i) Total Direct Charges	$ Breakdown not available
(j) Indirect Costs: Rate $ Base 0	Will be provided as par
(k) Total (EPA Share 100 %) (Other Agency Share 0 %)	request for reimburseme: $ *

22. Is equipment authorized to be furnished by EPA or acquired with EPA funds? ☐ Yes ☒ No
(Identify all equipment costing $1,000 or more)

23. Are any of these funds being used on extramural agreements? ☐ Yes ☒ No *(See item 21f)*
☐ Grant, ☐ Cooperative Agreement, or ☐ Procurement

Contractor/Recipient Name *(if known)*	Total Extramural Amount Under This Project	Percent Funded by EPA *(if known)*

PART III — PAYMENT METHODS AND BILLING INSTRUCTIONS

24. ☒ Disbursement Agreement:

☒ Reimbursement — Request for reimbursement of actual costs will be itemized on SF 1081 or SF 1080 and submitted to the Financial Management Office, Environmental Protection Agency, 26 West St. Clair, Cincinnati, OH 45268:
☒ Monthly ☐ Quarterly ☐ Upon Completion of Work

☐ Advance — Only available for use by Federal agencies on working capital fund or with appropriate justification of need for this type of payment method. Unexpended funds at completion of work will be returned to EPA. Quarterly cost reports will be forwarded to the Financial Management Office, Environmental Protection Agency, 26 West St. Clair, Cincinati, OH 45268.

☐ Allocation Transfer — Used to transfer obligational authority or transfer of function between Federal agencies. Must receive prior approval by the Office of the Comptroller, Budget Division, Budget Formulation and Control Branch, EPA Headquarters.

25. ☐ Reimbursement Agreement

Other Agency's IAG Identification Number	Billing Instructions and Frequency
Billing Address	

OSWER DIRECTIVE NO. 9355.1-1

PART IV — ACCEPTANCE CONDITIONS

28. General Conditions:

The other agency covenants and agrees that it will expeditiously initiate and complete the project work for which funds have been awarded under this agreement.

27. Special Conditions:

Work assignments for A/E selection will be initiated via a letter signed by the * or his designee. The letter will identify the particular site, provide the necessary account numbers, and describe any adjustments, including increases in the site dollar ceiling ($7,000) and/or changes to the scope of work.

The USACE will initiate Phase I actions upon receipt of EPA authorization. Phase II actions will not begin until EPA has notified the USACE of the selection and approval of a remedy and EPA approval of an Interagency Agreement for Phase II actions.

EPA acting as manager of the Hazardous Substance Response Trust Fund, requires current information on CERCLA response actions and related obligations of CERCLA funds for these actions. In addition, CERCLA authorizes EPA to recover from responsible parties all government costs incurred during a response action.

(See Attachment A)

Part V — OFFER AND ACCEPTANCE

NOTE: 1) For disbursement actions, the agreement/amendment must be signed in duplicate and one origin returned to the Grants Administration Division for Headquarters agreements and to the appropria EPA IAG administration office for Regional agreements within 3 calendar weeks after receipt or with any extension of time as may be granted by EPA. The agreement/amendment must be forwarded the address cited in Item 28 after acceptance signature.

Receipt of a written refusal or failure to return the properly executed document within the prescribe time may result in the withdrawal of the offer by the Agency. Any change to the agreement by the oth agency subsequent to the document being signed by the EPA Action Official which the Action Offic determines to materially alter the agreement/amendment shall void the agreement amendment.

2) For reimbursement actions, the other agency will initiate the action and forward two origin. agreements/amendments to the appropriate EPA program office for signature. The agreements amendments will then be forwarded to the appropriate EPA IAG administration office for acceptanc signature on behalf of the Environmental Protection Agency. One original copy will be returned to th other agency after acceptance.

EPA IAG Administration Office *(for administrative/management assistance)*	EPA Program Office *(for technical assistance)*
28. Organization/Address *	29. Organization/Address *

Decision Official on Behalf of the Environmental Protection Agency Program Office		
30. Signature	Typed Name and Title *	Date

Action Official on Behalf of the Environmental Protection Agency		
31. Signature	Typed Name and Title *	Date

Authorizing Official on Behalf of the Other Agency		
32. Signature	Typed Name and Title	Date

27. SPECIAL PROVISIONS (continued)

In order to help assure successful recovery of CERCLA funds, the USACE shall maintain site-specific accounts and documentation of the following:

- Employee hours and salary (timesheets)
- Employee travel and per diem expenses (travel authorizations, paid vouchers, and treasury schedules)
- Receipts for materials, equipment, and supplies
- Any other costs not included in the above categories

In order to assist in the development and prosecution of a cost recovery action, within three weeks from the date of a request from EPA or the Department of Justice (DOJ), the USACE will provide to EPA or DOJ site-specific costs and copies of the back-up documentation which supports those costs. EPA and DOJ may periodically request updates of the costs and documentation after the initial request. The USACE will provide EPA with a contact for obtaining such site-specific accounting information and documentation. This cost information and documentation must also be available for audit or verification on request of the Inspector General.

USACE will provide access to its files concerning the project on an on-going basis for EPA and DOJ examination to assist in cost recovery. As original documents may be requested for cost recovery actions, USAGE will provide EPA and DOJ access to the original documentation when requested. USACE will notify EPA in advance of placing any project files in storage or archives.

Reimbursement is contingent upon receipt and approval by EPA of monthly progress and financial reports by site, containing an accounting of funds and status of activities.

The USACE will provide a letter report summarizing each A/E selection to the Regional Technical Project Officer.

BIBLIOGRAPHY

STATUTES

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. Sections 9601-9657, PL 96-510.

Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C. Sections 6901-6991i, PL 94-580 (amended Nov. 8, 1984).

REGULATIONS

EPA Order 1440.1, Respiratory Protection.

EPA Order 1440.2, Health and Safety Requirements for Employees Engaged in Field Activities.

Evaluation, Review, and Coordination of Federal and Federally-Assisted Programs and Projects, OMB Circular A-95.

Executive Order 11988, "Floodplains Management".

Executive Order 12372, "Intergovernmental Review of Federal Programs" (47 FR 30954), July 16, 1982.

Executive Order 12432, "Development of Minority Business Enterprises," July 14, 1983.

Instructions on Budget Execution, OMB Circular A-34.

Intergovernmental Review of Environmental Protection Agency Programs and Activities, Final Rule (40 CFR Part 29).

"Intergovernmental Review of EPA Programs and Activities: Procedures to Establish Comment Period Start Dates for Programs and Activities Subject to Executive Order 12372," (48 FR 44643), September 29, 1983.

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"Superfund Community Relations Policy," OSWER, May 9, 1983.

"Suggested Regional File Structure, Superfund Priority Sites and Priority Site Candidates," OERR, May 1982.

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Cooperative Agreement (EPA Form 5700-20A)

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MISCELLANEOUS

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What Every Engineer Should Know About Project Management, A.M. Ruskin and W.E. Estes. Marcel Dekker, 1982.

The Implementation of Project Management. The Professional's Handbook., Linn C. Struckenbruck. Addison Wesley Inc., 1981.

Great Planning Disasters, P. Hall. Weidenfeld and Nicholson, London, 1980.

Management Decision Methods for Managers of Engineering and Research, W.E. Souder. Van Nostrand Reinhold Company, New York, 1980.

COMMUNITY RELATIONS RESPONSIVENESS SUMMARY
[SITE NAME]

INTRODUCTION

The responsiveness summary documents for the public record:

- Concerns and issues raised during remedial planning
- Comments raised during the comment period on the RI/FS
- How EPA or the State considered and responded to these concerns.

CONCERNS RAISED PRIOR TO THE FEASIBILITY STUDY COMMENT PERIOD

Briefly describe:

- Major concerns and issues raised by State and local officials, potentially responsible parties, and citizens. The level of concern over each of the major issues should be discussed. Include the number of times a concern was raised, the number of people raising the concern and names of individuals or groups raising concerns and issues when appropriate.
- Activities conducted by EPA or the State to elicit citizen input and to address specific concerns and issues; for example, small group meeting, news conference, and progress reports.
- Changes in any remedial planning activities as a result of concerns raised.

CONCERNS RAISED DURING THE COMMENT PERIOD

Briefly describe comments on the feasibility study made by local officials, potentially responsible parties and citizens:

- Categorize comments by major issue or topic addressed.
- Summarize comments under the categories as completely as possible. Do not be so brief that the essence is lost. For example, "concern about health effects" is not specific enough. Which health effect is the community worried about?
- Discuss the level of concern over each of the major issues. Include how many times the comment was raised and the number of people raising the concern. Include names of individuals and groups raising concerns and issues when appropriate.
- Discuss when the comment period started and stopped. Mention when, where, and level of attendance at public meeting, if held.

RESPONSE TO COMMUNITY CONCERNS

Explain Agency response:

- Note whether staff met with concerned citizens or conducted other communication activities during the comment period such as a public meeting or availability of technical staff to respond to questions.
- Document any modifications or changes in the remedial alternative as a result of comments.
- Give the reasons for rejecting the community's or potentially responsible party's preferred alternative if the Agency's selected alternative is different. The citation of "CERCLA" alone does not explain the Agency's rationale. A more detailed explanation is required.
- Document in detail any alternatives provided by the public or potentially responsible parties which are not evaluated in the feasibility study.
- Include any letters, reports, etc., received from potentially responsible parties.

REMAINING CONCERNS

Briefly explain:

- Any areas of community concern that require Agency attention during remedial design and construction.
- How EPA or the State intends to resolve any outstanding concerns.

FORMAT FOR BRIEFING THE REGIONAL [ASSISTANT] ADMINISTRATOR
RECORD OF DECISION
[SITE NAME]

PURPOSE

- The purpose of this Record of Decision (ROD) is select the appropriate remedial action at the [site name] that is consistent with the requirements of CERCLA and the NCP. The Regional [Assistant] Administrator has been delegated the authority for that approval.

ISSUES

[Discuss general issues that the RA or AA should be aware of:]

- [State and local officials and community interest and concerns]
- [Federal facility or Federal generator]
- [RCRA issues for on-site actions, off-site disposal]
- [TSCA, other statutes]
- [State cost share, flood plain construction, new technologies, other issues]
- [RC or OGC concurrence or concerns].

Note: This section will be presented by Headquarters, in the case of a ROD signature by the AA.

MAIN POINTS

[Present:]

- [Brief summary of site history]
- [Brief summary of site description]
- [Summary of previous and current response actions]
- [Enforcement status]
- [Objectives of proposed RA]
- [Discuss Tabular Summary of Cost-Effectiveness Analysis including:]
  - [Alternatives and Costs]
  - [Public health, environmental, and technical considerations]
  - [Public comments]
  - [Recommended cost-effective alternative]
- [Waivers from other environmental programs, if necessary].

Note: This section should summarize only the information related to the proposed remedy.

- [Future RA's needed to complete site cleanup]
- [Summary charts and graphics - effective charts and graphics include:]
  - [Aerial photo showing key features.]
  - [Site map and/or aerial photo showing proposed actions.]
  - [Table of final alternatives listing the alternatives, capital, O&M and present worth, cost, and public health, environmental, technical and community considerations (see samples in Summary of Remedial Alternative Selections).]

Note: This section will be presented by the Region.

NEXT STEPS

[Describe:]

Action	Date
[RA or AA - OSWER approves ROD]	
[amend/award CA, SSC, IAG]	
[sign PR]	
[design remedy]	
[implement remedy].	

Note: This section will be presented by the Region.

Note: The Executive Summary should generally be limited to 3 to 5 pages, excluding charts and graphics.