

# **Close Out Procedures for National Priorities List Sites**



**Office of Superfund Remediation and Technology Innovation  
U.S. Environmental Protection Agency**

## Table of Contents

| <b><u>Section</u></b>                                                              | <b><u>Page</u></b> |
|------------------------------------------------------------------------------------|--------------------|
| <b>Acronyms.....</b>                                                               | <b>iv</b>          |
| <b>I.0 Introduction.....</b>                                                       | <b>1-1</b>         |
| 1.1 Background.....                                                                | 1-1                |
| 1.2 Contents of the Guidance .....                                                 | 1-2                |
| 1.3 Role of the Remedial Project Manager.....                                      | 1-3                |
| <b>2.0 Remedial Action Completion .....</b>                                        | <b>2-1</b>         |
| 2.1 Introduction.....                                                              | 2-1                |
| 2.1.1 Relation to Operable Units .....                                             | 2-1                |
| 2.1.2 Utilizing Multiple RA Projects at a Site.....                                | 2-1                |
| 2.2 Remedial Action Completion Definition.....                                     | 2-2                |
| 2.2.1 RA Completion for Source Remediation Actions .....                           | 2-4                |
| 2.2.2 RA Completion for Source and Groundwater Containment Actions..               | 2-4                |
| 2.2.3 RA Completion for Groundwater and Surface Water Restoration<br>Remedies..... | 2-5                |
| 2.2.4 RA Completion for Institutional Control Actions.....                         | 2-7                |
| 2.3 Relationship of RA Completion to Other Actions .....                           | 2-7                |
| 2.3.1 Operational & Functional (O&F) .....                                         | 2-8                |
| 2.3.2 Long Term Response Action (LTRA and PRP LR) .....                            | 2-8                |
| 2.3.3 Operation and Maintenance (O&M) .....                                        | 2-9                |
| 2.4 Inspection Guidelines for RA Completion .....                                  | 2-9                |
| 2.4.1 Fund-lead RA Completion Inspections.....                                     | 2-10               |
| 2.4.2 Responsible Party-lead RA Completion Inspections.....                        | 2-10               |
| 2.4.3 Federal Facility-lead RA Completion Inspections .....                        | 2-10               |
| 2.5 Preparing the RA Report.....                                                   | 2-11               |
| 2.6 RA Report Approval .....                                                       | 2-11               |
| 2.7 RA Report Distribution.....                                                    | 2-14               |
| <b>3.0 Construction Completion .....</b>                                           | <b>3-1</b>         |
| 3.1 Introduction.....                                                              | 3-1                |
| 3.2 Construction Completion Process.....                                           | 3-1                |
| 3.2.1 Pre-Final Inspection .....                                                   | 3-1                |
| 3.2.2 Preliminary Close Out Report .....                                           | 3-2                |
| 3.3 Technology Considerations for Construction Completions.....                    | 3-4                |
| 3.3.1 Groundwater Treatment Remedies.....                                          | 3-5                |
| 3.3.2 Soil Vapor Extraction Remedies.....                                          | 3-5                |
| 3.3.3 In-situ Remedies for Groundwater or Soil.....                                | 3-6                |
| 3.3.4 Interim Remedies .....                                                       | 3-7                |
| 3.3.5 RODs with Contingency Remedies.....                                          | 3-8                |
| 3.3.6 Groundwater Monitoring.....                                                  | 3-8                |
| 3.3.7 Institutional Controls.....                                                  | 3-8                |

|            |                                                                                                                                                         |            |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 3.4        | Lead and Authority Considerations for Construction Completions.....                                                                                     | 3-9        |
| 3.4.1      | PRP Lead Sites.....                                                                                                                                     | 3-9        |
| 3.4.2      | Federal Facilities.....                                                                                                                                 | 3-9        |
| 3.4.3      | State Lead Sites.....                                                                                                                                   | 3-9        |
| 3.4.4      | NPL Sites Addressed Under Removal Authority .....                                                                                                       | 3-10       |
| 3.4.5      | Multiple Authorities Conducting Cleanup at the Same Site .....                                                                                          | 3-10       |
| 3.5        | Sites Deleted from the NPL .....                                                                                                                        | 3-10       |
| 3.6        | Additional Work at Construction Completion Sites.....                                                                                                   | 3-11       |
| <b>4.0</b> | <b>Site Completion.....</b>                                                                                                                             | <b>4-1</b> |
| 4.1        | Introduction.....                                                                                                                                       | 4-1        |
| 4.2        | Site Completion Criteria.....                                                                                                                           | 4-1        |
| 4.2.1      | All Remedial Decision Documents have been Completed and the<br>Selected Remedy is Consistent with CERCLA, the NCP, and EPA Policy<br>and Guidance ..... | 4-1        |
| 4.2.2      | All Response Actions have been Completed and Appropriately<br>Documented in the Site File .....                                                         | 4-2        |
| 4.2.3      | Institutional Controls are In Place .....                                                                                                               | 4-3        |
| 4.3        | Role of Operation and Maintenance Activities in Achieving Site<br>Completion .....                                                                      | 4-3        |
| 4.4        | Final Close Out Report .....                                                                                                                            | 4-4        |
| <b>5.0</b> | <b>Site Deletion and Partial Deletion.....</b>                                                                                                          | <b>5-1</b> |
| 5.1        | Introduction.....                                                                                                                                       | 5-1        |
| 5.2        | NPL Deletion Criteria.....                                                                                                                              | 5-2        |
| 5.3        | NPL Deletion Through Resource Conservation and Recovery Act (RCRA)<br>Deferral.....                                                                     | 5-2        |
| 5.4        | The Deletion Process .....                                                                                                                              | 5-3        |
| 5.4.1      | State Concurrence .....                                                                                                                                 | 5-3        |
| 5.4.2      | Deletion Docket .....                                                                                                                                   | 5-3        |
| 5.4.3      | Two-step Rulemaking Process .....                                                                                                                       | 5-5        |
| 5.4.3.1    | Notice of Intent to Delete (NOID) Preparation.....                                                                                                      | 5-6        |
| 5.4.3.2    | Headquarters Concurrence .....                                                                                                                          | 5-6        |
| 5.4.3.3    | Publication of the Notice of Intent to Delete and the Local<br>Notice .....                                                                             | 5-7        |
| 5.4.3.4    | Receiving Comments and Responsiveness Summary<br>Preparation.....                                                                                       | 5-8        |
| 5.4.3.5    | Notice of Deletion (NOD) Preparation and Publication .....                                                                                              | 5-8        |
| 5.4.4      | Direct Final Rulemaking Process.....                                                                                                                    | 5-8        |
| 5.4.4.1    | Direct Notice of Intent to Delete and Direct Notice of<br>Deletion Preparation .....                                                                    | 5-9        |
| 5.4.4.2    | Headquarters Concurrence .....                                                                                                                          | 5-10       |
| 5.4.4.3    | Publication of the NOID, Direct NOD and the<br>Local Notice .....                                                                                       | 5-10       |
| 5.4.4.4    | Withdrawal Notice Preparation and Publication.....                                                                                                      | 5-10       |

|         |                                                                   |      |
|---------|-------------------------------------------------------------------|------|
| 5.4.4.5 | Receiving Comments and Responsiveness Summary<br>Preparation..... | 5-11 |
| 5.4.4.6 | Notice of Deletion Preparation and Publication.....               | 5-11 |

## Exhibits

| <b><u>Section</u></b>                                               | <b><u>Page</u></b> |
|---------------------------------------------------------------------|--------------------|
| 2-1 Remedial Action Completion Examples .....                       | 2-3                |
| 2-2 Source Remediation Actions Pipeline.....                        | 2-4                |
| 2-3 Source and Groundwater Containment Actions Pipeline.....        | 2-5                |
| 2-4 Groundwater and Surface Water Restoration Actions Pipeline..... | 2-6                |
| 2-5 Recommended Remedial Action Report Contents.....                | 2-12               |
| 3-1 Examples of Minor Punch List Items.....                         | 3-2                |
| 3-2 Recommended Preliminary Close Out Report Outline.....           | 3-3                |
| 4-1 Role of Institutional Controls .....                            | 4-3                |
| 4-2 NCP Definition for Operation and Maintenance.....               | 4-3                |
| 4-3 Recommended Final Close Out Report Outline .....                | 4-5                |
| 5-1 Example Deletion Docket Documents.....                          | 5-5                |
| 5-2 Two-step Rulemaking Process.....                                | 5-6                |
| 5-3 Federal Register Deletion Package Contents.....                 | 5-7                |
| 5-4 Direct Deletion Process.....                                    | 5-9                |

## Acronyms

|        |                                                                               |
|--------|-------------------------------------------------------------------------------|
| ARAR   | Applicable or Relevant and Appropriate Requirement                            |
| ATSDR  | The Agency for Toxic Substances and Disease Registry                          |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act of 1980 |
| CFR    | 40 Code of Federal Regulations                                                |
| CIC    | Community Involvement Coordinator                                             |
| DoD    | Department of Defense                                                         |
| DQO    | Data Quality Objective                                                        |
| EPA    | U.S. Environmental Protection Agency                                          |
| ESD    | Explanation of Significant Differences                                        |
| FCOR   | Final Close Out Report                                                        |
| FDMS   | Federal Docket Management System                                              |
| FF     | Federal Facility                                                              |
| FR     | Federal Register                                                              |
| HQ     | Headquarters                                                                  |
| HRS    | Hazard Ranking System                                                         |
| IC     | Institutional Control                                                         |
| LTRA   | Long Term Response Action                                                     |
| MCL    | Maximum Contaminant Level                                                     |
| MCLG   | Maximum Contaminant Level Goal                                                |
| MNA    | Monitored Natural Attenuation                                                 |
| NCP    | National Oil and Hazardous Substances Pollution Contingency Plan              |
| NOD    | Notice of Deletion                                                            |
| NOID   | Notice of Intent to Delete                                                    |
| NPL    | National Priorities List                                                      |
| O&F    | Operational & Functional                                                      |
| O&M    | Operation and Maintenance                                                     |
| OSC    | On-Scene Coordinator                                                          |
| OSWER  | Office of Solid Waste and Emergency Response                                  |
| OU     | Operable Unit                                                                 |
| PCOR   | Preliminary Close Out Report                                                  |
| POLREP | Pollution Report                                                              |
| PRB    | Permeable Reactive Barrier                                                    |
| PRP    | Potential Responsible Party                                                   |
| QA/QC  | Quality Assurance and Quality Control                                         |
| QAPP   | Quality Assurance Project Plan                                                |
| RA     | Remedial Action                                                               |
| RACR   | Remedial Action Completion Report                                             |
| RAO    | Remedial Action Objective                                                     |
| RCRA   | Resource Conservation and Recovery Act                                        |
| RD     | Remedial Design                                                               |
| RI/FS  | Remedial Investigation/Feasibility Study                                      |
| ROD    | Record of Decision                                                            |

|        |                                                      |
|--------|------------------------------------------------------|
| RPM    | Remedial Project Manager                             |
| SAA    | Superfund Alternative Approach                       |
| SARA   | Superfund Amendments and Reauthorization Act of 1986 |
| SITREP | Situation Report                                     |
| SPIM   | Superfund Program Implementation Manual              |
| SVE    | Soil Vapor Extraction                                |
| USACE  | U.S. Army Corps of Engineers                         |

## I.0 Introduction

This guidance document is designed primarily for U.S. Environmental Protection Agency (EPA's) Remedial Project Managers (RPMs). It describes a recommended process for accomplishing and documenting remedial action completion, construction completion, site completion, and site deletion. The guidance is intended for those sites that are or were final on the National Priorities List (NPL). Portions of this guidance also may assist in the management of sites with Superfund Alternative Approach (SAA) agreements in place.<sup>1</sup>

This guidance supersedes the following documents:

- ◆ OERR Directive 9320.2-11, *Procedures for Partial Deletions at NPL Sites*, April 30, 1996.
- ◆ OSWER Directive 9320.2-09A-P, *Close Out Procedures for National Priorities List Sites*, January 2000.
- ◆ OSWER Directive 9320.2-13, *Addendum to Policy for 'Close Out Procedures for National Priorities List Sites'*, December 6, 2005.

### I.1 Background

Section 105(a)(8)(B) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Action of 1986 (SARA), requires that the statutory criteria provided by the Hazard Ranking System (HRS) be used to prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States.<sup>2</sup> This list, which is Appendix B of the National Contingency Plan, is the NPL. Pursuant to the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 Code of Federal Regulations [CFR] Part 300), sites on the NPL are eligible for Superfund-financed remedial actions (RAs).

Superfund often addresses NPL sites through a combination of removal and remedial authority. Cleanup activities under removal authority include actions developed to achieve prompt risk reduction through emergency, time-critical, and non time-critical actions. In general, cleanup actions under removal authority are selected in an Action Memorandum.

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<sup>1</sup> For additional guidance on SAA sites, see *Revised Response Selection and Settlement Approach for Superfund Alternative Sites* (OSWER 9208.0-18; June 17, 2004).

<sup>2</sup> 40 CFR 300.425(c) provides two other mechanisms for listing a site on the NPL. The second mechanism allows the State to list one priority regardless of their HRS score. The third mechanism allows certain sites to be listed regardless of their HRS score, if all of the following conditions are met:

- The Agency for Toxic Substances and Disease Registry (ATSDR) of the U.S. Public Health Service has issued a health advisory that recommends dissociation from the release.
- EPA determines that the release poses a significant threat to public health.
- EPA anticipates that it will be more cost-effective to use its remedial authority than to use its removal authority to respond to the release.

Cleanup activities under remedial authority are called remedial actions. A remedial investigation/feasibility study (RI/FS) at an NPL site generally evaluates the nature and extent of contamination, and identifies potential alternatives for the remedy. The Record of Decision (ROD) generally documents the remedial activities selected to achieve protectiveness and meet Applicable or Relevant and Appropriate Requirements (ARARs). Consistent with CERCLA §121, RAs are required to protect human health and the environment, and they may include a combination of engineered response actions (such as treatment, containment, removal of contaminated material, and providing alternate water supplies). Institutional controls are often used to complement these engineering controls.

## **1.2 Contents of the Guidance**

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A Superfund site may require several response actions to address all the site hazards. The recommended process for remedial action completion is described in Chapter 2 of this guidance.

When physical construction is complete at the entire site (through removal and/or remedial authority), the site typically achieves the construction completion milestone. EPA Headquarters monitors and reports site progress towards the construction completion milestone. The recommended process for construction completion is described in Chapter 3.

Site completion typically occurs when it is determined that no further response is required at the site, all cleanup levels have been achieved, and the site is deemed protective of human health and the environment. The recommended process for site completion is described in Chapter 4.

Once the site completion milestone has been achieved, the site is typically eligible for deletion from the NPL. The deletion process generally includes EPA verification, in consultation with the state, that no further federal response is needed, and the opportunity for public notice and comment in the *Federal Register* before the site is deleted from the NPL. The NCP deletion criteria may also be applied to portions of the site. Consistent with the recommended site deletion process, these portions of a site may be partially deleted from the NPL. The recommended process for site deletion and partial deletion is described in Chapter 5.

This guidance provides recommended processes related to showing how the various milestones of the NPL site close out process are achieved, highlighting specific activities and the recommended documentation for each activity's completion.

OSWER Directive No. 9200.4-22A, *CERCLA Coordination With Natural Resource Trustees* dated July 31, 1997, calls for Trustees listed in the Regional Contingency Plans to be notified of the completion of construction at an NPL site. The guidance also indicates that EPA will seek to consult with Trustees prior to deleting a site or portion of a site from the NPL. Appropriate language is included in this document for addressing these notification requirements.

In addition, Section 126(a) of CERCLA provides that the governing body of an Indian tribe shall be afforded substantially the same treatment as a state regarding a number of actions, including consultation on remedial actions, and roles and responsibilities under the national contingency plan and submittal of priorities for remedial action. RPMs should consult with tribes, as appropriate and consistent with EPA tribal policy, throughout the recommended processes discussed in this guidance.

### ***1.3 Role of the Remedial Project Manager***

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The EPA RPM typically has lead responsibility for ensuring the successful completion of cleanup activities at an NPL site and for guiding a site through each successive phase of the Superfund process. It is recommended that the RPM consider the recommendations contained in this guidance when evaluating whether each milestone at a site can be achieved. The RPM should review the recommendations in this guidance to assist in determining that all statutory and regulatory requirements have been met, and that all appropriate policies have been considered for each recommended step in the site completion process.

## 2.0 Remedial Action Completion

### 2.1 Introduction

This chapter describes the recommended procedures for achieving remedial action completion at a NPL site. For purposes of this guidance, the term “remedial action” (RA, or “RA project”) refers to the actual construction or implementation of a discrete scope of activities supporting a Superfund site cleanup. Each RA project is generally designed to achieve progress toward specific remedial action objectives (RAOs) identified in a CERCLA remedy decision document (e.g., ROD, ROD amendment).

The guidelines and processes for RA completion described in this chapter are independent of any requirements for “Certification of Completion of the Remedial Action” that may exist under the terms of a consent decree. For example, the RA completion milestone does not necessarily signify that a PRP has fully performed an RA in accordance with the terms of a consent decree (see 2.4.2).

#### 2.1.1 Relation to Operable Units

Throughout the site investigation phase, the lead and support agencies should first identify the type and optimal sequence of site activities, including whether the site may best be addressed as a series of separate operable units (OU). The NCP (40 CFR 300.5) defines an OU as a “discrete action that comprises an incremental step” in cleaning up a site. In practice, however, an operable unit now more commonly refers to a geographical area, a contaminated medium, or the chronological phase of a cleanup. The division of a site into OUs often serves to better inform stakeholders of the manner in which EPA expects to manage the cleanup of a site.

The RA project is the physical work carried out to address contamination at a particular OU. Rather than refer to the descriptive area or phase of a site, the terms “RA” or “RA project” are used synonymously to refer to the particular action implemented, such as sediment dredging or construction of a landfill cap.

A Superfund site may consist of one or more OUs, each of which may in turn be addressed by one or more RA projects. The number of OUs and planned projects at a site may increase or decrease over time as knowledge of site conditions change.

Both OUs and RA projects are used to sub-divide a site into a series of smaller components that allow for more effective management and implementation of cleanup activities. A distinct RA project corresponds to the “action” level in CERCLIS. It has a definite start and completion date as defined in the *Superfund Program Implementation Manual* (SPIM).

#### 2.1.2 Utilizing Multiple RA Projects at a Site

The appropriate division of a site into discrete operable units and projects is based on the best professional judgment of the site manager and is often dependent on the size and

complexity of a site. Each RA should consist of an appropriate scope of activities, developed through sound engineering and project management analysis, which contribute to the efficient and effective achievement of an overall site cleanup strategy.

Some unique types of sites (for example, residential soil cleanups, excavation of mine waste, or sediment dredging) may require multiple RA projects to effectively carry out a single remedy. The approach to remediating these types of sites typically involves the removal of very large volumes of waste over an expansive geographic area and/or an exceptionally long period of time. In these situations, site managers may find that implementation of the remedy is best managed as a series of individual projects which may employ different delivery mechanisms.

Site managers should consider a variety of site-specific factors as well as programmatic constraints when determining how to divide implementation of a remedy into projects. For example, different parties may be funding or conducting actions at physically distinct portions of the site, a particular property owner may impede access thereby delaying work in some areas, or there may be large distances separating distinct waste areas. Site managers may also consider the impact of various contract mechanisms and durations when determining how to implement particularly large-scale remedies. The above considerations are merely examples of issues that could exist at a site; RPMs should fully consider the circumstances at their site to determine the most appropriate and efficient manner in which to manage the cleanup.

## **2.2 Remedial Action Completion Definition**

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Completion of a remedial action project is typically achieved when the designated Regional official (Branch Chief or above, as determined by the EPA Region) approves in writing the RA Report. The RA Report is often referred to as a Remediation Action Completion Report (RACR) at federal facilities.

The key factors to consider for achieving RA completion and submitting the RA Report vary depending on the type of remedy that was implemented. For purposes of this guidance, remedies are generally grouped into four categories:

- ◆ source remediation actions,
- ◆ source and groundwater containment actions,
- ◆ groundwater and surface water restoration actions, and
- ◆ institutional control (IC) actions.

The RA completion factors for each of these scenarios will be discussed separately in this chapter.

Exhibit 2-1 provides examples of RAs and indicates when it may be appropriate to achieve RA completion. Multiple technologies are increasingly being used to address both source

and groundwater contamination in parallel. In these situations, each remedial technology may have a unique goal. It is recommended that the RPM consult with HQ to ensure that the appropriate RA completion criteria are being considered.

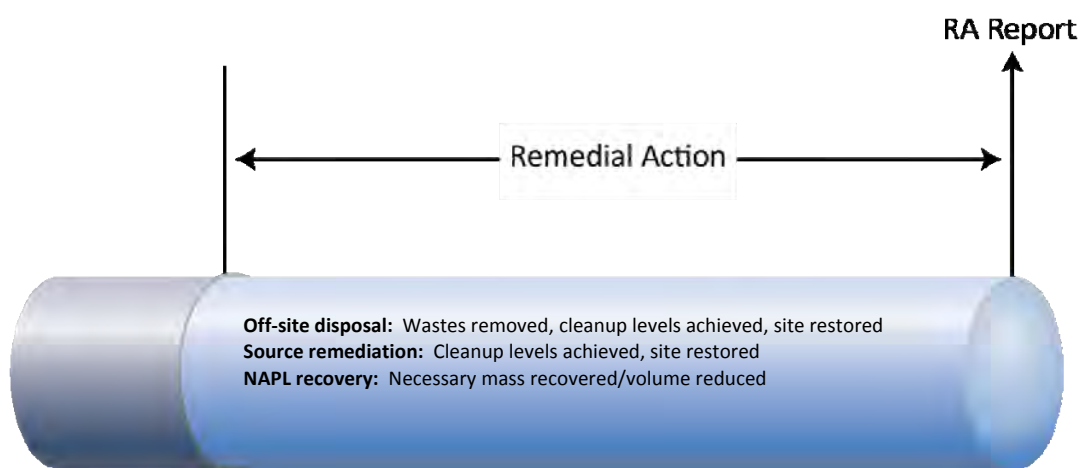
### Exhibit 2-1 Remedial Action Completion Examples

| Example RA                                                                                                                                 | RA Complete Guidelines                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><i>Source Remediation Actions</i></b>                                                                                                   |                                                                                                                                                                                           |
| Source remediation (e.g., soil vapor extraction, in situ treatment of source material)                                                     | Cleanup levels have been achieved for the treated wastes and site has been restored.                                                                                                      |
| Excavation and off-site disposal of contamination                                                                                          | All wastes that need to be addressed as part of the RA have been excavated, removed from the site to an approved location, cleanup levels have been achieved, and site has been restored. |
| NAPL remediation (destruction or recovery) with the goal of reducing the volume of source material, not restoring groundwater              | Necessary contaminant mass removed or volume reduced.                                                                                                                                     |
| <b><i>Source and Groundwater Containment Actions</i></b>                                                                                   |                                                                                                                                                                                           |
| Containment remedies (e.g., source control, landfill cap, groundwater containment in conjunction with a technical impracticability waiver) | Construction of the designed remedy is complete and data indicate that effective containment has been achieved (operational and functional, or O&F).                                      |
| Extraction and treatment of groundwater to prevent plume migration                                                                         | Construction of the treatment plant and monitoring system are complete, and data indicate that effective containment has been achieved (O&F).                                             |
| <b><i>Groundwater and Surface Water Restoration Actions</i></b>                                                                            |                                                                                                                                                                                           |
| Groundwater and surface water restoration remedies that involve ex situ treatment                                                          | Construction of the treatment plant and monitoring system are complete, and the remedy is operating as intended (O&F).                                                                    |
| Groundwater restoration remedies that involve in situ treatment                                                                            | Construction of the remedy and monitoring system are complete, injections of the appropriate reagent are underway, and the remedy is operating as intended (O&F).                         |
| Groundwater and surface water restoration remedies that involve monitored natural attenuation                                              | The ROD is signed and any necessary RA is conducted (e.g., installation of sufficient monitoring well network to make the O&F determination).                                             |
| <b><i>Institutional Control Actions</i></b>                                                                                                |                                                                                                                                                                                           |
| Implementation of an IC remedy                                                                                                             | Institutional controls specified in the decision document are implemented.                                                                                                                |

### 2.2.1 RA Completion for Source Remediation Actions

For purposes of this guidance, source material is defined as material that includes or contains hazardous substances, pollutants, or contaminants that act as a reservoir for migration of contamination to groundwater, to surface water, to air, or acts as a source for direct exposure.<sup>3</sup> Source remediation generally refers to actions taken to reduce or eliminate the toxicity, mobility, or volume of contaminated source material, either through on-site treatment to appropriate cleanup levels or by physically removing it from the site. Examples include soil vapor extraction, in situ thermal treatment, and dredging of contaminated sediments. Exhibit 2-2 graphically depicts source remediation actions.

**Exhibit 2-2**  
**Source Remediation Actions Pipeline**



For excavation and other active source remediation remedies, regions should consider the following factors prior to approval of the RA Report:

- ◆ Whether all construction activities are complete, including site restoration and demobilization;
- ◆ Whether all remedial action objectives and associated cleanup levels specified in the applicable ROD have been achieved;
- ◆ Whether a successful contract final inspection or equivalent has been conducted (see 2.4); and
- ◆ Whether the RA Report contains the information described in Exhibit 2-5.

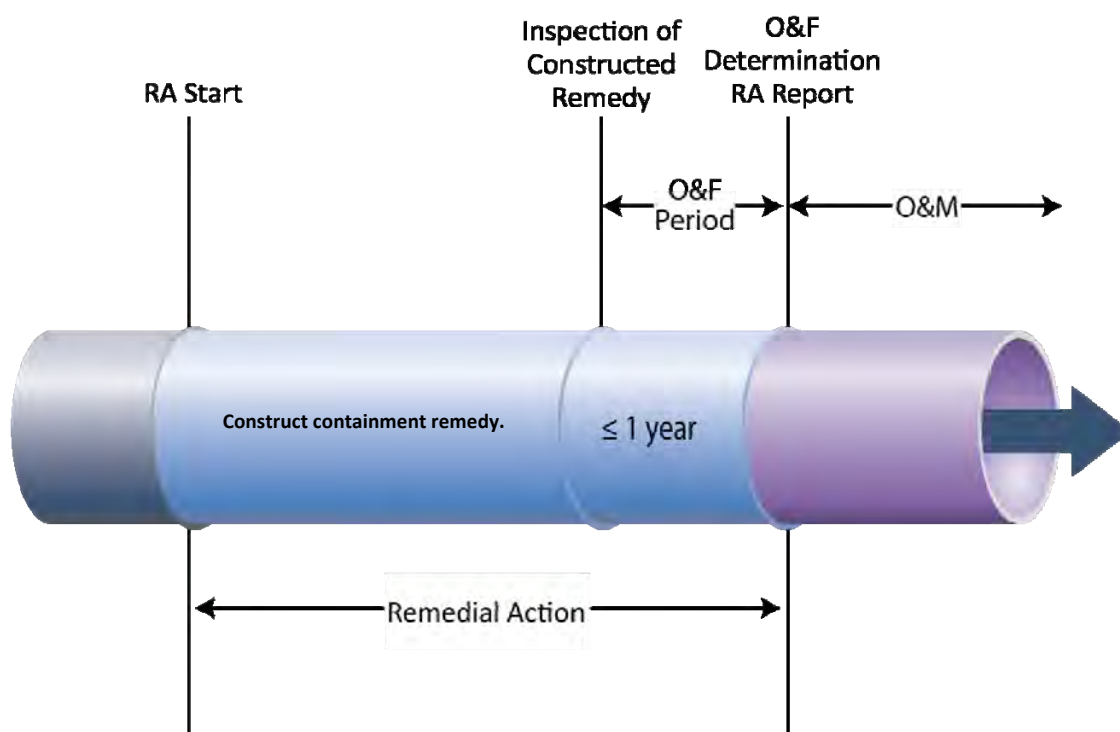
### 2.2.2 RA Completion for Source and Groundwater Containment Actions

Containment remedies may include, but are not limited to, permanent source control, a landfill cap, or physical measures to control the migration of a contaminated groundwater plume or surface water. Exhibit 2-3 graphically depicts source and groundwater containment actions. For containment remedies, regions should consider the following factors prior to approval of the RA Report:

<sup>3</sup> See also *A Guide to Principal Threat and Low Level Threat Wastes* (OSWER 9380.3-06FS; November 1991).

- ◆ Whether all construction activities are complete, including site restoration and demobilization;
- ◆ Whether all remedial action objectives in the applicable ROD have been achieved;
- ◆ Whether there is data to indicate that containment has been achieved, and the operational & functional (O&F) determination has been made (see 2.3.1);
- ◆ Whether a successful contract final inspection or equivalent has been conducted (see 2.4); and
- ◆ Whether the RA Report contains the information described in Exhibit 2-5.

**Exhibit 2-3**  
**Source and Groundwater Containment Actions Pipeline**

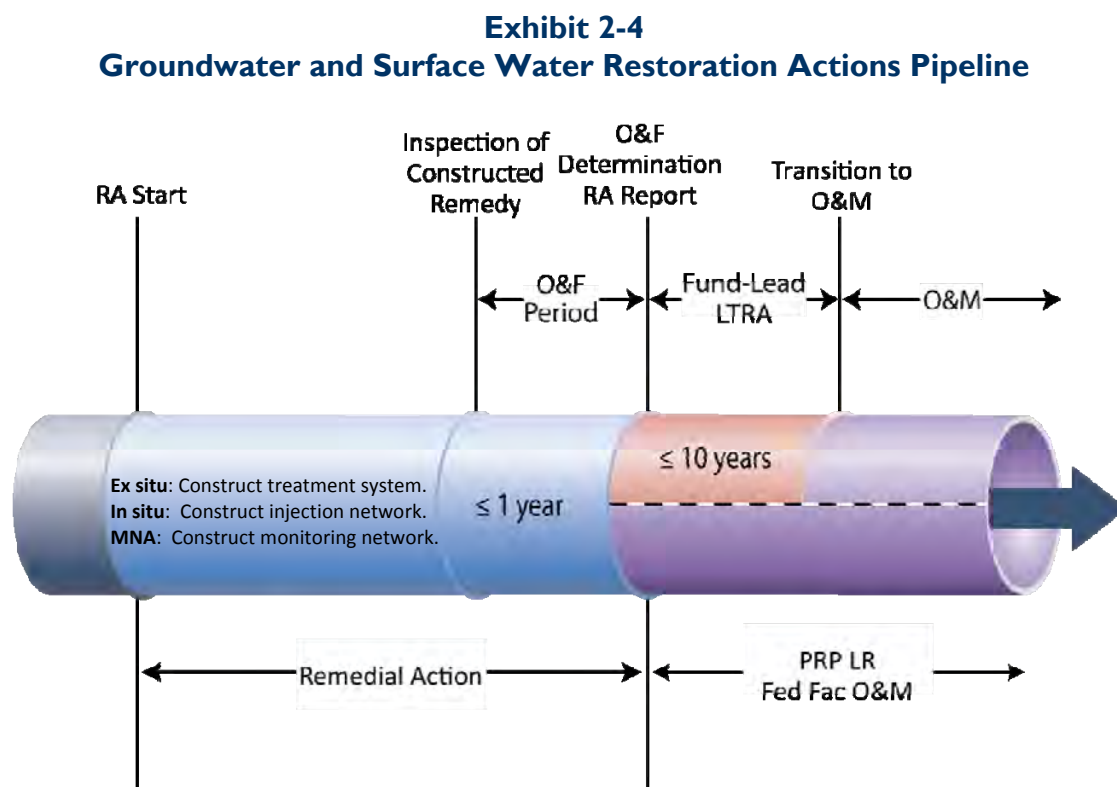


### 2.2.3 RA Completion for Groundwater and Surface Water Restoration Remedies

For purposes of this guidance, a restoration remedy is a remedial action with the objective of returning all or part of a surface water body or groundwater aquifer to the beneficial use specified in the ROD.<sup>4</sup> For groundwater currently or potentially used for drinking water purposes, these levels may be Maximum Contaminant Levels (MCLs) or non-zero Maximum Contaminant Level Goals (MCLGs) established under the Safe Drinking Water Act. The timing of the RA Report is generally unique for these remedies due to the duration of remediation, which may be substantially longer than for the other categories of remedies described above. For a restoration remedy, the RA Report is typically written when the

<sup>4</sup> See also *Transfer of Long Term Response Action (LTRA) Projects to States* (OSWER 9355.0-81FS-A; July 2003)

remedy has been constructed and is operating as intended, but prior to achieving the remedial action objectives specified in the ROD. Exhibit 2-4 graphically depicts groundwater and surface water restoration actions.



For groundwater and surface water restoration remedies, regions should consider the following factors prior to approval of the RA Report:

- ◆ Whether the construction of the treatment system is complete;
- ◆ For in situ restoration remedies, whether delivery of the appropriate reagent (e.g., oxidant or surfactants) is underway;
- ◆ Whether the monitoring well network is installed;
- ◆ Whether the remedy is operating as intended (O&F, see 2.3.1);
- ◆ Whether a successful contract final inspection or equivalent has been conducted (see 2.4); and
- ◆ Whether the RA Report contains the information described in Exhibit 2-5.

Previous guidance distinguished between Interim and Final RA Reports, where Interim RA Reports were used to document RA completion for groundwater and surface water restoration actions (a Final RA Report would then be issued when cleanup levels were achieved). Current guidance eliminates this distinction, now referring to all reports simply as “RA Reports”. Rather than producing a Final RA Report, monitoring data demonstrating that cleanup levels have been achieved may be referenced in the Final Close Out Report (see Chapter 4).

### 2.2.4 RA Completion for Institutional Control Actions

EPA considers ICs to include “non-engineered instruments, such as administrative and legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a response action.”<sup>5</sup> ICs typically are designed to work by limiting land or resource use or by providing information that helps modify or guide human behavior at a site. Some common examples of ICs include zoning restrictions, building or excavation permits, well drilling prohibitions, easements, and covenants.

Institutional controls typically are selected to supplement an engineered remedy. In some instances, the party responsible for IC implementation is different from the party constructing the engineered remedy (e.g., the state and EPA’s contractor, respectively). In such instances, the RA Report requirements are typically met when the engineered remedy has been implemented (see sections 2.2.1, 2.2.2, 2.2.3) and are not contingent on implementation of the ICs. A subsequent RA Report documenting the implementation of the ICs is typically not necessary.

There may be instances where ICs are an integral component of a single RA project, documented in the ROD as such and described in more detail in the Statement of Work, Consent Decree or other agreement. In these situations, it may be appropriate to ensure implementation of ICs prior to approval of the RA Report.

In limited cases when ICs are the sole remedy selected in a decision document, an RA Report is used to document completion.<sup>6</sup> In these limited cases, regions should consider the following factors prior to approval of the RA Report:

- ◆ Whether the ICs specified in the ROD (or ROD Amendment, ESD) are implemented;
- ◆ Whether a successful final inspection or equivalent has been conducted (see 2.4); and
- ◆ Whether the RA Report contains the information described in Exhibit 2-5.

## 2.3 Relationship of RA Completion to Other Actions

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This section describes other actions in the remedial pipeline that often relate to RA completion. Detailed definitions, as well as additional guidance on tracking RAs and other related activities, may be found in the *Superfund Program Implementation Manual* (SPIM).

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<sup>5</sup> *Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites (Interim Final)* (EPA 540-R-09-001/OSWER 9355.0-89; November 2010). (PIME Guidance)

<sup>6</sup> Under the NCP, ICs are not to be used as the sole remedy unless active response measures are determined to be impracticable. See Section 2.3 of the PIME Guidance, cited above.

### 2.3.1 Operational & Functional (O&F)

O&F activities are generally conducted after physical construction of the remedy is complete to ensure that it is functioning properly and operating as designed. The phase following construction of the remedy and before O&F is often referred to as shakedown, where the constructor makes minor modifications as necessary to ensure the remedy is operating as designed. O&F determinations are generally made for containment remedies (all media), as well as groundwater and surface water restoration remedies (including monitored natural attenuation remedies). A separate O&F determination should be made for each remedial action at a site, and is not directly related to the site-wide construction completion determination (see Chapter 3).

For Fund-financed remedies, the O&F determination generally governs the schedule for transfer of a project from EPA to the state for operation and maintenance. O&F determinations may also be made at Potential Responsible Party (PRP) lead projects to signify the end of the shakedown period. A similar determination, Operating Properly and Successfully, is sometimes made at federal facility (FF) projects for purposes of property transfer under CERCLA section 120(h)(3)(B).<sup>7</sup>

According to the NCP (40 CFR 300.435(f)(2)), a remedy becomes O&F either one year after construction is complete, or when the remedy is determined concurrently by EPA and the state to be functioning properly and is performing as designed, whichever is earlier. EPA may grant extensions to the one-year period in writing, as appropriate. The specific criteria for determining O&F will vary for each remedy and site. For Fund-financed remedies, the Superfund State Contract or site-specific Cooperative Agreement provides an opportunity to describe the process and expectations for O&F prior to the initiation of the remedial action.

EPA and the state (and PRP, if appropriate) conduct a joint inspection at the conclusion of construction to determine that the remedy has been constructed properly. The joint inspection also typically marks the beginning of the O&F, or shakedown, period. Following the shakedown period, the O&F determination should be documented by a letter from EPA to the state (and PRP, if appropriate). The date of the O&F determination may be subsequently referenced in the RA Report; however the RA Report should not serve as the primary documentation for O&F due to the length of time it takes to prepare and approve the RA Report. This will help ensure timely transfer of O&M responsibilities to states for Fund-financed projects.

### 2.3.2 Long Term Response Action (LTRA and PRP LR)

For purposes of this guidance, LTRA refers to the Fund-financed operation of groundwater and surface water restoration measures, including monitored natural attenuation, for the first ten years of operation following the O&F determination or until cleanup levels are

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<sup>7</sup> For additional information, see *Guidance for Evaluation of Federal Agency Determinations that Remedial Actions are Operating Properly and Successfully Under CERCLA Section 120(h)(3)* (Interim), August 1996.

achieved, whichever is earlier.<sup>8</sup> The Fund typically continues to pay 90 percent of the cost during this ten-year period (with the remaining 10 percent paid by the state as a required cost share), then the state becomes responsible for operation and maintenance (O&M) of 100 percent of the remedy.

The operation of PRP-lead restoration remedies following the RA is considered O&M, however EPA refers to these activities as “PRP LR” (for PRP long-term response) for tracking and reporting purposes. The ten-year time frame is not used for PRP LR. For federal facility-lead sites, groundwater and surface water restoration remedies transition from RA completion directly to O&M. Guidelines for the start and completion of LTRA and PRP LR activities may be found in the *Superfund Program Implementation Manual* (SPIM).

### 2.3.3 Operation and Maintenance (O&M)

O&M consists of the activities required to maintain the effectiveness and integrity of the remedy; in the case of Fund-financed measures to restore groundwater or surface water, O&M refers to the continued operation of such measures beyond the LTRA period until cleanup levels are achieved. Guidelines for the start and completion of O&M activities at Fund, PRP and federal facility-lead sites may be found in the *Superfund Program Implementation Manual* (SPIM).

## 2.4 Inspection Guidelines for RA Completion

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EPA generally conducts contract pre-final and final inspections prior to closing out an RA construction contract, regardless of lead or contracting party. These inspections are conducted to determine whether the construction has been completed in accordance with the contract design and specifications. The inspections are generally held between the contracting party and the construction contractor, although others may be invited.

During the contract pre-final inspection, the contracting party's project manager and the construction contractor should inspect all elements of work to see if the work is substantively complete and ready for acceptance under the terms of the contract. Some minor defects may come to light as the inspection proceeds. The construction manager should develop a "punch list" of all items that need correction or completion before the work can be accepted. A pre-final inspection report should be prepared, including the punch list, completion dates for outstanding items, and a date for a final inspection.

If punch list items are minor, the pre-final inspection may automatically serve as the final inspection. Otherwise, a final inspection should be conducted later to determine that punch list items are corrected and all work has been completed in accordance with the contract plans and specifications.

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<sup>8</sup> For additional information on LTRAs, see *Transfer of Long Term Response Action (LTRA) Projects to States* (OSWER 9355.0-81FS-A; July 2003).

An applicable consent decree, Federal Facility Agreement, Statement of Work or other agreement may recommend additional inspections depending upon site circumstances. These inspections may be held concurrently with or separately from the contract pre-final and final inspection described in this guidance.

#### **2.4.1 Fund-lead RA Completion Inspections**

The NCP refers to an additional inspection at Fund lead sites requiring LTRA and/or O&M. This inspection is typically conducted jointly by EPA and the state at the end of all construction activities for that RA project in order to initiate the shake down, or O&F, period. If convenient, it can be conducted in conjunction with the contract pre-final or final inspection (see Section 2.4). The results of this inspection should be clearly documented in order to support the initiation of the O&F period.

#### **2.4.2 Responsible Party-lead RA Completion Inspections**

The *Model RD/RA Consent Decree* (Section XIV, Certification of Completion) refers to a pre-certification inspection upon completion of the RA. This inspection may involve the Settling Defendants (PRPs), EPA, the state, and appropriate contractors. The purpose of this inspection is typically to determine if the remedial action has been fully performed, and the performance standards have been achieved in accordance with the terms of the consent decree.

After the pre-certification inspection, if the Settling Defendants still believe that the RA has been fully performed and the performance standards have been achieved, the final consent decree normally requires them to submit a written report to EPA for approval stating that “the Remedial Action has been completed in full satisfaction of the requirements of this Consent Decree.” This report, if it contains the proper information, may also serve as the RA Report for the remedial action.<sup>9</sup>

#### **2.4.3 Federal Facility-lead RA Completion Inspections**

Federal Facility Agreements may include an additional set of inspections to determine that all aspects of the remedy have been implemented in accordance with applicable enforcement documents and the ROD. Participants may include representatives from the federal facility, the EPA, the state, and appropriate contractors. The inspection can be done concurrently with the contract inspection described in Section 2.4, where appropriate.

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<sup>9</sup> Final RD/RA Consent Decrees (Section XIV, Certification of Completion) usually require use of a “Certification of Completion of the Remedial Action” for consent decrees that address the sole or final operable unit for the site in which the United States has decided to grant a site-wide covenant not to sue. The model states that this Certification may be used, consistent with regional practice, for non-final OU consent decrees but this is not typically the case.

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## 2.5 Preparing the RA Report

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The RA Report should document the cleanup activities that occurred in order to fully implement a remedial action project at a site. The collection of individual RA Reports for a site can be used as the supporting documentation for development of the Final Close Out Report, as described in Chapter 4.

The RA Report is typically prepared by the party most familiar with the RA construction efforts (e.g., construction or oversight contractor). Such familiarity should provide the best opportunity to describe the specific activities conducted as part of the remedial action, and should provide the necessary supporting information to document that the remedy has either met cleanup levels or has achieved O&F.

The RA Report should be completed as soon as possible after contract final inspection of the completed construction, and the determination that the remedy is O&F, if applicable. The RA Report may take some time to compile; however, the goal is to have the report submitted to the region for approval within 90 days of the final inspection. This is a recommended guideline; the applicable Consent Decree, Statement of Work, or Federal Facility Agreement may specify the report schedule for a given RA project.

Exhibit 2-5, at the end of this chapter, presents the recommended contents of the RA Report. As discussed in Section 2.2.2, the contents of the RA Report are dependent upon the nature of the activities that have occurred for that particular RA project. Some items previously recommended for RA Reports (including documentation of actual RA costs and analysis of lessons learned) are no longer recommended. These items may be included as an optional appendix to the report, or documented independently in the site file.

Additional guidance specific to the preparation of Remedial Action Completion Reports (RACRs) for Department of Defense facilities on the NPL is available in the January 19, 2006 document *Recommended Streamlined Site Close Out and NPL Deletion Process for DoD Facilities*.

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## 2.6 RA Report Approval

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Since the RA Report is not typically prepared by EPA, the report is approved by EPA in order to achieve RA completion. There is no formal EPA Headquarters review or concurrence role for RA Reports.

Approval occurs when the designated regional official (Branch Chief or above, as determined by the EPA Region) approves in writing the RA Report. The approval can be provided with an appropriate signature on the RA Report cover sheet, an internal approval memorandum from the RPM to the designated regional official, or by letter to the originator of the RA Report.

**Exhibit 2-5**  
**Recommended Remedial Action Report Contents**

| Section                     | Contents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I. Background               | <ul style="list-style-type: none"> <li>• Provide a brief description of the site (e.g., name, location).</li> <li>• Summarize requirements specified in the applicable ROD for the RA. Include information on the remedial action objectives, cleanup levels (and basis for determining the cleanup levels), institutional controls, monitoring requirements, operation and maintenance requirements, and other parameters applicable to the design, construction, operation, and performance of the RA.</li> <li>• Briefly summarize the remedial design (RD), including any significant regulatory or technical considerations or events that occurred during the preparation of the RD.</li> <li>• Identify and briefly discuss any ROD amendments, explanation of significant differences, or technical impracticability waivers.</li> </ul>                                                                                            |
| II. Construction Activities | <ul style="list-style-type: none"> <li>• Provide a step-by-step summary description of the activities undertaken to construct and implement the RA (e.g., mobilization and site preparatory work; construction of the treatment system; associated site work, such as fencing and surface water collection and control; system operation and monitoring; and sampling activities).</li> <li>• If a treatment remedy, refer reader to an appendix for a description of the major components of the treatment train and operating parameters for the system.</li> <li>• If implemented, summarize details of the institutional controls (e.g., the type of institutional control, who will maintain the control, who will enforce the control).</li> <li>• Summarize any significant problems or deviations that occurred during construction (an ESD or other documentation separate from the RA Report may also be appropriate).</li> </ul> |

| Section                                                    | Contents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| III. Chronology of Events                                  | <ul style="list-style-type: none"> <li>• Provide a tabular summary that lists the major events for the RA, and associated dates of those events, starting with ROD signature.</li> <li>• Include significant milestones and dates, such as RD submittal and approval; decision document modifications; mobilization and construction of the remedy; significant operational events such as treatment system / application start-up, monitoring and sampling events, system modifications, operational down time, variances or non-compliance situations, and final shut-down or cessation of operations; final sampling and confirmation-of-performance results; required inspections; demobilization; and completion or startup of post-construction operation &amp; maintenance activities.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| IV. Performance Standards and Construction Quality Control | <ul style="list-style-type: none"> <li>• For treatment remedies, identify the quantity of material treated, the strategy used for collecting and analyzing samples, and the overall results from the sampling and analysis effort to confirm that cleanup levels have been achieved (where applicable).</li> <li>• For containment remedies, summarize the data to confirm that containment is occurring (basis for O&amp;F determination) and that, if applicable, cleanup levels have been achieved.</li> <li>• For excavation remedies, identify the amount of material excavated, the strategy for temporary storage and sampling, (or direct load-out), a description of any on-site or off-site treatment prior to disposal, and the final disposal location.</li> <li>• Provide an explanation of the approved construction quality assurance and construction quality control requirements or cite the appropriate reference for this material. Explain any substantial problems or deviations.</li> <li>• Provide an assessment of the performance data quality, including the overall quality of the analytical data, with a brief discussion of quality assurance and quality control (QA/QC) procedures followed, use of a quality assurance project plan (QAPP), comparison of analytical data with data quality objectives (DQOs).</li> <li>• For PRP or federal facility-lead projects, discuss EPA's oversight activities and results with regard to analytical data quality and the review of confirmatory data.</li> </ul> |

| Section                                | Contents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| V. Final Inspection and Certifications | <ul style="list-style-type: none"> <li>• Report the results of the various pre-final and final RA contract inspections. Note punch list items identified during the pre-final inspection and discuss how they were addressed prior to the final inspection.</li> <li>• Briefly describe adherence to health and safety requirements while implementing the RA. Explain any substantial problems or deviations.</li> <li>• For RP-lead, describe results of pre-certification inspection.</li> <li>• If applicable, certify that the remedy is operational and functional, along with the date this was achieved.</li> </ul> |
| VI. Operation & Maintenance Activities | <ul style="list-style-type: none"> <li>• Describe anticipated operation and maintenance activities, such as monitoring, site maintenance, and closure activities.</li> <li>• Identify potential problems or concerns with such activities.</li> <li>• If the remedy involves groundwater or surface water restoration, describe the future activities necessary to meet cleanup levels.</li> <li>• If ICs have not been implemented, describe activities that need to be completed to get the controls in place.</li> </ul>                                                                                                 |
| VII. Contact Information               | <ul style="list-style-type: none"> <li>• Provide contact information (names, addresses, phone numbers, and contract/reference data) for the major design and remediation contractors, EPA oversight contractors, and the respective RPM and project managers for EPA, the state, and the PRPs, as applicable.</li> </ul>                                                                                                                                                                                                                                                                                                    |
| Appendices                             | <ul style="list-style-type: none"> <li>• Provide supplemental information in appendices to the RA Report, as appropriate. These could include a map of the site and operable unit, a schematic of the treatment system, as-built drawings, site restoration plan, supplemental performance information, documentation of the O&amp;F determination, and a list of references.</li> </ul>                                                                                                                                                                                                                                    |

## 2.7 RA Report Distribution

Once the RA Report is approved, the original is retained in the Regional site file, and a copy should be provided to the originator of the report and other appropriate parties (e.g., state, tribe and/or PRP). Upon RA Completion, the region should also notify the appropriate Natural Resources Damages Trustees listed in the Regional Contingency Plans (if there are trustees at the site).<sup>10</sup> The region should provide a copy of the RA Report to the Trustees within one week of the completion and approval of the report.

<sup>10</sup> For additional information, see *CERCLA Coordination With Natural Resource Trustees* (OSWER 9200.4-22A; July 31, 1997).

## 3.0 Construction Completion

### 3.1 Introduction

In the first ten years of the Superfund program, outside audiences often measured Superfund's progress in cleaning up sites by the number of sites deleted from the NPL. This measure, however, did not and still does not fully recognize the substantial construction work and reduction of risk to human health and the environment that has occurred at NPL sites not yet eligible for deletion.

In response, the NCP Preamble *Federal Register* notice (55 FR 8699, March 8, 1990) established a "construction completion" category of NPL sites to more clearly communicate to the public the status of cleanup progress among sites on the NPL. In a subsequent *Federal Register* notice (58 FR 12142, March 2, 1993) EPA formally introduced construction completions "... to simplify its system of categorizing sites and to better communicate the successful completion of cleanup activities."

For purposes of this guidance, a construction completion site is a CERCLA site where physical construction of all cleanup actions is complete, including actions to address all immediate threats and to bring all long-term threats under control. Only sites that are final on the NPL or deleted from the NPL may qualify for construction completion.

Determination of construction completion at a site has no legal or financial significance, as it does not relate to satisfying contractual or other requirements (e.g., cleanup contract, consent decree, cooperative or interagency agreement), nor does construction completion affect the eligibility of cost reimbursement from the Fund.

### 3.2 Construction Completion Process

Construction completion is a site-wide measure; therefore completion of the last response action at a site generally determines when a site becomes eligible. This section discusses the typical construction completion process for sites addressed under CERCLA remedial authority, which is the most common approach to cleanup of sites on the NPL. At these sites, the milestone is normally achieved when a pre-final inspection for the last RA has been conducted and a Preliminary Close Out Report (PCOR) has been signed. Later sections of this guidance will address unique scenarios for sites addressed under other, or multiple, authorities.

#### 3.2.1 Pre-Final Inspection

A pre-final inspection should be conducted for the site's final RA following the recommended procedures outlined in Section 2.4, Inspection Guidelines for RA Completion. Construction completion criteria are normally satisfied when only minor "punch list" items are identified in the inspection to finish the work in accordance with design plans and

specifications. For purposes of this guidance, punch list items are activities that are part of the contract but do not affect the functionality of the remedy. These items are usually addressed by the construction contractor before the final inspection, but typically do not impact the construction completion determination. Exhibit 3-1 provides examples of potential punch list items. Exhibit 3-1 is only a representative list; each site is evaluated individually to determine eligibility for construction completion.

### **Exhibit 3-1**

#### **Examples of Minor Punch List Items**

- Revegetating landscape (except when integral to the remedy)
- Removing construction debris
- Installing additional monitoring wells
- Installing support equipment, such as security lighting
- Repairing minor defects in workmanship or construction
- Demobilization activities
- Resurfacing roads

### **3.2.2 Preliminary Close Out Report**

While much of the input can be provided by the contractor or through previous RA Reports, the PCOR is an EPA document that is typically prepared by the Remedial Project Manager (RPM). Even before the pre-final inspection is conducted, the RPM can start drafting portions of the PCOR because much of the documentation is historical and not generally dependent on the outcome of the pre-final inspection.

The PCOR should focus on all OUs at the site, including a description of the releases at the site, site conditions, all construction activities (including removals), completion of construction, Five-year Reviews, and a detailed schedule of steps remaining for site completion. The PCOR generally should be seven to nine pages and contain the information shown in Exhibit 3-2.

The RPM will often prepare the PCOR for the site before the RA Report for the final RA project is completed. This sequence is typical because the RA Report may take up to 90 days for the preparer (PRP, contractor, USACE, etc.) to submit and get approved, or the site may have a long period of operation before cleanup levels are achieved (e.g., soil vapor extraction, bioremediation).

EPA Headquarters (HQ) has Regional Coordinators assigned to act as primary reviewers of draft PCORs. These individuals will work closely with the RPM in assessing eligibility for construction completion and reviewing the draft document. The RPM sends the draft PCOR to the appropriate HQ Regional Coordinator for review and comment prior to regional signature. After addressing HQ comments and obtaining the signature of the Regional Superfund Division Director (or designee), a copy of the signed report is forwarded to EPA HQ for concurrence and tracking. If HQ concurs, the construction completion date normally corresponds to the date the regional official signed the PCOR.

**Exhibit 3-2**  
**Recommended Preliminary Close Out Report Outline**

| Section                                        | Contents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I. Introduction                                | <ul style="list-style-type: none"> <li>• Include general statement indicating date of pre-final inspection and a statement that contractors or agencies have constructed the remedies in accordance with remedial design plans and specifications.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| II. Summary of Site Conditions                 | <ul style="list-style-type: none"> <li>• Provide background summary of site location, site description, and NPL listing information.</li> <li>• Describe any removal action activities at the site.</li> <li>• Summarize remedies selected and remedial action objectives from all decision documents.</li> <li>• Include dates each RA was initiated and completed, method used to implement RA (e.g., consent decree, contract, cooperative or other agreement), and date and description of pre-final inspections used to determine that construction is complete.</li> <li>• If implemented, summarize details of the institutional controls (e.g., the type of ICs, who will maintain and enforce the controls).</li> </ul>                                                  |
| III. Demonstration of Construction QA/QC       | <ul style="list-style-type: none"> <li>• Document that the construction quality assurance/quality control plan was implemented, and that construction completion is consistent with the ROD(s) and remedial design plans and specifications.</li> <li>• Summarize any significant deviations that occurred during construction (an ESD or other documentation separate from the PCOR may also be appropriate).</li> </ul>                                                                                                                                                                                                                                                                                                                                                         |
| IV. Schedule of Activities For Site Completion | <ul style="list-style-type: none"> <li>• Identify activities remaining in order to: <ul style="list-style-type: none"> <li>» Assure effectiveness of the remedy (e.g., implement institutional controls, work plan for operation and maintenance),</li> <li>» Assure consistency with the NCP (e.g., joint EPA/state inspection, operational and functional determination),</li> <li>» Satisfy requirements for site completion (e.g., achieve groundwater cleanup goals).</li> </ul> </li> <li>• Note the schedule for the first (or next) Five-Year Review and state whether the review is statutory or policy.</li> <li>• Specify the organization responsible for implementation of each activity.</li> <li>• Set estimated dates for completion of each activity.</li> </ul> |

Sometimes a PCOR may not be needed because the site meets both construction completion and site completion criteria (See Chapter 4) simultaneously. In these instances, the RPM may elect to prepare a Final Close Out Report (FCOR) to satisfy the purposes of both documents concurrently. For example, a site where the remedy involves only excavation and consolidation of contaminated soils under a cap may be eligible for both construction completion and site completion pending confirmatory sampling and a successful final inspection. At a site with a groundwater restoration remedy, an FCOR would likely not be appropriate at the time of construction completion due to the extended operation of the groundwater remedy prior to achieving final cleanup levels.

At some NPL sites, EPA determines that no physical construction is necessary in the final OU to protect human health and the environment. There may or may not have been previous removal or remedial actions conducted at other OUs of the site. All sites qualifying for construction completion, including sites with No Action RODs in the final operable unit, should be documented via a Preliminary Close Out Report or Final Close Out Report.

The construction completion milestone is typically achieved when the Regional Superfund Division Director (or designee) signs the PCOR, a hard copy of the signed document is sent to EPA HQ, and EPA HQ concurs.

Upon completion of a PCOR or FCOR, the appropriate Trustees listed in the Regional Contingency Plans should be notified of the construction completion determination (if there are trustees at the site).<sup>11</sup> The region should provide a copy of the report to the Trustees within one week of the completion of the report. A copy should also be provided to the state, tribe and PRP, if applicable.

### 3.3 Technology Considerations for Construction Completions

This section includes considerations for specific types of remedies, including groundwater treatment remedies, in-situ groundwater and soil remedies, soil vapor extraction, monitoring, and institutional controls. This section also discusses some special considerations for interim remedies and contingency remedies. The information below only addresses a subset of the many technologies employed at NPL sites. In instances where other remedial technologies are used, site-specific circumstances should be evaluated to determine eligibility for construction completion.

The sections below provide information and recommendations for achieving construction completion for a given remedy, assuming the given remedy is the last action at a site prior to achieving construction completion. However, the official construction completion determination applies to the entire NPL site. The site-wide determination generally will not be made until each individual remedy at a given site meets the definition of construction completion.

<sup>11</sup> For additional information, see *CERCLA Coordination With Natural Resource Trustees* (OSWER 9200.4-22A; July 31, 1997)

### 3.3.1 Groundwater Treatment Remedies

Groundwater treatment remedies often involve extraction of groundwater followed by conveyance to an above-ground treatment system. Such remedies may be undertaken to restore groundwater quality to levels that allow for beneficial use (e.g., restoration to safe drinking water levels) or to prevent further migration of a contaminated plume. These actions typically involve a continuous operation phase long after the system has been constructed in order to achieve the cleanup levels specified in the ROD.

These sites may achieve construction completion when physical construction of the remedy (e.g., construction of the treatment plant, pumps, and extraction wells) is complete, the pre-final inspection has been conducted, the treatment system is operational, and any expected future adjustments are likely to be minimal in nature (e.g., well replacement). If additional, substantial work is expected (e.g., expansion of the extraction network or additional treatment components), then the site may not qualify for construction completion.

In instances where monitored natural attenuation (MNA) is being used to achieve groundwater remediation goals, the initial network of monitoring wells necessary to effectively evaluate MNA progress should be in place prior to construction completion.

For sites with a groundwater treatment remedy, the "Schedule of Activities for Site Completion" section of the PCOR should include the anticipated date of the Operational and Functional (O&F) determination and an estimated timeframe to achieve cleanup goals.

### 3.3.2 Soil Vapor Extraction Remedies

Soil vapor extraction (SVE) units are generally designed to physically remove volatile compounds from soil layers located above the water table. The process typically employs vapor extraction wells alone or in combination with air injection wells. Vacuum blowers are designed to induce air through the soil layers, which strip volatile compounds from the soil and carry them to the surface via extraction wells. Volatiles can be controlled by adsorption to activated carbon, incineration, or condensation by refrigeration. SVE systems vary in size, but typically consist of several extraction wells, blowers, and collection/treatment units.

For purposes of this guidance, SVE resembles groundwater treatment remedies in that little day-to-day activity, other than routine operation of the treatment facility, takes place once the treatment facility is built. These actions may require a continuous operation phase long after the system has been constructed in order to achieve the cleanup levels specified in the ROD. Accordingly, the construction completion policy for SVE remedies and groundwater treatment remedies are generally the same.

Since SVE is in situ, construction activity is primarily limited to the installation of extraction wells, blowers, and collection/treatment units. Construction completion at SVE sites may be achieved when the extraction network and treatment unit have been constructed, a successful pre-final inspection has been conducted, the treatment system is operational, and any expected future adjustments are likely to be minimal in nature (e.g., well replacement).

The "Schedule of Activities for Site Completion" section of the PCOR should include the anticipated date of the Operational and Functional (O&F) determination and an estimated timeframe to achieve cleanup goals.

### 3.3.3 In-situ Remedies for Groundwater or Soil

In-situ treatment remedies for groundwater or soil could include chemical oxidation or other types of chemical treatment, biological treatment, thermal treatment, air sparging, permeable reactive barriers, and other similar technologies. In-situ treatment remedies typically involve adding treatment agents to the subsurface. Treatment agents could include chemical agents (e.g., oxidants, or surfactants); agents to facilitate microbiological activity; heating agents (e.g., steam, or electric current); physical reactants (such as zero valent iron, oxygen or air); or other agents.

In 2005, EPA published a policy addendum (*Addendum to Policy for "Close Out Procedures for National Priorities List Sites"* OSWER 9320.2-13, December 6, 2005) to clarify the criteria to evaluate eligibility for construction completion for in situ groundwater remedies. Prior to construction completion, any treatability or pilot tests should be complete and implementation of the full-scale remedy should be underway. Full-scale in situ remedies are often implemented in phases across areas of the site (e.g., an initial round of injections in the source area is followed by data evaluation, then subsequent injections in a downgradient dissolved plume). In such instances, the criteria for construction completion generally apply to the initial phase of the full-scale remedy.

Generally, in situ treatment remedies may be considered construction complete when each of the following three activities has been completed and documented in a PCOR:

- (1) Physical construction of at least the first phase of the full-scale remedy should be complete, including injection wells, metering systems or other components needed to place or control movement of treatment agents in the subsurface.

If a pump and treat system is part of the remedy, physical construction of all components of the system should also be completed. If a permeable reactive barrier (PRB) is used, physical construction of all components of the barrier system, including reactive and non-reactive segments of the barrier, should be completed.

If no physical construction is needed for the full-scale remedy (e.g., existing injection wells from the pilot will be used), construction may be considered complete when final design of the full-scale remedy is completed. In this case, the final design report should specify the treatment agents to be used, the method for placing treatment agents in the subsurface, and the location and design of injection wells to be used for the full-scale remedy.

(2) At least one round of treatment/agent addition has been initiated for the full-scale remedy.

- If different agents are to be added in stages, at least one round of the first stage should have been initiated.
- For electrical resistive heating and thermal conductive heating, this typically would mean turning on the power for electrodes or heater elements.
- For steam enhanced extraction, this generally would mean commencement of steam generation.
- For in-situ chemical oxidation and surfactant/co-solvent flushing, this usually would mean initial agent addition.
- For phytoremediation, this typically means completing the initial planting (harvesting, if planned, does not typically need to occur prior to construction completion).
- For a permeable reactive barrier (PRB), the treatment agent (reactive barrier material) should have been placed during remedy construction.
- If Geoprobe™ points (or similar) are to be used for injection of treatment agents, injection points needed for at least the first round of treatment should have been installed.

(3) The pre-final inspection indicates the remedy will perform as designed and any expected future adjustments are likely to be minimal in nature (e.g., replacement of existing injection wells).

### 3.3.4 Interim Remedies

Interim remedies are most commonly used to institute temporary measures to stabilize an area of a site and prevent further migration of contaminants while a final remedial solution is being developed.<sup>12</sup> An interim remedy may also be used to evaluate the performance of a remedial technology prior to establishing final cleanup levels. Interim remedies generally are limited in scope and address media or areas of a site that will be subsequently addressed by a final ROD.

If an interim remedy has been used to initiate cleanup at a site, it should be followed by a final ROD and implementation of the final remedy before the site qualifies as a construction completion.

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<sup>12</sup> See also *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents* (EPA 540-R-98-031 / OSWER 9200.1-23.P; July 1999).

### 3.3.5 RODs with Contingency Remedies

RODs sometimes incorporate contingency remedies when there is uncertainty about the ability of the selected option to meet cleanup goals. Often this is particularly true where an innovative treatment technology is selected for use at a site. In terms of the construction completion criteria, the issue of contingency remedies may arise in situations where remediation may still be ongoing after the site is considered construction complete (e.g., groundwater restoration, SVE). For example, where natural attenuation is selected as the groundwater remedy, EPA may have included a more traditional pump and treat as the contingency remedy.

Sites that have contingency remedies identified in a ROD may be considered construction complete if the region has information to determine that use of the contingency remedy is not anticipated at the site, and the PCOR includes a statement to this effect. This determination in no way affects any Potential Responsible Party (PRP) settlement or other obligations. Making this determination does not preclude having to later invoke the contingency should it be required.

### 3.3.6 Groundwater Monitoring

Monitoring efforts generally are designed to provide information about remedy performance and progress toward achieving cleanup levels. Monitoring may be appropriate at any stage of remediation, including operation and maintenance (O&M) which continues after construction completion. Although monitoring occasionally may identify the need for future work, the need for monitoring does not preclude considering a site as a construction completion if the site qualifies otherwise.

In instances where monitored natural attenuation (MNA) is being used to achieve groundwater remediation goals, the initial network of monitoring wells necessary to effectively evaluate MNA progress should be in place prior to construction completion. Due to the dynamic nature of groundwater remedies, the installation of additional monitoring wells may continue after construction completion.

### 3.3.7 Institutional Controls

For purposes of this guidance, institutional controls are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of a response action.<sup>13</sup> ICs typically are designed to work by limiting land or resource use or by providing information that helps modify or guide human behavior at a site. Some common examples of ICs include zoning restrictions, building or excavation permits, well drilling prohibitions, easements, and covenants.

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<sup>13</sup> *Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites* (Interim Final) (EPA 540-R-09-001 / OSWER 9355.0-89; November 2010). (PIME Guidance)

Since institutional controls do not require physical construction, a site can achieve the construction completion milestone before ICs are in place. The need for institutional controls should be documented in a decision document and the details regarding future implementation should be included in the “Schedule of Activities for Site Completion” section of the PCOR. However, ICs need to be implemented in order to achieve site completion (see Chapter 4).

### **3.4 Lead and Authority Considerations for Construction Completions**

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Some NPL site cleanups are addressed by parties other than EPA. Construction completion guidelines and procedures for these sites are discussed below.

#### **3.4.1 PRP Lead Sites**

A determination of construction completion at a site generally does not have any legal significance and therefore, should not affect any enforcement agreement or other obligations associated with the PRPs. Construction completion criteria for PRP sites are meant to be identical to those for Fund lead sites. The RPM, however, should carefully determine whether the activities performed by the PRP are in accordance with applicable enforcement documents.

#### **3.4.2 Federal Facilities**

Construction completion procedures for federal facility sites are identical to those for Fund- and PRP-financed remedial actions. The EPA RPM is generally responsible for developing the PCOR at federal facility sites. Due to the size and complexity of these sites, the PCOR is typically longer but generally should not exceed 20 pages.

#### **3.4.3 State Lead Sites**

Sites where the state is the lead agency for conducting and/or overseeing response actions typically call for state certification of construction completion. In these situations, EPA relies heavily on the state to determine the appropriate response actions at a site. (See Section 4.2.1. for guidelines to ensure all response actions have been appropriately documented in a decision document.)

In most instances, the state prepares the PCOR and EPA concurs with this decision by signing the PCOR. The PCOR should indicate regional concurrence with the state's determination that no further physical construction is anticipated.

If the state does not prepare an actual PCOR, then the state should send a certification letter to the region that includes a detailed summary of all actions taken at the site. The letter should also clearly state that no further construction is anticipated.

All sites qualifying for construction completion will be documented by a PCOR (or FCOR, as appropriate, see Section 3.2.2). If the state does not prepare the PCOR, then the EPA RPM prepares the document after regional concurrence with the state's certification letter.

### 3.4.4 NPL Sites Addressed Under Removal Authority

Actions under removal authority are generally intended to achieve prompt risk reduction through emergency, time critical, and non-time critical actions. In some rare instances, NPL sites may be addressed entirely under removal authority. In such instances, the site may achieve construction completion at the same time as site completion.

The RPM (or On-Scene Coordinator (OSC), as appropriate) should document in the final Pollution Report (POLREP) that the contractor has completed all removal actions and demobilized from the site.<sup>14</sup> The RPM or OSC should then prepare an FCOR to document the construction completion (and simultaneous site completion) for sites that were addressed entirely under removal authority. (See Section 4.2.1 for guidelines to ensure all response actions have been appropriately documented in a decision document.)

For sites addressed through a combination of remedial and removal authority, the process outlined in Section 3.2 (including a pre-final inspection, punch list items and the PCOR) is applicable. The PCOR should summarize all construction activities, whether conducted under removal or remedial authority.

### 3.4.5 Multiple Authorities Conducting Cleanup at the Same Site

Cleanup work under different authorities may be planned or under construction simultaneously at a site. For example, operating facilities may have RCRA corrective action ongoing at one part of the site, while CERCLA response work is occurring elsewhere. In situations where all physical construction identified under CERCLA authority for the NPL site is complete, but other non-CERCLA work remains, the site may qualify for construction completion if documentation guidelines are met. Any physical construction that has been identified through the CERCLA process should be finished before the site is declared construction complete.

## 3.5 Sites Deleted from the NPL

Initially, only final NPL sites qualified for construction completion. As a result, sites already deleted from the NPL would never qualify for construction completion if physical construction remained at the time of deletion. This included sites deleted from the NPL as a result of deferral of the remedy and associated physical construction to RCRA Subtitle C.

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<sup>14</sup> For information regarding POLREPs refer to *Guidance for Preparing POLREPs/SITREPS* (OSWER No. 9360.3-03; December 2007).

In 2000, the Agency published a Notice of Policy Change in the *Federal Register* (65 FR 57810, September 26, 2000) which states that all sites that are on the NPL or have been deleted from the NPL may be eligible for construction completion “when all physical construction under all authorities is complete and all other applicable construction completion policy criteria have been satisfied.” As a result, the construction completion milestone may follow deletion from the NPL at a small number of sites that have been deleted where, for example, cleanup was deferred to and carried out under RCRA Subtitle C.

### 3.6 Additional Work at Construction Completion Sites

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Routine adjustments and modifications to a constructed remedy can be expected, particularly during O&M. Anticipating the need for these routine activities to occur does not preclude listing a site as a construction completion if the site qualifies otherwise.

Examples of routine adjustments or modifications may include the following:

- ◆ drilling of additional extraction wells as subsurface conditions evolve,
- ◆ replacement of injection wells for in-situ remedies,
- ◆ modifications to unit processes at groundwater treatment plants,
- ◆ dismantling and removing on-site remediation facilities,
- ◆ repair, replacement or relocation of equipment,
- ◆ cap maintenance (e.g., mowing, landscaping, erosion control),
- ◆ making repairs or adjustments to a treatment plant,
- ◆ clearing debris from a drainage system or settling pond,
- ◆ modifying the sampling and analysis scheme for the monitoring portion of a remedy.

The region should carefully evaluate the status of all response actions at the site and consider the need for additional construction activities. If the region believes that substantial construction might still be required in the future for the site (e.g., to address a potential new exposure pathway or expand an extraction network to a downgradient area), then the construction completion determination is likely premature. Similarly, if the region anticipates the need for an additional ROD, or a fundamental change that requires an amended ROD, then the construction completion determination may also be premature.

However, unforeseen circumstances may trigger the need for more substantial work after the site has been declared a construction complete. Examples may include adding a new treatment component to address a previously undetected contaminant, removing newly discovered pockets of contamination, or rebuilding a remedy following a natural disaster. In such situations where the need for the additional work is unforeseen, EPA HQ will decide, in consultation with the region, if the site should retain its construction completion status.

## 4.0 Site Completion

### 4.1 Introduction

For purposes of this guidance, site completion signifies the end of all response actions at a NPL site. The site completion designation generally means that the response actions at the site were completed and it is anticipated that no further Superfund response is necessary to protect human health and the environment.

It is recommended that the RPM apply EPA's site completion criteria discussed in this chapter to a site to help verify that it is eligible for site completion status. Site completion is typically documented by a FCOR. This chapter explains the recommended site completion criteria and the recommended documentation to demonstrate that the criteria have been met and that the site completion milestone has been achieved.

### 4.2 Site Completion Criteria

Typically, it is recommended that regions evaluate all the criteria discussed in this section when evaluating whether the site is eligible for site completion. Consistent with CERCLA, section 300.430 of the NCP states that the national goal of the Superfund Program is to select (and implement) remedies that are protective of human health and the environment, that maintain protection over time, and that minimize untreated waste. The recommended criteria are:

- ◆ All remedial decision documents have been completed and the selected remedy is consistent with CERCLA, the NCP, and EPA policy and guidance;
- ◆ All response actions have been completed and appropriately documented in the site file; and
- ◆ All institutional controls are in place.

#### 4.2.1 All Remedial Decision Documents have been Completed and the Selected Remedy is Consistent with CERCLA, the NCP, and EPA Policy and Guidance

When evaluating site completion, it is recommended that all remedial activities taken at a site be documented in a remedial decision document. In addition, if cleanup actions were taken under another authority (for example, removal or state authority), it is recommended that these actions be evaluated in a CERCLA remedy decision document before site completion. In situations where site investigation activities conclude that site risks do not warrant a response action, this decision is generally documented in a no action or no further action ROD. At the time of site completion, all anticipated decision documents should be completed.

When reviewing the remedial decision documents and associated response actions, it is important to assess whether they adequately address all contamination and exposure pathways identified during the RI/FS or any subsequent site characterization. The remedial action objectives and cleanup levels selected in these documents are typically reviewed in light of CERCLA, the NCP, and current EPA policy and guidance. These reviews should provide assurance that the remedial action objectives (RAOs) and associated cleanup levels selected for the response actions identify clear expectations and objectives and are consistent with ARARs, as appropriate.

#### **4.2.2 All Response Actions have been Completed and Appropriately Documented in the Site File**

CERCLA and Section 300.5 of the NCP both define response as removal or remedial action, including enforcement related activities. As defined by the NCP, response actions may include a combination of engineering and/or institutional controls selected to address risks posed at the site. If waste is left in place, O&M activities may continue after all response actions have been completed. See 4.2.4 for additional definitions and information related to operation and maintenance activities.

In order to determine that all response actions have been completed, it is encouraged that the regions have defensible and reportable data to verify that the cleanup levels associated with the response action have been achieved. This data, along with other remedial and removal action activities, are typically included in a report signifying completion of these activities. The data and report should be part of the post-decision document file or general site file kept at the region.

For removal actions, the completion of these activities is typically documented in Pollution Reports (POLREPs). The content of these reports can be found in the *Guidance for Preparing POLREPs/SITREPS* (EPA 540/F-94/018).

For remedial actions, the completions of these actions are typically documented in RA Reports. Chapter 3 provides details on the recommended content of these reports for different types of remedial action.

It is recommended that the content of these reports be summarized in the Final Close Out Report. In addition to the compilation of the reports described in this section, the FCOR typically summarizes all activities associated with restoration of groundwater or surface water, including a summary of monitoring data and an analysis that demonstrates that cleanup levels have been achieved.

Recommended contents for this report are summarized in Exhibit 4-3.

### 4.2.3 Institutional Controls are In Place

EPA considers ICs to include “non-engineered instruments, such as administrative and legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a response action”.<sup>15</sup>

#### Exhibit 4-1 Role of Institutional Controls

The NCP (40 CFR 300.430(a)(1)(iii) states that institutional controls should supplement engineering controls to prevent or limit exposure, but institutional controls normally “shall not substitute for active response measures.”

Institutional controls (ICs) may be necessary to ensure protectiveness and/or to protect a remedy. If any cleanup options being evaluated leave waste in place, ICs should be considered to ensure that unacceptable risk from residual contamination does not occur. In order to achieve site completion, the appropriate institutional controls need to be implemented, and the requirement for the institutional controls needs to be in a decision document.

### 4.3 Role of Operation and Maintenance Activities in Achieving Site Completion

The NCP discussion of Operation and Maintenance (O&M) is provided in Exhibit 4-2. O&M is not defined as a response action by the NCP, and may continue after site completion and deletion.

#### Exhibit 4-2 NCP Definition for Operation and Maintenance

The NCP (40 CFR 300.435(f)) states that:

Operation and maintenance (O&M) measures are initiated after the remedy has achieved the remedial action objectives and remediation goals in the ROD, and is determined to be operational and functional, except for groundwater or surface water restoration under §300.435(f)(4). A state must provide its assurance to assume responsibility for O&M, including, where appropriate, requirements for maintaining institutional controls, under §300.510(c).

<sup>15</sup> *Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites (Interim Final)* (EPA 540-R-09-001/OSWER 9355.0-89; November 2010). (PIME Guidance)

O&M activities that continue after the site has achieved the remedial action objectives and cleanup goals generally relate to maintaining engineering and/or institutional controls at the sites where waste is left on site.

Any site with O&M activities being conducted in a continued effort to attain remedial action objectives or cleanup levels typically does not qualify for site completion until these objectives and levels are met. These activities typically include actions related to groundwater or surface water restoration.

#### **4.4 Final Close Out Report**

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The FCOR typically documents compliance with statutory requirements and provides a consolidated record of all removal and remedial activities for the entire site. Since it is the final record, it is recommended that the FCOR be a complete and stand-alone document. The report typically does not signify that the terms of cooperative agreements, consent decrees, or administrative orders have been satisfied, nor does it signify resolution of contractual or other administrative issues for Superfund activities.

It is recommended that the FCOR describe how the cleanup was accomplished and provide the overall technical justification for site completion. Although the content and format of the report may vary depending on site circumstances, it is recommended that the report include information presented in Exhibit 4-3. This recommended information is typically readily available from the previous documents such as the POLREPs, RI/FS, RODs, RDs, RA reports and O&M reports.

Typically, the RPM prepares the FCOR, but may task the state to prepare it at state-lead sites. In addition, PRPs or federal facilities may be requested to provide data to support the justification for site completion. The report is typically 10 to 15 pages, but may be longer for larger sites. To keep the report brief, it is recommended that detailed technical information and data be referenced or appended to the report. The state should have an opportunity to review and comment on the report prior to final signature. In addition, the region must send the draft to EPA Headquarters (HQ) for review and comment.

Once all stakeholder comments are appropriately addressed, the document is signed by the Regional Administrator or other appropriate official.

Upon completion of an FCOR, the appropriate Trustees listed in the Regional Contingency Plans will be notified of the completion of the remedial actions (if there are trustees at the site).<sup>16</sup> The region should provide a copy of the report to the Trustees within one week of the completion of the report. A copy should also be provided to the state, tribe and PRP, if applicable.

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<sup>16</sup> For additional information, see *CERCLA Coordination With Natural Resource Trustees* (OSWER 9200.4-22A; July 31, 1997)

**Exhibit 4-3**  
**Recommended Final Close Out Report Outline**

| Section                                                                  | Contents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I. Introduction                                                          | <ul style="list-style-type: none"> <li>• Include general statement indicating all response actions have been successfully completed.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| II. Summary of Site Conditions                                           | <ul style="list-style-type: none"> <li>• Provide background summary of site location, site description, and NPL listing information.</li> <li>• Describe any removal action activities at the site.</li> <li>• Summarize remedies selected and specify remedial objectives from all decision documents.</li> <li>• Include dates each RA was initiated and completed, method used to implement RA (e.g., consent decree, contract, cooperative or other agreement), and date of RA Reports.</li> <li>• Summarize details of the institutional controls (e.g., where ICs are a part of the remedy, include a map or figure, the objective of the ICs, the type of ICs, implementation, who will maintain and enforce the controls).</li> <li>• Discuss any final inspection activities that were performed.</li> </ul> |
| III. Monitoring Results                                                  | <ul style="list-style-type: none"> <li>• For source actions, discuss confirmatory sampling results which indicate compliance with cleanup levels.</li> <li>• For source and groundwater containment actions, discuss sampling results which indicate the remedy is functioning as designed.</li> <li>• For monitoring required for no action remedies, discuss sampling results which indicate the no action decision is appropriate.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                      |
| IV. Attainment of Groundwater Restoration Cleanup Levels (if applicable) | <ul style="list-style-type: none"> <li>• Provide a summary of monitoring data and an analysis to demonstrate cleanup levels specified in the RODs or Action Memoranda are achieved.</li> <li>• Append actual monitoring data and analysis from monitoring report(s) in appropriate level of detail.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| V. Summary of Operation and Maintenance Required                         | <ul style="list-style-type: none"> <li>• Description of ongoing monitoring activities for all media and engineering controls where waste is left on site.</li> <li>• Description of all enforcement and maintenance activities for institutional controls.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| VI. Demonstration of Cleanup Activity QA/QC                              | <ul style="list-style-type: none"> <li>• Document construction quality assurance/quality control plan that was implemented.</li> <li>• Document that the operation and maintenance quality assurance/quality control plan was implemented.</li> <li>• Document the sampling and analysis protocol that was followed.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Section                        | Contents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VII. Five-year Review          | <ul style="list-style-type: none"> <li>• Statement explaining whether a five-year review is appropriate, and if so, the type of review (statutory or policy) and the schedule for the review.</li> <li>• If five-year reviews were performed and are now discontinued, explain why.</li> <li>• If a five-year review had been performed at the site, provide a summary of the last five-year review completed (protectiveness determination, any identified issues and recommendations).</li> <li>• If issues were raised in the last five-year review, briefly describe activities taken to address issues and implement recommendations, as appropriate.</li> </ul> |
| VIII. Site Completion Criteria | <ul style="list-style-type: none"> <li>• Statement that the implemented remedy achieves the degree of cleanup or protection specified in the ROD(s) for all pathways of exposure.</li> <li>• Statement that all selected remedial and removal actions remedial action objectives and associated cleanup goals are consistent with agency policy and guidance.</li> <li>• Statement that no further Superfund response is needed to protect human health and the environment.</li> </ul>                                                                                                                                                                               |
| IX. Bibliography               | <ul style="list-style-type: none"> <li>• Complete citation of relevant reports</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## 5.0 Site Deletion and Partial Deletion

### 5.1 Introduction

This chapter focuses on the NCP deletion criteria, the recommended process and documentation, and publication requirements needed to achieve the site deletion or partial deletion milestone. The information presented in the following sections generally references site deletions but applies to both site deletions and partial deletions of media, OUs, or specific parcels. Any differences will be noted in the text.

Deletion of a site or portion of a site from the NPL does not preclude eligibility for subsequent Fund-financed or responsible party actions. If future conditions warrant, the NCP (40 CFR 300.425(e)(3)) provides that Fund-financed remedial actions may be taken at sites or portions of sites deleted from the NPL. When there is a significant release from a site or portion of a site deleted from the NPL, the site or portion of a site may be restored to the NPL without rescoring the site under the HRS. Additional enforcement actions also may be taken, depending on liability releases in the consent decree or administrative order. Deletion of a site or portion of a site does not affect cost recovery efforts under CERCLA Section 107.

#### Deletion

The NPL deletion process typically begins at most sites once it is determined that the site completion milestone has been achieved and documented (Chapter 4). For purposes of this guidance, site deletion requirements include 1) the documentation of activities and decision making at the site is complete, 2) the activities conducted and documented are verified, and 3) the public has an opportunity for notice and comment before the site is formally deleted from the NPL.

#### Partial Deletion

The Partial Deletion Rule, which allows the EPA to delete portions of NPL sites, provided that deletion criteria are met, was published in the *Federal Register* on November 1, 1995 (65 FR 55466). Previously, EPA's policy had been to delete sites only after cleanup of the entire site has been completed. However, waiting to delete an entire site does not communicate the successful cleanup of portions of the site. Total site cleanup may take many years, while portions of the site may have been cleaned up and may be available for productive use. Such a portion may be a defined geographic area of the site, or may be a specific medium at the site, e.g., surface soil, depending on the nature or extent of the release(s).

## 5.2 NPL Deletion Criteria

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These criteria are applied to the site or the portion of the site proposed for deletion.

The NCP (40 CFR 300.425(e)) states that a site may be deleted from, or recategorized on, the NPL when no response or no further response is appropriate. The EPA must consult with the state in making this determination. To delete a site from the NPL, EPA must determine, in consultation with the state, that one of the following criteria have been met:

- ◆ Responsible or other parties have implemented all appropriate response actions required;
- ◆ All appropriate Fund-financed response under CERCLA has been implemented, and no further response action by responsible parties is appropriate; or
- ◆ The remedial investigation has shown that the release poses no significant threat to public health or the environment, and, therefore, taking of remedial measures is not appropriate.

Site deletion from the NPL has been separated from the Five Year Review process (56 FR 66601, December 24, 1991). This means that a site can be deleted from the NPL without having the first Five Year Review completed. Once a site is deleted and waste is left in place above levels that allows for unrestricted use and unlimited exposure, a Five Year Review will be conducted at the site no less than every five years. EPA has separate guidance addressing Five Year Review requirements (OSWER No. 9355.703B P, June 2001).

Chapter 4 outlines the expectations for the determination that all response actions have been implemented.

## 5.3 NPL Deletion Through Resource Conservation and Recovery Act (RCRA) Deferral

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EPA's *Deletion Policy for Resource Conservation and Recovery Act (RCRA) Facilities* dated March 20, 1995 (60 FR 14661), was later amended on November 24, 1997 (62 FR 62523) to also make the policy applicable to federal facility sites. The policy states that:

“EPA believes it is appropriate to delete sites from the NPL based upon deferral to RCRA under certain circumstances. Deletion of sites from the NPL to defer them to RCRA Subtitle C corrective action authorities would free CERCLA’s oversight resources for use in situations where another authority is not available, as well as avoid possible duplication of effort and the need for an owner/operator to follow more than one set of regulatory procedures.”

A site can be deleted from the NPL through a RCRA deferral action if the site complies with the following criteria:

- ◆ The CERCLA site is currently being addressed by RCRA corrective action authorities under an existing enforceable order or permit containing corrective action provisions;
- ◆ Response under RCRA is progressing adequately; and
- ◆ Deletion would not disrupt an ongoing CERCLA response action.

This Deletion Policy pertains to deletions based on deferral to state/federal RCRA programs only, not other entities. For sites deferred to RCRA, the site may not necessarily meet the construction completion or site completion milestone prior to deletion. Sites deferred to other entities, such as Underground Storage Tanks or state cleanup programs, should still meet all deletion criteria discussed in Section 5.1.

## 5.4 The Deletion Process

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Deleting a site from the NPL requires a modification to the Code of Federal Regulations. To perform this task, the Administrative Procedure Act requires formal administrative rule-making procedures which include creating a docket, publishing notices in the *Federal Register*, and holding a formal public comment period.

For full deletion, the site deletion process typically begins once the site achieves the site completion milestone.

For partial deletion, any person, including individuals, business entities, states, local governments, and other federal agencies, may submit a petition requesting a partial deletion. A petition may consist of a simple written request from any interested party. Upon evaluation by the region, this written request may begin the partial deletion process.

### 5.4.1 State Concurrence

Early in the site deletion or partial deletion process, the region consults with the state and requests the state's concurrence on EPA's intent to delete the site. A site cannot be deleted from the NPL without the state's concurrence. If the state agrees with the deletion, the state will provide a concurrence letter, and the letter is placed in the deletion docket.

### 5.4.2 Deletion Docket

The region prepares a deletion docket containing all pertinent information supporting the deletion recommendation. The deletion docket is not a continuation of the Administrative Record for the site. Documents in the Administrative Record can be referenced and do not have to be duplicated in the deletion docket (provided the Administrative Record is still available to the public). In addition to containing the documentation supporting the deletion, the docket also contains copies of the *Federal Register* deletion notices, Responsiveness summary and public comments, as appropriate. The deletion docket should be available to the public at the EPA regional office public docket, a local repository, and online in the site Federal Docket Management System (FDMS).

The FDMS holds deletion docket documents electronically in the online docket for the site. NPL site dockets contain documents that support all rulemaking actions for the site (site listing, partial deletions and deletions). Site dockets are available for public viewing at [www.regulations.gov](http://www.regulations.gov). RPMs are encouraged to work with their regional deletion coordinators to ensure the deletion docket is properly uploaded into FDMS.

The documents contained in the deletion docket will vary depending on the type of response (i.e., remedial action, removal action, and no action) and the lead agency (e.g., federal, state, or responsible party).

At a minimum, the following documents are typically included in the deletion docket for a full site deletion:

- ◆ Final Close Out Report
- ◆ State Concurrence Letter
- ◆ Administrative Record Index

At a minimum, the following documents are typically included in the deletion docket for a partial deletion:

- ◆ No Action ROD or RA Report for the parcels being proposed for deletion
- ◆ A map clearly delineating the boundaries of the parcels proposed for deletion
- ◆ State Concurrence Letter
- ◆ Bibliography of the Administrative Record citing those documents pertinent to the parcels

The documents listed in Exhibit 5-1 are examples of what may also be included in the deletion docket as applicable. This is not an exhaustive list. The contents of the deletion docket, outside of those minimum requirements listed above, are at the discretion of the region preparing the deletion.

It is recommended that regional program offices work with their regional Superfund deletions coordinators and records management staff to ensure that complete copies of the documents in the deletion docket are developed and placed in the appropriate regional, local, and FDMS site repositories. The public will have an opportunity to review the docket during the 30 day public comment period that follows publication of the Notice of Intent to Delete (NOID). Public meetings are optional.

Deletion notices are published in the *Federal Register* by either using the two-step rulemaking process (see Section 5.3.3) or the direct final rulemaking process (see Section 5.3.4). Although deletion requirements are the same for both processes, the administrative steps are slightly different.

### **Exhibit 5-1**

#### **Example Deletion Docket Documents**

- ✓ Consent Decree
- ✓ Action Memoranda
- ✓ Community Relations Plans
- ✓ Superfund State Contract
- ✓ Cooperative Agreements
- ✓ Agreements with Potentially Responsible Parties
- ✓ Design Plans and Specifications
- ✓ Construction Inspection Reports
- ✓ On Scene Coordinator or Pollution Reports
- ✓ Five-Year Reviews
- ✓ Operation and Maintenance Plans
- ✓ Preliminary Close Out Report
- ✓ Transcripts from Public Meetings
- ✓ Institutional Control Documentation
- ✓ Monitoring Reports

#### **5.4.3 Two-step Rulemaking Process**

Exhibit 5-2 shows the administrative steps in the two-step rulemaking process. The deletion process steps generally include the following:

- ◆ Notice of Intent to Delete (NOID) preparation
- ◆ Obtaining HQ concurrence
- ◆ Publishing the NOID and Local Notice
- ◆ Receiving comments and preparing a Responsiveness Summary (if needed)
- ◆ Preparing and Publishing the Notice of Deletion (NOD)

### 5.4.3.1 Notice of Intent to Delete (NOID) Preparation

After consultation with the state, the region prepares the NOID.

The NOID contains EPA regional staff and other contacts, deletion criteria and procedures, and site specific information. It typically provides for a 30 day public comment period. Site specific information needed to prepare the NOID is generally obtained from the FCOR for full site deletions or the RA Report or no Action ROD for partial deletions.

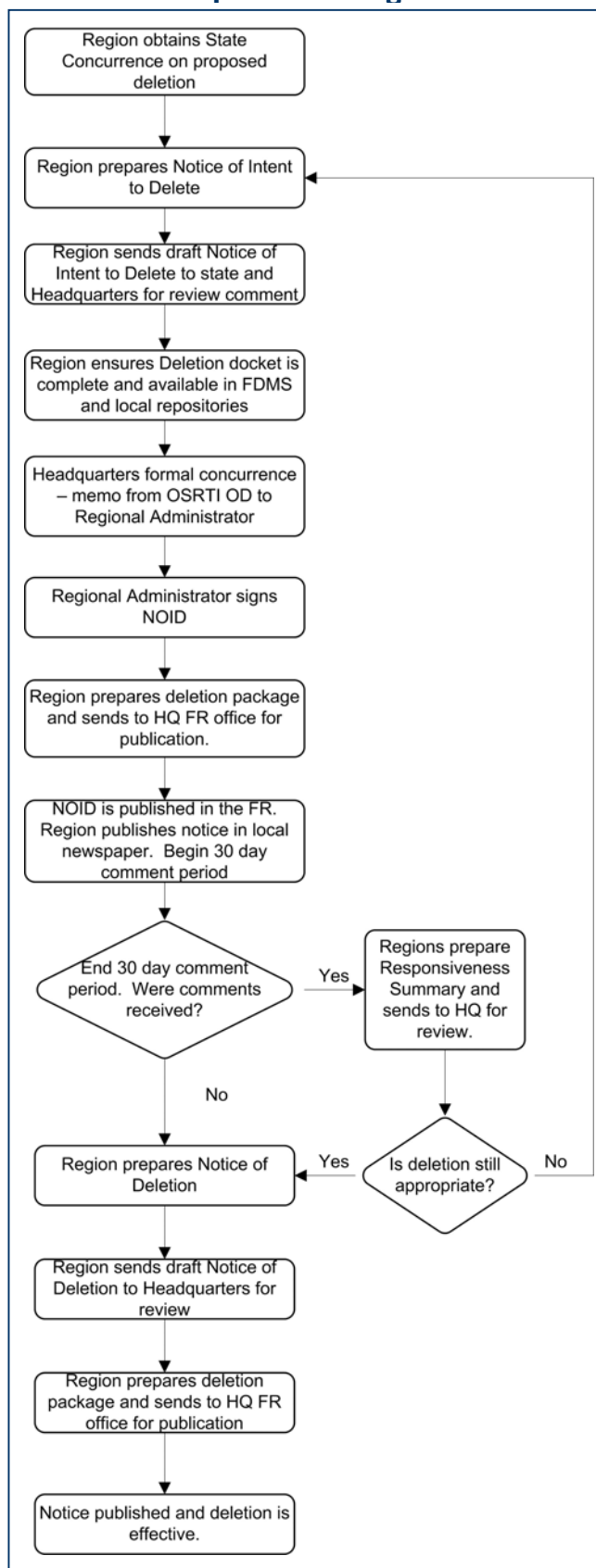
Templates for the site deletion and partial deletion NOIDs are available at the following website:

<http://www.epa.gov/superfund/cleanup/postconstruction/deletion.htm>. The draft NOID is sent to EPA Headquarters for review and comment.

### 5.4.3.2 Headquarters Concurrence

The Regional Administrator is delegated authority to sign the NOID. Before the Regional Administrator can sign the document, the delegation requires formal Headquarters concurrence. After the region addresses Headquarters comments, the Office of Solid Waste and Emergency Response (OSWER) Assistant Administrator must concur with the deletion before the deletion process proceeds. This concurrence is delegated to the OSWER Superfund Office Director. The OSWER Superfund Office Director completes the "Headquarters Concurrence Checklist" to support the deletion concurrence.

**Exhibit 5-2  
Two-step Rulemaking Process**



For full site deletions, the checklist includes the following:

- ◆ All NPL deletion criteria have been met.
- ◆ All institutional controls have been recorded in appropriate decision documents and have been implemented as recommended in the Institutional Control Implementation and Assurance Plan guidance.
- ◆ All program measures (Environmental Indicators, Five-Year Reviews, Sitewide Ready for Anticipated Use) support the decision to delete.
- ◆ State Concurrence letter is in the deletion docket.
- ◆ The Final Close Out Report has been completed.
- ◆ Deletion Docket is in local, regional and electronic (FDMS) repositories.
- ◆ NOID is consistent with templates and supports deletion.

For partial deletions, the checklist includes the following:

- ◆ All NPL deletion criteria have been met.
- ◆ All institutional controls have been recorded in appropriate decision documents and have been implemented as recommended in the Institutional Control Implementation and Assurance Plan guidance.
- ◆ State Concurrence letter is in the deletion docket.
- ◆ A map clearly delineating the parcels proposed for deletion is included.
- ◆ The no Action ROD or RA Report has been completed.
- ◆ Deletion Docket is in local, regional and electronic repositories.
- ◆ NOID is consistent with templates and supports deletion.

The directive entitled *CERCLA Delegation of Authority 14-17, National Priorities List Determinations, Headquarters Concurrence on Notice of Intent to Delete*, dated September 12, 2008, outlines the Headquarters concurrence process in more detail.

#### **5.4.3.3 Publication of the Notice of Intent to Delete and the Local Notice**

Upon receiving Headquarters concurrence, the Regional Administrator signs the NOID, and a deletion package is prepared in the region and sent to the Headquarters Federal Register Office for publication. The package contents are in Exhibit 5-3.

### **Exhibit 5-3 Federal Register Deletion Package Contents**

- |                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>✓ Original FR Notice</li> <li>✓ Four hard copies</li> <li>✓ <i>Federal Register</i> Typesetting Request – found in Webforms</li> <li>✓ Disk or CD containing electronic version of FR notice in Microsoft Word</li> </ul> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The regional Community Involvement Coordinator (CIC) typically prepares and distributes a local notice regarding the NOID that is published at the same time that the NOID is published in the *Federal Register*. It is recommended that this notice be published in a local newspaper of general circulation. It should announce the Agency's intent to delete the site or portion of the site from the NPL and the public comment period. The local notice should also provide contacts, methods for submission of comments, and locations of the deletion dockets. In addition to the local notice, the RPM or the CIC should notify the appropriate Trustees listed in the Regional Contingency Plans that EPA is planning to delete the site or portion of the site.<sup>17</sup>

#### **5.4.3.4 Receiving Comments and Responsiveness Summary Preparation**

If public comments are received during the comment period that oppose the deletion action (typically referred to as adverse comments), the region typically prepares a responsiveness summary. If comments are received during the comment period that are not considered adverse, it is at the region's discretion to determine what type of response may be appropriate. It is recommended that the responsiveness summary present comments received during the public comment period paired with detailed responses to the comments. A draft of the responsiveness summary is sent to EPA Headquarters for review and comment. Once Headquarters comments are addressed, the region includes a copy of the responsiveness summary, approved by the Regional Administrator, in the deletion dockets. A template for the responsiveness summary is available at the following website: <http://www.epa.gov/superfund/cleanup/postconstruction/deletion.htm>.

#### **5.4.3.5 Notice of Deletion (NOD) Preparation and Publication**

If, after responding to public comments, the deletion action is still appropriate, the region prepares a Notice of Deletion (NOD). Templates for the site deletion and partial deletion NODs are found at the following website <http://www.epa.gov/superfund/cleanup/postconstruction/deletion.htm>. The NOD includes an effective date (the date of publication), the name of a regional contact, supplemental site information and the responsiveness summary, as appropriate. A draft of the Notice of Deletion is sent to EPA Headquarters for review and comment. Once Headquarters comments are addressed, the Notice of Deletion is signed by the Regional Administrator and published in the *Federal Register* (see Exhibit 5-3 for deletion package materials).

#### **5.4.4 Direct Final Rulemaking Process**

The direct final rulemaking process, also called the direct deletion process, is appropriate for sites where deletion is expected to be non-controversial, and EPA does not anticipate adverse comments during the comment period. If adverse comments are anticipated, it is recommended that the two-step final rulemaking process (Section 5.3.3) be utilized to ensure ample opportunity to address any adverse comments that are received.

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<sup>17</sup> For additional information, see *CERCLA Coordination With Natural Resource Trustees* (OSWER 9200.4-22A; July 31, 1997)

Exhibit 5-4 shows the administrative steps in the direct deletion process. The direct deletion process steps generally include the following:

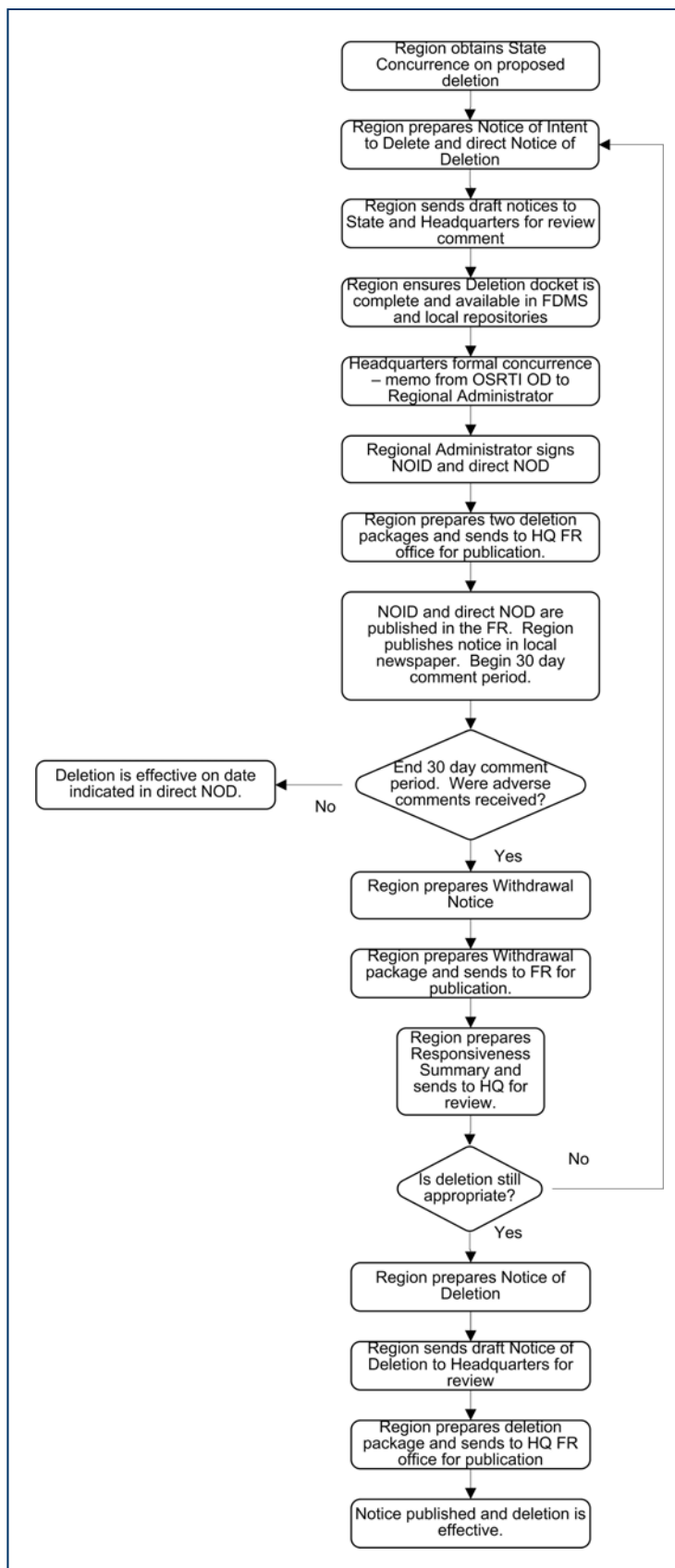
- ◆ Preparing the Notice of Intent to Delete (NOID) and the direct Notice of Deletion (NOD)
- ◆ Obtaining Headquarters concurrence, and
- ◆ Publishing the NOID, direct NOD and Local Notice
- ◆ If adverse comments are received:
  - Preparing and Publishing the *Federal Register* Withdrawal Notice
  - Receiving comments and preparing the Responsiveness Summary
  - Preparing and Publishing the Notice of Deletion

#### 5.4.4.1 Direct Notice of Intent to Delete and Direct Notice of Deletion Preparation

After consultation with the state, the region prepares the NOID and the direct NOD.

The NOID primarily contains EPA regional staff and other contacts. It provides for a minimum 30 day public comment period. The NOID is published in the “Proposed Rules” section of the *Federal Register*. The NOID directs the reader to the NOD, published in the “Rules and Regulations” section of the same *Federal Register*, for deletion criteria and procedures, and site specific information.

#### Exhibit 5-4 Direct Deletion Process



The NOD contains all deletion criteria, explains the direct deletion process, and contains site specific information supporting the deletion. It indicates the effective date of deletion. The effective date is generally 30 days after the end of the minimum 30 day public comment period (i.e., typically 60 days after publication in the *Federal Register*). This allows sufficient time to withdraw the direct final notice of deletion in the event that unexpected adverse comments are received during the comment period.

Templates for the site deletion and partial deletion NOIDs and direct NODs are available at the following website:  
<http://www.epa.gov/superfund/cleanup/postconstruction/deletion.htm>.

The draft NOID and NOD are sent to EPA Headquarters for review and comment.

#### **5.4.4.2 Headquarters Concurrence**

After the region addresses Headquarters comments, the Superfund Office Director completes the “Headquarters Concurrence Checklist”. The OSWER Assistant Administrator must concur before the Regional Administrator signs the NOID and the NOD. The concurrence process is discussed in section 5.3.3.2.

#### **5.4.4.3 Publication of the NOID, Direct NOD and the Local Notice**

Once the Regional Administrator signs the Notice of Intent to Delete and the Notice of Deletion, a deletion package is prepared for each notice and sent to the Headquarters Federal Register Office for publication. The package contents are in Exhibit 5-3.

The CIC should also publish the local notice of the proposed deletion action in the newspaper of local circulation consistent with the two-step deletion process also described in section 5.3.3.3.

If no adverse comments are received during the comment period, the direct final deletion notice will become effective on the deletion date indicated in the direct NOD.

#### **5.4.4.4 Withdrawal Notice Preparation and Publication**

If adverse comments are received during the comment period, the region should issue a timely notice in the *Federal Register* withdrawing the direct final notice of deletion and informing the public that the deletion will not take effect. This withdrawal notice should be published in the *Federal Register* before the effective date of the direct NOD. The template for the Withdrawal Notice is available at the following website:  
<http://www.epa.gov/superfund/cleanup/postconstruction/deletion.htm>.

The Withdrawal Notice is signed by the Regional Administrator. The region prepares a Withdrawal Notice package and sends it to the Headquarters Federal Register Office for publication. The package contents are in Exhibit 5-3.

**5.4.4.5 Receiving Comments and Responsiveness Summary Preparation**

A Responsiveness Summary is prepared consistent with the two-step deletion process (see 5.3.3.4).

**5.4.4.6 Notice of Deletion Preparation and Publication**

If the deletion action is still appropriate, a Notice of Deletion is prepared and published consistent with the two-step deletion process (see 5.3.3.5).