

**REMEDIAL ACTION [REMOVAL ACTION]
[PHASED CONSTRUCTION COMPLETION] REPORT
ANNOTATED OUTLINE
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ACRONYMS

AM	Action Memorandum
ARAR	applicable or relevant and appropriate requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOE	U.S. Department of Energy
PCCR	Phased Construction Completion Report
RAR	Remedial Action Report
RmAR	Removal Action Report
ROD	Record of Decision

This annotated outline was written to be used as a guide for preparation of remedial action reports (RARs), removal action reports (RmARs), and phased construction completion reports (PCCRs) for the U.S. Department of Energy (DOE)–Oak Ridge Operations Environmental Management Program. This annotated outline addresses the preparation of an RAR, RmAR, or PCCR for a particular project; study area; operable unit; watershed; Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) area; or release site, hereinafter referred to as the “site.” This outline has not been approved by the Environmental Protection Agency or the Tennessee Department of Environment and Conservation and may be modified to meet their needs. It should be noted that, where only a single action follows a ROD, a description of the activities in the action will be provided in an RAR. However, where multiple actions are identified in a ROD, a PCCR will be prepared for each such action up to the last action, which will be documented in an RAR.

The annotated outline also may be used as a guide in preparation of RmARs, as indicated by notes in brackets [].

EXECUTIVE SUMMARY

Include an executive summary in all RARs/PCCRs [RmARs]. The executive summary appears on a separate page in the front matter of the document, and should be printed on blue paper.

The executive summary should briefly describe the Record of Decision (ROD) [Action Memorandum (AM)] that guided the activities performed as part of the project including the total cost and duration of the project. Summarize any major deviations (i.e., technical field changes, cost variances, revised assumptions) from the ROD [AM] made during the project. Particular mention should be made of any additional benefits provided, cost savings, or risks abated during implementation. Identify the start and completion dates for the project and any changes made to the schedule. [For a removal action, specify the process for final remedy selection (i.e., final ROD).]

1. INTRODUCTION AND PURPOSE

The introduction section should provide a brief (one- to two-page) summary of the remedial [removal] action. State the purpose of this document, which should be to summarize the activities completed at the site and the results of field construction testing, monitoring, sampling, or other measurements.

2. PROJECT DESCRIPTION

Summarize the operational history of the site and the releases of pollutants of concern. Include a summary of previous investigations, remedial actions, construction phases, or removal actions at the site.

This chapter, one to two paragraphs long, presents a brief description of the physical conditions of the site, including contaminants of concern being remediated under this action. Although brief, the site description is comprehensive enough that a reader unfamiliar with the action is able to understand the project setting and the rationale for the project. Provide one or more figures presenting the location of the

site and the attributes of the remedy. The site description or introduction sections of the ROD [AM] contain brief summaries of the site information that would be adequate for this purpose.

3. PROJECT REQUIREMENTS

Provide a brief summary of the ROD [AM] to acquaint the reviewer with the source of the problems and the components of the preferred remedy. For a remedial action, include a summary of the remedial action objectives (as defined in the ROD). [For a removal action, a summary of the removal action objectives is suggested.] Consider assembling a measurable set of goals to define the project requirements. The completion of these specific goals can be demonstrated by the description and summary of the work completed in Chap. 4, Remediation Activities.

Compliance with applicable or relevant and appropriate requirements (ARARs) (e.g., waste segregation, characterization, and management; protection of on-site wetlands; and prevention or regulation of releases to air or surface water) should be identified as goals and objectives of the action.

4. REMEDIATION ACTIVITIES

In this chapter, briefly describe the following:

- what was encountered at the site, including the appearance and condition of the site, the piping, structures, debris, and water levels present;
- remediation efforts, work activities, and start-up activities completed for the project;
- any unexpected findings during construction, monitoring, or sampling, and any deviations made from the work plan or scope of work prepared for the project;
- how the work completed actually achieved the particular goal or expectation;
- results of verification/confirmation testing, including results of quality control or quality assurance, testing, calibration logs, monitoring data, and other supporting information generated during the project;
- project start and completion dates and identification of any important milestone completion dates or deviations from the original schedule proposed in the ROD [AM];
- all final project costs associated with the remedial [removal] action project in a table with itemized costs (i.e., project management, overhead, and construction) identified; and
- results of the final inspection and certification that the remedy is operational and functional.

Copies of supporting information, required for permanent retention in the post-decision file, should be included as appendices, and may include the following:

- Photographs
- Logbooks

- Field change orders
- Daily construction quality control reports
- Visitor lists
- Laboratory analyses and validation packages
- Field notes and field instrument readings for chemical or personnel monitoring
- Chain-of-custody documents
- Hazardous waste manifests
- Land Disposal Restriction certificates and notification
- Disposal certificates
- As-built drawings

5. DEVIATIONS FROM THE RECORD OF DECISION [ACTION MEMORANDUM]

In this chapter, concisely describe any alterations made to the scope of the project as defined in the ROD [AM]. Specifically, identify any changes made to the design during implementation, and explain the rationale for these changes, including the risk abated (if any), the long-term environmental benefits realized, and the time or level of effort saved. Provide any variance to the estimated schedule associated with this project as forecasted in the ROD [AM].

Any significant differences from the chosen remedy, as defined in the ROD [AM], may require the preparation of a formal Explanation of Significant Differences to justify the modification to the regulators and for inclusion in the Administrative Record. If an ARAR was not met, describe the circumstances and rationale for failure to comply. In addition, if project deviation resulted in field changes that obviated an ARAR, provide an explanation.

6. COSTS

Provide the final project costs with a comparison to the cost information in the ROD [AM]. Provide any variance to the estimated costs associated with this project as forecasted in the ROD [AM]. Specifically, explain the activities associated with this variance and the reason for the variance.

7. WASTE MANAGEMENT AND TRANSPORTATION ACTIVITIES

In this chapter, present a summary of waste materials that were recovered, generated, stored, treated, or disposed of during the performance of the project. Describe waste characterization and segregation activities. For example, include description of types and amounts of wastes or contaminated media generated (e.g., Resource Conservation and Recovery Act, polychlorinated biphenyl, low-level waste, or media containing any waste types). Include a statement that waste management activities were conducted in accordance with ARARs and/or the waste management plan. Describe transportation activities that occurred during the project, including the quantities and disposition of materials removed from the site and transported elsewhere on the Oak Ridge Reservation or off-site, as well as the dates, method of shipment, and the storage and disposal locations. Include copies of supporting information, required for permanent retention in the Administrative Record or in accordance with other applicable records requirements, as an appendix.

Waste management plan information should include:

- quantities of materials excavated and disposed of;
- waste treatment, storage, or disposal photographs;
- waste management logs;
- copies of all waste analyses performed for disposal;
- copies of all certifications of final disposal signed by the responsible disposal facility official;
- data on who sampled, analyzed, transported, and accepted all wastes encountered; and
- copies of waste shipping manifests.

8. OPERATION AND MAINTENANCE PLANS (AS REQUIRED)

In this chapter, identify unexpected occurrences or alterations made to the operation and maintenance plans originally presented in the RAWP [RmAWP], or the operating and maintenance protocol established in the ROD [AM]. Include both a description of the cause of the change and a brief discussion of any impacts on effectiveness or operating reliability of the system.

This document must serve as the defining document for the long-term operation and maintenance of the system. Specifics need to be provided.

9. MONITORING SCHEDULE AND/OR EXPECTATIONS

Present the need for any post-action monitoring and a description of that monitoring. If monitoring requirements are extensive, place in an appendix as a Monitoring Plan.

Also provide information and recommendations to satisfy the 5-year (or less than 5-year) CERCLA monitoring and review requirements. As stated in Chap. 5, the information should focus on changes from the requirements presented in the RAWP [RmAWP].

Summarize the impacts of any unexpected occurrences or transients observed during startup or early operations (e.g., the recovery of free or nonaqueous phase product during groundwater recovery where none was expected), along with the changes recommended with respect to the monitoring schedule and parameters. Identify interim monitoring practices or programs to address the observed conditions at the site.

10. REFERENCES

Include a list of references used to develop the RAR [RmAR] in the format shown here:

42 U.S.C. § 7401 et seq., Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986.

40 *CFR* Pt. 300, National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

U.S. Environmental Protection Agency (EPA) 1995. *Remedial Design/Remedial Action Handbook*, Publication 9355.0-4B, Washington, D.C.