

**REMEDIAL DESIGN WORK PLAN  
ANNOTATED OUTLINE  
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## ACRONYMS

ARAR	applicable or relevant and appropriate requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
FFA	Federal Facility Agreement
LUCIP	Land Use Control Implementation Plan
RAWP	Remedial Action Work Plan
RD	remedial design
RDR	Remedial Design Report
RDWP	Remedial Design Work Plan
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act of 1986
TDEC	Tennessee Department of Environment and Conservation

This annotated outline was written to be used as a guide for preparation of Remedial Design Work Plans (RDWPs) for the U.S. Department of Energy (DOE), Oak Ridge Operations Environmental Management program. This document addresses preparation of an RDWP for a particular project, study area, or operable unit; Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) area; or release site, hereinafter referred to as the “site” and does not address the RDWPs to be written for a watershed Record of Decision (ROD). This outline has not been approved by the Environmental Protection Agency (EPA) or the Tennessee Department of Environment and Conservation (TDEC) and may be modified to meet their needs.

## **EXECUTIVE SUMMARY**

Include an executive summary in all RDWPs. The executive summary should appear on a separate page in the front matter of the document and be printed on blue paper.

The executive summary summarizes the remediation project and associated remedial design (RD) activities so that managers with DOE, EPA, and TDEC will have the essential information required to understand the scope of work addressed in the document. It should include a brief description of the site and the regulatory history of the project. Note in this section if the Land Use Control Implementation Plan (LUCIP) has been appended to this document.

## **1. INTRODUCTION AND PURPOSE**

This chapter provides a brief summary of the RD process and summarizes the purpose and scope for the project. The introduction identifies pertinent documents such as the ROD and the Remedial Design Report (RDR)/Remedial Action Work Plan (RAWP) but only refers the reader to those documents.

The purpose and scope of the project is identified in brief statements and includes the location of the project, the nature of the work to be performed, and a brief summary of the major work tasks. Any special project-applicable or relevant and appropriate requirements (ARARs) or project-level plans (other than the standard monitoring and performance plans required for CERCLA projects on the Oak Ridge Reservation) should be noted.

The purpose of the design report is to document the components to be designed and whether the design package is to include detailed drawings and specifications for competitive procurement of a construction contractor or to include a set of performance specifications.

## **2. PROJECT ORGANIZATION**

Provide a list of the names, titles, telephone numbers, and organization affiliations of key personnel associated with this project. Provide an organization chart showing relationships of key personnel and organizations. Include brief descriptions of individual roles, responsibilities, and authorities. Key personnel may include the following: subcontractor technical representative, project manager, lead

discipline design engineer, quality assurance specialist, computer-aided design and drafting designer, site health and safety officer, and waste management specialist.

### **3. PROJECT DESCRIPTION**

Summarize the operational history of the site and the releases or pollutants of concern, referencing support sections of the Remedial Investigation, Feasibility Study, or ROD. Include a summary of previous investigations, remedial actions, or removal actions at the site.

Summarize the remedial action objectives from the ROD (e.g., the specific remediation goals and performance criteria for the remedy components).

Summarize the remedy components to be designed for this design package. Provide a description of the remedy, preliminary layout, preliminary process diagrams, and the general operation and maintenance or long-term monitoring requirements.

List the design work tasks to be completed, the specific work products or deliverables, and design interfaces. Provide a preliminary list of drawings and list of specification sections.

### **4. REMEDIAL DESIGN SCHEDULE**

A summary level (bar chart) schedule is used to outline the proposed schedule for the completion of all RD activities, including Federal Facility Agreement (FFA) Appendix E milestones. At a minimum, the following items must be presented in the schedule:

- Date of ROD issuance;
- Start and end dates for project integration, construction and post-construction monitoring (if applicable) (e.g., 30%, 60%, and 90% design packages);
- Start and end dates for RD and procurement activities, separated into phases consistent with project plan;
- Due dates and review periods for regulatory deliverables including the RDR/RAWP, and Remedial Action Report. Note that these milestones are subject to change via the FFA negotiation process;
- Informal regulator input opportunities;
- Dates for regulatory meetings and review;
- Schedule for preparation of supporting RD work plans (if required);
- Schedule for performing field sampling in the RD (if required);

- Projected start and end dates for remedial actions; and
- Schedule for design submittals and review periods.

Since both the RDWP and the RDR/RAWP are identified in the FFA as primary documents, the established review cycle protocol for these documents must be reflected in this schedule. To expedite the approval of the Draft 2 (D2) RDWP, the project team should meet with the FFA representatives before submittal of the Draft 0 (D0) RDWP and establish an agreement on the design objectives, ARARs, and schedule.

## **5. DESIGN CRITERIA, CODES, AND STANDARDS**

Identify the specific design criteria; industry codes and standards; and local, state, and federal regulatory requirements that must be complied with in the design. Discuss any permits, access, easements, or rights-of-way required. Identify any special technical problems, health and safety requirements, or design data required.

Identify the design procedures required to be followed by the design team, including interdisciplinary reviews, engineering calculations, drawings, and specifications.

## **6. APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS**

Briefly state the ARARs associated with the project and identify the mechanism or means of compliance. The FFA agencies are concerned that each ARAR is incorporated into the RD in an appropriate and effective manner as design work progresses. A summary table of ARARs crosswalked to the means by which each requirement will be met should be provided in an Appendix.

If waivers from or alterations to any ARARs are contemplated during the planning or preparation of the RD, they must be negotiated. DOE is responsible for ensuring that the conditions of the waivers are met.

Note: Under CERCLA 121(e), no permits are required for work performed entirely on-site; the requirements call for compliance with the "substantive" requirements of permits (e.g., discharge meets effluent limits but no NPDES permit required).

## **7. REFERENCES**

The following are general references which may be included in a RDWP.

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.