

CHAPTER 3 REPORTING CRITERIA

3-1. Preparation. The party most familiar with the RD, the construction efforts, and the associated project costs, should prepare the RA report. This familiarity will provide the best opportunity to discuss the successes, difficulties, and lessons learned during the project. The EPA RPM and contractor for the RA (e.g., PRP, U.S. Army Corps of Engineers, State or EPA contractor) are typically the parties most familiar with the RA. While the EPA RPM can and sometimes does prepare the RA report, the contractor is usually tasked with that effort.

3-2. Timing. For most OUs, the RA report should be prepared and submitted to the EPA region (Region) or appropriate regulatory authority for approval within 90 days after the contract final inspection of the completed construction.¹ At OUs where LTRA is being performed, an interim RA report should be prepared once the remedy is constructed (within 90 days after the final inspection). The interim RA report must then be amended and finalized once the RA cleanup goals specified in the ROD are achieved. An interim RA report is required because of the extended period of time that may elapse between the completion of construction and achievement of cleanup goals. Where actual costs are not known at the time of report preparation (e.g., pending claims, change orders), estimated costs may be used (Chapter 6).

3-3. Distribution.

a. Once the Region or appropriate regulatory authority has approved the RA report, either interim or final, depending on the remedy, the original report is retained in the Regional site file, and an approved copy should be returned to the report preparer. Upon completion of the RA report, the Region or appropriate regulatory authority is required to notify the appropriate Natural Resource Trustees listed in the Regional Contingency Plans regarding the completion of the RA. The Region or appropriate regulatory authority will provide a copy of the approved RA report to the Trustees within one week of the report's approval.

b. For projects in which the USACE is involved, a copy of the RA report shall be furnished to HQ USACE and the USACE HTRW Center of Expertise (CX). Mailing addresses are provided in Appendix D.

3-4. Approval.

a. For a given site or OU, the RA is considered to be complete once the designated EPA Regional official has approved the interim or final RA report in writing. An interim RA report is completed only for RAs that include groundwater or surface water restoration remedies (including monitored natural attenuation). Interim reports are used because of the extended period of time that typically transpires between the completion of the treatment system construction (or the ROD signature, in the case of monitored natural attenuation) and the

¹ For PRP-lead sites, the RA report is due within 90 days after the official determination has been made that the remediation objectives/cleanup goals have been achieved.

achievement of the cleanup goals. A final RA report is complete once the remediation objectives/cleanup goals are achieved.

b. Criteria required for EPA approval of an interim RA report include:

(1) The remedy to reduce contaminant concentrations and achieve the cleanup goals, including groundwater or surface water restoration, with active treatment or natural attenuation, is installed;

(2) For active treatment, the construction of the treatment system is complete and the system is operating as intended (i.e., the remedy is determined to be O&F at Fund-financed sites);

(3) For monitored natural attenuation, any necessary RA components, such as monitoring wells, are constructed;

(4) If the OU addresses media other than groundwater, construction activities are complete and RA objectives specified in the ROD are achieved for these components;

(5) A final inspection is conducted;

(6) Institutional controls, if applicable, are in place; and

(7) The interim RA report includes the information described in Chapter 4 of this guide.

c. Criteria required for the approval of a final RA report include:

(1) All construction activities are complete, including site restoration and demobilization;

(2) All RA objectives specified in the ROD, including those for groundwater and surface water (if applicable), are achieved;

(3) A final inspection is conducted;

(4) Institutional or engineering controls, such as containment (if applicable), are in place (i.e., the remedy is determined to be O&F at a Fund-financed site); and

(5) The final RA report includes the information described in Chapter 4 of this guide.

d. When an interim RA report has already been prepared, the interim RA report may simply be amended to create the final RA report. The amendment would add information on activities that occurred after the interim RA report was completed, including a final actual cost breakdown.

3-5. Review. Prior to submittal of the RA report, it should be reviewed to ensure that it contains the necessary information. Exhibit 3-1 provides a checklist that summarizes the

recommended content of the RA report. Each component listed in the checklist is further described in Chapter 4, including examples.

Exhibit 3-1 Remedial Action Report Checklist

SECTION	COMPONENT
I. Introduction	<ul style="list-style-type: none"> ◆ Include a brief description of the location, size, environmental setting, and operational history of the site. ◆ Describe the operations and waste management practices that contributed to contamination of the site. ◆ Describe the regulatory and enforcement history of the site. ◆ Describe the major findings and results of site investigation activities. ◆ Describe prior removal and remedial activities at the site. ◆ Describe the OUs designated at the site and introduce the OU for which the RA report applies.
II. Operable Unit Background	<ul style="list-style-type: none"> ◆ Summarize requirements specified in the ROD for the OU. Include information on the remediation objectives/cleanup goals, institutional controls, monitoring requirements, operation and maintenance requirements, and other parameters applicable to the design, construction, operation, and performance of the RA. ◆ Provide additional information regarding the basis for determining the remediation objectives/cleanup goals for the OU, including information on planned future land use. ◆ Summarize the remedial design, including any significant regulatory or technical considerations or events occurring during the design. ◆ Identify and briefly discuss any ROD amendments, explanation of significant differences, or technical impracticability waivers.
III. Construction Activities	<ul style="list-style-type: none"> ◆ Provide a step-by-step description of the major 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). ◆ If a treatment technology was used, refer to Appendix A for site conditions, matrix characteristics and/or operating parameters of the system.

Exhibit 3-1, cont.
Remedial Action Report Checklist

SECTION	COMPONENT
IV. Chronology of Events	<ul style="list-style-type: none"> ◆ Provide a tabular summary that lists the major events for the OU, and associated dates of those events, starting with the ROD signature. ◆ Include significant milestones and dates, such as, remedial design submittal and approval; ROD amendments; 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-RA operation & maintenance activities. ◆ If an operational and functional (O&F) period applies, indicate the start and end dates of the O&F period. ◆ If preparing an interim RA report, indicate when cleanup goals are projected to be achieved for the ground or surface water restoration.
V. Performance Standards and Construction Quality Control	<ul style="list-style-type: none"> ◆ Describe the overall performance of the technology in terms of comparison to remediation objectives/cleanup goals. ◆ 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. ◆ 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. ◆ 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). ◆ For PRP-funded projects, discuss the government's oversight activities and results with regard to analytical data quality.
VI. Final Inspection and Certifications	<ul style="list-style-type: none"> ◆ Report the results of the various RA construction inspections, and identify noted deficiencies. ◆ Briefly describe adherence to health and safety requirements. Explain any substantial problems or deviations. ◆ If implemented, summarize details of institutional controls (e.g., type, who will maintain, who will enforce). ◆ For PRP-lead, describe results of precertification inspection. ◆ If applicable, certify that the remedy is operational and functional, along with the date this was achieved.

Exhibit 3-1, cont.
Remedial Action Report Checklist

SECTION	COMPONENT
VII. Operation & Maintenance Activities	<ul style="list-style-type: none"> ◆ Describe the general activities for post-construction operation and maintenance, such as monitoring, site maintenance, and closure activities. ◆ Identify potential problems or concerns with such activities. ◆ Note results of any optimization efforts during O&M. ◆ If preparing an interim RA report, describe the future groundwater or surface water restoration activities to meet cleanup goals.
VIII. Summary of Project Costs	<ul style="list-style-type: none"> ◆ Present the total costs incurred for the remedial action. Identify costs as capital, O&M, or periodic costs, either RA or post-RA, as applicable (e.g., RA capital costs, RA operating costs, post-RA O&M costs). ◆ The reporting of project costs is required for government-financed projects and should be provided whenever possible for PRP-lead projects. If the project is PRP-lead, a summary of government oversight costs for the RD and RA should be included. ◆ Indicate the year(s) in which costs were incurred. ◆ If actual costs are not available, use estimated costs. ◆ Escalate costs estimated in the ROD to the same dollar basis year and compare the total project costs, actual or estimated, to the ROD estimate. If outside the range of -30 to +50 percent, explain the differences. Provide the index or rate used for the escalation.
IX. Observations and Lessons Learned	<ul style="list-style-type: none"> ◆ Provide site-specific observations and lessons learned from the project, highlighting successes and problems encountered and how resolved.
X. Operable Unit Contact Information	<ul style="list-style-type: none"> ◆ Provide contact information (names, addresses, phone numbers, and contract/reference data) for the major design and remediation contractors and subcontractors, oversight contractors, and the respective remedial project manager (RPM) and project managers for the government and the PRPs, as applicable.
XI. References	<ul style="list-style-type: none"> ◆ Provide a list of references used to develop the RA report (e.g., ROD, RD documents, RA correspondence, as-built drawings).
Appendix A. Cost and Performance Factors	<ul style="list-style-type: none"> ◆ List values and measurement procedures for factors affecting cost and performance of treatment technologies used in the remedy, including site conditions, matrix characteristics, and operating parameters.
Appendix B. Project Costs	<ul style="list-style-type: none"> ◆ Provide a breakdown of the actual RA capital, operating, and/or periodic costs. ◆ Provide a breakdown of the future projected O&M and/or periodic costs.