

DTSC's Remedial Investigation Report Quick Reference Guide

The Remedial Investigation (RI) Report documents the findings of the implementation of the RI Work Plan in characterizing the nature and extent of contamination at a site, assessing the resulting risk to human health and the environment, and evaluating the relative effectiveness of cleanup alternatives. The objective of the RI Report is to present specific information to support risk management decisions on whether a cleanup is required for protection of public health and/or the environment.

RI Report Content

- **Executive Summary** – Help the reader to quickly understand project objectives, scope of work, and all the main findings.
- **Introduction** – Summarize property identifiers, location and setting, project contacts, and site history and use.
- **Conceptual Site Model (CSM)** – Illustrate contaminant release, fate and transport, exposure pathways, and receptors.
- **Nature and Extent of Contamination** – Summarize scope of environmental investigations completed, site geology, and hydrogeology.
- **Sampling Analytical Results** – Evaluate analytical data quality, detail likely fate and transport, relate field and lab data with CSM.
- **Summary and Conclusions** – Use technical diagrams to illustrate and summarize updated CSM; discuss completeness of RI for feasibility analysis of cleanup alternatives or interim actions; present objectives and recommendations for next phase of work.

RI Report Appendices

Include as applicable:

- Exploratory logs (borehole/test pit, etc.)
- Laboratory analytical data and chain of custody
- Limitations that apply to the work should be summarized, including references to the originally proposed Work Plan with project objectives and scope of work
- Sampling and Analysis Plan (SAP)/Quality Assurance Project Plan (QAPP), if not previously submitted with a Work Plan
- Details of statistical methods

RI Report Figures

Figures should include North arrow, scale, legend, measurement units, and annotated clarification as necessary.

- **Vicinity Map** – Show property in relation to surrounding region. Include surface topography, natural areas, surrounding land uses, location of groundwater supply, and monitoring wells within a one-mile radius.
- **Site Maps** – include relevant information such as boundaries; buildings/facilities; historical features; underground storage tanks; locations of hazardous substance treatment, storage, or disposal; previous cleanup; existing well/sampling locations. Show current and applicable historical chemical concentrations and extent of contamination. Illustrate hydrogeological flow, show sample location/depth, etc.
- **Cross section(s)** – Show actual/inferred site-specific geology (and hydrogeology). Cross-section transects should be shown on a plan view map. Include applicable information from boring logs; show wells, screened intervals, water levels, and extent and concentration of contamination for all site media, if applicable.
- **Conceptual Site Model (CSM)** – Show original CSM and any changes to CSM. The CSM figure(s) should contain the following information: (1) site contaminants and sources; (2) the nature and extent of contamination; (3) fate and transport processes; (4) exposure pathways; and (5) potential and/or actual receptors.

Remedial Investigation Report Quick Reference Guide

RI Report Tables

- Site data – Include historical and current analytical and field-measured data. Tables should include units, sample name, dates/time of sample collection and lab analysis, sample depth, groundwater elevation, analytical method, analyte, and applicable cleanup levels. Use multiple tables if necessary to break data out by media type.
- Include cleanup levels with any contaminant exceedances clearly indicated using bold font or shading.
- Nondetectable levels should be noted as “U” with the numerical laboratory reporting limit (RL) provided, rather than “ND.”
- Sampling information/laboratory methods – include sampling methods, analytical methods, reporting limits, and any special sampling protocols.
- Cleanup Levels – When establishing cleanup levels, include potential and final Applicable or Relevant and Appropriate Requirements (ARARs) and screening levels for all applicable media.

For detailed information, be sure to refer to:

- [U.S. EPA guidance document for conducting a Remedial Investigation/ Feasibility Study \(RI/FS\) under CERCLA](#)
RI/FS is defined in Title 40 Code of federal Regulations Chapter I Subchapter J Part 300 Subpart E Section 300.430
- [Triad: Systematic Planning, Dynamic Work Strategies, and Real-time Measurement](#)
- [DTSC's Proven Technologies and Remedies Guidance](#)

For more information, contact
Fernando.Amador@dtsc.ca.gov