

A Risk Management Plan encompasses all activities necessary to manage a site's risk to human health, public welfare and the environment so that acceptable risk levels are not exceeded under current or reasonably anticipated future land use conditions.

12.1 NEED FOR A RISK MANAGEMENT PLAN

A site-specific Risk Management Plan, approved by the department, is required at a site under any one of the following conditions:

- The total (sum of all exposure pathways) carcinogenic risk for any COC exceeds 1×10^{-5} ,
- The hazard index (sum of all exposure pathways) for any COC exceeds 1.0 (or, if appropriate, the hazard index for an individual organ, system or mode of action),
- The cumulative site-wide carcinogenic risk (sum of COCs and all exposure pathways) exceeds 1×10^{-4} ,
- The cumulative site-wide hazard index (sum of COCs and all exposure pathways) for individual adverse health effect exceeds 1.0 (or, if appropriate, the hazard index for individual organ, system or mode of action),
- Although neither the carcinogenic or non-carcinogenic risk for any COC nor the cumulative site-wide risk exceeds acceptable levels, the risk assessment was based on site-specific assumptions that require a Risk Management Plan,
- Although neither the carcinogenic nor non-carcinogenic risk for any COC or site-wide risk exceeds acceptable levels, the groundwater plume is expanding, or
- Ecological risk does not meet the acceptable criteria.

The Risk Management Plan ensures that:

- Site conditions are protective of human health, public welfare and the environment based on achieving acceptable risk levels at any one of the three tiers discussed in Sections 8 through 10.
- Acceptable ecological protection is based on issues identified in the Ecological Risk Assessment (Section 6.11).
- Assumptions made in the estimation of risk and development of cleanup levels are not violated in the future, and
- The groundwater plume is stable or decreasing.

Successful implementation of the Risk Management Plan will result in a Letter of Completion from the department.

The following subsections provide general information on the preparation of the Risk Management Plan.

12.2 RISK MANAGEMENT PLAN

After it is determined that a Risk Management Plan is necessary for a site, the plan should include:

- Reasons why a Risk Management Plan is being prepared and the specific objectives of the plan. An example of a specific objective would be “remediation of soil to achieve specific risk-based concentrations for specific COCs.”
- Dated reference to the approved Risk Assessment Report, particularly its discussion of pathways and receptors.
- Application of technologies to reduce mass, concentration, and/or mobility of COCs to meet the risk-based target levels determined for the site or specific engineering activities. Examples of technologies or remediation activities include soil excavation and off-site disposal, pump and treat, vapor extraction, enhanced in-situ attenuation, and monitored natural attenuation.
- Data that will be collected and quality control/quality assurance procedures for collection, documentation, analysis and reporting during the implementation of the Risk Management Plan. Examples of data that may be collected include confirmatory soil or groundwater sampling data to demonstrate the effectiveness of the remedial measures.
- Details of how and when data will be evaluated and presented to the department. Examples include trend maps, concentration contours, concentration vs. distance plots, calculations related to mass removal rates, or application of specific statistical techniques.
- Application of activity and use limitations (AULs) to eliminate certain pathways of exposure and ensure that the pathways remain incomplete under current and reasonably anticipated future uses. Examples include conditions imposed on the property that prevent the installation of wells, thus eliminating the groundwater future use pathway, or prohibition of future residential land use.
- If needed, monitoring to demonstrate plume stability or the effectiveness of natural attenuation.
- A long-term stewardship plan that ensures that the AULs are effective and maintained, that site conditions do not change to result in unacceptable risk, and that site information remains available to interested parties.
- A schedule for implementation of the plan. If the duration of the planned activities exceeds a few months, a detailed project time line must be developed. It must include all major milestones and all deliverables to the department.
- Criteria that will be used to demonstrate that the Risk Management Plan has been successfully completed.
- As appropriate, contingency plans if the final remedy fails to meet the objectives of the Risk Management Plan in a timely manner.

The department will approve the Risk Management Plan as submitted or provide comments. If comments are made, the department will work with the Remediating Party to revise the Risk Management Plan and to resubmit it for approval. Upon receipt of approval, the remediating party should begin implementing the plan.

However, as noted earlier in this guidance, both RCRA and CERCLA operate under specific public notification, review, comment and response requirements that must be met before those authorities can make a final decision to approve a Risk Management Plan.

12.3 COMPLETION OF RISK MANAGEMENT ACTIVITIES

Upon successful implementation of the approved Risk Management Plan, the remediating party must submit a Completion of the Risk Management Plan Report to the department for approval that includes:

1. Documentation of completion of all risk management activities, and
2. If applicable, a request to plug and abandon all nonessential monitoring wells related to the environmental activities at the site.

Again, both RCRA and CERCLA may require interim or additional reports once the final remedy is operational but before remediation performance standards have been met.

12.4 PROCEDURE FOR LETTER OF COMPLETION

After the Risk Management Plan has been successfully implemented, the remediating party may request a Letter of Completion from the department. The department will issue a letter if the site satisfies all requirements of the approved Risk Management Plan. The letter would state that, based on the information submitted, the concentrations of COCs on or adjacent to the site do not pose an unacceptable level of risk to human health, public welfare and the environment for the current and reasonably anticipated future uses and provided that all AULs remain in place. Section 11 contains more detailed guidance on the Letter of Completion.