



Office of Environment, Safety & Health
Office of Environmental Management

Expediting Cleanup through Contingent Removal Actions



This guidance is primarily intended for personnel with line management responsibility for Department of Energy (DOE) environmental restoration projects conducted pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). It provides a concise description of the components and application of contingent removal actions to streamline remediation of recurrent site problems. "Contingent Removal" is a DOE-specific term consistent with the removal action process as defined in the National Contingency Plan (NCP), 40 CFR 300.

Although a number of DOE's waste sites are sufficiently complex and unique to warrant extensive pre-response characterization, many do not. In fact, the time and costs to evaluate waste sites and document individual response actions can be reduced significantly by focusing on the similarities between sites and constructing a pre-determined set of responses based on those similarities. This concept of utilizing similarities between sites to streamline remedial planning and implementation is embodied in EPA's presumptive remedy policy (OSWER Fact Sheet 9355.0-47FS, September 1993, EPA 540-F-93-047) and serves as the basis for implementing generic approaches.¹

Analogous to this concept of pre-determined responses, the contingent removal action approach is designed to address anticipated recurrent site problems more efficiently and consistently. Contingent removal actions are intended to streamline the remediation process by establishing a standardized, pre-approved response strategy (e.g., excavate and dispose off-site in a permitted cell) for a site-specifically defined condition (e.g., thorium hot spots above x pCi/g in the top y inches of soil), thus reducing approval and documentation delays and expediting response.

Developing Contingent Removal Actions

Close coordination and teamwork between DOE, EPA, and State RPMs is essential to the development of a contingent removal approach. This "core" team, with assistance from the extended project team (e.g., support contractors and technical experts assisting in the scoping and implementation of the project) must reach consensus on:

- Appropriate site problems for contingent removals
- Appropriate criteria to trigger removals
- Removal implementation procedures
- Strategies for integrating contingent removals into the overall site remediation strategy

Without this common understanding and consensus, response times will be lengthened, negating potential gains from the up-front planning which characterizes this approach.

This approach is potentially applicable to a range of problem types (e.g., soil hot spots, buried drums/tanks) varying in potential scope and scale of cleanup (i.e., volumes of materials addressed). However, as with any innovative approach, the core team may want to limit initial application to problem types where response action logistics currently fit within existing constraints (e.g., necessary equipment and personnel are available on-site). As experience is gained, broader application involving additional resources can be pursued (i.e., placement of new contracts).

Step One: Identify Appropriate Site Problems for Contingent Removals

The core team should use their site conceptual model developed during the scoping phase to identify specific types of problems amenable to a contingent removal action approach. Factors to consider when evaluating candidates for contingent removals are discussed below:

- **Frequency of problem type:** The greatest potential savings from this approach will be directly correlated with the frequency in which conditions triggering the agreed to response are encountered (i.e., economies of scale increase each time a problem is more efficiently addressed through a contingent removal).
- **Cost of taking action:** Any fiscal constraints on the scope of a contingent removal should be identified (e.g., conducting a removal(s) will not exceed \$X00,000 within the fiscal year or impede progress on other projects currently scheduled or ongoing and funded under the existing baseline).
- **Health and safety issues:** Any health and safety concerns with implementing a pre-approved response strategy to ensure protection for workers must be identified and resolved (e.g., necessary H&S personnel are available and an adequate H&S plan is currently in place to address the problem).
- **Availability of technology and waste management capability:** Necessary equipment, waste management facilities, and

¹ Generic approaches are facility-specific remedial strategies which use the knowledge gained from previous experience at waste sites within a facility to serve as the basis and justification for subsequent responses at similar sites in that facility.

regulatory approvals (e.g., permits) must be available to provide a reasonable assurance of success (e.g., workers trained in emergency response are on-site and compliant storage capacity is available for approximately X,000 yd³ of material).

Step Two: Establish Criteria For Triggering Action

Once the core team agrees on which types of site problems will be addressed through contingent removals, facility specific criteria to trigger action (and also delineate the boundaries of the response) must be established. To ensure resources are being expended on substantive cleanup, *specified concentration or dose levels to trigger response should be set where there is a clear potential for risk*. Setting trigger levels at concentrations for which an action is clearly needed also allows for a more rapid response, i.e., sites with concentrations below the trigger levels can then be assessed on a separate (slower) track to determine whether a no-further-action finding is appropriate, or whether additional data are needed to determine if a response is required.

[NOTE: Establishing facility-specific trigger levels as part of a contingent removal approach does not limit in any way the agencies' authority to initiate a removal action whenever they determine it is appropriate to do so (e.g., threat of hazardous substance release, threat of fire and / or explosion, etc).]

Potential sources for trigger levels include: 1) regulatory standards, 2) risk-based methodologies, equations, or guidelines, or 3) exposure levels exceeding health and safety requirements in DOE Orders². Use of trigger levels is conceptually consistent with the use of action levels³ in the RCRA corrective action program.

Step Three: Establish Removal/Implementation Procedures

Once the core team designates a type of site problem as a candidate for a contingent removal action (i.e., trigger criteria have been met), specific implementation procedures must be developed. Decision rules (see Highlight 1) are useful for linking the site problem, the criteria used to trigger response, and the implementing procedures to effectively communicate the basis for action to the public and the remedial contractor performing the work. Factors to consider when establishing implementation procedures include:

- **Responsibilities and authorities:** The core team needs to agree on which organizations will conduct the action to expedite field mobilization and avoid delays.

- **Contracting mechanisms:** Proposed contracting mechanisms to conduct the removals should be reviewed to avoid unforeseen delays and accelerate the start of field activities (e.g., no procurement is required due to available on-site equipment and labor force).
- **Monitoring strategy for terminating a removal:** A monitoring plan indicating when the action may stop (e.g., all soils above x pCi/g have been removed) or when scope limits have been reached should be established before actual excavation begins.
- **Generic design and technical procedures:** Use of existing procedures, plans, and design documentation (e.g., protocols for using radiological detection instruments) should be emphasized to streamline design and conserve resources.

HIGHLIGHT 1: Example Decision Rules to Communicate Facility-Specific Basis for Action

If thorium is found above x pCi/g in the top y inches of soil in any 100 ft² area measured using the Soil Screening Facility Methodology, and the total estimated volume is less than 100 yd³, then that volume will be excavated using onsite personnel and equipment, and stored in disposal boxes until offsite waste acceptance criteria can be verified.

If concentrations of TCE in any off-site monitoring well exceed twice the maximum contaminant level in two consecutive quarterly samples, then alternative drinking water will be supplied to local residents using potable groundwater supplies within an x mile radius of the monitoring well.

Step Four: Integrate Contingent Removal Actions Into Overall Site Remediation Strategy

The objective of an effective site remediation strategy is to determine which site problems are best addressed through either removal or remedial action and optimize the sequence and timing of those actions. Therefore, once a contingent removal action approach has been proposed and the public has had an opportunity to comment, it needs to be integrated into the overall site remediation strategy (e.g., incorporated into the existing Federal Facility Agreement). Thus, each time a situation is encountered which meets the trigger criteria, a response can be implemented immediately. Each time a response is initiated, the agencies should prepare an information brief to communicate to the public what remediation has been (or is being) conducted to keep them informed of the progress being made.

² DOE Orders are internally established requirements for which full compliance is mandated for all affected activities, including CERCLA remedial and removal actions.

³ Corrective action for releases from solid waste management units at hazardous waste management facilities; Proposed rule 61 FR 19432, May 1, 1996.