

Remedial Response Program Cleanup Process

Background

Prior to the early 1960's, when Rachel Carson published the book *Silent Spring*, people and businesses were unaware of how dumping chemical wastes would affect public health and the environment. On thousands of properties where careless disposal practices were intensive or continuous, the result was uncontrolled releases to the environment that may have become abandoned hazardous waste sites and landfills. Following the environmental emergency in the late 1970's at the Love Canal area, concerned citizens led Congress to establish the [Superfund](#) program in 1980 to identify, investigate, and clean up these sites. U.S. EPA administers the Superfund program in cooperation with individual states and tribal governments. In Ohio, the Division of Environmental Response and Revitalization (DERR), Remedial Response Program was created in the late 1980's to address such sites.

Ohio's process to clean up sites is consistent with the process outlined in the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR, Part 300), more commonly called the National Contingency Plan ([NCP](#)). The NCP is the federal government's blueprint for responding to both spills and hazardous substance releases.

Site Discovery and Assessment

Ohio's remedial response cleanup process begins with site discovery or notification of possible releases of hazardous substances to the environment. Sites are discovered by citizens and government agencies, including Ohio EPA and U.S. EPA. Potential sites are assessed to determine if a contaminant release has occurred at or from a property. The preliminary assessment includes an evaluation of readily available information to quickly identify the level of risk posed to public health and safety and the environment. This assessment helps identify whether additional investigation and/or an immediate response is warranted. The second phase of site assessment involves physical investigation. This investigation includes collecting and analyzing environmental and waste samples to determine what hazardous substances are present and whether they are in the soil, ground water, surface water bodies or sediments, or in the air. This assessment serves as a cursory evaluation of contaminant migration and exposure pathways (e.g., air, ground water, surface water, soil).

The relative potential of each new site to pose a threat to public health and safety and the environment is evaluated in comparison with the threats posed by other existing sources of contamination and a decision is made as to whether further investigation and cleanup are necessary. A site may be addressed through DERR's Voluntary Action Program ([VAP](#)) if a volunteer completes work at an eligible property in accordance with the pertinent rules before Ohio EPA's Director sends an enforcement letter. Sites that have been prioritized for action and have not received a Covenant Not To Sue pursuant to VAP rules are typically addressed through the remedial response cleanup process. U.S. EPA also has the option of pursuing cleanup at sites.

Invitation to Negotiate Directors Final Findings and Orders

Negotiation of Director's Final Findings and Orders (orders) is initiated when the Director sends a letter identifying the threat caused by contaminant releases and inviting potentially responsible parties to negotiate orders to investigate and clean up these sites. The goal of initiating negotiations is to ensure a site clean up. Typically, clean up orders will require 1) an investigation of the extent of contamination, the rate of migration of contaminants, the risks posed by the contamination, and an evaluation of remedial action alternatives; 2) design of the selected remedial alternative, construction and operation and maintenance of the system; 3) both (1) and (2); or 4) implementation of an interim action that will address immediate threats (e.g., sites requiring, source removal, source containment, or elimination of direct exposure pathways). It is possible that an investigation order may include an interim action to address known threats of an imminent nature.

VAP Sufficient Evidence Demonstration

Ohio's Voluntary Action Program is privatized and does not require that a volunteer notify Ohio EPA of its participation until the No Further Action letter has been completed by a certified professional and a decision has been made by the volunteer about whether to pursue a covenant not to sue from the Director. Therefore, Ohio EPA may issue an enforcement letter for a site that is participating in the VAP. If a volunteer is already addressing a site pursuant to the VAP rules, a response to the Director's invitation (*i.e.*, enforcement letter) to negotiate an order may be a demonstration that they are already conducting investigation and cleanup activities under the VAP. The demonstration must meet sufficient evidence rule requirements that the volunteer is addressing the threat(s) identified in the Director's invitation. The Director makes the final determination as to whether a party has satisfactorily demonstrated that they were already in the VAP or not. Failure to make satisfactory progress in the VAP may result in a revocation of VAP eligibility and re-initiation of enforcement negotiations.

Remedial Investigation/Feasibility Study

The Director typically invites PRPs to negotiate orders for remedial investigation/feasibility study (RI/FS) first. The purpose of the remedial investigation is to characterize the nature and extent of any releases or potential releases of contaminants at or from a site, assess potential risks to public health and safety and the environment posed by such releases, and collect the information needed to support the development and evaluation of cleanup alternatives. The purpose of the feasibility study is to develop and evaluate the cleanup alternatives and to provide the information necessary to select a formal site remedy. Portions of the remedial investigation and feasibility study are conducted concurrently to allow the information gathered during the remedial investigation to influence the development of cleanup alternatives, which in turn affects data needs and the scope of the remedial investigation.

Interim Actions

The Director also invites negotiation of orders for interim actions, which may be completed instead of or in association with orders for investigation and/or cleanup. Interim actions are focused, accelerated response actions designed to prevent, minimize, or mitigate a release or threatened release which, if not addressed, would likely result in or continue to present a substantial threat to public health and safety and the environment. They are generally taken in response to conditions which warrant a rapid response (e.g., a contaminated ground water plume threatening a municipal wellfield). Therefore, interim actions may not address all potential threats which may exist at a site.

Preferred Plans and Decision Documents

The Remedial Response Program uses the information collected during the RI/FS to develop a Preferred Plan for public comment. The Preferred Plan presents an evaluation of the cleanup alternative preferred by Ohio EPA. The following criteria are used to evaluate possible remediation alternatives: overall protection of human health and the environment, compliance with applicable or relevant and appropriate requirements; long-term effectiveness and permanence; reduction of toxicity, mobility and volume through treatment; short-term effectiveness; implementability; cost; and, community acceptance.—The Preferred Plan also establishes the preliminary final remedial action objectives, which are specific goals for reducing the risks posed by a site.

Upon the completion of a 30-day public comment period and a public meeting, a Decision Document is prepared by the Remedial Response Program. The cleanup alternative selected in the Decision Document considers public comment, presents the selected cleanup action for a site, and describes the factors that led to its selection. The Decision Document is issued as a final action of the Director and may be appealed to the Environmental Review Appeals Commission ([ERAC](#)).

Remedial Design/Remedial Action

After issuance of the Decision Document, responsible parties are invited to negotiate orders for remedial design/remedial action. These orders require responsible parties to design and implement a remedy compliant with the Decision Document, and include any needed operation and maintenance of systems after construction completion. Ohio EPA monitors compliance with performance standards to ensure no further clean up is needed to ensure protection of human health and the environment.

Institutional Controls

Many cleanup plans include site controls that are implemented through legal documents. These documents implement controls that help minimize the potential for exposure to contamination by ensuring appropriate land or resource use. In December

2004, Ohio enacted an [environmental covenants act](#) (Ohio Revised Code 5301.80 - 5301.92) to ensure the ability to implement and enforce institutional (land use) controls.