Ohio's Corrective Action Program FAQs

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What is the Goal of Corrective Action?

The ultimate goal of Corrective Action is to meet three performance standards: protection of human health and the environment, attainment of media cleanup objectives and control of the source of the release. This is generally accomplished through a phased approach consisting of an investigation of the nature and extent of contamination, identification and evaluation of remedy alternatives, and implementation of a selected remedy or remedies.

What Mechanisms are Used by Ohio EPA to Implement Corrective Action?

Ohio EPA's Corrective Action oversight is accomplished through one of the following: permits, orders, Ohio EPA's Voluntary Action Program, a facility-lead agreement or a collaborative working arrangement between the facility and Ohio EPA's Division of Hazardous Waste Management (DHWM) outside of any formal written agreement. These mechanisms are discussed in greater detail below.

Hazardous Waste Permits

Ohio became authorized for implementing the Corrective Action program through permits on December 23, 1996. Before that date Corrective Action activities within the state were led by U.S. EPA, with the Division of Emergency and Remedial Response (DERR) and the Division of Hazardous Waste Management (DHWM) in supporting roles. To receive program authorization from U.S. EPA, Ohio EPA submitted an application providing a program description and commitment to perform certain tasks. For more information, the Federal Register can be found at http://www.epa.gov/fedrgstr/EPA-WASTE/1996/October/Day-23/pr-733.html.

The Ohio Administrative Code (OAC) contains requirements for Corrective Action at facilities with hazardous waste installation and operation permits. This rule reads as follows:

> OAC Rule 3745-54-101
> Corrective action for waste management units.
>
> (A) The owner or operator of a facility seeking a permit for the treatment, storage, or disposal of hazardous waste must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any waste management unit at the facility, regardless of the time at which waste was placed in such unit.
>
> (B) Corrective Action will be specified in the permit in accordance with this rule and with rules 3745-57-70 to 3745-57-75 of the Administrative Code. The permit will contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to the issuance of the permit) and

assurances of financial responsibility for completing such corrective action.

(C) The owner or operator must implement corrective actions beyond the facility property boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the Director that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such actions. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where offsite access is denied. Onsite measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for such corrective action must be provided.

Ohio EPA implements Corrective Action by including terms and conditions for Corrective Action in each new or renewal permit. This is done as hazardous waste permit applications are reviewed and permit language is developed. Ohio's hazardous waste permits can be found at http://www.epa.ohio.gov/dhwm/issuedpermits.aspx.

Administrative Consent Orders

A limited number of Corrective Action orders are issued each year. The authority for order driven Corrective Action stems from Ohio Revised Code §§3734.13, 3734.20, 3745.01 and 6111.03.

For the few administrative orders DHWM has negotiated with facilities, the typical approach is to negotiate and issue two separate administrative orders. In general, the first set of administrative orders requires the facility to conduct a facility-wide investigation, complete an approvable report documenting the results of the investigation and complete an approvable corrective measures study report in which the facility proposes the corrective measures it will implement. The second set of administrative orders requires the facility to implement the corrective measures selected by Ohio EPA and to produce a final report documenting successful implementation of the measures. Orders will be developed on a site-specific, order by order basis in conjunction with the individual facility. All of DHWM's final orders can be found at http://www.epa.ohio.gov/dhwm/aco.aspx.

Ohio EPA's Voluntary Action Program

A facility may satisfy its Corrective Action obligations by cleaning up the property under Ohio EPA's Voluntary Action Program (VAP), provided that the property is eligible for the VAP. The RCRA Corrective Action facilities that are eligible to participate in the VAP are those that are not required to conduct Corrective Action under a federal or state permit or are not required to conduct Corrective Action under a federal or state order. Ohio EPA has taken the position that a facility can use either the "classic" VAP or the Memorandum of Agreement (MOA) Track VAP. However, in order to receive "comfort" from U.S. EPA that the VAP cleanup is sufficient to satisfy RCRA Corrective Action objectives, the facility must conduct the cleanup following and completing the MOA Track.

The MOA Track was created by the Brownfields and Voluntary Action Program Memorandum of Agreement between U.S. EPA and Ohio EPA in 2001 and most recently updated on November 8, 2007 to serve as a formal agreement providing federal comfort for eligible Superfund or RCRA Corrective Action properties where a voluntary action has been completed in compliance with the MOA Track.

The MOA Track VAP provides for public involvement and incorporates document review and oversight of the voluntary action by Ohio EPA. The MOA Track procedures must be followed

from the beginning stage through all the steps in the review and approval process necessary to obtain a VAP No Further Action letter. DERR VAP staff provides the document review and oversight for facilities that meet Corrective Action obligations through the VAP.
More information about VAP and the MOA Track can be found at http://www.epa.ohio.gov/derr/volunt/volunt.aspx.

Working Collaboratively with Ohio EPA
As an alternative to a permit, orders or the VAP, a facility can perform Corrective Action through either a facility-lead agreement with Ohio EPA's Division of Hazardous Waste Management (DHWM) or a collaborative working agreement between the facility and DHWM outside of a formal written agreement. Although DHWM does not yet have a finalized facility-lead agreement to offer as an example, though one is under development, a general equivalent is the Voluntary Agreement offered by U.S. EPA Region 5. Such a written agreement spells out the expectations of both parties while charting a road map towards the anticipated future use of the facility property and Corrective Action completion. Ultimately, ongoing communication between the facility and DHWM will ensure that collaborative efforts to reach Corrective Action goals are accomplished in a streamlined, efficient manner.

What are the Components of the Corrective Action Process?

The Corrective Action process is generally a phased approach consisting of an investigation of the nature and extent of contamination, identification and evaluation of remedy alternatives, and implementation of a selected remedy or remedies. Interim measures may be necessary to control a release prior to the selection of a final remedy.

Typically, several key components of the process are designated and outlined as follows:

Facility Investigation
The initial phase of Corrective Action was designed to assess whether there were any releases to soil or groundwater that need further investigation. This phase of the corrective action process includes a review of all records related to the facility, a visit to the facility, and sometimes soil or water sampling.

If additional investigation is deemed necessary, the facility owner or operator will be required to prepare and implement a work plan for sampling soil, ground water, sediments, surface water, and air to determine the extent and magnitude of any releases of hazardous waste or hazardous constituents. The facility will use the sampling results to assess the potential exposures to human health and/or ecological receptors. This assessment, along with the anticipated future use of the facility, will become the basis for the selection of corrective measures at the site.

Corrective Measures Evaluation/Remedy Selection
If the results of the facility investigation indicate that some type of action is necessary, the facility will evaluate potential remedy alternatives and recommend the selection of a specific remedy (or remedies). The regulating authority will seek input from the public on a proposed remedy selection prior to selecting the remedy. Once the regulatory agency selects a remedy, the implementation of the corrective measures can begin.

After implementation of the remedy, a completion report is typically submitted to the regulatory agency along with any ongoing maintenance and operation plans if such plans are necessary.

Interim Measures
While facility characterization is underway or before a final remedy is selected, facility conditions may warrant the need for Interim Measures at a Corrective Action facility. Interim Measures are used to control or abate ongoing risks to human health and the environment in advance of the final remedy selection. For example, actual or potential contamination of drinking water supplies may necessitate an interim action to provide alternative drinking water sources.

How Can Presumptive Remedies Help Me Reach My Corrective Action Goals Faster?
Presumptive remedies are preferred technologies for common categories of facilities, based on historical patterns of remedy selection and performance. Consideration and selection of a presumptive remedy can streamline facility investigation and speed up selection of cleanup actions. Use of a presumptive remedy can greatly shorten the time spent studying remedial alternatives.

What Are Institutional Controls and Environmental Covenants?
Controls that restrict the use of land and activities on that land are often a key element of Corrective Action cleanups. An institutional control is a non-engineered, legal control intended to influence human activities in such a way as to prevent or reduce exposure to hazardous wastes or hazardous constituents. For example, an institutional control may prohibit the use of ground water at a facility.

The role that institutional controls play in the risk management approach for a facility is based on facility-specific conditions and should be considered during the remedy selection process. Like any other remedial alternative, institutional controls should be rigorously evaluated to determine their appropriateness, feasibility, and long-term effectiveness in protecting human health and the environment. In Ohio, an institutional control is imposed on a property through an environmental covenant.

The use of environmental covenants in environmental cleanup programs is now memorialized in Ohio law with the passage of House Bill 516, which became effective on December 22, 2004. This bill provides a clear statutory basis for Ohio EPA and owners/operators of hazardous waste facilities undergoing Corrective Action to enter into an environmental covenant that will impose use and/or activity limitations on the property or portion of the property as appropriate. House Bill 516 was codified into Ohio Revised Code §§ 5301.80 through 5301.92.

Examples of Environmental Covenants created under this legislation can be found at http://www.epa.ohio.gov/dhwm/userestrictions.aspx.

How does the Public Become Involved in the Corrective Action Process?
Public input plays an important role in the Corrective Action process. Final remedies at facilities can have significant impacts on the surrounding community and future land use.

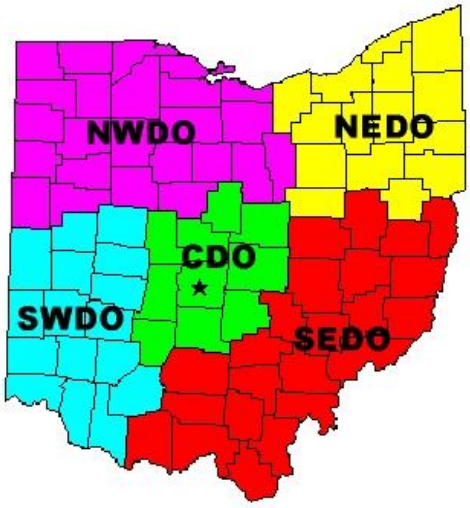
Ohio EPA also believes that public participation activities need to be tailored to individual facilities/communities with consideration to the nature and extent of environmental contamination and interest in the facility. Ohio EPA will generally seek formal input from the public when proposing remedies for a facility. However, the public is encouraged to contact Ohio EPA at any point in the Corrective Action process to ask questions or provide input.

What Are Environmental Indicators?

U.S. EPA developed Environmental Indicators (EIs) to track the progress of cleanup at Corrective Action universe facilities. The two EIs are called "Current Human Exposures Under Control" and "Migration of Contaminated Groundwater Under Control." They provide a means of evaluating and reporting on current facility-wide conditions; including, current land use and pathways of exposure. Ohio EPA is responsible for determining whether specific facilities have met each EI. For more information on EIs, see U.S. EPA's Corrective Action Environmental Indicators Web page.

Who Can I Contact at Ohio EPA for More Information?

If you would like more information about conducting Corrective Action at your facility, please contact your local district office.



District Office	Contact	Phone Number	E-mail
NWDO	Michael Terpinski	419-373-3075	Michael.Terpinski@epa.state.oh.us
NEDO	Harry Courtright	330-963-1119	Harry.Courtright@epa.state.oh.us
SEDO	Scott Bergreen	740-380-5288	Scott.Bergreen@epa.state.oh.us
SWDO	Harold O'Connell	937-285-6078	Harold.OConnell@epa.state.oh.us
CDO	Steve Rath	614-728-3878	Steve.Rath@epa.state.oh.us

Where Can I Find More Information about Corrective Action?

There are many corrective action resources and guidance documents available on the internet. Click on a topic provided below for a list of Web pages on that subject.[1]

- U.S. EPA and Regional Resources
- Investigations (characterization, monitoring, sampling and analysis methods, quality assurance project plans and data quality objectives)
- Ground Water
- Vapor Intrusion
- Human Health and Ecological Risk Assessments
- Remediation (includes remedy selection, green remediation, remediation waste, remedial system optimization and financial assurance)

[1] Mention of non-Ohio EPA documents or resources on this Web page does not constitute an Ohio EPA endorsement of their contents, only an acknowledgment that they exist and may be relevant to RCRA Corrective Action.