

US EPA ARCHIVE DOCUMENT

FACT SHEET #1

HISTORY OF RCRA CORRECTIVE ACTION



Congress, the general public, EPA, and State agencies believe the rate and pace of RCRA cleanups should be increased. Tim Fields, Assistant Administrator of the Office of Solid Waste and Emergency Response, recently indicated that Corrective Action was the RCRA program's highest priority. One of the efforts designed to improve Corrective Action progress is a new workshop titled, "RCRA Corrective Action Workshop on Results-Based Project Management." This is the first in a series of fact sheets supporting the Workshop. EPA will periodically update this fact sheet on the history of RCRA Corrective Action to reflect current developments. You can access the most current version of the fact sheet at <http://www.epa.gov/epaoswer/hazwaste/ca/#wkshp>.

What is the purpose of this fact sheet?

This fact sheet (see note at end of the fact sheet) provides an overview of the main events that have shaped the current RCRA Corrective Action Program. It also provides a brief history of the statutory authorities, regulations, and policy that form the framework for the program. A misconception concerning the Corrective Action Program through the years has been that implementation can only be accomplished through an inflexible, prescriptive, step-by-step process. This fact sheet points out that since 1990, the Program has emphasized site-specific flexibility aimed at achieving both interim and final Corrective Action results. The most recent and significant action reflecting this emphasis occurred on October 7, 1999 when the Agency issued the [Subpart S Withdrawal Notice](#) that formally withdrew the [Corrective Action regulations proposed in 1990](#). Today's Corrective Action Program continues to emphasize flexibility and results!

What does the Corrective Action Program do?

The RCRA Corrective Action Program evaluates releases of hazardous wastes and hazardous constituents at hazardous waste treatment, storage and disposal facilities, and develops and implements remedial measures to protect human health and the environment. Currently, EPA believes that there are approximately 6,400 facilities subject to RCRA Corrective Action. Of these, approximately 3,600 facilities have Corrective Action already underway or will be required to implement Corrective Action as part of the process to obtain a permit to treat store or dispose of hazardous waste.

Why is the RCRA Corrective Action Program Important?

The program addresses risk-reduction and final cleanup at facilities that treat, store, or dispose of hazardous waste. EPA has identified rapid remediation of RCRA Corrective Action facilities as one of its highest priorities.

What does “Focus on Results” mean?

As emphasized in the 1996 [Advance Notice of Proposed Rulemaking \(ANPR\)](#), EPA believes that program implementation should focus on results rather than on any one prescriptive linear process. For example, EPA is most interested in knowing that the two [Environmental Indicators](#) (see description on page 4 of this fact sheet) have been achieved at facilities, as opposed to the number or sequence of events and reports leading up to achieving the EIs or the Federal or State authority under which cleanup requirements are imposed or overseen. Therefore, it is imperative that program implementers have a clear understanding of the “interim” and “final” results that the Corrective Action program seeks to achieve. **While interim measures are particularly important to help achieve the Environmental Indicator goals, Corrective Action obligations remain until final remedial measures are complete.**

Interim (or near-term) remedial measures should be used to control, minimize or eliminate releases(es) and potential releases that pose an actual or potential threat to human health and the environment. Common examples of interim measures include actions designed to cut-off an exposure pathway (e.g., temporary cover of contaminated soil), or installation of a containment system designed to prevent the further spread of contaminated groundwater. To the extent practicable, interim measures should be consistent with final remedies.

Final remedial measures should (1) protect human health and the environment; (2) attain media cleanup objectives; and (3) remediate the sources of releases to eliminate or further reduce threats to human health and the environment, and use treatment to address principal threats, unless alternative approaches are determined to be appropriate by the Regional Administrator. The following evaluation/balancing criteria were developed to help program implementers determine the optimum alternative: (1) long-term reliability and effectiveness; (2) reduction of toxicity, mobility and volume through treatment; (3) short-term effectiveness; (4) implementability; (5) cost; (6) community acceptance; and (7) State acceptance (in states not authorized for Corrective Action). As an additional tool to aid in remedy evaluation and selection, the Agency has developed a series of expectations for final remedies. These expectations are described in Corrective Action Workshop Fact Sheet #2 which is available at <http://www.epa.gov/epaoswer/hazwaste/ca/#wkshp>. Additional guidance for final remedies is also in Corrective Action Workshop Fact Sheet #3 that is also accessible at the previous Internet address.

How does EPA implement the Corrective Action Program?

EPA implements the program principally through permits and orders issued under statutory authorities established by the Hazardous and Solid Waste Amendments of 1984 (HSWA). Prior to HSWA, EPA's authority to compel remediation of RCRA facilities was limited to:

- ! Section 3004(a) - required the Agency to promulgate regulations establishing standards for hazardous waste treatment, storage and disposal facilities (TSDFs); the Agency promulgated regulations under this statutory authority that requires cleanup of certain releases from hazardous waste treatment, storage, and disposal units.
- ! Section 3013 - monitoring, testing, analysis and reporting of information for facilities that may present a substantial hazard to human health or the environment; and
- ! Section 7003 - cleanups of situations that may present an imminent and substantial endangerment to human health and the environment.

HSWA added statutory provisions to RCRA that gave EPA substantial authority to develop a broader Corrective Action Program than previously existed; however, the pre-HSWA authorities are still available for use where appropriate. Corrective Action provisions added to RCRA include:

- ! Section 3008(h) - provides authority to require Corrective Action, as necessary to protect human health and the environment, at facilities authorized to operate under interim status;
- ! Section 3004(u) - requires that when Corrective Action, as necessary to protect human health and the environment cannot be finished before permits are issued, permits contain Corrective Action schedules of compliance.
- ! Section 3004(v) - requires corrective action for releases migrating beyond the facility boundary;
- ! Section 3005(c)(3) - requires that permits contain all conditions EPA or the State determines is necessary to protect human health and the environment. This provision is often referred to as EPA's "omnibus" authority and has been used, for example, to require Corrective Action at "areas of concern" (AOCs).

Note: Direct quotes of the relevant statutory language are attached to this fact sheet.

EPA expects that the States will be the primary implementers of the Corrective Action Program. Currently, 33 States have already received authorization for RCRA Corrective Action and use their own Statutory and regulatory authorities to implement the program. A number of additional States are also in the process of receiving Corrective Action authorization.

What are the major developments that have shaped the program since 1984?

1999 - Subpart S Withdrawal Notice (64 FR 54604, October 7): This notice withdraws most provisions of the 1990 Subpart S proposal (except for those elements proposed that were made final on February 16, 1993 and two jurisdictional issues related to the definition of "facility"). EPA took this action because it believes that detailed regulations are not necessary to carry out the Agency's duties under sections 3004(u) and (v) of RCRA. Additionally, attempting to promulgate a comprehensive set of RCRA regulations at this

time could unnecessarily disrupt the 33 State programs already authorized to carry out the Corrective Action Program in lieu of EPA, as well as the additional State programs currently under review for authorization. This withdrawal notice ended uncertainty related to this rulemaking for State regulators and owners and operators of hazardous waste management facilities. This notice also made it clear that the 1996 Advance Notice of Proposed Rulemaking should be considered the primary Corrective Action implementation guidance. The withdrawal notice can be viewed at <http://www.epa.gov/epaoswer/hazwaste/ca/partwith.htm> .

1999 - Announcement of RCRA Cleanup Reforms (July 8): This announcement launched a set of administrative reforms aimed at improving progress toward a set of ambitious national cleanup goals for the RCRA Corrective Action Program. These national goals focus on achieving two environmental indicators (discussed above) at the 1,712 RCRA facilities identified by EPA and the states warranting attention over the next several years. The reform announcement is available at <http://www.epa.gov/epaoswer/osw/factsheet1.pdf> .

1999 - Interim Final Guidance for RCRA Corrective Action Environmental Indicators (February 5): This guidance updated the 1994 guidance (see above) for evaluating sites to determine whether they meet the RCRA Corrective Action Program's two environmental indicators. Specifically, these indicators are called, "Current Human Exposures Under Control" and "Migration of Contaminated Ground Water Under Control." These two EIs represent the primary goals for the RCRA Corrective Action Program. Furthermore, they are serving as the measures for tracking the Program's performance in accordance with the Government Performance and Results Act of 1993. The full guidance on these two environmental indicators is available at http://www.epa.gov/epaoswer/osw/ei_guida.pdf .

The Corrective Action Program's goals are by the year 2005 to have 95% of the high priority facilities to achieve the human exposure indicator, and 70% of high priority facilities to achieve the contaminated ground water indicator. The percentages are based upon a baseline established in 1999 of 1712 facilities which is comprised of approximately 1500 high priority facilities plus approximately 200 other Regional and State priorities. The importance of this guidance was further emphasized in a February 11, 1999 EPA memo requesting EPA Regions to provide a commitment to the national EI goals, along with details as to how they intend to meet the goals.

1998 - Hazardous Waste Identification Rule for Contaminated Media (HWIR - Media, November 30, 63 FR 65874): This regulation makes it faster and easier to obtain permits for treating, storing, and disposing of hazardous remediation wastes. It allows facility owner/operators to seek a streamlined permit called a "Remedial Action Plan" to address remediation wastes. In addition, it removed the requirement that "cleanup only" TSD's conduct facility-wide Corrective Action. Other key concepts addressed in the rule include the creation of a special type of unit called a "staging pile", exemption from RCRA Subtitle C for certain dredged materials, and streamlined authorization procedures for revisions to State RCRA programs.

1998 - Management of Remediation Waste Under RCRA (October 14,

EPA 530-F-98-026): This guidance provides a very useful consolidation of existing statutes, regulations, policies and guidance which can be used to tailor RCRA hazardous waste requirements when applied to remediation waste. Some examples of the 18 different approaches addressed in the guidance include: area of contamination, CAMUs, permit waivers, contained-in policy, and exemptions for less-than 90 day accumulation of hazardous waste. For a copy of this guidance as well as other EPA materials pertaining to remediation waste management, go to

http://www.epa.gov/epaoswer/hazwaste/ca/rcr/pspd_mem.pdf

1998 - Post-Closure Regulations (63 FR 56710, October 22): This regulation provides flexibility to EPA and authorized States agencies by removing the requirements to obtain a permit for the post-closure period. It also allows EPA or authorized State agencies to use other available authorities to address post-closure needs under certain circumstances, thus removing impediments that have been encountered when one unit is subject to Post-Closure and other units are subject to Corrective Action.

1998 - Land Disposal Restrictions (LDR) Phase IV Rule (63 FR 28556, May 26): This rule promulgates Land Disposal Restrictions treatment standards for metal-bearing wastes, including toxicity characteristic metal wastes, and hazardous wastes from mineral processing. This rule also amends the LDR treatment standards for soil contaminated with hazardous waste. The purpose of this revision is to create standards which are more technically and environmentally appropriate to contaminated soils than those which currently apply. Additional information about this rule can be found at

<http://www.epa.gov/epaoswer/hazwaste/ldr/ldrmetal/facts.htm> .

1998 - Risk-Based Clean Closure Guidance (March 16, 1998): This memorandum provides guidance on risk-based clean closure, and confirms that RCRA regulated units may be clean closed to protective, risk-based media cleanup levels.

1996 - Coordination between RCRA Corrective Action and Closure and CERCLA Site Activities (September 24):

This guidance memorandum focuses on three areas: acceptance of decisions made by other remedial programs; deferral of activities and coordination among EPA RCRA, EPA CERCLA and state/tribal cleanup programs; and coordination of the specific standards and administrative requirements for closure of RCRA regulated units with other cleanup activities. The primary purpose of this guidance is to help eliminate duplication of effort, streamline cleanup processes, and build effective relationships with the states and tribes. You can read a full copy of this memo at

<http://www.epa.gov/swerfrr/doc/924memo.htm> .

1996 - RCRA Public Participation Manual: The RCRA Public Participation Manual is intended as a "user's manual." It explains how public participation works in the RCRA permitting process (including corrective action in Chapters 4 and 5), and how citizens, regulators, and industry can cooperate to make it work better. It also describes a wide assortment of activities to enhance public participation, and includes several appendices that provide lists of contacts, sources of information, and examples of public participation tools and activities. The entire manual is available at

<http://www.epa.gov/epaoswer/hazwaste/permit/pubpart/manual.htm> .

1996 - Advance Notice of Proposed Rulemaking (61 FR 19432, May 1): The three primary purposes of the ANPR were to: discuss improvements to the Corrective Action Program that were underway; update the 1990 proposal and other documents by providing the Agency's current guidance on Corrective Action implementation; and, request comments on many issues that could affect future corrective action rulemakings and policies. The ANPR also conveyed seven implementation principles (see Highlight 1) that continue to reflect the Agency's most recent guidance for implementing the RCRA Corrective Action Program. Subsequent to issuing the ANPR, the Agency issued a memorandum (January 17, 1997) emphasizing the expectation that the ANPR should be used as guidance for implementing the RCRA Corrective Action Program. The ANPR is available at <http://www.epa.gov/docs/fedrgstr/EPA-WASTE/1996/May/Day-01/pr-547.pdf>.

HIGHLIGHT 1
Corrective Action Operating Principles from May 1, 1996 ANPR

- Corrective Action decisions should be based on risk.
- Program implementation should focus on results.
- Interim actions and stabilization should be used to reduce risks and prevent exposures.
- Activities at Corrective Action facilities should be phased.
- Program implementation should provide for meaningful inclusion of all stakeholders.
- Corrective Action obligations should be addressed using the most appropriate tool for any given facility.
- States should be the primary implementers of the Corrective Action Program.

1994 - Proposed Post-Closure Rule (59 FR 55778, November 8): This notice proposed to remove the requirement for a post-closure permit, and allow the Agency to use alternative authorities to address facilities with unites requiring post-closure care. It also proposed to require authorized states to adopt, as part of an adequate enforcement program, authority to address Corrective Action at interim status facilities.

1994 - Subpart S Initiative: The Subpart S Initiative was created in response to concerns about the slow pace of RCRA Corrective Action. This initiative centered around 5 major objectives: create a consistent, holistic approach to cleanups; establish protective, practical cleanup expectations; shift more responsibility to the regulated community; streamline cleanups and reduce costs; and increase opportunities for meaningful public involvement throughout cleanups. The major product of the Subpart S Initiative was the May 1, 1996 Advance Notice of Proposed Rulemaking.

1994 - RCRA Corrective Action Plan (CAP, EPA 520-R-94-004): The CAP provides guidance to program implementers on a comprehensive menu of possible elements for implementing Corrective Action. For example, the CAP provides an extensive list of activities that might be associated with facility investigations. The intent is to select the elements of an actual facility investigation on a site-specific basis.

1994 - Environmental Indicators: EPA established two environmental indicators as results-based measures for Corrective Action to aid the site decision maker in focusing on cleanup outcomes rather than process. These two indicators focused on preventing unacceptable exposure to humans and preventing the continued migration of contaminated ground water.

1993 - Corrective Action Management Unit and Temporary Unit Regulations (55 FR 8658, February 16): The regulations, which were promulgated based on the 1990 Subpart S proposal, created two new types of units designed to increase flexibility in the way remediation wastes are managed.

1991 - National Corrective Action Prioritization System (NCAPs): NCAPs established a ranking system for facilities subject to Corrective Action. Using NCAPs, facilities subject to Corrective Action are divided into high, medium, and low priority categories to help implementers focus resources on the worst facilities first. Of these 3600 facilities mentioned previously, the division among high, medium and low priority based on NCAPs scoring is 1500, 1100, and 1000, respectively.

1991 - Stabilization Initiative (October 25): The stabilization initiative encouraged program implementers to use flexible approaches aimed at near-term activities to control or abate threats to human health and the environment and prevent/minimize movement of existing contamination at many facilities rather than only focusing on final, facility-wide, cleanups for relatively few facilities.

1990 - Subpart S Proposal (55 FR 30798, July 27): EPA proposed detailed regulations to govern the technical (e.g., cleanup levels, site characterization, etc.) and procedural (definitions, permitting, oversight, etc) elements for implementing RCRA Corrective Action. The 1990 proposal was intended to be similar to the Superfund Program's National Contingency Plan (NCP) in scope and level of detail. However, the proposal also emphasized the need for site-specific **flexibility** stating "EPA believes a flexible approach, based on site-specific analysis is necessary. No two cleanups will follow exactly the same course, and therefore, the program has to allow significant latitude to the decision maker in structuring the process, selecting the remedy, and setting cleanup standards appropriate to the specifics of the situation." (55 FR 30802.)

The 1990 Subpart S proposal encouraged project managers to focus on cleanup results and emphasized procedural flexibility. At the same time it also provided substantial detail on common cleanup elements. These common elements are identified in Highlight 2 (next page) along with corresponding elements from the EPA's Superfund cleanup program. After considering many significant and diverse public comments, EPA decided not to finalize the majority of the proposal (e.g., see discussion above on CAMUs and TUs which were finalized in 1993). In the absence of detailed Corrective Action regulations, EPA has issued guidance, policy directives and related regulations all of which were designed to increase the effectiveness, efficiency and pace of Corrective Action.

HIGHLIGHT 2

Common Elements of RCRA Corrective Action as Described In 1990 Proposal

- RCRA Facility Assessment (RFA) - similar to Superfund's Preliminary Assessment/Site Inspection (PA/SI)
- RCRA Facility Investigation (RFI) - similar to Superfund's Remedial Investigation (RI)
- Corrective Measures Study (CMS) - similar to Superfund's Feasibility Study
- Statement of Basis (SB) and Response to Comments (RTC) - similar to Superfund Record of Decision (ROD)
- Remedy evaluation and selection based on four proposed standards for all remedies and six decision or balancing factors - similar in scope to Superfund remedy selection criteria
- Corrective Measures Implementation (CMI) - similar to Superfund's Remedial Design/Remedial Action (RD/RA)

Where do I get more information?

For more information about RCRA Corrective Action and the Results Based Site Management Workshop, visit the Corrective Action Internet Home Page at <http://www.epa.gov/epaoswer/hazwaste/ca/>.

Note:

This document provides guidance to EPA and States on how best to implement RCRA Corrective Action. It also provides guidance to the public and the regulated community on how EPA intends to exercise its discretion in implementing its regulations. The document does not, however, substitute for EPA's regulations, nor is it regulation itself. Thus, it cannot impose legally-binding requirements on EPA, States, or the regulated community, and may not apply to a particular situation based upon the circumstances. EPA may change this guidance in the future as appropriate.

Statutory References (excerpts)

RCRA Section 3013(a): "If the Administrator determines, upon receipt of any information that (1) the presence of any hazardous waste at a facility or site at which hazardous waste is, or has been, stored, treated, or disposed of; or (2) the releases of any such waste from such facility or site may present a substantial hazard to human health or the environment, he may issue an order requiring the owner or operator of such facility or site to conduct such monitoring, testing, analysis, and reporting with respect to such facility or site as the Administrator deems reasonable to ascertain the nature and extent of such hazard."

Under certain circumstances, EPA can use RCRA Section 3013 to issue orders to the "most recent previous owner or operator. . . who could reasonable be expected to have [knowledge of the presence of hazardous waste at the facility or site]."

RCRA Section 7003(a): "Notwithstanding any other provision of this Act, upon receipt of evidence that the past or present handling, storage, treatment, transportation, or disposal of any solid waste or hazardous waste may present an imminent and substantial endangerment to health or the environment, the Administrator may bring suit on behalf of the United States in the appropriate district court against any person (including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility) who has contributed or who is contributing to the alleged disposal to restrain such person from such handling, storage, treatment, transportation, or disposal to order such person to take such other action as may be necessary, or both. . ."

RCRA Section 3004(u): "Standards promulgated under this section shall require, and a permit issued after the date of enactment of the Hazardous and Solid Waste Amendments of 1984 by the Administrator or a State shall require, corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage, or disposal facility seeking a permit under this subtitle, regardless of the time at which waste was placed in such unit. Permits issued under section 3005 shall contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action."

RCRA Section 3004(v): "As promptly as practicable after the date of enactment for the Hazardous and Solid Waste Amendments of 1984, the Administrator shall amend the standards under this section regarding corrective action required at facility for the treatment, storage, or disposal of hazardous waste listed or identified under section 3001 to require that corrective action be taken beyond the facility boundary where necessary to protect human health and the environment unless the owner or operator of the facility concerned demonstrates to the satisfaction of the Administrator that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action."

RCRA section 3005(c)(3) : "Any permit under this section shall be for a fixed term, not to exceed 10 years in the case of any land disposal facility, storage facility, or incinerator or other treatment facility. Each permit for a land disposal facility shall be reviewed 5 years after date of issuance or reissuance and shall be modified as necessary to assure that the facility continues to comply with the currently applicable requirements of this section and section 3004. Nothing in this subsection shall preclude the Administrator from reviewing and modifying a permit at any time during its term. Review of any application for a permit renewal shall consider improvements in the state of control and measurement technology as well as changes in applicable regulations. Each permit issued under this section shall contain such terms and conditions as the Administrator (or the State) determines necessary to protect human health and the environment."

RCRA section 3008(h)(1): "Whenever on the basis of any information the Administrator determines that there is or has been a release of hazardous wastes into the environment from a facility authorized to operate under section 3005(e) of this subtitle, the Administrator may issue an order requiring corrective action or such other response measure as the Administrator deems necessary to protect human health or the environment or the Administrator may commence a civil action in the United States district court in the district in which the facility is located for appropriate relief, including a temporary or permanent injunction."

