



RCRA Corrective Action Training Program: Getting to YES! *Strategies for Meeting the 2020 Vision*



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Notes:

Purpose of Slide

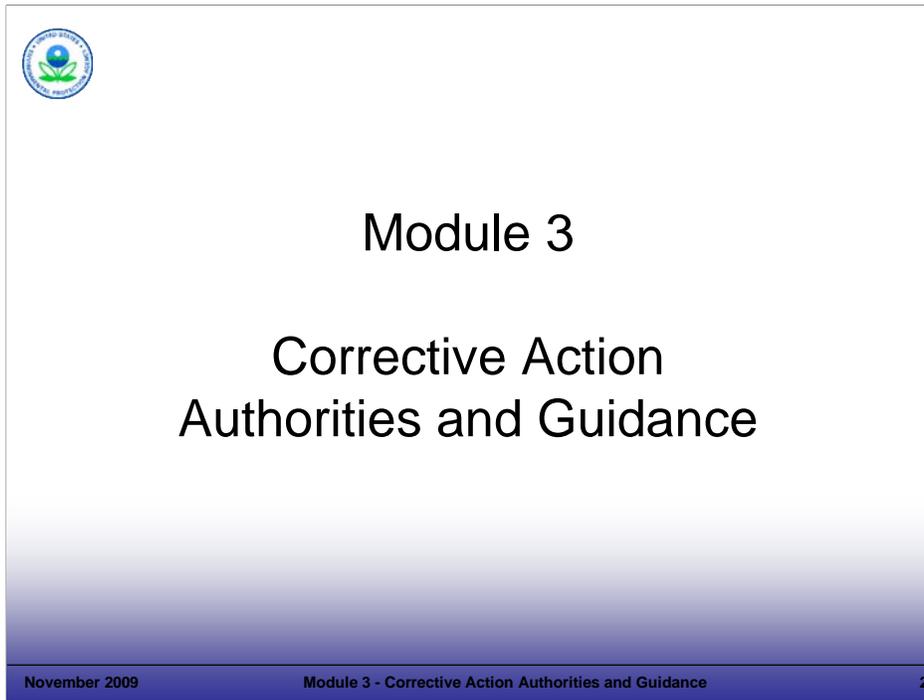
- Holder slide for Module 3, Corrective Action Authorities and Guidance.

Key Points

- This is a holder slide. No specific key points.

References

- None.



Notes:

Purpose of Slide

- Holder slide for Module 3, Corrective Action Authorities and Guidance.

Key Points

- This is a holder slide. No specific key points.

References

- None.



Module Overview

- ❖ Review legal authorities used to implement Resource Conservation and Recovery Act (RCRA) corrective action (CA)
- ❖ Examine RCRA CA cleanup reforms and results-based guidance for CA
- ❖ Trace the evolution of the legal and policy framework for CA

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Notes:

Purpose of Slide

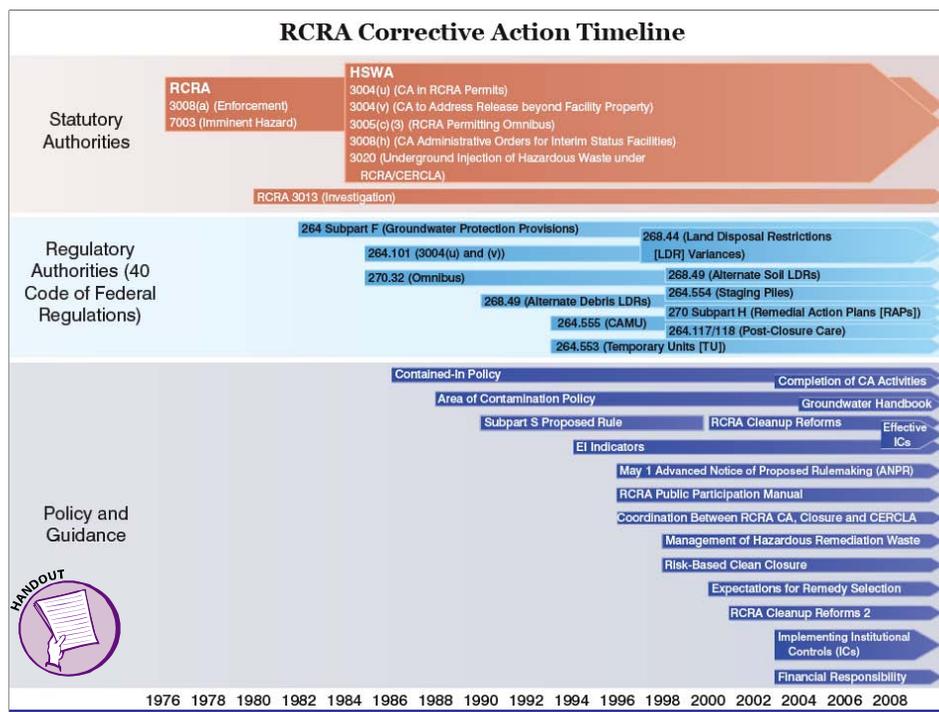
- Provide an overview of the topics covered by this module.

Key Points

- The first part of the module reviews the legal authorities and mechanisms used to implement corrective action (CA) at Resource Conservation and Recovery Act (RCRA) facilities. Various authorities and mechanisms are available to implementers in administering CA. We will briefly review the statutory and regulatory authorities for RCRA CA established by the original RCRA statute and by authorities added by the Hazardous and Solid Waste Amendments (HSWA) to RCRA. The EPA and state define the means for CA, but the end is the key. We will discuss several key terms which apply specifically to RCRA CA. We also will examine other legal authorities, primarily including various types of state cleanup programs (including voluntary cleanup programs) that may be used to address cleanup obligations at RCRA facilities.
- The second part of the module examines the RCRA reforms and results-based guidance for implementing CA.
- In addition, this module reminds participants of the public involvement and financial assurance requirements of RCRA CA and the important role these play in successfully achieving RCRA CA progress.
- Regulations and state programs provide the means; the end is a protective cleanup. As long as the site is being addressed adequately, as required by RCRA, neither the authority used nor the agency overseeing the cleanup is important. The various authorities allow implementers to be flexible and creative in administering CA.

References

- None.



Notes:

Purpose of Slide

- Provide a historic overview of the statutory authorities, regulatory authorities, and policies and guidance that provide the framework for RCRA CA.

Key Points

- This slide provides a historic view of the evolution of the RCRA CA program.
- The following slides provide more detail on these authorities and policy/guidance.
- The instructor will review these materials with the class, based on the level of experience of participants. The timeline is also provided as a handout and ties to references included with the Reference CD ROM, which participants can use as a resource after the course is over.

References

- Derived from the references cited in the remainder of this module.



Pre-HSWA Statutory Enforcement Authorities

- ❖ 1976
 - Section 7003 provides judicial authority to compel any person to abate conditions that present an imminent and substantial endangerment to human health or the environment
- ❖ 1980
 - Section 3013 added (provides administrative authority to compel investigations)
 - Section 7003 amended (provides administrative authority to abate conditions that **may** present)

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Notes:

Purpose of Slide

- Review two of the statutory authorities contained in RCRA (prior to HSWA) for compelling owner/operators (o/o's) to perform CA. These authorities remain in effect and may be used where appropriate.

Key Points

- Prior to HSWA, CA was not required at RCRA-regulated facilities (except at regulated units); however, the U.S. Environmental Protection Agency (EPA) did have information-gathering and cleanup authorities.
- Section 3013 of RCRA provides authority to require monitoring, testing, analysis, and reporting at hazardous waste treatment, storage and disposal facilities (TSDFs) to address potentially substantial hazards to human health or the environment. Under this authority, EPA could issue an administrative order to require testing, monitoring, analysis, and reporting. While Section 3013 authority is triggered by the presence or release of hazardous waste that may present a substantial hazard, Section 3013 refers to the statutory definition of hazardous waste, which is broader than the regulatory definition at 40 Code of Federal Regulations (CFR) 261.3. Section 3013 applies to the current o/o or potentially the most recent previous o/o who could be expected to know about the presence or potential release of the hazardous waste (it only applies to the most recent previous o/o if the current o/o could not be expected to know this information).
- Section 7003 provides EPA authority to initiate judicial action or issue administrative orders to any person to require action as necessary to protect human health and the environment. This action can include investigation and cleanup in situations that may present imminent and substantial danger to human health and the environment. Courts have repeatedly recognized that the endangerment standard of Section 7003 is quite broad. The associated guidance defines an "endangerment" as an actual, threatened, or potential harm to health or the environment. Section 7003 also applies to potential endangerments caused by materials that meet RCRA's statutory definition of solid waste. EPA may enforce and seek penalties against violators of Section 7003 orders in appropriate United States district courts.
- EPA retains enforcement authority under Sections 3013 and 7003 in authorized states.

References

- Code of Federal Regulations (CFR). 40 CFR 261.3.
- EPA. 1984. Issuance of Administrative Orders under Section 3013 of RCRA. September 26.
- EPA. 1997. Guidance on the Use of Section 7003 of RCRA. October 20.
- EPA. 2005. Model RCRA Section 7003 Administrative Order on Consent. October 28.



Pre-HSWA Regulatory Authority

- ❖ Established in 1982 as part of groundwater monitoring and protection regulations for hazardous waste land disposal units
- ❖ Requires o/o to implement CA program for release of hazardous constituents into groundwater from “regulated units”
- ❖ Only implemented as a permit condition

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Notes:

Purpose of Slide: Review the original CA regulatory authority established under RCRA Subpart F groundwater monitoring regulations for o/o's of hazardous waste land disposal facilities.

Key Points

- Prior to HSWA, “RCRA CA” referred to the removal or treatment of Appendix VIII hazardous constituents in groundwater. Under the original groundwater monitoring requirements established in 40 CFR Part 264 Subpart F for o/o's of TSDFs, the o/o must develop and implement a CA plan to address the release of hazardous constituents into groundwater from “regulated units” at levels above the groundwater protection standard (GWPS) or alternative concentration limits (ACLs). The CA requirement is the third step of a three-phased program for detecting, characterizing, and responding to releases to the uppermost aquifer from regulated units. This requirement remains in effect and may be used where appropriate.
- 40 CFR 264.90 defines a “regulated unit” as any land disposal unit (for example, a surface impoundment, waste pile, land treatment unit, or landfill) that received hazardous waste on or after July 26, 1982.
- This regulatory authority only addresses releases of hazardous constituents into groundwater (not other environmental media) from “regulated units” and is part of the base RCRA program.
- The requirements of 40 CFR 264.100 are implemented under an o/o's permit.
- Note that the post-closure rule allows the integration of groundwater and other cleanup at “regulated units” with facility-wide CA.

References

- CFR. 40 CFR 264.100.
- CFR. 40 CFR 264.90.
- Federal Register (FR). 1982. 47 FR 32274. July 26.
- FR. 1998. Standards Applicable to Owners and Operators of Closed and Closing Hazardous Waste Management Facilities; Post-Closure Permit Requirement and Closure Process; Final Rule. 63 FR 56710. October 22.



HSWA Authorities - §3008(h)

- ❖ Authorizes CA administrative orders for o/o's subject to interim status requirements
- ❖ EPA may issue an order based on a determination of a release
- ❖ Versatile authority
- ❖ Not delegated to states; however, many states have similar authorities
 - EPA should consult and give notice to states before issuing orders
 - Pursue unilateral enforcement only if other avenues fail

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Notes:

Purpose of Slide: Introduce the authority for interim status CA orders.

Key Points

- Section 3008(h) authority for interim status CA orders provides authority for requiring CA at non-permitted, interim status RCRA facilities. Interim status is the period during which the o/o of a TSDF is treated as having been issued a RCRA permit even though a final determination on the permit has not yet been made by the regulator. O/o's of TSDFs in existence on November 19, 1980, or brought under Subtitle C regulation due to a legislative or regulatory change, may continue to operate as if they have a permit until their permit is issued or denied as long as they comply with specific requirements. Congress created "interim status" under section 3005(e) of RCRA.
- Section 3008(h) authorizes EPA to issue CA administrative orders and to initiate civil actions for facilities currently under interim status, facilities that once had interim status, or facilities that should have had interim status. A Section 3008(h) order may be issued whether the facility is operating (prior to receiving a permit), is closing, or is closed.
- EPA may issue the order based on determination of a release of hazardous waste or hazardous constituents from the facility into the environment.
- CA orders under Section 3008(h) may be issued unilaterally by EPA (unilateral administrative order [UAO]) or issued as consent agreements between the o/o and the Agency (administrative orders on consent [AOC]). A UAO is a non-negotiated, and usually, adversarial proceeding under which the o/o is ordered to act. EPA may use its administrative order authority without going through the federal courts. Also, EPA may choose to obtain a 3008(h) order by commencing a civil action in the U.S. district court.
- The Section 3008(h) authority is versatile and can be crafted as needed to implement CA for releases at a particular facility. All types of CA activities at a RCRA facility can be performed under an order, including: interim measures, investigation and assessment, controls of facility operations, and long-term cleanup work. In the case where a permit is issued to the facility after an order is already in place, EPA (1) may require the o/o to continue all or some of the activities under the order or (2) may incorporate the requirements of the order into the RCRA permit. EPA expects equivalent results whether CA is performed under an order or permit.
- EPA has issued guidance to EPA employees on Section 3008(h) model consent orders. The guidance discusses potential consent order provisions, including: definitions, guidance on work to be performed, alternative dispute resolution, termination and satisfaction, and stipulated penalties for AOCs. EPA has recently issued additional guidance on model consent orders regarding cost estimates and financial responsibility. Note that UAOs do not include stipulated penalties, procedures for dispute resolution, and *Force Majeure* clauses.
- The Section 3008(h) authority is Federal, but many states have comparable authority. States that desire such authority must enact parallel statutory enforcement authorities. For example, MI and CO have established legal authority to issue CA consent orders. If a State is authorized, EPA expects the State to implement the CA program and take enforcement actions, as necessary.
- It is advisable that EPA and the State should confer prior to issuance of an order to help ensure all facts about the facility are well known, to avoid misunderstandings, and to inform the State of the conditions requiring response and the actions EPA will take.

References

- EPA. 1985. Memorandum from J. Winston Porter, OSWER Assistant Administrator, to Regional Administrators. Interpretation of Section 3008(h) of the Solid Waste Disposal Act. December 16.
- EPA. Undated. Memorandum from J. Winston Porter, OSWER Assistant Administrator, to Regional Administrators. Use of §3008(h) Orders or Post-Closure Permits At Closing Facilities. OSWER Directive 9502.00-7. March 8.
- EPA. 1989. Guidance on Administrative Records for Section 3008(h) Orders. July.
- EPA. 1993. Final RCRA Section 3008(h) Model Consent Order OSWER Directive #9902.5A. December 15.
- EPA. 2006. Model Provisions for Cost Estimates and Financial Responsibility for Use in Section 3008(h) Administrative Orders on Consent. February.
- FR. 1985. 50 FR 28702. July 15; FR. 1985. 50 FR 38946. September 25; FR. 1988. 40 CFR Part 24. 53 FR 12256. April 13; and FR. 1999. 64 FR 40138. July 23. Preamble to the Consolidated Rules of Practice for 40 CFR Part 22.
- 40 CFR Part 22. Consolidated Rules of Practice.



HSWA Authorities - §3004(u)

- ❖ Requires that RCRA permits issued after November 8, 1984, include CA for releases from solid waste management units (SWMUs) within the facility boundary
- ❖ Requires financial assurance for CA
- ❖ Requires schedule of compliance for CA
- ❖ Codified at 40 CFR 264.101

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Notes:

Purpose of Slide: Review the permitting authority for CA at TSDFs added by HSWA.

Key Points

- HSWA substantially expanded CA authorities for both permitted RCRA facilities and facilities operating under interim status.
- Section 3004(u) of RCRA, as amended by HSWA, requires that any permit issued to a TSDF under Section 3005(c) after November 8, 1984, address CA for releases of hazardous wastes or hazardous constituents from any solid waste management unit (SWMU) at the facility. Permits subject to CA requirements include post-closure permits and permits issued to operating hazardous waste management facilities.
- Under Section 3004(u), o/o's are required to demonstrate financial responsibility for completing the required CAs. EPA has not issued regulations on financial assurance for CA, but has provided guidance. EPA is also considering if any further tools are warranted to support program implementers addressing financial assurance requirements.
- Section 3004(u) also requires a schedule of compliance for CA.
- Section 3004(u) was codified as a regulatory requirement at 40 CFR 264.101. We will discuss financial assurance in a little more detail later in this module.

References

- CFR. 40 CFR 264.101.
- FR. 1985. 50 FR 28702. July 15.
- FR. 1987. 52 FR 45788. December 1.
- FR. 1996. Corrective Action for Releases from Solid Waste Management Units at Hazardous Waste Management Facilities; Advance Notice of Proposed Rulemaking (ANPR). 61 FR 19432. May 1.



HSWA Authorities - §3004(v)

- ❖ Requires o/o to perform CA to address releases beyond facility's boundary
- ❖ Codified in 40 CFR 264.101
- ❖ Implemented as a permit condition

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Notes:

Purpose of Slide

- Review the CA authority created under Section 3004(v) of RCRA, as amended by HSWA.

Key Points

- Section 3004(v) requires EPA to amend the CA standards for TSDFs to require CA for releases that have migrated beyond the facility boundary where necessary to protect human health and the environment, unless the o/o demonstrates to the satisfaction of EPA that, despite the o/o's best efforts (which could include paying reasonable sums of money and making reasonable communication efforts), the o/o was unable to obtain permission to undertake the required actions. An example of a situation where required actions are not able to be undertaken includes if the o/o can demonstrate that it could not obtain access to properties beyond the facility boundary to implement the chosen remedy.
- This provision applies to releases from all SWMUs, including releases to the uppermost aquifer from regulated units.
- Section 3004(v) requirements have been codified at 40 CFR 264.101.

References

- CFR. 40 CFR 264.100 and 264.101.
- FR. 1985. 50 FR 28702. July 15.
- FR. 1987. 52 FR 45788. December 1.



CA Permits

- ❖ One tool for implementing CA and achieving completion
 - Forty-three states and territories now authorized
- ❖ Provide broad regulatory authority
- ❖ EPA and states may also use “omnibus” authority to implement cleanup activities at RCRA permitted facilities

(continued)

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Notes:

Purpose of Slide: Overview RCRA CA permits.

Key Points

We will discuss other approaches for CA later in this module (for example, facility-lead agreements and post-closure mechanisms).

- CA permits are one tool for implementing CA and achieving CA completion, by EPA and authorized states. The statutory language of Section 3004(u) requires EPA to issue a RCRA permit with a schedule of compliance (if CA has not been addressed) for investigating and correcting releases rather than delay issuance of permit until cleanup has been completed. Schedules of compliance, which are enforceable components of the permit, are the primary vehicle by which EPA specifies procedural and technical requirements that the o/o's must follow to achieve compliance with their CA obligations.
- Forty-three states and territories are authorized to implement CA. In states without authorization, EPA continues to implement RCRA CA authorities. However, in many of these states (not authorized for CA), the states oversee much of the CA work through a work sharing agreement with EPA. The relationship between state cleanup programs and RCRA CA is discussed in more detail later in this module.
- EPA and states have a number of authorities under the hazardous waste program to compel o/o's to address releases of hazardous waste and hazardous constituents from SWMUs throughout the facility. The requirement found at 40 CFR 264.101 (and state equivalent requirements) specifies that o/o's: “must institute CA as necessary to protect human health and the environment for all releases...”
- HSWA created section 3005(c)(3) that requires EPA and authorized states to establish conditions in a facility's RCRA permit as needed to protect human health and the environment. Referred to as the “omnibus” authority, EPA occasionally has used this authority to implement cleanup activities at RCRA-permitted facilities. Similarly, states with authorized RCRA programs have used state omnibus authorities. For example, EPA or an authorized state could use the omnibus authority to require the o/o to investigate the release of hazardous constituents from a source that was not defined as a SWMU. This authority is codified at 40 CFR 270.32(b)(2).

References

- CFR. 40 CFR 270.32(b)(2).
- FR. 1985. 50 FR 28702. July 15.
- FR. 1987. 52 FR 45788. December 1.
- EPA. Corrective Action Web Site: Data on Authorized States. Accessed at: www.epa.gov/epawaste/hazard/correctiveaction/index (October 2009).



CA Permits

- ❖ Majority of new and operating facilities typically perform CA under permits
- ❖ CA requirements included in the permit can and should be performance-based

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Notes:

Purpose of Slide

- Continue discussion of CA permits.

Key Points

- In general, facilities seeking a new permit or active operating facilities with regulated units will generally perform CA activities under conditions included in their RCRA permit. As noted earlier, Section 3004(u) was codified in 40 CFR 264.101; however, this requirement is not prescriptive, but is performance-based.
- In regards to CA permits, remember Principle No. 3 from Module 2 - "Think Performance Standards."
- The instructor will discuss how CA requirements in permits can be performance-based; performance-based approaches are discussed further in other modules.

References

- CFR. 40 CFR 264.101.



Alternate State Cleanup Programs

- ❖ Most states are authorized to implement CA program in lieu of EPA
- ❖ States also use alternate cleanup programs and authorities to support cleanup at RCRA facilities
 - State Superfund programs (e.g., NY)
 - One Cleanup programs (e.g., WI)
 - Brownfields programs (e.g., CT)
 - Voluntary programs (e.g., IL)
 - Other programs (e.g. Regional Water Quality Boards in CA)

(continued)

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Notes:

Purpose of Slide: Overview alternate State program authority for CA at TSDFs and stress the importance of state cleanup programs.

Key Points

- Alternate State cleanup programs may play an important role for RCRA CA facilities.
- Most states and territories are authorized to implement CA. In states without authorization, EPA continues to implement RCRA CA authorities. However, in many cases, the states oversee much of the CA work through work sharing agreements with EPA although EPA continues to have enforcement authority over CA. States also use other authorities to support cleanup.
- Many states have voluntary cleanup programs (VCPs) and other alternate cleanup authorities to speed cleanup at, for example, lower risk sites that may not be subject to other authorities – and to foster redevelopment. Eligibility and procedures vary among states. Participants commonly pay oversight costs. For example, the IL Voluntary Site Remediation Program (SRP) provides remediation applicants the opportunity to receive IL EPA review, technical assistance, and no further remediation (NFR) determinations. The program is designed to be flexible and responsive to the needs of the remediation applicants; the goals and scope of actions at these sites are normally defined by the Remediation Applicants. Under the program, IL EPA issues NFR letters to the Remedial Applicants who have successfully demonstrated, through proper investigation and remedial action (when warranted), that environmental conditions at their site do not present a significant risk to human health or the environment. The NFR letter signifies a release from further responsibilities under the Illinois Environmental Protection Act.
- States will often use their alternate cleanup programs to accelerate cleanups at facilities subject to RCRA CA. For example, a RCRA facility may have 45 SWMUs identified, but only 20 SWMUs are currently subject to a CA order issued by the EPA Region. The State or owner or operator could choose to address the remaining 25 SWMUs, not covered by the order, under an alternate state cleanup mechanism instead of a RCRA permit.
- EPA and several states have entered into non-binding Memoranda of Agreement (MOA) to recognize the use of alternate cleanup programs to address CA at lower priority RCRA TSDFs.
- The use of alternate state cleanup programs is one of the tools that may be used to meet the 2020 cleanup goals.

References

- IL Environmental Protection Agency. IL Environmental Protection Agency, Bureau of Land Web Site. Information on IL Voluntary State Remediation Program. Accessed On-line at: <http://www.epa.state.il.us/land/site-remediation/index.html>.



Alternative State Cleanup Mechanisms

- ❖ States will typically have a number of cleanup mechanisms that provide varying degrees of flexibility, including:
 - Voluntary cleanup programs
 - Operating permits
 - Post-closure plans, permits, or orders
 - Compliance orders on consent
 - Unilateral compliance orders

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Notes:

Purpose of Slide

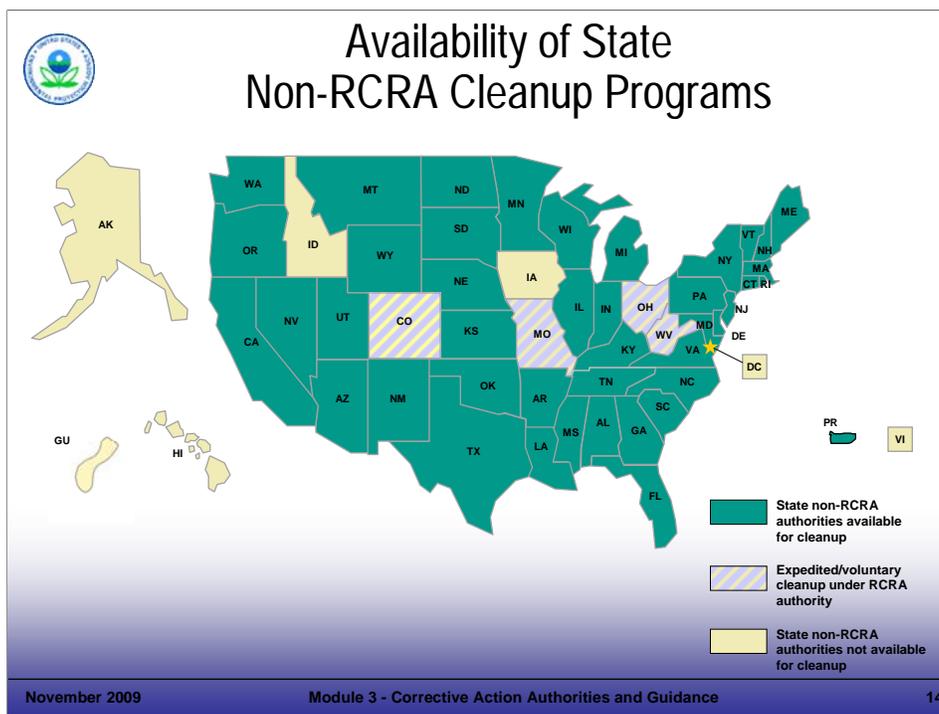
- Briefly discuss available and flexible options State programs typically have for implementing RCRA CA.

Key Points

- RCRA CA at a facility may be performed under one or a number of the mechanisms noted on this slide. Such mechanisms provide a structured, yet flexible, process for holding parties responsible for completing cleanup activities. They also ensure that a process is available to resolve any disputes that may arise during the course of the CA process. The facility benefits by having a defined process that may aid in planning, budgeting resources, obtaining insurance, and informing management of long-term commitments.
- An o/o may propose a mechanism under which it will perform the work; however, the final decision to accept that proposal or select an alternate mechanism rests with regulatory authority.
- The next slide shows a map of States that use alternate cleanup authorities at RCRA TSDFs; however, the map does not distinguish between the type of TSDFs (e.g., permitted, interim status, high priority, low priority).

References

- None.



Notes:

Purpose of Slide

- Overview of alternate State program authority for CA at TSDFs.

Key Points

- This map shows the availability of alternate state cleanup programs that may support remediation efforts at RCRA sites.
- This map is current as of October 2008.

References

- 2008. Map provided by EPA Office of Solid Waste and Emergency Response, Office of Resource Conservation and Recovery (ORCR). October.



Leveraging Compliance: Enforcement Authorities

- ❖ Section 3008(a) authorizes administrative orders and judicial actions to address non-compliance with any requirement of RCRA Subtitle C
- ❖ Subtitle C requirements include CA provisions in RCRA permit
- ❖ EPA may assess penalties for each day of violation
- ❖ State can take enforcement action under analogous state authority if authorized for CA

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Notes:

Purpose of Slide

- Overview enforcement approaches for CA.

Key Points

- Section 3008(a) authority is used to require any person that is not in compliance with the requirements of RCRA Subtitle C to take steps immediately or within a stated time period (that is, a schedule) to return to compliance.
- Subtitle C requirements include CA provisions in RCRA permits.
- The order can contain penalty provisions up to \$32,500 per day per violation and can suspend or revoke a facility's permit or interim status. When EPA issues a compliance order, the person issued the order can request an administrative hearing on the factual provisions of the order. If no hearing is requested, the order becomes final 30 days after it is issued.
- Section 3008(a) is Federal, but states have comparable authorities. EPA would look to the state to take enforcement action for non-compliance with CA requirements in a permit if the state is authorized for CA.

References

- CFR. 40 CFR 261.3.
- EPA. 1984. Issuance of Administrative Orders under Section 3013 of RCRA. September 26.
- EPA. 1997. Guidance on the Use of Section 7003 of RCRA. October 20.
- EPA. 2005. Model RCRA Section 7003 Administrative Order on Consent. October 28.



Summary of Mechanisms

- ❖ Agreements
 - Permits
 - Consent orders
 - Voluntary actions
- ❖ Unilateral actions (administrative and judicial)
- ❖ Enforcement for non-compliance

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Notes:

Purpose of Slide

- Summarize the key points of the first half of the module.

Key Points

- A variety of mechanisms are available to achieve CA.
- A Regional representative will speak to mechanisms and approaches used in your area.

References

- None.



Presentation/Discussion



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Notes:

Purpose of Slide

- Provide a place for Headquarters and Region/State discussion on current priorities and programs to support meeting 2020 goals.

Key Points

- An EPA representative will speak to mechanisms and approaches used in this area on a national and Regional perspective.

References

- None.



Use of RCRA 3013 and 7003 and CERCLA 106 Authorities

- ❖ RCRA Section 7003 & CERCLA Section 106
 - Both may be used to address *potential* imminent and substantial endangerment situations
 - Pros and cons to using each authority
 - Have been used individually and jointly at RCRA facilities
 - Region 9 recently issued a joint RCRA 7003/CERCLA 106 order
- ❖ RCRA Section 3013 has been used to address facilities not making progress under a facility-lead approach

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Notes:

Purpose of Slide

- Discuss use of RCRA Section 3013 and 7003 and CERCLA Section 106 authorities to help meet CA goals.

Key Points

- Region 1 has used a facility-lead approach to achieve CA goals at many RCRA facilities.
- At facilities that were not making adequate progress under the facility-lead approach, Region 1 issued RCRA Section 3013 orders to require these facilities to complete key CA activities (*e.g.*, completing RCRA Facility Investigations, preparing and submitting interim measures work plans).
- RCRA Section 7003 and CERCLA Section 106 have similar language about addressing *potential* imminent and substantial endangerment situations (RCRA Section 7003 states "...may present an imminent and substantial endangerment..." and CERCLA Section 106 states "...may be an imminent and substantial endangerment...").
- As stated in the 1997 "Guidance on the Use of Section 7003 of RCRA", there are advantages and disadvantages of using RCRA Section 7003 vis-à-vis CERCLA Section 106 authorities.
- RCRA Section 7003 and CERCLA Section 106 authorities have been used individually and jointly to help further CA goals.
- In December 2008, Region 9 issued a RCRA Section 7003/CERCLA Section 106 unilateral administrative order to a RCRA facility where wood treatment operations resulted in ground water and soil contamination.
- The order required various CA-related activities to characterize and stabilize the contamination.

References

- EPA. 1997. Guidance on the Use of Section 7003 of RCRA. October 20.



Use of RCRA 3008(h) Authority

- ❖ RCRA § 3008(h) is used in a variety of ways
 - Most follow 1993 model consent order
 - Some Regions have issued streamlined orders
- ❖ RCRA § 3008(h) is the most commonly used CA enforcement authority
 - Region 7 issued a § 3008(h) order with performance standards and included requirements that the Agency would impose remedy if performance standards not met.

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Notes:

Purpose of Slide

- Discuss use of RCRA Section 3008(h) to help meet CA goals.

Key Points

- RCRA Section 3008(h) is the most commonly used enforcement authority to achieve CA goals.
- Most of the RCRA § 3008(h) orders follow the "Final RCRA Section 3008(h) Model Consent Order."
- However, several Regions have issued streamlined RCRA § 3008(h) orders that are designed to achieve CA goals faster, but are still enforceable and protective of human health and the environment.
- Region 7 issued a RCRA § 3008(h) order that included a performance standard approach to control groundwater contamination.
- The order also included a provision that the Region would impose a remedy if the respondent did not meet the performance standard included in the order.

References

- EPA. 1993. Final RCRA Section 3008(h) Model Consent Order OSWER Directive #9902.5A. December 15.



RCRA CA Cleanup Reforms and Guidance

- ❖ This part of the module reviews EPA policy and guidance to support CA results, including:
 - RCRA Cleanup Reforms and Goals
 - Results-Based Guidance for CA
 - Public Participation
 - Financial Assurance

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Notes:

Purpose of Slide

- This part of the module reviews how EPA has integrated an emphasis on results into RCRA CA program guidance.

Key Points

- The first part of this module served to review the statutory and regulatory authorities and mechanisms that regulators use to implement CA at RCRA facilities. While these statutes and regulatory authorities provide EPA and states the means for CA, the end is the key. With that in mind, EPA has prepared many guidance and policy statements over the years; this second part of Module 3 examines RCRA reforms and results-based guidance for implementing CA.
- In addition, this module reminds participants of the public involvement requirements of RCRA CA and the important role that public involvement plays in successfully achieving RCRA CA progress.
- Financial assurance requirements are also reviewed.
- Regulations and state programs provide the means; the end is a protective cleanup. As long as the site is being addressed adequately, as required by RCRA, neither the authority used nor the agency overseeing the cleanup is important. The various authorities allow implementers to be flexible and creative in administering CA.

References

- None.



RCRA Cleanup Reforms

- ❖ 1999 Cleanup Reforms
- ❖ 2001 Cleanup Reforms

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Notes:

Purpose of Slide

- Introduce the background and purpose of the RCRA Cleanup Reforms.

Key Points

- In response to the Government Performance and Results Act of 1993 (GPRA), EPA established national goals for the RCRA CA program. GPRA holds federal agencies accountable for using resources wisely; it requires federal agencies to establish strategic plans and methods to measure the performance of the programs they administer.
- Partly in response to GPRA, EPA introduced the RCRA Cleanup Reforms in 1999. These initial reforms were EPA's comprehensive effort to address key impediments to cleanup at RCRA facilities, maximize program flexibility, and spur progress toward the national cleanup goals established for GPRA. The reforms are designed to achieve faster, more efficient cleanup at RCRA CA sites.
- In 2001, EPA implemented a second round of reforms. The 2001 Reforms reflected ideas and comments that EPA obtained from implementers and stakeholders involved in the RCRA CA Program.

References

- EPA. Web site link to GRPA Guidance. Accessed On-line at: <http://www.epa.gov/ocfo/planning/gpra.htm>.
- EPA. 1999. RCRA Cleanup Reforms. EPA 530-F-99-018 (Fact Sheet #1). July.
- EPA. 2001. RCRA Cleanup Reforms 2. EPA 530-F-01-001 (Fact Sheet #2). January.



Goals of the 1999 RCRA Cleanup Reforms

- ❖ Provide results-oriented guidance with clear objectives
- ❖ Foster practical approaches
- ❖ Enhance community involvement

(continued)

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Notes:

Purpose of Slide

- Discuss specific objectives and goals of the RCRA Cleanup Reforms.

Key Points

- Both the 1999 and 2001 RCRA Cleanup Reforms included the following goals:
 - Provide new results-oriented guidance with clear objectives. We will discuss examples of this guidance later in this module.
 - Foster practical approaches through training, outreach, and new uses of enforcement tools.
 - Enhance community involvement. EPA's reforms include a focus on providing public access to information on cleanup progress.
- Currently, as well as in the past, EPA has provided national and regional training to explain and foster the use of practical and results-oriented approaches for implementing RCRA CA.

References

- EPA. 1999. RCRA Cleanup Reforms. EPA 530-F-99-018 (Fact Sheet #1). July.
- EPA. 2001. RCRA Cleanup Reforms 2. EPA 530-F-01-001 (Fact Sheet #2). January.
- EPA. 1999. RCRA CA Workshop on Results-Based Project Management. June 10. Accessed On-line at: <http://www.epa.gov/osw/hazard/correctiveaction/workshop/>.



Goals of the 2001 Cleanup Reforms

- ❖ Pilot innovative approaches
- ❖ Promote cultural change
- ❖ Provide more effective access to cleanup information
- ❖ Encourage implementers and stakeholders to capitalize on redevelopment potential

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Notes:

Purpose of Slide

- Highlight additional goals and activities identified in the 2001 RCRA Cleanup Reforms.

Key Points

- The 2001 Reforms built on the 1999 Reforms and focused specifically on:
 - Piloting innovative approaches implemented by EPA regions and states, such as using innovative site characterization technologies and applying state cleanup programs, where appropriate, to achieve national goals.
 - Moving toward a culture of implementation by focusing on results, and not process, and by encouraging partnerships and increased dialogue between implementers and stakeholders.
 - Providing the public with better access to cleanup information, such as increasing support of Technical Outreach Services to Communities (TOSC) and posting information on the web.
 - Encouraging redevelopment and reuse of RCRA sites. Module 6 will discuss RCRA CA and Land Revitalization in greater detail – including, EPA's efforts and resources to support the incorporation of redevelopment and land reuse in RCRA CA cleanups.

References

- EPA. 2001. RCRA Cleanup Reforms 2. EPA 530-F-01-001 (Fact Sheet #2). January.



Primary EPA Guidance for RCRA CA

- ❖ The 1990 proposed Subpart S Rule (most of this rule was withdrawn by EPA in 1999)
- ❖ The 1996 Advance Notice of Proposed Rulemaking (ANPR) serves as the primary guidance for RCRA CA

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Notes:

Purpose of Slide: Identify EPA's primary guidance for implementing RCRA CA.

Key Points

While the goals of the Cleanup Reforms focus on fostering practical approaches and cultural change, RCRA CA guidance supporting these approaches has been in place for many years. The primary guidance includes the following:

- On July 27, 1990, EPA proposed new CA regulations (known as the Subpart S Rule) designed to help with implementation of a comprehensive regulatory framework for the CA statutory authorities under Sections 3004(u) and 3004(v). The Subpart S Rule was developed by EPA in response to HSWA and provided a comprehensive CA program (40 CFR 264 Subpart S [55 FR 30798, July 27, 1990]). Subpart S CA was to apply to releases to any media from any SWMU at a TSDF. CA requirements under the proposed Subpart S Rule were imposed through permit conditions or, for interim status facilities, through a RCRA Section 3008(h) order.
- In 1996, EPA issued its Advance Notice of Proposed Rulemaking (ANPR) related to RCRA CA requirements for releases from SWMUs at hazardous waste management facilities.
- On October 7, 1999, as part of the RCRA Cleanup Reforms, EPA withdrew most provisions of the July 27, 1990, Proposed Subpart S Rule. EPA took this action because it determined that the existing regulations and guidance allow the Agency and states to implement a CA program that is protective of human health and the environment. While most provisions of the rule were withdrawn, the Corrective Action Management Unit (CAMU) and temporary unit (TU) regulations that had been finalized earlier, remain in effect.
- The end result of EPA's withdrawal of the Proposed Subpart S Rule is that the May 1, 1996, ANPR provides the primary guidance for the RCRA CA program.
- EPA does not currently anticipate issuing federal regulations for implementing the RCRA CA Program. However, if information becomes available to indicate that regulation may be appropriate for certain aspects of CA, EPA will consider issuing such regulations.

References

- EPA. 1999. Environmental Fact Sheet: EPA Discontinues Action on 1990 Subpart S Proposal. EPA 530-F-99-042. October.
- FR. 1990. Corrective Action for Solid Waste Management Units at Hazardous Waste Management Facilities; Proposed Rule. 55 FR 30798. July 27.
- FR. 1996. ANPR. 61 FR 19432. May 1.
- FR. 1999. Withdrawal of Subpart S Proposed Rule. 64 FR 54604. October 7.



Results-Based Approaches to CA

- ❖ Encourages technical and administrative innovation to achieve cleanups
- ❖ Emphasizes outcomes and results in cleanups rather than the process used
- ❖ Offers benefits that include:
 - Greater focus on end goals
 - Faster results
 - Fewer resources used

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Notes:

Purpose of Slide

- Introduce and discuss EPA's results-based approaches to CA.

Key Points

- To provide guidance supporting the cleanup reforms, in September 2003, EPA issued Results-Based Approaches and Tailored Oversight Guidance to provide a framework for implementers to run programs that most effectively use available RCRA CA cleanup tools and private party resources to address environmental problems.
- The results-based approaches identified in the guidance reflect the collective experience of EPA and the states in implementing RCRA CA and other cleanup programs. The approaches are intended to help program implementers without placing an undue focus on the detailed procedures and steps originally established in earlier EPA guidance and in the Proposed Subpart S Rule (which has since been withdrawn).
- A key to the results-based approaches to CA is that program implementers consider practical approaches to achieve environmental results without necessarily following rigid administrative procedures. Benefits can include a greater focus on end goals, faster results, and fewer resources used.

References

- EPA. 2003. Results-Based Approaches and Tailored Oversight Guidance for Facilities Subject to Corrective Action under Subtitle C of the Resource Conservation and Recovery Act. EPA 530-R-03-012. September.



Overarching Approaches to Results-Based CA

- ❖ Establish tailored oversight for each facility
- ❖ Use a holistic approach to address environmental problems at the facility
- ❖ Develop performance standards for the o/o to achieve
- ❖ Tailor data gathering strategies to the purpose for which data will be used

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Notes:

Purpose of Slide

- Provide more detail on EPA's results-based approaches to CA.

Key Points

- Tailored oversight refers to an oversight plan that is developed cooperatively by the Project Manager and the o/o. It considers facility-specific conditions such as site complexity, compliance history, and the financial and technical capability of the o/o.
- A holistic approach emphasizes that implementers examine the overall conditions at a facility and prioritize and address environmental problems based on overall risk, rather than focusing on the cleanup of individual SWMUs or other units. Implementers need to focus on overall environmental results rather than following a rigid set of procedural steps to ensure that RCRA CA activity directly supports cleanup goals at a site.
- It is also recommended that the regulatory agency and the o/o work to develop performance standards that prescribe the scientific, technical, and administrative requirements that the o/o must fulfill to complete RCRA CA.
- Data gathered should support the selection and implementation of appropriate responses at the facility, such as data required to evaluate the status of environmental indicators (EIs). EIs are discussed further later in this module.
- Data Quality Objectives (DQOs), rather than a pre-determined set of sampling requirements, should guide the determination of data needs and quality.

References

- EPA. 2003. Results-Based Approaches and Tailored Oversight Guidance for Facilities Subject to Corrective Action under Subtitle C of the Resource Conservation and Recovery Act. EPA 530-R-03-012. September.



Supplemental Approaches to Results-Based CA

- ❖ Use presumptive remedies
- ❖ Incorporate innovative technologies and approaches, where appropriate
- ❖ Phase CA to achieve greater efficiency
- ❖ Expedite cleanups using facility-lead agreements
- ❖ Coordinate post-closure and facility-wide CA

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Notes:

Purpose of Slide: Discuss supplemental approaches identified in EPA guidance.

Key Points

- EPA has developed presumptive remedies under the Superfund program to streamline cleanups and these should be considered as potential remedies at appropriate RCRA CA facilities. Using presumptive remedies is an effective way to tailor CA oversight to individual facilities through the use of EPA and the states' collective experience in implementing these remedies at other sites. Information regarding presumptive remedy policies and procedures can be found on the EPA Superfund Web site (see references below).
- Where presumptive remedies are not available or appropriate, regulatory agencies and o/o's should consider innovative technologies that offer comparable or superior treatment performance, fewer adverse impacts, and lower costs for acceptable levels of performance compared to conventional technologies.
- O/o's should also consider phased approaches that focus on areas that pose the greatest near-term threat to human health and the environment. Moreover, o/o's should focus on RCRA CA activities that achieve EIs and subsequently develop remediation time frames for achieving final cleanup goals. A phased approach may be particularly useful where the o/o wants to redevelop, reuse, or sell part of the property.
- Facility-lead agreements are a tool and, where appropriate, should be considered at facilities in advance of issuing a permit or order requiring CA. Facility-lead agreements are discussed in more detail elsewhere in this module and in other modules included in this training program.
- Where facilities have post-closure requirements for hazardous waste management units, regulatory agencies and o/o's should seek to coordinate those requirements with facility-wide CA where appropriate.

References

- EPA. 2003. Results-Based Approaches and Tailored Oversight Guidance for Facilities Subject to Corrective Action under Subtitle C of the Resource Conservation and Recovery Act. EPA 530-R-03-012. September.
- EPA. 1996. Guidance on Coordination Between RCRA CA, Closure, and CERCLA Site Activities. September 24.
- EPA. Superfund Web site: Presumptive Remedies Policies and Procedures. Accessed On-line at: <http://www.epa.gov/superfund/policy/remedy/presump/pol.htm>



Additional Tools

- ❖ Environmental Indicators (EIs)
- ❖ Coordination between RCRA CA, RCRA Closure and CERCLA Site Activities
- ❖ Risk-Based Clean Closure

(continued)

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Notes:

Purpose of Slide

- This slide and the next one, identify additional guidance issued by EPA on implementation of RCRA CA authorities. We'll discuss some of these in this module and discuss others in later modules.

Key Points

- At the close of Module 2, we briefly introduced EIs. In 1994, EPA established two EIs as measures for CA to help site decision-makers focus on cleanup outcomes rather than the administrative processes. On February 5, 1999, EPA issued updated guidance for evaluating sites to determine whether they met the two EIs. The EIs focus on (1) documenting that current human exposures are controlled and (2) evaluating if the migration of contaminated groundwater has been controlled.
- On September 24, 1996, EPA issued guidance to address coordination between RCRA CA, RCRA closure, and CERCLA site activities. This guidance focuses on: (1) acceptance of decisions made by other remedial programs; (2) deferral of activities and coordination among RCRA, CERCLA, and state and tribal cleanup programs; and (3) coordination of standards and administrative requirements for closure with other cleanup efforts. This policy reiterated the general principle that RCRA and CERCLA cleanups will achieve similar environmental results and therefore, cleanups under one program will be acceptable to the other program.
- On March 16, 1998, EPA issued a memorandum that provided guidance on risk-based clean closure, and confirmed that RCRA-regulated units may be clean-closed to protective, risk-based, media cleanup levels.

References

- EPA. 1987. Memorandum from J. Winston Porter, Assistant Administrator OSWER to Regional Administrators. "RCRA Permit Requirements for State Superfund Actions." November 16.
- EPA. 1994. Memorandum from Michael Shapiro, Director OSW to Regional Waste Management Division Directors. "RCRIS Corrective Action Environmental Indicator Codes CA 725 and CA 750." July 29.
- EPA. 1995. Memorandum from Susan Parker, Corrective Action Program Branch Chief to Regional Corrective Action Contacts. "Environmental Indicator Fact Sheet." July 26.
- EPA. 1999. Interim Final. RCRA Corrective Action EI RCRA Code (CA725) and Current Human Exposures Under Control and (CA750) Groundwater Migration Controlled. February 5.
- EPA. 1996. Guidance on Coordination Between RCRA CA, Closure, and CERCLA Site Activities. September 24.
- EPA. 1998. Memorandum from Elizabeth Cotsworth, Acting Director Office of Solid Waste to RCRA Senior Policy Advisors and Regions I-X. Risk-Based Clean Closure Guidance. March 16.



Additional Guidance

- ❖ Public Participation
- ❖ Financial Assurance
- ❖ Handbook of Groundwater Protection and Cleanup Policies for RCRA CA
- ❖ Managing Remediation Waste (Module 9)
- ❖ CA Completion (Module 12)

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Notes:

Purpose of Slide: Identify additional guidance issued by EPA on the implementation of RCRA CA authorities. The following slides discuss public participation, financial assurance, and the Handbook of Groundwater Protection and Cleanup Policies for RCRA CA in more detail, while the other guidance is discussed in later modules.

Key Points

- EPA's overall public participation policy calls for meaningful public involvement in all EPA programs.
- Under Section 3004(u), o/o's are required to demonstrate financial responsibility for completing the required CA. EPA has not issued regulations on financial assurance for CA, but has provided guidance. EPA is also considering if any further tools are warranted to support program implementers addressing financial assurance requirements; two meetings of the 2020 work group were dedicated to this issue. (Note: this training course will be modified to include new guidance if it is issued).
- In 2001, EPA issued the Handbook of Groundwater Protection and Cleanup Policies for RCRA CA that integrates 15 topics into an overall Groundwater Protection and Cleanup Strategy that emphasizes a phased, results-based approach to cleaning up contaminated groundwater. In 2004, EPA issued an updated Handbook. Topics addressed in the Handbook are discussed in more detail in subsequent slides in this module and in subsequent modules.
- On October 14, 1998, EPA issued guidance that consolidated and explained existing statutes, regulations, policies, and guidance that can be used to tailor the RCRA hazardous waste requirements for application to remediation wastes. Examples of the 18 approaches addressed in this guidance include: the area of contamination policy, permit waivers, the "contained-in" policy, and LDR treatment variances. Additional detail on the management of remediation waste at RCRA CA facilities is provided in Module 9, Managing Remediation Waste.
- On February 25, 2003, EPA issued final guidance on CA completion. The purpose of this guidance is to address significant issues and procedures to determine when CA activities at a site are complete. This guidance is discussed in more detail in Module 12.

References

- EPA. 1996. RCRA Public Participation Manual. Chapter 4: Public Participation in RCRA Corrective Action under Permits and Section 3008(h) Orders. Office of Solid Waste, Permits Branch.
- EPA. 1998. Memorandum on Management of Remediation Waste. EPA 530-F-98-026. October 14.
- EPA. 2004. Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action for Facilities Subject to Corrective Action Under Subtitle C of the Resource Conservation and Recovery Act. EPA 530-R-04-030. Update. April
- FR. 2003. Final Guidance on Completion of CA Activities at RCRA Facilities. 68 FR 8757. February 25.
- EPA. 2003. Interim Guidance on Financial Responsibility for Facilities Subject to RCRA Corrective Action. September 30.



Public Participation During RCRA CA

- ❖ Begin early
- ❖ Identify, communicate, and listen
- ❖ Involve stakeholders throughout decision process
- ❖ Develop options
- ❖ Design site-specific programs

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Notes:

Purpose of Slide

- Convey general EPA public involvement principles.

Key Points

- The fundamental premise of EPA's public participation policy is meaningful public involvement in all EPA programs and that EPA consistently looks for new ways to enhance public input. EPA seeks input reflecting all points of view and should carefully consider this input when making decisions. EPA also works to ensure that decision-making processes are open and accessible to all interested groups, including those with limited financial and technical resources, English proficiency, and/or past experience participating in environmental decision-making. Such openness to the public increases EPA's credibility, improves the Agency's decision-making processes, and supports the Agency's final decisions. EPA's principles for public participation call for the following:
 - EPA should involve the public early and often throughout the decision-making process.
 - EPA should identify, communicate with, and listen to affected sectors of the public. To do this, Agency officials should plan and conduct public involvement activities that provide equal opportunities for individuals and groups to be heard. Where appropriate, Agency officials should give extra encouragement and consider providing assistance to sectors, such as minority and low-income populations, small businesses, and local governments, to ensure that they have opportunities to be heard and, where possible, access to technical or financial resources to support their participation.
 - EPA should involve members of the public as alternatives are developed, when possible, and seek the public's opinion on alternatives before decisions are made.
 - The Agency should use public input to develop options that facilitate resolution of differing points of view.
 - EPA should make every effort to tailor public involvement programs to the complexity of the facility, potential controversy in regards to certain issues, the segments of the public affected, the time frame for decision making, and the desired outcome.
 - EPA should work in partnership with state, local and tribal governments, community groups, associations, and other organizations to enhance and promote public involvement.

References

- EPA. RCRA Corrective Action Tools and Techniques Presentation. Accessed On-line at: <http://www.epa.gov/waste/hazard/correctiveaction/curriculum/caover.htm>
- EPA. 1996. RCRA Public Participation Manual. Chapter 4: Public Participation in RCRA Corrective Action under Permits and Section 3008(h) Orders. Office of Solid Waste, Permits Branch.



Financial Assurance

- ❖ Financial assurance requirements (CFR 264.101)
- ❖ Proposed financial assurance regulations (1986)
 - Permissible instruments
 - Timing guidelines
- ❖ Subpart S proposal (1990)
 - Use 1986 proposal as guideline
- ❖ ANPR (1996)
 - Flexibility
 - Goal: Ensure remedy proceeds expeditiously
- ❖ Interim Guidance (2003)

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Notes:

Purpose of Slide

- Present an overview of financial assurance requirements and provide references on the subject.

Key Points

- CFR 264.101 codifies the statutory requirement that each "permit will contain...assurances of financial responsibility for completing ... CA."
- On October 24, 1986, the Agency proposed detailed regulations for financial assurance for CA. (51 Federal Register (FR) 37854). The proposed rule was not finalized. The 1986 proposed rule provided permissible instruments to demonstrate financial assurance for CA and guidelines on critical issues (such as, the timing of financial assurance for CA).
- In the July 27, 1990 Subpart S proposal, the Agency stated its intent to use the 1986 proposed regulations as general guidelines for financial assurance for CA (55 FR 30798, page 30801).
- In the 1996 Subpart S ANPR (61 FR 19432), the Agency restated its general principles for financial assurance for CA in the absence of final rules. The Agency emphasized that program implementers and facility owner/operators have the flexibility to tailor financial responsibility requirements to facility-specific circumstances (61 FR 19432, page 19454). In response to industry concerns that financial assurance requirements would divert resources from actual cleanup activities, the Agency stated that program implementers should apply financial assurance requirements flexibly and that their main goal should be to ensure that remedies proceed expeditiously (61 FR 19432, page 19455).
- The September 30, 2003, "Interim Guidance on Financial Responsibility for Facilities Subject to RCRA Corrective Action," provides additional guidance on the timing of financial assurance, cost-estimating, and available financial assurance mechanisms.

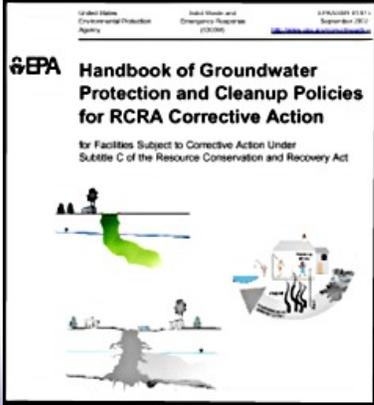
References

- FR. ANPR. 61 FR 19432. Page 19455. May 1.
- FR. 1990. Proposed Rule: Allowable Mechanisms. 55 FR 30799 (at 30856). July 27.
- EPA. 2003. Interim Guidance on Financial Responsibility for Facilities Subject to RCRA Corrective Action. Transmitted on September 30.



Handbook of Groundwater Protection and Cleanup Policies

- ❖ Comprehensive list of EPA policies on protecting and cleaning up groundwater at RCRA CA facilities
- ❖ Provides examples to illustrate application of policies



(continued)

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Notes:

Purpose of Slide

- Discuss EPA's Handbook of Groundwater Protection and Cleanup Policies.

Key Points

- The Handbook is designed to assist the regulator, the regulated community, and the public in finding and understanding EPA policies concerning groundwater protection and cleanup at RCRA facilities.
- The Handbook reflects EPA's latest thinking on groundwater policies and is a "living" document that is updated by adding new topics and new policies, by integrating changing policies or by clarifying existing policies. Examples are included to illustrate the application of principles discussed in the manual.

References

- EPA. 2004. Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action for Facilities Subject to Corrective Action Under Subtitle C of the Resource Conservation and Recovery Act. EPA 530-R-04-030. Update. April.



Summary

- ❖ States and EPA have several statutory and regulatory authorities for CA.
- ❖ The authorities, regulations, policies, and guidance provide the framework—a protective cleanup is the end goal.
- ❖ Implementers should use judgment in crafting the best, most practical approach for a site to achieve compliance with CA obligations.

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Notes:

Purpose of Slide

- Summarize the key points of this module.

Key Points

- EPA and authorized states have a number of authorities under the hazardous waste program to implement RCRA CA at permitted and interim status facilities.
- Authorities, regulations, guidance, and state programs provide the means; the end is a protective cleanup. As long as the site is being addressed adequately, as required by RCRA, neither the authority used nor the agency overseeing the cleanup is important. The various authorities allow implementers to be flexible and creative in administering CA.
- Implementers should use judgment in crafting the best approach for a site to achieve compliance with CA obligations, implement a protective remedy, and meet CA goals.

References

- None.