



## Area of Contamination and Corrective Action Management Units Compendium

October 2024

### Supporting Memos, Regulations, and Policies

EPA 530-F-24-018

Area of Contamination Definition: EPA interprets the Resource Conservation and Recovery Act to allow certain discrete areas of generally dispersed contamination to be considered RCRA units. Therefore, consolidation of material within an AOC and treatment of material, in situ, within an AOC does not create a point of hazardous waste generation for purposes of RCRA.

Corrective Action Management Unit Definition: An area within a facility that is used only for managing remediation wastes for implementing corrective action or cleanup at the facility.

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Federal Register Notice	<a href="#">50 FR 28702</a>	Hazardous Waste Management System; Final Codification Rule	July 15, 1985	The term solid waste management unit or ‘SWMU’ was first defined in the First Hazardous and Solid Waste Amendments Codification Rule, which was based on the legislative history of RCRA Section 3004(u).2.  “Any unit at the facility from which hazardous constituents might migrate, irrespective of whether the units were intended for the management of solid and/or hazardous wastes.”
Federal Register Notice	<a href="#">52 FR 45788</a>	Hazardous Waste; Codification Rule for the 1985 RCRA Amendments	December 1, 1987	This rule codifies further changes to the existing regulations which implement the HSWA provisions relating to corrective action and permitting for RCRA facilities. This rule also includes provisions to implement the statutory requirements pertaining to corrective action for releases beyond the facility boundary, and to corrective action for hazardous waste injection wells. Rule codified’ the 3004(v) provision about off-site contamination.
Federal Register Notice	<a href="#">53 FR 51444</a>	Comprehensive Environmental Response, Compensation, and Liability Act National Contingency Plan Proposed Rule	December 21, 1988	The original AOC policy concept was first articulated in the NCP for public comment in this proposed rule.
Memo	<a href="#">OSWER Directive 9347.3-O5FS</a>	<i>Determining When Land Disposal Restrictions (LDRs) Are Applicable to CERCLA Response Actions,</i>	July 1989	Information on when placement does and does not occur.
Federal Register Notice	<a href="#">55 FR 8758-8760</a>	National Contingency Plan	March 8, 1990	AOC concept was discussed in detail in the preamble to the NCP. NCP also discusses using the concept of “placement” to determine which requirements might apply within an AOC. The concept of “placement” is important because placement of hazardous waste into a landfill or other land-based unit is considered land disposal, which triggers the land

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				disposal restrictions, and may trigger other RCRA requirements including permitting (at a non-CERCLA site), closure and post closure. In the NCP, EPA stated, "placement does not occur when waste is consolidated within an AOC, when it is treated in situ, or when it is left in place. Placement does occur, and additional RCRA requirements may be triggered, when wastes are moved from one AOC to another (e.g., for consolidation) or when waste is actively managed (e.g., treated ex situ) within or outside the AOC and returned to the land.
Memo	<a href="#">11503</a>	CERCLA Response Activities and the Land Disposal Restrictions Program's Applicability at Plattsburgh Air Force Base	April 6, 1990	Discussion of the applicability of the land disposal restrictions to CERCLA (ARAR). Disposal within an area of contamination is not subject to minimum technological requirements. Discussion of treatability variances at CERCLA sites.
Federal Register Notice	<a href="#">55 FR 30854</a>	Subpart S Proposed Rule (Corrective Action for Solid Waste Management Units at Hazardous Waste Management Facilities	July 27, 1990	In the preamble to the NCP revisions (published on March 8,1990), the Agency has determined that placement, and thus land disposal, of hazardous wastes does not occur when waste is moved or treated in-situ within a unit. This is particularly important for RCRA corrective action since many remedial actions are likely to involve treatment, consolidation, and capping of wastes within existing units. Wastes moved or treated within such units would not be subject to the land disposal restrictions. Placement does occur, and the land disposal restrictions apply, when waste is removed from the unit for treatment or other purposes and the waste or residuals are returned to the unit, or to a different unit.  *EPA announced its decision to withdraw most provisions of the NPRM for the 1990 Subpart S proposal published on July 27, 1990. The only exceptions to this decision relate to two jurisdictional issues and those elements of the proposed rule that were promulgated as a final rule on February 16, 1993.
Memo	<a href="#">11950</a>	Applicability of Permitting to Movement of Hazardous Waste That Does Not Constitute Land Disposal	September 5, 1990	Land disposal includes movement of hazardous waste into a unit, but not movement within the unit. Movement within the unit does not require a permit. Movement of HW within a unit that is associated with land treatment may require a treatment permit.
Memo	<a href="#">13407</a>	Subtitle C Impermeable Cap Requirement for On-Site Containment of Wood Preserving Wastes	September 26, 1990	EPA grants ARAR waiver of landfill impermeable cap requirement for waste treated to LDR variance from treatment standard. The consolidation of wastes within an AOC, not replacement unit, does not trigger minimum technological requirements (MTR).

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Memo	<a href="#">13413</a>	Contaminated Soil and Debris Treated Replacement Under a Treatability Variance	October 9, 1990	An AOC designated by the Region during RCRA corrective action is a RCRA unit. Waste is not subject to LDR, and the unit is not subject to MTR. Discusses corrective action management units (CAMUs).
Memo	<a href="#">13442</a>	Applicability of "Superfund LDR Guides"	January 7, 1991	Discusses the use of Superfund and NCP guidance at RCRA sites. The AOC, placement concept, and LDR treatability variances apply to RCRA corrective action, state, and voluntary cleanups of RCRA waste. In-situ treatment may not be placement.
Memo	<a href="#">11597</a>	Land Disposal Restrictions Applicability to Investigative Derived Waste	April 16, 1991	The temporary container storage of investigative-derived wastes within an AOC followed by disposal within the original AOC does not trigger land disposal restrictions. The movement to separate storage and/or treatment area followed by replacement may trigger treatment. A single drum is not considered a unit. Drums and land on which drums are placed may constitute container storage areas.
Memo	<a href="#">11671</a>	Clarification of the Applicability of Certain RCRA Requirements to Common Excavation-Type Activities	June 11, 1992	Excavating and redepositing hazardous soils (active management) within an AOC during trenching or other non-RCRA related construction is not generation, treatment, storage, or disposal of hazardous waste and triggers no RCRA requirements, including LDR and generator rules.
Federal Register Notice	<a href="#">58 FR 8658</a>	Corrective Action Management Unit and Temporary Units; Corrective Action Provisions Under Subtitle C	February 16, 1993	Final CAMU rule differs from the AOC approach in important respects. First, the CAMU regulations create a new type of RCRA unit - a "Corrective Action Management Unit" or "CAMU." CAMUs are distinct from the type of units listed in RCRA Section 3004(k). Second, only EPA and authorized states may choose to designate CAMUs for management of remediation waste during RCRA corrective action and other cleanups. Third, the CAMU regulations expanded the flexibility available for management of remediation wastes beyond that offered by the AOC approach. Under the CAMU regulations, certain activities which would normally be considered placement are allowed when carried out in an agency-approved CAMU, including remediation waste may be removed from a CAMU and replaced before or after treatment) in the same or a different CAMU; remediation waste may be consolidated into a CAMU before or after treatment; and, remediation waste may be moved (again, before or after treatment) between two or more CAMUs at the same facility.

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Memo	<a href="#">11948</a>	Clarification of the RCRA "Contained-In" Policy	September 15, 1995	Pursuant to the contained-in policy, environmental media that contains listed HW must be managed as HW because, and only so long as, it contains listed HW. The in-situ treatment and movement of contaminated media within an AOC is not land disposal.
Memo	<a href="#">11954</a>	Use of the Area of Contamination Concept During RCRA Cleanups	March 13, 1996	This memorandum confirms that under current regulations, certain broad areas of contamination (AOCs) may be considered RCRA landfills. Under certain conditions, hazardous wastes may be moved within such areas without triggering RCRA land disposal restrictions or minimum technology requirements. This memorandum also describes the distinctions between the final Corrective Action Management Unit (CAMU) regulations and the Area of Contamination (AOC) approach and encourages appropriate use of both options to expedite remedial actions.
Memo	<a href="#">11970</a>	Scope and Applicability of the Area of Contamination (AOC)	March 25, 1996	The letter from Lowrance to Green (RPC# 6/11/92-01) reflects the current agency area of contamination policy. Movement of media within an AOC does not trigger RCRA, including land disposal restrictions. The AOC concept can be applied in a remediation action that is not overseen by a government agency. An AOC does not shield a facility from state or federal cleanup requirements.
Memo	<a href="#">14112</a>	Permitting And Land Disposal Requirements for Management of Contaminated Soil Which Is Hazardous or Contains Hazardous Waste	November 27, 1996	Non-exempt remediation activities involving treatment of hazardous waste or media are subject to RCRA permitting even if the cleanup is under state requirements other than RCRA or CERCLA. States with permit waiver authority may waive the permit requirements for cleanups if the waiver is not used in a manner less stringent than that allowed under federal authority. If the state remediation standards are less stringent, waste must meet the LDR treatment standards before placement. The use of a corrective action management unit or area of contamination concept will not trigger LDR requirements.
Memo	<a href="#">14068</a>	Applicability of the Domestic Sewage Exclusion	March 10, 1997	The domestic sewage exclusion extends to both listed and characteristic wastes which pass through sewer system to a publicly owned treatment works (POTW). Sewage is subject to CWA and exempt from RCRA. Waste removed or leaked from a sewer line does not meet the conditions of the exemption. Releases from a sewer line could be solid waste management units (SWMUs) or areas of contamination (AOCs). The definition of facility for corrective action is dependent on site-specific factors. Releases from SWMUs at permitted facilities are addressed under Sections 3004(u) or 3004(v) authority. Non-SWMU related releases, both within and beyond the facility boundary, are addressed under Section 3005(c)(3) omnibus permitting authority; releases at interim status

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				facilities addressed under Section 3008(h) interim status corrective action orders. Domestic sewage is defined as untreated sanitary wastes that passes through a sewer system.
Federal Register Notice	<a href="#">63 FR 28620</a>	Land Disposal Restrictions Phase IV: Final Rule Promulgating Treatment Standards for Metal Wastes and Mineral Processing Wastes; Mineral Processing Secondary Materials and Bevill Exclusion Issues; Treatment Standards for Hazardous Soils, and Exclusion of Recycled Wood Preserving Wastewaters	May 26, 1998	EPA's Area of Contamination Policy provides generally that certain discrete areas of generally dispersed contamination - the AOC can be RCRA units (usually a landfill), and that consolidation and in-situ treatment conducted within the AOC do not trigger land disposal restrictions.
Memo	<a href="#">14291</a>	Management of Remediation Waste Under RCRA	October 14, 1998	<p>Consolidates existing guidance on the RCRA regulations and policies that most often affect remediation waste management.</p> <p>The main differences between CAMUs and the AOC policy (discussed above) are that, when a CAMU is used, waste may be treated ex situ and then placed in a CAMU, CAMUs may be located in uncontaminated areas at a facility, and wastes may be consolidated into CAMUs from areas that are not contiguously contaminated. None of these activities are allowed under the AOC policy, which, covers only consolidation and in situ management techniques carried out within an AOC.</p>
Federal Register Notice	<a href="#">63 FR 65874</a>	Hazardous Remediation Waste Management Requirements (HWIR-media)	November 30, 1998	<p>The AOC policy allows important flexibility for activities done within a contiguous contaminated area. For example, hazardous remediation wastes may be consolidated or treated in situ within an AOC without triggering the LDRs or MTRs. However, the AOC policy does not address the permitting issues today's rule is addressing, nor does it address LDR and MTR for wastes removed from an AOC or treated ex situ.</p> <p>Existing areas of flexibility for managing remediation waste, such as the contained-in and AOC policies, and site-specific land disposal restrictions treatability variances, continue to be available.</p>

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				<p>The AOC policy is an interpretation of the statutory RCRA term, “land disposal” (section 3004(k)). The AOC policy, first elucidated in the March 8, 1990 “National Oil and Hazardous Substances Pollution Contingency Plan (NCP, 55 FR 8758–8760),” equates dispersed areas of contamination with RCRA landfills and clarifies that hazardous wastes may be moved within the AOC without triggering LDRs. The Agency anticipates that staging piles will aid in situations in which the AOC policy does not apply.</p>
Memo	<a href="#">14504</a>	Application of Area of Contamination Policy to Remediation of Wood Treating Sites	March 19, 1999	<p>AOC policy provides that certain discrete areas of generally dispersed contamination can be considered as RCRA units (usually a landfill), and that consolidation and in-situ treatment conducted within AOC do not trigger land disposal restrictions (REFER TO ALSO: 63 FR 28620; 5/26/98). EPA believes that wood treating sites can be excellent candidates for use of AOCs.</p>
Federal Register Notice	<a href="#">67 FR 2962</a>	Amendments to the Corrective Action Management Unit Rule	January 22, 2002	<p>EPA amended the 1993 CAMU rule. First, EPA is establishing a specific definition, distinct from the definition of remediation waste, to govern the types of wastes that are eligible for placement in CAMUs. Second, the Agency is establishing more detailed minimum design and operating standards for CAMUs in which waste will remain after closure, with opportunities for Regional Administrators to approve alternate design standards under certain circumstances. Third, the Agency is establishing treatment requirements for wastes that are placed in CAMUs, including minimum treatment standards, with opportunities to adjust treatment requirements under certain circumstances. Fourth, EPA is establishing more specific information requirements for CAMU applications and is explicitly requiring that the public be given notice and a reasonable opportunity for public comment before final CAMU determinations are made. Fifth, the Agency is establishing new requirements for CAMUs that will be used only for treatment and storage. Sixth, today's rulemaking “grandfathers” certain types of existing CAMUs and allows them to continue to operate under the 1993 rule.</p> <p>Page 3016: EPA was sued on the 1993 CAMU rule shortly after its promulgation. The resulting uncertainty surrounding the viability of the CAMU rule, along with other factors such as the increased use of Areas of Contamination (AOCs) and staging piles, the introduction of the Phase IV Land Disposal Restriction (LDR) soil treatment standards, and the stabilization initiative in corrective action, led to considerably less use of CAMUs than the Agency originally anticipated.</p>

