



Environmental Guidance Regulatory Bulletin

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Corrective Action Management Units and Temporary Units

CAMU/TU Final Rule Issued

Effective Date: April 19, 1993

Introduction

The Hazardous and Solid Waste Amendments of 1984 (HSWA) established a broad new mandate for the Environmental Protection Agency (EPA) and the States to take corrective action at hazardous waste treatment, storage, and disposal facilities (TSDFs) regulated under Subtitle C of the Resource Conservation and Recovery Act (RCRA). Under RCRA Section 3004(u), permits issued to TSDFs must address corrective action for all releases from solid waste management units at the facility. Under Section 3008(h), EPA may issue administrative orders that compel corrective action at facilities authorized to operate under Section 3005(e) (interim-status facilities). Section 3004(v) established the authority for EPA to issue orders compelling permitted facilities to remediate releases that have migrated beyond the facility's boundary.

On July 27, 1990, (at 55 FR 30796-884), EPA issued a proposed rule, under Subpart S of 40 CFR Part 264, to establish a comprehensive

regulatory framework for taking corrective action at RCRA facilities under the statutory authorities noted in the previous paragraph. That proposal recognized that Subtitle C requirements (in particular, RCRA land disposal restrictions [LDRs] and minimum technology requirements [MTRs]), when applied to certain contamination scenarios and associated remedies, discouraged the use of innovative technologies and potentially more protective remedies, and limited the flexibility of regulatory decision makers to choose the most practicable remedy at a specific site. Consequently, the proposed rule formulated a different regulatory structure for performing certain site remedies and for managing associated remediation wastes. A key provision in the proposed regulatory structure would have given EPA Regional Administrators or authorized States the authority, for purposes of implementing a site remedy, to (1) designate corrective action management units (CAMUs) and (2) replace design, operating, and closure standards normally applied to waste management units with alternative standards, if the units would be temporary units (TUs).

The proposed rule defined a CAMU as "a contiguous area...contaminated by hazardous wastes" [55 FR 30874, July 27, 1990]. CAMUs could have been subject to several proposed limitations. First, a CAMU would only be designated by EPA or an authorized State, and such designations would be subject to public review and comment as part of the remedy selection process. Second, the CAMU would have been a land area, and non-land based units (such as incinerators or tanks) would not have been considered part of the CAMU. Third, remediation waste from outside the CAMU that would have



been placed within the CAMU would be subject to LDRs [55 FR 30843-44, July 27, 1990].

The preamble to the proposed Subpart S rule discussed alternatives to the proposed CAMU approach. The options would have removed several limitations the proposed rule placed on CAMUs; but EPA cited problems with these options as reasons for not adopting them [55 FR 30844, July 27, 1990].

Under the proposed rule, TUs would have been any waste management unit at the facility (except incinerators and other non-tank thermal treatment units) created to manage corrective action wastes [55 FR 30881, July 27, 1990]. TUs were to operate no longer than 180 days unless the Regional Administrator or authorized State granted an extension [55 FR 30881, July 27, 1990].

EPA received many public comments on the Subpart S proposed rule regarding corrective action. Commenters, including the U.S. Department of Energy (DOE), criticized limitations placed on CAMUs. While supporting the CAMU concept, DOE asked that EPA adopt an expanded CAMU definition that eliminated some proposed limitations in a manner similar to options EPA presented but dismissed in the preamble.¹

EPA received other comments that raised many issues not related to CAMUs or TUs and these issues must be resolved before promulgation of a final Subpart S rule. Further, EPA decided to conduct a comprehensive new regulatory impact analysis (RIA) to more thoroughly assess costs and benefits of the Subpart S proposal and to analyze regulatory alternatives for that final rule. As a result, EPA delayed promulgating the Subpart S final rule until December 1993 [57 FR 52080, November 3, 1992].

¹ EH-23 letter dated 11/23/90, Subject: Consolidated DOE Comments Submitted to the EPA Docket on the "Corrective Action for Solid Waste Management Facilities (Subpart S) Proposed Rule," 55 FR 30798, July 27, 1990.

In view of the delay in issuing the final comprehensive Subpart S rule, on October 22, 1992, EPA issued a data-availability notice [57 FR 48195] stating that remedial actions under RCRA and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) would benefit from near-term CAMU and TU availability. In that notice, EPA announced its intention to expedite promulgating the CAMU and TU portions of the Subpart S rule as a separate final rule. Also, the document titled "Supplemental Information on Corrective Action Management Units," which accompanied the notice, answered comments received on the CAMU portion of the proposed Subpart S rule by suggesting an expanded CAMU definition. This expanded option defined a CAMU so as to avoid problems that EPA cited in the proposed Subpart S rule preamble (at 55 FR 30844, July 27, 1990) regarding removing CAMU limitations. DOE strongly supported the expanded CAMU option.²

The final CAMU/TU rule, published in the *Federal Register* on February 16, 1993 [at 58 FR 8658], adopts the expanded CAMU option. *The effective date of the final CAMU/TU rule is April 19, 1993.* A description of the final rule follows.

Final CAMU/TU Rule

Under the final rule, a CAMU is no longer limited to a contiguous contaminated area. A CAMU now is defined in terms of any area the EPA Regional Administrator or authorized State designates at the facility for managing "remediation wastes," as defined by the rule [40 CFR 260.10]. The main difference between the limited CAMUs under the proposed rule and CAMUs as envisioned by the final rule is that, under the final rule, any waste generated as part of a facility's corrective action and managed within a CAMU is not subject to RCRA LDRs [58 FR 8662, February 16, 1992].

² EH-23 letter dated 11/23/92, Subject: Consolidated DOE Comments Submitted to the EPA Docket on the "Supplemental Information on Corrective Action Management Units (CAMUs) Notice," 57 FR 48195, October 22, 1992.

The final rule also makes changes to proposed TU provisions. One change narrows the applicability of TU provisions *from* any unit at the facility (except incinerators and non-tank thermal treatment units) that is used for treating or storing hazardous waste during corrective action *to* tanks and container storage areas used for treatment or storage of remediation wastes. Another change lengthens a TU's allowable operating life from the proposed 180 days to one year.

General Provisions

Under the final rule, CAMUs and TUs can be designated only to manage wastes generated at a RCRA facility as a result of taking remedial actions at that facility (i.e., "remediation wastes"). The final rule defines "remediation wastes" as follows [40 CFR 260.10]:

... all solid and hazardous wastes, and all media (including ground water, surface water, soils, and sediments) and debris, which contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements under 40 CFR 264.101 and RCRA Section 3008(h). For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed in implementing RCRA Section 3004(v) or Section 3008(h) for releases beyond the facility boundary.

For purposes of taking corrective action, a "facility" consists of "all contiguous property under the control of the owner or operator" who is seeking a permit under Subtitle C of RCRA or implementing corrective action under RCRA Section 3008(h) [40 CFR 260.10].

Because CAMUs and TUs are limited to managing remediation wastes, they cannot be used to manage wastes generated from ongoing production processes or other industrial activities (i.e., "as-generated wastes") or to manage off-site wastes brought on-site (unless the off-site wastes

resulted from cleaning up a release originating on-site) [58 FR 8664, February 16, 1993].

For DOE sites, these general provisions imply that remediation wastes generated within the boundaries of contiguous property controlled by DOE at a site, or as part of cleaning up a release which has migrated off-site, can be managed in one or more CAMUs at that site without being subject to LDRs. Details and limitations are discussed in the following sections. For purposes of this discussion, each DOE site is assumed to be a "facility," but DOE waste management personnel at each site should confirm this assumption with their EPA Region or State regulatory authority. Some DOE sites may consist of two or more "facilities" for purposes of the CAMU/TU final rule.

Implementation

DOE sites that are conducting corrective actions or plan to do so may be anxious to request the designation of CAMUs or TUs shortly after the final regulation's effective date. Normally, this is possible because EPA would immediately implement regulations issued under HSWA in all States. But this will not be true for the CAMU/TU rule.

EPA has determined that CAMU/TU regulations are less stringent than existing Federal corrective action requirements. Therefore, CAMU/TU regulations will not apply in States authorized for the existing HSWA corrective action program until the States adopt comparable provisions under their own State law. Furthermore, these States are not required to adopt the rule because it is less stringent than existing corrective action requirements. States that are not yet authorized for corrective action are not required to include the rule's provisions in their programs when they seek authorization. If any unauthorized State has adopted corrective action standards more stringent than the final CAMU/TU rule, the State standards apply. Thus, the rule takes effect immediately in (1) States that are unauthorized for the RCRA base program, and (2) States that are authorized for the RCRA base

program, but are not yet authorized for the HSWA corrective action program.

EPA has strongly urged the States to adopt the final CAMU/TU regulations because of the potential benefits. DOE waste management personnel at each site are encouraged to evaluate whether the CAMU/TU final rule will be immediately implemented in their State. It is likely that most DOE sites will have to wait for their States to act before they can seek CAMU and TU designations.

Specific Provisions - CAMUs

If a DOE site is taking corrective action in accordance with 40 CFR 264.101 (for sites with a permit) or RCRA Section 3008(h) (for interim status sites), the final rule authorizes the EPA Regional Administrator or an authorized State to designate one or more areas at the site as CAMUs, which, as was discussed previously, are to be used only for managing remediation wastes [40 CFR 264.552(a)]. If the site has a RCRA permit, CAMUs can be designated by an EPA-initiated permit modification, or by a request made by the site's waste management personnel according to procedures for an owner/operator-initiated Class 3 permit modification [40 CFR 264.552(g) and 40 CFR 270.42, Appendix I]. For interim status facilities, CAMUs can be designated only through a RCRA Section 3008(h) Order [58 FR 8672-73, February 16, 1993]. If a site already is subject to a Section 3008(h) Order, the order would have to be amended to reflect the added CAMU. While waste management personnel can confer informally with EPA or an authorized State about such orders and modifications, there is no regulatory mechanism for sites to initiate a Section 3008(h) Order or an order modification. As part of the final Subpart S rule, EPA will consider possible options that allow accelerated cleanups to proceed outside the context of an enforcement order at interim status facilities [58 FR 8673, February 16, 1993]. Until then, waste management personnel at DOE interim status sites must

await action from EPA or an authorized State under Section 3008(h) before using CAMUs.

Designating a CAMU does not change the authority of EPA or an authorized State to establish clean-up levels, determine media-specific points of compliance to be applied to a facility's remediation, or make other remedy-selection decisions [40 CFR 264.552(h)].

Placing remediation wastes into the CAMU, does not constitute land disposal of hazardous waste [40 CFR 264.552(a)(1)]. Further, consolidating or placing remediation wastes into the CAMU does not create a hazardous waste management unit subject to MTRs [40 CFR 264.552(a)(2)]. Thus, remediation wastes generated at a DOE site, but outside a CAMU, can be consolidated into the CAMU, and remediation wastes can be moved between two or more CAMUs at the site without triggering LDRs. Likewise, if remediation wastes are excavated from a CAMU, treated in a separate unit inside or outside the CAMU at the site, and redeposited into the CAMU, LDRs are not triggered because 40 CFR 264.552(a)(1) indicates that placing treated wastes into the CAMU is not land disposal. Also, MTRs do not apply to the excavated area receiving the redeposited material [40 CFR 264.552(a)(2)].

When designation of a CAMU is being considered for a DOE site, waste management personnel are required to provide enough information so the Regional Administrator or authorized State can determine that the CAMU will meet the following seven criteria [40 CFR 264.552(c)]:

- The CAMU will help implement a reliable, effective, protective, and cost-effective remedy [40 CFR 264.552(c)(1)].
- CAMU-associated waste management activities will not create unacceptable risks to humans or to the environment as a result of exposure to hazardous wastes or constituents [40 CFR 264.552(c)(2)].

- The CAMU will include uncontaminated facility areas only if doing so (to manage remediation waste) is more protective than managing such wastes at contaminated facility areas [40 CFR 264.552(c)(3)].
- Areas within the CAMU, where wastes remain after CAMU closure, will be managed and contained to minimize future releases to the extent practicable [40 CFR 264.552(c)(4)].
- The CAMU will expedite the timing of remedial activity implementation when appropriate and practicable [40 CFR 264.552(c)(5)].
- The CAMU will allow the appropriate use of treatment technologies (including innovative technologies) to enhance remedial action by reducing the toxicity, mobility, or volume of wastes that remain after CAMU closure [40 CFR 264.552(c)(6)].
- To the extent practicable, the CAMU will minimize the facility's land area upon which wastes will remain after CAMU closure [40 CFR 264.552(c)(7)].
- Requirements for remediation waste management, including specifying applicable design, operating, and closure requirements for CAMU areas to be used to treat or store remediation wastes* [40 CFR 264.552(e)(2)]. For example, if wastes were to be excavated and treated in a tank or enclosure within the CAMU, the permit or order would specify treatment technology, treatment process design and operation, disposition of treatment residuals, and associated requirements. However, if the facility permit already regulates a treatment unit which is separate from the CAMU, the CAMU provision would not have to repeat applicable requirements contained elsewhere in the permit [58 FR 8671, February 16, 1993].
- Requirements for ground water monitoring* [40 CFR 264.552(e)(3)]. Site-specific information and conditions will dictate specifications or performance standards to be delineated in the permit or order.
- Closure and post-closure requirements* [40 CFR 264.552(e)(4)]. The regulations specify criteria the Regional Administrator or authorized State will apply in determining site-specific closure and post-closure permit or order conditions.

Regional Administrators or authorized States must document their evaluation of the proposed CAMU and make the evaluation publicly available [40 CFR 264.552(f)]. Typically, this will be done in a "Statement of Basis" document accompanying a permit, permit modification, order, or order modification. A permit or order designating a CAMU must contain the following requirements [40 CFR 264.552]:

- The CAMU's areal configuration* [40 CFR 264.552(e)(1)]. EPA expects that permits and orders will use a facility map and a description of the CAMU's physical boundaries or dimensions to indicate areal configuration [58 FR 8671, February 16, 1993].

The Regional Administrator or authorized State may designate a regulated unit (either a surface impoundment, waste pile, land treatment unit, or landfill that receives hazardous waste after July 26, 1982) as a CAMU or may incorporate a regulated unit into a CAMU only if the regulated unit is closed or closing (i.e., required to begin the closure process under 40 CFR 264.113 or 265.113), and its inclusion will enhance the facility's effective, protective, and reliable remedial actions [40 CFR 264.552(b)(1)]. If a regulated unit is incorporated into a CAMU, the previously applicable RCRA Subtitle C ground water monitoring, closure and post-closure, and financial responsibility requirements will continue to

apply after its incorporation [40 CFR 264.552(b)(2)]. Including a regulated unit within a larger CAMU, however, would not subject the entire CAMU to standards applicable to the regulated unit [58 FR 8667, February 16, 1993].

Specific Provisions - TUs

The final CAMU/TU rule authorizes the EPA Regional Administrator or authorized State to designate as TUs certain tanks and container storage areas within a facility's boundaries, but not necessarily within a CAMU's boundaries. At DOE sites, the designation could be initiated by site waste management personnel as a Class 2 permit modification, by EPA or an authorized State as an agency-initiated permit modification, or as a RCRA Section 3008(h) Order or order modification [40 CFR 264.553(f)]. A TU must be used only for treating and storing remediation wastes generated at the site. Its operating time must be limited to one year or less [40 CFR 264.553(b) and (d)]. Operating time can be extended only if the Regional Administrator or authorized State determines that the unit's continued operation is needed to ensure timely and efficient remedial actions at the site and that it will not threaten human health and the environment [40 CFR 264.553(e)].

The advantage to designating tanks and container storage areas as TUs is that the EPA Regional Administrator or authorized State can replace Subtitle C design, operating, or closure standards for these areas with other requirements based on the following factors [40 CFR 264.553(a) and (c)]:

- length of time the unit will operate,
- type of unit,
- volume of wastes to be managed,
- physical and chemical characteristics of wastes to be managed,
- potential releases from the unit,

- hydrogeological and other environmental conditions at the facility that may influence migration of releases, and
- potential exposure to humans and environmental receptors if releases occur from the unit.

LDR and MTR applicability is not a concern for TUs, however, since tanks and container storage areas are non-land based units (i.e., waste managed in such units is not being land disposed). The Regional Administrator or authorized State must document rationales for choosing alternative standards for any TU and for extending a TU's operating time [40 CFR 264.553(g)].

Public Participation

EPA regulations in 40 CFR Parts 124 and 270 for TSDF permit issuance and modification prescribe the framework for public input if CAMUs or TUs are being considered at permitted facilities, or if a time extension has been proposed for operating a TU. As mentioned, CAMU designations made through the permit process will follow procedures for an agency-initiated permit modification [40 CFR 270.41] or a Class 3 permit modification [40 CFR 270.42]. Requests to approve a TU will follow procedures for Class 2 TSDF permit modifications, as will requests to approve TU operating extensions that are not addressed as part of a larger Class 3 permit modification request [58 FR 8675, February 16, 1993]. If a DOE site initiates a request, these procedures require that the site's waste-management personnel make the request publicly available and hold a public meeting [40 CFR 270.42(b) and (c)]. If the Regional Administrator or authorized State grants the request, a draft of the modified permit must be prepared and the public must be given a chance to comment [40 CFR 124.10]. If a public hearing is requested, a hearing notice must be published and EPA or authorized State will hold the hearing before taking final action [40 CFR 124.11 and 124.12].

If EPA issues an order or order modification designating a CAMU, TU, or TU time extension, a 30- to 45-day public comment period generally will be provided. This public comment period may be reduced or eliminated if the corrective action order addresses an immediate threat [58 FR 8676, February 16, 1993].

Relationship to Other Regulatory Programs

CERCLA

EPA expects CAMUs and TUs to constitute applicable or relevant and appropriate requirements (ARARs) for remediating many CERCLA sites, especially if the remediation involves managing RCRA hazardous waste. EPA anticipates that the increased flexibility offered by CAMUs and TUs will allow the agency or an authorized State to expedite protective and cost effective remedies at CERCLA sites where they are ARARs, such as at Federal facilities on the National Priorities List [58 FR 8679, February 16, 1993]. Waste management personnel at DOE sites that are CERCLA sites should investigate whether CAMU/TU final regulations will be ARARs at their sites.

State Remedial Programs

Many States have enacted remedial programs to address environmental problems that may not be regulated under RCRA or CERCLA authorities. These programs typically are conducted in a manner similar to the RCRA corrective action and CERCLA Remedial Investigation/Feasibility Study (RI/FS) processes. As a general rule, because CAMUs and TUs have been defined in terms of RCRA Subtitle C corrective actions, they can be employed only at a facility regulated under RCRA Subtitle C or at a CERCLA site where CAMU/TU regulations are determined to be ARARs. Therefore, CAMUs and TUs will not generally be applicable to remedial actions conducted at non-RCRA or non-CERCLA sites. However, some States may have enforcement authorities (comparable to RCRA Section 7003)

that provide an implied or explicit waiver from otherwise applicable State RCRA requirements. Consequently, if cleanup is being required at a non-RCRA or non-CERCLA site in one of these States, the state enforcement authority may be used to approve or designate a CAMU or TU in a manner consistent with the CAMU/TU final rule. Please note, however, that a State cannot waive applicable Federal RCRA requirements (i.e., waive LDRs to allow the consolidation of "remediation wastes" within and/or among CAMUs to facilitate clean-up activities at a facility) unless the State is authorized to implement the particular RCRA program. For example, if a State is authorized for LDRs, it may be able to waive the LDR requirements under the State law, thus allowing for the designation of CAMUs and waiver of LDR requirements for these units.

RCRA Section 7003

Under RCRA Section 7003, EPA or a State using an equivalent authority has discretionary authority to order remedial action at a site where evidence of imminent or substantial danger exists to health or the environment. This authority allows the agency to designate any appropriate mechanism, including CAMUs, to remediate the contaminated site.

RCRA Section 3004(n) Air Emission Standards

EPA does not intend to promulgate air emission standards specific to CAMUs [58 FR 8679, February 16, 1993].

Please direct questions regarding this RCRA notice on the CAMU/TU final rule to:

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