

## An Overview of the Corrective Action Management Unit and Temporary Unit Regulations

David R. Green, Argonne National Laboratory  
Lisa Corathers, Battelle Pacific Northwest Laboratory  
Jerry Coalgate, U.S. Department of Energy

Work supported by the U.S. Department of Energy, Office of Environmental Guidance under contract W-31-109-Eng-38.

### ABSTRACT

In February 1993, the U.S. Environmental Protection Agency (EPA) promulgated the corrective action management unit (CAMU) and temporary unit (TU) regulations as 40 CFR Part 264, Subpart S. These regulations are intended to foster the selection of protective and cost-effective remedies for the restoration of sites contaminated by hazardous substances, hazardous wastes, and hazardous waste constituents by removing certain regulatory impediments to implementing those remedies, most notably the those of the land disposal restrictions (LDRs). This paper provides a brief overview the CAMU and TU regulations.

### REGULATORY OVERVIEW

The Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments (HSWA), established a broad new mandate for EPA and the States to implement corrective action at hazardous waste treatment, storage, and disposal facilities (TSDFs). RCRA §3004(u) requires that permits issued to such facilities address corrective action for all releases from solid waste management units (SWMUs) at the facility and RCRA §3004(v) established the authority to compel remediation of releases that have migrated beyond a permitted facility's boundary. Under RCRA §3008(h), EPA may issue administrative orders to compel corrective action at interim status facilities. RCRA §7003 provided EPA authority to require corrective action whenever there was an imminent or substantial endangerment to health or the environment posed by a release of solid or hazardous waste

On July 27, 1990, EPA published a proposed rule under these authorities to establish 40 CFR Part 264, Subpart S, a comprehensive regulatory framework for implementing RCRA corrective action. The proposal establishes detailed technical requirements and administrative procedures for investigating and responding to releases of hazardous wastes and hazardous waste constituents at RCRA facilities. The proposed Subpart S regulations also contained two provisions, the requirements for establishing CAMUs and TUs, intended to address some of the unusual problems associated with the management of wastes generated during environmental restoration activities. Based on public comments, EPA recognized the need to revise the proposed CAMU and TU regulations and to expedite their promulgation. As a result, EPA revised the regulations and published them as a final rule on February 16, 1993 (see 58 FR 8658).

The proposed Subpart S rule was a significant step toward a comprehensive set of regulations addressing corrective action; however, EPA has not finalized the bulk of the Subpart S proposed rule (even though it is used as guidance by EPA), thus 40 CFR §264.100-101 (which essentially codified the statutory provisions) remains the governing regulation. An amendment to 40 CFR §264.101 promulgated in the CAMU and TU rule did, however, create a link between the general requirements of 40 CFR §264.101 and the specific requirements of the CAMU and TU regulations. Thus, it is necessary to make clear that until all of Subpart S is promulgated, these sections *together* are the regulations governing corrective action under RCRA §3004(u) and (v), and RCRA §3008(h).

### DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

**MASTER**

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

GH

## **DISCLAIMER**

**Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.**

## WHAT IS A CORRECTIVE ACTION MANAGEMENT UNIT?

The definition of a CAMU, found at 40 CFR §260.10, is "... *an area within a facility that is designated by the Regional Administrator under Part 264 Subpart S, for the purpose of implementing corrective action requirements under 40 CFR §264.101 and RCRA §3008(h). A CAMU shall only be used for the management of remediation wastes pursuant to implementing such corrective action requirements at the facility.*" Note that the definition does not explicitly state that a CAMU must involve land-based units (e.g., landfills, waste piles); this is however implied, in that it is most likely that a CAMU used to manage remediation wastes would be some form of land-based unit.

In some cases, land-based waste management activities within a CAMU that may otherwise be subject to unit-specific standards under 40 CFR Parts 264 or 265 may be incorporated into a CAMU rather than remaining a distinct and separate unit. For example, wastes are often excavated and staged in piles before being transported to a treatment unit. Under the approach outlined by EPA, the area where the wastes are piled would not be considered a separate "waste pile" unit for RCRA purposes. In this case the RA would specify technical standards for that area of the CAMU (e.g., liners, wind dispersion controls, closure requirements) according to the decision criteria in 40 CFR §264.552(c). Similarly, areas of a CAMU could also be used for land-based treatment processes, such as bioremediation systems that involve structures or equipment to maintain optimal treatment conditions.

One other significant change was that under the proposed regulations a non-land-based unit could not be physically located within the boundaries of a CAMU. However, this requirement was changed in the final regulations. Now a non-land-based unit (e.g., a tank) can be located within the boundaries of a CAMU, but that unit will not actually be a part of the CAMU; it would maintain its separate regulatory identity, and *all* applicable Subtitle C requirements (e.g., design and operation requirements under 40 CFR §264, the LDR) continue to apply to that unit and to the wastes managed in that unit. This scenario, where a hazardous waste management unit lies within the boundary of a CAMU but is not a part of the CAMU, poses a significant challenge to facilities operating under such conditions. Clearly, additional waste tracking and segregation practices would be required to ensure compliance with the applicable regulations.

## WHAT IS A TEMPORARY UNIT?

Under the final regulations, a TU can only be a tank or container storage unit (so long as the unit does not require permitting under 40 CFR §264 - Subpart X) located at the facility conducting corrective action and which are used solely for the short-term treatment or storage of remediation wastes. A TU has an operational life of up to one year, with a one-year extension available at the RA's discretion. TUs can be located either inside or outside the physical boundaries of a CAMU and such location will not affect the requirements that apply to the TU; however, a TU must be located within the boundary of the facility. This requirement ensures that the regulatory agencies maintain a direct oversight of the unit and that the alternate standards specified for the unit by the RA are appropriate given the context of the site-specific assessment. Because of the narrow scope of the TU definition, TUs are used when there is a need for temporary relief from the compliance requirements of 40 CFR §264 applicable to these types of units. TUs cannot be used for the management of "as-generated wastes," cannot be any other type of unit (e.g., a waste pile, incinerator), are limited to a one-year operational life (with a single one-year extension available at the RA's discretion), and must provide the same degree of protectiveness under the alternative design, operational, or closure requirements as would be achieved by full compliance with all applicable Subtitle C requirements.

## **WHAT WASTES MAY BE MANAGED IN A CORRECTIVE ACTION MANAGEMENT UNIT OR A TEMPORARY UNIT?**

Only remediation wastes can be managed in a CAMU or TU. Remediation wastes are defined at 40 CFR §260.10 as "... *all solid and hazardous wastes, and all media (including ground water, surface water, soils and sediments) and debris that contain listed hazardous wastes, or which themselves exhibit a hazardous waste characteristic, that are managed at a facility 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 §3004(v) or RCRA §3008(h) for releases beyond the facility boundary.*" Wastes generated as part of the site investigations (e.g., drilling muds) are also considered to be remediation wastes. In addition, remediation wastes must have originated from corrective action at that facility, including those wastes generated as a result of RCRA §3004(v) or RCRA §3008(h) corrective action activities to address a release that has migrated offsite when the waste is returned directly to the facility for subsequent management. The definition of remediation waste excludes "new" or as-generated wastes (either hazardous or non-hazardous) that are generated from ongoing operations at a facility. In limiting remediation wastes to those that have "originated" from the facility, it should be made clear that this term refers to wastes that originate from remedial activities at the facility, rather than applying to the "as-generated" wastes that created the problem. For example, some facilities may have accepted wastes from offsite, and these wastes have subsequently contributed to contamination problems at the facility. Such waste would be considered remediation wastes for that facility when they are managed in the course of conducting corrective action under 40 CFR §264.101 or RCRA §3008(h). Notwithstanding the example cited above, if wastes are transported to the facility from an outside source, they would not be considered remediation waste for that facility, regardless of whether those wastes were the result of some type of remedial action conducted at another facility. Similarly, wastes that are excavated, transported to an offsite treatment facility, and returned to the facility are not remediation wastes under these regulations.

The requirement that CAMUs and TUs be used only for the management of remediation wastes is of particular importance. Only wastes that are generated as a result of implementing environmental restoration activities at a facility can be managed within a CAMU or TU. These units cannot be used to manage "as-generated" hazardous wastes; that is, those wastes generated from ongoing production processes or other industrial activities. Further, CAMUs should be limited to the management of wastes that are, or are contaminated by, listed hazardous wastes (i.e., wastes that have "F", "K", "P", or "U" hazardous waste codes). This is because it is these types of wastes that present the greatest challenge when compliance with the full range of the RCRA Subtitle C regulations, most notably the LDR, is required. EPA believes that characteristic hazardous wastes and non-hazardous solid wastes, which do not pose such a significant compliance challenge, should not be managed in a CAMU.

## **THE ADVANTAGES OF USING CORRECTIVE ACTION MANAGEMENT UNITS AND TEMPORARY UNITS IN ENVIRONMENTAL RESTORATION ACTIVITIES**

There are two advantages to the designation of a CAMU. The first is that remediation wastes generated at a facility and managed in a CAMU (subject to certain restrictions regarding offsite transportation) are not subject to the LDR. This applies to remediation wastes generated during corrective action at any location within the boundary of the facility; that is, remediation wastes may be consolidated from several locations at the facility into a single CAMU. Further, lateral expansion of an existing unit designated as a CAMU, or other activities related to the construction and operation of a new CAMU, are exempted from the minimum technology requirements (MTRs) (e.g., liners, leachate collection systems); however, as a practical matter, these design features will most likely be required by EPA or a State. The use of TUs during environmental restoration activities allows the RA set less stringent design and operating standards than otherwise required



under 40 CFR Part 264 for the temporary operation of tanks or container storage areas used to manage remediation wastes, so long as the alternative standards provide adequate protection of human health and the environment.

In addition, the use of CAMUs may reduce the cost and/or enhance the environmental effectiveness of closure of hazardous waste management units under the provisions of 40 CFR Part 264/265, Subpart G. For example, a unit that would otherwise be capped with the untreated waste left in place could be incorporated into a CAMU, the waste excavated, treated to reduce the toxicity, mobility, or volume of the contaminants, the treatment residues returned to the unit, and the unit capped, all without having to meet the burdensome requirements of the LDR. Another advantage to the use of CAMUs is that remedies selected under the CAMU alternatives would likely be more acceptable to the communities in the area surrounding the facility relative to those selected that do not include a CAMU, due to reduced reliance on incineration and/or off-site transportation and disposal. This potential for greater acceptance by the surrounding community would be of benefit not only in the context of RCRA corrective action, but extends to the evaluation of remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and to the considerations of compliance with the National Environmental Policy Act (NEPA).

### **IMPLEMENTATION AUTHORITY**

The final CAMU and TU regulations apply to interim status facilities undergoing corrective action under RCRA §3008(h) authority, as well as to permitted facilities conducting corrective action under RCRA §3004(u) and (v). Although the original proposed regulations for CAMUs did not explicitly state that CAMUs could be implemented under RCRA §3008(h) orders, EPA intends that the Subpart S regulations, when promulgated, would be implemented at interim status facilities as well as at permitted facilities. In order to clarify this point the final regulatory definition of a CAMU contains explicit reference to their use under RCRA §3008(h) orders. Further, at the EPA Regional Administrator's (RA) discretion, a CAMU or TU may be used in a response conducted under RCRA §7003 authority (i.e., imminent hazard authority) even if the response is not at a facility subject to 40 CFR Parts 264 or 265. In addition, the CAMU regulations are an applicable or relevant and appropriate requirement (ARAR) at sites being addressed under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

The CAMU and TU regulations provide the RA with the authority to designate and approve such units for the purpose of managing remediation waste. While a facility owner or operator may request designating an area as a CAMU, or may request permission to use a TU, the decision rests with the RA. Within the context of the RA's authority, there are limits which merit special mention. For example, the RA can, under 40 CFR §264.552(b), designate a "regulated unit" as a CAMU, or include a regulated unit as part of a larger CAMU. This authority does, however, have two important limitations: (1) only closed or closing units could be so designated, and (2) such a designation may only occur if doing so will enhance implementation of an effective, protective, and reliable remedy for the facility. The first limitation excludes operating regulated units, including regulated units continuing to operate under delay of closure provisions (in 40 CFR §264.113 or 40 CFR §265.113), from being eligible for designation as CAMUs because such units will continue to receive and manage "as-generated" wastes.

### **CONSIDERATIONS FOR DESIGNATING AN AREA AS A CORRECTIVE ACTION MANAGEMENT UNIT**

With the exception of the limitations discussed above, 40 CFR §264.552(c) specifies seven decision criteria applicable to CAMUs which form the basis for designating an area as a CAMU. The RA will review the

documentation supplied by the owner or operator and consider each of these decision criteria below in designating a CAMU.

#### **Decision Criterion One: Facilitation of Reliable, Effective, Protective, and Cost-Effective Remedies**

The first decision criterion [see 40 CFR §264.552(c)(1)] is that the CAMU will facilitate the implementation of a reliable, effective, protective, and cost-effective remedy. Under this criterion, a CAMU is not intended as a mechanism that will undercut the protectiveness of remedies; rather, CAMUs will facilitate the implementation of more reliable, effective, protective, and cost-effective remedies. *If an owner/operator cannot provide information to support that designating an area as a CAMU will result in remediation activities with these qualities, that area will not be designated as a CAMU.* In the preamble to the final CAMU regulations, EPA states that evaluation of this CAMU decision criterion will not necessarily require a detailed cost/benefit or other quantitative analyses to support this claim; however, this type of information as well as other protectiveness, effectiveness, reliability, and cost information would probably be necessary for the evaluation and should be provided with the submission to the RA.

#### **Decision Criterion Two: Risks During Remediation**

The second decision criterion [40 CFR §264.552(c)(2)] specifies that remediation waste management associated with CAMUs cannot create unacceptable risks to human health or the environment from exposure to hazardous wastes or hazardous waste constituents. This provision is intended to ensure that remediation waste management activities are conducted so as to control the short-term risks arising from environmental restoration activities. For example, corrective measures often involve management of large volumes of wastes that could potentially lead to exposure from windblown particulates, air emissions during excavation and transportation, or other short-term risks. Other considerations include situations where waste characteristics are such that risks to workers are high and special protective measures are required to minimize this risk. Evaluation of this criterion requires that potential short-term risks from remediation activities be carefully examined prior to, and carefully controlled during, implementation of the corrective measure. As with the first criterion, EPA will not require a quantitative risk assessment; however, quantitative assessments will generally be necessary for the evaluation.

#### **Decision Criterion Three: Uncontaminated Areas**

The third decision criterion [40 CFR §264.552(c)(3)] requires the RA ensure that any land area of a facility that is not already contaminated will be included within a CAMU *only* if remediation waste management at that area will be more protective than at already contaminated areas of the facility. Although it would generally be inadvisable to establish a CAMU in an area that was not contaminated, it will not always be possible to avoid incorporating uncontaminated areas into the CAMU. For example, small uncontaminated areas often exist within an area broadly contaminated by releases of hazardous wastes or hazardous waste constituents and to simplify the delineation of the areal extent of the CAMU, these uncontaminated areas would be included in the CAMU. Another case is that it may be appropriate to include small portions of uncontaminated land within a CAMU when remediation activity cannot be conducted on or within the contaminated area itself. For example, it might be necessary to include in a CAMU at a surface impoundment where wastes are being excavated, a small parcel of land adjacent to the impoundment where excavation equipment can be located. In those cases where uncontaminated land is included in a CAMU, the RA will generally include in the permit or order conditions requirements for the owner or operator to prevent contaminating the uncontaminated parcel during the activities conducted at the CAMU. As with the first two criteria, EPA does not require formal risk assessments or other quantitative analyses be performed; however, quantitative analyses are likely to be necessary in order to demonstrate compliance with this standard.

#### **Decision Criterion Four: Minimizing Future Releases**

The fourth decision criterion [40 CFR §264.552(c)(4)] specifies that areas within a CAMU where wastes will remain in place after closure of the CAMU are to be managed and contained so as to minimize future releases, to the extent practicable. This decision criterion closely parallels the closure provision for CAMUs, and is intended to make clear that the RA must consider *at the time of CAMU designation* whether long-term reliability and effectiveness of the remedy will be ensured through the implementation of a CAMU, particularly when it is necessary to leave wastes in place. Any CAMU recommendation by the owner or operator or designation by the RA must consider, as a primary objective, the long-term (i.e., post-closure) reliability and effectiveness of CAMU-related remediation actions.

#### **Decision Criterion Five: Timing**

The fifth decision criterion [40 CFR §264.552(c)(5)] specifies that the CAMU will expedite the timing of remedy implementation, when appropriate and practicable. The use of CAMUs is encouraged when doing so will eliminate unnecessary delays and will encourage more rapid implementation of corrective measures. However, it should be understood that CAMUs may not always result in a more rapid implementation of the corrective measure, or in complete remediation of a unit. By allowing for onsite waste management and encouraging the use of innovative technologies, the resulting corrective measures selected by the regulatory agency may take longer to complete than other options. For example, excavating all wastes and transporting them to an offsite commercial treatment or disposal facility can be accomplished quickly, but optimization of an onsite bioremediation system can take considerably longer, particularly if the system has not yet been used for a full-scale operation. Thus, as provided in the final regulations, this decision criterion only requires that a CAMU expedite remediation of the unit only when it is appropriate and practicable, in consideration of the technological limitations of the selected treatment option and other remedial objectives for the facility.

#### **Decision Criterion Six: Enhancing Long-term Effectiveness**

The sixth decision criterion [40 CFR §264.552(c)(6)] requires the use of treatment technologies to enhance the long-term effectiveness of the corrective measure by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the CAMU. Long-term reliability and protectiveness is directly tied to the effective treatment of wastes that pose future release threats. This criterion does not preclude consideration of alternatives that do not employ treatment, as long as they are capable of ensuring long term effectiveness. As a general rule, however, treatment provides greater long term effectiveness than containment, but in certain circumstances containment may be sufficiently effective. In making this evaluation, there is no preference between toxicity reduction, mobility reduction, or volume reduction.

#### **Decision Criterion Seven: Minimizing Land Areas Where Wastes Will Remain in Place**

The seventh decision criterion [40 CFR §264.552(c)(7)] requires that the designation of a CAMU minimize the land area where wastes will remain in place after closure, to the extent practicable. CAMUs, by their very nature, promote consolidation of remediation wastes into smaller, discrete areas of the facility suitable as long-term repositories for the wastes. Such units can be effectively managed and monitored over the long term. This criterion of minimizing the land area where remediation wastes will remain in place after closure of the CAMU ties in with the overall goal of achieving effective, protective remedies with long-term reliability. In addition, as a practical matter, development of the facility property (for future beneficial uses or by the owner/operator) may be less constrained if a relatively small area of the facility were dedicated to continued long-term containment of remediation wastes than if remediation wastes were managed at or near



their point of generation. This is particularly true for Federal facilities which often cover extremely large tracts of land that could be used for other purposes once the operating agency no longer needs use of the land.

## **DOCUMENTING A CORRECTIVE ACTION MANAGEMENT UNIT DESIGNATION**

Documentation of CAMU decisions is analogous to the documentation the EPA must currently make to support the selection of a RCRA corrective measure or a CERCLA remedial action. Therefore, if a CAMU is selected as part of a final remedy, such an explanation will need to be incorporated into the Statement of Basis (a document analogous to a Record of Decision (ROD)) for the permit, order, or modification to an existing permit or order to require implementation of the selected alternative or will be included in a CERCLA ROD.

In designating an area as a CAMU, the RA will review the documentation supplied by the owner/operator and consider each of the seven decision criteria discussed above. Based upon this review, in accordance with 40 CFR §264.552(f), the RA will document the rationale for designating the CAMU and will explain the basis for such designation. Such rationale will be incorporated as part of the permit or order, or in the remedy selection documentation (e.g., the ROD) for that facility, and will be available to the public. The rationale given for a CAMU decision in the supporting documentation will generally address only those criteria that are considered important to a given CAMU designation. For example, when a CAMU includes uncontaminated land on which remediation waste management will occur, the rationale supporting this inclusion will be specified. However, if remediation wastes will only be managed on contaminated land, this criterion need not be specifically addressed.

## **CONTENTS OF INFORMATION PACKAGES REQUIRED FOR DESIGNATING A CORRECTIVE ACTION MANAGEMENT UNIT**

Under 40 CFR §264.552(d), the owner/operator typically will be required to submit all the necessary information and documentation, such as the results of a RCRA Facility Investigation, Corrective Measures Study (CMS), or other site-specific analyses, for the RA to use in assessing the decision criteria discussed above. Therefore, it is in the interest of the owner/operator to ensure that the documents supplied to the RA address each of the specific decision factors in sufficient detail to allow an informed decision. Further, the facility should also consider how best to integrate the analysis of the specific criteria for selecting a corrective measure under RCRA and the criteria for CERCLA remedial actions with the documentation required for a CAMU. These analyses, while not identical, do share common elements, and careful integration of the evaluation processes may provide a significant savings in the level of effort required.

CAMU designations made through the permit process will generally be approved (or denied) according to the EPA-initiated permit modification procedures under 40 CFR §270.41, or the Class III permit modification procedures under 40 CFR §270.42. Class III permit modifications are similar to EPA-initiated modifications in terms of the amount and type of public review and comment that are provided. Typically, an EPA-initiated permit modification requires compliance with 40 CFR Part 124 provisions for public notices, comment periods, and a public meeting. Class III modifications require similar actions such as publication of a public notice, a comment period, and public meetings, if requested. In the case of a CAMU implemented through the use of a RCRA §3008(h) order, the order would generally require the same information as required in permits under 40 CFR §264.552(e). Therefore, the need to approve a CAMU early in the process (e.g., to support an interim measure or "stabilization" action) will pertain to facilities subject to RCRA §3008(h) orders, as well as permitted facilities. Thus, to implement a CAMU under an existing RCRA §3008(h) order, the order may need to be amended to reflect the addition of the CAMU.



In 40 CFR §264.552(e)(1), EPA states that the RA will specify in the permit or order the actual areal extent or configuration of the CAMU. Because permits and orders will generally identify the physical boundaries of CAMUs on a facility map, together with a specific description of the physical boundaries or dimensions of the CAMU, the owner/operator should supply this information in the documentation supplied to EPA. 40 CFR §264.552(e)(2) states that the permit or order must specify how remediation wastes will actually be managed in, or as part of, a designated CAMU, including specification of design, operating and closure requirements. For example, if wastes were to be excavated and bioremediated in an enclosure located within the CAMU, the permit or order would specify the requirements for the bioremediation technology, the design and operation of any structures used for the bioremediation process, the disposition of the treatment residuals, and other associated requirements for those wastes and the areas of the CAMU to be used in managing them. Again, it is incumbent on the owner/operator to supply this information to the RA. Under §264.552(e)(3), the permit or order must also establish the groundwater monitoring requirements for the CAMU. Because CAMUs will typically be implemented following studies to determine the extent and nature of surface and subsurface contamination, in most cases groundwater monitoring systems will already have been installed to characterize releases to groundwater. 40 CFR §264.552(e)(3) is intended to ensure that there will be a continuing responsibility for owner/operators to monitor groundwater quality in the vicinity of the CAMU to ensure that any releases of contaminants from the CAMU are detected and addressed. It is important to note that the groundwater monitoring requirements specified in the final regulations were not detailed, specific requirements and in no way addressed the numerous technical elements of installing and operating an effective groundwater monitoring system. Instead this requirement provides only a general performance standard, leaving the detailed specifications and performance standards for a groundwater monitoring program to be developed based on site-specific information and conditions, and then be specified in the permit or order. At 40 CFR §264.552(e)(4), the final regulations for CAMUs also promulgate those provisions addressing closure and post-closure requirements for CAMUs that must be incorporated in permits or orders. These requirements address the inclusion of such closure activities as excavation, removal, treatment, capping or containment of wastes, capping of areas where wastes will remain in place, and removal and decontamination of equipment, devices, and structures used for remediation waste management in the permit or order.

#### **DECISION FACTORS FOR DESIGNATING A TEMPORARY UNIT**

40 CFR §264.553(c) specifies seven decision criteria applicable to TU designations which form the basis for designating an area as a TU. The RA will review the documentation supplied and consider each of these decision criteria in designating a TU. According to 40 CFR 264.553(c), the RA shall consider the following factors in establishing standards to be applied to TUs: (1) length of time the unit will be in operation; (2) type of unit; (3) volumes of waste to be managed; (4) physical and chemical characteristics of the wastes to be managed; (5) potential for releases from the unit; (6) hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential releases; and (7) potential for exposure of humans and environmental receptors if releases were to occur from the unit. As with the request by an owner or operator to designate an area as a CAMU, the RA will typically base this decision on information supplied by the owner or operator. Thus it is incumbent on the owner or operator to supply all the necessary information to support such a designation, and to recommend the alternative design, operational, and closure standards for the TU.

#### **DOCUMENTING TEMPORARY UNITS DESIGNATIONS**

Documentation of TU decisions is analogous to the documentation required to support the selection of a corrective measure or the designation of a CAMU. Therefore, if a TU is incorporated as part of a corrective measure, an explanation would be incorporated into the Statement of Basis for a permit modification or a new or revised RCRA §3008(h) order. 40 CFR §264.553(g) of the final TU regulations requires the RA to

document the rationale for designating a TU or a time extension for a TU, and to explain the basis for such a designation. This is a new requirement and is intended to emphasize that TU decisions must be documented and explained as part of the notice and comment procedures for corrective action orders and permits.

As required under 40 CFR §264.553(d), the RA will specify requirements for TUs in the facility's operating permit or in a RCRA §3008(h) order. The requirements specified will include the design, operating, and closure requirements for such units, and will reflect the decision factors described above. This section of the permit or order will also specify a one-year time limit for operation of the TU. At the end of the specified time limit for a TU, or at the end of an extension (if granted, the extension may be for up to 1 year), the owner/operator will be required to cease management of remediation wastes in that unit and initiate the closure requirements prescribed in the permit or order. Incorporation of a TU designation into an existing permit will be conducted in accordance with the procedures for EPA-initiated permit modifications under 40 CFR §270.41, or the owner/operator of a permitted facility may request approval for a TU through a Class II permit modification. Class II owner/operator initiated permit modifications follow the procedures set forth in 40 CFR §270.42. In both cases, there are requirements for public notices, comment periods, and public meetings, if requested.

### **EXTENSIONS TO SPECIFIED OPERATING TIME LIMITS FOR TEMPORARY UNITS**

In some cases, due to unexpected circumstances, a TU may have to remain in service beyond the one-year time limit. 40 CFR §264.553(e) specifies the criteria the RA will consider prior to approving an extension to the time limit originally specified. If such an extension is requested, the RA will have to determine that continued operation of the unit will not pose a threat to human health and the environment and that continued use of the unit is necessary to ensure the timely and efficient implementation of corrective measures at the facility. Upon approval of an extension, the RA will identify the specific time limit for the extension in a modification to the permit or order. As mentioned above, 40 CFR §264.553(g) requires the RA to document the rationale for granting a time extension for a TU and to explain the basis for such designation. The rationale for such decisions will be incorporated as part of the Statement of Basis in a permit or order modification. Approval for extensions for TUs that are not addressed under a Class III permit modification or that are not part of an EPA-initiated permit modification will be processed as Class II permit modifications, subject to the somewhat less stringent requirements of 40 CFR §270.42. In cases where it is necessary or desirable to continue the waste management activity that was conducted in the TU, the owner/operator will be required to retrofit the unit to meet the applicable standards specified in 40 CFR Part 264 or Part 265 for that type of unit, arrange for an alternative unit in which to continue conducting the activity, or otherwise modify the waste management practices so that the unit is no longer used as a TU. If the owner/operator chooses to retrofit the unit, but such changes to the unit cannot be made before the end of the extension period, the owner/operator will be required to cease management of the waste until the retrofitting has been completed. Changes to TUs (e.g., retrofitting) or to other remediation waste operations at the end of the operating time limit for a TU will be subject to approval through modifications to the permit or order.

### **INTEGRATION WITH STATE LAWS AND REGULATIONS**

Under RCRA §3006, EPA may authorize States to administer and enforce the RCRA program within the State. Following authorization, EPA retains enforcement authority under RCRA §§3008, 7003, and 3013, even though authorized States have primary enforcement authority. Under RCRA §3006(g)(1) as amended by HSWA, new requirements and prohibitions imposed under HSWA authority take effect in authorized States at the same time that they take effect in unauthorized States. EPA is directed to carry out these requirements and prohibitions in authorized States, including the issuance of permits, until the State is granted authorization to do so. Since the CAMU and TU rule was promulgated pursuant to RCRA §3004(u) and (v), and RCRA

§3005(c) (i.e., interim status), all of which are HSWA provisions, EPA intends to implement the CAMU and TU provisions immediately in all States and territories in which the EPA now administers RCRA §3004(u) and (v) corrective action authorities. 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. These regulations do not, however, apply in States that are authorized for the HSWA corrective action requirements.

A complicating factor is that under RCRA §3009, States may impose more stringent or broader regulations than are included in the Federal program. Because the CAMU and TU regulations reduce regulatory requirements for certain types of waste management conducted during corrective action, EPA considers them to be less stringent than, and to reduce the scope of, the existing Federal corrective action requirements. Therefore, the CAMU and TU regulations will not apply in those States authorized for corrective action, until those States have adopted comparable provisions under their own State law. Furthermore, because the rule is less stringent than existing corrective action requirements, authorized States are under no obligation to adopt these regulations, and States not yet authorized for corrective action are not required to include these provisions in their programs when they seek authorization.

Another complicating factor is that many States have laws and programs to address environmental contamination problems that are not addressed under RCRA or CERCLA authorities. As a general rule, since CAMUs are defined as units to be used in connection with 40 CFR §264.101 or RCRA §3008(h) actions, they can be employed only at a facility regulated under Subtitle C of RCRA, or at CERCLA sites where the CAMU or TU provisions are determined to be ARARs. Therefore, sites being addressed under State laws may not be able to have an area designated as a CAMU or TU.

The point is that although the CAMU and TU provisions have been adopted by EPA, due to the specific requirements of State implementation of the Federal RCRA program, and of other State environmental laws, these provisions may not necessarily take effect. Thus, a facility may wish to designate an area as a CAMU under the Federal program in order to gain relief from some regulatory requirement (e.g., the LDR), but be prohibited from doing so under State law. It will be incumbent upon the owner/operator to determine the applicable requirements under both the Federal and State programs, assess how the use of CAMUs or TUs integrates with those requirements, and successfully demonstrate to the agencies concerned that their proposed CAMU will meet those requirements. It may be possible that the use of a CAMU or TU to gain relief from a regulatory requirement is not possible due to a conflict between Federal and State regulations.

## SUMMARY

In summary, the CAMU and TU rule finalizes provisions of the proposed Subpart S regulations for CAMUs and TUs. Both of these units function solely to manage remediation wastes that are generated at a RCRA facility during corrective action. These units cannot be used to manage "as-generated" hazardous wastes from ongoing production processes or other industrial activities. In adopting these regulations, EPA has provided added regulatory flexibility in order to expedite and improve actions to address releases of hazardous wastes or hazardous waste constituents, for example, relief from the LDR and MTR requirements for wastes managed in a CAMU. Although these regulations provide additional flexibility when selecting a corrective measure, it is extremely important to recognize that other requirements, policies, and guidelines for establishing site-specific cleanup goals and for selecting remedies under both the EPA- and State-administered programs remain in effect, and may significantly influence the usefulness of these provisions.