**Section 724.652 Corrective Action Management Units**

a) To implement remedies pursuant to Section 724.201 or RCRA section 3008(h), or to implement remedies at a permitted facility that is not subject to Section 724.201, the Agency may designate an area at the facility as a corrective action management unit pursuant to the requirements in this Section. "Corrective action management unit" or "CAMU" means an area within a facility that is used only for managing CAMU-eligible wastes for implementing corrective action or cleanup at that facility. A CAMU must be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the CAMU originated. One or more CAMUs may be designated at a facility.

1) "CAMU-eligible waste" means the following:

A) All solid and hazardous wastes, and all media (including groundwater, surface water, soils, and sediments) and debris, that are managed for implementing cleanup. As-generated wastes (either hazardous or non-hazardous) from ongoing industrial operations at a site are not CAMU-eligible wastes.

B) Wastes that would otherwise meet the description in subsection (a)(1)(A) are not CAMU-eligible waste where the following is true:

i) The wastes are hazardous waste found during cleanup in intact or substantially intact containers, tanks, or other non-land-based units found above ground, unless the wastes are first placed in the tanks, containers, or non-land-based units as part of cleanup, or the containers or tanks are excavated during the course of cleanup; or

ii) The Agency makes the determination in subsection (a)(2) to prohibit the wastes from management in a CAMU.

C) Notwithstanding subsection (a)(1)(A), where appropriate, as-generated non-hazardous waste may be placed in a CAMU where such waste is being used to facilitate treatment or the performance of the CAMU.

2) The Agency must prohibit the placement of waste in a CAMU where the Agency determines that the wastes have not been managed in compliance with applicable land disposal treatment standards of 35 Ill. Adm. Code 728, applicable unit design requirements of this Part or 35 Ill. Adm. Code 725, or other applicable requirements of this Subtitle G, and that the non-compliance likely contributed to the release of the waste.

3) Prohibition against Placing Liquids in a CAMU

A) The placement of bulk or noncontainerized liquid hazardous waste or free liquids contained in hazardous waste (whether or not sorbents have been added) in any CAMU is prohibited except where placement of such wastes facilitates the remedy selected for the waste.

B) The requirements in Section 724.414(c) for placement of containers holding free liquids in landfills apply to placement in a CAMU, except where placement facilitates the remedy selected for the waste.

C) The placement of any liquid that is not a hazardous waste in a CAMU is prohibited unless such placement facilitates the remedy selected for the waste or a demonstration is made pursuant to Section 724.414(e).

D) The absence or presence of free liquids in either a containerized or a bulk waste must be determined in accordance with Section 724.414(b). Sorbents used to treat free liquids in a CAMU must meet the requirements of Section 724.414(d).

4) Placement of CAMU-eligible wastes into or within a CAMU does not constitute land disposal of hazardous waste.

5) Consolidation or placement of CAMU-eligible wastes into or within a CAMU does not constitute creation of a unit subject to minimum technology requirements.

b) Establishing a CAMU

1) The Agency must designate a regulated unit (as defined in Section 724.190(a)(2)) as a CAMU or must incorporate a regulated unit into a CAMU, if it determines that the following is true of a regulated unit:

A) The regulated unit is closed or closing, meaning it has begun the closure process pursuant to Section 724.213 or 35 Ill. Adm. Code 725.213; and

B) Inclusion of the regulated unit will enhance implementation of effective, protective, and reliable remedial actions for the facility.

2) The Subpart F, G, and H requirements and the unit-specific requirements of this Part or 35 Ill. Adm. Code 265 that applied to the regulated unit will continue to apply to that portion of the CAMU after incorporation into the CAMU.

c) The Agency must designate a CAMU that will be used for storage or treatment only in accordance with subsection (f). The Agency must designate any other CAMU in accordance with the following requirements:

1) The CAMU must facilitate the implementation of reliable, effective, protective, and cost-effective remedies;

2) Waste management activities associated with the CAMU must not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes or hazardous constituents;

3) The CAMU must include uncontaminated areas of the facility, only if including such areas for the purpose of managing CAMU-eligible waste is more protective than management of such wastes at contaminated areas of the facility;

4) Areas within the CAMU, where wastes remain in place after closure of the CAMU, must be managed and contained so as to minimize future releases, to the extent practicable;

5) The CAMU must expedite the timing of remedial activity implementation, when appropriate and practicable;

6) The CAMU must enable the use, when appropriate, of treatment technologies (including innovative technologies) to enhance the long-term effectiveness of remedial actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the CAMU; and

7) The CAMU must, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the CAMU.

d) The owner or operator must provide sufficient information to enable the Agency to designate a CAMU in accordance with the criteria in this Section. This must include, unless not reasonably available, information on the following:

1) The origin of the waste and how it was subsequently managed (including a description of the timing and circumstances surrounding the disposal or release);

2) Whether the waste was listed or identified as hazardous at the time of disposal or release; and

3) Whether the disposal or release of the waste occurred before or after the land disposal requirements of 35 Ill. Adm. Code 728 were in effect for the waste listing or characteristic.

e) The Agency must specify, in the permit or order, requirements for the CAMU to include the following:

1) The areal configuration of the CAMU.

2) Except as provided in subsection (g), requirements for CAMU-eligible waste management to include the specification of applicable design, operation, treatment, and closure requirements.

3) Minimum Design Requirements: a CAMU, except as provided in subsection (f), into which wastes are placed must be designed in accordance with the following:

A) Unless the Agency approves alternative requirements pursuant to subsection (e)(3)(B), a CAMU that consists of new, replacement, or laterally expanded units must include a composite liner and a leachate collection system that is designed and constructed to maintain less than a 30-cm depth of leachate over the liner. For purposes of this Section, "composite liner" means a system consisting of two components; the upper component must consist of a minimum 30-mil flexible membrane liner (FML), and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1x10-7 cm/sec. FML components consisting of high density polyethylene (HDPE) must be at least 60 mil thick. The FML component must be installed in direct and uniform contact with the compacted soil component;

B) Alternative Requirements. The Agency must approve alternative requirements if it determines that either of the following is true:

i) The Agency determines that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents into the groundwater or surface water at least as effectively as the liner and leachate collection systems in subsection (e)(3)(A); or

ii) The CAMU is to be established in an area with existing significant levels of contamination, and the Agency determines that an alternative design, including a design that does not include a liner, would prevent migration from the unit that would exceed long-term remedial goals.

4) Minimum Treatment Requirements. Unless the wastes will be placed in a CAMU for storage or treatment only in accordance with subsection (f), CAMU-eligible wastes that, absent this Section, would be subject to the treatment requirements of 35 Ill. Adm. Code 728, and that the Agency determines contain principal hazardous constituents must be treated to the standards specified in subsection (e)(4)(C).

A) Principal hazardous constituents are those constituents that the Agency determines pose a risk to human health and the environment substantially higher than the cleanup levels or goals at the site.

i) In general, the Agency must designate as principal hazardous constituents those contaminants specified in subsection (e)(4)(H).

BOARD NOTE: The Board has codified 40 CFR 264.552(e)(4)(i)(A)(*1*) and (e)(4)(i)(A)(*2*) as subsections (e)(4)(H)(i) and (e)(4)(H)(ii) in order to comply with Illinois Administrative Code codification requirements.

ii) The Agency must also designate constituents as principal hazardous constituents, where appropriate, when risks to human health and the environment posed by the potential migration of constituents in wastes to groundwater are substantially higher than cleanup levels or goals at the site. When making such a designation, the Agency must consider such factors as constituent concentrations, and fate and transport characteristics under site conditions.

iii) The Agency must also designate other constituents as principal hazardous constituents that the Agency determines pose a risk to human health and the environment substantially higher than that posed by the cleanup levels or goals at the site.

B) In determining which constituents are "principal hazardous constituents", the Agency must consider all constituents that, absent this Section, would be subject to the treatment requirements in 35 Ill. Adm. Code 728.

C) Waste that the Agency determines contains principal hazardous constituents must meet treatment standards determined in accordance with subsection (e)(4)(D) or (e)(4)(E).

D) Treatment Standards for Wastes Placed in a CAMU

i) For non-metals, treatment must achieve 90 percent reduction in total principal hazardous constituent concentrations, except as provided by subsection (e)(4)(D)(iii).

ii) For metals, treatment must achieve 90 percent reduction in principal hazardous constituent concentrations as measured in leachate from the treated waste or media (tested according to the TCLP) or 90 percent reduction in total constituent concentrations (when a metal removal treatment technology is used), except as provided by subsection (e)(4)(D)(iii).

iii) When treatment of any principal hazardous constituent to a 90 percent reduction standard would result in a concentration less than ten times the Universal Treatment Standard for that constituent, treatment to achieve constituent concentrations less than 10 times the Universal Treatment Standard is not required. Universal Treatment Standards are identified in Table U to 35 Ill. Adm. Code 728.

iv) For waste exhibiting the hazardous characteristic of ignitability, corrosivity, or reactivity, the waste must also be treated to eliminate these characteristics.

v) For debris, the debris must be treated in accordance with 35 Ill. Adm. Code 728.145, or by methods or to levels established pursuant to subsections (e)(4)(D)(i) through (e)(4)(D)(iv) or subsection (e)(4)(E), whichever the Agency determines is appropriate.

vi) Alternatives to TCLP. For metal bearing wastes for which metals removal treatment is not used, the Agency must specify a leaching test other than Method 1311 (Toxicity Characteristic Leaching Procedure), in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", USEPA publication number EPA-530/SW-846, incorporated by reference in 35 Ill. Adm. Code 720.111(a) to measure treatment effectiveness, provided the Agency determines that an alternative leach testing protocol is appropriate for use, and that the alternative more accurately reflects conditions at the site that affect leaching.

E) Adjusted Standards. The Board will grant an adjusted standard pursuant to Section 28.1 of the Act to adjust the treatment level or method in subsection (e)(4)(D) to a higher or lower level, based on one or more of the following factors, as appropriate, if the owner or operator demonstrates that the adjusted level or method would adequately protect human health and the environment, based on consideration of the following:

i) The technical impracticability of treatment to the levels or by the methods in subsection (e)(4)(D);

ii) The levels or methods in subsection (e)(4)(D) would result in concentrations of principal hazardous constituents (PHCs) that are significantly above or below cleanup standards applicable to the site (established either site-specifically, or promulgated pursuant to State or federal law);

iii) The views of the affected local community on the treatment levels or methods in subsection (e)(4)(D), as applied at the site, and, for treatment levels, the treatment methods necessary to achieve these levels;

iv) The short-term risks presented by the on-site treatment method necessary to achieve the levels or treatment methods in subsection (e)(4)(D);

v) The long-term protection offered by the engineering design of the CAMU and related engineering controls under the circumstances set forth in subsection (e)(4)(I).

BOARD NOTE: The Board has codified 40 CFR 264.552(e)(4)(v)(E)(*1*) through (e)(4)(v)(E)(*5*) as subsections (e)(4)(I)(i) through (e)(4)(I)(v) in order to comply with Illinois Administrative Code codification requirements.

F) The treatment required by the treatment standards must be completed prior to, or within a reasonable time after, placement in the CAMU.

G) For the purpose of determining whether wastes placed in a CAMU have met site-specific treatment standards, the Agency must specify a subset of the principal hazardous constituents in the waste as analytical surrogates for determining whether treatment standards have been met for other principal hazardous constituents if it determines that the specification is appropriate based on the degree of difficulty of treatment and analysis of constituents with similar treatment properties.

H) Principal hazardous constituents that the Agency must designate are the following:

i) Carcinogens that pose a potential direct risk from ingestion or inhalation at the site at or above 10-3; and

ii) Non-carcinogens that pose a potential direct risk from ingestion or inhalation at the site an order of magnitude or greater over their reference dose.

I) Circumstances relating to the long-term protection offered by engineering design of the CAMU and related engineering controls are the following:

i) Where the treatment standards in subsection (e)(4)(D) are substantially met and the principal hazardous constituents in the waste or residuals are of very low mobility;

ii) Where cost-effective treatment has been used and the CAMU meets the Subtitle C liner and leachate collection requirements for new land disposal units at Section 724.401(c) and (d);

iii) Where, after review of appropriate treatment technologies, the Board determines that cost-effective treatment is not reasonably available, and the CAMU meets the Subtitle C liner and leachate collection requirements for new land disposal units at Section 724.401(c) and (d);

iv) Where cost-effective treatment has been used and the principal hazardous constituents in the treated wastes are of very low mobility; or

v) Where, after review of appropriate treatment technologies, the Board determines that cost-effective treatment is not reasonably available, the principal hazardous constituents in the wastes are of very low mobility, and either the CAMU meets or exceeds the liner standards for new, replacement, or a laterally expanded CAMU in subsections (e)(3)(A) and (e)(3)(B) or the CAMU provides substantially equivalent or greater protection.

5) Except as provided in subsection (f), requirements for groundwater monitoring and corrective action that are sufficient to do the following:

A) Continue to detect and to characterize the nature, extent, concentration, direction, and movement of existing releases of hazardous constituents in groundwater from sources located within the CAMU;

B) Detect and subsequently characterize releases of hazardous constituents to groundwater that may occur from areas of the CAMU in which wastes will remain in place after closure of the CAMU; and

C) Require notification to the Agency and corrective action as necessary to adequately protect human health and the environment for releases to groundwater from the CAMU.

6) Except as provided in subsection (f), closure and post-closure requirements, as follows:

A) Closure of corrective action management units must do the following:

i) It must minimize the need for further maintenance; and

ii) It must control, minimize, or eliminate, to the extent necessary to adequately protect human health and the environment, for areas where wastes remain in place, post-closure escape of hazardous wastes, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground, to surface waters, or to the atmosphere.

B) Requirements for closure of a CAMU must include the following, as appropriate and as deemed necessary by the Agency for a given CAMU:

i) Requirements for excavation, removal, treatment or containment of wastes; and

ii) Requirements for removal and decontamination of equipment, devices, and structures used in CAMU-eligible waste management activities within the CAMU.

C) In establishing specific closure requirements for a CAMU pursuant to this subsection (e), the Agency must consider the following factors:

i) CAMU characteristics;

ii) Volume of wastes that remain in place after closure;

iii) Potential for releases from the CAMU;

iv) Physical and chemical characteristics of the waste;

v) Hydrogeological and other relevant environmental conditions at the facility that may influence the migration of any potential or actual releases; and

vi) Potential for exposure of humans and environmental receptors if releases were to occur from the CAMU.

D) Cap Requirements

i) At final closure of the CAMU, for areas in which wastes will remain with constituent concentrations at or above remedial levels or goals applicable to the site after closure of the CAMU, the owner or operator must cover the CAMU with a final cover designed and constructed to meet the performance criteria listed in subsection (e)(6)(F) , except as provided in subsection (e)(6)(D)(ii):

BOARD NOTE: The Board has codified 40 CFR 264.552(e)(6)(iv)(A)*(1)* through (e)(6)(iv)(A)*(5)* as subsections (e)(6)(F)(i) through (e)(6)(F)(v) in order to comply with Illinois Administrative Code codification requirements.

ii) The Agency must apply cap requirements that deviate from those prescribed in subsection (e)(6)(D)(i) if it determines that the modifications are needed to facilitate treatment or the performance of the CAMU (e.g., to promote biodegradation).

E) Post-closure requirements as necessary to adequately protect human health and the environment, to include, for areas where wastes will remain in place, monitoring and maintenance activities, and the frequency with which such activities must be performed to ensure the integrity of any cap, final cover, or other containment system.

F) The final cover design and performance criteria are as follows:

i) The final cover must provide long-term minimization of migration of liquids through the closed unit;

ii) The final cover must function with minimum maintenance;

iii) The final cover must promote drainage and minimize erosion or abrasion of the cover;

iv) The final cover must accommodate settling and subsidence so that the cover's integrity is maintained; and

v) The final cover must have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

f) A CAMU used for storage or treatment only is a CAMU in which wastes will not remain after closure. Such a CAMU must be designated in accordance with all of the requirements of this Section, except as follows:

1) A CAMU that is used for storage or treatment only and that operates in accordance with the time limits established in the staging pile regulations at Section 724.654(d)(1)(C), (h), and (i) is subject to the requirements for staging piles at Section 724.654(d)(1)(A) and (d)(1)(B), (d)(2), (e), (f), (j), and (k) in lieu of the performance standards and requirements for a CAMU in subsections (c) and (e)(3) through (e)(6).

2) A CAMU that is used for storage or treatment only and that does not operate in accordance with the time limits established in the staging pile regulations at Section 724.654(d)(1)(C), (h), and (i):

A) The owner or operator must operate in accordance with a time limit, established by the Agency, that is no longer than necessary to achieve a timely remedy selected for the waste and

B) The CAMU is subject to the requirements for staging piles at Section 724.654(d)(1)(A) and (d)(1)(B), (d)(2), (e), (f), (j), and (k) in lieu of the performance standards and requirements for a CAMU in subsections (c), (e)(4), and (e)(6).

g) A CAMU into which wastes are placed where all wastes have constituent levels at or below remedial levels or goals applicable to the site do not have to comply with the requirements for liners at subsection (e)(3)(A), caps at subsection (e)(6)(D), groundwater monitoring requirements at subsection (e)(5) or, for treatment or storage-only a CAMU, the design standards at subsection (f).

h) The Agency must provide public notice and a reasonable opportunity for public comment before designating a CAMU. Such notice must include the rationale for any proposed adjustments pursuant to subsection (e)(4)(E) to the treatment standards in subsection (e)(4)(D).

i) Notwithstanding any other provision of this Section, the Agency must impose those additional requirements that it determines are necessary to adequately protect human health and the environment.

j) Incorporation of a CAMU into an existing permit must be approved by the Agency according to the procedures for Agency-initiated permit modifications pursuant to 35 Ill. Adm. Code 703.270 through 703.273, or according to the permit modification procedures of 35 Ill. Adm. Code 703.280 through 703.283.

k) The designation of a CAMU does not change the Agency's existing authority to address cleanup levels, media-specific points of compliance to be applied to remediation at a facility, or other remedy selection decisions.

(Source: Amended at 43 Ill. Reg. 5999, effective May 2, 2019)