

WAC 173-303-64660 Designation of a corrective action management

unit. (1) The department must designate a CAMU that will be used for storage and/or treatment only in accordance with subsection (4) of this section. When designating all other CAMUs, the department will do so in accordance with WAC 173-303-64650 and 173-303-64670, and the following:

(a) The CAMU will facilitate the implementation of reliable, effective, protective, and cost-effective remedies;

(b) Waste management activities associated with the CAMU will not create unacceptable risks to humans or the environment resulting from exposure to dangerous wastes or dangerous constituents;

(c) The CAMU will include uncontaminated areas of the facility only if including such areas for the purposes of managing CAMU-eligible wastes is more protective than management of such wastes at contaminated areas of the facility;

(d) Areas within the CAMU where wastes remain in place after closure of the CAMU, will be managed and contained so as to minimize future releases of dangerous wastes and dangerous constituents to the extent practicable;

(e) When appropriate and practicable, the CAMU will expedite the timing of remedial activity implementation;

(f) The CAMU will 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

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

(2) The owner/operator must provide sufficient information to enable the department to designate a CAMU in accordance with the criteria in this section. This must include, unless not reasonably available, information on:

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

(b) Whether the waste was listed or identified as dangerous at the time of disposal and/or release; and

(c) Whether the disposal and/or release of the waste occurred before or after the land disposal requirements of 40 C.F.R. part 268, which are incorporated by reference at WAC 173-303-140 (2)(a), or, if the waste is a state-only dangerous waste, the land disposal restrictions of WAC 173-303-140 (2)(b), were in effect for the waste listing, characteristic, or criterion.

(3) When designating a CAMU, the department will specify, in the permit or order, requirements for the CAMU including the following:

(a) The areal configuration of the CAMU;

(b) Except as provided in subsection (5) of this section, requirements for CAMU-eligible waste management within the CAMU including specification of applicable design, operation, treatment, and closure requirements;

(c) Minimum design requirements. CAMUs, except as provided in subsection (4) of this section, into which wastes are placed must be designed in accordance with the following:

(i) Unless the department approves alternate requirements under (c)(ii) of this subsection, CAMUs that consist 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 subsection, composite liner means a system consisting of two components; the upper component must consist of a minimum 30-mil flexible membrane liner (FML) (geomembrane), and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-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;

(ii) Alternate requirements. The department may approve alternate requirements if:

(A) The department finds that alternate design and operating practices, together with location characteristics, will prevent the migration of any dangerous constituents into the groundwater or surface water at least as effectively as the liner and leachate collection systems in (c)(i) of this subsection; or

(B) The CAMU is to be established in an area with existing significant levels of contamination, and the department finds 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.

(d) Minimum treatment requirements: Unless the wastes will be placed in a CAMU for storage and/or treatment only in accordance with subsection (4) of this section, CAMU-eligible wastes that, absent this subsection, would be subject to the treatment requirements of WAC 173-303-140(2), and that the department determines contain principal hazardous constituents must be treated to the standards specified in (d)(iii) of this subsection.

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

(A) In general, the department will designate as principal hazardous constituents:

(I) Carcinogens that pose a potential direct risk from ingestion or inhalation at the site at or above 10^{-3} ; and

(II) Noncarcinogens that pose a potential direct risk from ingestion or inhalation at the site an order of magnitude or greater over their reference dose.

(B) The department will 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 department may consider such factors as constituent concentrations, and fate and transport characteristics under site conditions.

(C) The department may also designate other constituents as principal hazardous constituents that the department determines pose a risk to human health and the environment substantially higher than the cleanup levels or goals at the site.

(ii) In determining which constituents are "principal hazardous constituents," the department must consider all constituents which, absent this section, would be subject to the treatment requirements of WAC 173-303-140(2).

(iii) Waste that the department determines contains principal hazardous constituents must meet treatment standards determined in accordance with (d)(iv) or (v) of this subsection.

(iv) Treatment standards for wastes placed in CAMUs.

(A) For nonmetals, treatment must achieve 90 percent reduction in total principal hazardous constituent concentrations, except as provided by (d)(iv)(C) of this subsection.

(B) 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 (d)(iv)(C) of this subsection.

(C) When treatment of any principal hazardous constituent to a 90 percent reduction standard would result in a concentration less than 10 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 40 C.F.R. 268.48 Table UTS, which is incorporated by reference at WAC 173-303-140 (2)(a).

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

(E) For debris, the debris must be treated in accordance with 40 C.F.R. 268.45, which is incorporated by reference at WAC 173-303-140 (2)(a), or by methods or to levels established under (d)(iv)(A) through (D) of this subsection or (d)(v) of this subsection, whichever the department determines is appropriate.

(F) Alternatives to TCLP. For metal bearing wastes for which metals removal treatment is not used, the department may specify a leaching test other than the TCLP (SW-846 Method 1311, WAC 173-303-110 (3)(a)) to measure treatment effectiveness, provided the department 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.

(v) Adjusted standards. The department may adjust the treatment level or method in (d)(iv) of this subsection to a higher or lower level, based on one or more of the following factors, as appropriate. The adjusted level or method must be protective of human health and the environment:

(A) The technical impracticability of treatment to the levels or by the methods in (d)(iv) of this subsection;

(B) The levels or methods in (d)(iv) of this subsection 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 under state or federal law);

(C) The views of the affected local community on the treatment levels or methods in (d)(iv) of this subsection as applied at the site, and, for treatment levels, the treatment methods necessary to achieve these levels;

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

(E) The long-term protection offered by the engineering design of the CAMU and related engineering controls:

(I) Where the treatment standards in (d)(iv) of this subsection are substantially met and the principal hazardous constituents in the waste or residuals are of very low mobility; or

(II) Where cost-effective treatment has been used and the CAMU meets the liner and leachate collection requirements for new land disposal units at WAC 173-303-665 (2)(h) and (j); or

(III) Where, after review of appropriate treatment technologies, the department determines that cost-effective treatment is not reasonably available, and the CAMU meets the liner and leachate collection requirements for new land disposal units at WAC 173-303-665 (2)(h) and (j); or

(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 department 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 laterally expanded CAMUs in (c)(i) and (ii) of this subsection, or the CAMU provides substantially equivalent or greater protection.

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

(vii) For the purpose of determining whether wastes placed in CAMUs have met site-specific treatment standards, the department may, as appropriate, 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 dangerous constituents. This specification will be based on the degree of difficulty of treatment and analysis of constituents with similar treatment properties.

(e) Except as provided in subsection (4) of this section, requirements for groundwater and vadose zone monitoring and corrective action that are sufficient to:

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

(ii) Detect and subsequently characterize releases of dangerous waste and dangerous constituents to groundwater that may occur from areas of the CAMU in which wastes will remain in place after CAMU closure.

(iii) Require notification to the department and corrective action as necessary to protect human health and the environment for releases to groundwater from the CAMU.

(f) Except as provided in subsection (4) of this section, requirements for closure will minimize the need for further maintenance; and control, minimize, or eliminate, to the extent necessary to protect human health and the environment, for areas where wastes remain in place, post-closure escape of dangerous wastes, dangerous constituents, leachate, contaminated runoff, or dangerous waste decomposition products to the ground, to groundwaters, to surface waters, or to the atmosphere.

(i) Requirements for closure will include, as appropriate and deemed necessary by the department, the following:

(A) Requirements for excavation, removal, treatment, and/or containment of wastes; and

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

(ii) In establishing closure requirements for CAMUs under subsection (3) of this section, the department will consider the following factors:

(A) CAMU characteristics;

(B) Volume of wastes which will remain in place after CAMU closure;

(C) Potential for releases from the CAMU;

(D) Physical and chemical characteristics of the waste;

(E) Hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential or actual releases in and/or from the CAMU; and

(F) Potential for exposure of humans and environmental receptors if releases were to occur at or from the CAMU.

(iii) Cap requirements:

(A) At final closure of the CAMU, for areas in which wastes will remain after closure of the CAMU, with constituent concentrations at or above remedial levels or goals applicable to the site, the owner or operator must cover the CAMU with a final cover designed and constructed to meet the following performance criteria, except as provided in (f)(iii)(B) of this subsection:

(I) Provide long-term minimization of migration of liquids through the closed unit;

(II) Function with minimum maintenance;

(III) Promote drainage and minimize erosion or abrasion of the cover;

(IV) Accommodate settling and subsidence so that the cover's integrity is maintained; and

(V) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

(B) The department may determine that modifications to (f)(iii)(A) of this subsection are needed to facilitate treatment or the performance of the CAMU (e.g., to promote biodegradation).

(iv) The department will, for areas of the CAMU in which wastes will remain in place after CAMU closure, specify post-closure requirements to control, minimize, or eliminate, to the extent necessary to protect human health and the environment, post-closure escape of dangerous waste, dangerous constituents, leachate, contaminated runoff, and dangerous waste decomposition products to the ground, to groundwaters, to surface waters, and to the atmosphere. Such post-closure requirements will include, as necessary to protect human health and the environment, monitoring and maintenance activities and the frequency with which such activities will be performed to ensure the integrity of any cap, final cover, or other containment system.

(4) CAMUs used for storage and/or treatment only are CAMUs in which wastes will not remain after closure. Such CAMUs must be designated in accordance with all of the requirements of this subsection, except as follows.

(a) CAMUs that are used for storage and/or treatment only and that operate in accordance with the time limits established in the staging pile regulations at 40 C.F.R. 264.554 (d)(1)(iii), (h), and (i) are subject to the requirements for staging piles at 40 C.F.R. 264.554 (d)(1)(i) and (ii), § 264.554 (d)(2), § 264.554 (e) and (f),

and § 264.554 (j) and (k) in lieu of the performance standards and requirements for CAMUs in this section at subsections (1) and (3)(c) through (f). The staging pile requirements of 40 C.F.R. Part 264.554 are incorporated by reference at WAC 173-303-64690.

(b) CAMUs that are used for storage and/or treatment only and that do not operate in accordance with the time limits established in the staging pile regulations at 40 C.F.R. 264.554 (d)(1)(iii), (h), and (i), which are incorporated by reference:

(i) Must operate in accordance with a time limit, established by the department, that is no longer than necessary to achieve a timely remedy selected for the waste; and

(ii) Are subject to the requirements for staging piles at 40 C.F.R. 264.554 (d)(1)(i) and (ii), 264.554 (d)(2), 264.554 (e) and (f), and 264.554 (j) and (k) in lieu of the performance standards and requirements for CAMUs in this section at subsections (1) and (3)(d) and (f).

(5) CAMUs 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 (3)(c)(i) of this section, caps at subsection (3)(f)(iii) of this section, groundwater monitoring requirements at subsection (3)(e) of this section or, for treatment and/or storage-only CAMUs, the design standards at subsection (4) of this section.

(6) The department must provide public notice and a reasonable opportunity for public comment before designating a CAMU. Such a notice will include the rationale for any proposed adjustments under subsection (3)(d)(v) of this section to the treatment standards in subsection (3)(d)(iv) of this section.

(7) Notwithstanding any other provision of this subsection, the department may impose additional requirements as necessary to protect human health and the environment.

(8) Incorporation of the designation of and requirements for a CAMU into a existing permit must be approved by the department according to the procedures for agency initiated permit modifications under WAC 173-303-830(3), or according to the permit modification procedures of WAC 173-303-830(4).

[Statutory Authority: Chapters 70.105 and 70.105D RCW. WSR 09-14-105 (Order 07-12), § 173-303-64660, filed 6/30/09, effective 7/31/09. Statutory Authority: Chapters 70.105, 70.105D, and 15.54 RCW and RCW 70.105.007. WSR 04-24-065 (Order 03-10), § 173-303-64660, filed 11/30/04, effective 1/1/05.]