

RCRA REVISION CHECKLIST 196

CAMU Amendments 67 <u>FR</u> 2962-3029 January 22, 2002 (RCRA Cluster XII, HSWA)

Name of State:	
State Statutory Authority:	
Title of Regulations:	_Effective Date:
Date Checklist Completed:	

				STATE	ANALOG IS	:
		ANALOGOUS STATE	FOUN	LESS STRIN-	MORE STRIN-	BROADER
FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	CITATION	EQUIV- ALENT	GENT	GENT	BROADER IN SCOPE

PART 260 - HAZARDOUS WASTE MANAGEMENT SYSTEM: GENERAL

SUBPART B – DEFINITIONS

DEFINITIONS

remove "Corrective action management unit (CAMU)"	260.10			
revise "Remediation waste"; insert comma after "debris"; remove "contain listed hazardous wastes or that themselves exhibit a hazardous characteristic				
and"	260.10			

					STATE ANALOG IS:						
				Potent	LESS	MORE					
	FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	STRIN- GENT	STRIN- GENT	BROADER IN SCOPE				
		RT 264 – STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES									
1	SUBPA	RT S – SPECIAL PR	OVISIONS FOR (CLEAN	UP						
	APPLICABILITY OF COR REGULATIONS	RECTIVE ACTION	MANAGEMENT	UNIT (CAMU	J)					
	add new subparagraph; except as provided in 264.550(b), CAMU's are subject to 264.552	264.550(a)									
	add new subparagraph; CAMU's approved before April 22, 2002, or that have submitted substantially complete applications on or before November 20, 2000, are subject to 264.551 for grandfathered CAMUs; such CAMUs will not be subject to 264.552, so long as they remain within approved scope	264.550(b)									
2	GRANDFATHERED COR	RECTIVE ACTION	MANAGEMENT	UNITS	(CAM	Us)					
3	redesignate old 264.552 as 264.551	264.551									
3	revise redesignated intro paragraph; insert "Section" after "RCRA"; remove ", as defined in § 260.10,"; insert new second sentence on meaning of CAMU; replace "owner/operator" with "owner or operator"	264.551(a) intro									

				STATE ANALOG IS			
FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE	
3 CORRECTIVE ACTION M	IANAGEMENT UNI	TS (CAMU)					
Regional Administrator (RA) may designate an area at facility as CAMU for purpose of implementing remedies under 264.101 or RCRA 3008(h) or to implement remedies at a facility not subject to 264.101; meaning of CAMU; CAMU must be located within contiguous property under owner/operator control where wastes originated; one or more CAMUs may be designated at facility	264.552(a)						
CAMU-eligible waste means:	264.552(a)(1)						
all solid & hazardous wastes, and all media & debris, managed for implementing cleanup; as- generated wastes from ongoing industrial operations at a site are not CAMU-eligible wastes	264.552(a)(1)(i)						
wastes that otherwise meet 264.552(a)(1)(i) description are not "CAMU-Eligible Wastes" where:	264.552(a)(1)(ii)						

		STATE ANALOG IS:			:
FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
264.552(a)(1)(ii) (A)					
264.552(a)(1)(ii) (B)					
264.552(a)(1)(iii)					
264.552(a)(2)					
	264.552(a)(1)(ii) (A) 264.552(a)(1)(ii) (B) 264.552(a)(1)(iii)	FEDERAL RCRA CITATION CITATION 264.552(a)(1)(ii)	FEDERAL RCRA CITATION CITATION ALENT 264.552(a)(1)(ii) - - 264.552(a)(1)(ii) - - 264.552(a)(1)(ii) - - 264.552(a)(1)(ii) - - 264.552(a)(1)(iii) - - 264.552(a)(1)(iii) - - 264.552(a)(1)(iii) - -	FEDERAL RCRA CITATIONANALOGOUS STATE CITATIONEQUIV- ALENTLESS STRIN- GENT264.552(a)(1)(ii) (A)	FEDERAL RCRA CITATION ANALOGOUS STATE EQUIV- ALENT LESS STRIN- GENT MORE STRIN- GENT 264.552(a)(1)(ii) (A) - - - - - 264.552(a)(1)(ii) (B) - - - - - 264.552(a)(1)(ii) (B) - - - - - 264.552(a)(1)(ii) - - - - - 264.552(a)(1)(iii) - - - - -

				STATE	ANALOG IS	8:
FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
placement of bulk or noncontainerized liquid hazardous waste or free liquids contained in hazardous waste is prohibited in any CAMU except where placement facilitates cleanup remedy	264.552(a)(3)(i)					
264.314(d) requirements for placement of containers holding free liquids in landfills apply to CAMU except where placement facilitates cleanup remedy	264.552(a)(3)(ii)					
placement of nonhazardous liquid waste in CAMU is prohibited unless it facilitates cleanup remedy or 264.314(f) demonstration is made	264.552(a)(3)(iii)					
absence or presence of free liquids must be determined in accordance with 264.314(c); sorbents used to treat free liquids must meet 264.314(e)	264.552(a)(3)(iv)					
placement of CAMU- eligible wastes into or within CAMU is not land disposal	264.552(a)(4)					
consolidation or placement of CAMU- eligible wastes into or within CAMU is not creation of a unit subject to minimum technology requirements	264.552(a)(5)					

				STATE	ANALOG IS	5:
FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
RA may designate a regulated unit as a CAMU, or incorporate a regulated unit into a CAMU, if:	264.552(b)(1)					
regulated unit is closed or closing under 264.113 or 265.113; and	264.552(b)(1)(i)					
inclusion will enhance effective, protective & reliable remedial actions	264.552(b)(1)(ii)					
subpart F, G & H and the unit-specific requirements of 264/265 that applied to regulated unit will continue to apply to that portion of the CAMU after incorporation into the CAMU	264.552(b)(2)					
only in accordance with 264.552(f) shall RA designate a CAMU to be used for storage and/or treatment; all other CAMUs designated in accordance with:	264.552(c)					
CAMU shall facilitate effective, protective, reliable & cost-effective remedies;	264.552(c)(1)					
CAMU waste management activities shall not create unacceptable risks from exposure to hazardous wastes or constituents;	264.552(c)(2)					

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FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
CAMU includes uncontaminated areas of facility, only if including such areas for managing CAMU-eligible waste is more protective than management of such wastes at contaminated areas of facility;	264.552(c)(3)					
areas where wastes remain in place after CAMU closure, shall be managed to minimize future releases;	264.552(c)(4)					
CAMU expedites timing of remedial activity implementation;	264.552(c)(5)					
CAMU enables use of treatment technologies to enhance long-term remedial action effectiveness by reducing toxicity, mobility or volume of wastes that remain after closure; and	264.552(c)(6)					
CAMU minimizes land area upon which wastes will remain after closure	264.552(c)(7)					
owner/operator to provide sufficient information to enable RA to designate CAMU; information must include:	264.552(d)					
origin of waste and how managed;	264.552(d)(1)					

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FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
whether waste was listed or identified as hazardous at time of disposal and/or release; and	264.552(d)(2)					
whether disposal and/or release occurred before or after LDRs were in effect for the listing or characteristic	264.552(d)(3)					
RA shall specify, in a permit or order CAMU requirements to include:	264.552(e)					
areal configuration	264.552(e)(1)					
except as 264.552(g) provides, applicable design, operation, treatment & closure requirements	264.552(e)(2)					
except as 264.552(g) provides, minimum design requirements:	264.552(e)(3)					
except 264.552(e)(3)(ii) approved alternate, CAMUs consisting of new, replacement or laterally expanded units must include composite liner & leachate collection system; meaning of <i>composite</i> <i>liner</i> ; construction of upper component; thickness of HDPE; installation of FML;	264.552(e)(3)(i)					

			STATE ANALOG IS:			:
FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
alternate requirements may be approved if:	264.552(e)(3)(ii)					
RA finds alternate design & operating practices, together with location, will prevent migration into ground or surface water at least as effectively as 264.552 (e)(3)(i) systems; or	264.552(e)(3)(ii) (A)					
CAMU to be established in area with existing significant contamination, and RA finds alternative design would prevent migration that exceeds long-term remedial goals	264.552(e)(3)(ii) (B)					
minimum treatment requirements; unless in CAMU treatment/ storage only under 264.552(f), CAMU eligible waste that absent 264.552 would be subject to 268 Treatment Standards and the RA determines waste contains principal hazardous constituents must be treated to 264.052(e)(4)(iii) standards	264.552(e)(4)					

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FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
principal hazardous constituents are those that pose a risk substantially higher than cleanup levels or goals at site	264.552(e)(4)(i)					
principal hazardous constituents (PHCs):	264.552(e)(4)(i) (A)					
carcinogens that pose specified risk from ingestion or inhalation; and	264.552(e)(4)(i) (A)(1)					
non-carcinogens that pose specified risk from ingestion or inhalation an order of magnitude or more above their reference dose	264.552(e)(4)(i) (A)(2)					
PHCs can also be designated when risks posed by potential migration to ground water are substantially higher than cleanup levels or goals; factors for designation	264.552(e)(4)(i) (B)					
RA may designate other constituents as PHCs if determined to pose a risk substantially higher than cleanup levels or goals at site	264.552(e)(4)(i) (C)					

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	FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE	
	in determining PHCs, the RA must consider all constituents subject to 268 treatment standards	264.552(e)(4)(ii)						
4	waste determined to contain PHCs must meet treatment standards determined in accordance with 264.552(e)(4)(iv) or (v)	264.552(e)(4)(iii)						
	treatment standards for wastes placed in CAMUs	264.552(e)(4)(iv)						
	non-metals must achieve 90% reduction in PHC concentrations	264.552(e)(4)(iv) (A)						
	metals must achieve 90% reduction in PHC concentrations or in total constituent concentrations	264.552(e)(4)(iv) (B)						
	when 90% reduction in PHC concentrations result in a concentration less than 10 times the UTS, treatment is not required; UTS are identified in 268.48	264.552(e)(4)(iv) (C)						
	wastes exhibiting ignitability, corrosibity or reactivity must also be treated to eliminate characteristic	264.552(e)(4)(iv) (D)						
	debris must be treated in accordance with 268.45, or to 264.552(e)(4)(iv) (A)-(D) or (e)(4)(v) levels	264.552(e)(4)(iv) (E)						

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FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
alternatives to TCLP; for metal bearing wastes, RA may specify a test other than TCLP to measure treatment effectiveness	264.552(e)(4)(iv) (F)					
RA may adjust treatment standards based on following; adjusted level must be protective of human health and environment:	264.552(e)(4)(v)					
technical impracticability of 264.552(e)(4)(iv);	264.552(e)(4)(v) (A)					
264.552(e)(4)(iv) would result in PHC concentrations significantly above or below cleanup standards;	264.552(e)(4)(v) (B)					
affected local community views of 264.552(e)(4)(iv) methods;	264.552(e)(4)(v) (C)					
short-term risks of method necessary to achieve 264.552(e)(4)(iv);	264.552(e)(4)(v) (D)					
long-term protection of CAMU & engineering controls:	264.552(e)(4)(v) (E)					
where 264.552(e)(4)(iv) treatment standards are substantially met & PHCs are of very low mobility; or	264.552(e)(4)(v) (E)(1)					
where cost-effective treatment is used & CAMU meets 264.301(c)&(d) requirements; or	264.552(e)(4)(v) (E)(2)					

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FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
where cost-effective treatment is not reasonably available & CAMU meets 264.301(c)&(d) requirements; or	264.552(e)(4)(v) (E)(<i>3</i>)					
where cost-effective treatment has been used & PHCs are of very low mobility; or	264.552(e)(4)(v) (E)(4)					
where cost-effective treatment is not available, PHCs are of very low mobility, & CAMU meets/exceeds 264.552(e)(3)(i)&(ii) requirements, or CAMU provides substantially equivalent or greater protection	264.552(e)(4)(v) (E)(5)					
treatment required must be completed prior to, or within reasonable time after, placement in CAMU	264.552(e)(4)(vi)					
RA may specify a PHC subset as analytical surrogates for determining if treatment standards are met for other PHCs; specification based on difficulty of treatment	264.552(e)(4)(vii)					
ground water monitoring & corrective action requirements sufficient to:	264.552(e)(5)					
detect & characterize existing releases in ground water from CAMU; and	264.552(e)(5)(i)					

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detect & characterize releases to ground water from CAMU when wastes remain after closure; and	264.552(e)(5)(ii)					
require RA notification & corrective action for releases to ground water from CAMU	264.552(e)(5)(iii)					
except as 264.552(d) provides, closure & post- closure requirements:	264.552(e)(6)					
closure of CAMU shall:	264.552(e)(6)(i)					
minimize further maintenance; and	264.552(e)(6)(i) (A)					
control, minimize or eliminate post-closure escape of hazardous wastes to ground, surface waters or atmosphere	264.552(e)(6)(i) (B)					
requirements for CAMU closure shall include:	264.552(e)(6)(ii)					
waste excavation, removal, treatment or containment requirements; and	264.552(e)(6)(ii) (A)					
equipment, devices & structures removal and decontamination requirements	264.552(e)(6)(ii) (B)					
in establishing 264.552(e) closure requirements, the RA shall consider:	264.552(e)(6)(iii)					
CAMU characteristics;	264.552(e)(6)(iii) (A)					

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FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
volume of wastes remaining after closure;	264.552(e)(6)(iii) (B)					
potential for releases;	264.552(e)(6)(iii) (C)					
physical & chemical characteristics of waste;	264.552(e)(6)(iii) (D)					
environmental conditions which may influence migration of any potential or actual releases; and	264.552(e)(6)(iii) (E)					
exposure potential from releases	264.552(e)(6)(iii) (F)					
cap requirements:	264.552(e)(6)(iv)					
at final closure in areas where wastes will remain, owner/operator must cover CAMU with cover that meets following performance criteria:	264.552(e)(6)(iv) (A)					
long-term liquids migration minimization;	264.552(e)(6)(iv) (A)(1)					
minimum maintenance;	264.552(e)(6)(iv) (A)(2)					
promote drainage & minimize erosion;	264.552(e)(6)(iv) (A)(3)					
accommodate settling and subsidence to maintain cover integrity; and	264.552(e)(6)(iv) (A)(4)					
permeability less than or equal to any bottom liner system or natural subsoils	264.552(e)(6)(iv) (A)(5)					

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RA may determine that 264.552(e)(6)(iv)(A) modifications are needed to facilitate treatment or performance	264.552(e)(6)(iv) (B)					
post-closure requirements to protect human health & environment to include monitoring & maintenance; frequency to ensure integrity of cap, final cover or other containment system	264.552(e)(6)(v)					
CAMUs used only for storage and/or treatment will not have wastes remaining after closure; such CAMUs designated using all 264.552 requirements, with following exceptions	264.552(f)					
qualified CAMUs that operate within 264.554(d)(1)(iii), (h) & (i) time limits are subject to specified staging pile requirements in lieu of 264.552(c) & (e)(3)-(6)	264.552(f)(1)					
qualified CAMUs that do not operate within 264.554(d)(1)(iii), (h) & (i) time limits:	264.552(f)(2)					
must operate with a time limit established by RA, no longer than necessary to achieve timely remedy, and	264.552(f)(2)(i)					

				STATE	ANALOG IS	3:
FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADE IN SCOPI
are subject to specified staging pile requirements in lieu of 264.552(c) & (e)(4) & (6)	264.552(f)(2)(ii)					
CAMUs with wastes at or below remedial levels or goals do not have to comply with liner, cap, ground water monitoring or design standards	264.552(g)					
RA shall provide public notice & opportunity for comment before designating a CAMU; notice shall include rationale for any proposed adjustments	264.552(h)					
RA may impose additional requirements to protect human health & the environment	264.552(i)					
incorporation of a CAMU into existing permit must be approved by RA according to 270.41 or 270.42	264.552(j)					
CAMU designation does not change EPA's authority to address clean- up levels, media-specific compliance, or other remedy selection decisions	264.552(k)					

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add new subparagraph; storage includes mixing, sizing, blending or other similar physical operations as long as they prepare wastes for subsequent management or treatment	264.554(a)(1)					
add and reserve new subparagraph	264.554(a)(2)					

†,5 DISPOSAL OF CAMU-ELIGIBLE WASTES IN PERMITTED HAZARDOUS WASTE LANDFILLS

if 264.555(a)(1)-(3) conditions are met, the RA may approve placement of CAMU-eligible wastes in hazardous waste landfills not at waste origination site, without meeting 268 requirements:	264.555(a)	
waste meets 264.552(a)(1) & (2) definition	264.555(a)(1)	
RA identifies PHCs in waste & requires treatment to any of the following standards:	264.555(a)(2)	
264.552(e)(4)(iv); or	264.555(a)(2)(i)	
264.552(e)(4)(v)(A), (C), (D) or (E)(1); or	264.555(a)(2)(ii)	
264.552(e)(4)(v)(E)(2), where treatment significantly reduces toxicity or mobility of PHCs, minimizing threat posed by waste	264.555(a)(2)(iii)	

				STATE ANALOG IS:		
FEDERAL REQUIREMENTS	FEDERAL RCRA CITATION	ANALOGOUS STATE CITATION	EQUIV- ALENT	LESS STRIN- GENT	MORE STRIN- GENT	BROADER IN SCOPE
landfill must have RCRA permit, meet 264 subpart N requirements & be authorized to accept CAMU-eligible wastes; "permit" does not include interim status	264.555(a)(3)					
person seeking approval to provide sufficient information to enable RA to approve placement of CAMU-eligible waste; information in 264.552(d) (1)-(3) required, unless not reasonably available	264.555(b)					
RA shall provide public notice & opportunity for comment before approving CAMU-eligible waste for placement off- site; approval must be specific to a single remediation	264.555(c)					
applicable part 264 hazardous waste management requirements for CAMU-eligible waste must be incorporated into receiving facility permit through permit issuance or modification, providing notice and opportunity for comment & hearing; a landfill may not receive hazardous CAMU-eligible waste unless specifically authorized by permit	264.555(d)					

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CAMU-eligible wastes may not be placed in off- site landfill in accordance with 264.555(d) until:	264.555(e)						
owner/operator notifies RA & persons on mailing list of intent to receive waste; contents of notice	264.555(e)(1)						
within 15 days of notification, persons on mailing list may provide comments to RA	264.555(e)(2)						
within 30 days of notification, RA may object to waste placement; RA can extend review for additional 30 days	264.555(e)(3)						
RA notifies owner/operator that he/she does not object	264.555(e)(4)						
if RA objects, facility may not receive waste until objection resolved or permit modification under 270.42 is obtained	264.555(e)(5)						
RA may modify, reduce or eliminate notification requirements as part of 264.555(d) process	264.555(e)(6)						

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generators of CAMU- eligible wastes sent off- site under 264.555, must comply with 268.7(a)(4); off-site facilities treating such wastes must comply with 268.7(b)(4); certification with respect to 264.555(a)(2) treatment requirements	264.555(f)					
for purposes of 264.555 only, "design of CAMU" in 264.552(e)(4)(v)(E) means design of permitted Subtitle C landfill	264.555(g)					

† Optional

Revision Checklist 196 revised the title of Subpart S of Part 264 from "Corrective Action for Solid Waste Management Units" to "Special Provisions for Cleanup".

1

2

Revision Checklist 196 redesignated 264.552 as 265.551 and revised the section heading from "Corrective Action Management Units (CAMU)" to "Grandfathered Corrective Action Management Units (CAMUs)".

³ Revision Checklist 196 redesignated 264.552 as 265.551, revised the introductory paragraph at newly redesignated 264.551(a), and inserted a new section 264.552.

⁴ There is a punctuation error at 264.552(e)(4)(iii) in the January 22, 2002 rule (67 FR 2962; Revision Checklist 196): the ending colon should be replaced with a period.

⁵ Revision Checklist 196 added a new section to Subpart S at 264.555 called "Disposal of CAMUeligible wastes in permitted hazardous waste landfills".