

Technical
Assistance
Project



Environmental
Guidance

RCRA Subpart CC
Organic Air Emission Standards
Technical Amendment

Questions & Answers

March 1997

U.S. Department of Energy
Office of Environmental Policy & Assistance
RCRA/CERCLA Division, EH-413
Washington, D.C.

Technical Assistance Project

***RCRA Subpart CC
Organic Air Emission Standards
Technical Amendment***

Questions & Answers



MARCH 1997

Prepared by

**U.S. Department of Energy
Office of Environmental Policy & Assistance
RCRA/CERCLA Division
(EH-413)
Washington, D.C.**

Technical support by

**Analytical Services, Inc.
Columbia, MD**

Background

On December 6, 1994, EPA published the final rule for RCRA Subpart CC air emission standards entitled, “Hazardous Waste Treatment, Storage and Disposal Facilities and Hazardous Waste Generators; Organic Air Emission Standards for Tanks, Surface Impoundments, and Containers.” [59 FR 62896] These air standards apply to owners and operators of hazardous waste treatment, storage and disposal facilities subject to RCRA subtitle C permitting requirements and to certain hazardous waste generators accumulating waste in on-site tanks and containers.

In response to numerous questions from industry about the requirements, EPA issued a technical amendment to the final subpart CC standards on February 9, 1996. [61 FR 4903] The purpose of the technical amendment is to clarify provisions of the final rule to better convey EPA’s original intent. However, the amendment did not specifically address, or only partly addressed, some DOE concerns regarding the applicability of the final rule to mixed waste management (e.g., the applicability of a deferral in the regulations for units used to store mixed waste). [40 CFR 264.1080(b)(6)] The purpose of this Technical Assistance Project (TAP) report is to address specific questions posed by DOE Field Elements regarding the implementation of the subpart CC final rule and technical amendment. Certain aspects of some of the questions are addressed in recent revisions to the final rule published by EPA on November 25, 1996. [61 FR 59932]

This TAP report has been coordinated with the EPA Office of Air Quality Planning and Standards, Emission Standards Division, and the DOE Office of General Counsel (GC-51); comments received are reflected herein and are greatly appreciated.

ISSUE 1: Does the mixed waste deferral under subpart CC apply to co-storage of nonhazardous wastes, whether radioactive or nonradioactive, in DOE mixed waste units?

The EPA deferred applicability of the subpart CC standards to hazardous waste management units that are used solely to treat or store radioactive mixed waste. [40 CFR 1080(b)(6) and 265.1080(b)(6)] In the technical amendment to the subpart CC standards, the EPA clarifies that other materials may be added to a unit managing radioactive mixed waste if the addition of materials other than radioactive mixed waste is required by applicable regulations or under the authority of the Atomic Energy Act or the Nuclear Waste Policy Act. [61 FR 4904]

The purpose of EPA’s limitation of the scope of the deferral is to prevent radioactive mixed waste from being used to exempt other hazardous waste from the rule through mixing. [61 FR 4904] In addition, the purpose of the subpart CC requirements is to provide air standards to reduce organic emissions from hazardous waste management activities. [59 FR 62896]

Therefore, the addition of nonhazardous waste to a unit which solely stores radioactive mixed waste does not affect the unit’s status under the subpart CC requirements. The mixed waste deferral is applicable because the addition of nonhazardous waste would not contravene the intent of the deferral and because RCRA subtitle C is not applicable to nonhazardous waste.

ISSUE 2: Does the use of the term “unit” in the preamble to the technical amendment [61 FR 4904] to the subpart CC standards suggest that a hazardous waste container cannot be placed in the same storage area as a mixed waste container without losing the deferral for the mixed waste container?

For the purpose of the subpart CC standards, EPA considers each individual container a unit. There is no reason that a container exempt under the mixed waste exemption cannot share space in a storage area with a container that must comply with the subpart CC standards. However, it is a good management practice to somehow mark the containers to distinguish ones that are exempt, so that an inspector can readily determine compliance with the subpart CC container standards.

ISSUE 3: Some waste currently managed as mixed waste will cease to be deemed mixed waste; through DOE administrative action, these materials may be reclassified as RCRA hazardous waste. For instance, some DOE waste, currently presumed to be mixed waste and therefore managed as such, may, in the future, be approved for free release to commercial facilities as non-radioactive hazardous waste, per DOE authority under the Atomic Energy Act. Are wastes that are presently managed as mixed waste, and therefore eligible for the mixed waste deferral, immediately subject to the requirements of subpart CC if an administrative action results in the wastes no longer being mixed waste?

Mixed waste that becomes RCRA hazardous waste as a result of a DOE-initiated administrative action, is immediately subject to the subpart CC requirements. Therefore, facilities considering free release of “formerly mixed wastes” must be certain that all required air emission controls are installed and operating on the effective date of waste redesignation.

ISSUE 4: Some DOE waste is stored in Department of Transportation (DOT) specification containers. As of October 1, 1996, all DOT specification containers must be UN stamped [HM 181, DOT Rules, 49 CFR 178]. Under subpart CC, containers that meet applicable DOT requirements under 49 CFR 173, 178, 179 and 180 are considered in compliance with the subpart CC requirements. [61 FR 59947] Since DOE’s DOT specification containers, which are not UN stamped, no longer meet DOT requirements, and thus are no longer considered DOT approved as of October 1, 1996, will these containers be subject to subpart CC monitoring requirements?



The subpart CC requirements for containers have been revised under the November 25, 1996, amendments to the subpart CC final rule. [61 FR 59932] The container standards apply only to those containers to which RCRA hazardous waste is added on or after December 6, 1996. Therefore, any DOT specification containers that contain RCRA hazardous waste added before this date, and that are not UN stamped, are not subject to the subpart CC standards. The subpart CC requirements would, however, apply to DOE’s DOT specification containers that are

not UN stamped and contain RCRA hazardous waste added after December 6, 1996.

Also, the revised subpart CC standards allow owners or operators to place hazardous waste in containers meeting DOT specifications and requirements under 49 CFR parts 173, 178, 179 and 180. [61 FR 59947] There are no RCRA monitoring requirements for containers that meet these DOT requirements.

For those containers that are subject to the subpart CC requirements, the amended container standards establish three levels of air emission control. The level of control that applies to a container depends on the design capacity of the container, the organic content of the RCRA hazardous waste placed in the container, and the use of the container. [61 FR 59947] The following is a brief summary of the levels of containers and the monitoring requirements for each level.

Level 1 controls apply to: (1) containers that have a design capacity greater than 0.1m^3 and less than or equal to 0.46m^3 , and (2) containers that have a design capacity greater than 0.46m^3 , but are not “in light material service” [i.e., used to manage a hazardous waste where the vapor pressure of one or more of the components in the material is greater than 0.3 kPa at 20 degrees C, and the total concentration of the pure components having a vapor pressure greater than 0.3kPa at 20 degrees C is equal to or greater than 20% by weight].¹ (40 CFR 264. 1086 (b)(1)(i) and (ii)) For containers required to use Level 1 controls, the amended rule requires that hazardous waste be managed in one of the following containers: (1) containers that meet DOT regulations, (2) covered containers, or (3) containers that are covered with an organic suppression barrier. There are no requirements for periodic Method 21 leak monitoring of

Level 1 containers. [61 FR 59948] There are also no requirements for loading hazardous waste into containers subject to Level 1 controls under the revised final rule. [61 FR 59947]

Level 2 controls apply to containers with a design capacity greater than 0.46m^3 and which are in light material service. [40 CFR 264.1086(b)(1)(iii)] For containers required to use Level 2 controls, the amended rule requires that hazardous waste be managed in one of the following containers: (1) containers that meet DOT regulations, (2) containers that operate with no detectable organic emissions or (3) containers that have been demonstrated within the preceding 12 months to be vapor-tight by using Method 27. [40 CFR 264.1086 (d)(1)(i)-(iii)] There are no requirements for periodic Method 21 leak monitoring of Level 2 containers. [61 FR 59948] For Level 2 containers operating with no detectable organic emissions, monitoring is conducted at the discretion of the owner or operator.²

Additionally, EPA has modified the transfer and loading requirements for containers using Level 2 controls. Transfer of hazardous waste shall be conducted using a method that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. [40 CFR 264.1086(d)(2)] Examples of appropriate container-loading procedures include, but are not limited to, using a submerged-fill pipe or other submerged-fill method to load liquids into the

¹ 0.1m^3 = approximately 26 gallons

² EPA “Summary of Container Air Emission Control Requirements in Subpart CC Promulgated on November 25, 1996,” December 16, 1996.

container; or using a vapor-balancing or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations. [40 CFR 264.1086(d)(2)]

Level 3 controls apply to containers with a design capacity greater than 0.1m³ and in which waste stabilization occurs. [40 CFR 264.1086(b)(2)] For containers required to use Level 3 controls, the amended rule requires that an open container be placed in an enclosure vented through a closed-vent system to a control device or a covered container be vented directly to a control device. [40 CFR 264.1086(e)(1)(i) and (ii).] There are no requirements for periodic Method 21 leak monitoring of Level 3 containers. [61 FR 59948] Owners and operators using Level 3 container controls must monitor closed-vent systems and control devices in accordance with 40 CFR 264.1087. No transfer or loading requirements are mentioned in the revised final rule for containers using Level 3 controls.

The covers and/or closure devices for containers subject to Level 1 or Level 2 control requirements must be visually inspected for defects at the time hazardous waste is first managed in the container or at the time the facility accepts possession of the container (with the exception of those containers emptied within 24 hours of being received). If the container used for managing hazardous wastes remains at the facility for a period of 1 year or more, the container and its cover and closure devices must be visually inspected to check for defects at least once every 12 months.[40 CFR 264.1086(c)(4)(i) and (ii), and 40 CFR 264.1086(d)(4)(i) and (ii)]

There is only one recordkeeping requirement for containers using Level 1 or Level 2 controls; there are no reporting requirements.

The facility is required to maintain a record of the procedure used to determine that containers with capacities equal to or greater than 0.46m³, and do not meet the applicable DOT regulations, are not managing hazard waste in light material service. [61 FR 59948]

ISSUE 5: If radioactive mixed wastes are treated and/or stored in hazardous waste management units, and then these units are flushed and non-RCRA wastes are treated and/or stored in the units, will these units still be entitled to the subpart CC mixed waste deferral?



The subpart CC standards are applicable to units in which radioactive mixed wastes are treated and/or stored, and these units are eligible for the mixed waste deferral provided in 40 CFR 264.1080(b)(6) and 265.1080(b)(6). However, the subpart CC standards, including the deferral, are not applicable to these units if they are then flushed and non-RCRA wastes are treated and/or stored in the units.

While not required under these regulations, it is good management practice to maintain records documenting the flushing of units, including analyses demonstrating that radioactive and hazardous components of mixed waste are no longer detectable in the unit.

Please direct questions regarding these Questions and Answers on the RCRA subpart CC Organic Air Emissions Standards to:

*Jerry Coalgate
DOE Office of Environmental
Policy & Assistance
RCRA/CERCLA Division, EH-413
1000 Independence Ave., S.W.
Washington, DC 20585*



