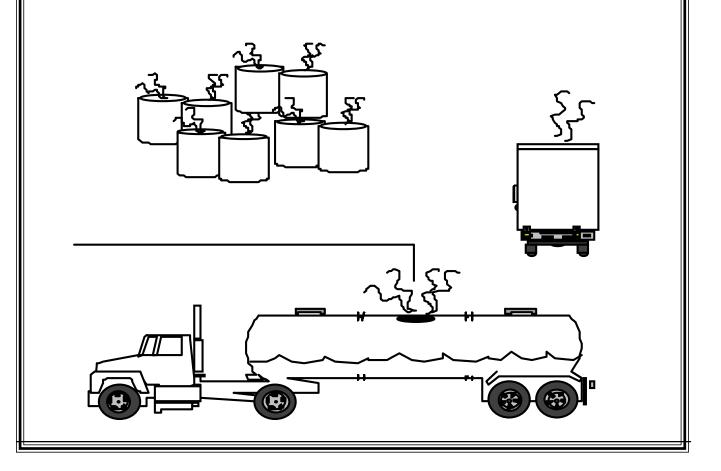


U.S. EPA REGION 7 ORGANIC AIR EMISSIONS ASSISTANCE

RCRA SUBPART CC GUIDANCE MODULE FOR CONTAINER LEVEL 1 CONTROLS

CONTAINER USING AN ORGANIC-VAPOR SUPPRESSING BARRIER



U.S. EPA REGION 7

GUIDANCE MODULE FOR CONTAINER LEVEL 1 CONTROLS

CONTAINER USING AN ORGANIC-VAPOR SUPPRESSING BARRIER

FORWARD

The purpose of this Guidance Module is to present information by which affected facilities can achieve better compliance with environmental regulations. This Guidance Module was produced by TechLaw, Inc. under contract to the U.S. Environmental Protection Agency (U.S. EPA) Region 7 for the Compliance Assurance and Enforcement Division of U.S. EPA Region 7.

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1.0 INTRODUCTION

1.1 About this Guidance Module

This Guidance Module is a compliance assistance tool for environmental managers responsible for complying with RCRA Subpart CC standards. Subpart CC standards may apply to tanks, containers, or surface impoundments which manage hazardous waste. Compliance with the Subpart CC standards is based on proper knowledge of the waste, good waste management practices, inspection and maintenance of equipment in good repair, and the appropriate application of acceptable control options.

This Guidance Module has been prepared for environmental managers, owners, and operators responsible for complying with Subpart CC standards through the use of containers with an organic-vapor suppressing barrier. Containers which meet Container Level 1 control criteria may use containers with organic-vapor suppressing barriers as the only control option for compliance with Subpart CC regulations. An open-top container can meet the requirements of Subpart CC if an organic-vapor suppressing barrier is placed on or over the entire area of hazardous waste in the container. Containers which meet Container Level 2 or Level 3 criteria (i.e., apply a waste stabilization process to the waste in the container) may not use containers with organic-vapor suppressing barriers as the only control option for compliance with Subpart CC standards. Information on applicability, waste determination, monitoring and inspection requirements, waste transfer requirements, repair requirements, recordkeeping requirements and permitting for containers with organic-vapor suppressing barriers is presented in this Guidance Module.

The inspection, management, and permitting requirements for tanks, surface impoundments and containers that apply controls other than containers using an organic-vapor suppressing barrier are not discussed in this Guidance Module. Please refer to the U.S. EPA Region 7 Environmental Manager's Guidance Handbook (December 1998) for information on the inspection, management, and permitting of these types of equipment. Other federal, state, and local regulations which limit the amount of volatile organics (VO) that can be emitted from a unit are not covered in this Guidance Module.

The Subpart CC standards were initially published on December 6, 1994 (59 FR 69826). Since that time U.S. EPA has published several FEDERAL REGISTER documents to amend or clarify the December 6, 1994 Final Rule. This Guidance

"Containers which meet Container Level 2 or Level 3 criteria (i.e., apply a waste stabilization process to the waste in the container) may not use containers with organic-vapor suppressing barriers as the only control option for compliance" Module considers applicable FEDERAL REGISTER documents through the December 8, 1997 (62 FR 64636) corrections and clarifications to the Final Rule.

1.2 General Subpart CC Requirements Subpart CC standards were published to reduce organic air emissions from tanks, surface impoundments, and containers. The standards allow for controlling organic air emissions from affected equipment by using an acceptable control device, by treating the waste, or by meeting one of various other design or regulatory requirements included in the standard.

Units which contain hazardous wastes which have been treated to reduce the VO concentrations to below certain specified limits are exempt from the Subpart CC standards. The acceptable organic treatment methodologies and the required treatment limits are presented in 40 CFR 264.1082(c)(2)(i) to (ix) and 265.1083(c)(2)(i) to (ix) of the Subpart CC standards. These treatment alternatives are discussed in the *U.S. EPA Region 7 Environmental Manager's Guidance Handbook* (June 1998).

Subpart CC standards require that waste determinations be conducted to determine the VO concentration of the waste, to ensure that treatment conditions specified in the standards are met, to determine if equipment is operating with no detectable emissions, and to determine the maximum organic vapor concentration in a container. Waste determinations are described in 40 CFR 265.1084 and in the U.S. EPA Region 7 Environmental Manager's Guidance Handbook (June 1998).

Subpart CC standards apply to any tank, surface impoundment or container which manages hazardous waste and which is subject to permit standards under 40 CFR 264, interim status standards under 40 CFR 265, or less than 90-day Large Quantity Generator (LQG) standards under 40 CFR 262.34(a)(1)(i) or (ii). Certain exemptions or exclusions also may apply. The descriptions of the exemptions and exclusions presented in the following applicability decision tree (Figure 2-1) are abbreviated. Please consult the Code of Federal Regulations references cited in the decision tree for additional detail.

The exclusions presented in Figure 2-1 do not affect the requirement to maintain appropriate records which provide information on the basis of the exclusion that is applied to the unit.

CONTAINER CONTROL

REQUIREMENTS

2.0

3.0

APPLICABILITY

A container using an organic-vapor suppressing barrier may be

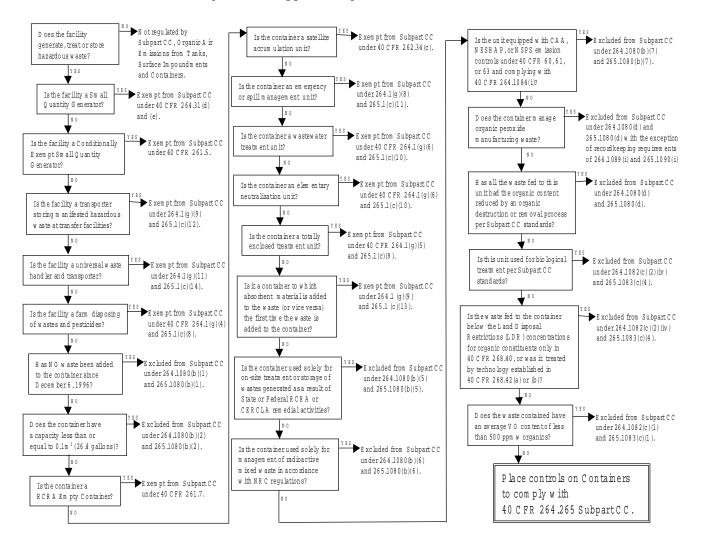


Figure 2-1: A pplicability D ecision T ree for C ontainers

subject to Subpart CC control requirements if it manages hazardous waste which has an annual average concentration of VO at the point of waste origination equal to or exceeding 500 ppm by weight (ppmw) as measured by methods specified in 40 CFR 265.1084(a). Equipment such as piping that is associated with the container using an organic-vapor suppressing barrier may also be subject to RCRA air rules. Piping and associated equipment which feeds the container may be subject to Subpart BB regulations if it contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight. Other equipment which exists downstream of the Subpart CC affected container may, or may not, be subject to RCRA air rules depending on the VO concentration of waste in the equipment.

Three levels of air pollution emission controls are specified by 40 CFR 264.1084 - Container Level 1, Container Level 2 and Container Level 3. Container Level 1 controls are typically the easiest to implement. The level of control required for a container is dependent on the capacity of the container, the vapor pressure of the waste in the container, and whether the container is used for waste stabilization.

Only containers which meet Container Level 1 criteria may comply with Subpart CC requirements with only an organic-vapor suppressing barrier.

Container Size		Service of Container	Container Control Level
cubic meters	gallons, approx.		
$> 0.1 \text{ and } \le 0.46$	$> 26.4 \text{ and } \le 122$	Light or heavy material service	Container Level 1
>0.46	>122	Heavy material service	Container Level 1
>0.46	>122	Light material service	Container Level 2
>0.1	>26.4	Waste stabilization	Container Level 3

Criteria for Container Control Requirements

Reference: 40 CFR 264.1086(b)(1)(i) through (b)(2) and 264.1086(b)(1)(i) through (b)(2)

3.1

Level of Control Required

Container Level 1 controls require that the container be equipped with an organic-vapor suppressing barrier, a U.S. DOT approved container, or a container equipped with a cover and closure device. Specific guidance on U.S. DOT approved containers and containers equipped with a cover and closure device can be found in the appropriate U.S. EPA Region 7 Environmental Managers Guidance Module.

3.2 Requirements Specific to a Container Using an Organic-Vapor Suppressing Barrier



"The cover and closure devices must be secured in the closed position any time hazardous waste is stored in the container."

Container Level 1 requirements for open-top containers using organic-vapor suppressing barriers standards are presented in 40 CFR 264.1086(c) and 265.1087(c). The basic requirements for Container Level 1 for open-top containers using organic-vapor suppressing barriers are as follows:

- The organic-vapor suppressing barrier must be placed on or over the hazardous waste in the container. The barrier must cover the entire area of the hazardous waste in a manner such that no hazardous waste is exposed to the atmosphere. One example of a barrier is a suitable organic-vapor suppressing foam.
- The container must be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials in order to minimize exposure of hazardous waste to the atmosphere and to maintain equipment integrity.
- The cover and closure devices must be secured in the closed position any time hazardous waste is stored in the container. The opening of a closure device or cover is permitted to add hazardous waste to the container. Removal of the cover and/or opening of the closure devices are allowed when it is necessary to provide access to the container for routine inspection, maintenance, sampling, removal of accumulated sludge or residues, or other activities needed for normal operation of the container [40 CFR 264.1086(c)(3)(i) and 265.1087(c)(3)(i)].
- When the container is filled to the intended final level in one continuous operation, the closure devices and cover must be promptly secured in the closed position. When the container is filled intermittently over a period of time, the closure devices and cover must be promptly secured in the closed position when one of the following applies: no additional material will be added to the container within 15 minutes, the person performing the loading operation leaves the immediate vicinity of the container, or when there is a shutdown of the process generating the material being added to the container [40 CFR 264.1086(c)(3) and 265.1087(c)(3)].
- Pressure relief devices such as conservation vents and

spring-loaded pressure-vacuum relief valves are allowed on containers subject to Level 1 controls. These pressure relief devices must operate with no detectable emissions when the device is secured in the closed position. The procedure for determining no detectable emissions are presented in 40 CFR 264.1086(g). Opening a spring-loaded pressure-vacuum relief valve, conservation vent or similar device is permitted as necessary to maintain the container internal pressure in accordance with design specifications [40 CFR 264.1086(c)(3)(iv) and 265.1087(c)(3)(iv)]. Safety devices, as defined in 40 CFR 265.1081, may open anytime necessary to avoid an unsafe condition, however they must not be used for routine venting of the vapor space in a container [40 CFR 264.1086(c)(3)(v) and 265.1087(c)(3)(v)].

Subpart CC specific monitoring and inspection requirements for an open-top container using an organic-vapor suppressing barrier are presented in 40 CFR 264.1086(c)(4), 264.1086(d)(4), 265.1087(c)(4) and 265.1087(d)(4).

Subpart CC standards require that the open-top container using an organic-vapor suppressing barrier be visually inspected. If a hazardous waste is already in the container at the time the owner or operator first accepts the possession of the container (i.e., once the owner or operator signs the Uniform Hazardous Waste Manifest) the container must be visually inspected within 24 hours of acceptance. The container must be visually inspected for cracks, holes, gaps or other open spaces in the interior of the container when the cover and closure devices are secured in the closed position. If a defect is noted, a first attempt at repair must take place within 24 hours with complete repair within five calendar days of detection.

When a container used for managing hazardous waste remains at the facility for a period of one (1) year or more, the container must be initially inspected and thereafter inspected every 12 months. If a defect is noted, repairs must begin within 24 hours, with completion of repairs within five calendar days of detection.

For Level 1 containers, the owner or operator must prepare and maintain records for each determination that waste stored in containers with capacity greater than 0.46 m^3 are not in light liquid service [40 CFR 264.1086(b)(v)(5) and 265.1087(b)(v)(5)].

3.2.1 Monitoring and inspection requirements [40 CFR 264.1086(c) and 265.1087(c)]

"When a container used for managing hazardous waste remains at the facility for a period of one (1) year or more, the container must be initially inspected and thereafter inspected every 12 months." Monitoring and inspection records for Subpart CC affected equipment must be maintained according to the requirements of 40 CFR 264.1089 or 265.1090 as applicable.

3.2.2 Waste transfer requirements [40 CFR 264.1086 and 265.1087]

The waste transfer requirements for Level 1 Containers are presented in 40 CFR 264.1086(c)(3)(i) and 40 CFR 265.1087(c)(3)(i). The waste transfer requirements for Container Level 1 open-top container using an organic-vapor suppressing barrier are as follows.

- When the container is filled to the intended final level in one continuous operation, the closure devices and cover must be promptly secured in the closed position, once the transfer is complete.
- When the container is filled intermittently over a period of time, the closure devices and cover must be promptly secured in the closed position when no additional material will be added to the container within 15 minutes, the person performing the loading operation leaves the immediate vicinity of the container or when there is a shutdown of the process generating the material being added to the container.
- For each defect detected during an inspection, the initial effort at 3.2.3 **Repair requirements** repair must be made no later than 24 hours after detection and [40 CFR 264.1086 and repair must be completed as soon as possible but no later than 265.1087] five calendar days after detection. If the repair of the defect cannot be completed within five calendar days, the hazardous waste must be removed from the container and the container cannot be used to manage hazardous waste until the defect is repaired. If the repair of the defect was delayed in accordance with the provisions set forth in 40 CFR 264.1086 and 265.1087, the facility operating record must contain the reason for the delay and the expected date of repair [40 CFR 264.1089(d)(1)(i)(B) and 265.1090(d)(1)(i)(B)].
- 3.2.4 Recordkeeping requirements [40 CFR 264.1089(d) and 265.1090(d)] All records that are maintained in accordance with Subpart CC standards, including those stored electronically, must be maintained in a central location and be easily accessible during inspections. The owner or operator of a facility that is subject to Subpart CC standards is required to record and maintain certain information in the facility operating record for a minimum of three years. The following table presents the recordkeeping requirements which apply to an open-top container using an organic suppressing barrier.

7

RECORDKEEPING REQUIREMENTS SUMMARY TABLE			
WASTE DETERMINATION	40 CFR		
For containers required to meet Level 1 controls, the owner or operator must prepare and maintain records for each determination that containers with capacity greater than 0.46 m ³ used to store waste are not in light liquid service.	264.1086(b)(v)(5) and 265.1087(b)(v)(5)		

4.0 **PERMIT REQUIREMENTS**

This section addresses the permit requirements for an existing treatment, storage, or disposal facility (TSDF) that meets Container Level 1 control requirements for containers through the use of an open-top container using an organic-vapor suppressing barrier. Although the 40 CFR Part 264 requirements are selfimplementing (i.e., the requirements apply to all affected facilities prior to revising the RCRA Part B permit), eventually all affected interim status and permitted TSDFs will be issued a RCRA Part B permit that incorporates the requirements of 40 CFR Part 264. In addition, any existing TSDF that becomes newly subject to the regulations or any new TSDF that is subject to the regulations must submit a permit application and receive a permit incorporating the RCRA Part B requirements prior to construction and operation of the newly affected unit or facility.

Prior to promulgation of the Subpart CC standards on December 6, 1994, 40 CFR Section 270.4 stipulated that compliance with a RCRA permit constituted compliance with the provisions of RCRA. In other words, facilities subject to the RCRA regulations were not required to comply with changes to the RCRA regulations until such revised requirements were incorporated into the facility's RCRA permit by the permitting authority. This provision is commonly known as "permit-as-a-shield". The December 6, 1994 Federal Register changed the "permit-as-ashield" practice by amending Section 270.4 to require that owners/operators of TSDFs that have been issued final RCRA permits prior to October 6, 1996, comply with the air emissions standards under Part 265, Subparts AA, BB and CC until the facility's permit is reviewed or reissued. In other words, the TSDF owner or operator is not required to initiate a permit modification to add the requirements of 40 CFR Part 264, Subparts AA, BB or CC for existing units, but must comply with the applicable requirements of 40 CFR Part 265, Subparts AA, BB and CC by the compliance date of December 8, 1997.

The RCRA permit for affected TSDFs will be revised to incorporate the applicable requirements of 40 CFR Part 264, Subparts AA, BB and CC whenever the permit is reopened or subject to renewal, or when a TSDF owner or operator submits a Class 3 modification request pertaining to an existing unit or addition of a new unit subject to the Subpart AA, BB, or CC requirements. Interim status TSDFs which have submitted Part B applications to U.S. EPA, but have not received a draft permit as of December 5, 1996, are required to modify the Part B application to incorporate the applicable requirements of 40 CFR Part 264, Subparts AA, BB, and CC prior to the draft being issued by U.S. EPA. If the TSDF has received a draft permit as of December 5, 1996, the applicable requirements of 40 CFR Part 264 Subparts AA, BB, and CC must be incorporated into the final permit determination. The U.S. EPA Regional Administrator will establish, on a case-by-case basis, the deadline for submittal of the revised Part B permit application.

4.1 Permit Content - General Development of the permit application is critical to receipt of a permit that is acceptable to the facility. It must be remembered that the permit application is the primary source of information for the permitting authority to use in preparing the permit. Although the regulations specify the minimum information that is required to be included in the permit application, the applicant may want to consider including additional optional information. In this manner the permitting authority will have all the information necessary for the development of complete, accurate and acceptable permit terms and conditions. Please contact your U.S. EPA or State permit writer for a permit writers checklist or for permit writing guidance.

Examples of additional information that an owner or operator may want to submit with an application that addresses open-top containers using an organic-vapor suppressing barrier include:

- Description of operating procedures (i.e., how containers are kept closed except when waste is transferred).
- Examples of facility records or example log forms.
- Description of inspection schedules for container inspections.
- Description of inspection procedures (i.e., how a defect is detected).
- Description of procedures followed in attempting to repair a defect.

The incorporation of this type of information into the permit application may be beneficial to the permit application review process and result the process proceeding smoothly so that the permit can be issued as quickly as possible.

4.2 Permit Content -Container Standards Operating, inspection, repair, recordkeeping and reporting requirements vary depending on the option used to control air emissions from a container. The following are requirements for the use of an open-top container using an organic-vapor suppressing barrier. At a minimum, the following requirements will appear as terms and conditions in the RCRA permit.

4.2.1 Operating requirements

Whenever a hazardous waste is in an open-top container using an organic-vapor suppressing barrier, the suppressing barrier must cover the entire surface of the hazardous waste, except as follows:

- When adding hazardous waste or other material into the container. For containers meeting Container Level 1 control requirements, in the case of continuous filling, the covers must be promptly secured in the closed position upon conclusion of the filling operation. In the case of batch filling, covers must be promptly secured in the closed position either upon the container being filled to the intended fill level, or the completion of a batch loading where the time between batch transfers exceeds 15 minutes, the person performing the loading operation leaves the immediate vicinity of the container, or the shutdown of the process generating the material being added to the container, whichever occurs first.
- When removing hazardous waste from the container. For containers meeting Container Level 1 control requirements, in the case where discrete batches or quantities of material are removed, covers must be promptly secured in the closed position upon completion of a batch removal where the time between batch transfers exceed 15 minutes, or the person performing the removal operation leaves the immediate vicinity of the container, whichever occurs first.
- When a container is empty [as defined in 40 CFR 261.7(b)].
- While performing routine activities such as sampling and accessing equipment through a manhole hatch.
- When a conservation vent or similar type of pressure relief

device is vented during normal operations to allow the internal pressure of the container to be maintained within design specifications.

• Whenever it is necessary to open a container to avoid an unsafe condition.

4.2.2 Inspection requirements Open-top containers using organic-vapor suppressing barriers used to satisfy Container Level 1 control requirements must be inspected when the facility first accepts possession of the container and the container is not emptied within 24 hours after the container is accepted. This inspection includes a visual inspection of the container and covers to check for visible cracks, holes, gaps, or other open spaces into the interior of the container. In the case where a container used for managing hazardous waste remains at the facility for a period of one year or more, the facility must visually inspect the container and its cover initially and once every 12 months thereafter.

4.2.3 Repair requirements When a defect is detected during an inspection, the facility must make an initial effort to repair the defect no later than 24 hours after detection and the repair must be completed as soon as possible but no later than five calendar days after detection. If the repair cannot be completed within this five day period, the hazardous waste must be removed from the container and the container cannot be used for managing hazardous waste until the defect is repaired.

4.2.4 Recordkeeping requirements All required records must be retained by the facility for a minimum of three years. The only recordkeeping required for containers meeting the Level 1 controls through the use of an open-top container using an organic-vapor suppressing barrier is to maintain records of any necessary repairs. If the container manages hazardous waste that contains certain organic peroxide compounds, records must be maintained in accordance with 40 CFR 264.1089(i) and 265.1090(i).

Web Site

Clarification and additional information concerning EPA regulations can be obtained by contacting the EPA through the internet at the following web site:

www.epa.gov/region07