



9.4.7 AIR EMISSION STANDARDS SUBPART CC



The purpose of this portion of the Phase I Technical Review is to ensure that air emissions from containers and tanks are controlled for new and existing hazardous waste treatment storage and disposal facilities (TSDFs). The requirement can be found in 40 CFR Parts 264 and 265, Subpart CC. The requirements were developed for the protection of public health and to control emissions from containers, tanks, surface impoundments, and certain miscellaneous units.

DTSC is planning to adopt these regulations by December 1998. However, these regulations are self implementing, thus currently applicable to California facilities. The burden of compliance is on owners or operators of TSDF and generators who handle organics wastes, as well as recyclers who store organics prior to treatment. Owners or operators have no requirement to notify DTSC or U.S. EPA that they are newly regulated by Subpart CC, but they have to prove in their Part B application (Operation Plan) that they have been in one of the following categories since December 6, 1996:

- c Facility is in compliance with the requirements of 40 CFR, Part 264, Subpart CC. For example, all units handling organics waste at or above regulated level of 500 parts per million by weight (ppmw) have a control device that reduces the rate of air emissions by 95%.
- c Facility can prove that no unit has an emission rate exceeding the regulated level. This should be based on using the appropriate U.S. EPA approved test method at point of origination.
- c Facility provides documents that prove all affected units are using air emission control devices in compliance with of the Clean Air Act.
- c Facility can verify that waste managed in the unit has been treated to reduce the organic content by a process that meets conditions specified in Subpart CC.

SUBPART CC CHECKLIST

Is this facility subject to the Air Emission Standards Subpart CC?

If the answer is no, what is the reason? See the following examples for the reasons:

- (1) Waste stream less than 500 ppmw average
- (2) Unit did not receive hazardous waste after 6/12/96
- (3) Unit undergoing closure
- (4) Waste water exemption
- (5) Elementary Neutralization Unit (corrosive)
- (6) Emergency or spill management exemption
- (7) Totally enclosed treatment facility exemption
- (8) Hazardous waste recycling unit exemption
- (9) Satellite accumulation area
- (10) Using containers of less than 26 gallons capacity
- (11) Units used in an on-site RCRA or CERCLA clean-up
- (12) Mixed radioactive and hazardous waste
- (13) Units with the California Clean Air Act, National Emission Standards for Hazardous Air Pollutants controls
- (14) Tanks with process vents

STANDARDS FOR CONTAINERS

Container standards are organized into three levels:

Level 1 - Less than or equal to 122 gallons (0.46 m³) [exemption below 26.4 gallons (0.1 m³), or larger than 122 gallons and do not manage hazardous waste in light material service¹

Level 2 - Larger than 122 gallons and manage hazardous waste in light material service

Level 3 - Larger than 26.4 gallons and treat hazardous waste by a stabilization process

CONTROL REQUIREMENTS FOR CONTAINERS

Level 1 Controls:

- c Use a container that meets the Department of Transportation (DOT) regulations.
- c Use a cover and closure device on the container and ensure that there are no visible gaps into the interior of the container.
- c Use an organic vapor suppression barrier on or above the hazardous waste in the container.

Level 2 Controls:

- c Use a container that meets the Department of Transportation (DOT) regulations.
- c Use a container that operates with no detectable organic emissions as tested using Method 21.
- c Use a container that is demonstrated to be vapor-tight within the last 12 months using Method 27.

Level 3 Controls:

- c Two control alternatives:
 - Vent container directly through a closed-vent system to a control device, or
 - Vent container inside an enclosure which is exhausted through a closed-vent to a control device.
- c Specific design and operating criteria for venting vapors directly to a control device (same as for tanks).
- c Enclosures must meet the design and operating criteria specified in "Procedure T - Criteria for and Verification of Permanent or Temporary Total Enclosure" under 40 CFR 52.741.

STANDARDS FOR TANKS

Tanks standards are organized into two levels:

Level 1 (less extensive requirements) - Tank must meet all of the following conditions to qualify for use with Tank Level 1 controls:

- c Maximum organic vapor pressure of waste is less than cutoff for tank design capacity
- c Contents are not heated to temperatures above the temperature of vapor pressure determination

¹Light liquid service: The vapor pressure of one or more of the organic constituents in the material must be greater than 0.3 Kilopascals at 20 degrees C and the total concentration of pure organic constituents having a vapor pressure greater than 0.3 Kilopascals at 20 degrees C is equal to or greater than 20 percent by weight

- c No waste stabilization in tanks

Level 2 (more extensive requirements) - Tanks that hold waste exceeding the Level 1 criteria or can not be proved otherwise are required to use Level 2 controls

TANK LEVEL 1 CONTROLS

Use a fixed roof (doesn't fluctuate with the level of material in tank). Fixed roof can be:

- c An integral part of the structural design, or
- c May separate from rest of tank (e.g., removable top on a vertical tank).

TANK LEVEL 2 CONTROLS

The following design options are allowed for Level 2 Tank Controls:

- (1) Cover vented to control device
- (2) Pressure tank
- (3) Tank inside enclosure which is vented to combustion control device
- (4) Fixed roof with internal floating roof
- (5) External floating roof

SURFACE IMPOUNDMENTS

To demonstrate that Subpart CC controls are not required for surface impoundments, the applicant must provide the following:

- c Waste placed in unit has average Volatile Organic (VO) concentration less than 500 ppmw at the point of waste origination, or
- c Waste placed in unit has been treated to meet the Land Disposal Requirements (LDRs) for organics or by one of the treatment alternatives specified in the rule, or
- c Units are used for biological waste treatment (meeting requirements for biological treatment alternative).

CONTROL REQUIREMENTS FOR SURFACE IMPOUNDMENTS

- c Use a floating membrane cover, or
- c Cover and vent to a control device

CONTROL DEVICES AND CLOSE-VENT SYSTEMS

The closed-vent system should route the gases, vapors, and fumes emitted from the hazardous waste in the waste management unit to a control device. The control devices should meet the following requirements:

Vapor recovery/reduction system - Designed and operated with an organic recovery or reduction efficiency of more than 95 percent by weight (i.e., condensers and carbon adsorbers).

Enclosed combustion devices - Designed and operated with organic destruction of more than 95 percent by weight, or residence time more than 0.5 seconds and temperature of more than 760 degree Centigrade (i.e., incinerators boilers and process heaters)

Flare - Designed and operated with no visible emission and flame present at all times.

REQUIRED OUTPUTS

APPLICABLE REGULATIONS AND STATUTES

State Laws and Regulations:

Title 22, California Code of Regulation.

Sections

66260.11 References

66264.1 Purpose, Scope and Applicability

Article 27 Air Emissions for Process Vents

66264.1030 through 1036

66270.50 Duration of Permit

66271.14 Issuance and Effective Date of Permit

Article 28 Air Emission Standards for Equipment Leaks

Sections 66264.1050 through 1065 and 66264.1033 through 1035

66264.11 ASTM Methods D-266267-88, D-2879-86, E-169-87, E-168-88, E-66260-85, 9060 or 8240
of SW-846

Health and Safety Code

Section

25200

Federal Laws and Regulations:

Chapter 20 RCRA TSDF

40 CFR

Section 264.1

Part 60 Reference Methods 2, 2A, 2C, 2D

Reference Methods 18, 21, 22

Parts 264 and 265

Subpart CC, Air Emission Standards

for Tanks, Containers and Surface Impoundments

Other Laws and Regulations

POLICIES

DTSC Policies:

EPA Policies:

Other Policies:

INSTRUCTIONS TO APPLICANTS

Handouts to be Given to Applicants:

Examples to be Given to Applicants:

PUBLIC PARTICIPATION CONSIDERATIONS

Emission Control from process vents can be a significant community issue particularly if past failures have caused community exposures.

Special Requests:

The following plans or documents should be included in the permit:

- (1) Detailed plans and reports on the design, installation, operation, and maintenance of the control device(s).
- (2) Documentation of compliance certifications.
- (3) Control device monitoring schedule and procedures.
- (4) Control device inspection schedule and procedures.
- (5) The applicant's implementation schedule of the requirements.

OMNIBUS PERMITTING AUTHORITY

RCRA Section 3005 states that permits issued must include terms and conditions that are necessary to protect human health and the environment. Therefore, permit writers can require more stringent controls as permit conditions. If necessary, for protection of the public health and the environment the permit may require an emission reduction of more than 95 percent, and lower annual and hourly emissions cut-off limits.

TECHNICAL REFERENCES

U.S. EPA. December 1990. Workshop-Organic Air Emissions from Waste Management Facilities. Speaker Slide Copies and Supporting Information. Vol. I. CERI 90-124a. Office of Air Quality Assessment, Research Triangle Park, North Carolina.

U.S. EPA. December 1990. Workshop-Organic Air Emissions from Waste Management Facilities. Speaker Slide Copies and Supporting Information. Vol. II. CERI 90-124b. Office of Air Quality Assessment, Research Triangle Park, North Carolina.