



## RCRA Subpart CC Organic Air Emission Standards: *Waste Determination*

**BACKGROUND:** In 1984, Congress passed the Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA). Section 3004(n) of HSWA directed EPA to promulgate regulations for monitoring and control of air emissions from hazardous waste treatment, storage, and disposal facilities (TSDFs). EPA is addressing TSDF air emissions by implementing 3004(n) in a phased approach. The first of three phases was completed with the promulgation of final RCRA standards (55 *FR* 22454, June 21, 1990) to reduce organic emissions vented from treating hazardous wastes by distillation, fractionation, thin-film evaporation, solvent extraction, steam and air stripping, as well as from leaks in piping and equipment used for hazardous waste management processes. The second phase involved the promulgation of final RCRA organic emissions standards for surface impoundments, tanks, containers, and miscellaneous units (59 *FR* 62896, December 6, 1994). The final rule was significantly amended in 1996 to better convey the EPA's original intent, to provide additional flexibility to owners and operators who must comply with the rules, and to change the effective date of the requirements. (61 *FR* 59932, November 25, 1996). The final rule also was amended in December 1997, to make technical amendments and to clarify the regulatory text (62 *FR* 64636, December 8, 1997). The last phase will involve assessment of the first two phases and publication of further regulations or guidance as needed. The subject of this information brief is the Phase Two regulations specifically dealing with waste determination.

**STATUTES** Resource Conservation and Recovery Act (RCRA), Hazardous and Solid Waste Amendments (HSWA) of 1984.

**REGULATIONS:** 40 CFR Parts 264 and 265, Subpart CC 1080-1091.

1. "Hazardous Waste Treatment, Storage and Disposal Facilities and Hazardous Waste Generators (RCRA Subpart CC), Organic Air Emission Standards; Final Rule Issued," U.S. Department of Energy, Office of Environmental Policy and Assistance, RCRA/CERCLA Division (EH-413) Regulatory Bulletin, August 1995.
2. "Hazardous Waste Treatment, Storage and Disposal Facilities and Hazardous Waste Generators (RCRA Subpart CC), Organic Air Emission Standards; Revised Final Rule Issued," U.S. Department of Energy, Office of Environmental Policy and Assistance, RCRA/CERCLA Division (EH-413) Regulatory Bulletin, September 1997.
3. "Hazardous Waste Treatment, Storage, and Disposal Facilities and Hazardous Waste Generators-Organic Air Emission Standards for Tanks, Surface Impoundments, and Containers; Final Rule," 59 *FR* 62896, December 6, 1994 Final Rule. Amendment: 61 *FR* 4903, February 9, 1996 Final Rule; Technical Amendment. Amendment: 61 *FR* 59932, November 25, 1996 Final Rule. Amendment: 62 *FR* 64636, December 8, 1997 Final Rule; Clarification and Technical Amendment.

### What waste streams are subject to these regulations?

Only hazardous wastestreams that have average volatile organic (VO) constituent concentrations greater than or equal to 500 parts per million by weight (ppmw) at the point of waste origination are subject to Subpart CC. [§264.1082(c)(1) & §265.1083 (c)(1)] It should be noted that units solely used for managing mixed (radioactive and hazardous) waste [§264.1080(b)(6) &

§265.1080(b)(6)] or remedial action wastes [§264.1080(b)(5) and §265.1080(b)(5)] are deferred from these standards.

### When must the average VO concentration be determined?

Under the final Subpart CC standards, a TSDF owner or operator (O/O) is not required to determine the VO concentration of the waste if it is placed in a tank, surface impoundment, or container using the required air emission controls. However, an O/O

must perform a waste determination for each hazardous waste placed in a waste management unit exempted from using air emission controls based on the VO concentration of the waste at its point of waste origination. [§264.1083(a)(2) & §265.1084(a)(2); 62 FR 64646] For wastes generated on-site, this is the point when a solid waste becomes a hazardous waste as defined in 40 CFR Part 261. For wastes received from off-site, this is the point where the owner/operator of the receiving facility accepts the manifest. [61 FR 4906-4909]

### What are the options for waste determination?

Waste determination may be made using either direct measurement (sampling and testing) or knowledge of the waste. [§265.1084(a)(2)] Each different waste stream must be evaluated separately. One waste stream would be different from another if it is generated from a different process or because its organic composition is sufficiently different. EPA requires that you perform a new waste determination whenever changes to the process generating the hazardous waste are likely to cause the average VO concentration to increase to a level at or above 500 ppmw. [59 FR 62916] *NOTE:* In the original final rule (59 FR 62896), the action level was 100 ppmw. However, in a subsequent final rule (61 FR 59932) the action level was raised to 500 ppmw.

### What constitutes “knowledge” of the waste?

Knowledge can be based on whatever supports your waste determination, including some testing. Examples include material balance calculations for the generating process and previous test data for other locations managing the same type of waste stream. [§265.1084(a)(4)] Please note that reliance on knowledge of the waste stream alone may be problematic. If the information proves to be incorrect, the facility could be subject to an enforcement action.

### Are certain test methods and procedures required for direct measurement?

The following direct measurements can be used:

- ❑ Method 25D or Methods 624, 625, 1624 and 1625 (see 40 CFR 136, Appendix A),
- ❑ solid waste Methods 8260 and 8270 (both in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846),
- ❑ any EPA standard method if validated using 40 CFR 63 Appendix D or 40 CFR 63, Method 301, EZ, or
- ❑ any other method if validated using 40 CFR 63 Method 301. [§265.1084(a)(3)]

### What are the waste sampling issues associated with waste determination procedures?

A written sampling plan is required that describes the procedures for collecting representative samples “such that a minimum loss of organics occurs and sample integrity is maintained.” Sampling procedures should minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage and preparation steps. Two examples of acceptable sampling plans are those specified in Method 25D or SW-846. [§265.1084(a)(3)(i)(C)]

The sample may be taken at the point of origination, or at a point downstream provided the waste has not been altered, mixed with other materials, or allowed to release any VO components prior to sampling. [61 FR 4906]

### How is the “average” VO concentration determined?

The average VO concentration may be established by averaging sample results of a waste stream over a representative time period of up to one year. At least four sample results must be used to calculate the average for the period. The samples must be representative of the waste stream. [§265.1084(a)(3)(ii)]

### What are the recordkeeping requirements?

The following records must be kept:

- ❑ If you claim the exemption that your hazardous waste-stream is less than 500 ppmw, you must document the basis of knowledge, test results, and calculations in the facility operating log. [§264.1089(f)(1) & §265.1090(f)(1)]
- ❑ If you use process knowledge in your waste determination, that knowledge must be documented. [§265.1084(a)(4)(i)]
- ❑ If you use direct measurement in your waste determination, you must document and keep records of the point of waste origination, averaging period, quality assurance program, and sampling plan. [§265.1084(a)(3)(i-ii)]

**Questions of policy or questions requiring policy decisions will not be dealt with in EH-413 Information Briefs unless that policy already has been established through appropriate documentation. Please refer any questions concerning the subject material covered in this Information Brief to:**

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