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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9, 60, 260, 262, 264, 265, 270, and 271

[IL-64-2-5807; FRL-5110-8]

RIN 2060-AB94

Hazardous Waste Treatment, Storage, and Disposal Facilities and Hazardous Waste Generators; Organic Air Emission Standards for Tanks, Surface Impoundments, and Containers

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Under the authority of the Resource Conservation and Recovery Act (RCRA), as amended, the EPA is promulgating air standards that will further reduce organic emissions from hazardous waste management activities. The air standards apply to owners and operators of hazardous waste treatment, storage, and disposal facilities (TSDF) subject to RCRA subtitle C permitting requirements and to certain hazardous waste generators accumulating waste on-site in RCRA permit-exempt tanks and containers. Under these standards, air emission controls must be used for tanks, surface impoundments, and containers in which hazardous waste is placed on or after June 5, 1995 except under certain conditions specified in the rule. Air emission control requirements are also added to the RCRA permit terms and provisions specified for TSDF miscellaneous units. In addition, this action establishes a new EPA reference test method (Method 25E) to determine the organic vapor pressure of a waste.

EFFECTIVE DATE: The final rule is effective as of June 5, 1995. The EPA has specified in the final rule a schedule that establishes the compliance dates by which different requirements of the rule must be met. These compliance dates and requirements are explained further under SUPPLEMENTARY INFORMATION.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of June 5, 1995.

ADDRESSES: Background information document. The background information document (BID) for the final rule may be obtained from the U.S. EPA Library (MD-35), Research Triangle Park, North Carolina 27711, telephone (919) 541-2777. Please refer to "Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)-Background Information for

Promulgated Organic Air Emission Standards for Tanks, Surface Impoundments, and Containers", EPA document number EPA-453/R-94-076b.

This document and the BID are also available on the EPA's Clean-up Information Bulletin Board (CLU-IN). To access CLU-IN with a modem of up to 28,800 baud, dial (301) 589-8366. First-time users will be asked to input some initial registration information. Next, select "D" (download) from the main menu. Input the file name "RCRAAIR1.ZIP" to download this notice. Input the file name "RCRAAIR2.ZIP" to download the BID. Follow the on-line instructions to complete the download. More information about the download procedure is located in Bulletin 104; to read this type "B 104" from the main menu. For additional help with these instructions, telephone the CLU-IN help line at (301) 589-8368.

Docket. The supporting information used for this rulemaking is available for public inspection and copying in the RCRA docket. The RCRA docket numbers pertaining to this rulemaking are F-91-CESP-FFFFF, F-92-CESA-FFFFF, F-94-CESF-FFFFF, and F-94-CE2A-FFFFF. The RCRA docket is located at the EPA RCRA Docket Office (5305) in room 2616 of the U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460.

FOR FURTHER INFORMATION CONTACT:

The RCRA Hotline, toll-free at (800) 424-9346. For further information on the specific air standards and test method promulgated by this action, contact Ms. Michele Aston, Emission Standards Division (MD-13), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number (919) 541-2363.

>>>> Preamble has not been included in this file. <<<<

For the reasons set out in the preamble, title 40, chapter I, parts 9, 60, 260, 262, 264, 265, 270, and 271 of the Code of Federal Regulations are amended as follows:

>>>> Part 9 has not been included because it is not required as part of a State's Hazardous Waste Program. <<<<

PART 60--STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

3. The authority citation for part 60 continues to read as follows:

Authority: Sections 111, 301(a) of the Clean Air Act as amended (42 U.S.C. 7411, 7601(a)) unless otherwise noted.

4. Appendix A is amended by adding Method 25E:

Appendix A-Test Methods

* * * * *

Method 25E--Determination of Vapor Phase Organic

Concentration in Waste Samples

Introduction

Performance of this method should not be attempted by persons unfamiliar with the operation of a flame ionization detector (FID) nor by those who are unfamiliar with source sampling because knowledge beyond the scope of this presentation is required.

1. Applicability and Principle

1.1 Applicability. This method is applicable for determining the vapor pressure of waste samples which represent waste which is or will be managed in tanks.

1.2 Principle. The headspace vapor of the sample is analyzed for carbon content by a headspace analyzer, which uses an FID.

2. Interferences

2.1 The analyst shall select the operating parameters best suited to the requirements for a particular analysis. The analyst shall produce confirming data through an adequate supplemental analytical technique and have the data available for review by the Administrator.

3. Apparatus

3.1 Sampling. The following equipment is required:

3.1.1 Sample Containers. Vials, glass, with butyl rubber septa, Perkin-Elmer Corporation Numbers 0105-0129 (glass vials), B001-0728 (gray butyl rubber septum, plug style), 0105-0131 (butyl rubber septa), or equivalent. The seal must be made from butyl rubber. Silicone rubber seals are not acceptable.

3.1.2 Vial Sealer. Perkin-Elmer Number 105-0106, or equivalent.

3.1.3 Gas-Tight Syringe. Perkin-Elmer Number 00230117, or equivalent.

3.1.4 The following equipment is required for sampling.

3.1.4.1 Tap.

3.1.4.2 Tubing. Telfon, 0.25-in. ID. Note: Mention of trade names or specific products does not constitute endorsement by the Environmental Protection Agency.

3.1.4.3 Cooling Coil. Stainless steel (304), 0.25 in.-ID, equipped with a thermocouple at the coil outlet.

3.2 Analysis. The following equipment is required:

3.2.1 Balanced Pressure Headspace Sampler. Perkin-Elmer HS-6, HS-100, or equivalent, equipped with a glass bead column instead of a chromatographic column.

3.2.2 FID. An FID meeting the following specifications is required:

3.2.2.1 Linearity. A linear response (±5 percent) over the operating range as demonstrated by the procedures established in Section 6.1.2.

3.2.2.2 Range. A full scale range of 1 to 10,000 ppm CH $_4$. Signal attenuators shall be available to produce a minimum signal response of 10 percent of full scale.

3.2.3 Data Recording System. Analog strip chart recorder or digital integration system compatible with the FID for permanently recording the output of the detector.

3.2.4 Thermometer. Capable of reading temperatures in the range of 30 E to 60 EC with an accuracy of ± 0.1 EC.

4. Reagents

4.1 Analysis. The following items are required for analysis:

4.1.1 Hydrogen (H₂). Zero grade.

4.1.2 Carrier Gas. Zero grade nitrogen, containing less than 1 ppm carbon (C) and less than 1 ppm carbon dioxide.

4.1.3 Combustion Gas. Zero grade air or oxygen as required by the FID.

4.2 Calibration and Linearity Check.

4.2.1 Stock Cylinder Gas Standard. 100 percent propane. The manufacturer shall:

(a) Certify the gas composition to be accurate to ±3 percent or better (see Section 4.2.1.1);

(b) Recommend a maximum shelf life over which the gas concentration does not change by greater than ±5 percent from the certified value; and

(c) Affix the date of gas cylinder preparation, certified propane concentration, and recommended maximum shelf life to the cylinder before shipment to the buyer.

4.2.1.1 Cylinder Standards Certification. The manufacturer shall certify the concentration of the calibration gas in the cylinder by (a) directly analyzing the cylinder and (b) calibrating his analytical procedure on the day of cylinder analysis. To calibrate his analytical procedure, the manufacturer shall use, as a minimum, a three-point calibration curve.

4.2.1.2 Verification of Manufacturer's Calibration Standards. Before using, the manufacturer shall verify each calibration standard by (a) comparing it to gas mixtures prepared in accordance with the procedure described in Section 7.1 of Method 106 of part 61, appendix B, or by (b) calibrating it against Standard Reference Materials (SRM's) prepared by the National Bureau of Standards, if such SRM's are available. The agreement between the initially determined concentration value and the verification concentration value shall be within ±5 percent. The manufacturer must reverify all calibration standards on a time interval consistent with the shelf life of the cylinder standards sold.

5. Procedure

5.1 Sampling.

5.1.1 Install a sampling tap to obtain the sample at a point which is most representative of the unexposed waste (where the waste has had minimum opportunity to volatilize to the atmosphere). Assemble the sampling apparatus as shown in Figure 25E-1.

>>>> See the accompanying hardcopy volume for non-machine-readable data that appears at this point. <<<

5.1.2 Begin sampling by purging the sample lines and cooling coil with at least four volumes of waste. Collect the purged material in a separate container and dispose of it properly.

5.1.3 After purging, stop the sample flow and transfer the Teflon sampling tube to a sample container. Sample at a flow rate such that the temperature of the waste is <10 EC (<50EF). Fill the sample container halfway (\pm 5 percent) and cap it within 5 seconds. Store immediately in a cooler and cover with ice.

5.1.4 Alternative sampling techniques may be used upon the approval of the Administrator.

5.2 Analysis.

5.2.1 Allow one hour for the headspace vials to equilibrate at the temperature specified in the regulation. Allow the FID to warm up until a stable baseline is achieved on the detector.

5.2.2 Check the calibration of the FID daily using the procedures in Section 6.1.2.

5.2.3 Follow the manufacturer's recommended procedures for the normal operation of the headspace sampler and FID.

5.2.4 Use the procedures in Sections 7.4 and 7.5 to calculate the vapor phase organic vapor pressure in the samples.

5.2.5 Monitor the output of the detector to make certain that the results are being properly recorded.

6. Operational Checks and Calibration

Maintain a record of performance of each item.

6.1 Use the procedures in Section 6.1.1 to calibrate the headspace analyzer and FID and check for linearity before the system is first placed in operation, after any shutdown longer than 6 months, and after any modification of the system.

6.1.1 Calibration and Linearity. Use the procedures in Section 6.2.1 of Method 18 of Part 60, Appendix A, to prepare the standards and calibrate the flowmeters, using propane as the standard gas. Fill the calibration standard vials halfway (±5 percent) with deionized water. Purge and fill the airspace with calibration standard. Prepare a minimum of three calibration standards in triplicate at concentrations that will bracket the applicable cutoff. For a cutoff of 5.2 kPa, prepare nominal concentrations of 30,000, 50,000, and 70,000 ppm as propane. For a cutoff of 27.6 kPa, prepare nominal concentrations of 200,000, 300,000, and 400,000 ppm as propane.

6.1.1.1 Use the procedures in Section 5.2.3 to measure the FID response of each standard. Use a linear regression analysis to calculate the values for the slope (k) and the y-intercept (b). Use the procedures in Sections 7.2 and 7.3 to test the calibration and the linearity.

6.1.2 Daily FID Calibration Check. Check the calibration at the beginning and at the end of the daily runs by using the

following procedures. Prepare two calibration standards at the nominal cutoff concentration using the procedures in Section 6.1.1. Place one at the beginning and one at the end of the daily run. Measure the FID response of the daily calibration standard and use the values for k and b from the most recent calibration to calculate the concentration of the daily standard. Use an equation similar to 25E-2 to calculate the percent difference between the daily standard and C $_{\rm s}$. If the difference is within 5 percent, then the previous values for k and b may be used. Otherwise, use the procedures in Section 6.1.1 to recalibrate the FID.

7. Calculations

7.1 Nomenclature.

A	=	Measurement of the area under the response curve, counts.
b	=	y-intercept of the linear regression line.
C _a	=	Measured vapor phase organic concentration of sample, ppm as propane.
C_{ma}	=	Average measured vapor phase organic concentration of standard, ppm as propane.
C_m	=	Measured vapor phase organic concentration of standard,
~		ppin as propane.
C _s	=	Calculated standard concentration, ppm as propane.
k	=	Slope of the linear regression line.
\mathbb{P}_{bar}	=	Atmospheric pressure at analysis conditions, mm Hg (in. Hg).
P*	=	Organic vapor pressure in the sample, kPa (psi).
β	=	1.333 X 10 ⁻⁷ kPa/[(mm Hg)(ppm)], (4.91 X 10 ⁻⁷ psi/[(in. Hg)(ppm)])

7.2 Linearity. Use the following equation to calculate the measured standard concentration for each standard vial.

 $C_{m} = k A + b Eq. 25E-1$

7.2.1 Calculate the average measured standard concentration (C_{ma}) for each set of triplicate standards and use the following equation to calculate the percent difference (PD) between C $_{ma}$ and $C_{\rm s}$.

$$PD \quad ' \quad \frac{C_s \& C_{ma}}{C_s} X \quad 100 \qquad Eq. \ 25E\&2$$

The instrument linearity is acceptable if the percent difference is within five for each standard.

7.3 Relative Standard Deviation (RSD). Use the following equation to calculate the RSD for each triplicate set of standards.

RSD '
$$\frac{100}{C_{ma}} \sqrt{\frac{(C_m \& C_{ma})^2}{2}} \qquad Eq. 25E\&3$$

The calibration is acceptable if the RSD is within five for each standard concentration.

7.4 Concentration of organics in the headspace. Use the following equation to calculate the concentration of vapor phase organics in each sample.

CA = k A + b Eq. 25E-4

7.5 Vapor Pressure of Organics in the Headspace Sample. Use the following equation to calculate the vapor pressure of organics in the sample.

 $P^* = \beta P_{bar} C_a$ Eq. 25E-5

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PART 260-HAZARDOUS WASTE MANAGEMENT SYSTEM: GENERAL

5. The authority citation for part 260 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921-6927, 6930, 6934, 6935, 6937, 6938, 6939, and 6974.

6. Section 260.11 is amended by adding the following references to the end of paragraph (a) and by revising the first sentence of paragraph (b) to read as follows:

§ 260.11 References.

(a) * * *

API Publication 2517, Third Edition, February 1989, "Evaporative Loss from External Floating-Roof Tanks," available from the American Petroleum Institute, 1220 L Street, Northwest, Washington, D.C. 20005.

"ASTM Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope," ASTM Standard D 2879-92, available from American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, Pennsylvania 19103;

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(b) The references listed in paragraph (a) of this section are also available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC. * * *

PART 262--STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE

8. The authority citation for part 262 continues to read as follows:

Authority: 42 U.S.C. 6906, 6912(a), 6922, 6923, 6924, 6925, 6937 and 6938, unless otherwise noted.

8a. Section 262.34 is amended by revising paragraphs
(a)(1)(i), (a)(1)(ii) and (d)(2) as follows:

§ 262.34 Accumulation time.

(1) * * *

(i) In containers and the generator complies with subparts I AA, BB and CC of 40 CFR part 265; and/or

(ii) In tanks and the generator complies with subparts J, AA, BB and CC of 40 CFR part 265, except §§ 265.197(c) and 265.200; and/or

* * * * *

(d) * * *

(2) The generator complies with the requirements of subpart I of part 265 of this chapter, except for §§ 265.176 and 265.178;

* * * * *

⁽a) * * *

PART 264-STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

9. The authority citation for part 264 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6924 and 6925.

Subpart B-General Facility Standards

§ 264.13 [Amended]

10. In § 264.13, paragraph (b)(6) is amended by adding "264.1083," after the phrase "as specified in §§ 264.17, 264.314, 264.341, 264.1034(d), 264.1063(d),".

11. In § 264.13, paragraph (b)(8) is added to read as follows:

§ 264.13 General waste analysis.

* * * *

(b) * * *

(8) For owners and operators seeking an exemption to the air emission standards of subpart CC in accordance with § 264.1082-

(i) The procedures and schedules for waste sampling and analysis, and the analysis of test data to verify the exemption.

(ii) Each generator's notice and certification of the volatile organic concentration in the waste if the waste is received from off site.

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§ 264.15 [Amended]

12. In § 264.15, paragraph (b)(4) is amended by removing the word "and" after the phrase "frequencies called for in §§ 264.174, 264.193, 264.195, 264.226, 264.254, 264.278, 264.303, 264.347, 264.602, 264.1033, 264.1052, 264.1053," and adding "264.1088, and 264.1091(b)," after "264.1058,".

Subpart E-Manifest System, Recordkeeping, and Reporting

13. Section 264.73 is amended by revising paragraphs (b)(3) and (b)(6) to read as follows:

§ 264.73 Operating record.

* * * * *

(b) * * *

(3) Records and results of waste analyses and waste determinations performed as specified in §§ 264.13, 264.17, 264.314, 264.341, 264.1034, 264.1063, 264.1083, 268.4(a), and 268.7 of this chapter.

* * * * *

(6) Monitoring, testing or analytical data, and corrective action where required by subpart F of this part and §§ 264.19, 264.191, 264.193, 264.195, 264.222, 264.223, 264.226, 264.252 through 264.254, 264.276, 264.278, 264.280, 264.302 through 264.304, 264.309, 264.347, 264.602, 264.1034(c) through 264.304(f), 264.1035, 264.1063(d) through 264.1063(i), 264.1064, 264.1088, 264.1089, and 264.1091.

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14. Section 264.77 is amended by revising paragraph (c) to read as follows:

§ 264.77 Additional reports.

* * * * *

(c) As otherwise required by subparts F, K through N, AA, BB, and CC of this part.

Subpart I-Use and Management of Containers

15. Section 264.179 is added to read as follows:

§ 264.179 Air Emission Standards.

The owner or operator shall manage all hazardous waste placed in a container in accordance with the requirements of subpart CC of this part.

Subpart J-Tank Systems

16. Section 264.200 is added to read as follows:

§ 264.200 Air emission standards.

The owner or operator shall manage all hazardous waste placed in a tank in accordance with the requirements of subpart CC of this part.

Subpart K-Surface Impoundments

17. Section 264.232 is added to read as follows:

§ 264.232 Air emission standards.

The owner or operator shall manage all hazardous waste placed in a surface impoundment in accordance with the requirements of subpart CC of this part.

Subpart X-Miscellaneous Unit

§ 264.601 [Amended]

18. The introductory text of § 264.601 is amended by adding the words "and subparts AA through CC" after "subparts I through O".

Subpart AA-Air Emission Standards for Process Vents

19. Section 264.1033 is amended by revising paragraph (k)(2) and adding paragraph (m) to read as follows:

§ 264.1033 Standards: Closed-vent systems and control devices.

* * * *

(k) * * *

(2) Closed-vent systems shall be monitored to determine compliance with this section during the initial leak detection monitoring, which shall be conducted by the date that the facility becomes subject to the provisions of this section, annually, and at other times as requested by the Regional Administrator. For the annual leak detection monitoring after the initial leak detection monitoring, the owner or operator is not required to monitor those closed-vent system components which operate in vacuum service or those closed-vent system joints, seams, or other connections that are permanently or semipermanently sealed (e.g., a welded joint between two sections of metal pipe or a bolted and gasketed pipe flange).

* * * * *

(m) The owner or operator using a carbon adsorption system shall document that all carbon removed from a carbon adsorption

system to comply with § 264.1033(g) and § 264.1033(h) is managed in one of the following manners:

(1) Regenerated or reactivated in a thermal treatment unit that is permitted under subpart X of this part;

(2) Incinerated by a process that is permitted under subpart0 of this part; or

(3) Burned in a boiler or industrial furnace that is permitted under subpart H of part 266 of this chapter.

20. In part 264, subpart CC is added to read as follows:

Subpart CC-Air Emission Standards for Tanks, Surface Impoundments, and Containers

Sec.

264.1080 Applicability.
264.1081 Definitions.
264.1082 Standards: General.
264.1083 Waste determination procedures.
264.1084 Standards: Tanks.
264.1085 Standards: Surface impoundments.
264.1086 Standards: Containers.
264.1087 Standards: Closed-vent systems and control devices.
264.1088 Inspection and monitoring requirements.
264.1089 Recordkeeping requirements.
264.1090 Reporting requirements.
264.1091 Alternative control requirements for tanks.

Subpart CC-Air Emission Standards for Tanks, Surface Impoundments, and Containers

§ 264.1080 Applicability.

(a) The requirements of this subpart apply to owners and operators of all facilities that treat, store, or dispose of hazardous waste in tanks, surface impoundments, or containers subject to either subparts I, J, or K of this part except as § 264.1 and paragraph (b) of this section provide otherwise.

(b) The requirements of this subpart do not apply to the following waste management units at the facility:

(1) A waste management unit that holds hazardous waste placed in the unit before June 5, 1995, and in which no hazardous waste is added to the unit on or after June 5, 1995.

(2) A container that has a design capacity less than or equal to 0.1 $\rm m^{3}.$

(3) A tank in which an owner or operator has stopped adding hazardous waste and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.

(4) A surface impoundment in which an owner or operator has stopped adding hazardous waste (except to implement an approved closure plan) and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.

(5) A waste management unit that is used solely for on-site treatment or storage of hazardous waste that is generated as the result of implementing remedial activities required under the corrective action authorities of RCRA sections 3004(u), 3004(v) or 3008(h), CERCLA authorities, or similar Federal or State authorities.

(6) A waste management unit that is used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the authority of the Atomic Energy Act and the Nuclear Waste Policy Act.

(c) For the owner and operator of a facility subject to this subpart and who received a final permit under RCRA section 3005 prior to June 5, 1995, the requirements of this subpart shall be incorporated into the permit when the permit is reissued in accordance with the requirements of 40 CFR 124.15 or reviewed in accordance with the requirements of 40 CFR 270.50(d). Until such date when the owner and operator receives a final permit incorporating the requirements of this subpart, the owner and operator is subject to the requirements of 40 CFR part 265, subpart CC.

§ 264.1081 Definitions.

As used in this subpart, all terms shall have the meaning given to them in 40 CFR 265.1081, the Act, and parts 260 through 266 of this chapter.

§ 264.1082 Standards: General.

(a) This section applies to the management of hazardous waste in tanks, surface impoundments, and containers subject to this subpart.

(b) The owner or operator shall control air emissions from each waste management unit in accordance with standards specified in §§ 264.1084 through 264.1087 of this subpart, as applicable to the waste management unit, except as provided for in paragraph (c) of this section.

(c) A waste management unit is exempted from standards specified in §§ 264.1084 through 264.1087 of this subpart provided that all hazardous waste placed in the waste management unit is determined by the owner or operator to meet either of the following conditions:

(1) The average VO concentration of the hazardous waste at the point of waste origination is less than 100 parts per million by weight (ppmw). The average VO concentration shall be determined by the procedures specified in § 264.1083(a) of this subpart.

(2) The organic content of the hazardous waste has been reduced by an organic destruction or removal process that achieves any one of the following conditions:

(i) A process that removes or destroys the organics contained in the hazardous waste to a level such that the average VO concentration of the hazardous waste at the point of waste treatment is less than the exit concentration limit (CT) established for the process. The average VO concentration of the hazardous waste at the point of waste treatment and the exit concentration limit for the process shall be determined using the procedures specified in § 264.1083(b) of this subpart.

(ii) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 95 percent, and the average VO concentration of the hazardous waste at the point of waste treatment is less than 50 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in § 264.1083(b) of this subpart.

(iii) A process that removes or destroys the organics contained in the hazardous waste to a level such that the actual organic mass removal rate (MR) for the process is greater than the required organic mass removal rate (RMR) established for the process. The required organic mass removal rate and the actual organic mass removal rate for the process shall be determined using the procedures specified in § 264.1083(b) of this subpart.

(iv) A biological process that destroys or degrades the organics contained in the hazardous waste, such that either of the following conditions is met:

(A) The organic reduction efficiency (R) for the process is equal to or greater than 95 percent, and the organic biodegradation efficiency (R $_{\rm bio}$) for the process is equal to or greater than 95 percent. The organic reduction efficiency and the organic biodegradation efficiency for the process shall be determined in accordance with the procedures specified in § 264.1083(b) of this subpart.

(B) The total actual organic mass biodegradation rate (MR $_{\rm bio}$) for all hazardous waste treated by the process is equal to or greater than the required organic mass removal rate (RMR). The required organic mass removal rate and the actual organic mass biodegradation rate for the process shall be determined using the procedures specified in § 264.1083(b) of this subpart.

(v) A process that removes or destroys the organics contained in the hazardous waste and meets all of the following conditions:

(A) All of the materials entering the process are hazardous wastes.

(B) From the point of waste origination through the point where the hazardous waste enters the process, the hazardous waste is continuously managed in waste management units which use air emission controls in accordance with the standards specified in §§ 264.1084 through 264.1087 of this subpart, as applicable to the waste management unit.

(C) The average VO concentration of the hazardous waste at the point of waste treatment is less than the lowest average VO concentration at the point of waste origination determined for each of the individual hazardous waste streams entering the process or 100 ppmw, whichever value is lower. The average VO concentration of each individual hazardous waste stream at the point of waste origination shall be determined using the procedure specified in § 264.1083(a) of this subpart. The average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedure specified in § 264.1083(b) of this subpart.

(vi) A hazardous waste incinerator for which the owner or operator has either:

(A) Been issued a final permit under 40 CFR part 270, and designs and operates the unit in accordance with the requirements of subpart 0 of this part; or

(B) Has certified compliance with the interim status requirements of 40 CFR part 265, subpart 0.

(vii) A boiler or industrial furnace for which the owner or operator has either:

(A) Been issued a final permit under 40 CFR part 270, and designs and operates the unit in accordance with the requirements of 40 CFR part 266, subpart H, or

(B) Has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

(d) When a process is used for the purpose of treating a hazardous waste to meet one of the sets of conditions specified in paragraphs (c)(2)(i) through (c)(2)(v) of this section, each material removed from or exiting the process that is not a hazardous waste but has an average VO concentration equal to or greater than 100 ppmw shall be managed in a waste management unit in accordance with the requirements of paragraph (b) of this section.

(e) The Regional Administrator may at any time perform or request that the owner or operator perform a waste determination for a hazardous waste managed in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of this section as follows:

(1) The waste determination for average VO concentration of a hazardous waste at the point of waste origination shall be performed using direct measurement in accordance with the applicable requirements of § 264.1083(a) of this subpart. The waste determination for a hazardous waste at the point of waste treatment shall be performed in accordance with the applicable requirements of § 264.1083(b) of this subpart.

(2) In a case when the owner or operator is requested to perform the waste determination, the Regional Administrator may elect to have an authorized representative observe the collection of the hazardous waste samples used for the analysis.

(3) In a case when the results of the waste determination performed or requested by the Regional Administrator do not agree with the results of a waste determination performed by the owner or operator using knowledge of the waste, then the results of the waste determination performed in accordance with the requirements of paragraph (e)(1) of this section shall be used to establish compliance with the requirements of this subpart.

(4) In a case when the owner or operator has used an averaging period greater than 1 hour for determining the average VO concentration of a hazardous waste at the point of waste origination, the Regional Administrator may elect to establish compliance with this subpart by performing or requesting that the owner or operator perform a waste determination using direct measurement based on waste samples collected within a 1-hour period as follows:

(i) The average VO concentration of the hazardous waste at the point of waste origination shall be determined by direct measurement in accordance with the requirements of § 264.1083(a) of this subpart.

(ii) Results of the waste determination performed or requested by the Regional Administrator showing that the average VO concentration of the hazardous waste at the point of waste origination is equal to or greater than 100 ppmw shall constitute noncompliance with this subpart except in a case as provided for in paragraph (e)(4)(iii) of this section.

(iii) For the case when the average VO concentration of the hazardous waste at the point of waste origination previously has been determined by the owner or operator using an averaging period greater than 1 hour to be less than 100 ppmw but because of normal operating process variations the VO concentration of the hazardous waste determined by direct measurement for any given 1-hour period may be equal to or greater than 100 ppmw, information that was used by the owner or operator to determine the average VO concentration of the hazardous waste (e.g., test results, measurements, calculations, and other documentation) and recorded in the facility records in accordance with the requirements of § 264.1083(a) and § 264.1089 of this subpart shall be considered by the Regional Administrator together with the results of the waste determination performed or requested by the Regional Administrator in establishing compliance with this subpart.

§ 264.1083 Waste determination procedures.

(a) Waste determination procedure for average volatile organic (VO) concentration of a hazardous waste at the point of waste origination.

(1) An owner or operator shall determine the average VO concentration at the point of waste origination for each hazardous waste placed in waste management units exempted under the provisions of § 264.1082(c)(1) of this subpart from using air emission controls in accordance with standards specified in § 264.1084 through § 264.1087 of this subpart, as applicable to the waste management unit.

(2) The VO concentration at the point of waste origination for a hazardous waste shall be determined in accordance with the

procedures specified in 40 CFR 265.1084(a)(2) through (a)(6) of this chapter.

(b) Waste determination procedures for treated hazardous waste.

(1) An owner or operator shall perform the applicable waste determinations for each treated hazardous waste placed in waste management units exempted under the provisions of § 264.1082(c)(2) of this subpart from using air emission controls in accordance with standards specified in § 264.1084 through § 264.1087 of this subpart, as applicable to the waste management unit.

(2) The waste determination for a treated hazardous waste shall be performed in accordance with the procedures specified in 40 CFR 265.1084(b)(2) through (b)(10), as applicable to the treated hazardous waste.

(c) Procedure to determine the maximum organic vapor pressure of a hazardous waste in a tank.

(1) An owner or operator shall determine the maximum organic vapor pressure for each hazardous waste placed in tanks using air emission controls in accordance with standards specified in § 264.1084(c) of this subpart.

(2) The maximum organic vapor pressure of the hazardous waste shall be determined in accordance with the procedures specified in 40 CFR 265.1084(c)(2) through (c)(4).

§ 264.1084 Standards: Tanks.

(a) This section applies to owners and operators of tanks subject to this subpart into which any hazardous waste is placed except for the following tanks:

(1) A tank in which all hazardous waste entering the tank meets the conditions specified in § 264.1082(c) of this subpart; or

(2) A tank used for biological treatment of hazardous waste in accordance with the requirements of § 264.1082(c)(2)(iv) of this subpart.

(b) The owner or operator shall place the hazardous waste into one of the following tanks:

(1) A tank equipped with a cover (e.g., a fixed roof) that is vented through a closed-vent system to a control device in accordance with the requirements specified in paragraph (d) of this section;

(2) A tank equipped with a fixed roof and internal floating roof in accordance with the requirements of § 264.1091 of this subpart;

(3) A tank equipped with an external floating roof in accordance with the requirements of § 264.1091 of this subpart; or

(4) A pressure tank that is designed to operate as a closed system such that the tank operates with no detectable organic emissions at all times that hazardous waste is in the tank except as provided for in paragraph (g) of this section.

(c) As an alternative to complying with paragraph (b) of this section, an owner or operator may place hazardous waste in a tank equipped with a cover (e.g., a fixed roof) meeting the requirements specified in paragraph (d)(1) of this section when the hazardous waste is determined to meet all of the following conditions:

(1) The hazardous waste is neither mixed, stirred, agitated, nor circulated within the tank by the owner or operator using a process that results in splashing, frothing, or visible turbulent flow on the waste surface during normal process operations;

(2) The hazardous waste in the tank is not heated by the owner or operator except during conditions requiring that the waste be heated to prevent the waste from freezing or to maintain adequate waste flow conditions for continuing normal process operations;

(3) The hazardous waste in the tank is not treated by the owner or operator using a waste stabilization process or a process that produces an exothermic reaction; and

(4) The maximum organic vapor pressure of the hazardous waste in the tank as determined using the procedure specified in § 264.1083(c) of this subpart is less than the following applicable value:

(i) If the tank design capacity is equal to or greater than 151 m³, then the maximum organic vapor pressure shall be less than 5.2 kPa;

(ii) If the tank design capacity is equal to or greater than 75 m³ but less than 151 m³, then the maximum organic vapor pressure shall be less than 27.6 kPa; or

(iii) If the tank design capacity is less than 75 m 3 , then the maximum organic vapor pressure shall be less than 76.6 kPa.

(d) To comply with paragraph (b)(1) of this section, the owner or operator shall design, install, operate, and maintain a cover that vents the organic vapors emitted from hazardous waste in the tank through a closed-vent system connected to a control device.

(1) The cover shall be designed and operated to meet the following requirements:

(i) The cover and all cover openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable organic emissions when all cover openings are secured in a closed, sealed position.

(ii) Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid or cap) at all times that hazardous waste is in the tank except as provided for in paragraph (f) of this section.

(2) The closed-vent system and control device shall be designed and operated in accordance with the requirements of § 264.1087 of this subpart.

(e) The owner and operator shall install, operate, and maintain enclosed pipes or other closed-systems, EPA considers a drain system that meets the requirements of 40 CFR 61.346(a)(1) or 40 CFR 61.346(b)(1) through (b)(3) to be a "closed systems", to:

(1) Transfer all hazardous waste to the tank from another tank, surface impoundment, or container subject to this subpart except for those hazardous wastes that meet the conditions specified in § 264.1082(c) of this subpart; and

(2) Transfer all hazardous waste from the tank to another tank, surface impoundment, or container subject to this subpart except for those hazardous wastes that meet the conditions specified in § 264.1082(c) of this subpart.

(f) Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid) at all times that hazardous waste is in the tank except when it is necessary to use the cover opening to:

(1) Add, remove, inspect, or sample the material in the tank;

(2) Inspect, maintain, repair, or replace equipment located inside the tank; or

(3) Vent gases or vapors from the tank to a closed-vent system connected to a control device that is designed and operated in accordance with the requirements of § 264.1087 of this subpart.

(g) One or more safety devices which vent directly to the atmosphere may be used on the tank, cover, closed-vent system, or control device provided each safety device meets all of the following conditions:

(1) The safety device is not used for planned or routine venting of organic vapors from the tank or closed-vent system connected to a control device; and

(2) The safety device remains in a closed, sealed position at all times except when an unplanned event requires that the device open for the purpose of preventing physical damage or permanent deformation of the tank, cover, closed-vent system, or control device in accordance with good engineering and safety practices for handling flammable, combustible, explosive, or other hazardous materials. An example of an unplanned event is a sudden power outage.

§ 264.1085 Standards: Surface impoundments.

(a) This section applies to owners and operators of surface impoundments subject to this subpart into which any hazardous waste is placed except for the following surface impoundments:

(1) A surface impoundment in which all hazardous waste entering the surface impoundment meets the conditions specified in § 264.1082(c) of this subpart; or

(2) A surface impoundment used for biological treatment of hazardous waste in accordance with the requirements of § 264.1082(c)(2)(iv) of this subpart.

(b) The owner or operator shall place the hazardous waste into a surface impoundment equipped with a cover (e.g., an airsupported structure or a rigid cover) that is vented through a closed-vent system to a control device meeting the requirements specified in paragraph (d) of this section.

(c) As an alternative to complying with paragraph (b) of this section, an owner or operator may place hazardous waste in a surface impoundment equipped with a floating membrane cover meeting the requirements specified in paragraph (e) of this section when the hazardous waste is determined to meet all of the following conditions:

(1) The hazardous waste is neither mixed, stirred, agitated, nor circulated within the surface impoundment by the owner or operator using a process that results in splashing, frothing, or visible turbulent flow on the waste surface during normal process operations;

(2) The hazardous waste in the surface impoundment is not heated by the owner or operator; and

(3) The hazardous waste is not treated by the owner or operator using a waste stabilization process or a process that produces an exothermic reaction.

(d) To comply with paragraph (b)(1) of this section, the owner or operator shall design, install, operate, and maintain a cover that vents the organic vapors emitted from hazardous waste in the surface impoundment through a closed-vent system connected to a control device.

(1) The cover shall be designed and operated to meet the following requirements:

(i) The cover and all cover openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable organic emissions when all cover openings are secured in a closed, sealed position.

(ii) Each cover opening shall be secured in the closed, sealed position (e.g., covered by a gasketed lid or cap) at all times that hazardous waste is in the surface impoundment except as provided for in paragraph (g) of this section.

(iii) The closed-vent system and control device shall be designed and operated in accordance with § 264.1087 of this subpart.

(e) To comply with paragraph (c) of this section, the owner or operator shall design, install, operate, and maintain a floating membrane cover that meets all of the requirements specified in 40 CFR 265.1086(e)(1) through (e)(4).

(f) The owner or operator shall install, operate, and maintain enclosed pipes or other closed-systems, EPA considers a drain system that meets the requirements of 40 CFR 61.346(a)(1) or 40 CFR 61.346(b)(1) through (b)(3) to be a "closed system", to: (1) Transfer all hazardous waste to the surface impoundment from another tank, surface impoundment, or container subject to this subpart except for those hazardous wastes that meet the conditions specified in § 264.1082(c) of this subpart; and

(2) Transfer all hazardous waste from the surface impoundment to another tank, surface impoundment, or container subject to this subpart except for those hazardous wastes that meet the conditions specified in § 264.1082(c) of this subpart.

(g) Each cover opening shall be secured in the closed, sealed position (e.g., a cover by a gasketed lid or cap) at all times that hazardous waste is in the surface impoundment except when it is necessary to use the cover opening to:

(1) Add, remove, inspect, or sample the material in the surface impoundment;

(2) Inspect, maintain, repair, or replace equipment located underneath the cover;

(3) Remove treatment residues from the surface impoundment in accordance with the requirements of 40 CFR 268.4; or

(4) Vent gases or vapors from the surface impoundment to a closed-vent system connected to a control device that is designed and operated in accordance with the requirements of § 264.1087 of this subpart.

(h) One or more safety devices that vent directly to the atmosphere may be installed on the cover, closed-vent system, or control device provided each device meets all of the following conditions:

(1) The safety device is not used for planned or routine venting of organic vapors from the surface impoundment or the closed-vent system connected to a control device; and

(2) The safety device remains in a closed, sealed position at all times except when an unplanned event requires that the device open for the purpose of preventing physical damage or permanent deformation of the cover, closed-vent system, or control device in accordance with good engineering and safety practices for handling flammable, combustible, explosive, or other hazardous materials. An example of an unplanned event is a sudden power outage.

§ 264.1086 Standards: Containers.

(a) This section applies to the owners and operators of containers having design capacities greater than 0.1 m^{-3} subject to this subpart into which any hazardous waste is placed except for a container in which all hazardous waste entering the container meets the conditions specified in § 264.1082(c) of this subpart.

(b) An owner or operator shall manage hazardous waste in containers using the following procedures:

(1) The owner or operator shall place the hazardous waste into one of the following containers except when a container is used for hazardous waste treatment as required by paragraph(b)(2) of this section:

(i) A container that is equipped with a cover which operates with no detectable organic emissions when all container openings (e.g., lids, bungs, hatches, and sampling ports) are secured in a closed, sealed position. The owner or operator shall determine that a container operates with no detectable emissions by testing each opening on the container for leaks in accordance with Method 21 in 40 CFR part 60, appendix A the first time any portion of the hazardous waste is placed into the container. If a leak is detected and cannot be repaired immediately, the hazardous waste shall be removed from the container and the container not used to meet the requirements of this paragraph until the leak is repaired and the container is retested.

(ii) A container having a design capacity less than or equal to 0.46 m³ that is equipped with a cover and complies with all applicable Department of Transportation regulations on packaging hazardous waste for transport under 49 CFR part 178.

(A) A container that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with this subpart is not subject to any exceptions to the 49 CFR part 178 regulations, except as noted in paragraph (b)(1)(ii)(B) of this section.

(B) A lab pack that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with this subpart may comply with the exceptions for combination packagings specified in 49 CFR 173.12(b).

(iii) A container that is attached to or forms a part of any truck, trailer, or railcar; and that has been demonstrated within the preceding 12 months to be organic vapor tight when all container openings are in a closed, sealed position (e.g., the container hatches or lids are gasketed and latched). For the purpose of meeting the requirements of this paragraph, a container is organic vapor tight if the container sustains a pressure change of not more than 750 pascals within 5 minutes after it is pressurized to a minimum of 4,500 pascals. This condition is to be demonstrated using the pressure test specified in Method 27 of 40 CFR part 60, appendix A, and a pressure measurement device which has a precision of ± 2.5 mm water and which is capable of measuring above the pressure at which the container is to be tested for vapor tightness.

(2) An owner or operator treating hazardous waste in a container by either a waste stabilization process, any process that requires the addition of heat to the waste, or any process that produces an exothermic reaction shall meet the following requirements:

(i) Whenever it is necessary for the container to be open during the treatment process, the container shall be located inside an enclosure that is vented through a closed-vent system to a control device.

(ii) The enclosure shall be a structure that is designed and operated in accordance with the following requirements:

(A) The enclosure shall be a structure that is designed and operated with sufficient airflow into the structure to capture the organic vapors emitted from the hazardous waste in the container and vent the vapors through the closed-vent system to the control device.

(B) The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or to direct airflow into the enclosure. The pressure drop across each opening in the enclosure shall be maintained at a pressure below atmospheric pressure such that whenever an open container is placed inside the enclosure no organic vapors released from the container exit the enclosure through the opening. The owner or operator shall determine that an enclosure achieves this condition by measuring the pressure drop across each opening in the enclosure. If the pressure within the enclosure is equal to or greater than atmospheric pressure then the enclosure does not meet the requirements of this section.

(iii) The closed-vent system and control device shall be designed and operated in accordance with the requirements of § 264.1087 of this subpart.

(3) An owner or operator transferring hazardous waste into a container having a design capacity greater than 0.46 m 3 shall meet the following requirements:

(i) Hazardous waste transfer by pumping shall be performed using a conveyance system that uses a tube (e.g., pipe, hose) to add the waste into the container. During transfer of the waste into the container, the cover shall remain in place and all container openings shall be maintained in a closed, sealed position except for those openings through which the tube enters the container and as provided for in paragraph (c) of this section. The tube shall be positioned in a manner such that either the:

(A) Tube outlet continuously remains submerged below the waste surface at all times waste is flowing through the tube;

(B) Lower bottom edge of the tube outlet is located at a distance no greater than two inside diameters of the tube or 15.25 cm, whichever distance is greater, from the bottom of the container at all times waste is flowing through the tube; or

(C) Tube is connected to a permanent port mounted on the bottom of the container so that the lower edge of the port opening inside the container is located at a distance equal to or less than 15.25 cm from the container bottom.

(ii) Hazardous waste transferred by a means other than pumping shall be performed such that during transfer of the waste into the container, the cover remains in place and all container openings are maintained in a closed, sealed position except for those openings through which the hazardous waste is added and as provided for in paragraph (d) of this section.

(c) Each container opening shall be maintained in a closed, sealed position (e.g., covered by a gasketed lid) at all times that hazardous waste is in the container except when it is necessary to use the opening to:

(1) Add, remove, inspect, or sample the material in the container;

(2) Inspect, maintain, repair, or replace equipment located inside the container; or

(3) Vent gases or vapors from a cover located over or enclosing an open container to a closed-vent system connected to a control device that is designed and operated in accordance with the requirements of § 264.1087 of this subpart. (d) One or more safety devices that vent directly to the atmosphere may be used on the container, cover, enclosure, closed-vent system, or control device provided each device meets all of the following conditions:

(1) The safety device is not used for planned or routine venting of organic vapors from the container, cover, enclosure, or closed-vent system connected to a control device; and

(2) The safety device remains in a closed, sealed position at all times except when an unplanned event requires that the device open for the purpose of preventing physical damage or permanent deformation of the container, cover, enclosure, closedvent system, or control device in accordance with good engineering and safety practices for handling flammable, combustible, explosive, or other hazardous materials. An example of an unplanned event is a sudden power outage.

§ 264.1087 Standards: Closed-vent systems and control devices.

(a) This section applies to each closed-vent system and control device installed and operated by the owner or operator to control air emissions in accordance with standards of this subpart.

(b) The closed-vent system shall meet the following requirements:

(1) The closed-vent system shall route the gases, vapors, and fumes emitted from the hazardous waste in the waste management unit to a control device that meets the requirements specified in paragraph (c) of this section.

(2) The closed-vent system shall be designed and operated in accordance with the requirements specified in § 264.1033(k) of this part.

(3) If the closed-vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device, the owner or operator shall meet the following requirements:

(i) For each bypass device except as provided for in paragraph (b)(3)(ii) of this section, the owner or operator shall either:

(A) Install, calibrate, maintain, and operate a flow indicator at the inlet to the bypass device that indicates at least once every 15 minutes whether gas, vapor, or fume flow is present in the bypass device; or (B) Secure a valve installed at the inlet to the bypass device in the closed position using a car-seal or a lock-and-key type configuration. The owner or operator shall visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the closed position.

(ii) Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of paragraph (b)(3)(i) of this section.

(c) The control device shall meet the following requirements:

(1) The control device shall be one of the following devices:

(i) A control device designed and operated to reduce the total organic content of the inlet vapor stream vented to the control device by at least 95 percent by weight;

(ii) An enclosed combustion device designed and operated in accordance with the requirements of § 264.1033(c) of this part; or

(iii) A flare designed and operated in accordance with the requirements of § 264.1033(d) of this part.

(2) The control device shall be operating at all times when gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device.

(3) The owner or operator using a carbon adsorption system to comply with paragraph (c)(1) of this section shall operate and maintain the control device in accordance with the following requirements:

(i) Following the initial startup of the control device, all activated carbon in the control device shall be replaced with fresh carbon on a regular basis in accordance with the requirements of § 264.1033(g) or § 264.1033(h) of this part.

(ii) All carbon removed from the control device shall be managed in accordance with the requirements of § 264.1033(m) of this part.

(4) An owner or operator using a control device other than a thermal vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with paragraph (c)(1) of this section shall operate and maintain the control device in accordance with the requirements of § 264.1033(j) of this part.

(5) The owner or operator shall demonstrate that a control device achieves the performance requirements of paragraph (c)(1) of this section as follows:

(i) An owner or operator shall demonstrate using either a performance test as specified in paragraph (c)(5)(iii) of this section or a design analysis as specified in paragraph (c)(5)(iv) of this section the performance of each control device except for the following:

(A) A flare;

(B) A boiler or process heater with a design heat input capacity of 44 megawatts or greater;

(C) A boiler or process heater into which the vent stream is introduced with the primary fuel;

(D) A boiler or process heater burning hazardous waste for which the owner or operator has been issued a final permit under 40 CFR part 270 and designs and operates the unit in accordance with the requirements of 40 CFR part 266, subpart H; or

(E) A boiler or process heater burning hazardous waste for which the owner or operator has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

(ii) An owner or operator shall demonstrate the performance of each flare in accordance with the requirements specified in § 264.1033(e).

(iii) For a performance test conducted to meet the requirements of paragraph (c)(5)(i) of this section, the owner or operator shall use the test methods and procedures specified in § 264.1034(c)(1) through (c)(4).

(iv) For a design analysis conducted to meet the requirements of paragraph (c)(5)(i) of this section, the design analysis shall meet the requirements specified in § 264.1035(b)(4)(iii).

(v) The owner or operator shall demonstrate that a carbon adsorption system achieves the performance requirements of paragraph (c)(1) of this section based on the total quantity of organics vented to the atmosphere from all carbon adsorption system equipment that is used for organic adsorption, organic desorption or carbon regeneration, organic recovery, and carbon disposal.

(6) If the owner or operator and the Regional Administrator do not agree on a demonstration of control device performance using a design analysis then the disagreement shall be resolved using the results of a performance test performed by the owner or operator in accordance with the requirements of paragraph (c)(5)(iii) of this section. The Regional Administrator may choose to have an authorized representative observe the performance test.

§ 264.1088 Inspection and monitoring requirements.

(a) This section applies to an owner or operator using air emission controls in accordance with the requirements of § 264.1084 through § 264.1087 of this subpart.

(b) Each cover used in accordance with requirements of § 264.1084 through § 264.1086 of this subpart shall be visually inspected and monitored for detectable organic emissions by the owner or operator using the procedure specified in 40 CFR 265.1089(f)(1) through (f)(7) except as follows:

(1) An owner or operator is exempted from performing the cover inspection and monitoring requirements specified in 40 CFR 265.1089(f)(1) through (f)(7) for the following tank covers:

(i) A tank internal floating roof that is inspected and monitored in accordance with the requirements of § 264.1091 of this subpart; or

(ii) A tank external floating roof that is inspected and monitored in accordance with the requirements of § 264.1091 of this subpart.

(2) If a tank is buried partially or entirely underground, an owner or operator is required to perform the cover inspection and monitoring requirements specified in 40 CFR 265.1089(f)(1) through (f)(7) only for those portions of the tank cover and those connections to the tank cover or tank body (e.g. fill ports, access hatches, gauge wells, etc.) that extend to or above the ground surface and can be opened to the atmosphere.

(3) An owner or operator is exempted from performing the cover inspection and monitoring requirements specified in 40 CFR 265.1089(f)(1) through (f)(7) for a container that meets all requirements specified in either § 264.1086(b)(1)(ii) or § 264.1086(b)(1)(iii) of this subpart. (4) An owner or operator is exempted from performing the cover inspection and monitoring requirements specified in 40 CFR 265.1089(f)(1) through (f)(7) for an enclosure used to control air emissions from containers in accordance with the requirements of § 264.1086(b)(2) of this subpart.

(c) Each closed-vent system used in accordance with the requirements of § 264.1087 shall be inspected and monitored by the owner or operator in accordance with the procedure specified in § 264.1033(k).

(d) Each control device used in accordance with the requirements of § 264.1087 of this subpart shall be inspected and monitored by the owner or operator in accordance with the procedures specified in § 264.1033(f) and § 264.1033(i).

(e) The owner or operator shall develop and implement a written plan and schedule to perform all inspection and monitoring requirements of this section. The owner or operator shall incorporate this plan and schedule into the facility inspection plan required under § 264.15.

§ 264.1089 Recordkeeping requirements.

(a) Each owner or operator of a facility subject to requirements in this subpart shall record and maintain the following information as applicable:

(1) Documentation for each cover installed on a tank in accordance with the requirements of § 264.1084(b)(2) or § 264.1084(b)(3) of this subpart that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the applicable design specifications as listed in 40 CFR 265.1091(c).

(2) Documentation for each floating membrane cover installed on a surface impoundment in accordance with the requirements of § 264.1085(c) of this subpart that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in 40 CFR 265.1086(e).

(3) Documentation for each enclosure used to control air emissions from containers in accordance with the requirements of § 264.1086(b)(2)(i) of this subpart that includes information prepared by the owner or operator or provided by the manufacturer or vendor describing the enclosure design, and certification by the owner or operator that the enclosure meets the specifications listed in § 264.1086(b)(2)(ii) of this subpart.

(4) Documentation for each closed-vent system and control device installed in accordance with the requirements of § 264.1087 of this subpart that includes:

(i) Certification that is signed and dated by the owner or operator stating that the control device is designed to operate at the performance level documented by a design analysis as specified in paragraph (a)(4)(ii) of this section or by performance tests as specified in paragraph (a)(4)(iii) of this section when the tank, surface impoundment, or container is or would be operating at capacity or the highest level reasonably expected to occur.

(ii) If a design analysis is used, then design documentation as specified in § 264.1035(b)(4). The documentation shall include information prepared by the owner or operator or provided by the control device manufacturer or vendor that describes the control device design in accordance with § 264.1035(b)(4)(iii) and certification by the owner or operator that the control equipment meets the applicable specifications.

(iii) If performance tests are used, then a performance test plan as specified in § 264.1035(b)(3) and all test results.

(iv) Information as required by § 264.1035(c)(1) and (c)(2).

(5) Records for all Method 27 tests performed by the owner or operator for each container used to meet the requirements of § 264.1086(b)(1)(iii) of this subpart.

(6) Records for all visual inspections conducted in accordance with the requirements of § 264.1088 of this subpart.

(7) Records for all monitoring for detectable organic emissions conducted in accordance with the requirements of § 264.1088 of this subpart.

(8) Records of the date of each attempt to repair a leak, repair methods applied, and the date of successful repair.

(9) Records for all continuous monitoring conducted in accordance with the requirements of § 264.1088 of this subpart.

(10) Records of the management of carbon removed from a carbon adsorption system conducted in accordance with § 264.1087(c)(3)(ii) of this subpart. (11) Records for all inspections of each cover installed on a tank in accordance with the requirements of § 264.1084(b)(2) or § 264.1084(b)(3) of this subpart that includes information as listed in 40 CFR 265.1091(c).

(b) An owner or operator electing to use air emission controls for a tank in accordance with the conditions specified in § 264.1084(c) of this subpart shall record the following information:

(1) Date and time each waste sample is collected for direct measurement of maximum organic vapor pressure in accordance with § 264.1083(c) of this subpart.

(2) Results of each determination of the maximum organic vapor pressure of the waste in a tank performed in accordance with § 264.1083(c) of this subpart.

(3) Records specifying the tank dimensions and design capacity.

(c) An owner or operator electing to use air emission controls for a tank in accordance with the requirements of § 264.1091 of this subpart shall record the information required by § 264.1091(c) of this subpart.

(d) An owner or operator electing not to use air emission controls for a particular tank, surface impoundment, or container subject to this subpart in accordance with the conditions specified in § 264.1082(c) of this subpart shall record the information used by the owner or operator for each waste determination (e.g., test results, measurements, calculations, and other documentation) in the facility operating log. If analysis results for waste samples are used for the waste determination, then the owner or operator shall record the date, time, and location that each waste sample is collected in accordance with applicable requirements of § 264.1083 of this subpart.

(e) An owner or operator electing to comply with requirements in accordance with § 264.1082(c)(2)(v) or § 264.1082(c)(2)(vi) of this subpart shall record the identification number for the incinerator, boiler, or industrial furnace in which the hazardous waste is treated.

(f) An owner or operator designating a cover as unsafe to inspect and monitor pursuant to 40 CFR 265.1089(f)(5) or difficult to inspect and monitor pursuant to 40 CFR 265.1089(f)(6) shall record in a log that is kept in the facility operating record the following information: (1) A list of identification numbers for tanks with covers that are designated as unsafe to inspect and monitor in accordance with the requirements of 40 CFR 265.1089(f)(5), an explanation for each cover stating why the cover is unsafe to inspect and monitor, and the plan and schedule for inspecting and monitoring each cover.

(2) A list of identification numbers for tanks with covers that are designated as difficult to inspect and monitor in accordance with the requirements of 40 CFR 265.1089(f)(6), an explanation for each cover stating why the cover is difficult to inspect and monitor, and the plan and schedule for inspecting and monitoring each cover.

(g) All records required by paragraphs (a) through (f) of this section except as required in paragraphs (a)(1) through (a)(4) of this section shall be maintained in the operating record for a minimum of 3 years. All records required by paragraphs (a)(1) through (a)(4) of this section shall be maintained in the operating record until the air emission control equipment is replaced or otherwise no longer in service.

(h) The owner or operator of a facility that is subject to this subpart and to the control device standards in 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V may elect to demonstrate compliance with the applicable sections of this subpart by documentation either pursuant to this subpart, or pursuant to the provisions of 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V, to the extent that the documentation required by 40 CFR parts 60 or 61 duplicates the documentation required by this section.

§ 264.1090 Reporting requirements.

(a) Each owner or operator managing hazardous waste in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of § 264.1082(c) shall report to the Regional Administrator each occurrence when hazardous waste is placed in the waste management unit in noncompliance with the conditions specified in § 264.1082(c)(1) or (c)(2) of this subpart, as applicable. Examples of such occurrences include placing in the waste management unit a hazardous waste having an average VO concentration equal to or greater than 100 ppmw at the point of waste origination; or placing in the waste management unit a treated hazardous waste which fails to meet the applicable conditions specified in § 264.1082(c)(2)(i) through (c)(2)(v) of this subpart. The owner or operator shall submit a written report within 15 calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the EPA identification number, facility name and address, a description
of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent reoccurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

(b) Each owner or operator using air emission controls on a tank in accordance with the requirements § 264.1084(c) of this subpart shall report to the Regional Administrator each occurrence when hazardous waste is managed in the tank in noncompliance with the conditions specified in § 264.1084(c)(1) through (c)(4) of this subpart. The owner or operator shall submit a written report within 15 calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent reoccurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

(c) Each owner or operator using a control device in accordance with the requirements of § 264.1087 of this subpart shall submit a semiannual written report to the Regional Administrator excepted as provided for in paragraph (d) of this section. The report shall describe each occurrence during the previous 6-month period when a control device is operated continuously for 24 hours or longer in noncompliance with the applicable operating values defined in § 264.1035(c)(4) or when a flare is operated with visible emissions as defined in § 264.1033(d). The written report shall include the EPA identification number, facility name and address, and an explanation why the control device could not be returned to compliance within 24 hours, and actions taken to correct the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

(d) A report to the Regional Administrator in accordance with the requirements of paragraph (c) of this section is not required for a 6-month period during which all control devices subject to this subpart are operated by the owner or operator such that during no period of 24 hours or longer did a control device operate continuously in noncompliance with the applicable operating values defined in § 264.1035(c)(4) or a flare operate with visible emissions as defined in § 264.1033(d).

§ 264.1091 Alternative control requirements for tanks.

US EPA ARCHIVE DOCUMENT

(a) This section applies to owners and operators of tanks electing to comply with § 264.1084(b)(2) or § 264.1084(b)(3) of this subpart.

(1) The owner or operator electing to comply with § 264.1084(b)(2) of this subpart shall design, install, operate, and maintain a fixed roof and internal floating roof that meet the requirements specified in 40 CFR 265.1091(a)(1)(i) through (a)(1)(ix).

(2) The owner or operator electing to comply with §
264.1084(b)(3) of this subpart shall design, install, operate,
and maintain an external floating roof that meets the
requirements specified in 40 CFR 265.1091(a)(2)(i) through
(a)(2)(iii).

(b) The owner or operator shall inspect and monitor the control equipment in accordance with the following requirements:

(1) For a tank equipped with a fixed roof and internal floating roof in accordance with the requirements of paragraph (a)(1) of this section, the owner or operator shall perform the inspection and monitoring requirements specified in 40 CFR 265.1091(b)(1).

(2) For a tank equipped with an external floating roof in accordance with the requirements of paragraph (a)(2) of this section, the owner or operator shall perform the inspection and monitoring requirements specified in 40 CFR 265.1091(b)(2).

(c) The owner or operator shall record the following information in the operating record in accordance with the requirements of § 264.1089(a)(1) and (a)(11) of this subpart:

(1) For a tank equipped with a fixed roof and internal floating roof in accordance with the requirements of paragraph (a)(1) of this section, the owner or operator shall record the information listed in 40 CFR 265.1091(c)(1).

(2) For a tank equipped with an external floating roof in accordance with the requirements of paragraph (a)(1) of this section, the owner or operator shall record the information listed in 40 CFR 265.1091(c)(2).

PART 265-INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

21. The authority citation for part 265 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6924, 6925, and 6935.

Subpart A-General

22. Section 265.1(b) is amended by revising the first sentence to read as follows:

§ 265.1 Purpose, scope, and applicability.

* * * * *

(b) Except as provided in § 265.1080(b), the standards of this part, and of 40 CFR 264.552 and 40 CFR 264.553, apply to owners and operators of facilities that treat, store or dispose of hazardous waste who have fully complied with the requirements for interim status under section 3005(e) of RCRA and § 270.10 of this chapter until either a permit is issued under section 3005 of RCRA or until applicable part 265 closure and post-closure responsibilities are fulfilled, and to those owners and operators of facilities in existence on November 19, 1980 who have failed to provide timely notification as required by section 3010(a) of RCRA and/or failed to file Part A of the permit application as required by 40 CFR 270.10 (e) and (g). * * *

* * * * *

Subpart B-General Facility Standards

§ 265.13 [Amended]

23. In § 265.13, paragraph (b)(6) is amended by adding "265.1084," after the phrase "as specified in §§ 265.200, 265.225, 265.252, 265.273, 265.314, 265.341, 265.375, 265.402, 265.1034(d), 265.1063(d),".

24. In § 265.13, paragraph (b)(8) is added to read as follows:

§ 265.13 General waste analysis.

* * * *

(b) * * *

(8) For owners and operators seeking an exemption to the air emission standards of Subpart CC of this part in accordance with § 265.1083-

(i) The procedures and schedules for waste sampling and analysis, and the analysis of test data to verify the exemption.

(ii) Each generator's notice and certification of the volatile organic concentration in the waste if the waste is received from offsite.

* * * * *

§ 265.15 [Amended]

25. In § 265.15, paragraph (b)(4) is amended by removing the word "and" after the phrase "frequencies called for in §§ 265.174, 265.193, 265.195, 265.226, 265.260, 265.278, 265.304, 265.347, 265.377, 265.403, 265.1033, 265.1052, 265.1053," and adding "265.1089, and 265.1091(b)," after "265.1058,".

Subpart E-Manifest System, Recordkeeping, and Reporting

26. Section 265.73 is amended by revising paragraphs (b)(3) and (b)(6) to read as follows:

§ 265.73 Operating record.

* * * *

(b) * * *

(3) Records and results of waste analysis, waste determinations, and trial tests performed as specified in §§ 265.13, 265.200, 265.225, 265.252, 265.273, 265.314, 265.341, 265.375, 265.402, 265.1034, 265.1063, 265.1084, 268.4(a), and 268.7 of this chapter.

* * * * *

(6) Monitoring, testing or analytical data when required by §§ 265.19, 265.90, 265.94, 265.191, 265.193, 265.195, 265.222, 265.223, 265.226, 265.255, 265.259, 265.260, 265.276, 265.278, 265.280(d)(1), 265.302 through 265.304, 265.347, 265.377, 265.1034(c) through 265.1034(f), 265.1035, 265.1063(d) through 265.1063(i), 265.1064, 265.1089, 265.1090, and 265.1091.

* * * * *

27. Section 265.77 is amended by revising paragraph (d) to read as follows:

§ 265.77 Additional reports.

* * * * *

(d) As otherwise required by Subparts AA, BB, and CC of this part.

Subpart I-Use and Management of Containers

28. Section 265.178 is added to read as follows:

§ 265.178 Air emission standards.

The owner or operator shall manage all hazardous waste placed in a container in accordance with the requirements of subpart CC of this part.

Subpart J-Tank Systems

29. Section 265.202 is added to read as follows:

§ 265.202 Air emission standards.

The owner or operator shall manage all hazardous waste placed in a tank in accordance with the requirements of subparts AA, BB, and CC of this part.

Subpart K-Surface Impoundments

30. Section 265.231 is added to read as follows:

§ 265.231 Air emission standards.

The owner or operator shall manage all hazardous waste placed in a surface impoundment in accordance with the requirements of subpart CC of this part.

Subpart AA-Air Emission Standards for Process Vents

31. Section 265.1033 is amended by revising paragraph (j)(2) and adding paragraph (l) to read as follows:

§ 265.1033 Standards: Closed-vent systems and control devices.

* * * * *

(j) * * *

(2) Closed-vent systems shall be monitored to determine compliance with this section during the initial leak detection monitoring, which shall be conducted by the date that the facility becomes subject to the provisions of this section, annually, and at other times as requested by the Regional Administrator. For the annual leak detection monitoring after the initial leak detection monitoring, the owner or operator is not required to monitor those closed-vent system components which continuously operate in vacuum service or those closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of metal pipe or a bolted and gasketed pipe flange).

* * * * *

(1) The owner or operator using a carbon adsorption system shall document that all carbon removed from the control device is managed in one of the following manners:

(1) Regenerated or reactivated in a thermal treatment unit that is permitted under subpart X of 40 CFR part 264 or subpart P of this part;

(2) Incinerated by a process that is permitted under subpartO of 40 CFR part 264 or subpart 0 of this part; or

(3) Burned in a boiler or industrial furnace that is permitted under subpart H of part 266 of this chapter.

32. In 40 CFR part 265, subpart CC is added to read as follows:

Subpart CC-Air Emission Standards for Tanks, Surface Impoundments, and Containers

Sec.
265.1080 Applicability.
265.1081 Definitions.
265.1082 Schedule for implementation of air emission standards.
265.1083 Standards: General.
265.1084 Waste determination procedures.
265.1085 Standards: Tanks.
265.1086 Standards: Surface impoundments.
265.1087 Standards: Containers.
265.1088 Standards: Closed-vent systems and control devices.
265.1089 Inspection and monitoring requirements.
265.1090 Recordkeeping requirements.
265.1091 Alternative tank emission control requirements.

Subpart CC-Air Emission Standards for Tanks, Surface Impoundments, and Containers

§ 265.1080 Applicability.

(a) The requirements of this subpart apply to owners and operators of all facilities that treat, store, or dispose of

hazardous waste in tanks, surface impoundments, or containers subject to either subparts I, J, or K of this part except as § 265.1 and paragraph (b) of this section provide otherwise.

(b) The requirements of this subpart do not apply to the following waste management units at the facility:

(1) A waste management unit that holds hazardous waste placed in the unit before June 5, 1995, and in which no hazardous waste is added to the unit on or after June 5, 1995.

(2) A container that has a design capacity less than or equal to 0.1 $\ensuremath{\text{m}}^3.$

(3) A tank in which an owner or operator has stopped adding hazardous waste and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.

(4) A surface impoundment in which an owner or operator has stopped adding hazardous waste (except to implement an approved closure plan) and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.

(5) A waste management unit that is used solely for on-site treatment or storage of hazardous waste that is generated as the result of implementing remedial activities required under the RCRA corrective action authorities of 3004(u), 3004(v) or 3008(h), CERCLA authorities, or similar Federal or State authorities.

(6) A waste management unit that is used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the authority of the Atomic Energy Act and the Nuclear Waste Policy Act.

(c) For the owner and operator of a facility subject to this subpart who has received a final permit under RCRA section 3005 prior to June 5, 1995, the following requirements apply:

(1) The requirements of 40 CFR part 264, subpart CC shall be incorporated into the permit when the permit is reissued in accordance with the requirements of 40 CFR 124.15 or reviewed in accordance with the requirements of 40 CFR 270.50(d).

(2) Until the date when the permit is reissued in accordance with the requirements of 40 CFR 124.15 or reviewed in accordance with the requirements of 40 CFR 270.50(d), the owner and operator is subject to the requirements of this subpart.

§ 265.1081 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given to them in the Act and parts 260 through 266 of this chapter.

"Average volatile organic concentration" or "average VO concentration" means the mass-weighted average volatile organic concentration of a hazardous waste as determined in accordance with the requirements of § 265.1084 of this subpart.

"Cover" means a device or system which is placed on or over a hazardous waste such that the entire hazardous waste surface area is enclosed and sealed to reduce air emissions to the atmosphere. A cover may have openings such as access hatches, sampling ports, and gauge wells that are necessary for operation, inspection, maintenance, or repair of the unit on which the cover is installed provided that each opening is closed and sealed when not in use. Examples of covers include a fixed roof installed on a tank, a floating membrane cover installed on a surface impoundment, a lid installed on a drum, and an enclosure in which an open container is placed during waste treatment.

"External floating roof" means a pontoon or double-deck type floating roof that rests on the surface of a hazardous waste being managed in a tank that has no fixed roof.

"Fixed roof" means a rigid cover that is installed in a stationary position so that it does not move with fluctuations in the level of the hazardous waste placed in a tank.

"Floating membrane cover" means a cover consisting of a synthetic flexible membrane material that rests upon and is supported by the hazardous waste being managed in a surface impoundment.

"Floating roof" means a pontoon-type or double-deck type cover that rests upon and is supported by the hazardous waste being managed in a tank, and is equipped with a closure seal or seals to close the space between the cover edge and the tank wall.

"Internal floating roof" means a floating roof that rests or floats on the surface (but not necessarily in complete contact with it) of a hazardous waste being managed in a tank that has a fixed roof.

"Liquid-mounted seal" means a foam or liquid-filled primary seal mounted in contact with the hazardous waste between the tank wall and the floating roof continuously around the circumference of the tank. "Maximum organic vapor pressure" means the equilibrium partial pressure exerted by the hazardous waste contained in a tank determined at the temperature equal to either: (1) the local maximum monthly average temperature as reported by the National Weather Service when the hazardous waste is stored or treated at ambient temperature; or (2) the highest calendar-month average temperature of the hazardous waste when the hazardous waste is stored at temperatures above the ambient temperature or when the hazardous waste is stored or treated at temperatures below the ambient temperature.

"No detectable organic emissions" means no escape of organics from a device or system to the atmosphere as determined by an instrument reading less than 500 parts per million by volume (ppmv) above the background level at each joint, fitting, and seal when measured in accordance with the requirements of Method 21 in 40 CFR part 60, appendix A, and by no visible openings or defects in the device or system such as rips, tears, or gaps.

"Point of waste origination" means as follows:

(1) When the facility owner or operator is the generator of the hazardous waste, the point of waste origination means the point where a solid waste produced by a system, process, or waste management unit is determined to be a hazardous waste as defined in 40 CFR part 261.

[Note: In this case, this term is being used in a manner similar to the use of the term "point of generation" in air standards established for waste management operations under authority of the Clean Air Act in 40 CFR parts 60, 61, and 63].

(2) When the facility owner and operator are not the generator of the hazardous waste, point of waste origination means the point where the owner or operator accepts delivery or takes possession of the hazardous waste.

"Point of waste treatment" means the point where a hazardous waste exits a waste management unit used to destroy, degrade, or remove organics in the hazardous waste.

"Vapor-mounted seal" means a foam-filled primary seal mounted continuously around the circumference of the tank so that there is an annular vapor space underneath the seal. The annular vapor space is bounded by the bottom of the primary seal, the tank wall, the hazardous waste surface, and the floating roof.

"Volatile organic concentration" or "VO concentration" means the fraction by weight of organic compounds in a hazardous waste expressed in terms of parts per million (ppmw) as determined by direct measurement using Method 25D or by knowledge of the waste in accordance with the requirements of § 265.1084 of this subpart.

"Waste determination" means performing all applicable procedures in accordance with the requirements of § 265.1084 of this subpart to determine whether a hazardous waste meets standards specified in this subpart. Examples of a waste determination include performing the procedures in accordance with the requirements of § 265.1084 of this subpart to determine the average VO concentration of a hazardous waste at the point of waste origination; the average VO concentration of a hazardous waste at the point of waste treatment and comparing the results to the exit concentration limit specified for the process used to treat the hazardous waste; determining the organic reduction efficiency and the organic biodegradation efficiency for a biological process used to treat a hazardous waste and comparing the results to the applicable standards; or the maximum volatile organic vapor pressure for a hazardous waste in a tank and comparing the results to the applicable standards.

"Waste stabilization process" means any physical or chemical process used to either reduce the mobility of hazardous constituents in a hazardous waste or eliminate free liquids as determined by Test Method 9095 (Paint Filter Liquids Test) in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846, Third Edition, September 1986, as amended by Update I, November 15, 1992 (incorporated by reference-refer to § 260.11 of this chapter). A waste stabilization process includes mixing the hazardous waste with binders or other materials, and curing the resulting hazardous waste and binder mixture. Other synonymous terms used to refer to this process are "waste fixation" or "waste solidification."

§ 265.1082 Schedule for implementation of air emission standards.

(a) Owners or operators of facilities existing on June 5, 1995, and subject to subparts I, J, and K of this part shall meet the following requirements:

(1) Install and begin operation of all control equipment required by this subpart by June 5, 1995, except as provided for in paragraph (a)(2) of this section.

(2) When control equipment required by this subpart cannot be installed and in operation by June 5, 1995, the owner or operator shall:

(i) Install and begin operation of the control equipment as soon as possible but no later than December 8, 1997.

(ii) Prepare an implementation schedule that includes the following information: specific calendar dates for award of contracts or issuance of purchase orders for the control equipment, initiation of on-site installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of this subpart.

(iii) For facilities subject to the recordkeeping requirements of § 265.73 of this part, the owner or operator shall enter the implementation schedule specified in paragraph (a)(2)(ii) of this section in the operating record no later than June 5, 1995.

(iv) For facilities not subject to § 265.73 of this part, the owner or operator shall enter the implementation schedule specified in paragraph (a)(2)(ii) of this section in a permanent, readily available file located at the facility no later than June 5, 1995.

(b) Owners or operators of facilities in existence on the effective date of statutory or regulatory amendments under the Act that render the facility subject to subparts I, J, or K of this part shall meet the following requirements:

(1) Install and begin operation of all control equipment required by this subpart by the effective date of the amendment except as provided for in paragraph (b)(2) of this section.

(2) When control equipment required by this subpart cannot be installed and begin operation by the effective date of the amendment, the owner or operator shall:

(i) Install and operate the control equipment as soon as possible but no later than 30 months after the effective date of the amendment.

(ii) For facilities subject to the recordkeeping requirements of § 265.73, enter and maintain the implementation schedule specified in paragraph (a)(2)(ii) of this section in the operating record no later than the effective date of the amendment, or

(iii) For facilities not subject to § 265.73, the owner or operator shall enter and maintain the implementation schedule specified in paragraph (a)(2)(ii) of this section in a permanent, readily available file located at the facility site no later than the effective date of the amendment. (c) The Regional Administrator may elect to extend the implementation date for control equipment at a facility, on a case by case basis, to a date later than December 8, 1997, when special circumstances that are beyond the facility owner's or operator's control delay installation or operation of control equipment and the owner or operator has made all reasonable and prudent attempts to comply with the requirements of this subpart.

§ 265.1083 Standards: General.

(a) This section applies to the management of hazardous waste in tanks, surface impoundments, and containers subject to this subpart.

(b) The owner or operator shall control air emissions from each waste management unit in accordance with standards specified in § 265.1085 through § 265.1088 of this subpart, as applicable to the waste management unit, except as provided for in paragraph (c) of this section.

(c) A waste management unit is exempted from standards specified in § 265.1085 through § 265.1088 of this subpart provided that all hazardous waste placed in the waste management unit is determined by the owner or operator to meet either of the following conditions:

(1) The average VO concentration of the hazardous waste at the point of waste origination is less than 100 parts per million by weight (ppmw). The average VO concentration shall be determined by the procedures specified in § 265.1084(a) of this subpart.

(2) The organic content of the hazardous waste has been reduced by an organic destruction or removal process that achieves any one of the following conditions:

(i) A process that removes or destroys the organics contained in the hazardous waste to a level such that the average VO concentration of the hazardous waste at the point of waste treatment is less than the exit concentration limit (C $_{\rm t}$) established for the process. The average VO concentration of the hazardous waste at the point of waste treatment and the exit concentration limit for the process shall be determined using the procedures specified in § 265.1084(b) of this subpart.

(ii) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 95 percent, and the average VO concentration of the hazardous waste at the point of waste treatment is less than 50 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in § 265.1084(b) of this subpart.

(iii) A process that removes or destroys the organics contained in the hazardous waste to a level such that the actual organic mass removal rate (MR) for the process is greater than the required organic mass removal rate (RMR) established for the process. The required organic mass removal rate and the actual organic mass removal rate for the process shall be determined using the procedures specified in § 265.1084(b) of this subpart.

(iv) A biological process that destroys or degrades the organics contained in the hazardous waste, such that either of the following conditions is met:

(A) The organic reduction efficiency (R) for the process is equal to or greater than 95 percent, and the organic biodegradation efficiency (R $_{\rm bio}$) for the process is equal to or greater than 95 percent. The organic reduction efficiency and the organic biodegradation efficiency for the process shall be determined in accordance with the procedures specified in § 265.1084(b) of this subpart.

(B) The total actual organic mass biodegradation rate (MR $_{\rm bio}$) for all hazardous waste treated by the process is equal to or greater than the required organic mass removal rate (RMR). The required organic mass removal rate and the actual organic mass biodegradation rate for the process shall be determined using the procedures specified in § 265.1084(b) of this subpart.

(v) A process that removes or destroys the organics contained in the hazardous waste and meets all of the following conditions:

(A) All of the materials entering the process are hazardous wastes.

(B) From the point of waste origination through the point where the hazardous waste enters the process, the hazardous waste is continuously managed in waste management units which use air emission controls in accordance with the standards specified in § 265.1085 through § 265.1088 of this subpart, as applicable to the waste management unit.

(C) The average VO concentration of the hazardous waste at the point of waste treatment is less than the lowest average VO concentration at the point of waste origination determined for each of the individual hazardous waste streams entering the process or 100 ppmw, whichever value is lower. The average VO concentration of each individual hazardous waste stream at the point of waste origination shall be determined using the procedure specified in § 265.1084(a) of this subpart. The average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedure specified in § 265.1084(b) of this subpart.

(vi) A hazardous waste incinerator for which the owner or operator has either:

(A) Been issued a final permit under 40 CFR part 270, and designs and operates the unit in accordance with the requirements of 40 CFR part 264, subpart 0; or

(B) Has certified compliance with the interim status requirements of subpart 0 of this part.

(vii) A boiler or industrial furnace for which the owner or operator has either:

(A) Been issued a final permit under 40 CFR part 270, and designs and operates the unit in accordance with the requirements of 40 CFR part 266, subpart H, or

(B) Has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

(d) When a process is used for the purpose of treating a hazardous waste to meet one of the sets of conditions specified in paragraphs (c)(2)(i) through (c)(2)(v) of this section, each material removed from or exiting the process that is not a hazardous waste but has an average VO concentration equal to or greater than 100 ppmw shall be managed in a waste management unit in accordance with the requirements of paragraph (b) of this section.

(e) The Regional Administrator may at any time perform or request that the owner or operator perform a waste determination for a hazardous waste managed in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of this section as follows:

(1) The waste determination for average VO concentration of a hazardous waste at the point of waste origination shall be performed using direct measurement in accordance with the applicable requirements of § 265.1084(a) of this subpart. The waste determination for a hazardous waste at the point of waste treatment shall be performed in accordance with the applicable requirements of § 265.1084(b) of this subpart. (2) In a case when the owner or operator is requested to perform the waste determination, the Regional Administrator may elect to have an authorized representative observe the collection of the hazardous waste samples used for the analysis.

(3) In a case when the results of the waste determination performed or requested by the Regional Administrator do not agree with the results of a waste determination performed by the owner or operator using knowledge of the waste, then the results of the waste determination performed in accordance with the requirements of paragraph (e)(1) of this section shall be used to establish compliance with the requirements of this subpart.

(4) In a case when the owner or operator has used an averaging period greater than 1 hour for determining the average VO concentration of a hazardous waste at the point of waste origination, the Regional Administrator may elect to establish compliance with this subpart by performing or requesting that the owner or operator perform a waste determination using direct measurement based on waste samples collected within a 1-hour period as follows:

(i) The average VO concentration of the hazardous waste at the point of waste origination shall be determined by direct measurement in accordance with the requirements of § 265.1084(a) of this subpart.

(ii) Results of the waste determination performed or requested by the Regional Administrator showing that the average VO concentration of the hazardous waste at the point of waste origination is equal to or greater than 100 ppmw shall constitute noncompliance with this subpart except in a case as provided for in paragraph (e)(4)(iii) of this section.

(iii) For the case when the average VO concentration of the hazardous waste at the point of waste origination previously has been determined by the owner or operator using an averaging period greater than 1 hour to be less than 100 ppmw but because of normal operating process variations the VO concentration of the hazardous waste determined by direct measurement for any given 1-hour period may be equal to or greater than 100 ppmw, information that was used by the owner or operator to determine the average VO concentration of the hazardous waste (e.g., test results, measurements, calculations, and other documentation) and recorded in the facility records in accordance with the requirements of § 265.1084(a) and § 265.1090 of this subpart shall be considered by the Regional Administrator together with the results of the waste determination performed or requested by the Regional Administrator in establishing compliance with this subpart.

§ 265.1084 Waste determination procedures.

(a) Waste determination procedure for volatile organic (VO) concentration of a hazardous waste at the point of waste origination.

(1) An owner or operator shall determine the average VO concentration at the point of waste origination for each hazardous waste placed in a waste management unit exempted under the provisions of § 265.1083(c)(1) of this subpart from using air emission controls in accordance with standards specified in § 265.1085 through § 265.1088 of this subpart, as applicable to the waste management unit.

(2) When the facility owner or operator is the generator of the hazardous waste, the owner or operator shall determine the average VO concentration of the hazardous waste using either direct measurement as specified in paragraph (a)(5) of this section or knowledge of the waste as specified in paragraph (a)(6) of this section for each hazardous waste generated as follows:

(i) When the hazardous waste is generated as part of a continuous process, the owner or operator shall:

(A) Perform an initial waste determination of the average VO concentration of the waste stream before the first time any portion of the material in the waste stream is placed in a waste management unit subject to this subpart, and thereafter update the information used for the waste determination at least once every 12 months following the date of the initial waste determination; and

(B) Perform a new waste determination whenever changes to the source generating the waste stream are reasonably likely to cause the average VO concentration of the hazardous waste to increase to a level that is equal to or greater than the applicable VO concentration limits specified in § 265.1083 of this subpart.

(ii) When the hazardous waste is generated as part of a batch process that is performed repeatedly but not necessarily continuously, the owner or operator shall:

(A) Perform an initial waste determination of the average VO concentration for one or more representative waste batches generated by the process before the first time any portion of the material in the batches is placed in a waste management unit subject to this subpart, and thereafter update the information

used for the waste determination at least once every 12 months following the date of the initial waste determination; and

(B) Perform a new waste determination whenever changes to the process generating the waste batches are reasonably likely to cause the average VO concentration of the hazardous waste to increase to a level that is equal to or greater than the applicable VO concentration limits specified in § 265.1083 of this subpart.

(3) When the facility owner and operator is not the generator of the hazardous waste, the owner or operator shall determine the average VO concentration of the hazardous waste using either direct measurement as specified in paragraph (a)(5) of this section or knowledge of the waste as specified in paragraph (a)(6) of this section for each hazardous waste entering the facility as follows:

(i) When the hazardous waste enters the facility as a continuous flow of material through a pipeline or other means (e.g., wastewater stream), the owner or operator shall:

(A) Perform an initial waste determination of the waste stream before the first time any portion of the material in the waste stream is placed in a waste management unit subject to this subpart, and thereafter update the information used for the waste determination at least once every 12 months following the date of the initial waste determination; and

(B) Perform a new waste determination whenever changes to the source generating the waste stream are reasonably likely to cause the average VO concentration of the hazardous waste to increase to a level that is equal to or greater than the applicable VO concentration limits specified in § 265.1083 of this subpart.

(ii) When the hazardous waste enters the facility in a container, the owner or operator shall perform a waste determination for the material held in each container.

(4) For the case when the average VO concentration of the hazardous waste is determined by the owner or operator to be less than 100 ppmw, but because of normal operating variations in the source or process generating the hazardous waste the VO concentration of the hazardous waste may be equal to or greater than 100 ppmw at any given time during the averaging period, the owner or operator shall prepare and enter in the facility operating record information that specifies the following:

(i) The maximum and minimum VO concentration values for the hazardous waste that occur during that averaging period used for the waste determination;

(ii) The operating conditions or circumstances under which the VO concentration of the hazardous waste will be equal to or greater than 100 ppmw, and;

(iii) The information and calculations used by the owner or operator to determine the average VO concentration of the hazardous waste.

(5) Procedure for using direct measurement to determine average VO concentration of a hazardous waste at the point of waste origination.

(i) The owner or operator shall identify and record the point of waste origination for the hazardous waste. All waste samples used to determine the average VO concentration of the hazardous waste shall be collected at this point.

(ii) The owner or operator shall designate and record the averaging period to be used for determining the average VO concentration for the hazardous waste. The averaging period shall not exceed 1 year. An initial waste determination shall be performed for each averaging period.

(iii) The owner or operator shall identify each discrete quantity of the material composing the hazardous waste represented by the averaging period designated in paragraph (a)(5)(ii) of this section. An example of a discrete quantity of material composing a hazardous waste generated as part of a continuous process is the quantity of material generated during a process operating mode defined by a specific set of operating conditions which are normal for the process. An example of a discrete quantity of material composing a hazardous waste generated as part of a batch process that is performed repeatedly but not necessarily continuously is the total quantity of material composing a single batch generated by the process. An example of a discrete quantity of material composing a hazardous waste delivered to a facility in a container is the total quantity of material held in the container.

(iv) The following procedure shall be used measure the VO concentration for each discrete quantity of material identified in paragraph (a)(5)(iii) of this section:

(A) A sufficient number of samples, but no less than four samples, shall be collected to represent the organic composition for the entire discrete quantity of hazardous waste being tested.

All of the samples shall be collected within a 1-hour period. Sufficient information shall be prepared and recorded to document the waste quantity represented by the samples and, as applicable, the operating conditions for the source or process generating the hazardous waste represented by the samples.

(B) Each sample shall be collected in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846, Third Edition, September 1986, as amended by Update I, November 15, 1992 (incorporated by reference-refer to § 260.11 of this chapter).

(C) Each collected sample shall be prepared and analyzed in accordance with the requirements of Method 25D in 40 CFR part 60, appendix A.

(D) The measured VO concentration for the discrete quantity of hazardous waste shall be determined by using the results for all samples analyzed in accordance with paragraph (a)(5)(iv)(C) of this section and the following equation:

 $C \quad \frac{1}{n} \quad X \quad \frac{n}{i' \quad 1} \quad C_i$

where:

- C = Measured VO concentration of the discrete quantity of hazardous waste, ppmw.
- *i* = Individual sample "i" of the hazardous waste collected in accordance with the requirements of SW-846.
- n = Total number of samples of hazardous waste collected (at least 4) within a 1-hour period.
- C_i = VO concentration measured by Method 25D for sample "i", ppmw.

(v) The average VO concentration of the hazardous waste shall be determined using the following procedure:

(A) When the facility owner or operator is the generator of the hazardous waste, a sufficient number of VO concentration measurements for the hazardous waste shall be performed in accordance with the requirements of paragraph (a)(5)(iv) of this section to represent the complete range of hazardous waste organic compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for each process operating mode identified for the source or process generating the hazardous waste.

(B) When the facility owner or operator is not the generator of the hazardous waste, a sufficient number of VO concentration measurements for the hazardous waste shall be performed in accordance with the requirements of paragraph (a)(5)(iv) of this section to represent the complete range of hazardous waste organic compositions and quantities that occur in the hazardous waste as received at the facility during the entire averaging period.

(C) The average VO concentration of the hazardous waste at the point of waste origination shall be calculated by using the results for all VO measurements performed in accordance with paragraph (a)(5)(iv) of this section and the following equation:

$$C_{ave} \stackrel{!}{=} \frac{1}{Q_T} X \stackrel{m}{\stackrel{!}{=}} (Q_j X C_j)$$

where:

j

- C_{ave} = Average VO concentration of the hazardous waste at the point of waste origination, ppmw.
 - Individual discrete quantity "j" of the hazardous waste for which a VO concentration measurement is determined in accordance with the requirements of paragraph (a)(5)(iv) of this section.
- m = Total number of VO concentration measurements determined in accordance with the requirements of paragraph (a)(5)(iv) of this section for the averaging period.
- Q_j = Mass of the discrete quantity of the hazardous waste represented by C_j, kg.
- Q_T = Total mass of the hazardous waste for the averaging period, kg.
- C_j = Measured VO concentration of discrete quantity "j" for the hazardous waste determined in accordance with the

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requirements of paragraph (a)(5)(iv) of this section, ppmw.

(6) Procedure for using knowledge of the waste to determine the average VO concentration of a hazardous waste at the point of waste origination.

(i) The owner or operator shall identify and record the point of waste origination for the hazardous waste. All information used to determine the average VO concentration of the hazardous waste shall be based on the hazardous waste composition at this point.

(ii) The owner or operator shall designate and record the averaging period to be used for determining the average VO concentration for the hazardous waste. The averaging period shall not exceed 1 year. An initial waste determination shall be performed for each averaging period.

(iii) The owner or operator shall prepare and record sufficient information that documents the average VO concentration for the hazardous waste. Information may be used that is prepared by either the facility owner or operator or by the generator of the hazardous waste. Examples of information that may be used as the basis for knowledge of the waste include: organic material balances for the source or process generating the waste; VO concentration measurements for the same type of waste performed in accordance with the procedure specified in paragraph (a)(5)(iv) of this section; previous individual organic constituent test data for the waste that are still applicable to the current waste management practices; documentation that the waste is generated by a process for which no organics-containing materials are used; previous test data for other locations managing the same type of waste; or other knowledge based on manifests, shipping papers, or waste certification notices.

(iv) If test data other than VO concentration measurements performed in accordance with the procedure specified in paragraph (a)(5)(iv) of this section are used as the basis for knowledge of the waste, then the owner or operator shall document the test method, sampling protocol, and the means by which sampling variability and analytical variability are accounted for in the determination of the average VO concentration. For example, an owner or operator may use individual organic constituent concentration test data that are validated in accordance with Method 301 in appendix A of 40 CFR part 63 as the basis for knowledge of the waste.

(b) Waste determination procedures for treated hazardous waste.

(1) An owner or operator shall perform the applicable waste determination for each treated hazardous waste placed in a waste management unit exempted under the provisions of § 265.1083(c)(2) of this subpart from using air emission controls in accordance with standards specified in § 265.1085 through § 265.1088 of this subpart, as applicable to the waste management unit.

(2) The owner or operator shall perform a waste determination for each discrete quantity of treated hazardous waste as follows:

(i) When the hazardous waste is treated by a continuous process, the owner or operator shall:

(A) Perform an initial waste determination for the treated waste stream before the first time any portion of the material in the waste stream is placed in a waste management unit subject to this subpart, and thereafter update the information used for the waste determination at least once every 12 months following the date of the initial waste determination; and

(B) Perform a new waste determination whenever changes to the hazardous waste streams fed to the process are reasonably likely to cause the characteristics of the hazardous waste at the point of waste treatment to change to levels that fail to achieve the applicable conditions specified in § 265.1083(c)(2) of this subpart.

(ii) When the hazardous waste is treated by a batch process that is performed repeatedly but not necessarily continuously, the owner or operator shall:

(A) Perform an initial waste determination for the treated hazardous waste in one or more representative batches treated by the process, and thereafter update the information used for the waste determination at least once every 12 months following the date of the initial waste determination; and

(B) Perform a new waste determination whenever changes to the hazardous waste treated by the process are reasonably likely to cause the characteristics of the hazardous waste at the point of waste treatment to change to levels that fail to achieve the applicable conditions specified in § 265.1083(c)(2) of this subpart.

(3) The owner or operator shall designate and record the specific provision in § 265.1083(c)(2) of this subpart for which the waste determination is being performed. The waste determination for the treated hazardous waste shall be performed

using the applicable procedures specified in paragraphs (b)(4) through (b)(10) of this section.

(4) Procedure to determine the average VO concentration of a hazardous waste at the point of waste treatment.

(i) The owner or operator shall identify and record the point of waste treatment for the hazardous waste. All waste samples used to determine the average VO concentration of the hazardous waste shall be collected at this point.

(ii) The owner or operator shall designate and record the averaging period to be used for determining the average VO concentration for the hazardous waste. The averaging period shall not exceed 1 year. An initial waste determination shall be performed for each averaging period.

(iii) The owner or operator shall identify each discrete quantity of the material composing the hazardous waste represented by the averaging period designated in paragraph (b)(4)(ii) of this section.

(iv) The following procedure shall be used measure the VO concentration for each discrete quantity of material identified in paragraph (b)(4)(iii) of this section:

(A) A sufficient number of samples, but no less than four samples, shall be collected to represent the organic composition for the entire discrete quantity of hazardous waste being tested. All of the samples shall be collected within a 1-hour period. Sufficient information shall be prepared and recorded to document the waste quantity represented by the samples and, as applicable, the operating conditions for the process treating the hazardous waste represented by the samples.

(B) Each sample shall be collected in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846, Third Edition, September 1986, as amended by Update I, November 15, 1992 (incorporated by reference-refer to § 260.11 of this chapter).

(C) Each collected sample shall be prepared and analyzed in accordance with the requirements of Method 25D in 40 CFR part 60, appendix A.

(D) The measured VO concentration for the discrete quantity of hazardous waste shall be determined by using the results for all samples analyzed in accordance with paragraph (b)(4)(iv)(C) of this section and the following equation:

$$C \quad \frac{1}{n} \quad X \quad \frac{n}{i' \quad 1} \quad C_i$$

where:

- *C* = Measured VO concentration of the discrete quantity of hazardous waste, ppmw.
- *i* = Individual sample "i" of the hazardous waste collected in accordance with the requirements of SW-846.
- n = Total number of samples of hazardous waste collected (at least 4) within a 1-hour period.
- C_i
- VO concentration measured by Method 25D for sample "i", ppmw.

(v) The average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the following procedure:

(A) When the facility owner or operator is the generator of the hazardous waste, a sufficient number of VO concentration measurements for the hazardous waste shall be performed in accordance with the requirements of paragraph (b)(4)(iv) of this section to represent the complete range of hazardous waste organic compositions and quantities treated by the process during the entire averaging period.

(B) The average VO concentration of the hazardous waste at the point of waste treatment shall be calculated by using the results for all VO measurements performed in accordance with paragraph (b)(4)(iv) of this section and the following equation:

$$C_{ave}$$
 ' $\frac{1}{Q_T}$ X ' (Q_j X C_j)

where:

 C_{ave}

= Average VO concentration of the hazardous waste at the point of waste origination, ppmw.

j = Individual discrete quantity "j" of the hazardous waste for which a VO concentration measurement is determined in accordance with the requirements of paragraph (b)(4)(iv) of this section.

- m = Total number of VO concentration measurements determined in accordance with the requirements of paragraph (b)(4)(iv) of this section for the averaging period.
- Q_j = Mass of the discrete quantity of the hazardous waste represented by C $_j$, kg.
- Q_T = Total mass of the hazardous waste for the averaging period, kg.
- C_j = Measured VO concentration of discrete quantity "j" for the hazardous waste determined in accordance with the requirements of paragraph (b)(4)(iv) of this section, ppmw.

(5) Procedure to determine the exit concentration limit (C $_{\rm t})$ for a treated hazardous waste.

(i) The point of waste origination for each hazardous waste treated by the process at the same time shall be identified.

(ii) If a single hazardous waste stream is identified in paragraph (b)(5)(i) of this section, then the exit concentration limit (C_t) shall be 100 ppmw.

(iii) If more than one hazardous waste stream is identified in paragraph (b)(5)(i) of this section, then the VO concentration of each hazardous waste stream at the point of waste origination shall be determined in accordance with the requirements of paragraph (a) of this section. The exit concentration limit (C $_{t}$) shall be calculated by using the results determined for each individual hazardous waste stream and the following equation:

$$C_{t} \stackrel{i}{\overset{m}{\underset{x' \mid 1}{\overset{y' \mid 1$$

where:

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- C_t = Exit concentration limit for treated hazardous waste, ppmw.
- x = Individual hazardous waste stream "x" that has a VO concentration less than 100 ppmw at the point of waste origination as determined in accordance with the requirements of § 265.1084(a).
- y = Individual hazardous waste stream "y" that has a VO concentration equal to or greater than 100 ppmw at the point of waste origination as determined in accordance with the requirements of § 265.1084(a).
- m = Total number of "x" hazardous waste streams treated by
 process.
- n = Total number of "y" hazardous waste streams treated by process.
- Q_x = Annual mass quantity of hazardous waste stream "x", kg/yr.
- Q_y = Annual mass quantity of hazardous waste stream "y", kg/yr.
 - = Average VO concentration of hazardous waste stream "x" at the point of waste origination as determined in accordance with the requirements of § 265.1084(a), ppmw.

(6) Procedure to determine the organic reduction efficiency (R) for a treated hazardous waste.

(i) The organic reduction efficiency for a treatment process shall be determined based on results for a minimum of three consecutive runs. The sampling time for each run shall be 1 hour.

(ii) The point of each hazardous waste stream entering the process and each hazardous waste stream exiting the process that is to be included in the calculation of the organic reduction efficiency for the process shall be identified.

(iii) For each run, the following information shall be determined for each hazardous waste stream identified in paragraph (b)(6)(ii) of this section using the following procedures:

 $\overline{C_x}$

(A) The mass quantity of each hazardous waste stream entering the process (Q $_{\rm b}$) and the mass quantity of each hazardous waste stream exiting the process (Q $_{\rm a}$) shall be determined.

(B) The VO concentration of each hazardous waste stream entering the process (C_b) during the run shall be measured in accordance with the requirements of paragraphs (a)(5)(iv)(A) through (a)(5)(iv)(D) of this section. The VO concentration of each hazardous waste stream exiting the process (C_a) during the run shall be determined in accordance with the requirements of paragraph (b)(4)(iv) of this section. Samples shall be collected as follows:

(1) For a continuous process, the samples of the hazardous waste entering and samples of the hazardous waste exiting the process shall be collected concurrently.

(2) For a batch process, the samples of the hazardous waste entering the process shall be collected at the time that the hazardous waste is placed in the process. The samples of the hazardous waste exiting the process shall be collected as soon as practicable after the time when the process stops operation or the final treatment cycle ends.

(iv) The waste volatile organic mass flow entering the process (E_b) and the waste volatile organic mass flow exiting the process (E_a) shall be calculated by using the results determined in accordance with paragraph (b)(6)(iii) of this section and the following equations:

$$E_{b} \stackrel{'}{=} \frac{1}{10^{6}} \stackrel{m}{j' 1} (Q_{bj} X C_{bj})$$

$$E_a \quad ' \quad \frac{1}{10^6} \quad \frac{m}{j' \ 1} \quad (Q_{aj} \ X \ C_{aj})$$

where:

 E_{a}

Waste volatile organic mass flow exiting process, kg/hr.

 E_b = Waste volatile organic mass flow entering process, kg/hr.

m = Total number of runs (at least 3)

- j = Individual run "j"
- Q_{bj} = Mass quantity of hazardous waste entering process
 during run "j", kg/hr.
- Q_{aj} = Average mass quantity of waste exiting process during run "j", kg/hr.
- C_{aj} = Measured VO concentration of hazardous waste exiting process during run "j" as determined in accordance with the requirements of § 265.1084(b)(4)(iv), ppmw.
- C_{bj} = Measured VO concentration of hazardous waste entering process during run "j" as determined in accordance with the requirements of § 265.1084 (a)(5)(iv)(A) through (a)(5)(iv)(D), ppmw.

(v) The organic reduction efficiency of the process shall be calculated by using the results determined in accordance with paragraph (b)(6)(iv) of this section and the following equation:

$$R \quad ' \quad \frac{E_b \& E_a}{E_b} X \ 100\%$$

where:

- R = Organic reduction efficiency, percent.
- E_b = Waste volatile organic mass flow entering process as determined in accordance with the requirements of paragraph (b)(6)(iv) of this section, kg/hr.
- E_a = Waste volatile organic mass flow exiting process as determined in accordance with the requirements of paragraph (b)(6)(iv) of this section, kg/hr.

(7) Procedure to determine the organic biodegradation efficiency ($R_{\rm bio}$) for a treated hazardous waste.

(i) The fraction of organics biodegraded (F $_{\rm bio})$ shall be determined using the procedure specified in 40 CFR part 63, appendix C of this chapter.

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(ii) The organic biodegradation efficiency shall be calculated by using the following equation:

 R_{bio} ' $F_{bio} \times 100\%$

where

R_{bio}

= Organic biodegradation efficiency, percent.

- F_{bio}
- = Fraction of organic biodegraded as determined in accordance with the requirements of paragraph (b)(7)(i) of this section.

(8) Procedure to determine the required organic mass removal rate (RMR) for a treated hazardous waste.

(i) The point of waste origination for each hazardous waste treated by the process at the same time shall be identified.

(ii) For each hazardous waste stream identified in paragraph (b)(8)(i) of this section, the VO concentration of the hazardous waste stream at the point of waste origination shall be determined in accordance with the requirements of paragraph (a) of this section.

(iii) For each individual hazardous waste stream that has a volatile organic concentration equal to or greater than 100 ppmw at the point of waste origination as determined in accordance with the requirements of paragraph (b)(8)(ii) of this section, the average volumetric flow rate of hazardous waste at the point of waste origination and the density of the hazardous waste stream shall be determined.

(iv) The required organic mass removal rate for the hazardous waste shall be calculated by using the results determined for each individual hazardous waste stream in accordance with the requirements of paragraphs (b)(8)(ii) and (b)(8)(iii) of this section and the following equation:

$$RMR \stackrel{n}{\downarrow} V_{y} X k_{y} X \frac{(\overline{C}_{y} \& 100 \ ppmw)}{10^{6}}$$

where:

RMR = Required organic mass removal rate, kg/hr.

- y = Individual hazardous waste stream "y" that has a volatile organic concentration equal to or greater than 100 ppmw at the point of waste origination as determined in accordance with the requirements of § 265.1084(a).
- n = Total number of "y" hazardous waste streams treated by
 process.
- V_y = Average volumetric flow rate of hazardous waste stream "y" at the point of waste origination, m ³/hr.
- k_y = Density of hazardous waste stream "y", kg/m³
- $\overline{C_y}$ = Average VO concentration of hazardous waste stream "y" at the point of waste origination as determined in accordance with the requirements of § 265.1084(a), ppmw.

(9) Procedure to determine the actual organic mass removal rate (MR) for a treated hazardous waste.

(i) The actual organic mass removal rate shall be determined based on results for a minimum of three consecutive runs. The sampling time for each run shall be 1 hour.

(ii) The waste volatile organic mass flow entering the process (E_b) and the waste volatile organic mass flow exiting the process (E_a) shall be determined in accordance with the requirements of paragraph (b)(6)(iv) of this section.

(iii) The actual organic mass removal rate shall be calculated by using the results determined in accordance with the requirements of paragraph (b)(9)(ii) of this section and the following equation:

 $MR' E_h \& E_a$

where:

MR = Actual organic mass removal rate, kg/hr.

- E_{h}
 - Waste volatile organic mass flow entering process as determined in accordance with the requirements of paragraph (b)(6)(iv) of this section, kg/hr.

Waste volatile organic mass flow exiting process as determined in accordance with the requirements of paragraph (b)(6)(iv) of this section, kg/hr.

(10) Procedure to determine the actual organic mass biodegradation rate (MR $_{\rm bio}$) for a treated hazardous waste.

(i) The actual organic mass biodegradation rate shall be determined based on results for a minimum of three consecutive runs. The sampling time for each run shall be 1 hour.

(ii) The waste organic mass flow entering the process (E $_{\rm b}$) shall be determined in accordance with the requirements of paragraph (b)(6)(iv) of this section.

(iii) The fraction of organic biodegraded (F $_{\rm bio})$ shall be determined using the procedure specified in 40 CFR part 63, appendix C.

(iv) The actual organic mass biodegradation rate shall be calculated by using the mass flow rates and fraction of organic biodegraded determined in accordance with the requirements of paragraphs (b)(10)(ii) and (b)(10)(iii) of this section and the following equation:

 MR_{bio} ' $E_b \times F_{bio}$

where:

MR_{bio}

- bio = Actual organic mass biodegradation rate, kg/hr.
- E_{b}
- Waste organic mass flow entering process as determined in accordance with the requirements of paragraph (b)(6)(iv) of this section, kg/hr.
- F_{bio} = Fraction of organic biodegraded as determined in accordance with the requirements of paragraph (b)(10)(iii) of this section.

(c) Procedure to determine the maximum organic vapor pressure of a hazardous waste in a tank.

(1) An owner or operator shall determine the maximum organic vapor pressure for each hazardous waste placed in a tank using air emission controls in accordance with standards specified in § 265.1085(c) of this subpart.

 E_{a}

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(2) An owner or operator shall use either direct measurement as specified in paragraph (c)(3) of this section or knowledge of the waste as specified by paragraph (c)(4) of this section to determine the maximum organic vapor pressure which is representative of the hazardous waste composition stored or treated in the tank.

(3) To determine the maximum organic vapor pressure of the hazardous waste by direct measurement, the following procedure shall be used:

(i) Representative samples of the waste contained in the tank shall be collected. Sampling shall be conducted in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846, Third Edition, September 1986, as amended by Update I, November 15, 1992 (incorporated by reference-refer to § 260.11 of this chapter).

(ii) Any appropriate one of the following methods may be used to analyze the samples and compute the maximum organic vapor pressure:

(A) Method 25E in 40 CFR part 60, appendix A;

(B) Methods described in American Petroleum Institute Publication 2517, Third Edition, February 1989, "Evaporative Loss from External Floating-Roof Tanks," (incorporated by referencerefer to § 260.11 of this chapter);

(C) Methods obtained from standard reference texts;

(D) ASTM Method 2879-92 (incorporated by reference-refer to § 260.11 of this chapter); or

(E) Any other method approved by the Regional Administrator.

(4) To determine the maximum organic vapor pressure of the hazardous waste by knowledge, sufficient information shall be prepared and recorded that documents the maximum organic vapor pressure of the hazardous waste in the tank. Examples of information that may be used include: documentation that the waste is generated by a process for which no organics-containing materials are used; or that the waste is generated by a process for which at other locations it previously has been determined by direct measurement that the waste maximum organic vapor pressure is less than the maximum vapor pressure limit for the appropriate design capacity category specified for the tank.

§ 265.1085 Standards: Tanks.

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(a) This section applies to owners and operators of tanks subject to this subpart into which any hazardous waste is placed except for the following tanks:

(1) A tank in which all hazardous waste entering the tank meets the conditions specified in § 265.1083(c) of this subpart; or

(2) A tank used for biological treatment of hazardous waste in accordance with the requirements of § 265.1083(c)(2)(iv) of this subpart.

(b) The owner or operator shall place the hazardous waste into one of the following tanks:

(1) A tank equipped with a cover (e.g., a fixed roof) that is vented through a closed-vent system to a control device in accordance with the requirements specified in paragraph (d) of this section;

(2) A tank equipped with a fixed roof and internal floating roof in accordance with the requirements of § 265.1091 of this subpart;

(3) A tank equipped with an external floating roof in accordance with the requirements of § 265.1091 of this subpart; or

(4) A pressure tank that is designed to operate as a closed system such that the tank operates with no detectable organic emissions at all times that hazardous waste is in the tank except as provided for in paragraph (g) of this section.

(c) As an alternative to complying with paragraph (b) of this section, an owner or operator may place hazardous waste in a tank equipped with a cover (e.g., a fixed roof) meeting the requirements specified in paragraph (d)(1) of this section when the hazardous waste is determined to meet all of the following conditions:

(1) The hazardous waste is neither mixed, stirred, agitated, nor circulated within the tank by the owner or operator using a process that results in splashing, frothing, or visible turbulent flow on the waste surface during normal process operations;

(2) The hazardous waste in the tank is not heated by the owner or operator except during conditions requiring that the waste be heated to prevent the waste from freezing or to maintain adequate waste flow conditions for continuing normal process operations; (3) The hazardous waste in the tank is not treated by the owner or operator using a waste stabilization process or a process that produces an exothermic reaction; and

(4) The maximum organic vapor pressure of the hazardous waste in the tank as determined using the procedure specified in § 265.1084(c) of this subpart is less than the following applicable value:

(i) If the tank design capacity is equal to or greater than 151 $\rm m^3,$ then the maximum organic vapor pressure shall be less than 5.2 kPa;

(ii) If the tank design capacity is equal to or greater than 75 m³ but less than 151 m³, then the maximum organic vapor pressure shall be less than 27.6 kPa; or

(iii) If the tank design capacity is less than 75 m 3 , then the maximum organic vapor pressure shall be less than 76.6 kPa.

(d) To comply with paragraph (b)(1) of this section, the owner or operator shall design, install, operate, and maintain a cover that vents the organic vapors emitted from hazardous waste in the tank through a closed-vent system connected to a control device.

(1) The cover shall be designed and operated to meet the following requirements:

(i) The cover and all cover openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable organic emissions when all cover openings are secured in a closed, sealed position.

(ii) Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid or cap) at all times that hazardous waste is in the tank except as provided for in paragraph (f) of this section.

(2) The closed-vent system and control device shall be designed and operated in accordance with the requirements of § 265.1088 of this subpart.

(e) The owner and operator shall install, operate, and maintain enclosed pipes or other closed systems for the transfer of hazardous waste as described in paragraph (e)(1) or (e)(2) of this section. The EPA considers a drain system that meets the requirements of 40 CFR 61.346(a)(1) or 40 CFR 61.346(b)(1) through (b)(3) to be a closed system.

(1) Transfer all hazardous waste to the tank from another tank, surface impoundment, or container subject to this subpart except for those hazardous wastes that meet the conditions specified in § 265.1083(c) of this subpart; and

(2) Transfer all hazardous waste from the tank to another tank, surface impoundment, or container subject to this subpart except for those hazardous wastes that meet the conditions specified in § 265.1083(c) of this subpart.

(f) Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid) at all times that hazardous waste is in the tank except when it is necessary to use the cover opening to:

(1) Add, remove, inspect, or sample the material in the tank;

(2) Inspect, maintain, repair, or replace equipment located inside the tank; or

(3) Vent gases or vapors from the tank to a closed-vent system connected to a control device that is designed and operated in accordance with the requirements of § 265.1088 of this subpart.

(g) One or more safety devices which vent directly to the atmosphere may be used on the tank, cover, closed-vent system, or control device provided each safety device meets all of the following conditions:

(1) The safety device is not used for planned or routine venting of organic vapors from the tank or the closed-vent system connected to a control device; and

(2) The safety device remains in a closed, sealed position at all times except when an unplanned event requires that the device open for the purpose of preventing physical damage or permanent deformation of the tank, cover, closed-vent system, or control device in accordance with good engineering and safety practices for handling flammable, combustible, explosive, or other hazardous materials. An example of an unplanned event is a sudden power outage.

§ 265.1086 Standards: surface impoundments.

(a) This section applies to owners and operators of surface impoundments subject to this subpart into which any hazardous waste is placed except for the following surface impoundments: (1) A surface impoundment in which all hazardous waste entering the surface impoundment meets the conditions specified in § 265.1083(c) of this subpart; or

(2) A surface impoundment used for biological treatment of hazardous waste in accordance with the requirements of § 265.1083(c)(2)(iv) of this subpart.

(b) The owner or operator shall place the hazardous waste into a surface impoundment equipped with a cover (e.g., an airsupported structure or a rigid cover) that is vented through a closed-vent system to a control device meeting the requirements specified in paragraph (d) of this section.

(c) As an alternative to complying with paragraph (b) of this section, an owner or operator may place hazardous waste in a surface impoundment equipped with a floating membrane cover meeting the requirements specified in paragraph (e) of this section when the hazardous waste is determined to meet all of the following conditions:

(1) The hazardous waste is neither mixed, stirred, agitated, nor circulated within the surface impoundment by the owner or operator using a process that results in splashing, frothing, or visible turbulent flow on the waste surface during normal process operations;

(2) The hazardous waste in the surface impoundment is not heated by the owner or operator; and

(3) The hazardous waste in the surface impoundment is not treated by the owner or operator using a waste stabilization process or a process that produces an exothermic reaction.

(d) To comply with paragraph (b)(1) of this section, the owner or operator shall design, install, operate, and maintain a cover that vents the organic vapors emitted from hazardous waste in the surface impoundment through a closed-vent system connected to a control device.

(1) The cover shall be designed, installed, operated, and maintained to meet the following requirements:

(i) The cover and all cover openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable organic emissions when all cover openings are secured in a closed, sealed position.

(ii) Each cover opening shall be secured in the closed, sealed position (e.g., covered by a gasketed lid or cap) at all
times that hazardous waste is in the surface impoundment except as provided for in paragraph (g) of this section.

(iii) The closed-vent system and control device shall be designed and operated in accordance with § 265.1088 of this subpart.

(e) To comply with paragraph (c) of this section, the owner or operator shall design, install, operate, and maintain a floating membrane cover that meets all of the following requirements:

(1) The floating membrane cover shall be designed, installed, and operated such that at all times when hazardous waste is in the surface impoundment, the entire surface area of the hazardous waste is enclosed by the cover, and any air spaces underneath the cover are not vented to the atmosphere except during conditions specified in paragraph (h) of this section.

(2) The floating membrane cover and all cover openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable organic emissions when all cover openings are secured in a closed, sealed position.

(3) Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid or cap) at all times that hazardous waste is in the surface impoundment except as provided for in paragraphs (g)(1) through (g)(3) of this section; and

(4) The synthetic membrane material used for the floating membrane cover shall be either:

(i) High density polyethylene with a thickness no less than 2.5 mm; or

(ii) A material or a composite of different materials determined to have the following properties:

(A) Organic permeability properties that are equivalent to those of the material specified in paragraph (e)(4)(i) of this section; and

(B) Chemical and physical properties that maintain the material integrity for as long as the cover is in use. Factors that shall be considered in selecting the material include: the effects of contact with the waste managed in the impoundment, weather exposure, and cover installation and operation practices.

(f) The owner or operator shall install, operate, and maintain enclosed pipes or other closed systems for the transfer of hazardous waste as described in paragraph (f)(1) or (f)(2) of this section. The EPA considers a drain system that meets the requirements of 40 CFR 61.346(a)(1) or 40 CFR 61.346(b)(1) through (b)(3) to be a closed system.

(1) Transfer all hazardous waste to the surface impoundment from another tank, surface impoundment, or container subject to this subpart except for those hazardous wastes that meet the conditions specified in § 265.1083(c) of this subpart; and

(2) Transfer all hazardous waste from the surface impoundment to another tank, surface impoundment, or container subject to this subpart except for those hazardous wastes that meet the conditions specified in § 265.1083(c) of this subpart.

(g) Each cover opening shall be secured in the closed, sealed position (e.g., covered by a gasketed lid or cap) at all times that hazardous waste is in the surface impoundment except when it is necessary to use the cover opening to:

(1) Add, remove, inspect, or sample the material in the surface impoundment;

(2) Inspect, maintain, repair, or replace equipment located underneath the cover;

(3) Remove treatment residues from the surface impoundment in accordance with the requirements of 40 CFR 268.4; or

(4) Vent gases or vapors from the surface impoundment to a closed-vent system connected to a control device that is designed and operated in accordance with the requirements of § 265.1088 of this subpart.

(h) One or more safety devices that vent directly to the atmosphere may be installed on the cover, closed-vent system, or control device provided each device meets all of the following conditions:

(1) The safety device is not used for planned or routine venting of organic vapors from the surface impoundment or the closed-vent system connected to a control device; and

(2) The safety device remains in a closed, sealed position at all times except when an unplanned event requires that the device open for the purpose of preventing physical damage or permanent deformation of the cover, closed-vent system, or control device in accordance with good engineering and safety practices for handling flammable, combustible, explosive, or other hazardous materials. An example of an unplanned event is a sudden power outage.

§ 265.1087 Standards: Containers.

(a) This section applies to the owners and operators of containers having design capacities greater than 0.1 m ³ subject to this subpart into which any hazardous waste is placed except for a container in which all hazardous waste entering the container meets the conditions specified in § 265.1083(c) of this subpart.

(b) An owner or operator shall manage hazardous waste in containers using the following procedures:

(1) The owner or operator shall place the hazardous waste into one of the following containers except when a container is used for hazardous waste treatment as required by paragraph(b)(2) of this section:

(i) A container that is equipped with a cover which operates with no detectable organic emissions when all container openings (e.g., lids, bungs, hatches, and sampling ports) are secured in a closed, sealed position. The owner or operator shall determine that a container operates with no detectable emissions by testing each opening on the container for leaks in accordance with Method 21 in 40 CFR part 60, appendix A the first time any portion of the hazardous waste is placed into the container. If a leak is detected and cannot be repaired immediately, the hazardous waste shall be removed from the container and the container not used to meet the requirements of this paragraph until the leak is repaired and the container is retested.

(ii) A container having a design capacity less than or equal to 0.46 m³ that is equipped with a cover and complies with all applicable Department of Transportation regulations on packaging hazardous waste for transport under 49 CFR part 178.

(A) A container that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with this subpart is not subject to any exceptions to the 49 CFR part 178 regulations, except as noted in paragraph (b)(1)(ii)(B) of this section.

(B) A lab pack that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with this subpart may comply with the exceptions for combination packagings specified in 49 CFR 173.12(b).

(iii) A container that is attached to or forms a part of any truck, trailer, or railcar; and that has been demonstrated within the preceding 12 months to be organic vapor tight when all container openings are in a closed, sealed position (e.g., the container hatches or lids are gasketed and latched). For the purpose of meeting the requirements of this paragraph, a container is organic vapor tight if the container sustains a pressure change of not more than 750 pascals within 5 minutes after it is pressurized to a minimum of 4,500 pascals. This condition is to be demonstrated using the pressure test specified in Method 27 of 40 CFR part 60, appendix A, and a pressure measurement device which has a precision of \pm 2.5 mm water and which is capable of measuring above the pressure at which the container is to be tested for vapor tightness.

container by either a waste stabilization process, any process that requires the addition of heat to the waste, or any process that produces an exothermic reaction shall meet the following requirements:

(i) Whenever it is necessary for the container to be open during the treatment process, the container shall be located inside an enclosure that is vented through a closed-vent system to a control device.

(ii) The enclosure shall be a structure that is designed and operated in accordance with the following requirements:

(A) The enclosure shall be a structure that is designed and operated with sufficient airflow into the structure to capture the organic vapors emitted from the hazardous waste in the container and vent the vapors through the closed-vent system to the control device.

(B) The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or to direct airflow into the enclosure. The pressure drop across each opening in the enclosure shall be maintained at a pressure below atmospheric pressure such that whenever an open container is placed inside the enclosure no organic vapors released from the container exit the enclosure through the opening. The owner or operator shall determine that an enclosure achieves this condition by measuring the pressure drop across each opening in the enclosure. If the pressure within the enclosure is equal to or greater than atmospheric pressure then the enclosure does not meet the requirements of this section. (iii) The closed-vent system and control device shall be designed and operated in accordance with the requirements of § 265.1088 of this subpart.

(3) An owner or operator transferring hazardous waste into a container having a design capacity greater than 0.46 m 3 shall meet the following requirements:

(i) Hazardous waste transfer by pumping shall be performed using a conveyance system that uses a tube (e.g., pipe, hose) to add the waste into the container. During transfer of the waste into the container, the cover shall remain in place and all container openings shall be maintained in a closed, sealed position except for those openings through which the tube enters the container and as provided for in paragraph (c) of this section. The tube shall be positioned in a manner such that either the:

(A) Tube outlet continuously remains submerged below the waste surface at all times waste is flowing through the tube;

(B) Lower bottom edge of the tube outlet is located at a distance no greater than two inside diameters of the tube or 15.25 cm, whichever distance is greater, from the bottom of the container at all times waste is flowing through the tube; or

(C) Tube is connected to a permanent port mounted on the bottom of the container so that the lower edge of the port opening inside the container is located at a distance equal to or less than 15.25 cm from the container bottom.

(ii) Hazardous waste transferred by a means other than pumping shall be performed such that during transfer of the waste into the container, the cover remains in place and all container openings are maintained in a closed, sealed position except for those openings through which the hazardous waste is added and as provided for in paragraph (d) of this section.

(c) Each container opening shall be maintained in a closed, sealed position (e.g., covered by a gasketed lid) at all times that hazardous waste is in the container except when it is necessary to use the opening to:

(1) Add, remove, inspect, or sample the material in the container;

(2) Inspect, maintain, repair, or replace equipment located inside the container; or

(3) Vent gases or vapors from a cover located over or enclosing an open container to a closed-vent system connected to a control device that is designed and operated in accordance with the requirements of § 265.1088 of this subpart.

(d) One or more safety devices that vent directly to the atmosphere may be used on the container, cover, enclosure, closed-vent system, or control device provided each device meets all of the following conditions:

(1) The safety device is not used for planned or routine venting of organic vapors from the container, cover, enclosure, or closed-vent system connected to a control device; and

(2) The safety device remains in a closed, sealed position at all times except when an unplanned event requires that the device open for the purpose of preventing physical damage or permanent deformation of the container, cover, enclosure, closedvent system, or control device in accordance with good engineering and safety practices for handling flammable, combustible, explosive, or other hazardous materials. An example of an unplanned event is a sudden power outage.

§ 265.1088 Standards: Closed-vent systems and control devices.

(a) This section applies to each closed-vent system and control device installed and operated by the owner or operator to control air emissions in accordance with standards of this subpart.

(b) The closed-vent system shall meet the following requirements:

(1) The closed-vent system shall route the gases, vapors, and fumes emitted from the hazardous waste in the waste management unit to a control device that meets the requirements specified in paragraph (c) of this section.

(2) The closed-vent system shall be designed and operated in accordance with the requirements specified in § 265.1033(j) of this part.

(3) If the closed-vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device, the owner or operator shall meet the following requirements:

(i) For each bypass device except as provided for in paragraph (b)(3)(ii) of this section, the owner or operator shall either: (A) Install, calibrate, maintain, and operate a flow indicator at the inlet to the bypass device that indicates at least once every 15 minutes whether gas, vapor, or fume flow is present in the bypass device; or

(B) Secure the valve installed at the inlet to the bypass device in the closed position using a car-seal or a lock-and-key type configuration. The owner or operator shall visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the closed position.

(ii) Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of paragraph (b)(3)(i) of this section.

(c) The control device shall meet the following requirements:

(1) The control device shall be one of the following devices:

(i) A control device designed and operated to reduce the total organic content of the inlet vapor stream vented to the control device by at least 95 percent by weight;

(ii) An enclosed combustion device designed and operated in accordance with the requirements of § 265.1033(c); or

(iii) A flare designed and operated in accordance with the requirements of § 265.1033(d).

(2) The control device shall be operating at all times when gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device.

(3) The owner or operator using a carbon adsorption system to comply with paragraph (c)(1) of this section shall operate and maintain the control device in accordance with the following requirements:

(i) Following the initial startup of the control device, all activated carbon in the control device shall be replaced with fresh carbon on a regular basis in accordance with the requirements of § 265.1033(g) or § 265.1033(h).

(ii) All carbon removed from the control device shall be managed in accordance with the requirements of § 265.1033(1).

(4) An owner or operator using a control device other than a thermal vapor incinerator, flare, boiler, process heater,

condenser, or carbon adsorption system to comply with paragraph (c)(1) of this section shall operate and maintain the control device in accordance with the requirements of § 265.1033(i).

(5) The owner or operator shall demonstrate that a control device achieves the performance requirements of paragraph (c)(1) of this section as follows:

(i) An owner or operator shall demonstrate using either a performance test as specified in paragraph (c)(5)(iii) of this section or a design analysis as specified in paragraph (c)(5)(iv) of this section the performance of each control device except for the following:

(A) A flare;

(B) A boiler or process heater with a design heat input capacity of 44 megawatts or greater;

(C) A boiler or process heater into which the vent stream is introduced with the primary fuel;

(D) A boiler or process heater burning hazardous waste for which the owner or operator has been issued a final permit under 40 CFR part 270 and designs and operates the unit in accordance with the requirements of 40 CFR part 266, subpart H; or

(E) A boiler or process heater burning hazardous waste for which the owner or operator has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

(ii) An owner or operator shall demonstrate the performance of each flare in accordance with the requirements specified in § 265.1033(e).

(iii) For a performance test conducted to meet the requirements of paragraph (c)(5)(i) of this section, the owner or operator shall use the test methods and procedures specified in § 265.1034(c)(1) through (c)(4).

(iv) For a design analysis conducted to meet the requirements of paragraph (c)(5)(i) of this section, the design analysis shall meet the requirements specified in § 265.1035(b)(4)(iii).

(v) The owner or operator shall demonstrate that a carbon adsorption system achieves the performance requirements of paragraph (c)(1) of this section based on the total quantity of organics vented to the atmosphere from all carbon adsorption system equipment that is used for organic adsorption, organic desorption or carbon regeneration, organic recovery, and carbon disposal.

(6) If the owner or operator and the Regional Administrator do not agree on a demonstration of control device performance using a design analysis then the disagreement shall be resolved using the results of a performance test performed by the owner or operator in accordance with the requirements of paragraph (c)(5)(iii) of this section. The Regional Administrator may choose to have an authorized representative observe the performance test.

§ 265.1089 Inspection and monitoring requirements.

(a) This section applies to an owner or operator using air emission controls in accordance with the requirements of § 265.1085 through § 265.1088 of this subpart.

(b) Each cover used in accordance with requirements of § 265.1085 through § 265.1087 of this subpart shall be visually inspected and monitored for detectable organic emissions by the owner or operator using the procedure specified in paragraph (f) of this section except as follows:

(1) An owner or operator is exempted from performing the cover inspection and monitoring requirements specified in paragraph (f) of this section for the following tank covers:

(i) A tank internal floating roof that is inspected and monitored in accordance with the requirements of § 265.1091 of this subpart; or

(ii) A tank external floating roof that is inspected and monitored in accordance with the requirements of § 265.1091 of this subpart.

(2) If a tank is buried partially or entirely underground, an owner or operator is required to perform the cover inspection and monitoring requirements specified in paragraph (f) of this section only for those portions of the tank cover and those connections to the tank cover or tank body (e.g. fill ports, access hatches, gauge wells, etc.) that extend to or above the ground surface and can be opened to the atmosphere.

(3) An owner or operator is exempted from performing the cover inspection and monitoring requirements specified in paragraph (f) of this section for a container that meets all requirements specified in either § 265.1087(b)(1)(ii) or § 265.1087(b)(1)(iii) of this subpart.

(4) An owner or operator is exempted from performing the cover inspection and monitoring requirements specified in paragraph (f) of this section for an enclosure used to control air emissions from containers in accordance with the requirements of § 265.1087(b)(2) of this subpart.

(c) Each closed-vent system used in accordance with the requirements of § 265.1088 of this subpart shall be inspected and monitored by the owner or operator in accordance with the procedure specified in § 265.1033(j).

(d) Each control device used in accordance with the requirements of § 265.1088 of this subpart shall be inspected and monitored by the owner or operator in accordance with the procedure specified in § 265.1033(f).

(e) The owner or operator shall develop and implement a written plan and schedule to perform all inspection and monitoring requirements of this section. The owner or operator shall incorporate this plan and schedule into the facility inspection plan required under 40 CFR 265.15.

(f) Inspection and monitoring of a cover in accordance with the requirements of paragraph (b) of this section shall performed as follows:

(1) The cover and all cover openings shall be initially visually inspected and monitored for detectable organic emissions on or before the date that the tank, surface impoundment, or container using the cover becomes subject to the provisions of this subpart and at other times as requested by the Regional Administrator.

(2) At least once every 6 months following the initial visual inspection and monitoring for detectable organic emissions required under paragraph (f)(1) of this section, the owner and operator shall visually inspect and monitor the cover and each cover opening except for following cover openings:

(i) A cover opening that has continuously remained in a closed, sealed position for the entire period since the last time the cover opening was visually inspected and monitored for detectable emissions;

(ii) A cover opening that is designated as unsafe to inspect and monitor in accordance with paragraph (f)(5) of this section;

(iii) A cover opening on a cover installed and placed in operation before December 6, 1994, that is designated as

difficult to inspect and monitor in accordance with paragraph (f)(6) of this section.

(3) To visually inspect a cover, the owner or operator shall view the entire cover surface and each cover opening in a closed, sealed position for evidence of any defect that may affect the ability of the cover or cover opening to continue to operate with no detectable organic emissions. A visible hole, gap, tear, or split in the cover surface or a cover opening is defined as a leak which shall be repaired in accordance with paragraph (f)(7) of this section.

(4) To monitor a cover for detectable organic emissions, the owner or operator shall use the following procedure:

(i) Method 21 in 40 CFR part 60, appendix A to test each cover seal and cover connection for detectable organic emissions. Seals on floating membrane covers shall be monitored around the entire perimeter of the cover at locations spaced no greater than 3 meters apart.

(ii) For all cover connections and seals except for the seals around a rotating shaft that passes through a cover opening, if the monitoring instrument indicates detectable organic emissions (i.e., an instrument concentration reading greater than 500 ppmv plus the background level), then a leak is detected. Each detected leak shall be repaired in accordance with paragraph (f)(7) of this section.

(iii) For the seals around a rotating shaft that passes through a cover opening, if the monitoring instrument indicates a concentration reading greater than 10,000 ppmv, then a leak is detected. Each detected leak shall be repaired in accordance with paragraph (f)(7) of this section.

(5) An owner or operator may designate a cover as an unsafe to inspect and monitor cover if all of the following conditions are met:

(i) The owner or operator determines that inspection or monitoring of the cover would expose a worker to dangerous, hazardous, or other unsafe conditions.

(ii) The owner or operator develops and implements a written plan and schedule to inspect the cover using the procedure specified in paragraph (f)(3) of this section and monitor the cover using the procedure specified in paragraph (f)(4) of this section as frequently as practicable during those times when a worker can safely access the cover. (6) An owner or operator may designate a cover installed and placed in operation before December 6, 1994, as a difficult to inspect and monitor cover if all of the following conditions are met:

(i) The owner or operator determines that inspection or monitoring the cover requires elevating a worker to a height greater than 2 meters above a support surface; and

(ii) The owner and operator develops and implements a written plan and schedule to inspect the cover using the procedure specified in paragraph (f)(3) of this section, and to monitor the cover using the procedure specified in paragraph (f)(4) of this section at least once per calendar year.

(7) When a leak is detected by either of the methods specified in paragraph (f)(3) or (f)(4) of this section, the owner or operator shall repair the leak in the following manner:

(i) The owner or operator shall make a first attempt at repairing the leak no later than 5 calendar days after the leak is detected. Repair of the leak shall be completed as soon as practicable, but no later than 15 calendar days after the leak is detected. If repair of the leak cannot be completed within the 15-day period, except as provided in paragraph (f)(7)(ii) of this section, then the owner or operator shall not add hazardous waste to the tank, surface impoundment, or container on which the cover is installed until the repair of the leak is completed.

(ii) Repair of a leak detected on a cover installed on a tank or surface impoundment may be delayed beyond 15 calendar days if the owner or operator determines that both of the following conditions occur:

(A) Repair of the leak requires first emptying the contents of the tank or surface impoundment; and

(B) Temporary removal of the tank or surface impoundment from service will result in the unscheduled cessation of production from the process unit or operation of the waste management unit that is generating the hazardous waste managed in the tank or surface impoundment.

(iii) Repair of a leak determined by the owner or operator to meet the conditions specified in paragraph (f)(7)(ii) of this section shall be performed at the next time the process, system, or waste management unit that is generating the hazardous waste managed in the tank or surface impoundment stops operation for any reason. § 265.1090 Recordkeeping requirements.

(a) Each owner or operator of a facility subject to requirements in this subpart shall record and maintain the following information as applicable:

(1) Documentation for each cover installed on a tank in accordance with the requirements of § 265.1085(b)(2) or § 265.1085(b)(3) of this subpart that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the applicable design specifications as listed in § 265.1091(c) of this subpart.

(2) Documentation for each floating membrane cover installed on a surface impoundment in accordance with the requirements of § 265.1086(c) of this subpart that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in § 265.1086(e) of this subpart.

(3) Documentation for each enclosure used to control air emissions from containers in accordance with the requirements of § 265.1087(b)(2)(i) of this subpart that includes information prepared by the owner or operator or provided by the manufacturer or vendor describing the enclosure design, and certification by the owner or operator that the enclosure meets the specifications listed in § 265.1087(b)(2)(ii) of this subpart.

(4) Documentation for each closed-vent system and control device installed in accordance with the requirements of § 265.1088 of this subpart that includes:

(i) Certification that is signed and dated by the owner or operator stating that the control device is designed to operate at the performance level documented by a design analysis as specified in paragraph (a)(4)(ii) of this section or by performance tests as specified in paragraph (a)(4)(iii) of this section when the tank, surface impoundment, or container is or would be operating at capacity or the highest level reasonably expected to occur.

(ii) If a design analysis is used, then design documentation as specified in § 265.1035(b)(4). The documentation shall include information prepared by the owner or operator or provided by the control device manufacturer or vendor that describes the control device design in accordance with § 265.1035(b)(4)(iii) and certification by the owner or operator that the control equipment meets the applicable specifications. (iii) If performance tests are used, then a performance test plan as specified in § 265.1035(b)(3) and all test results.

(iv) Information as required by § 265.1035(c)(1) and § 265.1035(c)(2).

(5) Records for all Method 27 tests performed by the owner or operator for each container used to meet the requirements of § 265.1087(b)(1)(iii) of this subpart.

(6) Records for all visual inspections conducted in accordance with the requirements of § 265.1089 of this subpart.

(7) Records for all monitoring for detectable organic emissions conducted in accordance with the requirements of § 265.1089 of this subpart.

(8) Records of the date of each attempt to repair a leak, repair methods applied, and the date of successful repair.

(9) Records for all continuous monitoring conducted in accordance with the requirements of § 265.1089 of this subpart.

(10) Records of the management of carbon removed from a carbon adsorption system conducted in accordance with § 265.1088(c)(3)(ii) of this subpart.

(11) Records for all inspections of each cover installed on a tank in accordance with the requirements of § 265.1085(b)(2) or § 265.1085(b)(3) of this subpart that includes information as listed in § 265.1091(c) of this subpart.

(b) An owner or operator electing to use air emission controls for a tank in accordance with the conditions specified in § 265.1085(c) of this subpart shall record the following information:

(1) Date and time each waste sample is collected for direct measurement of maximum organic vapor pressure in accordance with § 265.1084(c) of this subpart.

(2) Results of each determination for the maximum organic vapor pressure of the waste in the tank performed in accordance with § 265.1084(c) of this subpart.

(3) Records specifying the tank dimensions and design capacity.

(c) An owner or operator electing to use air emission controls for a tank in accordance with the requirements of §

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265.1091 of this subpart shall record the information required by § 265.1091(c) of this subpart.

(d) An owner or operator electing not to use air emission controls for a particular tank, surface impoundment, or container subject to this subpart in accordance with the conditions specified in § 265.1083(c) of this subpart shall record the information used by the owner or operator for each waste determination (e.g., test results, measurements, calculations, and other documentation) in the facility operating log. If analysis results for waste samples are used for the waste determination, then the owner or operator shall record the date, time, and location that each waste sample is collected in accordance with applicable requirements of § 265.1084 of this subpart.

(e) An owner or operator electing to comply with requirements in accordance with § 265.1083(c)(2)(vi) or § 265.1083(c)(2)(v) of this subpart shall record the identification number for the incinerator, boiler, or industrial furnace in which the hazardous waste is treated.

(f) An owner or operator designating a cover as unsafe to inspect and monitor pursuant to § 265.1089(f)(5) of this subpart or difficult to inspect and monitor pursuant to § 265.1089(f)(6) of this subpart shall record in a log that is kept in the facility operating record the following information:

(1) A list of identification numbers for tanks with covers that are designated as unsafe to inspect and monitor in accordance with the requirements of § 265.1089(f)(5) of this subpart, an explanation for each cover stating why the cover is unsafe to inspect and monitor, and the plan and schedule for inspecting and monitoring each cover.

(2) A list of identification numbers for tanks with covers that are designated as difficult to inspect and monitor in accordance with the requirements of § 265.1089(f)(6) of this subpart, an explanation for each cover stating why the cover is difficult to inspect and monitor, and the plan and schedule for inspecting and monitoring each cover.

(g) All records required by paragraphs (a) through (f) of this section except as required in paragraphs (a)(1) through (a)(4) of this section shall be maintained in the operating record for a minimum of 3 years. All records required by paragraphs (a)(1) through (a)(4) of this section shall be maintained in the operating record until the air emission control equipment is replaced or otherwise no longer in service. (h) The owner or operator of a facility that is subject to this subpart and to the control device standards in 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, may elect to demonstrate compliance with the applicable sections of this subpart by documentation either pursuant to this subpart, or pursuant to the provisions of 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V, to the extent that the documentation required by 40 CFR parts 60 or 61 duplicates the documentation required by this section.

§ 265.1091 Alternative tank emissions control requirements.

(a) This section applies to owners and operators of tanks electing to comply with § 265.1085(b)(2) or (b)(3) of this subpart.

(1) The owner or operator electing to comply with § 265.1085(b)(2) of this subpart shall design, install, operate, and maintain a fixed roof and internal floating roof that meet the following requirements.

(i) The fixed roof shall comply with the requirements of § 265.1085(d)(1) of this subpart. The internal floating roof shall rest or float on the waste surface (but not necessarily in complete contact with it) inside a tank that has a fixed roof. The internal floating roof shall be floating on the waste surface at all times, except during initial fill and during those intervals when the tank is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the tank and the edge of the internal floating roof:

(A) A foam- or liquid-filled seal mounted in contact with the waste (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the waste between the wall of the tank and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the tank and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both shall be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the tank by springs or weighted levers and is connected by braces to the

floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the waste surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

(vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) The owner or operator electing to comply with § 265.1085(b)(3) of this subpart shall design, install, operate, and maintain an external floating roof that meets the following requirements:

(i) Each external floating roof shall be equipped with a closure device between the wall of the tank and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

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(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in paragraph(b)(2)(iv) of this section, the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except as allowed in paragraph (b)(2)(iv) of this section.

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the waste surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the waste at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) The owner or operator may elect to comply with § 265.1085(b)(2) or (b)(3) of this subpart using an alternative means of emission limitation for which a Federal Register notice has been published in accordance with the requirements of 40 CFR 60.114b permitting its use as an alternative means for the purpose of compliance with 40 CFR 60.112b.

(b) Monitoring and inspection of the control equipment described in paragraph (a) of this section shall be conducted as follows:

(1) After installation, owners and operators of internal floating roofs shall:

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(i) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the tank with waste. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric, or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the tank.

(ii) For tanks equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the waste inside the tank, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the tank from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the tank cannot be emptied within 45 days, a 30day extension may be requested from the Regional Administrator. Such a request for an extension shall document that alternate capacity is unavailable and specify a schedule of actions the owner or operator will take that will assure that the control equipment will be repaired or the tank will be emptied as soon as possible.

(iii) For tanks equipped with a double-seal system as specified in paragraph (a)(1)(i)(B) of this section:

(A) Visually inspect the tank as specified in paragraph(b)(1)(iv) of this section at least every 5 years; or

(B) Visually inspect the tank as specified in paragraph (b)(1)(ii) of this section.

(iv) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed. If the internal floating roof has defects; the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the waste surfaces from the atmosphere; or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the tank with waste. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of tanks conducting the annual visual inspection as specified in paragraph (b)(1)(ii) of this section, and at intervals no greater than 5 years in the case of tanks specified in paragraph (b)(1)(iii) of this section.

(v) Notify the Regional Administrator in writing at least 30 days prior to the filling or refilling of each tank for which an inspection is required by paragraphs (b)(1)(i) and (b)(1)(iv) of this section to afford the Regional Administrator the opportunity to have an observer present. If the inspection required by paragraph (b)(1)(iv) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Regional Administrator at least 7 days prior to the refilling of the tank. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification, including the written documentation, may be made in writing and sent by express mail so that it is received by the Regional Administrator at least 7 days prior to the refilling.

(2) After installation, the owner or operator of an external floating roof shall:

(i) Determine the gap areas and maximum gap widths between the primary seal and the wall of the tank and between the secondary seal and the wall of the tank according to the following frequency:

(A) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the tank or within 60 days of the initial fill with waste and at least once every 5 years thereafter.

(B) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with waste and at least once per year thereafter.

(C) If any tank ceases to hold waste for a period of 1 year or more, subsequent introduction of waste into the tank shall be considered an initial fill for the purposes of paragraphs (b)(2)(i)(A) and (b)(2)(i)(B) of this section.

(ii) Determine the gap widths and areas in the primary and secondary seals individually by the following procedures:

(A) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

(B) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against the seal) between the

seal and the wall of the tank and measure the circumferential distance of each such location.

(C) Determine the total surface area of each gap described in paragraph (b)(2)(ii)(B) of this section by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(iii) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(2)(iv) of this section.

(iv) Make necessary repairs or empty the tank within 45 days of identification in any inspection for seals not meeting the following requirements:

(A) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm² per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

(1) One end of the mechanical shoe is to extend into the waste contained in the tank, and the other end is to extend a minimum vertical distance of 61 cm above the waste surface.

(2) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(B) The secondary seal is to meet the following requirements:

(1) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(ii)(C) of this section.

(2) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm 2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

(3) There are to be no holes, tears, or other openings in the seal or seal fabric.

(v) If a failure that is detected during inspections required in paragraph (b)(2)(i) of this section cannot be repaired within 45 days and if the tank cannot be emptied within

45 days, a 30-day extension may be requested from the Regional Administrator. Such extension request shall include a demonstration of the unavailability of alternate capacity and a specification of a schedule that will assure that the control equipment will be repaired or the tank will be emptied as soon as possible.

(vi) Notify the Regional Administrator 30 days in advance of any gap measurements required by paragraph (b)(2)(i) of this section to afford the Regional Administrator the opportunity to have an observer present.

(vii) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(A) If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the tank with waste.

(B) For all the inspections required by paragraph (b)(2)(vii) of this section, the owner or operator shall notify the Regional Administrator in writing at least 30 days prior to the filling or refilling of each tank to afford the Regional Administrator the opportunity to inspect the tank prior to refilling. If the inspection required by paragraph (b)(2)(vii) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Regional Administrator at least 7 days prior to the refilling of the tank. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification, including the written documentation, may be made in writing and sent by express mail so that it is received by the Regional Administrator at least 7 days prior to the refilling.

(c) Owners and operators who elect to install and operate the control equipment in paragraph (a) of this section shall include the following information in the operating record in accordance with the requirements of § 265.1090(a)(1) and (a)(11) of this subpart:

(1) Internal floating roof.

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(i) Documentation that describes the control equipment design and certifies that the control equipment meets the specifications of paragraphs (a)(1) and (b)(1) of this section.

(ii) Records of each inspection performed as required by paragraphs (b)(1)(i) through (b)(1)(iv) of this section. Each record shall identify the tank on which the inspection was performed and shall contain the date the tank was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(iii) If any of the conditions described in paragraph (b)(1)(ii) of this section are detected during the annual visual inspection required by paragraph (b)(1)(ii) of this section, the records shall identify the tank, the nature of the defects, and the date the tank was emptied or the nature of and date the repair was made.

(iv) After each inspection required by paragraph (b)(1)(iii) of this section that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in paragraph (b)(1)(ii) of this section, the records shall identify the tank and the reason it did not meet the specifications of paragraph (a)(1) or (b)(1)(iii) of this section and describe each repair made.

(2) External floating roof.

(i) Documentation that describes the control equipment design and certifies that the control equipment meets the specifications of paragraphs (a)(2) and (b)(2)(ii) through (b)(2)(iv) of this section.

(ii) Records of each gap measurement performed as required by paragraph (b)(2) of this section. Each record shall identify the tank in which the measurement was performed, the date of measurement, the raw data obtained in the measurement, and the calculations described in paragraphs (b)(2)(ii) and (b)(2)(iii) of this section.

(iii) Records for each seal gap measurement that detects gaps exceeding the limitations specified by paragraph (b)(2)(iv) of this section that identifies the tank, the date the tank was emptied or the repairs made, and the nature of the repair.

PART 270-EPA ADMINISTERED PERMIT PROGRAMS: THE HAZARDOUS WASTE MANAGEMENT PROGRAM

33. The authority citation for part 270 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912, 6925, 6927, 6939, and 6974.

Subpart A-General Information

34. Section 270.4 is amended by revising paragraphs (a)(2), and (a)(3) and by adding paragraph (a)(4) to read as follows:

§ 270.4 Effect of a permit.

(a) * * *

(2) Are promulgated under part 268 of this chapter restricting the placement of hazardous wastes in or on the land;

(3) Are promulgated under part 264 of this chapter regarding leak detection systems for new and replacement surface impoundment, waste pile, and landfill units, and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detection system requirements include double liners, CQA programs, monitoring, action leakage rates, and response action plans, and will be implemented through the procedures of § 270.42 Class 1 permit modifications; or

(4) Are promulgated under subparts AA, BB, or CC of part 265 of this chapter limiting air emissions.

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Subpart B-Permit Application

35. Section 270.14 is amended by revising paragraph (b)(5) to read as follows:

§ 270.14 Contents of Part B: General requirements.

* * * * *

(b) * * *

(5) A copy of the general inspection schedule required by § 264.15(b). Include where applicable, as part of the inspection schedule, specific requirements in §§ 264.174, 245.193(i), 264.195, 264.226, 264.254, 264.273, 264.303, 264.602, 264.1033, 264.1052, 264.1053, 264.1058, 264.1088, and 264.1091.

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36. Section 270.15 is amended by adding paragraph (e) to read as follows:

§ 270.15 Specific Part B information requirements for containers.

* * * * *

(e) Information on air emission control equipment as required in § 270.27.

37. Section 270.16 is amended by adding paragraph (k) to read as follows:

§ 270.16 Specific Part B information requirements for tank systems.

* * * * *

(k) Information on air emission control equipment as required in § 270.27.

38. Section 270.17 is amended by adding paragraph (j) to read as follows:

§ 270.17 Specific Part B information requirements for surface impoundments.

* * * * *

(j) Information on air emission control equipment as required in § 270.27.

39. Part 270 subpart B is amended by adding § 270.27 to read as follows:

§ 270.27 Specific Part B information requirements for air emission controls for tanks, surface impoundments, and containers.

(a) Except as otherwise provided in § 264.1 of this chapter, owners and operators of tanks, surface impoundments, or containers that use air emission controls in accordance with the requirements of 40 CFR part 264, subpart CC shall provide the following additional information:

(1) Documentation for each cover installed on a tank subject to § 264.1084(b)(2) or § 264.1084(b)(3) of this chapter that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the applicable design specifications as listed in § 265.1091(c) of this chapter. **US EPA ARCHIVE DOCUMENT**

(2) Identification of each container area subject to the requirements of 40 CFR part 264, subpart CC and certification by the owner or operator that the requirements of this subpart are met.

(3) Documentation for each enclosure used to control air emissions from containers in accordance with the requirements of § 264.1086(b)(2)(i) of this chapter that includes information prepared by the owner or operator or provided by the manufacturer or vendor describing the enclosure design, and certification by the owner or operator that the enclosure meets the specifications listed in § 265.1087(b)(2)(ii) of this chapter.

(4) Documentation for each floating membrane cover installed on a surface impoundment in accordance with the requirements of § 264.1085(c) of this chapter that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in § 265.1086(e) of this chapter.

(5) Documentation for each closed-vent system and control device installed in accordance with the requirements of § 264.1087 of this chapter that includes design and performance information as specified in § 270.24 (c) and (d).

(6) An emission monitoring plan for both Method 21 and control device monitoring methods. This plan shall include the following information: monitoring point(s), monitoring methods for control devices, monitoring frequency, procedures for documenting exceedances, and procedures for mitigating noncompliances.

(7) When an owner or operator of a facility subject to 40 CFR part 265, subpart CC cannot comply with 40 CFR part 264, subpart CC by the date of permit issuance, the schedule of implementation required under § 265.1082 of this chapter.

>>> Part 271 has not been included because it is not required as part of a State's Hazardous Waste Program. <<<<

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