



216-7

OFFICE OF THE SECRETARY OF STATE

JESSE WHITE • Secretary of State

August 19, 2016

RECEIVED  
AUG 23 2016  
STATE OF ILLINOIS  
Pollution Control Board

POLLUTION CONTROL BOARD  
DON BROWN  
100 W RANDOLPH ST  
STE 11-500  
CHICAGO, IL 60601

Dear DON BROWN

Your rules Listed below met our codification standards and have been published in Volume 40, Issue 35 of the Illinois Register, dated 8/26/2016.

ADOPTED RULES

- RCRA Permit Program
  - 35 Ill. Adm. Code 703 11271
  - Point of Contact: Mike McCambridge
- Hazardous Waste Management System: General
  - 35 Ill. Adm. Code 720 11286
  - Point of Contact: Mike McCambridge
- Identification and Listing of Hazardous Waste
  - 35 Ill. Adm. Code 721 11367
  - Point of Contact: Mike McCambridge
- Standards Applicable to Generators of Hazardous Waste
  - 35 Ill. Adm. Code 722 11717
  - Point of Contact: Mike McCambridge
- Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
  - 35 Ill. Adm. Code 724 11726
  - Point of Contact: Mike McCambridge
- Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
  - 35 Ill. Adm. Code 725 11830
  - Point of Contact: Mike McCambridge



## OFFICE OF THE SECRETARY OF STATE

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Standards for the Management of Specific Hazardous Waste and Specific Types of Hazardous Waste Management Facilities

35 Ill. Adm. Code 726

11955

Point of Contact: Mike McCambridge

Standards for Owners and Operators of Hazardous Waste Facilities Operating Under a RCRA Standardized Permit

35 Ill. Adm. Code 727

12011

Point of Contact: Mike McCambridge

Land Disposal Restrictions

35 Ill. Adm. Code 728

12052

Point of Contact: Mike McCambridge

Standards for Universal Waste Management

35 Ill. Adm. Code 733

12268

Point of Contact: Mike McCambridge

If you have any questions, you may contact the Administrative Code Division at (217) 782 - 7017.





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POLLUTION CONTROL BOARD

NOTICE OF ADOPTED AMENDMENTS

- 12) Have all the changes agreed upon by the Board and JCAR been made as indicated in the agreements issued by JCAR? Section 22.4(a) of the Environmental Protection Act [415 ILCS 5/22.4(a)] provides that Section 5-35 of the Administrative Procedure Act [5 ILCS 100/5-35] does not apply to this rulemaking. Because this rulemaking is not subject to Section 5-35 of the APA, it is not subject to First Notice or to Second Notice review by JCAR.

Since the Notices of Proposed Amendments appeared in the March 18, 2016 issue of the *Illinois Register*, the Board received a number of suggestions for revisions from JCAR. The Board evaluated each suggestion and incorporated a number of changes into the text as a result, as detailed in the Identical-in-Substance Rulemaking Addendum (Final) in docket R16-16, as indicated in item 11 above. See the Identical-in-Substance Rulemaking Addendum (Final) in docket R16-16 for additional details on the JCAR suggestions and the Board actions with regard to each. One table in the Identical-in-Substance Rulemaking Addendum (Final) itemizes the changes made in response to various suggestions. Another table indicates JCAR suggestions not incorporated into the text, with a brief explanation for each.

- 13) Will these amendments replace emergency amendments currently in effect? No.

- 14) Are there any other Amendments pending on this Part? No.

- 15) A Complete Description of Subjects and Issues Involved: The amendments to Part 722 are a single segment of the docket R16-7 rulemaking that also affects 35 Ill. Adm. Code 703, 720, 721, 724, 725, 726, 727, 728, and 733, each of which is covered by a separate notice in this issue of the *Illinois Register*. To save space, a more detailed description of the subjects and issues involved in the docket R16-7 rulemaking in this issue of the *Illinois Register* only in the answer to question 5 in the Notice of Adopted Amendments for 35 Ill. Adm. Code 703. A comprehensive description is contained in the Board's opinion and order of June 18, 2016, proposing amendments in docket R16-7, which opinion and order is available from the address below.

Specifically, the amendments to Part 722 make corrections suggested by USEPA based on review of the Illinois rules for the purpose of authorization of the Illinois RCRA Subtitle C program.

Tables appear in the Identical-in-Substance Rulemaking Addendum (Final) in docket R16-16 that list numerous corrections and amendments that are not based on current federal amendments. The tables contain deviations from the literal text of the federal amendments underlying these amendments, as well as corrections and clarifications that the Board made in the base text involved. Persons interested in the details of those



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POLLUTION CONTROL BOARD

NOTICE OF ADOPTED AMENDMENTS

corrections and amendments should refer to the Identical-in-Substance Rulemaking Addendum (Final) in docket R16-16.

Section 22.4 of the Environmental Protection Act [415 ILCS 5/22.4] provides that Section 5-35 of the Administrative Procedure Act [5 ILCS 100/5-35] does not apply to this rulemaking. Because this rulemaking is not subject to Section 5-35 of the APA, it is not subject to First Notice or to Second Notice review by the Joint Committee on Administrative Rules (JCAR).

- 16) Information and questions regarding these adopted amendments shall be directed to:  
Please reference consolidated docket R16-7 and direct inquiries to the following person:

Michael J. McCambridge  
Staff Attorney  
Illinois Pollution Control Board  
100 W. Randolph 11-500  
Chicago, IL 60601

312-814-6924  
michael.mccambridge@illinois.gov

Request copies of the Board's opinion and order of June 16, 2016 at 312-814-3620.  
Alternatively, you may obtain a copy of the Board's opinion and order from the Internet at <http://www.ipcb.state.il.us>.

The full text of the Adopted amendments begins on the next page:

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POLLUTION CONTROL BOARD

NOTICE OF ADOPTED AMENDMENTS

TITLE 35: ENVIRONMENTAL PROTECTION

SUBTITLE G: WASTE DISPOSAL

CHAPTER I: POLLUTION CONTROL BOARD

SUBCHAPTER c: HAZARDOUS WASTE OPERATING REQUIREMENTS

PART 722

STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE

SUBPART A: GENERAL

Section	
722.110	Purpose, Scope, and Applicability
722.111	Hazardous Waste Determination
722.112	USEPA Identification Numbers
722.113	Electronic Reporting

SUBPART B: THE MANIFEST

Section	
722.120	General Requirements
722.121	Manifest Tracking Numbers, Manifest Printing, and Obtaining Manifests
722.122	Number of Copies
722.123	Use of the Manifest
722.124	Use of the Electronic Manifest
722.125	Electronic Manifest Signatures
722.127	Waste Minimization Certification

SUBPART C: PRE-TRANSPORT REQUIREMENTS

Section	
722.130	Packaging
722.131	Labeling
722.132	Marking
722.133	Placarding
722.134	Accumulation Time

SUBPART D: RECORDKEEPING AND REPORTING

Section	
722.140	Recordkeeping
722.141	Annual Reporting
722.142	Exception Reporting
722.143	Additional Reporting
722.144	Special Requirements for Generators of between 100 and 1,000 kilograms per month

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POLLUTION CONTROL BOARD

NOTICE OF ADOPTED AMENDMENTS

SUBPART E: EXPORTS OF HAZARDOUS WASTE

Section	
722.150	Applicability
722.151	Definitions
722.152	General Requirements
722.153	Notification of Intent to Export
722.154	Special Manifest Requirements
722.155	Exception Report
722.156	Annual Reports
722.157	Recordkeeping
722.158	International Agreements

SUBPART F: IMPORTS OF HAZARDOUS WASTE

Section	
722.160	Imports of Hazardous Waste

SUBPART G: FARMERS

Section	
722.170	Farmers

SUBPART H: TRANS-BOUNDARY SHIPMENTS OF HAZARDOUS WASTE  
FOR RECOVERY WITHIN THE OECD

Section	
722.180	Applicability
722.181	Definitions
722.182	General Conditions
722.183	Notification and Consent
722.184	Movement Document
722.185	Contracts
722.186	Provisions Relating to Recognized Traders
722.187	Reporting and Recordkeeping
722.189	OECD Waste Lists

SUBPART K: ALTERNATIVE REQUIREMENTS FOR HAZARDOUS  
WASTE DETERMINATION AND ACCUMULATION OF UNWANTED  
MATERIAL FOR LABORATORIES OWNED BY ELIGIBLE ACADEMIC  
ENTITIES

Section	
722.300	Definitions
722.301	Applicability
722.302	Opting into the Subpart K Requirements



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POLLUTION CONTROL BOARD

NOTICE OF ADOPTED AMENDMENTS

- 722.303 Notice of Election into the Subpart K Requirements
- 722.304 Notice of Withdrawal from the Subpart K Requirements
- 722.305 Summary of the Requirements of this Subpart K
- 722.306 Container Standards in the Laboratory
- 722.307 Personnel Training
- 722.308 Removing Unwanted Material from the Laboratory
- 722.309 Hazardous Waste Determination and Removal of Unwanted Material from the Laboratory
- 722.310 Hazardous Waste Determination in the Laboratory
- 722.311 Hazardous Waste Determination at an On-Site Central Accumulation Area
- 722.312 Hazardous Waste Determination at an On-Site Treatment, Storage, or Disposal Facility
- 722.313 Laboratory Clean-Outs
- 722.314 Laboratory Management Plan
- 722.315 Unwanted Material That Is Not Solid Waste or Hazardous Waste
- 722.316 Non-Laboratory Hazardous Waste Generated at an Eligible Academic Entity

722.APPENDIX A Hazardous Waste Manifest

AUTHORITY: Implementing Sections 7.2 and 22.4 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/7.2, 22.4, and 27].

SOURCE: Adopted in R81-22 at 5 Ill. Reg. 9781, effective May 17, 1982; amended and codified in R81-22 at 6 Ill. Reg. 4828, effective May 17, 1982; amended in R82-18 at 7 Ill. Reg. 2518, effective February 22, 1983; amended in R84-9 at 9 Ill. Reg. 11950, effective July 24, 1985; amended in R85-22 at 10 Ill. Reg. 1131, effective January 2, 1986; amended in R86-1 at 10 Ill. Reg. 14112, effective August 12, 1986; amended in R86-19 at 10 Ill. Reg. 20709, effective December 2, 1986; amended in R86-46 at 11 Ill. Reg. 13555, effective August 4, 1987; amended in R87-5 at 11 Ill. Reg. 19392, effective November 12, 1987; amended in R87-39 at 12 Ill. Reg. 13129, effective July 29, 1988; amended in R88-16 at 13 Ill. Reg. 452, effective December 27, 1988; amended in R89-1 at 13 Ill. Reg. 18523, effective November 13, 1989; amended in R90-10 at 14 Ill. Reg. 16653, effective September 25, 1990; amended in R90-11 at 15 Ill. Reg. 9644, effective June 17, 1991; amended in R91-1 at 15 Ill. Reg. 14562, effective October 1, 1991; amended in R91-13 at 16 Ill. Reg. 9833, effective June 9, 1992; amended in R92-1 at 16 Ill. Reg. 17696, effective November 6, 1992; amended in R93-4 at 17 Ill. Reg. 20822, effective November 22, 1993; amended in R95-6 at 19 Ill. Reg. 9935, effective June 27, 1995; amended in R95-20 at 20 Ill. Reg. 11236, effective August 1, 1996; amended in R96-10/R97-3/R97-5 at 22 Ill. Reg. 603, effective December 16, 1997; amended in R97-21/R98-3/R98-5 at 22 Ill. Reg. 17950, effective September 28, 1998; amended in R00-5 at 24 Ill. Reg. 1136, effective January 6, 2000; amended in R00-13 at 24 Ill. Reg. 9822, effective June 20, 2000; expedited correction at 25 Ill. Reg. 5105, effective June 20, 2000; amended in R05-2 at 29

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NOTICE OF ADOPTED AMENDMENTS

Ill. Reg. 6312, effective April 22, 2005; amended in R06-5/R06-6/R06-7 at 30 Ill. Reg. 3138, effective February 23, 2006; amended in R06-16/R06-17/R06-18 at 31 Ill. Reg. 871, effective December 20, 2006; amended in R07-5/R07-14 at 32 Ill. Reg. 11927, effective July 14, 2008; amended in R09-16/R10-4 at 34 Ill. Reg. 18817, effective November 12, 2010; amended in R11-2/R11-16 at 35 Ill. Reg. 17888, effective October 14, 2011; amended in R12-7 at 36 Ill. Reg. 8773, effective June 4, 2012; amended in R13-15 at 37 Ill. Reg. 17763, effective October 24, 2013; amended in R15-1 at 39 Ill. Reg. 1700, effective January 12, 2015; amended in R16-7 at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

SUBPART C: PRE-TRANSPORT REQUIREMENTS

**Section 722.132 Marking**

- a) Before transporting or offering hazardous waste for transportation off-site, a generator must mark each package of hazardous waste in accordance with the applicable USDOT regulations on hazardous materials under 49 CFR 172 (Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements), incorporated by reference in 35 Ill. Adm. Code 720.111(b);
- b) Marking Small Containers ~~small containers~~. Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must mark each container of 119 gallons (450 liters) ~~(110 gallons)~~ or less that is used in such transportation with the following words and information displayed in accordance with the requirements of 49 CFR 172.304 (Marking Requirements), incorporated by reference in 35 Ill. Adm. Code 720.111(b):

HAZARDOUS WASTE—Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

Generator's Name and Address \_\_\_\_\_.

Generator's USEPA Identification Number \_\_\_\_\_.

Manifest Tracking Number \_\_\_\_\_.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

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POLLUTION CONTROL BOARD

NOTICE OF ADOPTED AMENDMENTS

SUBPART E: EXPORTS OF HAZARDOUS WASTE

**Section 722.158 International Agreements**

- a) Any person that exports or imports waste hazardous under U.S. national procedures, as defined in Section 722.181, to or from any of the designated member countries of the Organisation for Economic Co-operation and Development (OECD), as listed in subsection (a)(1) ~~of this Section~~, for purposes of recovery is subject to the requirements of Subpart H of this Part. The requirements of Subparts E and F of this Part do not apply where Subpart H of this Part applies.
- 1) For the purposes of this Subpart E, the designated OECD countries are Australia, Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, the Republic of Korea, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.
  - 2) Only for the purposes of Subpart E of this Part, Canada and Mexico are considered OECD member countries.

BOARD NOTE: USEPA used identical language in 40 CFR 262.10(d), corresponding 262.58(a), and 262.80(a) to define when a waste is considered hazardous under U.S. national procedures. The Board has chosen to create the term “waste hazardous under U.S. national procedures”; add a definition in Section 722.181, the centralized listing of definitions for Subpart H of this Part; and replace USEPA’s defining language in this subsection (a) with a cross-reference to the definition in Section 722.181.

- b) Any person that exports hazardous waste to or imports hazardous waste from any designated OECD member country for purposes other than recovery (e.g., incineration, disposal, etc.), Mexico (for any purpose), or Canada (for any purpose) remains subject to the requirements of Subparts E and F of this Part, and that person is not subject to the requirements of Subpart H of this Part.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)



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## POLLUTION CONTROL BOARD

## NOTICE OF ADOPTED AMENDMENTS

- 1) Heading of the Part: Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
- 2) Code Citation: 35 Ill. Adm. Code 724
- 3) 

<u>Section Numbers:</u>	<u>Adopted Actions:</u>
724.171	Amendment
724.194	Amendment
724.244	Amendment
724.245	Amendment
724.414	Amendment
724.670	Amendment
724.671	Amendment
724.933	Amendment
724.934	Amendment
724.935	Amendment
724.936	Amendment
724.981	Amendment
724.982	Amendment
724.986	Amendment
724.1101	Amendment
724.1102	Amendment
- 4) Statutory Authority: 415 ILCS 5/7.2, 22.4, and 27.
- 5) Effective date of amendments: AUG - 9 2016
- 6) Does this rulemaking contain an automatic repeal date? No.
- 7) Do these Amendments contain incorporations by reference? No.
- 8) Statement of availability: The adopted amendments, a copy of the Board's opinion and order adopted June 16, 2016 in docket R16-7, and all materials incorporated by reference are on file at the Board's principal office and are available for public inspection and copying.
- 9) Notice of proposal published in the Illinois Register: 40 Ill. Reg. 4289; March 18, 2016
- 10) Has JCAR issued a statement of objections to these rules? No. Section 22.4(a) of the Environmental Protection Act [415 ILCS 5/22.4(a)] provides that Section 5-35 of the Administrative Procedure Act [5 ILCS 100/5-35] does not apply to this rulemaking. Because this rulemaking is not subject to Section 5-35 of the APA, it is not subject to

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NOTICE OF ADOPTED AMENDMENTS

First Notice or to Second Notice review by the Joint Committee on Administrative Rules (JCAR).

- 11) Differences between the proposal and the final version: A table that appears in a document entitled “Identical-in –Substance Rulemaking Addendum (Final)” that the Board added to docket R16-7 summarizes the differences between the amendment adopted in the June 16, 2016 in docket R16-7 and those proposed by the Board in an opinion and order dated March 3, 2016, in docket R16-7. Many of the differences are explained in greater detail in the Board’s opinion and order adopting the amendment.

The differences are limited to minor corrections and clarifications. The changes are intended to have no substantive effect. The intent is to add clarity to the rules without deviation from the substance of the federal amendments on which this proceeding is based.

- 12) Have all the changes agreed upon by the Board and JCAR been made as indicated in the agreements issued by JCAR? Section 22.4(a) of the Environmental Protection Act [415 ILCS 5/22.4(a)] provides that Section 5-35 of the Administrative Procedure Act [5 ILCS 100/5-35] does not apply to this rulemaking. Because this rulemaking is not subject to Section 5-35 of the APA, it is not subject to First Notice or to Second Notice review by JCAR.

Since the Notices of Proposed Amendments appeared in the March 18, 2016 issue of the *Illinois Register*, the Board received a number of suggestions for revisions from JCAR. The Board evaluated each suggestion and incorporated a number of changes into the text as a result, as detailed in the Identical-in–Substance Rulemaking Addendum (Final) in docket R16-16, as indicated in item 11 above. See the Identical-in–Substance Rulemaking Addendum (Final) in docket R16-16 for additional details on the JCAR suggestions and the Board actions with regard to each. One table in the Identical-in–Substance Rulemaking Addendum (Final) itemizes the changes made in response to various suggestions. Another table indicates JCAR suggestions not incorporated into the text, with a brief explanation for each.

- 13) Will these amendments replace emergency amendments currently in effect? No.

- 14) Are there any other Amendments pending on this Part? No.

- 15) A Complete Description of Subjects and Issues Involved: The amendments to Part 724 are a single segment of the docket R16-7 rulemaking that also affects 35 Ill. Adm. Code 703, 720, 721, 722, 725, 726, 727, 728, and 733, each of which is covered by a separate notice in this issue of the *Illinois Register*. To save space, a more detailed description of the subjects and issues involved in the docket R16-7 rulemaking in this issue of the



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POLLUTION CONTROL BOARD

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Illinois Register only in the answer to question 5 in the Notice of Adopted Amendments for 35 Ill. Adm. Code 703. A comprehensive description is contained in the Board's opinion and order of June 18, 2016, proposing amendments in docket R16-7, which opinion and order is available from the address below.

Specifically, the amendments to Part 724 are corrections and clarifying amendments that are not directly derived from the instant federal amendments. This includes correction of an error, at the request of Joint Committee on Administrative Rules (JCAR) staff, that the Board was to have completed in a prior rulemaking. This also includes corrections submitted by USEPA as a result of review of the rules for the purpose of authorization of the Illinois RCRA Subtitle C program.

Tables appear in the Identical-in-Substance Rulemaking Addendum (Final) in docket R16-16 that list numerous corrections and amendments that are not based on current federal amendments. The tables contain deviations from the literal text of the federal amendments underlying these amendments, as well as corrections and clarifications that the Board made in the base text involved. Persons interested in the details of those corrections and amendments should refer to the Identical-in-Substance Rulemaking Addendum (Final) in docket R16-16.

Section 22.4 of the Environmental Protection Act [415 ILCS 5/22.4] provides that Section 5-35 of the Administrative Procedure Act [5 ILCS 100/5-35] does not apply to this rulemaking. Because this rulemaking is not subject to Section 5-35 of the APA, it is not subject to First Notice or to Second Notice review by the Joint Committee on Administrative Rules (JCAR).

- 16) Information and questions regarding these adopted amendments shall be directed to:  
Please reference consolidated docket R16-7 and direct inquiries to the following person:

Michael J. McCambridge  
Staff Attorney  
Illinois Pollution Control Board  
100 W. Randolph 11-500  
Chicago, IL 60601

312-814-6924  
michael.mccambridge@illinois.gov

Request copies of the Board's opinion and order of June 16, 2016 at 312-814-3620. Alternatively, you may obtain a copy of the Board's opinion and order from the Internet at <http://www.ipcb.state.il.us>.



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The full text of the Adopted amendments begins on the next page:

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POLLUTION CONTROL BOARD

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TITLE 35: ENVIRONMENTAL PROTECTION

SUBTITLE G: WASTE DISPOSAL

CHAPTER I: POLLUTION CONTROL BOARD

SUBCHAPTER c: HAZARDOUS WASTE OPERATING REQUIREMENTS

PART 724

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

SUBPART A: GENERAL PROVISIONS

Section	
724.101	Purpose, Scope, and Applicability
724.103	Relationship to Interim Status Standards
724.104	Electronic Reporting

SUBPART B: GENERAL FACILITY STANDARDS

Section	
724.110	Applicability
724.111	USEPA Identification Number
724.112	Required Notices
724.113	General Waste Analysis
724.114	Security
724.115	General Inspection Requirements
724.116	Personnel Training
724.117	General Requirements for Ignitable, Reactive, or Incompatible Wastes
724.118	Location Standards
724.119	Construction Quality Assurance Program

SUBPART C: PREPAREDNESS AND PREVENTION

Section	
724.130	Applicability
724.131	Design and Operation of Facility
724.132	Required Equipment
724.133	Testing and Maintenance of Equipment
724.134	Access to Communications or Alarm System
724.135	Required Aisle Space
724.137	Arrangements with Local Authorities

SUBPART D: CONTINGENCY PLAN AND EMERGENCY PROCEDURES

Section	
724.150	Applicability
724.151	Purpose and Implementation of Contingency Plan

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NOTICE OF ADOPTED AMENDMENTS

724.152	Content of Contingency Plan
724.153	Copies of Contingency Plan
724.154	Amendment of Contingency Plan
724.155	Emergency Coordinator
724.156	Emergency Procedures

SUBPART E: MANIFEST SYSTEM, RECORDKEEPING AND REPORTING

Section	
724.170	Applicability
724.171	Use of Manifest System
724.172	Manifest Discrepancies
724.173	Operating Record
724.174	Availability, Retention, and Disposition of Records
724.175	Annual Facility Activities Report
724.176	Unmanifested Waste Report
724.177	Additional Reports

SUBPART F: RELEASES FROM SOLID WASTE MANAGEMENT UNITS

Section	
724.190	Applicability
724.191	Required Programs
724.192	Groundwater Protection Standard
724.193	Hazardous Constituents
724.194	Concentration Limits
724.195	Point of Compliance
724.196	Compliance Period
724.197	General Groundwater Monitoring Requirements
724.198	Detection Monitoring Program
724.199	Compliance Monitoring Program
724.200	Corrective Action Program
724.201	Corrective Action for Solid Waste Management Units

SUBPART G: CLOSURE AND POST-CLOSURE CARE

Section	
724.210	Applicability
724.211	Closure Performance Standard
724.212	Closure Plan; Amendment of Plan
724.213	Closure; Time Allowed For Closure
724.214	Disposal or Decontamination of Equipment, Structures, and Soils
724.215	Certification of Closure
724.216	Survey Plat



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NOTICE OF ADOPTED AMENDMENTS

- 724.217 Post-Closure Care and Use of Property
- 724.218 Post-Closure Care Plan; Amendment of Plan
- 724.219 Post-Closure Notices
- 724.220 Certification of Completion of Post-Closure Care

SUBPART H: FINANCIAL REQUIREMENTS

- Section
- 724.240 Applicability
- 724.241 Definitions of Terms as Used in This Subpart
- 724.242 Cost Estimate for Closure
- 724.243 Financial Assurance for Closure
- 724.244 Cost Estimate for Post-Closure Care
- 724.245 Financial Assurance for Post-Closure Care
- 724.246 Use of a Mechanism for Financial Assurance of Both Closure and Post-Closure Care
- 724.247 Liability Requirements
- 724.248 Incapacity of Owners or Operators, Guarantors, or Financial Institutions
- 724.251 Wording of the Instruments

SUBPART I: USE AND MANAGEMENT OF CONTAINERS

- Section
- 724.270 Applicability
- 724.271 Condition of Containers
- 724.272 Compatibility of Waste with Container
- 724.273 Management of Containers
- 724.274 Inspections
- 724.275 Containment
- 724.276 Special Requirements for Ignitable or Reactive Waste
- 724.277 Special Requirements for Incompatible Wastes
- 724.278 Closure
- 724.279 Air Emission Standards

SUBPART J: TANK SYSTEMS

- Section
- 724.290 Applicability
- 724.291 Assessment of Existing Tank System Integrity
- 724.292 Design and Installation of New Tank Systems or Components
- 724.293 Containment and Detection of Releases
- 724.294 General Operating Requirements
- 724.295 Inspections

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NOTICE OF ADOPTED AMENDMENTS

- 724.296 Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems
- 724.297 Closure and Post-Closure Care
- 724.298 Special Requirements for Ignitable or Reactive Waste
- 724.299 Special Requirements for Incompatible Wastes
- 724.300 Air Emission Standards

SUBPART K: SURFACE IMPOUNDMENTS

- Section
- 724.320 Applicability
- 724.321 Design and Operating Requirements
- 724.322 Action Leakage Rate
- 724.323 Response Actions
- 724.326 Monitoring and Inspection
- 724.327 Emergency Repairs; Contingency Plans
- 724.328 Closure and Post-Closure Care
- 724.329 Special Requirements for Ignitable or Reactive Waste
- 724.330 Special Requirements for Incompatible Wastes
- 724.331 Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027
- 724.332 Air Emission Standards

SUBPART L: WASTE PILES

- Section
- 724.350 Applicability
- 724.351 Design and Operating Requirements
- 724.352 Action Leakage Rate
- 724.353 Response Action Plan
- 724.354 Monitoring and Inspection
- 724.356 Special Requirements for Ignitable or Reactive Waste
- 724.357 Special Requirements for Incompatible Wastes
- 724.358 Closure and Post-Closure Care
- 724.359 Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027

SUBPART M: LAND TREATMENT

- Section
- 724.370 Applicability
- 724.371 Treatment Program
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724.988	Inspection and Monitoring Requirements
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- 724.APPENDIX D Cochran's Approximation to the Behrens-Fisher Student's T-Test  
724.APPENDIX E Examples of Potentially Incompatible Waste  
724.APPENDIX I Groundwater Monitoring List

AUTHORITY: Implementing Sections 7.2 and 22.4 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/7.2, 22.4, and 27].

SOURCE: Adopted in R82-19 at 7 Ill. Reg. 14059, effective October 12, 1983; amended in R84-9 at 9 Ill. Reg. 11964, effective July 24, 1985; amended in R85-22 at 10 Ill. Reg. 1136, effective January 2, 1986; amended in R86-1 at 10 Ill. Reg. 14119, effective August 12, 1986; amended in R86-28 at 11 Ill. Reg. 6138, effective March 24, 1987; amended in R86-28 at 11 Ill. Reg. 8684, effective April 21, 1987; amended in R86-46 at 11 Ill. Reg. 13577, effective August 4, 1987; amended in R87-5 at 11 Ill. Reg. 19397, effective November 12, 1987; amended in R87-39 at 12 Ill. Reg. 13135, effective July 29, 1988; amended in R88-16 at 13 Ill. Reg. 458, effective December 28, 1988; amended in R89-1 at 13 Ill. Reg. 18527, effective November 13, 1989; amended in R90-2 at 14 Ill. Reg. 14511, effective August 22, 1990; amended in R90-10 at 14 Ill. Reg. 16658, effective September 25, 1990; amended in R90-11 at 15 Ill. Reg. 9654, effective June 17, 1991; amended in R91-1 at 15 Ill. Reg. 14572, effective October 1, 1991; amended in R91-13 at 16 Ill. Reg. 9833, effective June 9, 1992; amended in R92-1 at 16 Ill. Reg. 17702, effective November 6, 1992; amended in R92-10 at 17 Ill. Reg. 5806, effective March 26, 1993; amended in R93-4 at 17 Ill. Reg. 20830, effective November 22, 1993; amended in R93-16 at 18 Ill. Reg. 6973, effective April 26, 1994; amended in R94-7 at 18 Ill. Reg. 12487, effective July 29, 1994; amended in R94-17 at 18 Ill. Reg. 17601, effective November 23, 1994; amended in R95-6 at 19 Ill. Reg. 9951, effective June 27, 1995; amended in R95-20 at 20 Ill. Reg. 11244, effective August 1, 1996; amended in R96-10/R97-3/R97-5 at 22 Ill. Reg. 636, effective December 16, 1997; amended in R98-12 at 22 Ill. Reg. 7638, effective April 15, 1998; amended in R97-21/R98-3/R98-5 at 22 Ill. Reg. 17972, effective September 28, 1998; amended in R98-21/R99-2/R99-7 at 23 Ill. Reg. 2186, effective January 19, 1999; amended in R99-15 at 23 Ill. Reg. 9437, effective July 26, 1999; amended in R00-5 at 24 Ill. Reg. 1146, effective January 6, 2000; amended in R00-13 at 24 Ill. Reg. 9833, effective June 20, 2000; expedited correction at 25 Ill. Reg. 5115, effective June 20, 2000; amended in R02-1/R02-12/R02-17 at 26 Ill. Reg. 6635, effective April 22, 2002; amended in R03-7 at 27 Ill. Reg. 3725, effective February 14, 2003; amended in R05-8 at 29 Ill. Reg. 6009, effective April 13, 2005; amended in R05-2 at 29 Ill. Reg. 6365, effective April 22, 2005; amended in R06-5/R06-6/R06-7 at 30 Ill. Reg. 3196, effective February 23, 2006; amended in R06-16/R06-17/R06-18 at 31 Ill. Reg. 893, effective December 20, 2006; amended in R07-5/R07-14 at 32 Ill. Reg. 12365, effective July 14, 2008; amended in R09-3 at 33 Ill. Reg. 1106, effective December 30, 2008; amended in R09-16/R10-4 at 34 Ill. Reg. 18873, effective November 12, 2010; amended in R11-2/R11-16 at 35 Ill. Reg. 17965, effective October 14, 2011; amended in R13-15 at 37 Ill. Reg. 17773, effective October 24, 2013; amended in R15-1 at 39 Ill. Reg. 1724, effective January 12, 2015; amended in R16-7 at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

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SUBPART E: MANIFEST SYSTEM, RECORDKEEPING AND REPORTING

**Section 724.171 Use of Manifest System**

- a) Receipt of Manifested Hazardous Waste ~~manifested hazardous waste~~.
  - 1) If a facility receives hazardous waste accompanied by a manifest, the owner, operator, or its agent must sign and date the manifest, as indicated in subsection (a)(2) ~~of this Section~~, to certify that the hazardous waste covered by the manifest was received, that the hazardous waste was received except as noted in the discrepancy space of the manifest, or that the hazardous waste was rejected as noted in the manifest discrepancy space.
  - 2) If a facility receives a hazardous waste shipment accompanied by a manifest, the owner, operator, or its agent must do the following:
    - A) The owner, operator, or agent must sign and date, by hand, each copy of the manifest;
    - B) The owner, operator, or agent must note any discrepancies (as defined in Section 724.172-725.172) on each copy of the manifest;
    - C) The owner, operator, or agent must immediately give the transporter at least one copy of the manifest;
    - D) The owner, operator, or agent must send a copy (Page 3) of the manifest to the generator within 30 days after delivery;
    - E) Within 30 days after delivery, the owner, operator, or agent must send the top copy (Page 1) of the manifest to the e-Manifest System for purposes of data entry and processing. In lieu of mailing this paper copy to the e-Manifest System operator, the owner or operator may transmit to the e-Manifest System operator an image file of Page 1 of the manifest, or both a data string file and the image file corresponding to Page 1 of the manifest. Any data or image files transmitted to USEPA under this subsection (a) must be submitted in data file and image file formats that are acceptable to USEPA and that are supported by USEPA's electronic reporting requirements and by the e-Manifest System; and

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- F) The owner, operator, or agent must retain at the facility a copy of each manifest for at least three years after the date of delivery.
- 3) If a facility receives hazardous waste imported from a foreign source, the receiving facility must mail a copy of the manifest and documentation confirming USEPA's consent to the import of hazardous waste to the following address within 30 days after delivery: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, DC 20460.
- b) If a facility receives, from a rail or water (bulk shipment) transporter, hazardous waste that is accompanied by a shipping paper containing all the information required on the manifest (excluding the USEPA identification numbers, generator's certification, and signatures), the owner or operator, or the owner or operator's agent, must do the following:
- 1) It must sign and date each copy of the manifest or shipping paper (if the manifest has not been received) to certify that the hazardous waste covered by the manifest or shipping paper was received;
  - 2) It must note any significant discrepancies (as defined in Section 724.172(a)) in the manifest or shipping paper (if the manifest has not been received) on each copy of the manifest or shipping paper;
- BOARD NOTE: The Board does not intend that the owner or operator of a facility whose procedures under Section 724.113(c) include waste analysis must perform that analysis before signing the shipping paper and giving it to the transporter. Section 724.172(b), however, requires reporting an unreconciled discrepancy discovered during later analysis.
- 3) It must immediately give the rail or water (bulk shipment) transporter at least one copy of the manifest or shipping paper (if the manifest has not been received);
  - 4) The owner or operator must send a copy of the signed and dated manifest or a signed and dated copy of the shipping paper (if the manifest has not been received within 30 days after delivery) to the generator within 30 days after the delivery; and



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BOARD NOTE: Section 722.123(c) requires the generator to send three copies of the manifest to the facility when hazardous waste is sent by rail or water (bulk shipment).

- 5) Retain at the facility a copy of the manifest and shipping paper (if signed in lieu of the manifest at the time of delivery) for at least three years from the date of delivery.
- c) Whenever a shipment of hazardous waste is initiated from a facility, the owner or operator of that facility must comply with the requirements of 35 Ill. Adm. Code 722.

BOARD NOTE: The provisions of 35 Ill. Adm. Code 722.134 are applicable to the on-site accumulation of hazardous wastes by generators. Therefore, the provisions of Section 722.134 only apply to owners or operators that are shipping hazardous waste that they generated at that facility.

- d) Within three working days after the receipt of a shipment subject to Subpart H of 35 Ill. Adm. Code 722, the owner or operator of a facility must provide a copy of the movement document bearing all required signatures to the exporter; to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, DC 20460; to the Bureau of Land, Division of Land Pollution Control, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, IL 62794-9276; and to competent authorities of all other concerned countries. The original copy of the movement document must be maintained at the facility for at least three years from the date of signature.
- e) A facility must determine whether the consignment state for a shipment regulates any additional wastes (beyond those regulated federally) as hazardous wastes under its state hazardous waste program. A facility must also determine whether the consignment state or generator state requires the facility to submit any copies of the manifest to that state.
- f) Legal Equivalence to Paper Manifests~~-equivalence to paper manifests~~. E-Manifests that are obtained, completed, transmitted in accordance with 35 Ill. Adm. Code 722.120(a)(3), and used in accordance with this Section in lieu of the paper manifest form are the legal equivalent of paper manifest forms bearing handwritten signatures, and satisfy for all purposes any requirement in 35 Ill.

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Adm. Code 720 through 728 to obtain, complete, sign, provide, use, or retain a manifest.

- 1) Any requirement in 35 Ill. Adm. Code 720 through 728 for the owner or operator of a facility to sign a manifest or manifest certification by hand, or to obtain a handwritten signature, is satisfied by signing with or obtaining a valid and enforceable electronic signature within the meaning of 35 Ill. Adm. Code 722.125.
  - 2) Any requirement in 35 Ill. Adm. Code 720 through 728 to give, provide, send, forward, or to return to another person a copy of the manifest is satisfied when a copy of an e-Manifest is transmitted to the other person.
  - 3) Any requirement in 35 Ill. Adm. Code 720 through 728 for a manifest to accompany a hazardous waste shipment is satisfied when a copy of an e-Manifest is accessible during transportation and forwarded to the person or persons who are scheduled to receive delivery of the hazardous waste shipment.
  - 4) Any requirement in 35 Ill. Adm. Code 720 through 728 for an owner or operator to keep or retain a copy of each manifest is satisfied by the retention of the facility's e-Manifest copies in its account on the e-Manifest System, provided that such copies are readily available for viewing and production if requested by any USEPA or Agency inspector.
  - 5) No owner or operator may be held liable for the inability to produce an e-Manifest for inspection under this Section if the owner or operator can demonstrate that the inability to produce the e-Manifest is due exclusively to a technical difficulty with the e-Manifest System for which the owner or operator bears no responsibility.
- g) An owner or operator may participate in the e-Manifest System either by accessing the e-Manifest System from the owner's or operator's electronic equipment, or by accessing the e-Manifest System from portable equipment brought to the owner's or operator's site by the transporter that delivers the waste shipment to the facility.
- h) Special Procedures Applicable to Replacement Manifests ~~procedures applicable to replacement manifests~~. If a facility receives hazardous waste that is accompanied by a paper replacement manifest for a manifest that was originated electronically, the following procedures apply to the delivery of the hazardous waste by the final transporter:

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- 1) Upon delivery of the hazardous waste to the designated facility, the owner or operator must sign and date each copy of the paper replacement manifest by hand in Item 20 (Designated Facility Certification of Receipt) and note any discrepancies in Item 18 (Discrepancy Indication Space) of the paper replacement manifest;
  - 2) The owner or operator of the facility must give back to the final transporter one copy of the paper replacement manifest;
  - 3) Within 30 days after delivery of the hazardous waste to the designated facility, the owner or operator of the facility must send one signed and dated copy of the paper replacement manifest to the generator and send an additional signed and dated copy of the paper replacement manifest to the e-Manifest System; and
  - 4) The owner or operator of the facility must retain at the facility one copy of the paper replacement manifest for at least three years after the date of delivery.
- i) Special procedures applicable to electronic signature methods undergoing tests. If an owner or operator using an e-Manifest signs this manifest electronically using an electronic signature method that is undergoing pilot or demonstration tests aimed at demonstrating the practicality or legal dependability of the signature method, the owner or operator must also sign with an ink signature the facility's certification of receipt or discrepancies on the printed copy of the manifest provided by the transporter. Upon executing its ink signature on this printed copy, the owner or operator must retain this original copy among its records for at least three years after the date of delivery of the waste.
  - j) Imposition of User Fee for e-Manifest Use ~~user fee for e-Manifest use~~. An owner or operator that is a user of the e-Manifest System may be assessed a user fee by USEPA for the origination or processing of each e-Manifest. An owner or operator may also be assessed a user fee by USEPA for the collection and processing of paper manifest copies that owners or operators must submit to the e-Manifest System operator under subsection ~~(a)(2)(E)~~ 724.171(a)(2)(E). USEPA has stated that it would maintain and update from time-to-time the current schedule of e-Manifest System user fees, which will be determined based on current and projected e-Manifest System costs and level of use of the e-Manifest System. USEPA has said that it would publish the current schedule of e-Manifest user fees as an appendix to 40 CFR 262.

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- k) E-Manifest ~~Signatures~~ signatures. E-Manifest signatures must meet the criteria described in 35 Ill. Adm. Code 722.125.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART F: RELEASES FROM SOLID WASTE MANAGEMENT UNITS

**Section 724.194 Concentration Limits**

- a) The Agency must specify in the facility permit concentration limits in the groundwater for hazardous constituents established under Section 724.193. The following must be true of the concentration of a hazardous constituent:
- 1) It must not exceed the background level of that constituent in the groundwater at the time that limit is specified in the permit; or
  - 2) For any of the constituents listed in Table 1, it must not exceed the respective value given in that Table if the background level of the constituent is below the value given in Table 1; or
  - 3) It must not exceed an alternative limit established by the Agency under subsection (b) ~~of this Section~~.

TABLE 1—MAXIMUM CONCENTRATION OF CONSTITUENTS FOR GROUNDWATER PROTECTION

Constituent	Maximum Concentration (mg/l)
Arsenic (CAS No. 7440-38-2)	0.05
Barium (CAS No. 7440-39-3)	1.0
Cadmium (CAS No. 7440-43-9)	0.01
Chromium (CAS No. 7440-47-3)	0.05
Lead (CAS No. 7439-92-1)	0.05
Mercury (CAS No. 7439-97-6)	0.002
Selenium (CAS No. 7782-49-2)	0.01
Silver (CAS No. 7440-22-4)	0.05



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Endrin (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,endo-1,4:5,8-dimethanonaphthalene) (CAS No. 72-20-8)	0.0002
Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer) (CAS No. 58-89-9)	0.004
Methoxychlor (1,1,1-Trichloro-2,2-bis(p-methoxyphenyl)ethane) (1,1,1-Trichloro-2,2'-bis-(p-methoxyphenyl)ethane) (CAS No. 72-43-5)	0.1
Toxaphene (C <sub>10</sub> H <sub>10</sub> Cl <sub>6</sub> , Technical chlorinated camphene, 67-69 percent chlorine) (CAS No. 8001-35-2)	0.005
2,4-D (2,4-Dichlorophenoxyacetic acid) (CAS No. 94-75-7)	0.1
2,4,5-TP (Silvex) (2,4,5-Trichlorophenoxypropionic acid) (CAS No. 93-72-1)	0.01

- b) The Agency must establish an alternative concentration limit for a hazardous constituent if it finds that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternative concentration limit is not exceeded. In establishing alternate concentration limits, the Agency must consider the following factors:
- 1) Potential adverse effects on groundwater quality, considering the following:
    - A) The physical and chemical characteristics of the waste in the regulated unit, including its potential for migration;
    - B) The hydrogeological characteristics of the facility and surrounding land;
    - C) The quantity of groundwater and the direction of groundwater flow;
    - D) The proximity and withdrawal rates of groundwater users;
    - E) The current and future uses of groundwater in the area;

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- F) The existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater quality;
  - G) The potential for health risks caused by human exposure to waste constituents;
  - H) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;
  - I) The persistence and permanence of the potential adverse effects; and
- 2) Potential adverse effects on hydraulically-connected surface-water quality, considering the following:
- A) The volume and physical and chemical characteristics of the waste in the regulated unit;
  - B) The hydrogeological characteristics of the facility and surrounding land;
  - C) The quantity and quality of groundwater and the direction of groundwater flow;
  - D) The patterns of rainfall in the region;
  - E) The proximity of the regulated unit to surface waters;
  - F) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;
  - G) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface-water quality;
  - H) The potential for health risks caused by human exposure to waste constituents;
  - I) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and
  - J) The persistence and permanence of the potential adverse effects.

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- c) In making any determination under subsection (b) ~~of this Section~~ about the use of groundwater in the area around the facility, the Agency must consider any identification of underground sources of drinking water and exempted aquifers made under 35 Ill. Adm. Code 704.123.
- d) The Agency must make specific written findings in setting any alternate concentration limits under subsection (b) ~~of this Section~~.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART H: FINANCIAL REQUIREMENTS

**Section 724.244 Cost Estimate for Post-Closure Care**

- a) The owner or operator of a disposal surface impoundment, disposal miscellaneous unit, land treatment unit, or landfill unit or the owner or operator of a surface impoundment or waste pile required under Sections 724.328 or 724.358 to prepare a contingent closure and post-closure plan must have a detailed written estimate, in current dollars, of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the applicable post-closure regulations in Sections 724.217 through 724.220, 724.328, 724.358, 724.380, 724.410, and ~~724.703-724.603~~.
  - 1) The post-closure cost estimate must be based on the costs to the owner or operator of hiring a third party to conduct post-closure care activities. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. (See definition of parent corporation in Section 724.241(d)).
  - 2) The post-closure cost estimate is calculated by multiplying the annual post-closure cost estimate by the number of years of post-closure care required under Section 724.217.
- b) During the active life of the facility, the owner or operator must adjust the post-closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instruments used to comply with Section 724.245. For owners or operators using the financial test or corporate guarantee, the post-closure cost estimate must be updated for inflation within 30 days after the close of the firm's fiscal year and before the submission of updated information to the Agency, as specified in Section 724.245(f)(5). The adjustment may be made by recalculating the post-closure cost estimate in current dollars or by using an inflation factor derived from the annual Implicit Price Deflator for Gross National Product, as published by the U.S. Department of Commerce in its

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Survey of Current Business, as specified in subsections (b)(1) and (b)(2) ~~of this Section~~. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.

- 1) The first adjustment is made by multiplying the post-closure cost estimate by the inflation factor. The result is the adjusted post-closure cost estimate.
- 2) Subsequent adjustments are made by multiplying the latest adjusted post-closure cost estimate by the latest inflation factor.
- c) During the active life of the facility the owner or operator must revise the post-closure cost estimate within 30 days after the Agency has approved a request to modify the post-closure plan if the change in the post-closure plan increases the cost of post-closure care. The revised post-closure cost estimate must be adjusted for inflation, as specified in Section 724.244(b).
- d) The owner or operator must keep the following at the facility during the operating life of the facility: The latest post-closure cost estimate prepared in accordance with Section 724.244(a) and (c) and, when this estimate has been adjusted in accordance with Section 724.244(b), the latest adjusted post-closure cost estimate.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 724.245 Financial Assurance for Post-Closure Care**

An owner or operator of a hazardous waste management unit subject to the requirements of Section 724.244 must establish financial assurance for post-closure care in accordance with the approved post-closure plan for the facility 60 days prior to the initial receipt of hazardous waste or the effective date of the regulation, whichever is later. The owner or operator must choose from among the following options:

- a) Post-Closure Trust Fund ~~Post-closure trust fund~~.
  - 1) An owner or operator may satisfy the requirements of this Section by establishing a post-closure trust fund that conforms to the requirements of this subsection (a) and submitting an original, signed duplicate of the trust agreement to the Agency. An owner or operator of a new facility must submit the original, signed duplicate of the trust agreement to the Agency at least 60 days before the date on which hazardous waste is first received for disposal. The trustee must be an entity that has the authority to act as a



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trustee and whose trust operations are regulated and examined by a federal or State agency.

- 2) The wording of the trust agreement must be that specified in Section 724.251 and the trust agreement accompanied by a formal certification of acknowledgment (as specified in Section 724.251). Schedule A of the trust agreement must be updated within 60 days after a change in the amount of the current post-closure cost estimate covered by the agreement.
- 3) Payments into the trust fund must be made annually by the owner or operator over the term of the initial RCRA permit or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; this period is hereafter referred to as the "pay-in period." The payments into the post-closure trust fund must be made as follows:
  - A) For a new facility, the first payment must be made before the initial receipt of hazardous waste for disposal. A receipt from the trustee for this payment must be submitted by the owner or operator to the Agency before this initial receipt of hazardous waste. The first payment must be at least equal to the current post-closure cost estimate, except as provided in subsection (g) of this Section, divided by the number of years in the pay-in period. Subsequent payments must be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment must be determined by the following formula:

$$\text{Next payment} = \frac{(\text{CE} - \text{CV})}{\text{Y}}$$

Where:

- CE = the current closure cost estimate;
- CV = the current value of the trust fund; and
- Y = the number of years remaining in the pay-in period

- B) If an owner or operator establishes a trust fund, as specified in 35 Ill. Adm. Code 725.245(a), and the value of that trust fund is less than the current post-closure cost estimate when a permit is awarded for the facility, the amount of the current post-closure cost estimate still to be paid into the trust fund must be paid in over the

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pay-in period as defined in subsection (a)(3) ~~of this Section~~. Payments must continue to be made no later than 30 days after each anniversary date of the first payment made pursuant to 35 Ill. Adm. Code 725. The amount of each payment must be determined by the following formula:

$$\text{Next payment} = \frac{(\text{CE} - \text{CV})}{Y}$$

Where:

CE = the current closure cost estimate;  
CV = the current value of the trust fund; and  
Y = the number of years remaining in the pay-in period

- 4) The owner or operator may accelerate payments into the trust fund or may deposit the full amount of the current post-closure cost estimate at the time the fund is established. ~~However, the owner or operator must maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in subsection (a)(3) of this Section.~~
- 5) If the owner or operator establishes a post-closure trust fund after having used one or more alternative mechanisms specified in this Section or in 35 Ill. Adm. Code 725.245, its first payment must be in at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to specifications of this subsection (a) and 35 Ill. Adm. Code 725.245, as applicable.
- 6) After the pay-in period is completed, whenever the current post-closure cost estimate changes during the operating life of the facility, the owner or operator must compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within 60 days after the change in the cost estimate, must either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current post-closure cost estimate, or obtain other financial assurance, as specified in this Section, to cover the difference.
- 7) During the operating life of the facility, if the value of the trust fund is greater than the total amount of the current post-closure cost estimate, the

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owner or operator may submit a written request to the Agency for release of the amount in excess of the current post-closure cost estimate.

- 8) If an owner or operator substitutes other financial assurance as specified in this Section for all or part of the trust fund, it may submit a written request to the Agency for release of the amount in excess of the current post-closure cost estimate covered by the trust fund.
  - 9) Within 60 days after receiving a request from the owner or operator for release of funds, as specified in subsection (a)(7) or (a)(8) ~~of this Section~~, the Agency must instruct the trustee to release to the owner or operator such funds as the Agency specifies in writing.
  - 10) During the period of post-closure care, the Agency must approve a release of funds if the owner or operator demonstrates to the Agency that the value of the trust fund exceeds the remaining cost of post-closure care.
  - 11) An owner or operator or any other person authorized to perform post-closure care may request reimbursement for post-closure care expenditures by submitting itemized bills to the Agency. Within 60 days after receiving bills for post-closure activities, the Agency must instruct the trustee to make requirements in those amounts that the Agency specifies in writing if the Agency determines that the post-closure care expenditures are in accordance with the approved post-closure plan or otherwise justified. If the Agency does not instruct the trustee to make such reimbursements, the Agency must provide the owner or operator with a detailed written statement of reasons.
  - 12) The Agency must agree to termination of the trust when either of the following occurs:
    - A) An owner or operator substitutes alternative financial assurance, as specified in this Section; or
    - B) The Agency releases the owner or operator from the requirements of this Section in accordance with subsection (i) ~~of this Section~~.
- b) Surety Bond Guaranteeing Payment into a Post-Closure Trust Fund ~~and bond guaranteeing payment into a post-closure trust fund.~~
- 1) An owner or operator may satisfy the requirements of this Section by obtaining a surety bond that conforms to the requirements of this

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subsection (b) and submitting the bond to the Agency. An owner or operator of a new facility must submit the bond to the Agency at least 60 days before the date on which hazardous waste is first received for disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the U.S. Department of the Treasury.

BOARD NOTE: The U.S. Department of the Treasury updates Circular 570, "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies," on an annual basis pursuant to 31 CFR 223.16. Circular 570 is available on the Internet from the following website: <http://www.fms.treas.gov/c570/>.

- 2) The wording of the surety bond must be that specified in Section 724.251.
- 3) The owner or operator who uses a surety bond to satisfy the requirements of this Section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the Agency. This standby trust fund must meet the requirements specified in subsection (a) ~~of this Section~~, except as follows:
  - A) An original, signed duplicate of the trust agreement must be submitted to the Agency with the surety bond; and
  - B) Until the standby trust fund is funded pursuant to the requirements of this Section, the following are not required by these regulations:
    - i) Payments into the trust fund, as specified in subsection (a) ~~of this Section~~;
    - ii) Updating of Schedule A of the trust agreement (as specified in Section 724.251) to show current post-closure cost estimates;
    - iii) Annual valuations, as required by the trust agreement; and
    - iv) Notices of nonpayment, as required by the trust agreement.
- 4) The bond must guarantee that the owner or operator will do one of the following:



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- A) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility;
  - B) Fund the standby trust fund in an amount equal to the penal sum within 15 days after an order to begin closure is issued by the Board or a U.S. district court or other court of competent jurisdiction; or
  - C) Provide alternative financial assurance as specified in this Section, and obtain the Agency's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and the Agency of a notice of cancellation of the bond from the surety.
- 5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.
  - 6) The penal sum of the bond must be in an amount at least equal to the current post-closure cost estimate, except as provided in subsection (g) ~~of this Section.~~
  - 7) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Agency or obtain other financial assurance, as specified in this Section, to cover the increase. Whenever the current post-closure cost estimate decreases, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the Agency.
  - 8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Agency. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Agency, as evidenced by the return receipts.
  - 9) The owner or operator may cancel the bond if the Agency has given prior written consent based on its receipt of evidence of alternative financial assurance, as specified in this Section.

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- c) Surety Bond Guaranteeing Performance of Post-Closure Care ~~bond guaranteeing performance of post-closure care.~~
- 1) An owner or operator may satisfy the requirements of this Section by obtaining a surety bond that conforms to the requirements of this subsection (c) and submitting the bond to the Agency. An owner or operator of a new facility must submit the bond to the Agency at least 60 days before the date on which hazardous waste is first received for disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the U.S. Department of the Treasury.  
  
BOARD NOTE: The U.S. Department of the Treasury updates Circular 570, "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies," on an annual basis pursuant to 31 CFR 223.16. Circular 570 is available on the Internet from the following website: <http://www.fms.treas.gov/c570/>.
  - 2) The wording of the surety bond must be that specified in Section 724.251.
  - 3) The owner or operator who uses a surety bond to satisfy the requirements of this Section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the Agency. This standby trust must meet the requirements specified in subsection (a) ~~of this Section~~, except as follows:
    - A) An original, signed duplicate of the trust agreement must be submitted to the Agency with the surety bond; and
    - B) Unless the standby trust fund is funded pursuant to the requirements of this Section, the following are not required:
      - i) Payments into the trust fund, as specified in subsection (a) ~~of this Section~~;
      - ii) Updating of Schedule A of the trust agreement (as specified in Section 724.251) to show current post-closure cost estimates;
      - iii) Annual valuations, as required by the trust agreement; and

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- iv) Notices of nonpayment, as required by the trust agreement.
- 4) The bond must guarantee that the owner or operator will do either of the following:
    - A) Perform final post-closure care in accordance with the post-closure plan and other requirements of the permit for the facility; or
    - B) Provide alternative financial assurance, as specified in this Section, and obtain the Agency's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and the Agency of a notice of cancellation of the bond from the surety.
  - 5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following a final judicial determination or Board order finding that the owner or operator has failed to perform post-closure care in accordance with the approved post-closure plan and other permit requirements, under the terms of the bond the surety will perform post-closure care in accordance with post-closure plan and other permit requirements or will deposit the amount of the penal sum into the standby trust fund.
  - 6) The penal sum of the bond must be in an amount at least equal to the current post-closure cost estimate.
  - 7) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum during the operating life of the facility, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Agency, or obtain other financial assurance, as specified in this Section. Whenever the current closure cost estimate decreases during the operating life of the facility, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the Agency.
  - 8) During the period of post-closure care, the Agency must approve a decrease in the penal sum if the owner or operator demonstrates to the Agency that the amount exceeds the remaining cost of post-closure care.

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- 9) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Agency. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Agency, as evidenced by the return receipts.
  - 10) The owner or operator may cancel the bond if the Agency has given prior written consent. The Agency must provide such written consent when either of the following occurs:
    - A) An owner or operator substitutes alternative financial assurance as specified in this Section; or
    - B) The Agency releases the owner or operator from the requirements of this Section in accordance with subsection (i) ~~of this Section~~.
  - 11) The surety will not be liable for deficiencies in the performance of post-closure care by the owner or operator after the Agency releases the owner or operator from the requirements of this Section in accordance with subsection (i) ~~of this Section~~.
- d) Post-Closure Letter of Credit ~~Post-closure letter of credit~~.
- 1) An owner or operator may satisfy the requirements of this Section by obtaining an irrevocable standby letter of credit that conforms to the requirements of this subsection (d) and submitting the letter to the Agency. An owner or operator of a new facility must submit the letter of credit to the Agency at least 60 days before the date on which hazardous waste is first received for disposal. The letter of credit must be effective before this initial receipt of hazardous waste. The issuing institution must be an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or State agency.
  - 2) The wording of the letter of credit must be that specified in Section 724.251.
  - 3) An owner or operator who uses a letter of credit to satisfy the requirements of this Section must also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Agency must be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Agency. This

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standby trust fund must meet the requirements of the trust fund specified in subsection (a) ~~of this Section~~, except as follows:

- A) An original, signed duplicate of the trust agreement must be submitted to the Agency with the letter of credit; and
- B) Unless the standby trust fund is funded pursuant to the requirements of this Section, the following are not required by these regulations:
  - i) Payments into the trust fund, as specified in subsection (a) ~~of this Section~~;
  - ii) Updating of Schedule A of the trust agreement (as specified in Section 724.251) to show current post-closure cost estimates;
  - iii) Annual valuations, as required by the trust agreement; and
  - iv) Notices of nonpayment, as required by the trust agreement.
- 4) The letter or credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date and providing the following information: the USEPA identification number, name and address of the facility, and the amount of funds assured for post-closure care of the facility by the letter of credit.
- 5) The letter of credit must be irrevocable and issued for a period of at least one year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year unless, at least 120 days before the current expiration date, the issuing institution notifies both the owner or operator and the Agency by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days will begin on the date when both the owner or operator and the Agency have received the notice, as evidenced by the return receipts.
- 6) The letter of credit must be issued in an amount at least equal to the current post-closure cost estimate, except as provided in subsection (g) ~~of this Section~~.
- 7) Whenever the current post-closure cost estimate increases to an amount greater than the amount of the credit during the operating life of the



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facility, the owner or operator, within 60 days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current post-closure cost estimate and submit evidence of such increase to the Agency, or obtain other financial assurance as specified in this Section to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the amount of the credit may be reduced to the amount of the current post-closure cost estimate following written approval by the Agency.

- 8) During the period of post-closure care, the Agency must approve a decrease in the amount of the letter of credit if the owner or operator demonstrates to the Agency that the amount exceeds the remaining cost of post-closure care.
  - 9) Following a final judicial determination or Board order finding that the owner or operator has failed to perform post-closure care in accordance with the approved post-closure plan and other permit requirements, the Agency may draw on the letter of credit.
  - 10) If the owner or operator does not establish alternative financial assurance, as specified in this Section, and obtain written approval of such alternative assurance from the Agency within 90 days after receipt by both the owner or operator and the Agency of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the Agency must draw on the letter of credit. The Agency may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last 30 days of any such extension the Agency must draw on the letter of credit if the owner or operator has failed to provide alternative financial assurance, as specified in this Section, and obtain written approval of such assurance from the Agency.
  - 11) The Agency must return the letter of credit to the issuing institution for termination when either of the following occurs:
    - A) An owner or operator substitutes alternative financial assurance, as specified in this Section; or
    - B) The Agency releases the owner or operator from the requirements of this Section in accordance with subsection (i) ~~of this Section~~.
- e) Post-Closure Insurance ~~Post-closure insurance~~.

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- 1) An owner or operator may satisfy the requirements of this Section by obtaining post-closure insurance that conforms to the requirements of this subsection (e) and submitting a certificate of such insurance to the Agency. An owner or operator of a new facility must submit the certificate of insurance to the Agency at least 60 days before the date on which hazardous waste is first received for disposal. The insurance must be effective before this initial receipt of hazardous waste. At a minimum, the insurer must be licensed to transact the business of insurance or be eligible to provide insurance as an excess or surplus lines insurer in one or more states.
- 2) The wording of the certificate of insurance must be that specified in Section 724.251.
- 3) The post-closure insurance policy must be issued for a face amount at least equal to the current post-closure cost estimate, except as provided in subsection (g) ~~of this Section~~. The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.
- 4) The post-closure insurance policy must guarantee that funds will be available to provide post-closure care of facility whenever the post-closure period begins. The policy must also guarantee that, once post-closure care begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the Agency to such party or parties as the Agency specifies.
- 5) An owner or operator or any other person authorized to perform post-closure care may request reimbursement for post-closure care expenditures by submitting itemized bills to the Agency. Within 60 days after receiving bills for post-closure activities, the Agency must instruct the insurer to make reimbursement in such amounts as the Agency specifies in writing if the Agency determines that the post-closure care expenditures are in accordance with the approved post-closure plan or otherwise justified. If the Agency does not instruct the insurer to make such reimbursements, the Agency must provide the owner or operator with a detailed written statement of reasons.
- 6) The owner or operator must maintain the policy in full force and effect until the Agency consents to termination of the policy by the owner or operator as specified in subsection (e)(11) ~~of this Section~~. Failure to pay

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the premium, without substitution of alternative financial assurance as specified in this Section, will constitute a significant violation of these regulations, warranting such remedy as the Board may impose pursuant to the Environmental Protection Act [415 ILCS 5]. Such violation will be deemed to begin upon receipt by the Agency of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

- 7) Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.
- 8) The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Agency. Cancellation, termination, or failure to renew may not occur, however, during the 120 days beginning with the date of receipt of the notice by both the Agency and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur, and the policy will remain in full force and effect, in the event that on or before the date of expiration one of the following occurs:
  - A) The Agency deems the facility abandoned;
  - B) The permit is terminated or revoked or a new permit is denied;
  - C) Closure is ordered by the Board or a U.S. district court or other court of competent jurisdiction;
  - D) The owner or operator is named as debtor in a voluntary or involuntary proceeding under 11 USC (Bankruptcy); or
  - E) The premium due is paid.
- 9) Whenever the current post-closure cost estimate increases to an amount greater than the face amount of the policy during the life of the facility, the owner or operator, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current post-

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closure cost estimate and submit evidence of such increase to the Agency or obtain other financial assurance, as specified in this Section, to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the face amount may be reduced to the amount of the current post-closure cost estimate following written approval by the Agency.

- 10) Commencing on the date that liability to make payments pursuant to the policy accrues, the insurer must thereafter annually increase the face amount of the policy. Such increase must be equivalent to the face amount of the policy, less any payments made, multiplied by an amount equivalent to 85 percent of the most recent investment rate or of the equivalent coupon-issue yield announced by the U.S. Treasury for 26-week Treasury securities.
  - 11) The Agency must give written consent to the owner or operator that the owner or operator may terminate the insurance policy when either of the following occurs:
    - A) An owner or operator substitutes alternative financial assurance, as specified in this Section; or
    - B) The Agency releases the owner or operator from the requirements of this Section in accordance with subsection (i) ~~of this Section~~.
- f) Financial Test and Corporate Guarantee for Post-Closure Care ~~test and corporate guarantee for post-closure care~~.
- 1) An owner or operator may satisfy the requirements of this Section by demonstrating that it passes a financial test as specified in this subsection (f). To pass this test the owner or operator must meet the criteria of either subsection (f)(1)(A) or (f)(1)(B) ~~of this Section~~:
    - A) The owner or operator must have the following:
      - i) Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5;

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- ii) Net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates;
  - iii) Tangible net worth of at least \$10 million; and
  - iv) Assets in the United States amounting to at least 90 percent of its total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.
- B) The owner or operator must have the following:
- i) A current rating for its most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's;
  - ii) Tangible net worth at least six times the sum of the current closure and post-closure cost estimates and current plugging and abandonment cost estimates;
  - iii) Tangible net worth of at least \$10 million; and
  - iv) Assets located in the United States amounting to at least 90 percent of its total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.
- 2) The phrase "current closure and post-closure cost estimates," as used in subsection (f)(1) ~~of this Section~~, refers to the cost estimates required to be shown in subsections 1 through 4 of the letter from the owner's or operator's chief financial officer (see Section 724.251). The phrase "current plugging and abandonment cost estimates," as used in subsection (f)(1) ~~of this Section~~, refers to the cost estimates required to be shown in subsections 1 through 4 of the letter from the owner's or operator's chief financial officer (see 35 Ill. Adm. Code 704.240).
- 3) To demonstrate that it meets this test, the owner or operator must submit the following items to the Agency:



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- A) A letter signed by the owner's or operator's chief financial officer and worded as specified in Section 724.251;
- B) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and
- C) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating the following:
  - i) The accountant has compared the data that the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and
  - ii) In connection with that procedure, no matters came to the accountant's attention that caused the accountant to believe that the specified data should be adjusted.
- 4) An owner or operator of a new facility must submit the items specified in subsection (f)(3) of this Section to the Agency at least 60 days before the date on which hazardous waste is first received for disposal.
- 5) After the initial submission of items specified in subsection (f)(3) of this Section, the owner or operator must send updated information to the Agency within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in subsection (f)(3) of this Section.
- 6) If the owner or operator no longer meets the requirements of subsection (f)(1) of this Section, the owner or operator must send notice to the Agency of intent to establish alternative financial assurance, as specified in this Section. The notice must be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements the owner or operator must provide the alternative financial assurance within 120 days after the end of such fiscal year.
- 7) Based on a reasonable belief that the owner or operator may no longer meet the requirements of subsection (f)(1) of this Section, the Agency may

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require reports of financial condition at any time from the owner or operator in addition to those specified in subsection (f)(3) ~~of this Section~~. If the Agency finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of subsection (f)(1) ~~of this Section~~, the owner or operator must provide alternative financial assurance, as specified in this Section, within 30 days after notification of such a finding.

- 8) The Agency may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in the accountant's report on examination of the owner's or operator's financial statements (see subsection (f)(3)(B) ~~of this Section~~). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The Agency must evaluate other qualifications on an individual basis. The owner or operator must provide alternative financial assurance, as specified in this Section, within 30 days after notification of the disallowance.
- 9) During the period of post-closure care, the Agency must approve a decrease in the current post-closure cost estimate for which this test demonstrates financial assurance if the owner or operator demonstrates to the Agency that the amount of the cost estimate exceeds the remaining cost of post-closure care.
- 10) The owner or operator is no longer required to submit the items specified in subsection (f)(3) ~~of this Section~~ when either of the following occurs:
  - A) An owner or operator substitutes alternative financial assurance, as specified in this Section; or
  - B) The Agency releases the owner or operator from the requirements of this Section in accordance with subsection (i) ~~of this Section~~.
- 11) An owner or operator may meet the requirements of this Section by obtaining a written guarantee, hereafter referred to as "corporate guarantee." The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in subsections (f)(1) through (f)(9), and must comply with the terms of the corporate guarantee. The wording of the corporate guarantee must be that specified in Section 724.251. A certified copy of the corporate guarantee

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must accompany the items sent to the Agency, as specified in subsection (f)(3) ~~of this Section~~. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the corporate guarantee must provide as follows:

- A) That if the owner or operator fails to perform post-closure care of a facility covered by the corporate guarantee in accordance with the post-closure plan and other permit requirements whenever required to do so, the guarantor will do so or establish a trust fund as specified in subsection (a) ~~of this Section~~ in the name of the owner or operator.
  - B) That the corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the Agency. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Agency, as evidenced by the return receipts.
  - C) That if the owner or operator fails to provide alternative financial assurance as specified in this Section and obtain the written approval of such alternative assurance from the Agency within 90 days after receipt by both the owner or operator and the Agency of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternative financial assurance in the name of the owner or operator.
- g) Use of Multiple Financial Mechanisms ~~multiple financial mechanisms~~. An owner or operator may satisfy the requirements of this Section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit and insurance. The mechanisms must be as specified in subsections (a), (b), (d), and (e) ~~of this Section~~, respectively, except that it is the combination of mechanisms, rather than the single mechanism, that must provide financial assurance for an amount at least equal to the current post-closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, it

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may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The Agency may use any or all of the mechanisms to provide for post-closure care of the facility.

- h) Use of a Financial Mechanism for Multiple Facilities ~~financial mechanism for multiple facilities~~. An owner or operator may use a financial assurance mechanism specified in this Section to meet the requirements of this Section for more than one facility. Evidence of financial assurance submitted to the Agency must include a list showing, for each facility, the USEPA identification number, name, address, and the amount of funds for post-closure care assured by the mechanism. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. The amount of funds available to the Agency must be sufficient to close all of the owner or operator's facilities. In directing funds available through the mechanism for post-closure care of any of the facilities covered by the mechanism, the Agency may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.
- i) Release of the Owner or Operator from the Requirements ~~owner or operator from the requirements~~ of this Section. Within 60 days after receiving certifications from the owner or operator and a qualified Professional Engineer that the post-closure care period has been completed for a hazardous waste disposal unit in accordance with the approved plan, the Agency must notify the owner or operator that it is no longer required to maintain financial assurance for post-closure ~~for post-closure~~ care of that unit, unless the Agency determines that post-closure care has not been in accordance with the approved post-closure plan. The Agency must provide the owner or operator a detailed written statement of any such determination that post-closure care has not been in accordance with the approved post-closure plan.
- j) Appeal. The following Agency actions are deemed to be permit modifications or refusals to modify for purposes of appeal to the Board (35 Ill. Adm. Code 702.184(e)(3)):
  - 1) An increase in or a refusal to decrease the amount of a bond, letter of credit, or insurance;
  - 2) Requiring alternative assurance upon a finding that an owner or operator or parent corporation no longer meets a financial test.

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(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART N: LANDFILLS

**Section 724.414 Special Requirements for Bulk and Containerized Liquids**

- a) The placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids (whether or not sorbents have been added) in any landfill is prohibited.
- b) To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test must be used: Method 9095B (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," USEPA publication number EPA-530/SW-846, incorporated by reference in 35 Ill. Adm. Code 720.111(a).
- c) Containers holding free liquids must not be placed in a landfill unless the following is true:
  - 1) All free-standing liquid fulfills one of the following:
    - A) It has been removed by decanting or other methods;
    - B) It has been mixed with sorbent or solidified so that free-standing liquid is no longer observed; or
    - C) It has been otherwise eliminated; or
  - 2) The container is very small, such as an ampule; or
  - 3) The container is designed to hold free liquids for use other than storage, such as a battery or capacitor; or
  - 4) The container is a lab pack, as defined in Section 724.416, and is disposed of in accordance with Section 724.416.
- d) Sorbents used to treat free liquids to be disposed of in landfills must be nonbiodegradable. Nonbiodegradable sorbents are the following: materials listed or described in subsection (d)(1) ~~of this Section~~; materials that pass one of the tests in subsection ~~(d)(2)-(e)(2) of this Section~~; or materials that are determined by the Board to be nonbiodegradable through the adjusted standard procedure of 35 Ill. Adm. Code 104.



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- 1) Nonbiodegradable sorbents are the following:
  - A) Inorganic minerals, other inorganic materials, and elemental carbon (e.g., aluminosilicates (clays, smectites, Fuller's earth, bentonite, calcium bentonite, montmorillonite, calcined montmorillonite, kaolinite, micas (illite), vermiculites, zeolites, etc.), calcium carbonate (organic free limestone), oxides/hydroxides (alumina, lime, silica (sand), diatomaceous earth, etc.), perlite (volcanic glass), expanded volcanic rock, volcanic ash, cement kiln dust, fly ash, rice hull ash, activated charcoal (activated carbon), etc.); or
  - B) High molecular weight synthetic polymers (e.g., polyethylene, high density polyethylene (HDPE), polypropylene, polystyrene, polyurethane, polyacrylate, polynorborene, polyisobutylene, ground synthetic rubber, cross-linked allylstrene and tertiary butyl copolymers, etc.). This does not include polymers derived from biological material or polymers specifically designed to be degradable; or
  - C) Mixtures of these nonbiodegradable materials.
- 2) Tests for nonbiodegradable sorbents are the following:
  - A) The sorbent material is determined to be nonbiodegradable under ASTM Method G21-70 (1984a) (Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi), incorporated by reference in 35 Ill. Adm. Code 720.111(a);
  - B) The sorbent material is determined to be nonbiodegradable under ASTM Method G22-76 (1984b) (Standard Practice for Determining Resistance of Plastics to Bacteria), incorporated by reference in 35 Ill. Adm. Code 720.111(a); or
  - C) The sorbent material is determined to be non-biodegradable under OECD Guideline for Testing of Chemicals, Method 301B (CO<sub>2</sub> Evolution (Modified Sturm Test)), incorporated by reference in 35 Ill. Adm. Code 720.111(a).
- e) The placement of any liquid that is not a hazardous waste in a hazardous waste landfill is prohibited (35 Ill. Adm. Code 729.311), unless the Board finds that the owner or operator has demonstrated the following in a petition for an adjusted

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standard pursuant to Section 28.1 of the Act [415 ILCS 5/28.1] and 35 Ill. Adm. Code 101 and 104:

- 1) The only reasonably available alternative to the placement in a hazardous waste landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating under interim status, that contains or which may reasonably be anticipated to contain hazardous waste; and
- 2) Placement in the hazardous waste landfill will not present a risk of contamination of any "underground source of drinking water" (as that term is defined in 35 Ill. Adm. Code 702.110).

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART W: DRIP PADS

**Section 724.670 Applicability**

- a) The requirements of this Subpart W apply to owners and operators of facilities that use new or existing drip pads to convey treated wood drippage, precipitation, or surface water run-on to an associated collection system.
  - 1) "Existing drip pads" are the following:
    - A) Those constructed before December 6, 1990; and
    - B) Those for which the owner or operator had a design and had entered into binding financial or other agreements for construction prior to December 6, 1990.
  - 2) All other drip pads are "new drip pads."
  - 3) The requirements at Section 724.673(b)(3) to install a leak collection system applies only to those drip pads that were constructed after December 24, 1992 except for those constructed after December 24, 1992 for which the owner or operator had a design and has entered into binding financial or other agreements for construction prior to December 24, 1992.
- b) The owner or operator of any drip pad that is inside or under a structure that provides protection from precipitation so that neither run-off nor run-on is generated is not subject to regulation under Section ~~724.673(e)~~ ~~724.672(e)~~ or (f).

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- c) The requirements of this subsection (c) are not applicable to the management of infrequent and incidental drippage in storage yards provided that the owner or operator maintains and complies with a written contingency plan that describes how the owner or operator will respond immediately to the discharge of infrequent and incidental drippage. At a minimum, the contingency plan must describe how the owner or operator will do the following:
- 1) Clean up the drippage;
  - 2) Document the clean-up of the drippage;
  - 3) Retain documentation regarding the clean-up for three years; and
  - 4) Manage the contaminated media in a manner consistent with State and federal regulations.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 724.671 Assessment of Existing Drip Pad Integrity**

- a) For each existing drip pad, the owner or operator must evaluate the drip pad and determine whether it meets all of the requirements of this Subpart W, except the requirements for liners and leak detection systems of Section 724.673(b). No later than June 6, 1991, the owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by a qualified Professional Engineer that attests to the results of the evaluation. The assessment must be reviewed, updated, and re-certified annually until all upgrades, repairs or modifications necessary to achieve compliance with all the standards of Section 724.673 are complete. The evaluation must document the extent to which the drip pad meets each of the design and operating standards of Section 724.673, except the standards for liners and leak detection systems, specified in Section 724.673(b).
- b) The owner or operator must develop a written plan for upgrading, repairing, and modifying the drip pad to meet the requirements of Section 724.673(b) and submit the plan to the Agency no later than two years before the date that all repairs, upgrades and modifications will be complete. This written plan must describe all changes to be made to the drip pad in sufficient detail to document compliance with all the requirements of Section 724.673. The plan must be reviewed and certified by a qualified Professional Engineer.

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- c) Upon completion of all upgrades, repairs, and modifications, the owner or operator must submit to the Agency, the as-built drawings for the drip pad, together with a certification by a qualified Professional Engineer attesting that the drip pad conforms to the drawings.
- d) If the drip pad is found to be leaking or unfit for use, the owner or operator must comply with the provisions of Section ~~724.673(m)~~ ~~724.672(m)~~ or close the drip pad in accordance with Section 724.675.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART AA: AIR EMISSION STANDARDS FOR PROCESS VENTS

**Section 724.933 Standards: Closed-Vent Systems and Control Devices**

- a) Compliance Required.
  - 1) Owners or operators of closed-vent systems and control devices used to comply with provisions of this Part must comply with the provisions of this Section.
  - 2) Implementation Schedule.
    - A) The owner or operator of an existing facility that cannot install a closed-vent system and control device to comply with the provisions of this Subpart AA on the effective date that the facility becomes subject to the provisions of this Subpart AA must prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to 30 months after the effective date that the facility becomes subject to this Subpart AA for installation and startup.
    - B) Any unit that began operation after December 21, 1990 and which was subject to the provisions of this Subpart AA when operation began must comply with the rules immediately (i.e., must have control devices installed and operating on startup of the affected unit); the 30-month implementation schedule does not apply.
    - C) The owner or operator of any facility in existence on the effective date of a statutory or regulatory amendment that renders the



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facility subject to this Subpart AA must comply with all requirements of this Subpart AA as soon as practicable, but no later than 30 months after the effective date of the amendment. When control equipment required by this Subpart AA cannot be installed and begin operation by the effective date of the amendment, the facility owner or operator must 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 AA. The owner or operator must enter the implementation schedule in the operating record or in a permanent, readily available file located at the facility.

- D) An owner or operator of a facility or unit that becomes newly subject to the requirements of this Subpart AA after December 8, 1997, due to an action other than those described in subsection (a)(2)(C) of this Section, must comply with all applicable requirements immediately (i.e., the facility or unit must have control devices installed and operating on the date the facility or unit becomes subject to this Subpart AA; the 30-month implementation schedule does not apply).
- b) A control device involving vapor recovery (e.g., a condenser or adsorber) must be designed and operated to recover the organic vapors vented to it with an efficiency of 95 weight percent or greater unless the total organic emission limits of Section 724.932(a)(1) for all affected process vents is attained at an efficiency less than 95 weight percent.
- c) An enclosed combustion device (e.g., a vapor incinerator, boiler, or process heater) must be designed and operated to reduce the organic emissions vented to it by 95 weight percent or greater; to achieve a total organic compound concentration of 20 ppmv, expressed as the sum of the actual compounds and not in carbon equivalents, on a dry basis, corrected to three percent oxygen; or to provide a minimum residence time of 0.50 seconds at a minimum temperature of ~~760° C~~ ~~760° C~~. If a boiler or process heater is used as the control device, then the vent stream must be introduced into the flame zone of the boiler or process heater.
- d) Flares.



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- 1) A flare must be designed for and operated with no visible emissions, as determined by the methods specified in subsection (e)(1) ~~of this Section~~, except for periods not to exceed a total of five minutes during any two consecutive hours.
- 2) A flare must be operated with a flame present at all times, as determined by the methods specified in subsection (f)(2)(C) ~~of this Section~~.
- 3) A flare must be used only if the net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) or greater and the flare is steam-assisted or air-assisted or if the net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) or greater and the flare is nonassisted. The net heating value of the gas being combusted must be determined by the methods specified in subsection (e)(2) ~~of this Section~~.
- 4) Exit Velocity.
  - A) A steam-assisted or nonassisted flare must be designed for and operated with an exit velocity, as determined by the methods specified in subsection (e)(3) ~~of this Section~~, less than 18.3 m/s (60 ft/s), except as provided in subsections (d)(4)(B) and (d)(4)(C) ~~of this Section~~.
  - B) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in subsection (e)(3) ~~of this Section~~, equal to or greater than 18.3 m/s (60 ft/s) but less than 122 m/s (400 ft/s) is allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).
  - C) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in subsection (e)(3) ~~of this Section~~, less than the velocity, V, as determined by the method specified in subsection (e)(4) ~~of this Section~~, and less than 122 m/s (400 ft/s) is allowed.
- 5) An air-assisted flare must be designed and operated with an exit velocity less than the velocity, V, as determined by the method specified in subsection (e)(5) ~~of this Section~~.
- 6) A flare used to comply with this Section must be steam-assisted, air-assisted, or nonassisted.

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- e) Compliance Determination and Equations ~~determination and equations~~.
- 1) Reference Method 22 (Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b), must be used to determine the compliance of a flare with the visible emission provisions of this Subpart AA. The observation period is two hours and must be used according to Reference Method 22.
  - 2) The net heating value of the gas being combusted in a flare must be calculated using the following equation:

$$H_T = K \times \sum_{i=1}^n C_i \times H_i$$

Where:

$H_T$  = the net heating value of the sample in MJ/scm;  
where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C

$K$  =  $1.74 \times 10^{-7}$  (1/ppm)(g mol/scm)(MJ/kcal) where the standard temperature for (g mol/scm) is 20 °C;

$\Sigma(X_i)$  = the sum of the values of X for each component i, from i=1 to n

$C_i$  = the concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 (Measurement of Gaseous Organic Compound Emissions by Gas Chromatography) in appendix A to 40 CFR 60 (Test Methods), and for carbon monoxide, by ASTM D 1946-90 (Standard Practice for Analysis of Reformed Gas by Gas Chromatography), each incorporated by reference in 35 Ill. Adm. Code 720.111; and

$H_i$  = the net heat of combustion of sample component i, kcal/gmol at 25 °C and 760 mm Hg. The heats of combustion must be determined using ASTM D

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2382-88 (Standard Test Method for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High Precision Method)), incorporated by reference in 35 Ill. Adm. Code 720.111(a), if published values are not available or cannot be calculated.

- 3) The actual exit velocity of a flare must be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Reference Methods 2 (Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)), 2A (Direct Measurement of Gas Volume through Pipes and Small Ducts), 2C (Determination of Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts (Standard Pitot Tube)), or 2D (Measurement of Gas Volume Flow Rates in Small Pipes and Ducts) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b), as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.
- 4) The maximum allowed velocity in m/s,  $V_{\max}$ , for a flare complying with subsection (d)(4)(C) of this Section must be determined by the following equation:

$$\log_{10}(V_{\max}) = \frac{H_T + 28.8}{31.7}$$

Where:

$\log_{10}$  = logarithm to the base 10

$H_T$  = the net heating value as determined in subsection (e)(2) of this Section.

- 5) The maximum allowed velocity in m/s,  $V_{\max}$ , for an air-assisted flare must be determined by the following equation:

$$V_{\max} = 8.706 + 0.7084H_T$$

Where:

$H_T$  = the net heating value as determined in subsection (e)(2) of this Section.



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- f) The owner or operator must monitor and inspect each control device required to comply with this Section to ensure proper operation and maintenance of the control device by implementing the following requirements:
- 1) Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of stream flow from each affected process vent to the control device at least once every hour. The flow indicator sensor must be installed in the vent stream at the nearest feasible point to the control device inlet but before the point at which the vent streams are combined.
  - 2) Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation, as follows:
    - A) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device must have accuracy of  $\pm 1$  percent of the temperature being monitored in  $^{\circ}\text{C}^{\circ}\text{C}$  or  $\pm 0.5^{\circ}\text{C}^{\circ}\text{C}$ , whichever is greater. The temperature sensor must be installed at a location in the combustion chamber downstream of the combustion zone.
    - B) For a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature at two locations and have an accuracy of  $\pm 1$  percent of the temperature being monitored in  $^{\circ}\text{C}^{\circ}\text{C}$  or  $\pm 0.5^{\circ}\text{C}^{\circ}\text{C}$ , whichever is greater. One temperature sensor must be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor must be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.
    - C) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.
    - D) For a boiler or process heater having a design heat input capacity less than 44 MW, a temperature monitoring device equipped with a continuous recorder. The device must have an accuracy of  $\pm 1$  percent of the temperature being monitored in  $^{\circ}\text{C}^{\circ}\text{C}$  or  $\pm 0.5^{\circ}\text{C}^{\circ}\text{C}$ , whichever is greater. The temperature sensor must be installed at a location in the furnace downstream of the combustion zone.

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- E) For a boiler or process heater having a design heat input capacity greater than or equal to 44 MW, a monitoring device equipped with a continuous recorder to measure parameters that indicate good combustion operating practices are being used.
  - F) For a condenser, either of the following:
    - i) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the condenser; or
    - ii) A temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature with an accuracy of  $\pm 1$  percent of the temperature being monitored in  $^{\circ}\text{C}$  or  $\pm 0.5$   $^{\circ}\text{C}$ , whichever is greater. The temperature sensor must be installed at a location in the exhaust vent stream from the condenser exit (i.e., product side).
  - G) For a carbon adsorption system that regenerates the carbon bed directly in the control device such as a fixed-bed carbon adsorber, either of the following:
    - i) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the carbon bed, or
    - ii) A monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated on a regular, predetermined time cycle.
- 3) Inspect the readings from each monitoring device required by subsections (f)(1) and (f)(2) of this Section at least once each operating day to check control device operation and, if necessary, immediately implement the corrective measures necessary to ensure the control device operates in compliance with the requirements of this Section.
- g) An owner or operator using a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device must replace the existing carbon in the control device with fresh carbon at



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a regular, predetermined time interval that is no longer than the carbon service life established as a requirement of Section 724.935(b)(4)(C)(vi).

- h) An owner or operator using a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device must replace the existing carbon in the control device with fresh carbon on a regular basis by using one of the following procedures:
  - 1) Monitor the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system on a regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency must be daily or at an interval no greater than 20 percent of the time required to consume the total carbon working capacity established as a requirement of Section 724.935(b)(4)(C)(vii), whichever is longer.
  - 2) Replace the existing carbon with fresh carbon at a regular, predetermined time interval that is less than the design carbon replacement interval established as a requirement of Section 724.935(b)(4)(C)(vii).
- i) An alternative operational or process parameter may be monitored if the operator demonstrates that the parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.
- j) An owner or operator of an affected facility seeking to comply with the provisions of this Part by using a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system is required to develop documentation including sufficient information to describe the control device operation and identify the process parameter or parameters that indicate proper operation and maintenance of the control device.
- k) A closed-vent system must meet either of the following design requirements:
  - 1) A closed-vent system must be designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, as determined by the methods specified at Section 724.934(b), and by visual inspections; or
  - 2) A closed-vent system must be designed to operate at a pressure below atmospheric pressure. The system must be equipped with at least one pressure gauge or other pressure measurement device that can be read

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from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

- 1) The owner or operator must monitor and inspect each closed-vent system required to comply with this Section to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements:
  - 1) Each closed-vent system that is used to comply with subsection (k)(1) of ~~this Section~~ must be inspected and monitored in accordance with the following requirements:
    - A) An initial leak detection monitoring of the closed-vent system must be conducted by the owner or operator on or before the date that the system becomes subject to this Section. The owner or operator must monitor the closed-vent system components and connections using the procedures specified in Section 724.934(b) to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background.
    - B) After initial leak detection monitoring required in subsection (l)(1)(A) of ~~this Section~~, the owner or operator must inspect and monitor the closed-vent system as follows:
      - i) Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) must be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The owner or operator must monitor a component or connection using the procedures specified in Section 724.934(b) to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced (e.g., a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (e.g., a flange is unbolted).
      - ii) Closed-vent system components or connections other than those specified in subsection (l)(1)(B)(i) of ~~this Section~~ must be monitored annually and at other times as requested by the Regional Administrator, except as provided for in subsection (o) of ~~this Section~~, using the procedures

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specified in Section 724.934(b) to demonstrate that the components or connections operate with no detectable emissions.

- C) In the event that a defect or leak is detected, the owner or operator must repair the defect or leak in accordance with the requirements of subsection (1)(3) ~~of this Section~~.
  - D) The owner or operator must maintain a record of the inspection and monitoring in accordance with the requirements specified in Section 724.935.
- 2) Each closed-vent system that is used to comply with subsection (k)(2) ~~of this Section~~ must be inspected and monitored in accordance with the following requirements:
- A) The closed-vent system must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping or loose connections.
  - B) The owner or operator must perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to this Section. Thereafter, the owner or operator must perform the inspections at least once every year.
  - C) In the event that a defect or leak is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (1)(3) ~~of this Section~~.
  - D) The owner or operator must maintain a record of the inspection and monitoring in accordance with the requirements specified in Section 724.935.
- 3) The owner or operator must repair all detected defects as follows:
- A) Detectable emissions, as indicated by visual inspection or by an instrument reading greater than 500 ppmv above background, must be controlled as soon as practicable, but not later than 15 calendar days after the emission is detected, except as provided for in subsection (1)(3)(C) ~~of this Section~~.

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- B) A first attempt at repair must be made no later than five calendar days after the emission is detected.
  - C) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment must be completed by the end of the next process unit shutdown.
  - D) The owner or operator must maintain a record of the defect repair in accordance with the requirements specified in Section 724.935.
- m) A closed-vent system or control device used to comply with provisions of this Subpart AA must be operated at all times when emissions may be vented to it.
- n) The owner or operator using a carbon adsorption system to control air pollutant emissions must document that all carbon removed that is a hazardous waste and that is removed from the control device is managed in one of the following manners, regardless of the volatile organic concentration of the carbon:
- 1) It is regenerated or reactivated in a thermal treatment unit that meets one of the following:
    - A) The owner or operator of the unit has been issued a final permit under 35 Ill. Adm. Code 702, 703, and 705 that implements the requirements of Subpart X of this Part; or
    - B) The unit is equipped with and operating air emission controls in accordance with the applicable requirements of Subparts AA and CC of this Part or Subparts AA and CC of 35 Ill. Adm. Code 725; or
    - C) The unit is equipped with and operating air emission controls in accordance with a national emission standard for hazardous air pollutants under 40 CFR 61 (National Emission Standards for Hazardous Air Pollutants) or 63 (National Emission Standards for Hazardous Air Pollutants for Source Categories), each incorporated by reference in 35 Ill. Adm. Code 720.111(b).

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- 2) It is incinerated in a hazardous waste incinerator for which the owner or operator has done either of the following:
  - A) The owner or operator has been issued a final permit under 35 Ill. Adm. Code 702, 703, and 705 that implements the requirements of Subpart O of this Part; or
  - B) The owner or operator has certified compliance in accordance with the interim status requirements of Subpart O of 35 Ill. Adm. Code 725.
- 3) It is burned in a boiler or industrial furnace for which the owner or operator has done either of the following:
  - A) The owner or operator has been issued a final permit under 35 Ill. Adm. Code 702, 703, and 705 that implements the requirements of Subpart H of 35 Ill. Adm. Code 726; or
  - B) The owner or operator has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of Subpart H of 35 Ill. Adm. Code 726.
- o) Any components of a closed-vent system that are designated, as described in Section 724.935(c)(9), as unsafe to monitor are exempt from the requirements of subsection (l)(1)(B)(ii) ~~of this Section~~ if both of the following conditions are fulfilled:
  - 1) The owner or operator of the closed-vent system has determined that the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with subsection (l)(1)(B)(ii) ~~of this Section~~; and
  - 2) The owner or operator of the closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedure specified in subsection (l)(1)(B)(ii) ~~of this Section~~ as frequently as practicable during safe-to-monitor times.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)



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**Section 724.934 Test Methods and Procedures**

- a) Each owner or operator subject to the provisions of this Subpart AA must comply with the test methods and procedures requirements provided in this Section.
- b) When a closed-vent system is tested for compliance with no detectable emissions, as required in Section 724.933(l), the test must comply with the following requirements:
  - 1) Monitoring must comply with Reference Method 21 (Determination of Volatile Organic Compound Leaks) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b).
  - 2) The detection instrument must meet the performance criteria of Reference Method 21.
  - 3) The instrument must be calibrated before use on each day of its use by the procedures specified in Reference Method 21.
  - 4) Calibration gases must be as follows:
    - A) Zero air (less than 10 ppm of hydrocarbon in air); and
    - B) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.
  - 5) The background level must be determined as set forth in Reference Method 21.
  - 6) The instrument probe must be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.
  - 7) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.
- c) Performance tests to determine compliance with Section 724.932(a) and with the total organic compound concentration limit of Section 724.933(c) must comply with the following:
  - 1) Performance tests to determine total organic compound concentrations and mass flow rates entering and exiting control devices must be conducted

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and data reduced in accordance with the following reference methods and calculation procedures:

- A) Reference Method 2 (Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b), for velocity and volumetric flow rate.
- B) Reference Method 18 (Measurement of Gaseous Organic Compound Emissions by Gas Chromatography) or Reference Method 25A (Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b), for organic content. If Reference Method 25A is used, the organic HAP used as the calibration gas must be the single organic HAP representing the largest percent by volume of the emissions. The use of Reference Method 25A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.
- C) Each performance test must consist of three separate runs, each run conducted for at least one hour under the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. For the purpose of determining total organic compound concentrations and mass flow rates, the average of results of all runs applies. The average must be computed on a time-weighted basis.
- D) Total organic mass flow rates must be determined by the following equation:
- i) For a source using Reference Method 18:

$$E_h = Q_{2sd} \times \left( \sum_{i=1}^n C_i \times MW_i \right) \times 0.0416 \times 10^{-6}$$

Where:

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- $E_h$  = The total organic mass flow rate, kg/h;  
 $Q_{2sd}$  = The volumetric flow rate of gases entering or exiting control device, dscm/h, as determined by Reference Method 2;  
 $n$  = The number of organic compounds in the vent gas;  
 $C_i$  = The organic concentration in ppm, dry basis, of compound  $i$  in the vent gas, as determined by Reference Method 18;  
 $MW_i$  = The molecular weight of organic compound  $i$  in the vent gas, kg/kg-mol;  
0.0416 = The conversion factor for molar volume, kg-mol/m<sup>3</sup>, at 293 K and 760 mm Hg; and  
 $10^{-6}$  = The conversion factor from ppm.

- ii) For a source using Reference Method 25A:

$$E_h = Q \times C \times MW \times 0.0416 \times 10^{-6}$$

Where:

- $E_h$  = The total organic mass flow rate, kg/h;  
 $Q$  = The volumetric flow rate of gases entering or exiting control device, dscm/h, as determined by Reference Method 2;  
 $C$  = The organic concentration in ppm, dry basis, of compound  $i$  in the vent gas, as determined by Reference Method 25A;  
 $MW$  = The molecular weight of propane, 44 kg/kg-mol;

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0.0416 = The conversion factor for molar volume, kg-mol/m<sup>3</sup>, at 293 K and 760 mm Hg; and

10<sup>-6</sup> = The conversion factor from ppm.

- E) The annual total organic emission rate must be determined by the following equation:

$$A = F \times H$$

Where:

- A = total organic emission rate, kg/y;  
F = the total organic mass flow rate, kg/h, as calculated in subsection (c)(1)(D); ~~and of this Section.~~  
H = the total annual hours of operation for the affected unit, h/y.

- F) Total organic emissions from all affected process vents at the facility must be determined by summing the hourly total organic mass emissions rates (F as determined in subsection (c)(1)(D) ~~of this Section~~) and by summing the annual total organic mass emission rates (A as determined in subsection (c)(1)(E) ~~of this Section~~) for all affected process vents at the facility.
- 2) The owner or operator must record such process information as is necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction do not constitute representative conditions for the purpose of a performance test.
- 3) The owner or operator of an affected facility must provide, or cause to be provided, performance testing facilities as follows:
- A) Sampling ports adequate for the test methods specified in subsection (c)(1) ~~of this Section~~.
  - B) Safe sampling platforms.
  - C) Safe access to sampling platforms.

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- D) Utilities for sampling and testing equipment.
- 4) For the purpose of making compliance determinations, the time-weighted average of the results of the three runs must apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the Agency's approval, be determined using the average of the results of the two other runs.
- d) To show that a process vent associated with a hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of this Subpart AA, the owner or operator must make an initial determination that the time-weighted, annual average total organic concentration of the waste managed by the waste management unit is less than 10 ppmw using one of the following two methods:
- 1) Direct measurement of the organic concentration of the waste using the following procedures:
- A) The owner or operator must take a minimum of four grab samples of waste for each wastestream managed in the affected unit under process conditions expected to cause the maximum waste organic concentration.
- B) For waste generated onsite, the grab samples must be collected at a point before the waste is exposed to the atmosphere, such as in an enclosed pipe or other closed system that is used to transfer the waste after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For waste generated offsite, the grab samples must be collected at the inlet to the first waste management unit that receives the waste provided the waste has been transferred to the facility in a closed system such as a tank truck and the waste is not diluted or mixed with other waste.
- C) Each sample must be analyzed and the total organic concentration of the sample must be computed using Method 9060A (Total Organic Carbon) of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," USEPA publication number EPA-



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530/SW-846, incorporated by reference under 35 Ill. Adm. Code 720.111(a), or analyzed for its individual constituents.

- D) The arithmetic mean of the results of the analyses of the four samples apply for each wastestream managed in the unit in determining the time-weighted, annual average total organic concentration of the waste. The time-weighted average is to be calculated using the annual quantity of each waste stream processed and the mean organic concentration of each wastestream managed in the unit.
- 2) Using knowledge of the waste to determine that its total organic concentration is less than 10 ppmw. Documentation of the waste determination is required. Examples of documentation that must be used to support a determination under this subsection (d)(2) include the following:
  - A) Production process information documenting that no organic compounds are used;
  - B) Information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to generate a wastestream having a total organic content less than 10 ppmw; or
  - C) Prior speciation analysis results on the same wastestream where it is also documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.
- e) The determination that a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation that manages hazardous wastes that have time-weighted, annual average total organic concentrations less than 10 ppmw must be made as follows:
  - 1) By the effective date that the facility becomes subject to the provisions of this Subpart AA or by the date when the waste is first managed in a waste management unit, whichever is later; and either of the following:
  - 2) For continuously generated waste, annually; or
  - 3) Whenever there is a change in the waste being managed or a change in the process that generates or treats the waste.

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- f) When an owner or operator and the Agency do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous waste with organic concentrations of at least 10 ppmw based on knowledge of the waste, direct measurement may be used to resolve the dispute, as specified in subsection (d)(1) ~~of this Section~~.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 724.935 Recordkeeping Requirements**

- a) Compliance Required.
- 1) Each owner or operator subject to the provisions of this Subpart AA must comply with the recordkeeping requirements of this Section.
  - 2) An owner or operator of more than one hazardous waste management unit subject to the provisions of this Subpart AA may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.
- b) Owners and operators must record the following information in the facility operating record:
- 1) For facilities that comply with the provisions of Section 724.933(a)(2), an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The schedule must also include a rationale of why the installation cannot be completed at an earlier date. The implementation schedule must be in the facility operating record by the effective date that the facility becomes subject to the provisions of this Subpart AA.
  - 2) Up-to-date documentation of compliance with the process vent standards in Section 724.932, including the following:
    - A) Information and data identifying all affected process vents, annual throughput, and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility (i.e., the total emissions for all affected vents at the facility), and the approximate location within the facility of each affected unit (e.g., identify the hazardous waste management units on a facility plot plan).

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- B) Information and data supporting determination of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions must be made using operating parameter values (e.g., temperatures, flow rates, or vent stream organic compounds and concentrations) that represent the conditions that result in maximum organic emissions, such as when the waste management unit is operating at the highest load or capacity level reasonably expected to occur. If the owner or operator takes any action (e.g., managing a waste of different composition or increasing operating hours of affected waste management units) that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.
- 3) Where an owner or operator chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan. The test plan must include the following:
- A) A description of how it is determined that the planned test is going to be conducted when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. This must include the estimated or design flow rate and organic content of each vent stream and define the acceptable operating ranges of key process and control device parameters during the test program.
  - B) A detailed engineering description of the closed-vent system and control device including the following:
    - i) Manufacturer's name and model number of control device;
    - ii) Type of control device;
    - iii) Dimensions of the control device;
    - iv) Capacity; and
    - v) Construction materials.

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- C) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.
- 4) Documentation of compliance with Section 724.933 must include the following information:
- A) A list of all information references and sources used in preparing the documentation.
  - B) Records, including the dates of each compliance test required by Section 724.933(k).
  - C) If engineering calculations are used, a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of “APTI Course 415: Control of Gaseous Emissions,” USEPA publication number EPA-450/2-81-005, incorporated by reference in 35 Ill. Adm. Code 720.111(a), or other engineering texts, approved by the Agency, that present basic control device design information. Documentation provided by the control device manufacturer or vendor that describes the control device design in accordance with subsections (b)(4)(C)(i) through (b)(4)(C)(vii) of this Section may be used to comply with this requirement. The design analysis must address the vent stream characteristics and control device operation parameters as specified below.
    - i) For a thermal vapor incinerator, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.
    - ii) For a catalytic vapor incinerator, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

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- iii) For a boiler or process heater, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average flame zone temperatures, combustion zone residence time and description of method and location where the vent stream is introduced into the combustion zone.
- iv) For a flare, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also consider the requirements specified in Section 724.933(d).
- v) For a condenser, the design analysis must consider the vent stream composition, constituent concentrations, flow rate, relative humidity and temperature. The design analysis must also establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream and design average temperatures of the coolant fluid at the condenser inlet and outlet.
- vi) For a carbon adsorption system, such as a fixed-bed adsorber that regenerates the carbon bed directly onsite in the control device, the design analysis must consider the vent stream composition, constituent concentrations, flow rate, relative humidity and temperature. The design analysis must also establish the design exhaust vent stream organic compound concentration level, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling/drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time and design service life of carbon.
- vii) For a carbon adsorption system, such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device, the design analysis must consider the vent stream composition, constituent concentrations, flow



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rate, relative humidity and temperature. The design analysis must also establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

- D) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.
  - E) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 percent or greater unless the total organic concentration limit of Section 724.932(a) is achieved at an efficiency less than 95 weight percent or the total organic emission limits of Section 724.932(a) for affected process vents at the facility are attained by a control device involving vapor recovery at an efficiency less than 95 weight percent. A statement provided by the control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement.
  - F) If performance tests are used to demonstrate compliance, all test results.
- c) Design documentation and monitoring operating and inspection information for each closed-vent system and control device required to comply with the provisions of this Part must be recorded and kept up-to-date in the facility operating record. The information must include the following:
- 1) Description and date of each modification that is made to the closed-vent system or control device design.
  - 2) Identification of operating parameter, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with Section 724.933(f)(1) and (f)(2).

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- 3) Monitoring, operating and inspection information required by Section 724.933(f) through (k).
- 4) Date, time, and duration of each period that occurs while the control device is operating when any monitored parameter exceeds the value established in the control device design analysis as specified below:
  - A) For a thermal vapor incinerator designed to operate with a minimum residence time of 0.50 second at a minimum temperature of  $760\text{ }^{\circ}\text{C}^{\circ}\text{C}$ , any period when the combustion temperature is below  $760\text{ }^{\circ}\text{C}^{\circ}\text{C}$ .
  - B) For a thermal vapor incinerator designed to operate with an organic emission reduction efficiency of 95 weight percent or greater, any period when the combustion zone temperature is more than  $28\text{ }^{\circ}\text{C}^{\circ}\text{C}$  below the design average combustion zone temperature established as a requirement of subsection (b)(4)(C)(i) of this Section.
  - C) For a catalytic vapor incinerator, any period when:
    - i) Temperature of the vent stream at the catalyst bed inlet is more than  $28\text{ }^{\circ}\text{C}^{\circ}\text{C}$  below the average temperature of the inlet vent stream established as a requirement of subsection (b)(4)(C)(ii) of this Section; or
    - ii) Temperature difference across the catalyst bed is less than 80% of the design average temperature difference established as a requirement of subsection (b)(4)(C)(ii) of this Section.
  - D) For a boiler or process heater, any period when either of the following occurs:
    - i) Flame zone temperature is more than  $28\text{ }^{\circ}\text{C}^{\circ}\text{C}$  below the design average flame zone temperature established as a requirement of subsection (b)(4)(C)(iii) of this Section; or
    - ii) Position changes where the vent stream is introduced to the combustion zone from the location established as a requirement of subsection (b)(4)(C)(iii) of this Section.

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- E) For a flare, period when the pilot flame is not ignited.
  - F) For a condenser that complies with Section 724.933(f)(2)(F)(i), any period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the condenser are more than 20 percent greater than the design outlet organic compound concentration level established as a requirement of subsection (b)(4)(C)(v) ~~of this Section.~~
  - G) For a condenser that complies with Section 724.933(f)(2)(F)(ii), any period when the following occurs:
    - i) Temperature of the exhaust vent stream from the condenser is more than 6 ~~°C~~ above the design average exhaust vent stream temperature established as a requirement of subsection (b)(4)(C)(v) ~~of this Section.~~
    - ii) Temperature of the coolant fluid exiting the condenser is more than 6 ~~°C~~ above the design average coolant fluid temperature at the condenser outlet established as a requirement of subsection (b)(4)(C)(v) ~~of this Section.~~
  - H) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device and complies with Section 724.933(f)(2)(G)(i), any period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the carbon bed are more than 20 percent greater than the design exhaust vent stream organic compound concentration level established as a requirement of subsection (b)(4)(C)(vi) ~~of this Section.~~
  - I) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device and complies with Section 724.933(f)(2)(G)(ii), any period when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time established as a requirement of subsection (b)(4)(C)(vi) ~~of this Section.~~
- 5) Explanation for each period recorded under subsection (c)(4) ~~of this Section~~ of the cause for control device operating parameter exceeding the



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design value and the measures implemented to correct the control device operation.

- 6) For a carbon adsorption system operated subject to requirements specified in Section 724.933(g) or (h)(2), any date when existing carbon in the control device is replaced with fresh carbon.
- 7) For a carbon adsorption system operated subject to requirements specified in Section 724.933(h)(1), a log that records the following:
  - A) Date and time when control device is monitored for carbon breakthrough and the monitoring device reading; and
  - B) Date when existing carbon in the control device is replaced with fresh carbon.
- 8) Date of each control device startup and shutdown.
- 9) An owner or operator designating any components of a closed-vent system as unsafe to monitor pursuant to Section 724.933(o) must record in a log that is kept in the facility operating record the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of Section 724.933(o), an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component.
- 10) When each leak is detected, as specified in Section 724.933(l), the following information must be recorded:
  - A) The instrument identification number; the closed-vent system component identification number; and the operator name, initials, or identification number.
  - B) The date the leak was detected and the date of first attempt to repair the leak.
  - C) The date of successful repair of the leak.
  - D) Maximum instrument reading measured by Reference Method 21 (Determination of Volatile Organic Compound Leaks) of appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35

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Ill. Adm. Code 720.111(b), after it is successfully repaired or determined to be nonrepairable.

- E) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
  - i) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.
  - ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.
- d) Records of the monitoring, operating, and inspection information required by subsections (c)(3) through (c)(10) ~~of this Section~~ must be kept at least three years following the date of each occurrence, measurement, corrective action, or record.
- e) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the Agency must specify the appropriate recordkeeping requirements.
- f) Up-to-date information and data used to determine whether or not a process vent is subject to the requirements in Section 724.932, including supporting documentation as required by Section 724.934(d)(2), when application of the knowledge of the nature of the hazardous wastestream or the process by which it was produced is used, must be recorded in a log that is kept in the facility operating record.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 724.936 Reporting Requirements**

- a) A semiannual report must be submitted by owners and operators subject to the requirements of this Subpart AA to the Agency by dates specified in the RCRA permit. The report must include the following information:
  - 1) The USEPA identification number (35 Ill. Adm. Code 722.112), name, and address of the facility.



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- 2) For each month during the semiannual reporting period the following:
  - A) Dates when the control device did the following:
    - i) Exceeded or operated outside of the design specifications, as defined in Section 724.935(c)(4); and
    - ii) Such exceedances were not corrected within 24 hours, or that a flare operated with visible emissions, as defined by Reference Method 22 monitoring;
  - B) The duration and cause of each exceedance or visible emissions; and
  - C) Any corrective measures taken.
- b) If, during the semiannual reporting period, the control device does not exceed or operate outside of the design specifications, as defined in Section 724.935(c)(4), for more than 24 hours or a flare does not operate with visible emissions, as defined in Section 724.933(d), a report to the Agency is not required.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART CC: AIR EMISSION STANDARDS FOR TANKS, SURFACE  
IMPOUNDMENTS, AND CONTAINERS

**Section 724.981 Definitions**

As used in this Subpart CC, all terms will have the meaning given to them in 35 Ill. Adm. Code 725.981; section 1004 of the federal Resource Conservation and Recovery Act (42 USC 6903), incorporated by reference in 35 Ill. Adm. Code 720.111; and 35 Ill. Adm. Code 720 through 726 728.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 724.982 Standards: General**

- a) This Section applies to the management of hazardous waste in tanks, surface impoundments, and containers subject to this Subpart CC.
- b) The owner or operator must control air pollutant emissions from each waste management unit in accordance with the standards specified in Sections 724.984

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through 724.987, as applicable to the waste management unit, except as provided for in subsection (c) ~~of this Section~~.

- c) A tank, surface impoundment, or container is exempt from standards specified in Sections 724.984 through 724.987, as applicable, provided that all hazardous waste placed in the waste management unit is one of the following:
- 1) A tank, surface impoundment, or container for which all hazardous waste entering the unit has an average VO concentration at the point of waste origination of less than 500 parts per million by weight (ppmw). The average VO concentration must be determined by the procedures specified in Section 724.983(a). The owner or operator must review and update, as necessary, this determination at least once every 12 months following the date of the initial determination for the hazardous waste streams entering the unit.
  - 2) A tank, surface impoundment, or container for which the organic content of all the hazardous waste entering the waste management unit has been reduced by an organic destruction or removal process that achieves any one of the following conditions:
    - A) The process 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 ( $C_1$ ) 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 must be determined using the procedures specified in Section 724.983(b).
    - B) The process 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 100 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste treatment must be determined using the procedures specified in Section 724.983(b).
    - C) The process removes or destroys the organics contained in the hazardous waste to such a level that the actual organic mass



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removal rate (MR) for the process is equal to or 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 must be determined using the procedures specified in Section 724.983(b).

- D) The process is a biological process that destroys or degrades the organics contained in the hazardous waste so that either of the following conditions are met:
  - i) The organic reduction efficiency (R) for the process is equal to or greater than 95 percent, and the organic biodegradation efficiency ( $R_{\text{bio}}$ ) for the process is equal to or greater than 95 percent. The organic reduction efficiency and the organic biodegradation efficiency for the process must be determined using the procedures specified in Section 724.983(b).
  - ii) The total actual organic mass biodegradation rate ( $MR_{\text{bio}}$ ) 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 must be determined using the procedures specified in Section 724.983(b).
  
- E) The process removes or destroys the organics contained in the hazardous waste and meets all of the following conditions:
  - i) From the point of waste origination through the point where the hazardous waste enters the treatment process, the hazardous waste is continuously managed in waste management units that use air emission controls in accordance with the standards specified in Sections 724.984 through 724.987, as applicable to the waste management unit.
  - ii) From the point of waste origination through the point where the hazardous waste enters the treatment process, any transfer of the hazardous waste is accomplished through continuous hard-piping or other closed system

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transfer that does not allow exposure of the waste to the atmosphere.

BOARD NOTE: The USEPA considers a drain system that meets the requirements of federal subpart RR of 40 CFR 63 (National Emission Standards for Individual Drain Systems) to be a closed system.

- iii) 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 500 ppmw, whichever value is lower. The average VO concentration of each individual hazardous waste stream at the point of waste origination must be determined using the procedures specified in Section 724.983(a). The average VO concentration of the hazardous waste at the point of waste treatment must be determined using the procedures specified in Section 724.983(b).
  
- F) 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 owner or operator certifies that the average VO concentration at the point of waste origination for each of the individual waste streams entering the process is less than 10,000 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste origination must be determined using the procedures specified in Section 724.983(b) and Section 724.983(a), respectively.
  
- G) A hazardous waste incinerator for which either of the following conditions is true:
  - i) The owner or operator has been issued a final permit under 35 Ill. Adm. Code 702, 703, and 705 that implements the requirements of Subpart H of 35 Ill. Adm. Code 726; or



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- ii) The owner or operator has designed and operates the incinerator in accordance with the interim status requirements of Subpart O of 35 Ill. Adm. Code 725.
  - H) A boiler or industrial furnace for which either of the following conditions is true:
    - i) The owner or operator has been issued a final permit under 35 Ill. Adm. Code 702, 703, and 705 that implements the requirements of Subpart H of 35 Ill. Adm. Code 726; or
    - ii) The owner or operator has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of Subpart O of 35 Ill. Adm. Code 725.
  - I) For the purpose of determining the performance of an organic destruction or removal process in accordance with the conditions in each of subsections (c)(2)(A) through (c)(2)(F) ~~of this Section~~, the owner or operator must account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:
    - i) If Reference Method 25D (Determination of the Volatile Organic Concentration of Waste Samples) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b), is used for the analysis, one-half the blank value determined in Section 4.4 of the method or a value of 25 ppmw, whichever is less.
    - ii) If any other analytical method is used, one-half the sum of the limits of detection established for each organic constituent in the waste that has a Henry's law constant value at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) (which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole/m<sup>3</sup>) at 25 °C °C.
- 3) A tank or surface impoundment used for biological treatment of hazardous waste in accordance with the requirements of subsection (c)(2)(D) ~~of this Section~~.

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- 4) A tank, surface impoundment, or container for which all hazardous waste placed in the unit fulfills either of the following conditions:
  - A) It meets the numerical concentration limits for organic hazardous constituents, applicable to the hazardous waste, as specified in Table T to 35 Ill. Adm. Code 728; or
  - B) The organic hazardous constituents in the waste have been treated by the treatment technology established by USEPA for the waste, as set forth in 35 Ill. Adm. Code 728.142(a), or have been removed or destroyed by an equivalent method of treatment approved by the Agency pursuant to 35 Ill. Adm. Code 728.142(b).
  
- 5) A tank used for bulk feed of hazardous waste to a waste incinerator and all of the following conditions are met:
  - A) The tank is located inside an enclosure vented to a control device that is designed and operated in accordance with all applicable requirements specified under federal subpart FF of 40 CFR 61 (National Emission Standard for Benzene Waste Operations), incorporated by reference in 35 Ill. Adm. Code 720.111(b), for a facility at which the total annual benzene quantity from the facility waste is equal to or greater than 10 megagrams (11 tons) per year;
  - B) The enclosure and control device serving the tank were installed and began operation prior to November 25, 1996; and
  - C) The enclosure is designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" under appendix B to 40 CFR 52.741 (VOM Measurement Techniques for Capture Efficiency), incorporated by reference in 35 Ill. Adm. Code 720.111(b). The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical or electrical equipment; or to direct air flow into the enclosure. The owner or operator must perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" annually.



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- d) The Agency 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 that is 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 must be performed using direct measurement in accordance with the applicable requirements of Section 724.983(a). The waste determination for a hazardous waste at the point of waste treatment must be performed in accordance with the applicable requirements of Section 724.983(b).
  - 2) In performing a waste determination pursuant to subsection (d)(1) ~~of this Section~~, the sample preparation and analysis must be conducted as follows:
    - A) In accordance with the method used by the owner or operator to perform the waste analysis, except in the case specified in subsection (d)(2)(B) ~~of this Section~~.
    - B) If the Agency determines that the method used by the owner or operator was not appropriate for the hazardous waste managed in the tank, surface impoundment, or container, then the Agency may choose an appropriate method.
  - 3) Where the owner or operator is requested to perform the waste determination, the Agency may elect to have an authorized representative observe the collection of the hazardous waste samples used for the analysis.
  - 4) Where the results of the waste determination performed or requested by the Agency 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 subsection (d)(1) ~~of this Section~~ must be used to establish compliance with the requirements of this Subpart CC.
  - 5) Where the owner or operator has used an averaging period greater than one hour for determining the average VO concentration of a hazardous waste at the point of waste origination, the Agency may elect to establish compliance with this Subpart CC by performing or requesting that the owner or operator perform a waste determination using direct

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measurement based on waste samples collected within a one-hour period, as follows:

- A) The average VO concentration of the hazardous waste at the point of waste origination must be determined by direct measurement in accordance with the requirements of Section 724.983(a).
- B) Results of the waste determination performed or requested by the Agency showing that the average VO concentration of the hazardous waste at the point of waste origination is equal to or greater than 500 ppmw must constitute noncompliance with this Subpart CC, except in a case as provided for in subsection (d)(5)(C) ~~of this Section~~.
- C) Where 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 one hour to be less than 500 ppmw but because of normal operating process variations the VO concentration of the hazardous waste determined by direct measurement for any given one-hour period may be equal to or greater than 500 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 Section 724.983(a) and Section 724.989 must be considered by the Agency together with the results of the waste determination performed or requested by the Agency in establishing compliance with this Subpart CC.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 724.986 Standards: Containers**

- a) The provisions of this Section apply to the control of air pollutant emissions from containers for which Section 724.982(b) references the use of this Section for such air emission control.
- b) General Requirements ~~requirements~~.
  - 1) The owner or operator must control air pollutant emissions from each container subject to this Section in accordance with the following requirements, as applicable to the container, except when the special



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provisions for waste stabilization processes specified in subsection (b)(2) ~~of this Section~~ apply to the container.

- A) For a container having a design capacity greater than 0.1 m<sup>3</sup> (26 gal) and less than or equal to 0.46 m<sup>3</sup> (120 gal), the owner or operator must control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in subsection (c) ~~of this Section~~.
  - B) For a container having a design capacity greater than 0.46 m<sup>3</sup> (120 gal) that is not in light material service, the owner or operator must control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in subsection (c) ~~of this Section~~.
  - C) For a container having a design capacity greater than 0.46 m<sup>3</sup> (120 gal) that is in light material service, the owner or operator must control air pollutant emissions from the container in accordance with the Container Level 2 standards specified in subsection (d) ~~of this Section~~.
- 2) When a container having a design capacity greater than 0.1 m<sup>3</sup> (26 gal) is used for treatment of a hazardous waste by a waste stabilization process, the owner or operator must control air pollutant emissions from the container in accordance with the Container Level 3 standards specified in subsection (e) of this Section at those times during the waste stabilization process when the hazardous waste in the container is exposed to the atmosphere.
- c) Container Level 1 Standards ~~standards~~.
- 1) A container using Container Level 1 controls is one of the following:
    - A) A container that meets the applicable USDOT regulations on packaging hazardous materials for transportation, as specified in subsection (f) ~~of this Section~~.
    - B) A container equipped with a cover and closure devices that form a continuous barrier over the container openings so that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the

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container (e.g., a lid on a drum or a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (e.g., a “portable tank” or bulk cargo container equipped with a screw-type cap).

- C) An open-top container in which an organic-vapor suppressing barrier is placed on or over the hazardous waste in the container so that no hazardous waste is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.
- 2) A container used to meet the requirements of subsection (c)(1)(B) or (c)(1)(C) ~~of this Section~~ must be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere and to maintain the equipment integrity for as long as it is in service. Factors to be considered in selecting the materials of construction and designing the cover and closure devices must include the following: the organic vapor permeability; the effects of contact with the hazardous waste or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture, and sunlight; and the operating practices for which the container is intended to be used.
  - 3) Whenever a hazardous waste is in a container using Container Level 1 controls, the owner or operator must install all covers and closure devices for the container, as applicable to the container, and secure and maintain each closure device in the closed position, except as follows:
    - A) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container, as follows:
      - i) ~~In the case when~~ If the container is filled to the intended final level in one continuous operation, the owner or operator must promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.
      - ii) ~~In the case when~~ If discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator must promptly secure

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the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

- B) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container, as follows:
- i) For the purpose of meeting the requirements of this Section, an empty container, as defined in 35 Ill. Adm. Code 721.107(b), may be open to the atmosphere at any time (i.e., covers and closure devices are not required to be secured in the closed position on an empty container).
  - ii) ~~In the case when~~ If discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container, as defined in 35 Ill. Adm. Code 721.107(b), the owner or operator must promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.
- C) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator must promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.



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- D) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device that vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device must be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens must be established so that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.
  - E) Opening of a safety device, as defined in 35 Ill. Adm. Code 725.981, is allowed at any time conditions require doing so to avoid an unsafe condition.
- 4) The owner or operator of containers using Container Level 1 controls must inspect the containers and their covers and closure devices, as follows:
- A) ~~If in the case when~~ a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied within 24 hours after the container is accepted at the facility (i.e., it does not meet the conditions for an empty container, as specified in 35 Ill. Adm. Code 721.107(b)), the owner or operator must visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection must be conducted on or before the date on which the container is accepted at the facility (i.e., the date when the container becomes subject to the Subpart CC container standards). For the purposes of this



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requirement, the date of acceptance is the date of signature that the facility owner or operator enters on Item 20 of the Uniform Hazardous Waste Manifest, as set forth in the appendix to 40 CFR 262 (Uniform Hazardous Waste Manifest and Instructions (EPA Forms 8700-22 and 8700-22A and Their Instructions)), incorporated by reference in 35 Ill. Adm. Code 720.111(b) (USEPA Forms 8700-22 and 8700-22A), as required under Section 724.171. If a defect is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (c)(4)(C) ~~of this Section.~~

- B) ~~If in the case when~~ a container used for managing hazardous waste remains at the facility for a period of one year or more, the owner or operator must visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (c)(4)(C) ~~of this Section.~~
- C) When a defect is detected for the container, cover, or closure devices, the owner or operator must make first efforts at repair of the defect no later than 24 hours after detection and repair must be completed as soon as possible but no later than five calendar days after detection. If repair of a defect cannot be completed within five calendar days, then the hazardous waste must be removed from the container and the container must not be used to manage hazardous waste until the defect is repaired.
- 5) The owner or operator must maintain at the facility a copy of the procedure used to determine that containers with capacity of 0.46 m<sup>3</sup> (120 gal) or greater that do not meet applicable USDOT regulations, as specified in subsection (f) ~~of this Section~~, are not managing hazardous waste in light material service.
- d) Container Level 2 Standards ~~standards~~.
  - 1) A container using Container Level 2 controls is one of the following:

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- A) A container that meets the applicable USDOT regulations on packaging hazardous materials for transportation, as specified in subsection (f) ~~of this Section~~.
  - B) A container that operates with no detectable organic emissions, as defined in 35 Ill. Adm. Code 725.981, and determined in accordance with the procedure specified in subsection (g) ~~of this Section~~.
  - C) A container that has been demonstrated within the preceding 12 months to be vapor-tight by using Reference Method 27 (Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b), in accordance with the procedure specified in subsection (h) ~~of this Section~~.
- 2) Transfer of hazardous waste in or out of a container using Container Level 2 controls must be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the USEPA considers to meet the requirements of this subsection (d)(2) include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.
- 3) Whenever a hazardous waste is in a container using Container Level 2 controls, the owner or operator must install all covers and closure devices for the container, and secure and maintain each closure device in the closed position, except as follows:
- A) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container, as follows:



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- i) ~~If In the case when~~ the container is filled to the intended final level in one continuous operation, the owner or operator must promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.
  - ii) ~~If In the case when~~ discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator must promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon whichever of the following conditions occurs first: the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container.
- B) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container, as follows:
  - i) For the purpose of meeting the requirements of this Section, an empty container, as defined in 35 Ill. Adm. Code 721.107(b), may be open to the atmosphere at any time (i.e., covers and closure devices are not required to be secured in the closed position on an empty container).
  - ii) ~~If In the case when~~ discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container, as defined in 35 Ill. Adm. Code 721.107(b), the owner or operator must promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.
- C) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than

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transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator must promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

- D) Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device that vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device must be designed to operate with no detectable organic emission when the device is secured in the closed position. The settings at which the device opens must be established so that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.
  - E) Opening of a safety device, as defined in 35 Ill. Adm. Code 725.981, is allowed at any time conditions require doing so to avoid an unsafe condition.
- 4) The owner or operator of containers using Container Level 2 controls must inspect the containers and their covers and closure devices, as follows:
- A) ~~If in the case when~~ a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied within 24 hours after the container is accepted at the facility (i.e., it does not meet the conditions for an empty container as specified in 35 Ill.



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Adm. Code 721.107(b)), the owner or operator must visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection must be conducted on or before the date on which the container is accepted at the facility (i.e., the date when the container becomes subject to the Subpart CC container standards). For the purposes of this requirement, the date of acceptance is the date of signature that the facility owner or operator enters on Item 20 of the Uniform Hazardous Waste Manifest, in the appendix to 40 CFR 262 (Uniform Hazardous Waste Manifest and Instructions (USEPA Forms 8700-22 and 8700-22A and Their Instructions)), as required under Section 724.171. If a defect is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (d)(4)(C) ~~of this Section~~.

- B) ~~If in the case when~~ a container used for managing hazardous waste remains at the facility for a period of one year or more, the owner or operator must visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (d)(4)(C) ~~of this Section~~.
- C) When a defect is detected for the container, cover, or closure devices, the owner or operator must make first efforts at repair of the defect no later than 24 hours after detection, and repair must be completed as soon as possible but no later than five calendar days after detection. If repair of a defect cannot be completed within five calendar days, then the hazardous waste must be removed from the container and the container must not be used to manage hazardous waste until the defect is repaired.

e) Container Level 3 Standards ~~standards~~.

- 1) A container using Container Level 3 controls is one of the following:

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- A) A container that is vented directly through a closed-vent system to a control device in accordance with the requirements of subsection (e)(2)(B) ~~of this Section.~~
  - B) A container that is vented inside an enclosure that is exhausted through a closed-vent system to a control device in accordance with the requirements of subsections (e)(2)(A) and (e)(2)(B) ~~of this Section.~~
- 2) The owner or operator must meet the following requirements, as applicable to the type of air emission control equipment selected by the owner or operator:
- A) The container enclosure must be designed and operated in accordance with the criteria for a permanent total enclosure, as specified in “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure” under appendix B to 40 CFR 52.741 (VOM Measurement Techniques for Capture Efficiency), incorporated by reference in 35 Ill. Adm. Code 720.111(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 direct airflow into the enclosure. The owner or operator must perform the verification procedure for the enclosure, as specified in Section 5.0 to “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure” initially when the enclosure is first installed and, thereafter, annually.
  - B) The closed-vent system and control device must be designed and operated in accordance with the requirements of Section 724.987.
- 3) Safety devices, as defined in 35 Ill. Adm. Code 725.981, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with the requirements of subsection (e)(1) ~~of this Section.~~
- 4) Owners and operators using Container Level 3 controls in accordance with the provisions of this Subpart CC must inspect and monitor the closed-vent systems and control devices, as specified in Section 724.987.



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- 5) Owners and operators that use Container Level 3 controls in accordance with the provisions of this Subpart CC must prepare and maintain the records specified in Section 724.989(d).
  - 6) The transfer of hazardous waste into or out of a container using Container Level 3 controls must be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that USEPA considers to meet the requirements of this subsection (e)(6) include using any one of the following: the use of a submerged-fill pipe or other submerged-fill method to load liquids into the container; the use of a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or the use of a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.
- f) For the purpose of compliance with subsection (c)(1)(A) or (d)(1)(A) ~~of this Section~~, containers must be used that meet the applicable USDOT regulations on packaging hazardous materials for transportation, as follows:
- 1) The container meets the applicable requirements specified by USDOT in 49 CFR 178 (Specifications for Packaging), or 49 CFR 179 (Specifications for Tank Cars), each incorporated by reference in 35 Ill. Adm. Code 720.111(b).
  - 2) Hazardous waste is managed in the container in accordance with the applicable requirements specified by USDOT in subpart B of 49 CFR 107 (Exemptions), 49 CFR 172 (Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements), 49 CFR 173 (Shippers—General Requirements for Shipments and Packages), and 49 CFR 180 (Continuing Qualification and Maintenance of Packagings), each incorporated by reference in 35 Ill. Adm. Code 720.111(b).
  - 3) For the purpose of complying with this Subpart CC, no exceptions to the 49 CFR 178 or 179 regulations are allowed, except as provided for in subsection (f)(4) ~~of this Section~~.

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- 4) For a lab pack that is managed in accordance with the USDOT requirements of 49 CFR 178 (Specifications for Packagings), for the purpose of complying with this Subpart CC, an owner or operator may comply with the exceptions for combination packagings specified by USDOT in 49 CFR 173.12(b) (Exceptions for Shipments of Waste Materials), incorporated by reference in 35 Ill. Adm. Code 720.111(b).
- g) To determine compliance with the no detectable organic emissions requirement of subsection (d)(1)(B) ~~of this Section~~, the procedure specified in Section 724.983(d) must be used.
  - 1) Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the container, its cover, and associated closure devices, as applicable to the container, must be checked. Potential leak interfaces that are associated with containers include, but are not limited to, the following: the interface of the cover rim and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.
  - 2) The test must be performed when the container is filled with a material having a volatile organic concentration representative of the range of volatile organic concentrations for the hazardous wastes expected to be managed in this type of container. During the test, the container cover and closure devices must be secured in the closed position.
- h) Procedure for determining a container to be vapor-tight using Reference Method 27 for the purpose of complying with subsection (d)(1)(C) ~~of this Section~~.
  - 1) The test must be performed in accordance with Reference Method 27.
  - 2) A pressure measurement device must be used that has a precision of  $\pm 2.5$  mm (0.098 in) water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.
  - 3) If the test results determined by Reference Method 27 indicate that the container sustains a pressure change less than or equal to 0.75 kPa (0.11 psig) within five minutes after it is pressurized to a minimum of 4.5 kPa (0.65 psig), then the container is determined to be vapor-tight.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)



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SUBPART DD: CONTAINMENT BUILDINGS

**Section 724.1101 Design and Operating Standards**

- a) All containment buildings must comply with the following design and operating standards:
  - 1) The containment building must be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements (e.g., precipitation, wind, run on) and to assure containment of managed wastes.
  - 2) The floor and containment walls of the unit, including the secondary containment system if required under subsection (b) ~~of this Section~~, must be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit must be designed so that it has sufficient structural strength to prevent collapse or other failure. All surfaces to be in contact with hazardous wastes must be chemically compatible with those wastes. The containment building must meet the structural integrity requirements established by professional organizations generally recognized by the industry such as the American Concrete Institute (ACI) and the American Society of Testing Materials (ASTM). If appropriate to the nature of the waste management operation to take place in the unit, an exception to the structural strength requirement may be made for light-weight doors and windows that meet the following criteria:
    - A) They provide an effective barrier against fugitive dust emissions under subsection (c)(1)(C) ~~of this Section~~; and
    - B) The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings.
  - 3) Incompatible hazardous wastes or treatment reagents must not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail.

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- 4) A containment building must have a primary barrier designed to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit and appropriate for the physical and chemical characteristics of the waste to be managed.
- b) For a containment building used to manage hazardous wastes containing free liquids or treated with free liquids (the presence of which is determined by the paint filter test, a visual examination, or other appropriate means), the owner or operator must include the following:
  - 1) A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (e.g., a geomembrane covered by a concrete wear surface).
  - 2) A liquid collection and removal system to minimize the accumulation of liquid on the primary barrier of the containment building, as follows:
    - A) The primary barrier must be sloped to drain liquids to the associated collection system; and
    - B) Liquids and waste must be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time.
  - 3) A secondary containment system including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier, and a leak detection system that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time.
    - A) The requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum, as follows:
      - i) It is constructed with a bottom slope of 1 percent or more; and
      - ii) It is constructed of a granular drainage material with a hydraulic conductivity of  $1 \times 10^{-2}$  cm/sec or more and a thickness of 12 inches (30.5 cm) or more, or constructed of synthetic or geonet drainage materials with a transmissivity of  $3 \times 10^{-5}$  m<sup>2</sup>/sec or more.

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- B) If treatment is to be conducted in the building, an area in which such treatment will be conducted must be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building.
  - C) The secondary containment system must be constructed of materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building. (Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of Section 724.193(e)(1). In addition, the containment building must meet the requirements of Section 724.193(b) and Sections 724.193(c)(1) and (c)(2) to be an acceptable secondary containment system for a tank.)
- 4) For existing units other than 90-day generator units, USEPA may delay the secondary containment requirement for up to two years, based on a demonstration by the owner or operator that the unit substantially meets the standards of this Subpart DD. In making this demonstration, the owner or operator must have done the following:
- A) Provided written notice to USEPA of their request by November 16, 1992. This notification must have described the unit and its operating practices with specific reference to the performance of existing systems, and specific plans for retrofitting the unit with secondary containment;
  - B) Responded to any comments from USEPA on these plans within 30 days; and
  - C) Fulfilled the terms of the revised plans, if such plans are approved by USEPA.
- c) An owner or operator of a containment building must do the following:
- 1) It must use controls and practice to ensure containment of the hazardous waste within the unit, and at a minimum:



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- A) Maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be release from the primary barrier;
- B) Maintain the level of the stored or treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;
- C) Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed; and
- D) Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions (see Reference Method 22 (Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares) in appendix A to 40 CFR 60 (Test Methods)), incorporated by reference in 35 Ill. Adm. Code 720.111(b). In addition, all associated particulate collection devices (e.g., fabric filter, electrostatic precipitator, etc.) must be operated and maintained with sound air pollution control practices (see 40 CFR 60 for guidance). This state of no visible emissions must be maintained effectively at all times during routine operating and maintenance conditions, including when vehicles and personnel are entering and exiting the unit.

BOARD NOTE: At 40 CFR 264.1101(c)(1)(iv) (2005), USEPA cites "40 CFR part 60, subpart 292." At 57 Fed. Reg. 37217 (Aug. 18, 1992), USEPA repeats this citation in the preamble discussion of adoption of the rules. No such provision exists in the Code of Federal Regulations. While 40 CFR 60.292 of the federal regulations pertains to control of fugitive dust emissions, that provision is limited in its application to glass melting furnaces. The Board has chosen to use the general citation: "40 CFR 60."

- 2) It must obtain and keep on site a certification by a qualified Professional Engineer that the containment building design meets the requirements of subsections (a) through (c) ~~of this Section.~~
- 3) Throughout the active life of the containment building, if the owner or operator detects a condition that could lead to or has caused a release of



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hazardous waste, it must repair the condition promptly, in accordance with the following procedures:

- A) Upon detection of a condition that has led to a release of hazardous wastes (e.g., upon detection of leakage from the primary barrier) the owner or operator must do the following:
    - i) Enter a record of the discovery in the facility operating record;
    - ii) Immediately remove the portion of the containment building affected by the condition from service;
    - iii) Determine what steps must be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and
    - iv) Within seven days after the discovery of the condition, notify the Agency in writing of the condition, and within 14 working days, provide a written notice to the Agency with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work.
  - B) The Agency must review the information submitted, make a determination in accordance with Section 34 of the Act, regarding whether the containment building must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing.
  - C) Upon completing all repairs and cleanup the owner and operator must notify the Agency in writing and provide a verification, signed by a qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with subsection (c)(3)(A)(iv) of this Section.
- 4) It must inspect and record in the facility's operating record, at least once every seven days, data gathered from monitoring and leak detection equipment, as well as the containment building and the area immediately

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surrounding the containment building, to detect signs of releases of hazardous waste.-

- d) For a containment building that contains both areas with and without secondary containment, the owner or operator must do the following:
  - 1) Design and operate each area in accordance with the requirements enumerated in subsections (a) through (c) ~~of this Section~~;
  - 2) Take measures to prevent the release of liquids or wet materials into areas without secondary containment; and
  - 3) Maintain in the facility's operating log a written description of the operating procedures used to maintain the integrity of areas without secondary containment.
- e) Notwithstanding any other provision of this Subpart DD, the Agency must, in writing, allow the use of alternatives to the requirements for secondary containment for a permitted containment building where the Agency has determined that the facility owner or operator has adequately demonstrated that the only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements, and where containment of managed wastes and liquids can be assured without a secondary containment system.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 724.1102 Closure and Post-Closure Care**

- a) At closure of a containment building, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate and manage them as hazardous waste, unless 35 Ill. Adm. Code 721.103(e) applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for containment buildings must meet all of the requirements specified in Subparts G and H of of this Part 35 Ill. Adm. Code 739.
- b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in subsection (a) ~~of this Section~~, the owner or operator finds that not all contaminated subsoils can be practicably

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removed or decontaminated, he must close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills (~~Section 724.41035 Ill. Adm. Code 724.310~~). In addition, for the purposes of closure, post-closure, and financial responsibility, such a containment building is then considered to be a landfill, and the owner or operator must meet all the requirements for landfills specified in Subparts G and H of this Part ~~35 Ill. Adm. Code 739~~.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)



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- 1) Heading of the Part: Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
- 2) Code Citation: 35 Ill. Adm. Code 725
- 3) 

<u>Section Numbers:</u>	<u>Adopted Actions:</u>
725.173	Amendment
725.440	Amendment
725.502	Amendment
725.933	Amendment
725.934	Amendment
725.935	Amendment
725.952	Amendment
725.964	Amendment
725.983	Amendment
725.984	Amendment
725.985	Amendment
725.987	Amendment
725.1101	Amendment
- 4) Statutory Authority: 415 ILCS 5/7.2, 22.4, and 27.
- 5) Effective date of amendments: AUG - 9 2016
- 6) Does this rulemaking contain an automatic repeal date? No.
- 7) Do these Amendments contain incorporations by reference? No.
- 8) Statement of availability: The adopted amendments, a copy of the Board's opinion and order adopted June 16, 2016 in docket R16-7, and all materials incorporated by reference are on file at the Board's principal office and are available for public inspection and copying.
- 9) Notice of proposal published in the Illinois Register: 40 Ill. Reg. 4392; March 18, 2016
- 10) Has JCAR issued a statement of objections to these rules? No. Section 22.4(a) of the Environmental Protection Act [415 ILCS 5/22.4(a)] provides that Section 5-35 of the Administrative Procedure Act [5 ILCS 100/5-35] does not apply to this rulemaking. Because this rulemaking is not subject to Section 5-35 of the APA, it is not subject to First Notice or to Second Notice review by the Joint Committee on Administrative Rules (JCAR).

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- 11) Differences between the proposal and the final version: A table that appears in a document entitled “Identical-in –Substance Rulemaking Addendum (Final)” that the Board added to docket R16-7 summarizes the differences between the amendment adopted in the June 16, 2016 in docket R16-7 and those proposed by the Board in an opinion and order dated March 3, 2016, in docket R16-7. Many of the differences are explained in greater detail in the Board’s opinion and order adopting the amendment.

The differences are limited to minor corrections and clarifications. The changes are intended to have no substantive effect. The intent is to add clarity to the rules without deviation from the substance of the federal amendments on which this proceeding is based.

- 12) Have all the changes agreed upon by the Board and JCAR been made as indicated in the agreements issued by JCAR? Section 22.4(a) of the Environmental Protection Act [415 ILCS 5/22.4(a)] provides that Section 5-35 of the Administrative Procedure Act [5 ILCS 100/5-35] does not apply to this rulemaking. Because this rulemaking is not subject to Section 5-35 of the APA, it is not subject to First Notice or to Second Notice review by JCAR.

Since the Notices of Proposed Amendments appeared in the March 18, 2016 issue of the *Illinois Register*, the Board received a number of suggestions for revisions from JCAR. The Board evaluated each suggestion and incorporated a number of changes into the text as a result, as detailed in the Identical-in–Substance Rulemaking Addendum (Final) in docket R16-16, as indicated in item 11 above. See the Identical-in–Substance Rulemaking Addendum (Final) in docket R16-16 for additional details on the JCAR suggestions and the Board actions with regard to each. One table in the Identical-in–Substance Rulemaking Addendum (Final) itemizes the changes made in response to various suggestions. Another table indicates JCAR suggestions not incorporated into the text, with a brief explanation for each.

- 13) Will these amendments replace emergency amendments currently in effect? No.

- 14) Are there any other Amendments pending on this Part? No.

- 15) A Complete Description of Subjects and Issues Involved: The amendments to Part 725 are a single segment of the docket R16-7 rulemaking that also affects 35 Ill. Adm. Code 703, 720, 721, 722, 724, 726, 727, 728, and 733, each of which is covered by a separate notice in this issue of the *Illinois Register*. To save space, a more detailed description of the subjects and issues involved in the docket R16-7 rulemaking in this issue of the *Illinois Register* only in the answer to question 5 in the Notice of Adopted Amendments for 35 Ill. Adm. Code 703. A comprehensive description is contained in the Board’s

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opinion and order of June 18, 2016, proposing amendments in docket R16-7, which opinion and order is available from the address below.

Specifically, the amendments to Part 725 are corrections and clarifying amendments that are not directly derived from the instant federal amendments. This includes corrections submitted by USEPA as a result of review of the rules for the purpose of authorization of the Illinois RCRA Subtitle C program.

Tables appear in the Identical-in-Substance Rulemaking Addendum (Final) in docket R16-16 that list numerous corrections and amendments that are not based on current federal amendments. The tables contain deviations from the literal text of the federal amendments underlying these amendments, as well as corrections and clarifications that the Board made in the base text involved. Persons interested in the details of those corrections and amendments should refer to the Identical-in-Substance Rulemaking Addendum (Final) in docket R16-16.

Section 22.4 of the Environmental Protection Act [415 ILCS 5/22.4] provides that Section 5-35 of the Administrative Procedure Act [5 ILCS 100/5-35] does not apply to this rulemaking. Because this rulemaking is not subject to Section 5-35 of the APA, it is not subject to First Notice or to Second Notice review by the Joint Committee on Administrative Rules (JCAR).

- 16) Information and questions regarding these adopted amendments shall be directed to:  
Please reference consolidated docket R16-7 and direct inquiries to the following person:

Michael J. McCambridge  
Staff Attorney  
Illinois Pollution Control Board  
100 W. Randolph 11-500  
Chicago, IL 60601

312-814-6924  
michael.mccambridge@illinois.gov

Request copies of the Board's opinion and order of June 16, 2016 at 312-814-3620.  
Alternatively, you may obtain a copy of the Board's opinion and order from the Internet at <http://www.ipcb.state.il.us>.

The full text of the Adopted amendments begins on the next page:

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TITLE 35: ENVIRONMENTAL PROTECTION  
SUBTITLE G: WASTE DISPOSAL  
CHAPTER I: POLLUTION CONTROL BOARD  
SUBCHAPTER c: HAZARDOUS WASTE OPERATING REQUIREMENTS

PART 725  
INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF  
HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL  
FACILITIES

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725.102	Electronic Reporting
725.104	Imminent Hazard Action

SUBPART B: GENERAL FACILITY STANDARDS

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SUBPART C: PREPAREDNESS AND PREVENTION

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725.153	Copies of Contingency Plan
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725.212	Closure Plan; Amendment of Plan
725.213	Closure; Time Allowed for Closure
725.214	Disposal or Decontamination of Equipment, Structures, and Soils
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725.216	Survey Plat
725.217	Post-Closure Care and Use of Property
725.218	Post-Closure Care Plan; Amendment of Plan
725.219	Post-Closure Notices
725.220	Certification of Completion of Post-Closure Care
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725.244	Cost Estimate for Post-Closure Care
725.245	Financial Assurance for Post-Closure Monitoring and Maintenance
725.246	Use of a Mechanism for Financial Assurance of Both Closure and Post-Closure Care
725.247	Liability Requirements
725.248	Incapacity of Owners or Operators, Guarantors, or Financial Institutions
725.251	Promulgation of Forms (Repealed)

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725.329	Special Requirements for Ignitable or Reactive Wastes
725.330	Special Requirements for Incompatible Wastes
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725.354	Design and Operating Requirements
725.355	Action Leakage Rates
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725.357	Special Requirements for Incompatible Wastes
725.358	Closure and Post-Closure Care
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725.379	Recordkeeping
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725.412	Special Requirements for Ignitable or Reactive Wastes
725.413	Special Requirements for Incompatible Wastes
725.414	Special Requirements for Liquid Wastes
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- 725.540 Applicability
- 725.541 Assessment of Existing Drip Pad Integrity
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- 725.930 Applicability
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- 725.959 Standards: Delay of Repair
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- 725.962 Skip Period Alternative for Valves
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- Section
- 725.980 Applicability
- 725.981 Definitions
- 725.982 Schedule for Implementation of Air Emission Standards
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- 725.989 Inspection and Monitoring Requirements
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- Section
- 725.1100 Applicability
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- Section
- 725.1200 Applicability
- 725.1201 Design and Operating Standards
- 725.1202 Closure and Post-Closure Care
  
- 725.APPENDIX A Recordkeeping Instructions
- 725.APPENDIX B EPA Report Form and Instructions (Repealed)
- 725.APPENDIX C USEPA Interim Primary Drinking Water Standards
- 725.APPENDIX D Tests for Significance
- 725.APPENDIX E Examples of Potentially Incompatible Wastes
- 725.APPENDIX F Compounds with Henry's Law Constant Less Than 0.1 Y/X (at 25°C)

AUTHORITY: Implementing Sections 7.2 and 22.4 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/7.2, 22.4, and 27].

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SOURCE: Adopted in R81-22 at 5 Ill. Reg. 9781, effective May 17, 1982; amended and codified in R81-22 at 6 Ill. Reg. 4828, effective May 17, 1982; amended in R82-18 at 7 Ill. Reg. 2518, effective February 22, 1983; amended in R82-19 at 7 Ill. Reg. 14034, effective October 12, 1983; amended in R84-9 at 9 Ill. Reg. 11869, effective July 24, 1985; amended in R85-22 at 10 Ill. Reg. 1085, effective January 2, 1986; amended in R86-1 at 10 Ill. Reg. 14069, effective August 12, 1986; amended in R86-28 at 11 Ill. Reg. 6044, effective March 24, 1987; amended in R86-46 at 11 Ill. Reg. 13489, effective August 4, 1987; amended in R87-5 at 11 Ill. Reg. 19338, effective November 10, 1987; amended in R87-26 at 12 Ill. Reg. 2485, effective January 15, 1988; amended in R87-39 at 12 Ill. Reg. 13027, effective July 29, 1988; amended in R88-16 at 13 Ill. Reg. 437, effective December 28, 1988; amended in R89-1 at 13 Ill. Reg. 18354, effective November 13, 1989; amended in R90-2 at 14 Ill. Reg. 14447, effective August 22, 1990; amended in R90-10 at 14 Ill. Reg. 16498, effective September 25, 1990; amended in R90-11 at 15 Ill. Reg. 9398, effective June 17, 1991; amended in R91-1 at 15 Ill. Reg. 14534, effective October 1, 1991; amended in R91-13 at 16 Ill. Reg. 9578, effective June 9, 1992; amended in R92-1 at 16 Ill. Reg. 17672, effective November 6, 1992; amended in R92-10 at 17 Ill. Reg. 5681, effective March 26, 1993; amended in R93-4 at 17 Ill. Reg. 20620, effective November 22, 1993; amended in R93-16 at 18 Ill. Reg. 6771, effective April 26, 1994; amended in R94-7 at 18 Ill. Reg. 12190, effective July 29, 1994; amended in R94-17 at 18 Ill. Reg. 17548, effective November 23, 1994; amended in R95-6 at 19 Ill. Reg. 9566, effective June 27, 1995; amended in R95-20 at 20 Ill. Reg. 11078, effective August 1, 1996; amended in R96-10/R97-3/R97-5 at 22 Ill. Reg. 369, effective December 16, 1997; amended in R98-12 at 22 Ill. Reg. 7620, effective April 15, 1998; amended in R97-21/R98-3/R98-5 at 22 Ill. Reg. 17620, effective September 28, 1998; amended in R98-21/R99-2/R99-7 at 23 Ill. Reg. 1850, effective January 19, 1999; amended in R99-15 at 23 Ill. Reg. 9168, effective July 26, 1999; amended in R00-5 at 24 Ill. Reg. 1076, effective January 6, 2000; amended in R00-13 at 24 Ill. Reg. 9575, effective June 20, 2000; amended in R03-7 at 27 Ill. Reg. 4187, effective February 14, 2003; amended in R05-8 at 29 Ill. Reg. 6028, effective April 13, 2005; amended in R05-2 at 29 Ill. Reg. 6389, effective April 22, 2005; amended in R06-5/R06-6/R06-7 at 30 Ill. Reg. 3460, effective February 23, 2006; amended in R06-16/R06-17/R06-18 at 31 Ill. Reg. 1031, effective December 20, 2006; amended in R07-5/R07-14 at 32 Ill. Reg. 12566, effective July 14, 2008; amended in R09-3 at 33 Ill. Reg. 1155, effective December 30, 2008; amended in R09-16/R10-4 at 34 Ill. Reg. 18890, effective November 12, 2010; amended in R11-2/R11-16 at 35 Ill. Reg. 18052, effective October 14, 2011; amended in R13-15 at 37 Ill. Reg. 17811, effective October 24, 2013; amended in R15-1 at 39 Ill. Reg. 1746, effective January 12, 2015; amended in R16-7 at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

SUBPART E: MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING

**Section 725.173 Operating Record**

- a) The owner or operator must keep a written operating record at the facility.



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- b) The following information must be recorded as it becomes available and maintained in the operating record for three years unless otherwise provided as follows:
- 1) A description and the quantity of each hazardous waste received and the methods and dates of its treatment, storage, or disposal at the facility, as required by Appendix A to this Part. This information must be maintained in the operating record until closure of the facility;
  - 2) The location of each hazardous waste within the facility and the quantity at each location. For disposal facilities the location and quantity of each hazardous waste must be recorded on a map or diagram that shows each cell or disposal area. For all facilities this information must include cross-references to manifest document numbers if the waste was accompanied by a manifest. This information must be maintained in the operating record until closure of the facility;
- BOARD NOTE: See Sections 725.219, 725.379, and 725.409 for related requirements.
- 3) Records and results of waste analysis, waste determinations, and trial tests performed, as specified in Sections 725.113, 725.300, 725.325, 725.352, 725.373, 725.414, 725.441, 725.475, 725.502, 725.934, 725.963, and 725.984 and 35 Ill. Adm. Code 728.104(a) and 728.107;
  - 4) Summary reports and details of all incidents that require implementing the contingency plan, as specified in Section 725.156(j);
  - 5) Records and results of inspections, as required by Section 725.115(d) (except these data need be kept only three years);
  - 6) Monitoring, testing, or analytical data, where required by Subpart F of this Part or Sections 725.119, 725.194, 725.291, 725.293, 725.295, 725.324, 725.326, 725.355, 725.360, 725.376, 725.378, 725.380(d)(1), 725.402, 725.404, 725.447, 725.477, 725.934(c) through (f), 725.935, 725.963(d) through (i), 725.964, and ~~725.983~~ ~~725.1083~~ through 725.990. Maintain in the operating record for three years, except for records and results pertaining to groundwater monitoring and cleanup, and response action plans for surface impoundments, waste piles, and landfills, which must be maintained in the operating record until closure of the facility;

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BOARD NOTE: As required by Section 725.194, monitoring data at disposal facilities must be kept throughout the post-closure period.

- 7) All closure cost estimates under Section 725.242 and, for disposal facilities, all post-closure cost estimates under Section 725.244 must be maintained in the operating record until closure of the facility;
- 8) Records of the quantities (and date of placement) for each shipment of hazardous waste placed in land disposal units under an extension of the effective date of any land disposal restriction granted pursuant to 35 Ill. Adm. Code 728.105, a petition pursuant to 35 Ill. Adm. Code 728.106, or a certification under 35 Ill. Adm. Code 728.108 and the applicable notice required of a generator under 35 Ill. Adm. Code 728.107(a). All of this information must be maintained in the operating record until closure of the facility;
- 9) For an off-site treatment facility, a copy of the notice and the certification and demonstration, if applicable, required of the generator or the owner or operator under 35 Ill. Adm. Code 728.107 or 728.108;
- 10) For an on-site treatment facility, the information contained in the notice (except the manifest number) and the certification and demonstration, if applicable, required of the generator or the owner or operator under 35 Ill. Adm. Code 728.107 or 728.108;
- 11) For an off-site land disposal facility, a copy of the notice and the certification and demonstration, if applicable, required of the generator or the owner or operator of a treatment facility under 35 Ill. Adm. Code 728.107 or 728.108;
- 12) For an on-site land disposal facility, the information contained in the notice required of the generator or owner or operator of a treatment facility under 35 Ill. Adm. Code 728.107, except for the manifest number, and the certification and demonstration, if applicable, required under 35 Ill. Adm. Code 728.107 or 728.108;
- 13) For an off-site storage facility, a copy of the notice and the certification and demonstration, if applicable, required of the generator or the owner or operator under 35 Ill. Adm. Code 728.107 or 728.108;
- 14) For an on-site storage facility, the information contained in the notice (except the manifest number) and the certification and demonstration, if



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applicable, required of the generator or the owner or operator under 35 Ill. Adm. Code 728.107 or 728.108; and

- 15) Monitoring, testing or analytical data, and corrective action, where required by Sections 725.190 and 725.193(d)(2) and (d)(5), and the certification, as required by Section ~~725.296(f)~~~~725.196(f)~~, must be maintained in the operating record until closure of the facility.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART O: INCINERATORS

**Section 725.440 Applicability**

- a) The regulations in this Subpart O apply to owners or operators of hazardous waste incinerators (as defined in 35 Ill. Adm. Code 720.110), except as 35 Ill. Adm. Code 724.101 provides otherwise.
- b) Integration of the MACT ~~Standards~~~~standards~~.
  - 1) Except as provided by subsections (b)(2) and (b)(3) ~~of this Section~~, the standards of this Part no longer apply when an owner or operator demonstrates compliance with the maximum achievable control technology (MACT) requirements of subpart EEE of 40 CFR 63 (National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors), incorporated by reference in 35 Ill. Adm. Code 720.111(b), by conducting a comprehensive performance test and submitting to the Agency a Notification of Compliance, under 40 CFR 63.1207(j) and ~~63.1210(d)~~~~63.1210(b)~~, documenting compliance with the requirements of subpart EEE of 40 CFR 63.
  - 2) The MACT standards of subpart EEE of 40 CFR 63 do not replace the closure requirements of Section 724.451 or the applicable requirements of Subparts A through H, BB, and CC of this Part.
  - 3) Section 725.445, generally prohibiting burning of hazardous waste during startup and shutdown, remains in effect if the owner or operator elects to comply with 35 Ill. Adm. Code 703.320(b)(1)(A) to minimize emissions of toxic compounds from startup and shutdown.

BOARD NOTE: Operating conditions used to determine effective treatment of hazardous waste remain effective after the owner or operator demonstrates

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compliance with the standards of subpart EEE of 40 CFR 63. Sections 9.1 and 39.5 of the Environmental Protection Act [415 ILCS 5/9.1 and 39.5] make the federal MACT standards directly applicable to entities in Illinois and authorize the Agency to issue permits based on the federal standards.

- c) An owner or operator of an incinerator that burns hazardous waste is exempt from all of the requirements of this Subpart O, except Section 725.451 (Closure), provided that the owner or operator has documented, in writing, that the waste would not reasonably be expected to contain any of the hazardous constituents listed in Appendix H to 35 Ill. Adm. Code 721 and such documentation is retained at the facility, if the waste to be burned is one of the following:
- 1) It is listed as a hazardous waste in Subpart D of 35 Ill. Adm. Code 721, solely because it is ignitable (Hazard Code I), corrosive (Hazard Code C), or both;
  - 2) It is listed as a hazardous waste in Subpart D of 35 Ill. Adm. Code 721, solely because it is reactive (Hazard Code R) for characteristics other than those listed in 35 Ill. Adm. Code 721.123(a)(4) and (a)(5), and will not be burned when other hazardous wastes are present in the combustion zone;
  - 3) It is a hazardous waste solely because it possesses the characteristic of ignitability, corrosivity, or both, as determined by the tests for characteristics of hazardous wastes under Subpart C of 35 Ill. Adm. Code 721; or
  - 4) It is a hazardous waste solely because it possesses the reactivity characteristics described by 35 Ill. Adm. Code 721.123 (a)(1), (a)(2), (a)(3), (a)(6), (a)(7), or (a)(8) and will not be burned when other hazardous wastes are present in the combustion zone.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART Q: CHEMICAL, PHYSICAL, AND BIOLOGICAL TREATMENT

**Section 725.502 Waste Analysis and Trial Tests**

- a) In addition to the waste analysis required by Section 725.113(b) ~~of this Section~~ applies whenever either of the following conditions exist:

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- 1) A hazardous waste that is substantially different from waste previously treated in a treatment process or equipment at the facility is to be treated in that process or equipment; or
  - 2) A substantially different process from any previously used at the facility is to be used to chemically treat hazardous waste.
- b) To show that this proposed treatment will meet all applicable requirements of Section 725.501(a) and (b), the owner or operator must, before treating the different waste or using the different process or equipment:
- 1) Conduct waste analyses and trial treatment tests (e.g., bench scale or pilot plant scale tests); or
  - 2) Obtain written, documented information on similar treatment of similar waste under similar operating conditions.

~~BOARD NOTE: As required by Section 725.113, the waste analysis plan must include analyses needed to comply with Sections 725.505 and 725.506. As required by Section 725.173, the owner or operator must place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility.~~

BOARD NOTE: As required by Section 725.113, the waste analysis plan must include analyses needed to comply with Sections 725.505 and 725.506. As required by Section 725.173, the owner or operator must place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART AA: AIR EMISSION STANDARDS FOR PROCESS VENTS

**Section 725.933 Standards: Closed-Vent Systems and Control Devices**

- a) Compliance Required.
  - 1) Owners or operators of closed-vent systems and control devices used to comply with provisions of this Part must comply with the provisions of this Section.
  - 2) Implementation Schedule.



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- A) The owner or operator of an existing facility that cannot install a closed-vent system and control device to comply with the provisions of this Subpart AA on the effective date that the facility becomes subject to the provisions of this Subpart AA must prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to 30 months after the effective date that the facility becomes subject to this Subpart AA for installation and startup.
- B) Any unit that begins operation after December 21, 1990, and which is subject to the provisions of this Subpart AA when operation begins, must comply with the rules immediately (i.e., must have control devices installed and operating on startup of the affected unit); the 30-month implementation schedule does not apply.
- C) The owner or operator of any facility in existence on the effective date of a statutory or regulatory amendment that renders the facility subject to this Subpart AA must comply with all requirements of this Subpart AA as soon as practicable but no later than 30 months after the effective date of the amendment. When control equipment required by this Subpart AA cannot be installed and begin operation by the effective date of the amendment, the facility owner or operator must 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 AA. The owner or operator must enter the implementation schedule in the operating record or in a permanent, readily available file located at the facility.
- D) An owner or operator of a facility or unit that becomes newly subject to the requirements of this Subpart AA after December 8, 1997, due to an action other than those described in subsection (a)(2)(iii) of this Section must comply with all applicable requirements immediately (i.e., the facility or unit must have control devices installed and operating on the date the facility or



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unit becomes subject to this Subpart AA; the 30-month implementation schedule does not apply).

- b) A control device involving vapor recovery (e.g., a condenser or adsorber) must be designed and operated to recover the organic vapors vented to it with an efficiency of 95 weight percent or greater unless the total organic emission limits of Section 725.932(a)(1) for all affected process vents is attained at an efficiency less than 95 weight percent.
- c) An enclosed combustion device (e.g., a vapor incinerator, boiler, or process heater) must be designed and operated to reduce the organic emissions vented to it by 95 weight percent or greater; to achieve a total organic compound concentration of 20 ppmv, expressed as the sum of the actual compounds, not carbon equivalents, on a dry basis corrected to three percent oxygen; or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 degrees Celsius ( $^{\circ}\text{C}$ ). If a boiler or process heater is used as the control device, then the vent stream must be introduced into the flame combustion zone of the boiler or process heater.
- d) Flares.
  - 1) A flare must be designed for and operated with no visible emissions as determined by the methods specified in subsection (e)(1) ~~of this Section~~ except for periods not to exceed a total of five minutes during any two consecutive hours.
  - 2) A flare must be operated with a flame present at all times, as determined by the methods specified in subsection (f)(2)(C) ~~(f)(2)(e) of this Section~~.
  - 3) A flare must be used only if the net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted, or if the net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted must be determined by the methods specified in subsection (e)(2) ~~of this Section~~.
  - 4) Exit Velocity.
    - A) A steam-assisted or nonassisted flare must be designed for and operated with an exit velocity, as determined by the methods specified in subsection (e)(3) ~~of this Section~~, less than 18.3 m/s (60

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ft/s), except as provided in subsections (d)(4)(B) and (d)(4)(C) of this Section.

- B) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in subsection (e)(3) of this Section, equal to or greater than 18.3 m/s (60 ft/s) but less than 122 m/s (400 ft/s) is allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).
- C) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in subsection (e)(3) of this Section, less than the velocity, V as determined by the method specified in subsection (e)(4) and less than 122 m/s (400 ft/s) is allowed.
- 5) An air-assisted flare must be designed and operated with an exit velocity less than the velocity, V, as determined by the method specified in subsection (e)(5) of this Section.
- 6) A flare used to comply with this Section must be steam-assisted, air-assisted, or nonassisted.
- e) Compliance Determination and Equations ~~determination and equations.~~
- 1) Reference Method 22 (Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b), must be used to determine the compliance of a flare with the visible emission provisions of this Subpart AA. The observation period is two hours and must be used according to Reference Method 22.
- 2) The net heating value of the gas being combusted in a flare must be calculated using the following equation:

$$H_T = K \times \sum_{i=1}^n C_i \times H_i$$

Where:



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$H_T =$  the net heating value of the sample in MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to 1 mole is 20 °C

$K =$   $1.74 \times 10^{-7}$  (1/ppm)(g mol/scm)(MJ/kcal) where the standard temperature for (g mol/scm) is 20 °C

$\Sigma X_i =$  the sum of the values of X for each component i, from i=1 to  $n_i$

$C_i =$  the concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 (Measurement of Gaseous Organic Compound Emissions by Gas Chromatography) in appendix A to 40 CFR 60 (Test Methods), and for carbon monoxide, by ASTM D 1946-90 (Standard Practice for Analysis of Reformed Gas by Gas Chromatography), each incorporated by reference in 35 Ill. Adm. Code 720.111; and

$H_i =$  is the net heat of combustion of sample component i, kcal/gmol at 25 °C and 760 mm Hg. The heats of combustion must be determined using ASTM D 2382-88 (Standard Test Method for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High Precision Method)), incorporated by reference in 35 Ill. Adm. Code 720.111(a), if published values are not available or cannot be calculated.

- 3) The actual exit velocity of a flare must be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Reference Methods 2 (Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)), 2A (Direct Measurement of Gas Volume through Pipes and Small Ducts), 2C (Determination of Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts (Standard Pitot Tube)), or 2D (Measurement of Gas Volume Flow Rates in Small Pipes and Ducts) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b), as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.
- 4) The maximum allowed velocity in m/s, V for a flare complying with subsection (d)(4)(C) of this Section must be determined by the following equation:

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$$\log_{10}(V_{\max}) = \frac{H_T + 28.8}{31.7}$$

Where:

$\log_{10}$  = logarithm to the base 10; and

$H_T$  = the net heating value as determined in subsection (e)(2) of this Section.

- 5) The maximum allowed velocity in m/s,  $V$ , for an air-assisted flare must be determined by the following equation:

$$V = 8.706 + 0.7084 H_T$$

Where:

$H_T$  = the net heating value as determined in subsection (e)(2) of this Section.

- f) The owner or operator must monitor and inspect each control device required to comply with this Section to ensure proper operation and maintenance of the control device by implementing the following requirements:
- 1) Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow from each affected process vent to the control device at least once every hour. The flow indicator sensor must be installed in the vent stream at the nearest feasible point to the control device inlet but before being combined with other vent streams.
  - 2) Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation, as specified below:
    - A) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device must have accuracy of  $\pm 1$  percent of the temperature being monitored in  $^{\circ}\text{C}$  or  $\pm 0.5^{\circ}\text{C}$ , whichever is greater. The temperature sensor must be installed at a location in the combustion chamber downstream of the combustion zone.



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- B) For a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature at two locations and have an accuracy of  $\pm 1$  percent of the temperature being monitored in  $^{\circ}\text{C}^{\circ}\text{C}$  or  $\pm 0.5$   $^{\circ}\text{C}^{\circ}\text{C}$ , whichever is greater. One temperature sensor must be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor must be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.
- C) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.
- D) For a boiler or process heater having a design heat input capacity less than 44 MW, a temperature monitoring device equipped with a continuous recorder. The device must have an accuracy of  $\pm 1$  percent of the temperature being monitored in  $^{\circ}\text{C}^{\circ}\text{C}$  or  $\pm 0.5$   $^{\circ}\text{C}^{\circ}\text{C}$ , whichever is greater. The temperature sensor must be installed at a location in the furnace downstream of the combustion zone.
- E) For a boiler or process heater having a design heat input capacity greater than or equal to 44 MW, a monitoring device equipped with a continuous recorder to measure parameters that indicate good combustion operating practices are being used.
- F) For a condenser, either of the following:
- i) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the condenser; or
  - ii) A temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature with an accuracy of  $\pm 1$  percent of the temperature being monitored in degrees Celsius ( $^{\circ}\text{C}^{\circ}\text{C}$ ) or  $\pm 0.5$   $^{\circ}\text{C}^{\circ}\text{C}$ , whichever is greater. The temperature sensor must be installed at a location in the exhaust vent stream from the condenser exit (i.e., product side).

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- G) For a carbon adsorption system, such as a fixed-bed carbon adsorber that regenerates the carbon bed directly in the control device, either of the following:
  - i) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the carbon bed;  
or
  - ii) A monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated on a regular, predetermined time cycle.
- 3) Inspect the readings from each monitoring device required by subsections (f)(1) and (f)(2) ~~of this Section~~ at least once each operating day to check control device operation and, if necessary, immediately implement the corrective measures necessary to ensure the control device operates in compliance with the requirements of this Section.
- g) An owner or operator using a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device must replace the existing carbon in the control device with fresh carbon at a regular, predetermined time interval that is no longer than the carbon service life established as a requirement of Section 725.935(b)(4)(C)(vi).
- h) An owner or operator using a carbon adsorption system, such as a carbon canister, that does not regenerate the carbon bed directly onsite in the control device must replace the existing carbon in the control device with fresh carbon on a regular basis by using one of the following procedures:
  - 1) Monitor the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system on a regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency must be daily or at an interval no greater than 20 percent of the time required to consume the total carbon working capacity established as a requirement of Section 725.935(b)(4)(C)(vii), whichever is longer.
  - 2) Replace the existing carbon with fresh carbon at a regular, predetermined time interval that is less than the design carbon replacement interval established as a requirement of Section 725.935(b)(4)(C)(vii).

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- i) An owner or operator of an affected facility seeking to comply with the provisions of this Part by using a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system is required to develop documentation including sufficient information to describe the control device operation and identify the process parameter or parameters that indicate proper operation and maintenance of the control device.
  
- j) A closed-vent system must meet either of the following design requirements:
  - 1) A closed-vent system must be designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, as determined by the methods specified at Section 725.934(b), and by visual inspections; or
  - 2) A closed-vent system must be designed to operate at a pressure below atmospheric pressure. The system must be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.
  
- k) The owner or operator must monitor and inspect each closed-vent system required to comply with this Section to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements:
  - 1) Each closed-vent system that is used to comply with subsection (j)(1) ~~of this Section~~ must be inspected and monitored in accordance with the following requirements:
    - A) An initial leak detection monitoring of the closed-vent system must be conducted by the owner or operator on or before the date that the system becomes subject to this Section. The owner or operator must monitor the closed-vent system components and connections using the procedures specified in Section 725.934(b) to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background.
    - B) After initial leak detection monitoring required in subsection (k)(1)(A) ~~of this Section~~, the owner or operator must inspect and monitor the closed-vent system as follows:



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- i) Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) must be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The owner or operator must monitor a component or connection using the procedures specified in Section 725.934(b) to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced (e.g., a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (e.g., a flange is unbolted).
  - ii) Closed-vent system components or connections other than those specified in subsection (k)(1)(B)(i) ~~of this Section~~ must be monitored annually and at other times as requested by the Agency, except as provided for in subsection (n) ~~of this Section~~, using the procedures specified in Section 725.934(b) to demonstrate that the components or connections operate with no detectable emissions.
  - C) In the event that a defect or leak is detected, the owner or operator must repair the defect or leak in accordance with the requirements of subsection (k)(3) ~~of this Section~~.
  - D) The owner or operator must maintain a record of the inspection and monitoring in accordance with the requirements specified in Section 725.935.
- 2) Each closed-vent system that is used to comply with subsection (j)(2) ~~of this Section~~ must be inspected and monitored in accordance with the following requirements:
- A) The closed-vent system must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping or loose connections.
  - B) The owner or operator must perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to this Section. Thereafter, the owner or operator must perform the inspections at least once every year.



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- C) In the event that a defect or leak is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (k)(3) ~~of this Section~~.
  - D) The owner or operator must maintain a record of the inspection and monitoring in accordance with the requirements specified in Section 725.935.
- 3) The owner or operator must repair all detected defects as follows:
- A) Detectable emissions, as indicated by visual inspection or by an instrument reading greater than 500 ppmv above background, must be controlled as soon as practicable, but not later than 15 calendar days after the emission is detected, except as provided for in subsection (k)(3)(C) ~~of this Section~~.
  - B) A first attempt at repair must be made no later than five calendar days after the emission is detected.
  - C) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment must be completed by the end of the next process unit shutdown.
  - D) The owner or operator must maintain a record of the defect repair in accordance with the requirements specified in Section 725.935.
- l) A closed-vent system or control device used to comply with provisions of this Subpart AA must be operated at all times when emissions may be vented to it.
- m) The owner or operator using a carbon adsorption system to control air pollutant emissions must document that all carbon removed that is a hazardous waste and that is removed from the control device is managed in one of the following manners, regardless of the volatile organic concentration of the carbon:
- 1) It is regenerated or reactivated in a thermal treatment unit that meets one of the following:

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- A) The owner or operator of the unit has been issued a final permit under 35 Ill. Adm. Code 702, 703, and 705 that implements the requirements of Subpart X of 35 Ill. Adm. Code 724; or
  - B) The unit is equipped with and operating air emission controls in accordance with the applicable requirements of Subparts AA and CC of this Part or 35 Ill. Adm. Code 724; or
  - C) The unit is equipped with and operating air emission controls in accordance with a federal national emission standard for hazardous air pollutants under 40 CFR 61 (National Emission Standards for Hazardous Air Pollutants) or 63 (National Emission Standards for Hazardous Air Pollutants for Source Categories), each incorporated by reference in 35 Ill. Adm. Code 720.111(b).
- 2) It is incinerated in a hazardous waste incinerator for which the owner or operator has done either of the following:
- A) The owner or operator has been issued a final permit under 35 Ill. Adm. Code 702, 703, and 705 that implements the requirements of Subpart O of 35 Ill. Adm. Code 724; or
  - B) The owner or operator has designed and operates the incinerator in accordance with the interim status requirements of Subpart O of this Part.
- 3) It is burned in a boiler or industrial furnace for which the owner or operator has done either of the following:
- A) The owner or operator has been issued a final permit under 35 Ill. Adm. Code 702, 703, and 705 that implements the requirements of Subpart H of 35 Ill. Adm. Code 726; or
  - B) The owner or operator has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of Subpart H of 35 Ill. Adm. Code 726.
- n) Any components of a closed-vent system that are designated, as described in Section 725.935(c)(9), as unsafe to monitor are exempt from the requirements of subsection (k)(1)(B)(ii) ~~of this Section~~ if both of the following conditions are fulfilled:

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- 1) The owner or operator of the closed-vent system has determined that the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with subsection (k)(1)(B)(ii) ~~of this Section~~; and
- 2) The owner or operator of the closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedure specified in subsection (k)(1)(B)(ii) ~~of this Section~~ as frequently as practicable during safe-to-monitor times.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 725.934 Test Methods and Procedures**

- a) Each owner or operator subject to the provisions of this Subpart AA must comply with the test methods and procedures requirements provided in this Section.
- b) When a closed-vent system is tested for compliance with no detectable emissions, as required in Section 725.933(k), the test must comply with the following requirements:
  - 1) Monitoring must comply with Reference Method 21 (Determination of Volatile Organic Compound Leaks) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b).
  - 2) The detection instrument must meet the performance criteria of Reference Method 21.
  - 3) The instrument must be calibrated before use on each day of its use by the procedures specified in Reference Method 21.
  - 4) Calibration gases must be:
    - A) Zero air (less than 10 ppm of hydrocarbon in air).
    - B) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.
  - 5) The background level must be determined as set forth in Reference Method 21.

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- 6) The instrument probe must be traversed around all potential leak interfaces as close to the interface as possible, as described in Reference Method 21.
  - 7) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.
- c) Performance tests to determine compliance with Section 725.932(a) and with the total organic compound concentration limit of Section 725.933(c) must comply with the following:
- 1) Performance tests to determine total organic compound concentrations and mass flow rates entering and exiting control devices must be conducted and data reduced in accordance with the following reference methods and calculation procedures:
    - A) Reference Method 2 (Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b), for velocity and volumetric flow rate.
    - B) Reference Method 18 (Measurement of Gaseous Organic Compound Emissions by Gas Chromatography) or 25A (Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b), for organic content. If Reference Method 25A is used, the organic hazardous air pollutant (HAP) used as the calibration gas must be the single HAP that represents the largest percent by volume of the emissions. The use of Reference Method 25A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.
    - C) Each performance test must consist of three separate runs, each run conducted for at least 1 hour under the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. For the purpose of determining total organic compound concentrations and mass flow rates, the average of results of all runs applies. The average must be computed on a time-weighted ~~time-weighted~~ basis.



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D) Total organic mass flow rates must be determined by the following equation:

i) For a source utilizing Reference Method 18:

$$E_h = Q_{2sd} \times \left( \sum_{i=1}^n C_i \times MW_i \right) \times 0.0416 \times 10^{-6}$$

Where:

$E_h$  = The total organic mass flow rate, kg/h;

$Q_{2sd}$  = The volumetric flow rate of gases entering or exiting control device, dscm/h, as determined by Reference Method 2;

$n$  = The number of organic compounds in the vent gas;

$C_i$  = The organic concentration in ppm, dry basis, of compound  $i$  in the vent gas, as determined by Reference Method 18;

$MW_i$  = The molecular weight of organic compound  $i$  in the vent gas, kg/kg-mol;

0.0416 = The conversion factor for molar volume, kg-mol/m<sup>3</sup>, at 293 K and 760 mm Hg; and

$10^{-6}$  = The conversion factor from ppm.

ii) For a source utilizing Reference Method 25A:

$$E_h = Q \times C \times MW \times 0.0416 \times 10^{-6}$$

Where:

$E_h$  = The total organic mass flow rate, kg/h;

$Q$  = The volumetric flow rate of gases entering or exiting control device, dscm/h, as determined by Reference Method 2;

$C$  = The organic concentration in ppm, dry basis, of compound  $i$  in the vent gas, as determined by Reference Method 25A;

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MW = The molecular weight of propane, 44 kg/kg-mol;

0.0416 = The conversion factor for molar volume, kg-mol/m<sup>3</sup>, at 293 K and 760 mm Hg; and

10<sup>-6</sup> = The conversion factor from ppm.

- E) The annual total organic emission rate must be determined by the following equation:

$$A = F \times H$$

Where:

A = total organic emission rate, kg/y;

F = the total organic mass flow rate, kg/h, as calculated in subsection (c)(1)(D); ~~and of this Section~~

H = the total annual hours of operation for the affected unit, h/y.

- F) Total organic emissions from all affected process vents at the facility must be determined by summing the hourly total organic mass emissions rates (F, as determined in subsection (c)(1)(D) ~~of this Section~~) and by summing the annual total organic mass emission rates (A, as determined in subsection (c)(1)(E) ~~of this Section~~) for all affected process vents at the facility.
- 2) The owner or operator must record such process information as is necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction do not constitute representative conditions for the purpose of a performance test.
- 3) The owner or operator of an affected facility must provide, or cause to be provided, performance testing facilities as follows:
- A) Sampling ports adequate for the test methods specified in subsection (c)(1) ~~of this Section~~.
  - B) Safe sampling platforms.
  - C) Safe access to sampling platforms.
  - D) Utilities for sampling and testing equipment.

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- 4) For the purpose of making compliance determinations, the time-weighted average of the results of the three runs must apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the Agency's approval, be determined using the average of the results of the two other runs.
  
- d) To show that a process vent associated with a hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of this Subpart AA, the owner or operator must make an initial determination that the time-weighted, annual average total organic concentration of the waste managed by the waste management unit is less than 10 ppmw using one of the following two methods:
  - 1) Direct measurement of the organic concentration of the waste using the following procedures:
    - A) The owner or operator must take a minimum of four grab samples of waste for each wastestream managed in the affected unit under process conditions expected to cause the maximum waste organic concentration.
    - B) For waste generated onsite, the grab samples must be collected at a point before the waste is exposed to the atmosphere, such as in an enclosed pipe or other closed system that is used to transfer the waste after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For waste generated offsite, the grab samples must be collected at the inlet to the first waste management unit that receives the waste provided the waste has been transferred to the facility in a closed system such as a tank truck and the waste is not diluted or mixed with other waste.
    - C) Each sample must be analyzed and the total organic concentration of the sample must be computed using Method 9060A (Total Organic Carbon) of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," USEPA publication number EPA-530/SW-846, incorporated by reference under 35 Ill. Adm. Code 720.111(a), or analyzed for its individual constituents.

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- D) The arithmetic mean of the results of the analyses of the four samples apply for each wastestream managed in the unit in determining the time-weighted, annual average total organic concentration of the waste. The time-weighted average is to be calculated using the annual quantity of each waste stream processed and the mean organic concentration of each wastestream managed in the unit.
- 2) Using knowledge of the waste to determine that its total organic concentration is less than 10 ppmw. Documentation of the waste determination is required. Examples of documentation that must be used to support a determination under this subsection (d)(2) include the following:
  - A) Production process information documenting that no organic compounds are used;
  - B) Information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to generate a wastestream having a total organic content less than 10 ppmw; or
  - C) Prior speciation analysis results on the same wastestream where it is documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.
- e) The determination that distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous wastes with time-weighted, annual average total organic concentrations less than 10 ppmw must be made as follows:
  - 1) By the effective date that the facility becomes subject to the provisions of this Subpart AA or by the date when the waste is first managed in a waste management unit, whichever is later; ~~and~~
  - 2) For continuously generated waste, annually; and ~~or~~
  - 3) Whenever there is a change in the waste being managed or a change in the process that generates or treats the waste.
- f) When an owner or operator and the Agency do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping



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operation manages a hazardous waste with organic concentrations of at least 10 ppmw based on knowledge of the waste, the dispute may be resolved using direct measurement, as specified in subsection (d)(1) ~~of this Section~~.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 725.935 Recordkeeping Requirements**

- a) Compliance Required.
  - 1) Each owner or operator subject to the provisions of this Subpart AA must comply with the recordkeeping requirements of this Section.
  - 2) An owner or operator of more than one hazardous waste management unit subject to the provisions of this Subpart AA may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.
- b) Owners and operators must record the following information in the facility operating record:
  - 1) For facilities that comply with the provisions of Section 725.933(a)(2), an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The schedule must also include a rationale of why the installation cannot be completed at an earlier date. The implementation schedule must be in the facility operating record by the effective date that the facility becomes subject to the provisions of this Subpart AA.
  - 2) Up-to-date documentation of compliance with the process vent standards in Section 725.932, including the following:
    - A) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility (i.e., the total emissions for all affected vents at the facility), and the approximate location within the facility of each affected unit (e.g., identify the hazardous waste management units on a facility plot plan).

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- B) Information and data supporting determination of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions must be made using operating parameter values (e.g., temperatures, flow rates, or vent stream organic compounds and concentrations) that represent the conditions that result in maximum organic emissions, such as when the waste management unit is operating at the highest load or capacity level reasonably expected to occur. If the owner or operator takes any action (e.g., managing a waste of different composition or increasing operating hours of affected waste management units) that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.
- 3) Where an owner or operator chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan. The test plan must include the following:
- A) A description of how it is determined that the planned test is going to be conducted when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. This must include the estimated or design flow rate and organic content of each vent stream and define the acceptable operating ranges of key process and control device parameters during the test program.
  - B) A detailed engineering description of the closed-vent system and control device including the following:
    - i) Manufacturer's name and model number of control device;
    - ii) Type of control device;
    - iii) Dimensions of the control device;
    - iv) Capacity; and
    - v) Construction materials.

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- C) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.
- 4) Documentation of compliance with Section 725.933 must include the following information:
- A) A list of all information references and sources used in preparing the documentation;
  - B) Records, including the dates of each compliance test required by Section 725.933(j);
  - C) If engineering calculations are used, a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of “APTI Course 415: Control of Gaseous Emissions,” USEPA publication number EPA-450/2-81-005, incorporated by reference in 35 Ill. Adm. Code 720.111(a), or other engineering texts, approved by the Agency, that present basic control device design information. Documentation provided by the control device manufacturer or vendor that describes the control device design in accordance with subsections (b)(4)(C)(i) through (b)(4)(C)(vii) ~~of this Section~~ may be used to comply with this requirement. The design analysis must address the vent stream characteristics and control device operation parameters as specified below.
    - i) For a thermal vapor incinerator, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.
    - ii) For a catalytic vapor incinerator, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average temperatures across the catalyst bed inlet and outlet.



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- iii) For a boiler or process heater, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average flame zone temperatures, combustion zone residence time and description of method and location where the vent stream is introduced into the combustion zone.
- iv) For a flare, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also consider the requirements specified in Section 725.933(d).
- v) For a condenser, the design analysis must consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis must also establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream and design average temperatures of the coolant fluid at the condenser inlet and outlet.
- vi) For a carbon adsorption system, such as a fixed-bed adsorber that regenerates the carbon bed directly onsite in the control device, the design analysis must consider the vent stream composition, constituent concentrations, flow rate, relative humidity and temperature. The design analysis must also establish the design exhaust vent stream organic compound concentration level, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling/drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time and design service life of carbon.
- vii) For a carbon adsorption system, such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device, the design analysis must consider the vent stream composition, constituent concentrations, flow



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rate, relative humidity and temperature. The design analysis must also establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule;

- D) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur;
  - E) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 percent or greater unless the total organic concentration limit of Section 725.932(a) is achieved at an efficiency less than 95 weight percent or the total organic emission limits of Section 725.932(a) for affected process vents at the facility are attained by a control device involving vapor recovery at an efficiency less than 95 weight percent. A statement provided by the control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement; and
  - F) If performance tests are used to demonstrate compliance, all test results.
- c) Design documentation and monitoring operating and inspection information for each closed-vent system and control device required to comply with the provisions of this Part must be recorded and kept up-to-date in the facility operating record. The information must include the following:
- 1) Description and date of each modification that is made to the closed-vent system or control device design;
  - 2) Identification of operating parameter, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with Section 725.933(f)(1) and (f)(2);

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- 3) Monitoring, operating and inspection information required by Section 725.933(f) through (k);
- 4) Date, time, and duration of each period that occurs while the control device is operating when any monitored parameter exceeds the value established in the control device design analysis, as specified below:
  - A) For a thermal vapor incinerator designed to operate with a minimum residence time of 0.50 second at a minimum temperature of  $760\text{ }^{\circ}\text{C}^{\circ}\text{C}$ , any period when the combustion temperature is below  $760\text{ }^{\circ}\text{C}^{\circ}\text{C}$ .
  - B) For a thermal vapor incinerator designed to operate with an organic emission reduction efficiency of 95 percent or greater, any period when the combustion zone temperature is more than  $28\text{ }^{\circ}\text{C}^{\circ}\text{C}$  below the design average combustion zone temperature established as a requirement of subsection (b)(4)(C)(i) of this Section.
  - C) For a catalytic vapor incinerator, any period when either of the following occurs:
    - i) Temperature of the vent stream at the catalyst bed inlet is more than  $28\text{ }^{\circ}\text{C}^{\circ}\text{C}$  below the average temperature of the inlet vent stream established as a requirement of subsection (b)(4)(C)(ii) of this Section; or
    - ii) Temperature difference across the catalyst bed is less than 80 percent of the design average temperature difference established as a requirement of subsection (b)(4)(C)(ii) of this Section.
  - D) For a boiler or process heater, any period when either of the following occurs:
    - i) Flame zone temperature is more than  $28\text{ }^{\circ}\text{C}^{\circ}\text{C}$  below the design average flame zone temperature established as a requirement of subsection (b)(4)(C)(iii) of this Section; or
    - ii) Position changes where the vent stream is introduced to the combustion zone from the location established as a requirement of subsection (b)(4)(C)(iii) of this Section.



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- E) For a flare, period when the pilot flame is not ignited.
  - F) For a condenser that complies with Section 725.933(f)(2)(F)(i), any period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the condenser are more than 20 percent greater than the design outlet organic compound concentration level established as a requirement of subsection (b)(4)(C)(v) ~~of this Section~~.
  - G) For a condenser that complies with Section 725.933(f)(2)(F)(ii), any period when either of the following occurs:
    - i) Temperature of the exhaust vent stream from the condenser is more than  $6\text{ }^{\circ}\text{C}$  ~~°C~~ above the design average exhaust vent stream temperature established as a requirement of subsection (b)(4)(C)(v) ~~of this Section~~; or
    - ii) Temperature of the coolant fluid exiting the condenser is more than  $6\text{ }^{\circ}\text{C}$  ~~°C~~ above the design average coolant fluid temperature at the condenser outlet established as a requirement of subsection (b)(4)(C)(v) ~~of this Section~~.
  - H) For a carbon adsorption system, such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device and which complies with Section 725.933(f)(2)(G)(i), any period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the carbon bed are more than 20 percent greater than the design exhaust vent stream organic compound concentration level established as a requirement of subsection (b)(4)(C)(vi) ~~of this Section~~.
  - I) For a carbon adsorption system, such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device and which complies with Section 725.933(f)(2)(G)(ii), any period when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time established as a requirement of subsection (b)(4)(C)(vi) ~~of this Section~~;
- 5) Explanation for each period recorded under subsection (c)(4) ~~of this Section~~ of the cause for control device operating parameter exceeding the



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design value and the measures implemented to correct the control device operation;

- 6) For carbon adsorption systems operated subject to requirements specified in Section 725.933(g) or (h)(2), any date when existing carbon in the control device is replaced with fresh carbon;
- 7) For carbon adsorption systems operated subject to requirements specified in Section 725.933(h)(1), a log that records:
  - A) Date and time when control device is monitored for carbon breakthrough and the monitoring device reading.
  - B) Date when existing carbon in the control device is replaced with fresh carbon;
- 8) Date of each control device startup and shutdown;
- 9) An owner or operator designating any components of a closed-vent system as unsafe to monitor pursuant to Section 725.933(n) must record in a log that is kept in the facility operating record the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of Section 725.933(n), an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component; and
- 10) When each leak is detected, as specified in Section 725.933(k), the following information must be recorded:
  - A) The instrument identification number, the closed-vent system component identification number, and the operator name, initials, or identification number;
  - B) The date the leak was detected and the date of first attempt to repair the leak;
  - C) The date of successful repair of the leak;
  - D) Maximum instrument reading measured by Reference Method 21 (Determination of Volatile Organic Compound Leaks) of appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35

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Ill. Adm. Code 720.111(b), after it is successfully repaired or determined to be nonreparable; and

- E) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
- i) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.
  - ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion; ~~and~~
- d) Records of the monitoring, operating and inspection information required by subsections (c)(3) through (c)(10) ~~of this Section~~ must be maintained by the owner or operator for at least three years following the date of each occurrence, measurement, corrective action, or record.
- e) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser or carbon adsorption system, monitoring and inspection information indicating proper operation and maintenance of the control device must be recorded in the facility operating record.
- f) Up-to-date information and data used to determine whether or not a process vent is subject to the requirements in Section 725.932, including supporting documentation as required by Section 725.934(d)(2), when application of the knowledge of the nature of the hazardous waste stream ~~wastestream~~ or the process by which it was produced is used, must be recorded in a log that is kept in the facility operating record.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART BB: AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

**Section 725.952 Standards: Pumps in Light Liquid Service**

- a) Monitoring.

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- 1) Each pump in light liquid service must be monitored monthly to detect leaks by the methods specified in Section 725.963(b), except as provided in subsections (d), (e), and (f) ~~of this Section~~.
  - 2) Each pump in light liquid service must be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.
- b) Leaks.
- 1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
  - 2) If there are indications of liquids dripping from the pump seal, a leak is detected.
- c) Repairs.
- 1) When a leak is detected, it must be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 725.959.
  - 2) A first attempt at repair (e.g., tightening the packing gland) must be made no later than 5 calendar days after each leak is detected.
- d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of subsection (a) ~~of this Section~~, provided the following requirements are met:
- 1) Each dual mechanical seal system must be as follows:
    - A) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressures;
    - B) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of Section 725.960; or
    - C) Equipped with a system that purges the barrier fluid into a hazardous wastestream with no detectable emissions to the atmosphere;
  - 2) The barrier fluid system must not be a hazardous waste with organic concentrations 10 percent or greater by weight;



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- 3) Each barrier fluid system must be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both;
- 4) Each pump must be checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals;
- 5) Alarms.
  - A) Each sensor as described in subsection (d)(3) ~~of this Section~~, must be checked daily or be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly.
  - B) The owner or operator must determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both; and
- 6) Leaks.
  - A) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion determined in subsection (d)(5)(B) ~~of this Section~~, a leak is detected.
  - B) When a leak is detected, it must be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 725.959.
  - C) A first attempt at repair (e.g., relapping the seal) must be made no later than five calendar days after each leak is detected.
- e) Any pump that is designated, as described in Section 725.964(g)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of subsections (a), (c), and (d) ~~of this Section~~, if the pump meets the following requirements:
  - 1) Must have no externally actuated shaft penetrating the pump housing;
  - 2) Must operate with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in Section 725.963(c); and

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- 3) Must be tested for compliance with subsection (e)(2) ~~of this Section~~, initially upon designation, annually and at other times as specified by the Agency ~~pursuant to Section 725.950(e)~~.
- f) If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of Section 725.960, it is exempt from the requirements of subsections (a) through (e) ~~of this Section~~.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART BB: AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

**Section 725.964 Recordkeeping Requirements**

- a) Lumping Units.
  - 1) Each owner or operator subject to the provisions of this Subpart BB must comply with the recordkeeping requirements of this Section.
  - 2) An owner or operator of more than one hazardous waste management unit subject to the provisions of this Subpart BB may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.
- b) Owners and operators must record the following information in the facility operating record:
  - 1) For each piece of equipment to which this Subpart BB applies, the following:
    - A) Equipment identification number and hazardous waste management unit identification;
    - B) Approximate locations within the facility (e.g., identify the hazardous waste management unit on a facility plot plan);
    - C) Type of equipment (e.g., a pump or pipeline valve);
    - D) Percent-by-weight total organics in the hazardous wastestream at the equipment;

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- E) Hazardous waste state at the equipment (e.g., gas/vapor or liquid); and
  - F) Method of compliance with the standard (e.g., “monthly leak detection and repair” or “equipped with dual mechanical seals”);
- 2) For facilities that comply with the provisions of Section 725.933(a)(2), an implementation schedule, as specified in that Section;
  - 3) Where an owner or operator chooses to use test data to demonstrate the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan, as specified in Section 725.935(b)(3); and
  - 4) Documentation of compliance with Section 725.960, including the detailed design documentation or performance test results specified in Section 725.935(b)(4).
- c) When each leak is detected, as specified in Section 725.952, 725.953, 725.957, or 725.958, the following requirements apply:
- 1) A weatherproof and readily visible identification, marked with the equipment identification number, the date evidence of a potential leak was found in accordance with Section 725.958(a), and the date the leak was detected, must be attached to the leaking equipment;
  - 2) The identification on equipment except on a valve, may be removed after it has been repaired; and
  - 3) The identification on a valve may be removed after it has been monitored for two successive months as specified in Section 725.957(c) and no leak has been detected during those two months.
- d) When each leak is detected, as specified in Sections 725.952, 725.953, 725.957, or 725.958, the following information must be recorded in an inspection log and must be kept in the facility operating record:
- 1) The instrument and operator identification numbers and the equipment identification number;
  - 2) The date evidence of a potential leak was found in accordance with Section 725.958(a);



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- 3) The date the leak was detected and the dates of each attempt to repair the leak;
  - 4) Repair methods applied in each attempt to repair the leak;
  - 5) "Above 10,000," if the maximum instrument reading measured by the methods specified in Section 725.963(b) after each repair attempt is equal to or greater than 10,000 ppm;
  - 6) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak;
  - 7) Documentation supporting the delay of repair of a valve in compliance with Section 725.959(c);
  - 8) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a hazardous waste management unit shutdown;
  - 9) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days; and
  - 10) The date of successful repair of the leak.
- e) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of Section 725.960 must be recorded and kept up-to-date in the facility operating record as specified in Section 725.935(c)(1) and (c)(2), and monitoring, operating and inspection information in Section 725.935(c)(3) through (c)(8).
- f) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, monitoring and inspection information indicating proper operation and maintenance of the control device must be recorded in the facility operating record.
- g) The following information pertaining to all equipment subject to the requirements in Sections 725.952 through 725.960 must be recorded in a log that is kept in the facility operating record:
- 1) A list of identification numbers for equipment (except welded fittings) subject to the requirements of this Subpart BB.

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- 2) List of Equipment.
  - A) A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, under the provisions of Sections 725.952(e), 725.953(i), and 725.957(f).
  - B) The designation of this equipment as subject to the requirements of Section 725.952(e), 725.953(i), or 725.957(f) must be signed by the owner or operator.
- 3) A list of equipment identification numbers for pressure relief devices required to comply with Section 725.954(a).
- 4) Compliance Tests ~~tests~~.
  - A) The dates of each compliance test required in Sections 725.952(e), 725.953(i), 725.954, and 725.957(f).
  - B) The background level measured during each compliance test.
  - C) The maximum instrument reading measured at the equipment during each compliance test.
- 5) A list of identification numbers for equipment in vacuum service.
- 6) Identification, either by list or location (area or group) of equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for less than 300 hours per year.
- h) The following information pertaining to all valves subject to the requirements of Section 725.957(g) and (h) must be recorded in a log that is kept in the facility operating record:
  - 1) A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve; and
  - 2) A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.

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- i) The following information must be recorded in the facility operating record for valves complying with Section 725.962:
  - 1) A schedule of monitoring; and
  - 2) The percent of valves found leaking during each monitoring period.
- j) The following information must be recorded in a log that is kept in the facility operating record:
  - 1) Criteria required in Sections 725.952(d)(5)(B) and 725.953(e)(2) and an explanation of the criteria; and
  - 2) Any changes to these criteria and the reasons for the changes.
- k) The following information must be recorded in a log that is kept in the facility operating record for use in determining exemptions, as provided in Section 725.950 and other specific Subparts:
  - 1) An analysis determining the design capacity of the hazardous waste management unit;
  - 2) A statement listing the hazardous waste influent to and effluent from each hazardous waste management unit subject to the requirements in Sections 725.952 through Section 725.960 and an analysis determining whether these hazardous wastes are heavy liquids; and
  - 3) An up-to-date analysis and the supporting information and data used to determine whether or not equipment is subject to the requirements in Sections 725.952 through 725.960. The record must include supporting documentation, as required by Section 725.963(d)(3), when application of the knowledge of the nature of the hazardous wastestream or the process by which it was produced is used. If the owner or operator takes any action (e.g., changing the process that produced the waste) that could result in an increase in the total organic content of the waste contained in or contacted by equipment determined not to be subject to the requirements in Sections 725.952 through 725.960, then a new determination is required.
- l) Records of the equipment leak information required by subsection (d) ~~of this Section~~ and the operating information required by subsection (e) ~~of this Section~~ need be kept only three years.



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- m) The owner or operator of any facility with equipment that is subject to this Subpart and to federal regulations at 40 CFR 60, 61, or 63 may elect to determine compliance with this Subpart BB by documentation of compliance either pursuant to Section 725.964 or by documentation of compliance with the regulations at 40 CFR 60 (Standards of Performance for New Stationary Sources), 61 (National Emission Standards for Hazardous Air Pollutants), or 63 (National Emission Standards for Hazardous Air Pollutants for Source Categories), pursuant to the relevant provisions of 40 CFR 60, 61, or 63, each incorporated by reference in 35 Ill. Adm. Code 720.111(b). The documentation of compliance under the regulation at 40 CFR 60, 61, or 63 must be kept with or made readily available with the facility operating record.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART CC: AIR EMISSION STANDARDS FOR TANKS, SURFACE  
IMPOUNDMENTS, AND CONTAINERS

**Section 725.983 Standards: General**

- a) This Section applies to the management of hazardous waste in tanks, surface impoundments, and containers subject to this Subpart CC.
- b) The owner or operator must control air pollutant emissions from each hazardous waste management unit in accordance with the standards specified in Sections 725.985 through 725.988, as applicable to the hazardous waste management unit, except as provided for in subsection (c) ~~of this Section~~.
- c) A tank, surface impoundment, or container is exempted from standards specified in Sections 725.985 through 725.988, provided that all hazardous waste placed in the waste management unit is one of the following:
- 1) A tank, surface impoundment, or container for which all hazardous waste entering the unit has an average VO concentration at the point of waste origination of less than 500 parts per million by weight (ppmw). The average VO concentration must be determined by the procedures specified in Section 725.984(a). The owner or operator must review and update, as necessary, this determination at least once every 12 months following the date of the initial determination for the hazardous waste streams entering the unit;
  - 2) A tank, surface impoundment, or container for which the organic content of all the hazardous waste entering the waste management unit has been

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reduced by an organic destruction or removal process that achieves any one of the following conditions:

- A) The process removes or destroys the organics contained in the hazardous waste to such a level that the average VO concentration of the hazardous waste at the point of waste treatment is less than the exit concentration limit ( $C_t$ ) 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 must be determined using the procedures specified in Section 725.984(b);
- B) The process removes or destroys the organics contained in the hazardous waste to such a level 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 100 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste treatment must be determined using the procedures specified in Section 725.984(b);
- C) The process removes or destroys the organics contained in the hazardous waste to such a level that the actual organic mass removal rate ( $MR$ ) for the process is equal to or 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 must be determined using the procedures specified in Section 725.984(b);
- D) The process is a biological process that destroys or degrades the organics contained in the hazardous waste so that either of the following conditions is met:
  - i) The organic reduction efficiency ( $R$ ) for the process is equal to or greater than 95 percent, and the organic biodegradation efficiency ( $R_{bio}$ ) for the process is equal to or greater than 95 percent. The organic reduction efficiency and the organic biodegradation efficiency for the process must be determined using the procedures specified in Section 725.984(b); and

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- ii) The total actual organic mass biodegradation rate ( $MR_{bio}$ ) 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 must be determined using the procedures specified in Section 725.984(b);
- E) The process is one that removes or destroys the organics contained in the hazardous waste and meets all of the following conditions:
- i) From the point of waste origination through the point where the hazardous waste enters the treatment process, the hazardous waste is continuously managed in waste management units that use air emission controls in accordance with the standards specified in Section 725.985 through Section 725.988, as applicable to the waste management unit;
  - ii) From the point of waste origination through the point where the hazardous waste enters the treatment process, any transfer of the hazardous waste is accomplished through continuous hard-piping or other closed system transfer that does not allow exposure of the waste to the atmosphere;  
  
BOARD NOTE: The USEPA considers a drain system that meets the requirements of federal subpart RR of 40 CFR 63 (National Emission Standards for Individual Drain Systems) to be a closed system.
  - iii) 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 500 ppmw, whichever value is lower. The average VO concentration of each individual hazardous waste stream at the point of waste origination must be determined using the procedures specified in Section 725.984(a). The average VO concentration of the hazardous waste at the point of waste treatment must be



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determined using the procedures specified in Section 725.984(b);

- F) 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 owner or operator certifies that the average VO concentration at the point of waste origination for each of the individual waste streams entering the process is less than 10,000 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste origination must be determined using the procedures specified in Sections 725.984(b) ~~Section 724.983(b)~~ and 725.984(a) ~~Section 724.983(a)~~, respectively;
- G) A hazardous waste incinerator for which either of the following conditions is true:
  - i) The owner or operator has been issued a final permit under 35 Ill. Adm. Code 702, 703, and 705 that implements the requirements of Subpart O of 35 Ill. Adm. Code 724; or
  - ii) The owner or operator has designed and operates the incinerator in accordance with the interim status requirements of Subpart O of this Part;
- H) A boiler or industrial furnace for which either of the following conditions is true:
  - i) The owner or operator has been issued a final permit under 35 Ill. Adm. Code 702, 703, and 705 that implements the requirements of Subpart H of 35 Ill. Adm. Code 726; or
  - ii) The owner or operator has designed and operates the industrial furnace or incinerator in accordance with the interim status requirements of Subpart H of 35 Ill. Adm. Code 726; and
- I) For the purpose of determining the performance of an organic destruction or removal process in accordance with the conditions in each of subsections (c)(2)(A) through (c)(2)(F), the owner or operator must account for VO concentrations determined to be

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below the limit of detection of the analytical method by using the following VO concentration:

- i) If Reference Method 25D (Determination of the Volatile Organic Concentration of Waste Samples) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b), is used for the analysis, one-half the blank value determined in the method at Section 4.4 of Reference Method 25D or a value of 25 ppmw, whichever is less; and
  - ii) If any other analytical method is used, one-half the sum of the limits of detection established for each organic constituent in the waste that has a Henry's law constant value at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) (which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole/m<sup>3</sup>) at 25 °C°C;
- 3) A tank or surface impoundment used for biological treatment of hazardous waste in accordance with the requirements of subsection (c)(2)(D) ~~of this Section~~;
  - 4) A tank, surface impoundment, or container for which all hazardous waste placed in the unit fulfills either of the following two conditions:
    - A) It meets the numerical concentration limits for organic hazardous constituents, applicable to the hazardous waste, as specified in Table T to 35 Ill. Adm. Code 728; or
    - B) The organic hazardous constituents in the waste have been treated by the treatment technology established by USEPA for the waste, as set forth in 35 Ill. Adm. Code 728.142(a), or treated by an equivalent method of treatment approved by the Agency pursuant to 35 Ill. Adm. Code 728.142(b); or
  - 5) A tank used for bulk feed of hazardous waste to a waste incinerator, and all of the following conditions are met:
    - A) The tank is located inside an enclosure vented to a control device that is designed and operated in accordance with all applicable requirements specified under federal subpart FF of 40 CFR 61



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(National Emission Standards for Benzene Waste Operations), incorporated by reference in 35 Ill. Adm. Code 720.111(b), for a facility at which the total annual benzene quantity from the facility waste is equal to or greater than 10 megagrams (11 tons) per year;

- B) The enclosure and control device serving the tank were installed and began operation prior to November 25, 1996; and
- C) The enclosure is designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" under appendix B to 40 CFR 52.741 (VOM Measurement Techniques for Capture Efficiency), incorporated by reference in 35 Ill. Adm. Code 720.111(b). The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical or electrical equipment; or to direct air flow into the enclosure. The owner or operator must perform the verification procedure for the enclosure as specified in Section 5.0 of the "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" annually.
- d) The Agency 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 that is 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 must be performed using direct measurement in accordance with the applicable requirements of Section 725.984(a). The waste determination for a hazardous waste at the point of waste treatment must be performed in accordance with the applicable requirements of Section 725.984(b);
  - 2) In performing a waste determination pursuant to subsection (d)(1) of this Section, the sample preparation and analysis must be conducted as follows:
    - A) In accordance with the method used by the owner or operator to perform the waste analysis, except in the case specified in subsection (d)(2)(B) of this Section; and



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- B) If the Agency determines that the method used by the owner or operator was not appropriate for the hazardous waste managed in the tank, surface impoundment, or container, then the Agency may choose an appropriate method;
- 3) Where the owner or operator is requested to perform the waste determination, the Agency may elect to have an authorized representative observe the collection of the hazardous waste samples used for the analysis;
- 4) Where the results of the waste determination performed or requested by the Agency 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 subsection (d)(1) ~~of this Section~~ must be used to establish compliance with the requirements of this Subpart CC; and
- 5) Where the owner or operator has used an averaging period greater than one hour for determining the average VO concentration of a hazardous waste at the point of waste origination, the Agency may elect to establish compliance with this Subpart CC 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:
- A) The average VO concentration of the hazardous waste at the point of waste origination must be determined by direct measurement in accordance with the requirements of Section 725.984(a);
- B) Results of the waste determination performed or requested by the Agency showing that the average VO concentration of the hazardous waste at the point of waste origination is equal to or greater than 500 ppmw must constitute noncompliance with this Subpart CC, except in a case as provided for in subsection (d)(5)(C)-(d)(4)(C) ~~of this Section~~; and
- C) Where 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 one hour to be less than 500 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

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to or greater than 500 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 Sections 725.984(a) and 725.990 must be considered by the Agency together with the results of the waste determination performed or requested by the Agency in establishing compliance with this Subpart CC.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 725.984 Waste Determination Procedures**

- a) Determination of Volatile Organic Concentration ~~Waste determination procedure for volatile organic (VO) Concentration concentration of a hazardous waste at the Point point of Waste Origination-waste origination.~~
- 1) An owner or operator must 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 Section 725.983(c)(1) from using air emission controls in accordance with standards specified in Section 725.985 through Section 725.988, as applicable to the waste management unit.
    - A) An owner or operator must make an initial determination of the average VO concentration of the waste stream before the first time any portion of the material in the hazardous waste stream is placed in a waste management unit exempted under the provisions of Section 725.983(c)(1) from using air emission controls. Thereafter, an owner or operator must make an initial determination of the average VO concentration of the waste stream for each averaging period that a hazardous waste is managed in the unit.
    - B) An owner or operator must 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 VO concentration limits specified in Section 725.983(c)(1).
  - 2) For a waste determination that is required by subsection (a)(1) ~~of this Section~~, the average VO concentration of a hazardous waste at the point of waste origination must be determined using either direct measurement, as



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specified in subsection (a)(3) ~~of this Section~~, or by knowledge of the waste, as specified in subsection (a)(4) ~~of this Section~~.

- 3) ~~Direct Measurement~~ ~~measurement to determine average VO concentration of a hazardous waste at the point of waste origination.~~
- A) Identification. The owner or operator must identify and record the point of waste origination for the hazardous waste.
  - B) Sampling. Samples of the hazardous waste stream must be collected at the point of waste origination in such a manner that volatilization of organics contained in the waste and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.
    - i) The averaging period to be used for determining the average VO concentration for the hazardous waste stream on a mass-weighted average basis must be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the hazardous waste stream but must not exceed one year.
    - ii) A sufficient number of samples, but no fewer than four samples, must be collected for a hazardous waste determination. All of the samples for a given waste determination must be collected within a one-hour period. The average of the four or more sample results constitutes a waste determination for the waste stream. One or more waste determinations may be required to represent the complete range of waste compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the source or process generating the hazardous waste stream. Examples of such normal variations are seasonal variations in waste quantity or fluctuations in ambient temperature.
    - iii) All samples must be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan must describe the procedure by which representative samples of



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the hazardous waste stream are collected so that a minimum loss of organics occurs throughout the sample collection and handling process, and by which sample integrity is maintained. A copy of the written sampling plan must be maintained on-site in the facility operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in Reference Method 25D (Determination of the Volatile Organic Concentration of Waste Samples) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b).

- iv) Sufficient information, as specified in the “site sampling plan” required under subsection (a)(3)(B)(iii) ~~of this Section,~~ must 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.
  
- C) Analysis. Each collected sample must be prepared and analyzed in accordance with Reference Method 25D in appendix A to 40 CFR 60 for the total concentration of volatile organic constituents or using one or more methods when the individual organic compound concentrations are identified and summed and the summed waste concentration accounts for and reflects all organic compounds in the waste with Henry’s law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) (which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole/m<sup>3</sup>) at 25 °C (77 °F). At the owner’s or operator’s discretion, the owner or operator may adjust test data measured by any appropriate method to discount any contribution to the total volatile organic concentration that is a result of including a compound with a Henry’s law constant value of less than 0.1 Y/X at 25 °C (77 °F). ~~To adjust these data, the measured concentration of each individual chemical constituent contained in the waste is multiplied by the constituent specific adjustment factor ( $f_{m25D}$ ).~~ If the owner or operator elects to adjust test data, the adjustment must be made to all individual chemical constituents with a Henry’s law constant value greater than or equal to 0.1 Y/X at 25 °C contained in the waste. To adjust these data, the

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measured concentration of each individual chemical constituent contained in the waste is multiplied by the constituent-specific ~~Constituent-specific adjustment factors ( $f_{m25D}$ ) can be obtained by contacting the USEPA, Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711.~~ Other test methods may be used if they meet the requirements in subsection (a)(3)(C)(i) or (a)(3)(C)(ii) ~~of this Section~~ and provided the requirement is met to reflect all organic compounds in the waste with Henry's law constant values greater than or equal to 0.1 Y/X (which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole/m<sup>3</sup>) at 25 °C.

- i) Any USEPA standard method that has been validated in accordance with appendix D to 40 CFR 63 (Alternative Validation Procedure for EPA Waste and Wastewater Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b); or
- ii) Any other analysis method that has been validated in accordance with the procedures specified in Section 5.1 or 5.3, and the corresponding calculations in Section 6.1 or 6.3, of Method 301 (Field Validation of Pollutant Measurement Methods from Various Waste Media) in appendix A to 40 CFR 63 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b). The data are acceptable if they meet the criteria specified in Section 6.1.5 or 6.3.3 of Method 301. If correction is required under Section 6.3.3 of Method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 are not required.

D) Calculations.

- i) The average VO concentration ( $\bar{C}$ ) on a mass-weighted basis must be calculated by using the results for all waste determinations conducted in accordance with subsections (a)(3)(B) and (a)(3)(C) ~~of this Section~~ and the following equation:



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$$\bar{C} = \frac{1}{Q_T} \times \sum_{i=1}^n (Q_i \times C_i)$$

Where:

- $\bar{C}$  = Average VO concentration of the hazardous waste at the point of waste origination on a mass-weighted basis, in ppmw;
- $i$  = Individual waste determination "i" of the hazardous waste;
- $n$  = Total number of waste determinations of the hazardous waste conducted for the averaging period (not to exceed one year);
- $Q_i$  = Mass quantity of the hazardous waste stream represented by  $C_i$ , in kg/hr;
- $Q_T$  = Total mass quantity of the hazardous waste during the averaging period, in kg/hr; and
- $C_i$  = Measured VO concentration of waste determination "i," as determined in accordance with subsection (a)(3)(C) of this Section (i.e., the average of the four or more samples specified in subsection (a)(3)(B)(ii) of this Section), in ppmw.

ii) For the purpose of determining  $C_i$ , for individual waste samples analyzed in accordance with subsection (a)(3)(C) of this Section, the owner or operator must account for VO concentrations determined to be below the limit of detection of the analytical method by using the VO concentration determined according to subsection (a)(3)(G) of this Section.

E) Provided that the test method is appropriate for the waste as required under subsection (a)(3)(C) of this Section, the Agency must determine compliance based on the test method used by the owner or operator as recorded pursuant to Section 725.990(f)(1).



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- F) The quality assurance program elements required under subsections (a)(3)(C)(vi) and (a)(3)(C)(vii) ~~of this Section~~ are as follows:
- i) Documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps.
  - ii) Measurement of the overall accuracy and precision of the specific procedures.

BOARD NOTE: Subsections (a)(3)(F)(i) and (a)(3)(F)(ii) are derived from 40 CFR 265.984(a)(3)(iii)(F)(1), (a)(3)(iii)(F)(2), (a)(3)(iii)(G)(1), and (a)(3)(iii)(G)(2), which the Board has codified here to comport with Illinois Administrative Code format requirements.

- G) VO concentrations below the limit of detection must be considered to be as follows:
- i) If Reference Method 25D is used for the analysis, the VO concentration must be considered to be one-half the blank value determined in the method Method-at Section 4.4 of Reference Method 25D.
  - ii) If any other analytical method is used, the VO concentration must be considered to be one-half the sum of the limits of detection established for each organic constituent in the waste that has a Henry's law constant value at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) (which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole/m<sup>3</sup>) at 25 °C°C.

BOARD NOTE: Subsections (a)(3)(G)(i) and (a)(3)(G)(ii) are derived from 40 CFR 265.984(a)(3)(iv)(A)(1) and (a)(3)(iv)(A)(2), which the Board has codified here to comport with Illinois Administrative Code format requirements.

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- 4) Use of Owner or Operator Knowledge ~~owner or operator knowledge to determine average VO concentration of a hazardous waste at the point of waste origination.~~
- A) Documentation must be prepared that presents the information used as the basis for the owner's or operator's knowledge of the hazardous waste stream's average VO concentration. Examples of information that may be used as the basis for knowledge include the following: material balances for the source or process generating the hazardous waste stream; constituent-specific chemical test data for the hazardous waste stream from previous testing that are still applicable to the current waste stream; previous test data for other locations managing the same type of waste stream; or other knowledge based on information included in manifests, shipping papers, or waste certification notices.
- B) If test data are used as the basis for knowledge, then the owner or operator must 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 organic concentration test data for the hazardous waste stream that are validated in accordance with Method 301 as the basis for knowledge of the waste.
- C) An owner or operator using chemical constituent-specific concentration test data as the basis for knowledge of the hazardous waste may adjust the test data to the corresponding average VO concentration value that would have been obtained had the waste samples been analyzed using Reference Method 25D. To adjust these data, the measured concentration for each individual chemical constituent contained in the waste is multiplied by the appropriate constituent-specific adjustment factor ( $f_{m25D}$ ).
- D) In the event that the Agency and the owner or operator disagree on a determination of the average VO concentration for a hazardous waste stream using knowledge, then the results from a determination of average VO concentration using direct measurement, as specified in subsection (a)(3) ~~of this Section~~, must be used to establish compliance with the applicable requirements of this Subpart CC. The Agency may perform or



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request that the owner or operator perform this determination using direct measurement. The owner or operator may choose one or more appropriate methods to analyze each collected sample in accordance with the requirements of subsection (a)(3)(C) of this Section.

- b) Determination of VO Concentration at the Point of Waste Treatment~~Waste determination procedures for treated hazardous waste.~~
- 1) An owner or operator must perform the applicable waste determination for each treated hazardous waste placed in a waste management unit exempted under the provisions of Section 725.983(c)(2)(A) through (c)(2)(F) from using air emission controls in accordance with the standards specified in Sections 725.985 through 725.988, as applicable to the waste management unit.
    - A) An owner or operator must make an initial determination of the average VO concentration of the waste stream before the first time any portion of the material in the treated waste stream is placed in the waste management unit exempt under Section 725.983(c)(2), (c)(3), or (c)(4) from using air emission controls. Thereafter, an owner or operator must update the information used for the waste determination at least once every 12 months following the date of the initial waste determination.
    - B) An owner or operator must perform a new waste determination whenever changes to the process generating or treating the waste stream are reasonably likely to cause the average VO concentration of the hazardous waste to increase to such a level that the applicable treatment conditions specified in Section 725.983 (c)(2), (c)(3), or (c)(4) are not achieved.
  - 2) The owner or operator must designate and record the specific provision in Section 725.983(c)(2) under which the waste determination is being performed. The waste determination for the treated hazardous waste must be performed using the applicable procedures specified in subsections (b)(3) through (b)(9) of this Section.
  - 3) Procedure for Determination of to determine the average VO concentration of a hazardous waste at the point of waste treatment Concentration.



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- A) Identification. The owner or operator must identify and record the point of waste treatment for the hazardous waste.
  
- B) Sampling. Samples of the hazardous waste stream must be collected at the point of waste treatment in such a manner that volatilization of organics contained in the waste and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.
  - i) The averaging period to be used for determining the average VO concentration for the hazardous waste stream on a mass-weighted average basis must be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the hazardous waste stream but must not exceed one year.
  
  - ii) A sufficient number of samples, but no fewer than four samples, must be collected and analyzed for a hazardous waste determination. All of the samples for a given waste determination must be collected within a one-hour period. The average of the four or more sample results constitutes a waste determination for the hazardous waste stream. One or more waste determinations may be required to represent the complete range of waste compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the process generating or treating the hazardous waste stream. Examples of such normal variations are seasonal variations in waste quantity or fluctuations in ambient temperature.
  
  - iii) All samples must be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan must describe the procedure by which representative samples of the hazardous waste stream are collected so that a minimum loss of organics occurs throughout the sample collection and handling process, and by which sample integrity is maintained. A copy of the written sampling plan must be maintained on-site in the facility operating

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records. An example of an acceptable sample collection and handling procedures for a total organic constituent concentration may be found in Reference Method 25D.

- iv) Sufficient information, as specified in the “site sampling plan” required under subsection (a)(3)(B)(iii) ~~of this Section~~, must 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.
- C) Analysis. Each collected sample must be prepared and analyzed in accordance with Reference Method 25D for the total concentration of volatile organic constituents or using one or more methods when the individual organic compound concentrations are identified and summed, and the summed waste concentration accounts for and reflects all organic compounds in the waste with Henry’s law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) (which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole/m<sup>3</sup>) at 25° C ~~25°C~~ (77 °F ~~75°F~~). When the owner or operator is making a waste determination for a treated hazardous waste that is to be compared to an average VO concentration at the point of waste origination or the point of waste entry to the treatment system, to determine if the conditions of 35 Ill. Adm. Code 724.982(c)(2)(A) through (c)(2)(F) or Section 725.983(c)(2)(A) through (c)(2)(F) are met, then the waste samples must be prepared and analyzed using the same method or methods as were used in making the initial waste determinations at the point of waste origination or at the point of entry to the treatment system. At the owner’s or operator’s discretion, the owner or operator may adjust test data obtained by any appropriate method to discount any contribution to the total volatile organic concentration that is a result of including a compound with a Henry’s law constant value less than 0.1 Y/X at 25 °C ~~°C~~. ~~To adjust these data, the measured concentration of each individual chemical constituent contained in the waste is multiplied by the constituent specific adjustment factor (f<sub>m25D</sub>).~~ If the owner or operator elects to adjust test data, the adjustment must be made to all individual chemical constituents with a Henry’s law constant value greater than or equal to 0.1 Y/X at 25 °C ~~°C~~ contained in the waste. To adjust these data, the measured



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concentration of each individual chemical constituent contained in the waste is multiplied by the constituent-specific ~~Constituent-specific~~ adjustment factors ( $f_{m25D}$ ) approved in writing by the Agency can be obtained by contacting the USEPA, Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711. Other test methods may be used if they meet the requirements in subsection (a)(3)(C)(i) or (a)(3)(C)(ii) of this Section and provided the requirement is met to reflect all organic compounds in the waste with Henry's law constant values greater than or equal to 0.1 Y/X (which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole/m<sup>3</sup>) at 25 °C.

- i) Any USEPA standard method that has been validated in accordance with appendix D to 40 CFR 63, incorporated by reference in 35 Ill. Adm. Code 720.111(b); or
  - ii) Any other analysis method that has been validated in accordance with the procedures specified in Section 5.1 or 5.3, and the corresponding calculations in Section 6.1 or 6.3, of Method 301 in appendix A to 40 CFR 63, incorporated by reference in 35 Ill. Adm. Code 720.111(b). The data are acceptable if they meet the criteria specified in Section 6.1.5 or 6.3.3 of Method 301. If correction is required under Section 6.3.3 of Method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 are not required.
- D) Calculations. The average VO concentration ( $\bar{C}$ ) on a mass-weighted basis must be calculated by using the results for all samples analyzed in accordance with subsection (b)(3)(C) of this Section and the following equation:

$$\bar{C} = \frac{1}{Q_T} \times \sum_{i=1}^n (Q_i \times C_i)$$

Where:



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- $\bar{C}$  = Average VO concentration of the hazardous waste at the point of waste treatment on a mass-weighted basis, in ppmw;
- i = Individual determination "i" of the hazardous waste;
- n = Total number of waste determinations of the hazardous waste collected for the averaging period (not to exceed one year);
- $Q_i$  = Mass quantity of the hazardous waste stream represented by  $C_i$ , in kg/hr;
- $Q_T$  = Total mass quantity of hazardous waste during the averaging period, in kg/hr; and
- $C_i$  = Measured VO concentration of waste determinations "i," as determined in accordance with the requirements of subsection (b)(3)(C) ~~of this Section~~ (i.e., the average of the four or more samples specified in subsection (b)(3)(B)(ii) ~~of this Section~~), in ppmw.

- E) Provided that the test method is appropriate for the waste as required under subsection (b)(3)(C) ~~of this Section~~, compliance must be determined based on the test method used by the owner or operator as recorded pursuant to Section 725.990(f)(1).
- 4) Procedure for Determination of Exit Concentration Limit to determine the exit concentration limit ( $C_t$ ) for a treated hazardous waste.
- A) The point of waste origination for each hazardous waste treated by the process at the same time must be identified.
- B) If a single hazardous waste stream is identified in subsection (b)(4)(A) ~~of this Section~~, then the exit concentration limit ( $C_t$ ) must be 500 ppmw.
- C) If more than one hazardous waste stream is identified in subsection (b)(4)(A) ~~of this Section~~, then the average VO concentration of each hazardous waste stream at the point of waste origination must be determined in accordance with the requirements of subsection (a) ~~of this Section~~. The exit concentration limit ( $C_t$ ) must be calculated by using the results determined for each individual hazardous waste stream and the following equation:

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$$C_t = \frac{\sum_{x=1}^m (Q_x \times \bar{C}_x) + \sum_{y=1}^n (Q_y \times 500 \text{ppmw})}{\sum_{x=1}^m Q_x + \sum_{y=1}^n Q_y}$$

Where:

- $C_t$  = Exit concentration limit for treated hazardous waste, in ppmw;
- $x$  = Individual hazardous waste stream "x" that has an average VO concentration less than 500 ppmw at the point of waste origination, as determined in accordance with the requirements of subsection (a); ~~of this Section~~
- $y$  = Individual hazardous waste stream "y" that has an average VO concentration equal to or greater than 500 ppmw at the point of waste origination, as determined in accordance with the requirements of subsection (a); ~~of this Section~~
- $m$  = 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," in kg/yr;
- $Q_y$  = Annual mass quantity of hazardous waste stream "y," in kg/yr; ~~and~~
- $\bar{C}_x$  = Average VO concentration of hazardous waste stream "x" at the point of waste origination, as determined in accordance with the requirements of subsection (a); ~~of this Section~~, in ppmw.

- 5) Procedure for Determination of Organic Reduction Efficiency to determine the organic reduction efficiency (R) for a treated hazardous waste.

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- A) The organic reduction efficiency (R) for a treatment process must be determined based on results for a minimum of three consecutive runs.
- B) All hazardous waste streams entering the process and all hazardous waste streams exiting the treatment process must be identified. The owner or operator must prepare a sampling plan for measuring these streams that accurately reflects the retention time of the hazardous waste in the process.
- C) For each run, information must be determined for each hazardous waste stream identified in subsection (b)(5)(B) ~~of this Section~~, using the following procedures:
- i) The mass quantity of each hazardous waste stream entering the process ( $Q_b$ ) and the mass quantity of each hazardous waste stream exiting the process ( $Q_a$ ) must be determined; and
  - ii) The average VO concentration at the point of waste origination of each hazardous waste stream entering the process ( $C_b$ ) during the run must be determined in accordance with the requirements of subsection (a)(3) ~~of this Section~~. The average VO concentration at the point of waste treatment of each hazardous waste stream exiting the process ( $C_a$ ) during the run must be determined in accordance with the requirements of subsection (b)(3) ~~of this Section~~.
- D) The waste volatile organic mass flow entering the process ( $E_b$ ) and the waste volatile organic mass flow exiting the process ( $E_a$ ) must be calculated by using the results determined in accordance with subsection (b)(5)(C) ~~of this Section~~ and the following equations:

$$E_b = \frac{1}{10^6} \sum_{j=1}^m (Q_{bj} \times \overline{C_{bj}})$$



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$$E_a = \frac{1}{10^6} \sum_{j=1}^m (Q_{aj} \times \overline{C_{aj}})$$

Where:

$E_a$  = Waste volatile organic mass flow exiting the process, in kg/hr;

$E_b$  = Waste volatile organic mass flow entering the process, in kg/hr;

$m$  = Total number of runs (at least 3);

$j$  = Individual run "j";

$Q_{bj}$  = Mass quantity of hazardous waste entering the process during run "j," in kg/hr;

$Q_{aj}$  = Average mass quantity of waste exiting the process during run "j," in kg/hr;

$\overline{C_{aj}}$  = Average VO concentration of hazardous waste exiting the process during run "j," as determined in accordance with the requirements of subsection (b)(3) of this Section, in ppmw; and

$\overline{C_{bj}}$  = Average VO concentration of hazardous waste entering the process during run "j," as determined in accordance with the requirements of subsection 725.984(a)(3) of this Section, in ppmw.

- E) The organic reduction efficiency of the process must be calculated by using the results determined in accordance with subsection (b)(5)(D) of this Section and the following equation:

$$R = \frac{E_b - E_a}{E_b} \times 100\%$$

Where:

$R$  = Organic reduction efficiency, in percent;

$E_b$  = Waste volatile organic mass flow entering the process, as determined in accordance with the requirements of subsection (b)(5)(D) of this Section, in kg/hr; and

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$E_a$  = Waste volatile organic mass flow exiting the process, as determined in accordance with the requirements of subsection (b)(5)(D) of this Section, in kg/hr.

6) Procedure for Determination of Organic Biodegradation Efficiency to determine the organic biodegradation efficiency ( $R_{bio}$ ) for a treated hazardous waste.

A) The fraction of organics biodegraded ( $F_{bio}$ ) must be determined using the procedure specified in appendix C to 40 CFR 63 (Determination of the Fraction Biodegraded ( $F_{bio}$ ) in a Biological Treatment Unit), incorporated by reference in 35 Ill. Adm. Code 720.111(b).

B) The organic biodegradation efficiency ( $R_{bio}$ ) must be calculated by using the following equation:

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

Where:

$R_{bio}$  = Organic biodegradation efficiency, in percent; and

$F_{bio}$  = Fraction of organic biodegraded, as determined in accordance with the requirements of subsection (b)(6)(A) of this Section.

7) Procedure for Determination of Required Organic Mass Removal Rate to determine the required organic mass removal rate (RMR) for a treated hazardous waste.

A) All of the hazardous waste streams entering the treatment process must be identified.

B) The average VO concentration of the hazardous waste stream at the point of waste origination must be determined in accordance with the requirements of subsection (a) of this Section.

C) For each individual hazardous waste stream that has an average volatile organic concentration equal to or greater than 500 ppmw at the point of waste origination, the average volumetric flow rate of

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hazardous waste and the density of the hazardous waste stream at the point of waste origination must be determined.

- D) The required organic mass removal rate (RMR) for the hazardous waste must be calculated by using the average VO concentration, average volumetric flow rate, and density determined for each individual hazardous waste stream, and the following equation:

$$\text{RMR} = \sum_{y=1}^n \left[ V_y \times k_y \times \frac{(\bar{C}_y - 500\text{ppmw})}{10^6} \right]$$

Where:

RMR = Required organic mass removal rate, in kg/hr;

y = Individual hazardous waste stream "y" that has an average volatile organic (VO) concentration equal to or greater than 500 ppmw at the point of waste origination, as determined in accordance with the requirements of subsection (a) of this Section;

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, in  $\text{m}^3/\text{hr}$ ;

$k_y$  = Density of hazardous waste stream "y," in  $\text{kg}/\text{m}^3$ ;  
and

$\bar{C}_y$  = Average VO concentration of hazardous waste stream "y" at the point of waste origination, as determined in accordance with the requirements of subsection (a) of this Section, in ppmw.

- 8) Procedure for Determination of Actual Organic Mass Removal Rate to determine the actual organic mass removal rate (MR) for a treated hazardous waste.

- A) The actual organic mass removal rate (MR) must be determined based on results for a minimum of three consecutive runs. The sampling time for each run must be one hour.



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- B) The waste volatile organic mass flow entering the process ( $E_b$ ) and the waste volatile organic mass flow exiting the process ( $E_a$ ) must be determined in accordance with the requirements of subsection (b)(5)(D) ~~of this Section~~.
- C) The actual organic mass removal rate (MR) must be calculated by using the mass flow rate determined in accordance with the requirements of subsection (b)(8)(B) ~~of this Section~~ and the following equation:

$$MR = E_b - E_a$$

Where:

- MR = Actual organic mass removal rate, in kg/hr;  
 $E_b$  = Waste volatile organic mass flow entering the process, as determined in accordance with the requirements of subsection (b)(5)(D) ~~of this Section~~, in kg/hr; and  
 $E_a$  = Waste volatile organic mass flow exiting the process, as determined in accordance with the requirements of subsection (b)(5)(D) ~~of this Section~~, in kg/hr.

- 9) Procedure for Determination of Actual Organic Mass Biodegradation Rate ~~to determine the actual organic mass biodegradation rate ( $MR_{bio}$ ) for a treated hazardous waste.~~
- A) The actual organic mass biodegradation rate ( $MR_{bio}$ ) must be determined based on results for a minimum of three consecutive runs. The sampling time for each run must be one hour.
- B) The waste organic mass flow entering the process ( $E_b$ ) must be determined in accordance with the requirements of subsection (b)(5)(D) ~~of this Section~~.
- C) The fraction of organic biodegraded ( $F_{bio}$ ) must be determined using the procedure specified in appendix C to 40 CFR 63 (Determination of the Fraction Biodegraded ( $F_{bio}$ ) in a Biological Treatment Unit), incorporated by reference in 35 Ill. Adm. Code 720.111(b).

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- D) The actual organic mass biodegradation rate ( $MR_{bio}$ ) must be calculated by using the mass flow rates and fraction of organic biodegraded, as determined in accordance with the requirements of subsections (b)(9)(B) and (b)(9)(C) ~~of this Section~~, respectively, and the following equation:

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

Where:

$MR_{bio}$  = Actual organic mass biodegradation rate, in kg/hr;

$E_b$  = Waste organic mass flow entering the process, as determined in accordance with the requirements of subsection (b)(5)(D) ~~of this Section~~, in kg/hr; and

$F_{bio}$  = Fraction of organic biodegraded, as determined in accordance with the requirements of subsection (b)(9)(C) ~~of this Section~~.

- c) Procedure for Determination of VO to determine the maximum organic vapor pressure of a hazardous waste in a Tank tank.
- 1) An owner or operator must determine the maximum organic vapor pressure for each hazardous waste placed in a tank using Tank Level 1 controls in accordance with standards specified in Section 725.985(c).
  - 2) An owner or operator must use either direct measurement, as specified in subsection (c)(3) ~~of this Section~~, or knowledge of the waste, as specified by subsection (c)(4) ~~of this Section~~, to determine the maximum organic vapor pressure that is representative of the hazardous waste composition stored or treated in the tank.
  - 3) Direct Measurement to Determine VO measurement to determine the maximum organic vapor pressure of a hazardous waste.
    - A) Sampling. A sufficient number of samples must be collected to be representative of the waste contained in the tank. All samples must be conducted and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan must describe the procedure by which representative samples of the hazardous waste are collected so that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is



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maintained. A copy of the written sampling plan must be maintained on-site in the facility operating records. An example of acceptable sample collection and handling procedures may be found in Reference Method 25D.

- B) Analysis. Any appropriate one of the following methods may be used to analyze the samples and compute the maximum organic vapor pressure of the hazardous waste:
- i) Reference Method 25E (Determination of Vapor Phase Organic Concentration in Waste Samples) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b);
  - ii) Methods described in API publication 2517 (Evaporative Loss from External Floating-Roof Tanks), incorporated by reference in 35 Ill. Adm. Code 720.111(a);
  - iii) Methods obtained from standard reference texts;
  - iv) ASTM Method D 2879-92 (Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope), incorporated by reference in 35 Ill. Adm. Code 720.111(a);  
or
  - v) Any other method approved by the Agency.
- 4) Use of knowledge to determine the maximum organic vapor pressure of the hazardous waste. Documentation must be prepared and recorded that presents the information used as the basis for the owner's or operator's knowledge that the maximum organic vapor pressure of the hazardous waste is less than the maximum vapor pressure limit listed in Section 725.985(b)(1)(A) for the applicable tank design capacity category. An example of information that may be used is documentation that the hazardous 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 tank design capacity category.
- d) The procedure for determining no detectable organic emissions for the purpose of complying with this Subpart CC is as follows:



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- 1) The test must be conducted in accordance with the procedures specified in Reference Method 21 (Determination of Volatile Organic Compound Leaks) of appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b). Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the cover and associated closure devices must be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to, any of the following: the interface of the cover and its foundation mounting, the periphery of any opening on the cover and its associated closure device, and the sealing seat interface on a spring-loaded pressure relief valve.
- 2) The test must be performed when the unit contains a hazardous waste having an organic concentration representative of the range of concentrations for the hazardous waste expected to be managed in the unit. During the test, the cover and closure devices must be secured in the closed position.
- 3) The detection instrument must meet the performance criteria of Reference Method 21, except the instrument response factor criteria in Section 3.1.2(a) of Reference Method 21 must be for the average composition of the organic constituents in the hazardous waste placed in the waste management unit, not for each individual organic constituent.
- 4) The detection instrument must be calibrated before use on each day of its use by the procedures specified in Reference Method 21.
- 5) Calibration gases must be as follows:
  - A) Zero air (less than 10 ppmv hydrocarbon in air), and
  - B) A mixture of methane or n-hexane in air at a concentration of approximately, but less than, 10,000 ppmv methane or n-hexane.
- 6) The background level must be determined according to the procedures in Reference Method 21.
- 7) Each potential leak interface must be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Reference Method 21. ~~If in the case when the~~ configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface must be sampled.

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~~If In the case when~~ the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet must be placed at approximately the center of the exhaust area to the atmosphere.

- 8) The arithmetic difference between the maximum organic concentration indicated by the instrument and the background level must be compared with the value of 500 ppmv except when monitoring a seal around a rotating shaft that passes through a cover opening, in which case the comparison must be as specified in subsection (d)(9) ~~of this Section~~. If the difference is less than 500 ppmv, then the potential leak interface is determined to operate with no detectable organic emissions.
- 9) For the seals around a rotating shaft that passes through a cover opening, the arithmetic difference between the maximum organic concentration indicated by the instrument and the background level must be compared with the value of 10,000 ppmw. If the difference is less than 10,000 ppmw, then the potential leak interface is determined to operate with no detectable organic emissions.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 725.985 Standards: Tanks**

- a) The provisions of this Section apply to the control of air pollutant emissions from tanks for which Section 725.983(b) references the use of this Section for such air emission control.
- b) The owner or operator must control air pollutant emissions from each tank subject to this Section in accordance with the following requirements, as applicable:
  - 1) For a tank that manages hazardous waste that meets all of the conditions specified in subsections (b)(1)(A) through (b)(1)(C) ~~of this Section~~, the owner or operator must control air pollutant emissions from the tank in accordance with the Tank Level 1 controls specified in subsection (c) ~~of this Section~~ or the Tank Level 2 controls specified in subsection (d) ~~of this Section~~.
    - A) The hazardous waste in the tank has a maximum organic vapor pressure that is less than the maximum organic vapor pressure limit for the tank's design capacity category, as follows:

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- i) For a tank design capacity equal to or greater than 151 m<sup>3</sup> (5333 ft<sup>3</sup> or 39,887 gal), the maximum organic vapor pressure limit for the tank is 5.2 kPa (0.75 psia or 39 mm Hg);
    - ii) For a tank design capacity equal to or greater than 75 m<sup>3</sup> (2649 ft<sup>3</sup> or 19,810 gal) but less than 151 m<sup>3</sup> (5333 ft<sup>3</sup> or 39,887 gal), the maximum organic vapor pressure limit for the tank is 27.6 kPa (4.0 psia or 207 mm Hg); or
    - iii) For a tank design capacity less than 75 m<sup>3</sup> (2649 ft<sup>3</sup> or 19,810 gal), the maximum organic vapor pressure limit for the tank is 76.6 kPa (11.1 psia or 574 mm Hg).
  - B) The hazardous waste in the tank is not heated by the owner or operator to a temperature that is greater than the temperature at which the maximum organic vapor pressure of the hazardous waste is determined for the purpose of complying with subsection (b)(1)(A) of this Section.
  - C) The hazardous waste in the tank is not treated by the owner or operator using a waste stabilization process, as defined in Section 725.981.
- 2) For a tank that manages hazardous waste that does not meet all of the conditions specified in subsections (b)(1)(A) through (b)(1)(C) of this Section, the owner or operator must control air pollutant emissions from the tank by using Tank Level 2 controls in accordance with the requirements of subsection (d) of this Section. Examples of tanks required to use Tank Level 2 controls include the following: a tank used for a waste stabilization process and a tank for which the hazardous waste in the tank has a maximum organic vapor pressure that is equal to or greater than the maximum organic vapor pressure limit for the tank's design capacity category, as specified in subsection (b)(1)(A) of this Section.
- c) An owner or operator controlling air pollutant emissions from a tank using Tank Level 1 controls must meet the requirements specified in subsections (c)(1) through (c)(4) of this Section:
  - 1) The owner or operator must determine the maximum organic vapor pressure for a hazardous waste to be managed in the tank using Tank Level 1 controls before the first time the hazardous waste is placed in the



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tank. The maximum organic vapor pressure must be determined using the procedures specified in Section 725.984(c). Thereafter, the owner or operator must perform a new determination whenever changes to the hazardous waste managed in the tank could potentially cause the maximum organic vapor pressure to increase to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design capacity category specified in subsection (b)(1)(A) ~~of this Section~~, as applicable to the tank.

- 2) The tank must be equipped with a fixed roof designed to meet the following specifications:
  - A) The fixed roof and its closure devices must be designed to form a continuous barrier over the entire surface area of the hazardous waste in the tank. The fixed roof may be a separate cover installed on the tank (e.g., a removable cover mounted on an open-top tank) or may be an integral part of the tank structural design (e.g., a horizontal cylindrical tank equipped with a hatch).
  - B) The fixed roof must be installed in such a manner that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.
  - C) Either of the following must be true of each opening in the fixed roof and of any manifold system associated with the fixed roof must be either:
    - i) The opening or manifold system is equipped with a closure device designed to operate so that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or
    - ii) The opening or manifold system is connected by a closed-vent system that is vented to a control device. The control device must remove or destroy organics in the vent stream, and it must be operating whenever hazardous waste is managed in the tank, except as provided for in subsection (c)(2)(E).

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- D) The fixed roof and its closure devices must be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and which will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices must include the following: organic vapor permeability; the effects of any contact with the hazardous waste or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.
- E) The control device operated pursuant to subsection (c)(2)(C) ~~of this Section~~ needs not remove or destroy organics in the vent stream under the following conditions:
- i) During periods when it is necessary to provide access to the tank for performing the activities of subsection (c)(2)(E)(ii) ~~of this Section~~, venting of the vapor headspace underneath the fixed roof to the control device is not required, opening of closure devices is allowed, and removal of the fixed roof is allowed. Following completion of the activity, the owner or operator must promptly secure the closure device in the closed position or reinstall the cover, as applicable, and resume operation of the control device; and
  - ii) During periods of routine inspection, maintenance, or other activities needed for normal operations, and for the removal of accumulated sludge or other residues from the bottom of the tank.

BOARD NOTE: Subsections (c)(2)(E)(i) and (c)(2)(E)(ii) are derived from 40 CFR 265.985(c)(2)(iii)(B)(1) and (c)(2)(iii)(B)(2), which the Board has codified here to comport with Illinois Administrative Code format requirements.

- 3) Whenever a hazardous waste is in the tank, the fixed roof must be installed with each closure device secured in the closed position, except as follows:
- A) Opening of closure devices or removal of the fixed roof is allowed at the following times:

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- i) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator must promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.
    - ii) To remove accumulated sludge or other residues from the bottom of tank.
  - B) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device that vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device must be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens must be established so that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the owner or operator based on the tank manufacturer recommendations; applicable regulations; fire protection and prevention codes; standard engineering codes and practices; or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the tank internal pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.
  - C) Opening of a safety device, as defined in Section 725.981, is allowed at any time conditions require doing so to avoid an unsafe condition.
- 4) The owner or operator must inspect the air emission control equipment in accordance with the following requirements:
- A) The fixed roof and its closure devices must be visually inspected by the owner or operator to check for defects that could result in



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air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

- B) The owner or operator must perform an initial inspection of the fixed roof and its closure devices on or before the date that the tank becomes subject to this Section. Thereafter, the owner or operator must perform the inspections at least once every year, except under the special conditions provided for in subsection (l) ~~of this Section~~.
  - C) In the event that a defect is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (k) ~~of this Section~~.
  - D) The owner or operator must maintain a record of the inspection in accordance with the requirements specified in Section 725.990(b).
- d) An owner or operator controlling air pollutant emissions from a tank using Tank Level 2 controls must use one of the following tanks:
- 1) A fixed-roof tank equipped with an internal floating roof in accordance with the requirements specified in subsection (e) ~~of this Section~~;
  - 2) A tank equipped with an external floating roof in accordance with the requirements specified in subsection (f) ~~of this Section~~;
  - 3) A tank vented through a closed-vent system to a control device in accordance with the requirements specified in subsection (g) ~~of this Section~~;
  - 4) A pressure tank designed and operated in accordance with the requirements specified in subsection (h) ~~of this Section~~; or
  - 5) A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in subsection (i) ~~of this Section~~.
- e) The owner or operator that controls air pollutant emissions from a tank using a fixed roof with an internal floating roof must meet the requirements specified in subsections (e)(1) through (e)(3) ~~of this Section~~.

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- 1) The tank must be equipped with a fixed roof and an internal floating roof in accordance with the following requirements:
  - A) The internal floating roof must be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.
  - B) The internal floating roof must be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:
    - i) A single continuous seal that is either a liquid-mounted seal or a metallic shoe seal, as defined in Section 725.981; or
    - ii) Two continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.
  - C) The internal floating roof must meet the following specifications:
    - i) 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 liquid surface;
    - ii) Each opening in the internal floating roof must be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains;
    - iii) Each penetration of the internal floating roof for the purpose of sampling must have a slit fabric cover that covers at least 90 percent of the opening;
    - iv) Each automatic bleeder vent and rim space vent must be gasketed;
    - v) Each penetration of the internal floating roof that allows for passage of a ladder must have a gasketed sliding cover; and
    - vi) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof must have a flexible fabric sleeve seal or a gasketed sliding cover.

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- 2) The owner or operator must operate the tank in accordance with the following requirements:
  - A) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling must be continuous and must be completed as soon as practical;
  - B) Automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports; and
  - C) Prior to filling the tank, each cover, access hatch, gauge float well or lid on any opening in the internal floating roof must be bolted or fastened closed (i.e., no visible gaps). Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim exceeds the manufacturer's recommended setting.
  
- 3) The owner or operator must inspect the internal floating roof in accordance with the procedures specified as follows:
  - A) The floating roof and its closure devices must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, the following: when the internal floating roof is not floating on the surface of the liquid inside the tank; when liquid has accumulated on top of the internal floating roof; when any portion of the roof seals have detached from the roof rim; when holes, tears, or other openings are visible in the seal fabric; when the gaskets no longer close off the hazardous waste surface from the atmosphere; or when the slotted membrane has more than 10 percent open area;
  - B) The owner or operator must inspect the internal floating roof components as follows, except as provided in subsection (e)(3)(C) of this Section:
    - i) Visually inspect the internal floating roof components through openings on the fixed roof (e.g., manholes and roof hatches) at least once every 12 months after initial fill, and
    - ii) Visually inspect the internal floating roof, primary seal, secondary seal (if one is in service), gaskets, slotted



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membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least once every 10 years;

- C) As an alternative to performing the inspections specified in subsection (e)(3)(B) ~~of this Section~~ for an internal floating roof equipped with two continuous seals mounted one above the other, the owner or operator may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every five years;
- D) Prior to each inspection required by subsection (e)(3)(B) or (e)(3)(C) ~~of this Section~~, the owner or operator must notify the Agency in advance of each inspection to provide the Agency with the opportunity to have an observer present during the inspection. The owner or operator must notify the Agency of the date and location of the inspection as follows:
  - i) Prior to each visual inspection of an internal floating roof in a tank that has been emptied and degassed, written notification must be prepared and sent by the owner or operator so that it is received by the Agency at least 30 calendar days before refilling the tank, except when an inspection is not planned, as provided for in subsection (e)(3)(D)(ii) ~~of this Section~~; and
  - ii) When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator must notify the Agency as soon as possible, but no later than seven calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Regional Administrator at least seven calendar days before refilling the tank;
- E) In the event that a defect is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (k) ~~of this Section~~; and

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- F) The owner or operator must maintain a record of the inspection in accordance with the requirements specified in Section 725.990(b).
- 4) Safety devices, as defined in Section 725.981, may be installed and operated as necessary on any tank complying with the requirements of this subsection (e).
- f) The owner or operator that controls air pollutant emissions from a tank using an external floating roof must meet the requirements specified in subsections (f)(1) through (f)(3) ~~of this Section~~.
- 1) The owner or operator must design the external floating roof in accordance with the following requirements:
  - A) The external floating roof must be designed to float on the liquid surface except when the floating roof must be supported by the leg supports;
  - B) The floating roof must be equipped with two continuous seals, one above the other, between the wall of the tank and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.
    - i) The primary seal must be a liquid-mounted seal or a metallic shoe seal, as defined in Section 725.981. The total area of the gaps between the tank wall and the primary seal must not exceed 212 square centimeters (cm<sup>2</sup>) per meter (10.0 in<sup>2</sup> per foot) of tank diameter, and the width of any portion of these gaps must not exceed 3.8 centimeters (cm) (1.5 inches). If a metallic shoe seal is used for the primary seal, the metallic shoe seal must be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least 61 centimeters (24 inches) above the liquid surface.
    - ii) The secondary seal must be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal must not exceed 21.2 cm<sup>2</sup> per meter (1.0 in<sup>2</sup> per foot) of tank diameter, and the width of any portion of these gaps must not exceed 1.3 cm (0.5 inch); and

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- C) The external floating roof must meet the following specifications:
- i) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in a noncontact external floating roof must provide a projection below the liquid surface;
  - ii) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof must be equipped with a gasketed cover, seal, or lid;
  - iii) Each access hatch and each gauge float well must be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position;
  - iv) Each automatic bleeder vent and each rim space vent must be equipped with a gasket;
  - v) Each roof drain that empties into the liquid managed in the tank must be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening;
  - vi) Each unslotted and slotted guide pole well must be equipped with a gasketed sliding cover or a flexible fabric sleeve seal;
  - vii) Each unslotted guide pole must be equipped with a gasketed cap on the end of the pole;
  - viii) Each slotted guide pole must be equipped with a gasketed float or other device that closes off the liquid surface from the atmosphere; and
  - ix) Each gauge hatch and each sample well must be equipped with a gasketed cover.
- 2) The owner or operator must operate the tank in accordance with the following requirements:



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- A) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling must be continuous and must be completed as soon as practical;
  - B) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof must be secured and maintained in a closed position at all times except when the closure device must be open for access;
  - C) Covers on each access hatch and each gauge float well must be bolted or fastened when secured in the closed position;
  - D) Automatic bleeder vents must be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports;
  - E) Rim space vents must be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting;
  - F) The cap on the end of each unslotted guide pole must be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank;
  - G) The cover on each gauge hatch or sample well must be secured in the closed position at all times except when the hatch or well must be opened for access; and
  - H) Both the primary seal and the secondary seal must completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.
- 3) The owner or operator must inspect the external floating roof in accordance with the procedures specified as follows:
- A) The owner or operator must measure the external floating roof seal gaps in accordance with the following requirements:
    - i) The owner or operator must perform measurements of gaps between the tank wall and the primary seal within 60 calendar days after initial operation of the tank following

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- installation of the floating roof and, thereafter, at least once every five years;
- ii) The owner or operator must perform measurements of gaps between the tank wall and the secondary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every year;
  - iii) If a tank ceases to hold hazardous waste for a period of one year or more, subsequent introduction of hazardous waste into the tank must be considered an initial operation for the purposes of subsections (f)(3)(A)(i) and (f)(3)(A)(ii) ~~of this Section~~;
  - iv) The owner or operator must determine the total surface area of gaps in the primary seal and in the secondary seal individually using the procedure set forth in subsection (f)(3)(D) ~~of this Section~~;
  - v) In the event that the seal gap measurements do not conform to the specifications in subsection (f)(1)(B) ~~of this Section~~, the owner or operator must repair the defect in accordance with the requirements of subsection (k) ~~of this Section~~; and
  - vi) The owner or operator must maintain a record of the inspection in accordance with the requirements specified in Section 725.990(b);
- B) The owner or operator must visually inspect the external floating roof in accordance with the following requirements:
- i) The floating roof and its closure devices must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to any of the following: holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and

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- broken or missing hatches, access covers, caps, or other closure devices;
- ii) The owner or operator must perform an initial inspection of the external floating roof and its closure devices on or before the date that the tank becomes subject to this Section. Thereafter, the owner or operator must perform the inspections at least once every year except for the special conditions provided for in subsection (l) ~~of this Section~~;
  - iii) In the event that a defect is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (k) ~~of this Section~~; and
  - iv) The owner or operator must maintain a record of the inspection in accordance with the requirements specified in Section 725.990(b);
- C) Prior to each inspection required by subsection (f)(3)(A) or (f)(3)(B) ~~of this Section~~, the owner or operator must notify the Agency in advance of each inspection to provide the Agency with the opportunity to have an observer present during the inspection. The owner or operator must notify the Agency of the date and location of the inspection as follows:
- i) Prior to each inspection to measure external floating roof seal gaps as required under subsection (f)(3)(A) ~~of this Section~~, written notification must be prepared and sent by the owner or operator so that it is received by the Agency at least 30 calendar days before the date the measurements are scheduled to be performed;
  - ii) Prior to each visual inspection of an external floating roof in a tank that has been emptied and degassed, written notification must be prepared and sent by the owner or operator so that it is received by the Agency at least 30 calendar days before refilling the tank except when an inspection is not planned, as provided for in subsection (f)(3)(C)(iii) ~~of this Section~~; and



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- iii) When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator must notify the Agency as soon as possible, but no later than seven calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Regional Administrator at least seven calendar days before refilling the tank;
- D) Procedure for determining gaps in the primary seal and in the secondary seal for the purposes of subsection (f)(3)(A)(iv) ~~of this Section~~:
  - i) The seal gap measurements must be performed at one or more floating roof levels when the roof is floating off the roof supports;
  - ii) Seal gaps, if any, must be measured around the entire perimeter of the floating roof in each place where a 0.32-cm (1/4-inch) 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;
  - iii) For a seal gap measured under this subsection (f)(3), the gap surface area must be determined 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; and
  - iv) The total gap area must be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal diameter of the tank. These total gap areas for the primary seal and secondary seal are then compared to the respective standards for the seal type, as specified in subsection (f)(1)(B) ~~of this Section~~; and

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BOARD NOTE: Subsections (f)(3)(D)(i) through (f)(3)(D)(iv) are derived from 40 CFR 265.1085(f)(3)(i)(D)(1) through (f)(3)(i)(D)(4), which the Board has codified here to comport with Illinois Administrative Code format requirements.

- 4) Safety devices, as defined in Section 725.981, may be installed and operated as necessary on any tank complying with the requirements of this subsection (f).
- g) The owner or operator that controls air pollutant emissions from a tank by venting the tank to a control device must meet the requirements specified in subsections (g)(1) through (g)(3) ~~of this Section~~.
  - 1) The tank must be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:
    - A) The fixed roof and its closure devices must be designed to form a continuous barrier over the entire surface area of the liquid in the tank;
    - B) Each opening in the fixed roof not vented to the control device must be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices must be designed to operate so that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device must be designed to operate with no detectable organic emissions;
    - C) The fixed roof and its closure devices must be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices must include the following: organic vapor permeability; the effects of any contact with the liquid and its vapor managed in the tank; the

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effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed; and

- D) The closed-vent system and control device must be designed and operated in accordance with the requirements of Section 725.988.
- 2) Whenever a hazardous waste is in the tank, the fixed roof must be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:
- A) Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:
    - i) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator must promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank; and
    - ii) To remove accumulated sludge or other residues from the bottom of a tank; and
  - B) Opening of a safety device, as defined in Section 725.981, is allowed at any time conditions require doing so to avoid an unsafe condition.
- 3) The owner or operator must inspect and monitor the air emission control equipment in accordance with the following procedures:
- A) The fixed roof and its closure devices must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to any of the following: visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or



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- otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices;
- B) The closed-vent system and control device must be inspected and monitored by the owner or operator in accordance with the procedures specified in Section 725.988;
  - C) The owner or operator must perform an initial inspection of the air emission control equipment on or before the date that the tank becomes subject to this Section. Thereafter, the owner or operator must perform the inspections at least once every year except for the special conditions provided for in subsection (l) of this Section;
  - D) In the event that a defect is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (k) of this Section; and
  - E) The owner or operator must maintain a record of the inspection in accordance with the requirements specified in Section 725.990(b).
- h) The owner or operator that controls air pollutant emissions by using a pressure tank must meet the following requirements:
- 1) The tank must be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity;
  - 2) All tank openings must be equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in Section 725.984(d); and
  - 3) Whenever a hazardous waste is in the tank, the tank must be operated as a closed-vent system that does not vent to the atmosphere, except under either of the following two conditions:
    - A) The tank does not need to be operated as a closed-vent system at those times when the opening of a safety device, as defined in Section 725.981, is required to avoid an unsafe condition; and
    - B) The tank does not need to be operated as a closed-vent system at those times when the purging of inerts from the tank is required and the purge stream is routed to a closed-vent system and control

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device designed and operated in accordance with the requirements of Section ~~725.988-724.987~~.

- i) The owner or operator that controls air pollutant emissions by using an enclosure vented through a closed-vent system to an enclosed combustion control device must meet the requirements specified in subsections (i)(1) through (i)(4) ~~of this Section~~.
  - 1) The tank must be located inside an enclosure. The enclosure must be designed and operated in accordance with the criteria for a permanent total enclosure, as specified in “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure” under appendix B to 40 CFR 52.741 (VOM Measurement Techniques for Capture Efficiency), incorporated by reference in 35 Ill. Adm. Code 720.111(b). The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator must perform the verification procedure for the enclosure as specified in Section 5.0 ~~of the~~ “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure” initially when the enclosure is first installed and, thereafter, annually;
  - 2) The enclosure must be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler, or process heater specified in Section 725.988;
  - 3) Safety devices, as defined in Section 725.981, may be installed and operated as necessary on any enclosure, closed-vent system, or control device used to comply with the requirements of subsections (i)(1) and (i)(2) ~~of this Section~~; and
  - 4) The owner or operator must inspect and monitor the closed-vent system and control device, as specified in Section 725.988.
- j) The owner or operator must transfer hazardous waste to a tank subject to this Section in accordance with the following requirements:
  - 1) Transfer of hazardous waste, except as provided in subsection (j)(2) ~~of this Section~~, to the tank from another tank subject to this Section or from a surface impoundment subject to Section 725.986 must be conducted using



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continuous hard-piping or another closed system that does not allow exposure of the hazardous waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of subpart RR of 40 CFR 63 (National Emission Standards for Individual Drain Systems), incorporated by reference in 35 Ill. Adm. Code 720.111(b); and

- 2) The requirements of subsection (j)(1) ~~of this Section~~ do not apply when transferring a hazardous waste to the tank under any of the following conditions:
  - A) The hazardous waste meets the average VO concentration conditions specified in Section 725.983(c)(1) at the point of waste origination;
  - B) The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in Section 725.983(c)(2); and
  - C) The hazardous waste meets the requirements of Section 725.983(c)(4).
  
- k) The owner or operator must repair each defect detected during an inspection performed in accordance with the requirements of subsection (c)(4), (e)(3), (f)(3), or (g)(3) ~~of this Section~~ as follows:
  - 1) The owner or operator must make first efforts at repair of the defect no later than five calendar days after detection, and repair must be completed as soon as possible but no later than 45 calendar days after detection except as provided in subsection (k)(2) ~~of this Section~~; and
  - 2) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous waste normally managed in the tank. In this case, the owner or operator must repair the defect the next time the process or unit that is generating the hazardous waste managed in the tank stops operation. Repair of the defect must be completed before the process or unit resumes operation.
  
- l) Following the initial inspection and monitoring of the cover as required by the applicable provisions of this Subpart CC, subsequent inspection and monitoring



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may be performed at intervals longer than one year under the following special conditions:

- 1) Where inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions, then the owner or operator may designate a cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:
  - A) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required; and
  - B) Develop and implement a written plan and schedule to inspect and monitor the cover, using the procedures specified in the applicable Section of this Subpart CC, as frequently as practicable during those times when a worker can safely access the cover; and
- 2) ~~If in the case when~~ a tank is buried partially or entirely underground, an owner or operator is required to inspect and monitor, as required by the applicable provisions of this Section, only those portions of the tank cover and those connections to the tank (e.g., fill ports, access hatches, gauge wells, etc.) that are located on or above the ground surface.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 725.987 Standards: Containers**

- a) The provisions of this Section apply to the control of air pollutant emissions from containers for which Section 725.983(b) references the use of this Section for ~~such~~ air emission control.
- b) General Requirements ~~requirements~~.
  - 1) The owner or operator must control air pollutant emissions from each container subject to this Section in accordance with the following requirements, as applicable to the container, except when the following special provisions for waste stabilization processes specified in subsection (b)(2) ~~of this Section~~ apply to the container:
    - A) For a container having a design capacity greater than 0.1 m<sup>3</sup> (26 gal) and less than or equal to 0.46 m<sup>3</sup> (120 gal), the owner or operator must control air pollutant emissions from the container in

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accordance with the Container Level 1 standards specified in subsection (c) ~~of this Section~~;

- B) For a container having a design capacity greater than 0.46 m<sup>3</sup> (120 gal) that is not in light material service, the owner or operator must control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in subsection (c) ~~of this Section~~; and
  - C) For a container having a design capacity greater than 0.46 m<sup>3</sup> (120 gal) that is in light material service, the owner or operator must control air pollutant emissions from the container in accordance with the Container Level 2 standards specified in subsection (d) ~~of this Section~~.
- 2) When a container having a design capacity greater than 0.1 m<sup>3</sup> (26 gal) is used for treatment of a hazardous waste by a waste stabilization process, the owner or operator must control air pollutant emissions from the container in accordance with the Container Level 3 standards specified in subsection (e) ~~of this Section~~ at those times during the waste stabilization process when the hazardous waste in the container is exposed to the atmosphere.
- c) Container Level 1 Standards ~~standards~~.
- 1) A container using Container Level 1 controls is one of the following:
    - A) A container that meets the applicable USDOT regulations on packaging hazardous materials for transportation, as specified in subsection (f) ~~of this Section~~;
    - B) A container equipped with a cover and closure devices that form a continuous barrier over the container openings so that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (e.g., a lid on a drum or a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (e.g., a “portable tank” or bulk cargo container equipped with a screw-type cap); and

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- C) An open-top container in which an organic-vapor suppressing barrier is placed on or over the hazardous waste in the container so that no hazardous waste is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.
- 2) A container used to meet the requirements of subsection (c)(1)(B) or (c)(1)(C) of this Section must be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere and to maintain the equipment integrity for as long as it is in service. Factors to be considered in selecting the materials of construction and designing the cover and closure devices must include the following: the organic vapor permeability; the effects of contact with the hazardous waste or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture, and sunlight; and the operating practices for which the container is intended to be used.
- 3) Whenever a hazardous waste is in a container using Container Level 1 controls, the owner or operator must install all covers and closure devices for the container, as applicable to the container, and secure and maintain each closure device in the closed position except as follows:
  - A) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container, as follows:
    - i) ~~If In the case when~~ the container is filled to the intended final level in one continuous operation, the owner or operator must promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation; and
    - ii) ~~If In the case when~~ when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator must promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person



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performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first;

- B) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:
- i) For the purpose of meeting the requirements of this Section, an empty container, as defined in 35 Ill. Adm. Code 721.107(b), may be open to the atmosphere at any time (i.e., covers and closure devices are not required to be secured in the closed position on an empty container); and
  - ii) ~~If in the case when~~ discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container, as defined in 35 Ill. Adm. Code 721.107(b), the owner or operator must promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first;
- C) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator must promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container;
- D) Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device that vents to the atmosphere is allowed during normal operations for the purpose of maintaining the container internal pressure in accordance with the design specifications of the container. The device must be designed to operate with no detectable organic

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emissions when the device is secured in the closed position. The settings at which the device opens must be established so that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations; and

- E) Opening of a safety device, as defined in Section 725.981, is allowed at any time conditions require doing so to avoid an unsafe condition.
- 4) The owner or operator of containers using Container Level 1 controls must inspect the containers and their covers and closure devices as follows:
- A) ~~If in the case when~~ a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied within 24 hours after the container is accepted at the facility (i.e., it does not meet the conditions for an empty container as specified in 35 Ill. Adm. Code 721.107(b)), the owner or operator must visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection must be conducted on or before the date on which the container is accepted at the facility (i.e., the date when the container becomes subject to the Subpart CC container standards). For the purposes of this requirement, the date of acceptance is the date of signature that the facility owner or operator enters on Item 20 of the Uniform Hazardous Waste Manifest, as set forth in the appendix to 40 CFR 262 (Uniform Hazardous Waste Manifest and Instructions (EPA Forms 8700-22 and 8700-22A and Their Instructions)), incorporated by reference in 35 Ill. Adm. Code 720.111(b), as

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required under Section 725.171. If a defect is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (c)(4)(C) ~~of this Section~~;

B) ~~If In the case when~~ a container used for managing hazardous waste remains at the facility for a period of one year or more, the owner or operator must visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (c)(4)(C) ~~of this Section~~; and

C) When a defect is detected in the container, cover, or closure devices, the owner or operator must make first efforts at repair of the defect no later than 24 hours after detection, and repair must be completed as soon as possible but no later than five calendar days after detection. If repair of a defect cannot be completed within five calendar days, then the hazardous waste must be removed from the container and the container must not be used to manage hazardous waste until the defect is repaired.

5) The owner or operator must maintain at the facility a copy of the procedure used to determine that containers with capacity of 0.46 m<sup>3</sup> (120 gal) or greater which do not meet applicable USDOT regulations, as specified in subsection (f) ~~of this Section~~, are not managing hazardous waste in light material service.

d) Container Level 2 Standards ~~standards~~.

1) A container using Container Level 2 controls is one of the following:

A) A container that meets the applicable USDOT regulations on packaging hazardous materials for transportation as specified in subsection (f) ~~of this Section~~;

B) A container that operates with no detectable organic emissions, as defined in Section 725.981, and determined in accordance with the procedure specified in subsection (g) ~~of this Section~~; and



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- C) A container that has been demonstrated within the preceding 12 months to be vapor-tight by using Reference Method 27 (Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b), in accordance with the procedure specified in subsection (h) ~~of this Section~~.
- 2) Transfer of hazardous waste into or out of a container using Container Level 2 controls must be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive or other hazardous materials. Examples of container loading procedures that the USEPA considers to meet the requirements of this subsection (d)(2) include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.
- 3) Whenever a hazardous waste is in a container using Container Level 2 controls, the owner or operator must install all covers and closure devices for the container, and secure and maintain each closure device in the closed position, except as follows:
- A) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container, as follows:
- i) ~~If in the case when~~ the container is filled to the intended final level in one continuous operation, the owner or operator must promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation; and
- ii) ~~If in the case when~~ discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator must promptly secure the closure devices in the closed position and install covers,

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as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first;

- B) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:
- i) For the purpose of meeting the requirements of this Section, an empty container as defined in 35 Ill. Adm. Code 721.107(b) may be open to the atmosphere at any time (i.e., covers and closure devices are not required to be secured in the closed position on an empty container); and
  - ii) ~~If in the case when~~ discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in 35 Ill. Adm. Code 721.107(b), the owner or operator must promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first;
- C) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator must promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container;
- D) Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device that



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vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device must be designed to operate with no detectable organic emission when the device is secured in the closed position. The settings at which the device opens must be established so that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations; and

- E) Opening of a safety device, as defined in Section 725.981, is allowed at any time conditions require doing so to avoid an unsafe condition.
- 4) The owner or operator of containers using Container Level 2 controls must inspect the containers and their covers and closure devices as follows:
- A) ~~If in the case when~~ a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied within 24 hours after the container is accepted at the facility (i.e., it does not meet the conditions for an empty container as specified in 35 Ill. Adm. Code 721.107(b)), the owner or operator must visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection must be conducted on or before the date on which the container is accepted at the facility (i.e., the date when the container becomes subject to the Subpart CC container standards). For the purposes of this requirement, the date of acceptance is the date of signature that the facility owner or operator enters on Item 20 of the Uniform



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Hazardous Waste Manifest, in the appendix to 40 CFR 262 (Uniform Hazardous Waste Manifest and Instructions (USEPA Forms 8700-22 and 8700-22A and Their Instructions)), as required under Section 725.171. If a defect is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (d)(4)(C) ~~of this Section~~;

- B) ~~If in the case when~~ a container used for managing hazardous waste remains at the facility for a period of one year or more, the owner or operator must visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator must repair the defect in accordance with the requirements of subsection (d)(4)(C) ~~of this Section~~; and
- C) When a defect is detected in the container, cover, or closure devices, the owner or operator must make first efforts at repair of the defect no later than 24 hours after detection, and repair must be completed as soon as possible but no later than five calendar days after detection. If repair of a defect cannot be completed within five calendar days, then the hazardous waste must be removed from the container and the container must not be used to manage hazardous waste until the defect is repaired.
- e) ~~Container Level 3 Standards-standards.~~
- 1) A container using Container Level 3 controls is one of the following:
- A) A container that is vented directly through a closed-vent system to a control device in accordance with the requirements of subsection (e)(2)(B) ~~of this Section~~; or
- B) A container that is vented inside an enclosure that is exhausted through a closed-vent system to a control device in accordance with the requirements of subsections (e)(2)(A) and (e)(2)(B) ~~of this Section~~.
- 2) The owner or operator must meet the following requirements, as applicable to the type of air emission control equipment selected by the owner or operator:

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- A) The container enclosure must be designed and operated in accordance with the criteria for a permanent total enclosure, as specified in “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure” under appendix B to 40 CFR 52.741 (VOM Measurement Techniques for Capture Efficiency), incorporated by reference in 35 Ill. Adm. Code 720.111(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 direct airflow into the enclosure. The owner or operator must perform the verification procedure for the enclosure, as specified in Section 5.0 ~~of the~~ “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure” initially when the enclosure is first installed and, thereafter, annually; and
  - B) The closed-vent system and control device must be designed and operated in accordance with the requirements of Section 725.988.
- 3) Safety devices, as defined in Section 725.981, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with the requirements of subsection (e)(1) ~~of this Section~~.
  - 4) Owners and operators using Container Level 3 controls in accordance with the provisions of this Subpart CC must inspect and monitor the closed-vent systems and control devices, as specified in Section 725.988.
  - 5) Owners and operators that use Container Level 3 controls in accordance with the provisions of this Subpart CC must prepare and maintain the records specified in Section 725.990(d).
  - 6) The transfer of hazardous waste into or out of a container using Container Level 3 controls must be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that USEPA considers to meet the requirements of this subsection (e)(6) include using any one of the following: the use of a submerged-fill pipe or other submerged-fill method to load liquids into the container; the use of a vapor-balancing system or a vapor-recovery system



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to collect and control the vapors displaced from the container during filling operations; or the use of a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.

- f) For the purpose of compliance with subsection (c)(1)(A) or (d)(1)(A) ~~of this Section~~, containers must be used that meet the applicable USDOT regulations on packaging hazardous materials for transportation as follows:
- 1) The container meets the applicable requirements specified by USDOT in 49 CFR 178 (Specifications for Packaging), or 49 CFR 179 (Specifications for Tank Cars), each incorporated by reference in 35 Ill. Adm. Code 720.111(b);
  - 2) Hazardous waste is managed in the container in accordance with the applicable requirements specified by USDOT in subpart B of 49 CFR 107 (Exemptions), 49 CFR 172 (Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements), 49 CFR 173 (Shippers—General Requirements for Shipments and Packages), and 49 CFR 180 (Continuing Qualification and Maintenance of Packagings), each incorporated by reference in 35 Ill. Adm. Code 720.111(b);
  - 3) For the purpose of complying with this Subpart CC, no exceptions to the federal 49 CFR 178 or 179 regulations are allowed, except as provided for in subsection (f)(4) ~~of this Section~~; and
  - 4) For a lab pack that is managed in accordance with the USDOT requirements of 49 CFR 178 (Specifications for Packagings) for the purpose of complying with this Subpart CC, an owner or operator may comply with the exceptions for combination packagings specified by USDOT in 49 CFR 173.12(b) (Exceptions for Shipments of Waste Materials), incorporated by reference in 35 Ill. Adm. Code 720.111(b).
- g) To determine compliance with the no detectable organic emissions requirements of subsection (d)(1)(B) ~~of this Section~~, the procedure specified in Section 725.984(d) must be used.
- 1) Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the container, its cover, and associated closure devices, as applicable to the container, must be checked. Potential leak interfaces that are associated with containers include, but are not limited to: the interface



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of the cover rim and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

- 2) The test must be performed when the container is filled with a material having a volatile organic concentration representative of the range of volatile organic concentrations for the hazardous wastes expected to be managed in this type of container. During the test, the container cover and closure devices must be secured in the closed position.
- h) The procedure for determining a container to be vapor-tight using Reference Method 27 for the purpose of complying with subsection (d)(1)(C) ~~of this Section~~ is as follows:
  - 1) The test must be performed in accordance with Reference Method 27;
  - 2) A pressure measurement device must be used that has a precision of  $\pm 2.5$  mm (0.10 inch) water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness; and
  - 3) If the test results determined by Reference Method 27 indicate that the container sustains a pressure change less than or equal to 0.75 kPa (0.11 psig) within five minutes after it is pressurized to a minimum of 4.5 kPa (0.65 psig), then the container is determined to be vapor-tight.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

SUBPART DD: CONTAINMENT BUILDINGS

**Section 725.1101 Design and Operating Standards**

- a) All containment buildings must comply with the following design and operating standards:
  - 1) The containment building must be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements (e.g. precipitation, wind, run on) and to assure containment of managed wastes;
  - 2) The floor and containment walls of the unit, including the secondary containment system if required under subsection (b) ~~of this Section~~, must be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and

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heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit must be designed so that it has sufficient structural strength to prevent collapse or other failure. All surfaces to be in contact with hazardous wastes must be chemically compatible with those wastes. The containment building must meet the structural integrity requirements established by professional organizations generally recognized by the industry such as the American Concrete Institute (ACI) and the American Society of Testing Materials (ASTM). If appropriate to the nature of the waste management operation to take place in the unit, an exception to the structural strength requirement may be made for light-weight doors and windows that meet these criteria:

- A) They provide an effective barrier against fugitive dust emissions under subsection (c)(1)(D) ~~of this Section~~; and
  - B) The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings;
- 3) Incompatible hazardous wastes or treatment reagents must not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail; and
- 4) A containment building must have a primary barrier designed to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit and appropriate for the physical and chemical characteristics of the waste to be managed.
- b) For a containment building used to manage hazardous wastes containing free liquids or treated with free liquids (the presence of which is determined by the paint filter test, a visual examination, or other appropriate means), the owner or operator must include the following design features:
- 1) A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (e.g., a geomembrane covered by a concrete wear surface).
  - 2) A liquid collection and removal system to minimize the accumulation of liquid on the primary barrier of the containment building:

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- A) The primary barrier must be sloped to drain liquids to the associated collection system; and
  - B) Liquids and waste must be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time.
- 3) A secondary containment system including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier, and a leak detection system that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time.
- A) The requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum, as follows:
    - i) It is constructed with a bottom slope of 1 percent or more; and
    - ii) It is constructed of a granular drainage material with a hydraulic conductivity of  $1 \times 10^{-2}$  cm/sec or more and a thickness of 12 inches (30.5 cm) or more, or constructed of synthetic or geonet drainage materials with a transmissivity of  $3 \times 10^{-5}$  m<sup>2</sup>/sec or more.
  - B) If treatment is to be conducted in the building, an area in which such treatment will be conducted must be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building.
  - C) The secondary containment system must be constructed of materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building. (Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of Section 725.293(e)(1). In addition, the containment building must meet the requirements of subsections



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725.293(b) and (c) to be an acceptable secondary containment system for a tank.)

- 4) For existing units other than 90-day generator units, USEPA may delay the secondary containment requirement for up to two years, based on a demonstration by the owner or operator that the unit substantially meets the standards of this Subpart DD. In making this demonstration, the owner or operator must do each of the following:
  - A) Provide written notice to USEPA of their request by November 16, 1992. This notification must describe the unit and its operating practices with specific reference to the performance of existing systems, and specific plans for retrofitting the unit with secondary containment;
  - B) Respond to any comments from USEPA on these plans within 30 days; and
  - C) Fulfill the terms of the revised plans, if such plans are approved by USEPA.
  
- c) Owners or operators of all containment buildings must do each of the following:
  - 1) It must use controls and practice to ensure containment of the hazardous waste within the unit, and at a minimum do each of the following:
    - A) It must maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier;
    - B) It must maintain the level of the stored or treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;
    - C) It must take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed; and
    - D) It must take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions (see Reference Method 22 (Visual Determination

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of Fugitive Emissions from Material Sources and Smoke Emissions from Flares) in appendix A to 40 CFR 60 (Test Methods), incorporated by reference in 35 Ill. Adm. Code 720.111(b)). In addition, all associated particulate collection devices (e.g., fabric filter, electrostatic precipitator) must be operated and maintained with sound air pollution control practices (see 40 CFR 60 for guidance). This state of no visible emissions must be maintained effectively at all times during routine operating and maintenance conditions, including when vehicles and personnel are entering and exiting the unit;

BOARD NOTE: At 40 CFR 264.1101(c)(1)(iv), USEPA cites “40 CFR part 60, subpart 292.” At 57 Fed. Reg. 37217 (August 18, 1992), USEPA repeats this citation in the preamble discussion of adoption of the rules. No such provision exists in the Code of Federal Regulations. While 40 CFR 60.292 of the federal regulations pertains to control of fugitive dust emissions, that provision is limited in its application to glass melting furnaces. The Board has chosen to use the general citation: “40 CFR 60.”

- 2) It must obtain and keep on-site a certification by a qualified Professional Engineer that the containment building design meets the requirements of subsections (a) through (c) ~~of this Section~~;
- 3) Throughout the active life of the containment building, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, it must repair the condition promptly, in accordance with the following procedures:
  - A) Upon detection of a condition that has caused to a release of hazardous wastes (e.g., upon detection of leakage from the primary barrier) the owner or operator must do the following:
    - i) Enter a record of the discovery in the facility operating record;
    - ii) Immediately remove the portion of the containment building affected by the condition from service;
    - iii) Determine what steps must be taken to repair the containment building, remove any leakage from the

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- secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and
- iv) Within seven days after the discovery of the condition, notify the Agency in writing of the condition, and within 14 working days, provide a written notice to the Agency with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work;
- B) The Agency must review the information submitted, make a determination regarding whether the containment building must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing; and
- C) Upon completing all repairs and cleanup the owner and operator must notify the Agency in writing and provide a verification, signed by a qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with subsection (c)(3)(A)(iv) ~~of this Section~~; and
- 4) It must inspect and record in the facility's operating record ~~at least once every seven days~~, data gathered from monitoring and leak detection equipment, ~~as well as the~~ containment building, and the area immediately surrounding the containment building to detect signs of releases of hazardous waste ~~at least once every seven days~~.
- d) For a containment building that contains areas both with and without secondary containment, the owner or operator must do the following:
- 1) Design and operate each area in accordance with the requirements enumerated in subsections (a) through (c) ~~of this Section~~;
  - 2) Take measures to prevent the release of liquids or wet materials into areas without secondary containment; and
  - 3) Maintain in the facility's operating log a written description of the operating procedures used to maintain the integrity of areas without secondary containment.



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- e) Notwithstanding any other provision of this Subpart DD, the Agency must, in writing, allow the use of alternatives to the requirements for secondary containment for a permitted containment building where the Agency has determined that the facility owner or operator has adequately demonstrated that the only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements, and where containment of managed wastes and liquids can be assured without a secondary containment system.

(Source: Amended at 40 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)