

POLLUTION CONTROL BOARD

NOTICE OF PROPOSED AMENDMENTS

- 1) Heading of the Part: Standards Applicable to Generators of Hazardous Waste
- 2) Code Citation: 35 Ill. Adm. Code 722
- 3)

<u>Section Numbers</u> :	<u>Proposed Actions</u> :
722.132	Amendment
722.158	Amendment
- 4) Statutory Authority: 415 ILCS 5/7.2, 22.4, and 27
- 5) 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 is stated 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 March 3, 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 Board's opinion and order of March 3, 2016 in docket R16-7 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 March 3, 2016 opinion and order in docket R16-7.

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).

- 6) Published studies or reports, and sources of underlying data, used to compose this rulemaking: None

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- 7) Will this rulemaking replace any emergency rule currently in effect? No
- 8) Does this rulemaking contain an automatic repeal date? No
- 9) Does this rulemaking contain incorporations by reference? No
- 11) Are there any other rulemakings pending on this Part? No
- 10) Statement of Statewide Policy Objective: These proposed rulemakings do not create or enlarge a State mandate, as defined in Section 3(b) of the State Mandates Act [30 ILCS 805].
- 12) Time, Place and Manner in which interested persons may comment on this proposed rulemaking: The Board will accept written public comment on this proposal for a period of 45 days after the date of this publication. Comments should reference docket R16-7 and be addressed to:

John T. Therriault, Clerk
Illinois Pollution Control Board
State of Illinois Center, Suite 11-500
100 W. Randolph St.
Chicago IL 60601

Please direct inquiries to the following person and *reference* docket R16-7:

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

312/814-6924
e-mail: michael.mccambridge@illinois.gov

Request copies of the Board's opinion and order at 312/814-3620, or download a copy from the Board's Website at <http://www.ipcb.state.il.us>.

- 13) Initial Regulatory Flexibility Analysis:

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- A) Types of small businesses, small municipalities, and not-for-profit corporations affected: This rulemaking may affect those small businesses, small municipalities, and not-for-profit corporations that generate, transport, treat, store, or dispose of hazardous waste. These proposed amendments do not create or enlarge a State mandate, as defined in Section 3(b) of the State Mandates Act [30 ILCS 805].
- B) Reporting, bookkeeping or other procedures required for compliance: The existing rules and proposed amendments require extensive reporting, bookkeeping and other procedures, including the preparation of manifests and annual reports, waste analyses and maintenance of operating records. These proposed amendments do not create or enlarge a State mandate, as defined in Section 3(b) of the State Mandates Act [30 ILCS 805].
- C) Types of professional skills necessary for compliance: Compliance with the existing rules and proposed amendments may require the services of an attorney, certified public accountant, chemist, and registered professional engineer. These proposed amendments do not create or enlarge a State mandate, as defined in Section 3(b) of the State Mandates Act [30 ILCS 805].
- 14) Regulatory Agenda on which this rulemaking was summarized: December 4, 2015; 39 Ill. Reg. 15637-39

The full text of the Proposed 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 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

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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

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

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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
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].

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NOTICE OF PROPOSED AMENDMENTS

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 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);

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- b) Marking 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 _____)

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,

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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 _____)

Document comparison by Workshare Compare on Monday, March 14, 2016
11:39:32 AM

Input:	
Document 1 ID	file:///I:\Input\Agency Rulemakings - Files Received\2016\Mar2016\35-722-Corrected Agency Proposed-(issue 12).docx
Description	35-722-Corrected Agency Proposed-(issue 12)
Document 2 ID	file:///I:\Input\Agency Rulemakings - Files Received\2016\Mar2016\35-722-r01(issue 12).docx
Description	35-722-r01(issue 12)
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Deletions	16
Moved from	0
Moved to	0
Style change	0
Format changed	0
Total changes	25

1 TITLE 35: ENVIRONMENTAL PROTECTION
2 SUBTITLE G: WASTE DISPOSAL
3 CHAPTER I: POLLUTION CONTROL BOARD
4 SUBCHAPTER c: HAZARDOUS WASTE OPERATING REQUIREMENTS
5

6 PART 722
7 STANDARDS APPLICABLE TO
8 GENERATORS OF HAZARDOUS WASTE
9

10 SUBPART A: GENERAL
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18 SUBPART B: THE MANIFEST
19

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21	722.120	General Requirements
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29 SUBPART C: PRE-TRANSPORT REQUIREMENTS
30

31	Section	
32	722.130	Packaging
33	722.131	Labeling
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36	722.134	Accumulation Time
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41	722.140	Recordkeeping
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43	722.142	Exception Reporting

44 722.143 Additional Reporting
45 722.144 Special Requirements for Generators of between 100 and 1,000 kilograms per
46 month
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48 SUBPART E: EXPORTS OF HAZARDOUS WASTE
49

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52 722.151 Definitions
53 722.152 General Requirements
54 722.153 Notification of Intent to Export
55 722.154 Special Manifest Requirements
56 722.155 Exception Report
57 722.156 Annual Reports
58 722.157 Recordkeeping
59 722.158 International Agreements
60

61 SUBPART F: IMPORTS OF HAZARDOUS WASTE
62

63 Section
64 722.160 Imports of Hazardous Waste
65

66 SUBPART G: FARMERS
67

68 Section
69 722.170 Farmers
70

71 SUBPART H: TRANS-BOUNDARY SHIPMENTS OF
72 HAZARDOUS WASTE FOR RECOVERY WITHIN THE OECD
73

74 Section
75 722.180 Applicability
76 722.181 Definitions
77 722.182 General Conditions
78 722.183 Notification and Consent
79 722.184 Movement Document
80 722.185 Contracts
81 722.186 Provisions Relating to Recognized Traders
82 722.187 Reporting and Recordkeeping
83 722.189 OECD Waste Lists
84

85 SUBPART K: ALTERNATIVE REQUIREMENTS FOR HAZARDOUS WASTE
 86 DETERMINATION AND ACCUMULATION OF UNWANTED MATERIAL FOR
 87 LABORATORIES OWNED BY ELIGIBLE ACADEMIC ENTITIES
 88

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100		Laboratory
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103	722.312	Hazardous Waste Determination at an On-Site Treatment, Storage, or Disposal
104		Facility
105	722.313	Laboratory Clean-Outs
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107	722.315	Unwanted Material That Is Not Solid Waste or Hazardous Waste
108	722.316	Non-Laboratory Hazardous Waste Generated at an Eligible Academic Entity

109
 110 722.APPENDIX A Hazardous Waste Manifest
 111

112 AUTHORITY: Implementing Sections 7.2 and 22.4 and authorized by Section 27 of the
 113 Environmental Protection Act [415 ILCS 5/7.2, 22.4, and 27].
 114

115 SOURCE: Adopted in R81-22 at 5 Ill. Reg. 9781, effective May 17, 1982; amended and
 116 codified in R81-22 at 6 Ill. Reg. 4828, effective May 17, 1982; amended in R82-18 at 7 Ill. Reg.
 117 2518, effective February 22, 1983; amended in R84-9 at 9 Ill. Reg. 11950, effective July 24,
 118 1985; amended in R85-22 at 10 Ill. Reg. 1131, effective January 2, 1986; amended in R86-1 at
 119 10 Ill. Reg. 14112, effective August 12, 1986; amended in R86-19 at 10 Ill. Reg. 20709,
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 122 Ill. Reg. 13129, effective July 29, 1988; amended in R88-16 at 13 Ill. Reg. 452, effective
 123 December 27, 1988; amended in R89-1 at 13 Ill. Reg. 18523, effective November 13, 1989;
 124 amended in R90-10 at 14 Ill. Reg. 16653, effective September 25, 1990; amended in R90-11 at
 125 15 Ill. Reg. 9644, effective June 17, 1991; amended in R91-1 at 15 Ill. Reg. 14562, effective
 126 October 1, 1991; amended in R91-13 at 16 Ill. Reg. 9833, effective June 9, 1992; amended in
 127 R92-1 at 16 Ill. Reg. 17696, effective November 6, 1992; amended in R93-4 at 17 Ill. Reg.

128 20822, effective November 22, 1993; amended in R95-6 at 19 Ill. Reg. 9935, effective June 27,
 129 1995; amended in R95-20 at 20 Ill. Reg. 11236, effective August 1, 1996; amended in R96-
 130 10/R97-3/R97-5 at 22 Ill. Reg. 603, effective December 16, 1997; amended in R97-21/R98-
 131 3/R98-5 at 22 Ill. Reg. 17950, effective September 28, 1998; amended in R00-5 at 24 Ill. Reg.
 132 1136, effective January 6, 2000; amended in R00-13 at 24 Ill. Reg. 9822, effective June 20,
 133 2000; expedited correction at 25 Ill. Reg. 5105, effective June 20, 2000; amended in R05-2 at 29
 134 Ill. Reg. 6312, effective April 22, 2005; amended in R06-5/R06-6/R06-7 at 30 Ill. Reg. 3138,
 135 effective February 23, 2006; amended in R06-16/R06-17/R06-18 at 31 Ill. Reg. 871, effective
 136 December 20, 2006; amended in R07-5/R07-14 at 32 Ill. Reg. 11927, effective July 14, 2008;
 137 amended in R09-16/R10-4 at 34 Ill. Reg. 18817, effective November 12, 2010; amended in R11-
 138 2/R11-16 at 35 Ill. Reg. 17888, effective October 14, 2011; amended in R12-7 at 36 Ill. Reg.
 139 8773, effective June 4, 2012; amended in R13-15 at 37 Ill. Reg. 17763, effective October 24,
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 141 40 Ill. Reg. _____, effective _____.

142
 143 **SUBPART C: PRE-TRANSPORT REQUIREMENTS**

144
 145 **Section 722.132 Marking**

- 146
 147 a) Before transporting or offering hazardous waste for transportation off-site, a
 148 generator must mark each package of hazardous waste in accordance with the
 149 applicable USDOT regulations on hazardous materials under 49 CFR 172
 150 (Hazardous Materials Table, Special Provisions, Hazardous Materials
 151 Communications, Emergency Response Information, and Training
 152 Requirements), incorporated by reference in 35 Ill. Adm. Code 720.111(b);
 153
 154 b) Marking small containers.
 155 Before transporting hazardous waste or offering hazardous waste for transportation
 156 off-site, a generator must mark each container of 119 gallons (450 liters) (110
 157 gallons)-or less that is used in such transportation with the following words and
 158 information displayed in accordance with the requirements of 49 CFR 172.304
 159 (Marking Requirements), incorporated by reference in 35 Ill. Adm. Code
 160 720.111(b):

161
 162 **HAZARDOUS WASTE – Federal Law Prohibits Improper Disposal. If**
 163 **found, contact the nearest police or public safety authority or the U.S.**
 164 **Environmental Protection Agency.**

165
 166 Generator's Name and Address _____.

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 168 Generator's USEPA Identification Number _____.

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 170 Manifest Tracking Number _____.

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

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 _____)

POLLUTION CONTROL BOARD

NOTICE OF PROPOSED AMENDMENTS

- 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>Proposed 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
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- 5) 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 is stated 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 March 3, 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 Board's opinion and order of March 3, 2016 in docket R16-7 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

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NOTICE OF PROPOSED AMENDMENTS

Illinois Pollution Control Board
100 W. Randolph 11-500
Chicago IL 60601

312/814-6924
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Request copies of the Board's opinion and order at 312/814-3620, or download a copy from the Board's Website at <http://www.ipcb.state.il.us>.

- 13) Initial Regulatory Flexibility Analysis:
- A) Types of small businesses, small municipalities, and not-for-profit corporations affected: This rulemaking may affect those small businesses, small municipalities, and not-for-profit corporations that generate, transport, treat, store, or dispose of hazardous waste. These proposed amendments do not create or enlarge a State mandate, as defined in Section 3(b) of the State Mandates Act [30 ILCS 805].
 - B) Reporting, bookkeeping or other procedures required for compliance: The existing rules and proposed amendments require extensive reporting, bookkeeping and other procedures, including the preparation of manifests and annual reports, waste analyses and maintenance of operating records. These proposed amendments do not create or enlarge a State mandate, as defined in Section 3(b) of the State Mandates Act [30 ILCS 805].
 - C) Types of professional skills necessary for compliance: Compliance with the existing rules and proposed amendments may require the services of an attorney, certified public accountant, chemist, and registered professional engineer. These proposed amendments do not create or enlarge a State mandate, as defined in Section 3(b) of the State Mandates Act [30 ILCS 805].
- 14) Regulatory Agenda on which this rulemaking was summarized: December 4, 2015; 39 Ill. Reg. 15637-39

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NOTICE OF PROPOSED AMENDMENTS

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
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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 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,

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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.
- 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);

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- 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 ~~725.1083-725.983~~[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;

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;

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- 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 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 ~~725.196(f)~~ 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.

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- 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(bd), 63.1210(db), 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 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;

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- 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.
 - 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

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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 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

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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 ($^{\circ}$ 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)(c) of this Section, ~~(f)(2)(C)~~.
 - 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.
 - 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:

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

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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 1 mole is 20° C

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

ΣX_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

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.

H_T = the net heating value of the sample in MJ/scm; where the

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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

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

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

$C_i \equiv$ 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

$H_i \equiv$ 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~~

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

\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, for an air-assisted flare must be determined by the following equation:

$$V = 8.706 + 0.7084H_T$$

Where:

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

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

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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 ± 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.
 - 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 ± 1 percent of the temperature being monitored in $^{\circ}\text{C}$ or $\pm 0.5^{\circ}\text{C}$, 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 ± 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

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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 ± 1 percent of the temperature being monitored in degrees Celsius ($^{\circ}$ C) or $\pm 0.5^{\circ}$ 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, 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

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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).
- 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

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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:
 - 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

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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.
 - 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.

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- 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

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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:

- 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:

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- 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.
- 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

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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-~~weighed~~weighted basis.
- 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~~

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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/m³, at 293 K and 760 mm Hg

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

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 ³ , at 293 K and 760 mmHg
10^{-6}	=	The conversion factor from ppm.

ii) For a source utilizing Reference Method 25A:

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



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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

0.0416 = The conversion factor for molar volume, kg-mol/m³, at 293 K and 760 mm Hg

10⁻⁶ = The conversion factor from ppm.

E_h	≡	<u>The total organic mass flow rate, kg/h</u>
Q	≡	<u>The volumetric flow rate of gases entering or exiting control device, dscm/h, as determined by Reference Method 2</u>
C	≡	<u>The organic concentration in ppm, dry basis, of compound i in the vent gas, as determined by Reference Method 25A</u>
MW	≡	<u>The molecular weight of propane, 44 kg/kg-mol</u>
0.0416	≡	<u>The conversion factor for molar volume, kg-mol/m³, at 293 K and 760 mmHg</u>
10 ⁻⁶	≡	<u>The conversion factor from ppm.</u>

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

$$A = F \times H$$

$$A = F \times H$$

Where:

~~A = total organic emission rate, kg/y~~

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

~~H = the total annual hours of operation for the affected unit.~~

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

- 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

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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.
- 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

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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 ⁶⁶Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, ²²USEPA publication number EPA-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

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- 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).
 - 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.

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- 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.
 - 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

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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.
 - 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

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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 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

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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);
 - 3) Monitoring, operating and inspection information required by Section 725.933(f) through (k);

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- 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°C , any period when the combustion temperature is below 760°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°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°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°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° 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° 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~~that 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~~that 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

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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 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;

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

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- 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;
 - 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.

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- 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
 - 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

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- 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;
 - E) Hazardous waste state at the equipment (e.g., gas/vapor or liquid); and
 - F) Method of compliance with the standard (e.g., ⁴⁴monthly leak detection and repair³³ or ⁴⁴equipped with dual mechanical seals⁴²);
 - 2) For facilities that comply with the provisions of Section 725.933(a)(2), an implementation schedule, as specified in that Section;

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- 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);
 - 3) The date the leak was detected and the dates of each attempt to repair the leak;

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- 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)

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subject to the requirements of this Subpart BB.

- 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.
 - 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

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- 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.
- 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 ~~Section~~ 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

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- 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 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_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 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);

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- 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
 - 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;

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- 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 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 ~~Section~~ Sections ~~724.983(b)~~ 725.984(b) ~~Section~~ [724.983\(b\)](#) and [725.984\(a\)](#) ~~Section 724.983(a)~~ ~~725.984(a)~~, respectively;

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- 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) 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 the method at Section 4.4 of Reference Method 25D or a value of 25 ppmw, whichever is less; and

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- 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 1.8×10^{-6} atmospheres/gram-mole/m³) at 25° 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 (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

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- 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.

- 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
 - 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

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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 (d)(5)(C); 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

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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 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 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

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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 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

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(0.1 Y/X) (which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³) 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. Constituent-specific adjustment factors (f_{m25D}) can be obtained in writing from the Agency by contacting the USEPA, Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC ~~27711 in writing from the Agency 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 1.8×10^{-6} atmospheres/gram-mole/m³) 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

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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:

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

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

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Q_T = Total mass quantity of the hazardous waste during the averaging period, in kg/hr

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.

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
 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)

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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).
- 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

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mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) (which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³) at 25° 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.

- 4) Use of 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

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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 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) 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

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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 to determine the average VO concentration of a hazardous waste at the point of waste treatment.
 - 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

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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 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 1.8×10^{-6} atmospheres/gram-mole/m³) at ~~25°C~~ 25°C (75° F). When the owner or operator is making a waste determination for a treated

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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. 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. Constituent-specific adjustment factors (f_{m25D}) can be obtained ~~by in writing from the Agency~~ by contacting the USEPA, Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC ~~27711 in writing from the Agency~~ 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 1.8×10^{-6} atmospheres/gram-mole/m³) 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,

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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:

~~= 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~~

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Q_T = Total mass quantity of hazardous waste during the averaging period, in kg/hr

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.

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
 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 to determine the exit concentration limit (C_i) for a treated

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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:

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

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~~

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- ~~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~~
- ~~= 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.~~

- C_i = 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.

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as determined in accordance with the requirements of subsection (a) of this Section
 $m \equiv$ Total number of "x" hazardous waste streams treated by process
 $n \equiv$ Total number of "y" hazardous waste streams treated by process
 $Q_x \equiv$ Annual mass quantity of hazardous waste stream "x," in kg/yr
 $Q_y \equiv$ Annual mass quantity of hazardous waste stream "y," in kg/yr
 $C_x \equiv$ 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 to determine the organic reduction efficiency (R) for a treated hazardous waste-
- 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

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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:

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

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

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"~~

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~~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~~

~~= 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~~

~~= 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_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
- 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
- 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

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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~~

~~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.~~

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
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 to determine the organic biodegradation efficiency (R_{bio}) for a

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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~~

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

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

- 7) Procedure 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

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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 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:

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

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 m³/hr

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~~k_y = Density of hazardous waste stream "y," in kg/m^3~~

~~= 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.~~

RMR \equiv Required organic mass removal rate, in kg/hr
y \equiv 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 \equiv Total number of "y" hazardous waste streams treated by process
 V_y \equiv Average volumetric flow rate of hazardous waste stream "y" at the point of waste origination, in m^3/hr
 k_y \equiv Density of hazardous waste stream "y," in kg/m^3
 C_y \equiv 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 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.
 - 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

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(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~~

~~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.~~

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
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.

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- 9) Procedure 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).
 - 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~~

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

MR_{bio} \equiv Actual organic mass biodegradation rate, in kg/hr
 E_{b} \equiv 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
 F_{bio} \equiv Fraction of organic biodegraded, as determined in accordance with the requirements of subsection (b)(9)(C) of this Section.

- c) Procedure to determine the maximum organic vapor pressure of a hazardous waste in a 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 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

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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 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

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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:
- 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

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- 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. 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. 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

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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:
 - i) For a tank design capacity equal to or greater than 151 m³ (5333 ft³ or 39,887 gal), the maximum organic vapor pressure limit for the tank is 5.2 kPa (0.75 psia or 39 ~~mm~~ HgmmHg);
 - ii) For a tank design capacity equal to or greater than 75 m³ (2649 ft³ or 19,810 gal) but less than 151 m³ (5333 ft³ or 39,887 gal), the maximum organic vapor pressure limit for the tank is 27.6 kPa (4.0 psia or 207 ~~mm~~ HgmmHg); or
 - iii) For a tank design capacity less than 75 m³ (2649 ft³ or 19,810 gal), the maximum organic vapor pressure limit for the tank is 76.6 kPa (11.1 psia or 574 ~~mm~~ HgmmHg).
 - 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

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- 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 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).

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- 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).
- 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

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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:
 - 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.

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- 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 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.

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- 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.
- 1) The tank must be equipped with a fixed roof and an internal floating roof

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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

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- 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.
- 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)

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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 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

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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
 - 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

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must not exceed 212 square centimeters (cm²) per meter (10.0 in² 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 cm² per meter (1.0 in² per foot) of tank diameter, and the width of any portion of these gaps must not exceed 1.3 cm (0.5 inch); and
- 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

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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:
- 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

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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 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;

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- 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 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

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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
 - 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

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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

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.

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- 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 effects of outdoor exposure to wind, moisture, and sunlight; and

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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

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- the following: 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 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

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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 device designed and operated in accordance with the requirements of Section ~~724.987-725.988~~ [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 to ~~"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

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- 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 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

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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.
- 1) Following the initial inspection and monitoring of the cover as required by the applicable provisions of this Subpart CC, subsequent inspection and monitoring 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) 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 ———)

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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 [those](#) such air emission control.
- b) General 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 m³ (26 gal) and less than or equal to 0.46 m³ (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 m³ (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 m³ (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 m³ (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

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process when the hazardous waste in the container is exposed to the atmosphere.

- c) Container Level 1 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
 - 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.

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- 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 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) 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 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

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- ii) 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 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

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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) 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 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) 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

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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 m³ (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:
 - 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
 - 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

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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) 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) 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

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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) 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

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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; 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) 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

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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 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) 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:

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

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- 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:
- 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; 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

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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 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);

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- 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 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 ± 2.5 mm (0.10 inch) water and that is capable of measuring above the pressure

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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:
 - 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

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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 1×10^{-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 3×10^{-5} m²/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 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

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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 of Fugitive Emissions from Material Sources and Smoke Emissions from Flares) in appendix A to 40 CFR 60 (Test

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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

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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 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.
- 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

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Format changed	0
Total changes	575

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2 SUBTITLE G: WASTE DISPOSAL
3 CHAPTER I: POLLUTION CONTROL BOARD
4 SUBCHAPTER c: HAZARDOUS WASTE OPERATING REQUIREMENTS
5

6 PART 725
7 INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS
8 WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES
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- 302 725.APPENDIX B EPA Report Form and Instructions (Repealed)
- 303 725.APPENDIX C USEPA Interim Primary Drinking Water Standards
- 304 725.APPENDIX D Tests for Significance
- 305 725.APPENDIX E Examples of Potentially Incompatible Wastes
- 306 725.APPENDIX F Compounds with Henry's Law Constant Less Than 0.1 Y/X (at 25°C)

307

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

310

311 SOURCE: Adopted in R81-22 at 5 Ill. Reg. 9781, effective May 17, 1982; amended and
 312 codified in R81-22 at 6 Ill. Reg. 4828, effective May 17, 1982; amended in R82-18 at 7 Ill. Reg.
 313 2518, effective February 22, 1983; amended in R82-19 at 7 Ill. Reg. 14034, effective October 12,
 314 1983; amended in R84-9 at 9 Ill. Reg. 11869, effective July 24, 1985; amended in R85-22 at 10
 315 Ill. Reg. 1085, effective January 2, 1986; amended in R86-1 at 10 Ill. Reg. 14069, effective
 316 August 12, 1986; amended in R86-28 at 11 Ill. Reg. 6044, effective March 24, 1987; amended in
 317 R86-46 at 11 Ill. Reg. 13489, effective August 4, 1987; amended in R87-5 at 11 Ill. Reg. 19338,
 318 effective November 10, 1987; amended in R87-26 at 12 Ill. Reg. 2485, effective January 15,
 319 1988; amended in R87-39 at 12 Ill. Reg. 13027, effective July 29, 1988; amended in R88-16 at
 320 13 Ill. Reg. 437, effective December 28, 1988; amended in R89-1 at 13 Ill. Reg. 18354, effective
 321 November 13, 1989; amended in R90-2 at 14 Ill. Reg. 14447, effective August 22, 1990;
 322 amended in R90-10 at 14 Ill. Reg. 16498, effective September 25, 1990; amended in R90-11 at
 323 15 Ill. Reg. 9398, effective June 17, 1991; amended in R91-1 at 15 Ill. Reg. 14534, effective
 324 October 1, 1991; amended in R91-13 at 16 Ill. Reg. 9578, effective June 9, 1992; amended in
 325 R92-1 at 16 Ill. Reg. 17672, effective November 6, 1992; amended in R92-10 at 17 Ill. Reg.
 326 5681, effective March 26, 1993; amended in R93-4 at 17 Ill. Reg. 20620, effective November 22,
 327 1993; amended in R93-16 at 18 Ill. Reg. 6771, effective April 26, 1994; amended in R94-7 at 18
 328 Ill. Reg. 12190, effective July 29, 1994; amended in R94-17 at 18 Ill. Reg. 17548, effective
 329 November 23, 1994; amended in R95-6 at 19 Ill. Reg. 9566, effective June 27, 1995; amended in
 330 R95-20 at 20 Ill. Reg. 11078, effective August 1, 1996; amended in R96-10/R97-3/R97-5 at 22
 331 Ill. Reg. 369, effective December 16, 1997; amended in R98-12 at 22 Ill. Reg. 7620, effective
 332 April 15, 1998; amended in R97-21/R98-3/R98-5 at 22 Ill. Reg. 17620, effective September 28,
 333 1998; amended in R98-21/R99-2/R99-7 at 23 Ill. Reg. 1850, effective January 19, 1999;
 334 amended in R99-15 at 23 Ill. Reg. 9168, effective July 26, 1999; amended in R00-5 at 24 Ill.
 335 Reg. 1076, effective January 6, 2000; amended in R00-13 at 24 Ill. Reg. 9575, effective June 20,
 336 2000; amended in R03-7 at 27 Ill. Reg. 4187, effective February 14, 2003; amended in R05-8 at
 337 29 Ill. Reg. 6028, effective April 13, 2005; amended in R05-2 at 29 Ill. Reg. 6389, effective
 338 April 22, 2005; amended in R06-5/R06-6/R06-7 at 30 Ill. Reg. 3460, effective February 23,
 339 2006; amended in R06-16/R06-17/R06-18 at 31 Ill. Reg. 1031, effective December 20, 2006;
 340 amended in R07-5/R07-14 at 32 Ill. Reg. 12566, effective July 14, 2008; amended in R09-3 at 33
 341 Ill. Reg. 1155, effective December 30, 2008; amended in R09-16/R10-4 at 34 Ill. Reg. 18890,
 342 effective November 12, 2010; amended in R11-2/R11-16 at 35 Ill. Reg. 18052, effective October
 343 14, 2011; amended in R13-15 at 37 Ill. Reg. 17811, effective October 24, 2013; amended in

344 R15-1 at 39 Ill. Reg. 1746, effective January 12, 2015; amended in R16-7 at 40 Ill. Reg. _____,
345 effective _____.

346

347 SUBPART E: MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING

348

349 **Section 725.173 Operating Record**

350

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

352

353 b) The following information must be recorded as it becomes available and
354 maintained in the operating record for three years unless otherwise provided as
355 follows:

356

357 1) A description and the quantity of each hazardous waste received and the
358 methods and dates of its treatment, storage, or disposal at the facility, as
359 required by Appendix A to this Part. This information must be maintained
360 in the operating record until closure of the facility;

361

362 2) The location of each hazardous waste within the facility and the quantity
363 at each location. For disposal facilities the location and quantity of each
364 hazardous waste must be recorded on a map or diagram that shows each
365 cell or disposal area. For all facilities this information must include cross-
366 references to manifest document numbers if the waste was accompanied
367 by a manifest. This information must be maintained in the operating
368 record until closure of the facility;

369

370 BOARD NOTE: See Sections 725.219, 725.379, and 725.409 for related
371 requirements.

372

373 3) Records and results of waste analysis, waste determinations, and trial tests
374 performed, as specified in Sections 725.113, 725.300, 725.325, 725.352,
375 725.373, 725.414, 725.441, 725.475, 725.502, 725.934, 725.963, and
376 725.984 and 35 Ill. Adm. Code 728.104(a) and 728.107;

377

378 4) Summary reports and details of all incidents that require implementing the
379 contingency plan, as specified in Section 725.156(j);

380

381 5) Records and results of inspections, as required by Section 725.115(d)
382 (except these data need be kept only three years);

383

384 6) Monitoring, testing, or analytical data, where required by Subpart F of this
385 Part or Sections 725.119, 725.194, 725.291, 725.293, 725.295, 725.324,
386 725.326, 725.355, 725.360, 725.376, 725.378, 725.380(d)(1), 725.402,

387 725.404, 725.447, 725.477, 725.934(c) through (f), 725.935, 725.963(d)
388 through (i), 725.964, and ~~725.983~~~~725.1083~~ through 725.990. Maintain in
389 the operating record for three years, except for records and results
390 pertaining to groundwater monitoring and cleanup, and response action
391 plans for surface impoundments, waste piles, and landfills, which must be
392 maintained in the operating record until closure of the facility;

393
394 BOARD NOTE: As required by Section 725.194, monitoring data at
395 disposal facilities must be kept throughout the post-closure period.
396

- 397 7) All closure cost estimates under Section 725.242 and, for disposal
398 facilities, all post-closure cost estimates under Section 725.244 must be
399 maintained in the operating record until closure of the facility;
400
- 401 8) Records of the quantities (and date of placement) for each shipment of
402 hazardous waste placed in land disposal units under an extension of the
403 effective date of any land disposal restriction granted pursuant to 35 Ill.
404 Adm. Code 728.105, a petition pursuant to 35 Ill. Adm. Code 728.106, or
405 a certification under 35 Ill. Adm. Code 728.108 and the applicable notice
406 required of a generator under 35 Ill. Adm. Code 728.107(a). All of this
407 information must be maintained in the operating record until closure of the
408 facility;
409
- 410 9) For an off-site treatment facility, a copy of the notice and the certification
411 and demonstration, if applicable, required of the generator or the owner or
412 operator under 35 Ill. Adm. Code 728.107 or 728.108;
413
- 414 10) For an on-site treatment facility, the information contained in the notice
415 (except the manifest number) and the certification and demonstration, if
416 applicable, required of the generator or the owner or operator under 35 Ill.
417 Adm. Code 728.107 or 728.108;
418
- 419 11) For an off-site land disposal facility, a copy of the notice and the
420 certification and demonstration, if applicable, required of the generator or
421 the owner or operator of a treatment facility under 35 Ill. Adm. Code
422 728.107 or 728.108;
423
- 424 12) For an on-site land disposal facility, the information contained in the
425 notice required of the generator or owner or operator of a treatment facility
426 under 35 Ill. Adm. Code 728.107, except for the manifest number, and the
427 certification and demonstration, if applicable, required under 35 Ill. Adm.
428 Code 728.107 or 728.108;
429

- 430 13) For an off-site storage facility, a copy of the notice and the certification
 431 and demonstration, if applicable, required of the generator or the owner or
 432 operator under 35 Ill. Adm. Code 728.107 or 728.108;
 433
 434 14) For an on-site storage facility, the information contained in the notice
 435 (except the manifest number) and the certification and demonstration, if
 436 applicable, required of the generator or the owner or operator under 35 Ill.
 437 Adm. Code 728.107 or 728.108; and
 438
 439 15) Monitoring, testing or analytical data, and corrective action, where
 440 required by Sections 725.190 and 725.193(d)(2) and (d)(5), and the
 441 certification, as required by Section ~~725.296(f)~~~~725.196(f)~~, must be
 442 maintained in the operating record until closure of the facility.
 443

444 (Source: Amended at 40 Ill. Reg. _____, effective _____)
 445

446 SUBPART O: INCINERATORS
 447

448 **Section 725.440 Applicability**
 449

- 450 a) The regulations in this Subpart O apply to owners or operators of hazardous waste
 451 incinerators (as defined in 35 Ill. Adm. Code 720.110), except as 35 Ill. Adm.
 452 Code 724.101 provides otherwise.
 453
 454 b) Integration of the MACT standards.
 455
 456 1) Except as provided by subsections (b)(2) and (b)(3) of this Section, the
 457 standards of this Part no longer apply when an owner or operator
 458 demonstrates compliance with the maximum achievable control
 459 technology (MACT) requirements of subpart EEE of 40 CFR 63 (National
 460 Emission Standards for Hazardous Air Pollutants from Hazardous Waste
 461 Combustors), incorporated by reference in 35 Ill. Adm. Code 720.111(b),
 462 by conducting a comprehensive performance test and submitting to the
 463 Agency a Notification of Compliance, under 40 CFR 63.1207(j) and
 464 ~~63.1210(d)~~~~63.1210(b)~~, documenting compliance with the requirements of
 465 subpart EEE of 40 CFR 63.
 466
 467 2) The MACT standards of subpart EEE of 40 CFR 63 do not replace the
 468 closure requirements of Section 724.451 or the applicable requirements of
 469 Subparts A through H, BB, and CC of this Part.
 470
 471 3) Section 725.445, generally prohibiting burning of hazardous waste during
 472 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 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

- 516 applies whenever either of the following conditions exist:
517
518 1) A hazardous waste that is substantially different from waste previously
519 treated in a treatment process or equipment at the facility is to be treated in
520 that process or equipment;³ or
521
522 2) A substantially different process from any previously used at the facility is
523 to be used to chemically treat hazardous waste.
524
525 b) To show that this proposed treatment will meet all applicable requirements of
526 Section 725.501(a) and (b), the owner or operator must, before treating the
527 different waste or using the different process or equipment:
528
529 1) Conduct waste analyses and trial treatment tests (e.g., bench scale or pilot
530 plant scale tests)³; or
531
532 2) Obtain written, documented information on similar treatment of similar
533 waste under similar operating conditions.
534

535 BOARD NOTE: As required by Section 725.113, the waste analysis plan must include
536 analyses needed to comply with Sections 725.505 and 725.506. As required by Section
537 725.173, the owner or operator must place the results from each waste analysis and trial
538 test, or the documented information, in the operating record of the facility.
539

540 (Source: Amended at 40 Ill. Reg. _____, effective _____)
541

542 SUBPART AA: AIR EMISSION STANDARDS FOR PROCESS VENTS 543

544 **Section 725.933 Standards: Closed-Vent Systems and Control Devices** 545

- 546 a) Compliance Required.
547
548 1) Owners or operators of closed-vent systems and control devices used to
549 comply with provisions of this Part must comply with the provisions of
550 this Section.
551
552 2) Implementation Schedule.
553
554 A) The owner or operator of an existing facility that cannot install a
555 closed-vent system and control device to comply with the
556 provisions of this Subpart AA on the effective date that the facility
557 becomes subject to the provisions of this Subpart AA must prepare
558 an implementation schedule that includes dates by which the

559 closed-vent system and control device will be installed and in
 560 operation. The controls must be installed as soon as possible, but
 561 the implementation schedule may allow up to 30 months after the
 562 effective date that the facility becomes subject to this Subpart AA
 563 for installation and startup.
 564

565 B) Any unit that begins operation after December 21, 1990, and which
 566 is subject to the provisions of this Subpart AA when operation
 567 begins, must comply with the rules immediately (i.e., must have
 568 control devices installed and operating on startup of the affected
 569 unit); the 30-month implementation schedule does not apply.
 570

571 C) The owner or operator of any facility in existence on the effective
 572 date of a statutory or regulatory amendment that renders the
 573 facility subject to this Subpart AA must comply with all
 574 requirements of this Subpart AA as soon as practicable but no later
 575 than 30 months after the effective date of the amendment. When
 576 control equipment required by this Subpart AA cannot be installed
 577 and begin operation by the effective date of the amendment, the
 578 facility owner or operator must prepare an implementation
 579 schedule that includes the following information: specific calendar
 580 dates for award of contracts or issuance of purchase orders for the
 581 control equipment, initiation of on-site installation of the control
 582 equipment, completion of the control equipment installation, and
 583 performance of any testing to demonstrate that the installed
 584 equipment meets the applicable standards of this Subpart AA. The
 585 owner or operator must enter the implementation schedule in the
 586 operating record or in a permanent, readily available file located at
 587 the facility.
 588

589 D) An owner or operator of a facility or unit that becomes newly
 590 subject to the requirements of this Subpart AA after December 8,
 591 1997, due to an action other than those described in subsection
 592 (a)(2)(iii) of this Section must comply with all applicable
 593 requirements immediately (i.e., the facility or unit must have
 594 control devices installed and operating on the date the facility or
 595 unit becomes subject to this Subpart AA; the 30-month
 596 implementation schedule does not apply).
 597

598 b) A control device involving vapor recovery (e.g., a condenser or adsorber) must be
 599 designed and operated to recover the organic vapors vented to it with an
 600 efficiency of 95 weight percent or greater unless the total organic emission limits
 601 of Section 725.932(a)(1) for all affected process vents is attained at an efficiency

- 602 less than 95 weight percent.
 603
 604 c) An enclosed combustion device (e.g., a vapor incinerator, boiler, or process
 605 heater) must be designed and operated to reduce the organic emissions vented to it
 606 by 95 weight percent or greater; to achieve a total organic compound
 607 concentration of 20 ppmv, expressed as the sum of the actual compounds, not
 608 carbon equivalents, on a dry basis corrected to three percent oxygen; or to provide
 609 a minimum residence time of 0.50 seconds at a minimum temperature of 760
 610 degrees Celsius (°C). If a boiler or process heater is used as the control device,
 611 then the vent stream must be introduced into the flame combustion zone of the
 612 boiler or process heater.
 613
 614 d) Flares.
 615
 616 1) A flare must be designed for and operated with no visible emissions as
 617 determined by the methods specified in subsection (e)(1) ~~of this Section~~
 618 except for periods not to exceed a total of five minutes during any two
 619 consecutive hours.
 620
 621 2) A flare must be operated with a flame present at all times, as determined
 622 by the methods specified in subsection ~~(f)(2)(C)(f)(2)(e) of this Section.~~
 623
 624 3) A flare must be used only if the net heating value of the gas being
 625 combusted is 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-
 626 assisted or air-assisted, or if the net heating value of the gas being
 627 combusted is 7.45 MJ/scm (200 Btu/scf) or greater if the flare is
 628 nonassisted. The net heating value of the gas being combusted must be
 629 determined by the methods specified in subsection (e)(2) ~~of this Section.~~
 630
 631 4) Exit Velocity.
 632
 633 A) A steam-assisted or nonassisted flare must be designed for and
 634 operated with an exit velocity, as determined by the methods
 635 specified in subsection (e)(3) ~~of this Section~~, less than 18.3 m/s (60
 636 ft/s), except as provided in subsections (d)(4)(B) and (d)(4)(C) ~~of~~
 637 ~~this Section.~~
 638
 639 B) A steam-assisted or nonassisted flare designed for and operated
 640 with an exit velocity, as determined by the methods specified in
 641 subsection (e)(3) ~~of this Section~~, equal to or greater than 18.3 m/s
 642 (60 ft/s) but less than 122 m/s (400 ft/s) is allowed if the net
 643 heating value of the gas being combusted is greater than 37.3
 644 MJ/scm (1,000 Btu/scf).

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- 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.
 - 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 1 mole is 20° C
- K = 1.74 x 10⁻⁷ (1/ppm) (g mol/scm) (MJ/kcal) where the standard temperature for (g mol/scm) is 20° C
- ΣX_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

H_i \equiv 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.

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- 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:

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

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Where:

\log_{10} = logarithm to the base 10
 H_T = the net heating value as determined in subsection (e)(2) of this Section.

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

$$V = 8.706 + 0.7084H_T$$

Where:

702

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:

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- 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.

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- 2) Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation, as specified below:

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725

- A) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device must have accuracy of ± 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 ± 1 percent of the temperature being monitored in $^{\circ}\text{C}$ or $\pm 0.5^{\circ}\text{C}$, 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.

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- C) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

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- 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 ± 1 percent of the temperature being monitored in $^{\circ}\text{C}$ or $\pm 0.5^{\circ}\text{C}$,

743 whichever is greater. The temperature sensor must be installed at a
 744 location in the furnace downstream of the combustion zone.

745
 746 E) For a boiler or process heater having a design heat input capacity
 747 greater than or equal to 44 MW, a monitoring device equipped
 748 with a continuous recorder to measure parameters that indicate
 749 good combustion operating practices are being used.

750
 751 F) For a condenser, either of the following:

752
 753 i) A monitoring device equipped with a continuous recorder
 754 to measure the concentration level of the organic
 755 compounds in the exhaust vent stream from the condenser;
 756 or

757
 758 ii) A temperature monitoring device equipped with a
 759 continuous recorder. The device must be capable of
 760 monitoring temperature with an accuracy of ± 1 percent of
 761 the temperature being monitored in degrees Celsius ($^{\circ}$ C) or
 762 $\pm 0.5^{\circ}$ C, whichever is greater. The temperature sensor must
 763 be installed at a location in the exhaust vent stream from
 764 the condenser exit (i.e., product side).

765
 766 G) For a carbon adsorption system, such as a fixed-bed carbon
 767 adsorber that regenerates the carbon bed directly in the control
 768 device, either of the following:

769
 770 i) A monitoring device equipped with a continuous recorder
 771 to measure the concentration level of the organic
 772 compounds in the exhaust vent stream from the carbon bed;
 773 or

774
 775 ii) A monitoring device equipped with a continuous recorder
 776 to measure a parameter that indicates the carbon bed is
 777 regenerated on a regular, predetermined time cycle.

778
 779 3) Inspect the readings from each monitoring device required by subsections
 780 (f)(1) and (f)(2) of this Section at least once each operating day to check
 781 control device operation and, if necessary, immediately implement the
 782 corrective measures necessary to ensure the control device operates in
 783 compliance with the requirements of this Section.

784
 785 g) An owner or operator using a carbon adsorption system such as a fixed-bed

786 carbon adsorber that regenerates the carbon bed directly onsite in the control
 787 device must replace the existing carbon in the control device with fresh carbon at
 788 a regular, predetermined time interval that is no longer than the carbon service life
 789 established as a requirement of Section 725.935(b)(4)(C)(vi).
 790

791 h) An owner or operator using a carbon adsorption system, such as a carbon canister,
 792 that does not regenerate the carbon bed directly onsite in the control device must
 793 replace the existing carbon in the control device with fresh carbon on a regular
 794 basis by using one of the following procedures:
 795

796 1) Monitor the concentration level of the organic compounds in the exhaust
 797 vent stream from the carbon adsorption system on a regular schedule, and
 798 replace the existing carbon with fresh carbon immediately when carbon
 799 breakthrough is indicated. The monitoring frequency must be daily or at
 800 an interval no greater than 20 percent of the time required to consume the
 801 total carbon working capacity established as a requirement of Section
 802 725.935(b)(4)(C)(vii), whichever is longer.
 803

804 2) Replace the existing carbon with fresh carbon at a regular, predetermined
 805 time interval that is less than the design carbon replacement interval
 806 established as a requirement of Section 725.935(b)(4)(C)(vii).
 807

808 i) An owner or operator of an affected facility seeking to comply with the provisions
 809 of this Part by using a control device other than a thermal vapor incinerator,
 810 catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon
 811 adsorption system is required to develop documentation including sufficient
 812 information to describe the control device operation and identify the process
 813 parameter or parameters that indicate proper operation and maintenance of the
 814 control device.
 815

816 j) A closed-vent system must meet either of the following design requirements:
 817

818 1) A closed-vent system must be designed to operate with no detectable
 819 emissions, as indicated by an instrument reading of less than 500 ppmv
 820 above background, as determined by the methods specified at Section
 821 725.934(b), and by visual inspections; or
 822

823 2) A closed-vent system must be designed to operate at a pressure below
 824 atmospheric pressure. The system must be equipped with at least one
 825 pressure gauge or other pressure measurement device that can be read
 826 from a readily accessible location to verify that negative pressure is being
 827 maintained in the closed-vent system when the control device is operating.
 828

- 829 k) The owner or operator must monitor and inspect each closed-vent system required
 830 to comply with this Section to ensure proper operation and maintenance of the
 831 closed-vent system by implementing the following requirements:
 832
- 833 1) Each closed-vent system that is used to comply with subsection (j)(1) ~~of~~
 834 ~~this Section~~ must be inspected and monitored in accordance with the
 835 following requirements:
 836
- 837 A) An initial leak detection monitoring of the closed-vent system must
 838 be conducted by the owner or operator on or before the date that
 839 the system becomes subject to this Section. The owner or operator
 840 must monitor the closed-vent system components and connections
 841 using the procedures specified in Section 725.934(b) to
 842 demonstrate that the closed-vent system operates with no
 843 detectable emissions, as indicated by an instrument reading of less
 844 than 500 ppmv above background.
 845
- 846 B) After initial leak detection monitoring required in subsection
 847 (k)(1)(A) ~~of this Section~~, the owner or operator must inspect and
 848 monitor the closed-vent system as follows:
 849
- 850 i) Closed-vent system joints, seams, or other connections that
 851 are permanently or semi-permanently sealed (e.g., a welded
 852 joint between two sections of hard piping or a bolted and
 853 gasketed ducting flange) must be visually inspected at least
 854 once per year to check for defects that could result in air
 855 pollutant emissions. The owner or operator must monitor a
 856 component or connection using the procedures specified in
 857 Section 725.934(b) to demonstrate that it operates with no
 858 detectable emissions following any time the component is
 859 repaired or replaced (e.g., a section of damaged hard piping
 860 is replaced with new hard piping) or the connection is
 861 unsealed (e.g., a flange is unbolted).
 862
- 863 ii) Closed-vent system components or connections other than
 864 those specified in subsection (k)(1)(B)(i) ~~of this Section~~
 865 must be monitored annually and at other times as requested
 866 by the Agency, except as provided for in subsection (n) ~~of~~
 867 ~~this Section~~, using the procedures specified in Section
 868 725.934(b) to demonstrate that the components or
 869 connections operate with no detectable emissions.
 870
- 871 C) In the event that a defect or leak is detected, the owner or operator

872 must repair the defect or leak in accordance with the requirements
873 of subsection (k)(3) of this Section.

874
875 D) The owner or operator must maintain a record of the inspection
876 and monitoring in accordance with the requirements specified in
877 Section 725.935.

878
879 2) Each closed-vent system that is used to comply with subsection (j)(2) of
880 this Section must be inspected and monitored in accordance with the
881 following requirements:

882
883 A) The closed-vent system must be visually inspected by the owner or
884 operator to check for defects that could result in air pollutant
885 emissions. Defects include, but are not limited to, visible cracks,
886 holes, or gaps in ductwork or piping or loose connections.

887
888 B) The owner or operator must perform an initial inspection of the
889 closed-vent system on or before the date that the system becomes
890 subject to this Section. Thereafter, the owner or operator must
891 perform the inspections at least once every year.

892
893 C) In the event that a defect or leak is detected, the owner or operator
894 must repair the defect in accordance with the requirements of
895 subsection (k)(3) of this Section.

896
897 D) The owner or operator must maintain a record of the inspection
898 and monitoring in accordance with the requirements specified in
899 Section 725.935.

900
901 3) The owner or operator must repair all detected defects as follows:

902
903 A) Detectable emissions, as indicated by visual inspection or by an
904 instrument reading greater than 500 ppmv above background, must
905 be controlled as soon as practicable, but not later than 15 calendar
906 days after the emission is detected, except as provided for in
907 subsection (k)(3)(C) of this Section.

908
909 B) A first attempt at repair must be made no later than five calendar
910 days after the emission is detected.

911
912 C) Delay of repair of a closed-vent system for which leaks have been
913 detected is allowed if the repair is technically infeasible without a
914 process unit shutdown, or if the owner or operator determines that

915 emissions resulting from immediate repair would be greater than
 916 the fugitive emissions likely to result from delay of repair. Repair
 917 of such equipment must be completed by the end of the next
 918 process unit shutdown.
 919

920 D) The owner or operator must maintain a record of the defect repair
 921 in accordance with the requirements specified in Section 725.935.
 922

923 l) A closed-vent system or control device used to comply with provisions of this
 924 Subpart AA must be operated at all times when emissions may be vented to it.
 925

926 m) The owner or operator using a carbon adsorption system to control air pollutant
 927 emissions must document that all carbon removed that is a hazardous waste and
 928 that is removed from the control device is managed in one of the following
 929 manners, regardless of the volatile organic concentration of the carbon:
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931 1) It is regenerated or reactivated in a thermal treatment unit that meets one
 932 of the following:
 933

934 A) The owner or operator of the unit has been issued a final permit
 935 under 35 Ill. Adm. Code 702, 703, and 705 that implements the
 936 requirements of Subpart X of 35 Ill. Adm. Code 724; or
 937

938 B) The unit is equipped with and operating air emission controls in
 939 accordance with the applicable requirements of Subparts AA and
 940 CC of this Part or 35 Ill. Adm. Code 724; or
 941

942 C) The unit is equipped with and operating air emission controls in
 943 accordance with a federal national emission standard for hazardous
 944 air pollutants under 40 CFR 61 (National Emission Standards for
 945 Hazardous Air Pollutants) or 63 (National Emission Standards for
 946 Hazardous Air Pollutants for Source Categories), each
 947 incorporated by reference in 35 Ill. Adm. Code 720.111(b).
 948

949 2) It is incinerated in a hazardous waste incinerator for which the owner or
 950 operator has done either of the following:
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952 A) The owner or operator has been issued a final permit under 35 Ill.
 953 Adm. Code 702, 703, and 705 that implements the requirements of
 954 Subpart O of 35 Ill. Adm. Code 724; or
 955

956 B) The owner or operator has designed and operates the incinerator in
 957 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:
 - 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).

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- 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.
 - 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

1044 720.111(b), for organic content. If Reference Method 25A is used,
 1045 the organic hazardous air pollutant (HAP) used as the calibration
 1046 gas must be the single HAP that represents the largest percent by
 1047 volume of the emissions. The use of Reference Method 25A is
 1048 acceptable if the response from the high-level calibration gas is at
 1049 least 20 times the standard deviation of the response from the zero
 1050 calibration gas when the instrument is zeroed on the most sensitive
 1051 scale.

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 1053 C) Each performance test must consist of three separate runs, each run
 1054 conducted for at least 1 hour under the conditions that exist when
 1055 the hazardous waste management unit is operating at the highest
 1056 load or capacity level reasonably expected to occur. For the
 1057 purpose of determining total organic compound concentrations and
 1058 mass flow rates, the average of results of all runs applies. The
 1059 average must be computed on a time-weighted basis.

1060
 1061 D) Total organic mass flow rates must be determined by the following
 1062 equation:

1063
 1064 i) For a source utilizing Reference Method 18:

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

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 1067 Where:

- 1068 E_h = The total organic mass flow rate, kg/h;
- 1069 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/m³, at 293 K and 760 mmHg
- 10⁻⁶ = The conversion factor from ppm.

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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
- MW = The molecular weight of propane, 44 kg/kg-mol
- 0.0416 = The conversion factor for molar volume, kg-mol/m³, at 293 K and 760 mmHg
- 10⁻⁶ = The conversion factor from ppm.

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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) of this Section
- H = the total annual hours of operation for the affected unit.

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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.

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- 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.

- 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

- 1140 samples must be collected at the inlet to the first waste
 1141 management unit that receives the waste provided the waste has
 1142 been transferred to the facility in a closed system such as a tank
 1143 truck and the waste is not diluted or mixed with other waste.
 1144
- 1145 C) Each sample must be analyzed and the total organic concentration
 1146 of the sample must be computed using Method 9060A (Total
 1147 Organic Carbon) of "Test Methods for Evaluating Solid Waste,
 1148 Physical/Chemical Methods," USEPA publication number EPA-
 1149 530/SW-846, incorporated by reference under 35 Ill. Adm. Code
 1150 720.111(a), or analyzed for its individual constituents.
 1151
- 1152 D) The arithmetic mean of the results of the analyses of the four
 1153 samples apply for each wastestream managed in the unit in
 1154 determining the time-weighted, annual average total organic
 1155 concentration of the waste. The time-weighted average is to be
 1156 calculated using the annual quantity of each waste stream
 1157 processed and the mean organic concentration of each wastestream
 1158 managed in the unit.
 1159
- 1160 2) Using knowledge of the waste to determine that its total organic
 1161 concentration is less than 10 ppmw. Documentation of the waste
 1162 determination is required. Examples of documentation that must be used
 1163 to support a determination under this subsection (d)(2) include the
 1164 following:
 1165
- 1166 A) Production process information documenting that no organic
 1167 compounds are used;
 1168
- 1169 B) Information that the waste is generated by a process that is
 1170 identical to a process at the same or another facility that has
 1171 previously been demonstrated by direct measurement to generate a
 1172 wastestream having a total organic content less than 10 ppmw; or
 1173
- 1174 C) Prior speciation analysis results on the same wastestream where it
 1175 is documented that no process changes have occurred since that
 1176 analysis that could affect the waste total organic concentration.
 1177
- 1178 e) The determination that distillation, fractionation, thin-film evaporation, solvent
 1179 extraction, or air or steam stripping operations that manage hazardous wastes with
 1180 time-weighted, annual average total organic concentrations less than 10 ppmw
 1181 must be made as follows:
 1182

- 1183 1) By the effective date that the facility becomes subject to the provisions of
1184 this Subpart AA or by the date when the waste is first managed in a waste
1185 management unit, whichever is later; and
1186
1187 2) For continuously generated waste, annually; or
1188
1189 3) Whenever there is a change in the waste being managed or a change in the
1190 process that generates or treats the waste.
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1192 f) When an owner or operator and the Agency do not agree on whether a distillation,
1193 fractionation, thin-film evaporation, solvent extraction, or air or steam stripping
1194 operation manages a hazardous waste with organic concentrations of at least 10
1195 ppmw based on knowledge of the waste, the dispute may be resolved using direct
1196 measurement, as specified in subsection (d)(1) of this Section.
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1198 (Source: Amended at 40 Ill. Reg. _____, effective _____)
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1200 **Section 725.935 Recordkeeping Requirements**
1201

- 1202 a) Compliance Required.
1203
1204 1) Each owner or operator subject to the provisions of this Subpart AA must
1205 comply with the recordkeeping requirements of this Section.
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1207 2) An owner or operator of more than one hazardous waste management unit
1208 subject to the provisions of this Subpart AA may comply with the
1209 recordkeeping requirements for these hazardous waste management units
1210 in one recordkeeping system if the system identifies each record by each
1211 hazardous waste management unit.
1212
1213 b) Owners and operators must record the following information in the facility
1214 operating record:
1215
1216 1) For facilities that comply with the provisions of Section 725.933(a)(2), an
1217 implementation schedule that includes dates by which the closed-vent
1218 system and control device will be installed and in operation. The schedule
1219 must also include a rationale of why the installation cannot be completed
1220 at an earlier date. The implementation schedule must be in the facility
1221 operating record by the effective date that the facility becomes subject to
1222 the provisions of this Subpart.
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1224 2) Up-to-date documentation of compliance with the process vent standards
1225 in Section 725.932, including the following:

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- 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).
 - 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;

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- ii) Type of control device;
 - iii) Dimensions of the control device;
 - iv) Capacity; and
 - v) Construction materials.
- 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) 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.

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- 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.
 - 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.

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- 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 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

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- with Section 725.933(f)(1) and (f)(2);
- 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° C, any period when the combustion temperature is below 760° 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° 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° 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°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° 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° 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 that 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 that 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

- 1484 design value and the measures implemented to correct the control device
 1485 operation;
- 1486
- 1487 6) For carbon adsorption systems operated subject to requirements specified
 1488 in Section 725.933(g) or (h)(2), any date when existing carbon in the
 1489 control device is replaced with fresh carbon;
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- 1491 7) For carbon adsorption systems operated subject to requirements specified
 1492 in Section 725.933(h)(1), a log that records:
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- 1494 A) Date and time when control device is monitored for carbon
 1495 breakthrough and the monitoring device reading.
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- 1497 B) Date when existing carbon in the control device is replaced with
 1498 fresh carbon;
- 1499
- 1500 8) Date of each control device startup and shutdown;
- 1501
- 1502 9) An owner or operator designating any components of a closed-vent system
 1503 as unsafe to monitor pursuant to Section 725.933(n) must record in a log
 1504 that is kept in the facility operating record the identification of closed-vent
 1505 system components that are designated as unsafe to monitor in accordance
 1506 with the requirements of Section 725.933(n), an explanation for each
 1507 closed-vent system component stating why the closed-vent system
 1508 component is unsafe to monitor, and the plan for monitoring each closed-
 1509 vent system component; and
- 1510
- 1511 10) When each leak is detected as specified in Section 725.933(k), the
 1512 following information must be recorded:
- 1513
- 1514 A) The instrument identification number, the closed-vent system
 1515 component identification number, and the operator name, initials,
 1516 or identification number;
- 1517
- 1518 B) The date the leak was detected and the date of first attempt to
 1519 repair the leak;
- 1520
- 1521 C) The date of successful repair of the leak;
- 1522
- 1523 D) Maximum instrument reading measured by Reference Method 21
 1524 (Determination of Volatile Organic Compound Leaks) of appendix
 1525 A to 40 CFR 60 Test Methods, incorporated by reference in 35 Ill.
 1526 Adm. Code 720.111(b), after it is successfully repaired or

- 1527 determined to be nonrepairable; and
 1528
 1529 E) "Repair delayed" and the reason for the delay if a leak is not
 1530 repaired within 15 calendar days after discovery of the leak.
 1531
 1532 i) The owner or operator may develop a written procedure
 1533 that identifies the conditions that justify a delay of repair.
 1534 In such cases, reasons for delay of repair may be
 1535 documented by citing the relevant sections of the written
 1536 procedure.
 1537
 1538 ii) If delay of repair was caused by depletion of stocked parts,
 1539 there must be documentation that the spare parts were
 1540 sufficiently stocked on-site before depletion and the reason
 1541 for depletion; and
 1542
 1543 d) Records of the monitoring, operating and inspection information required by
 1544 subsections (c)(3) through (c)(10) of this Section must be maintained by the
 1545 owner or operator for at least three years following the date of each occurrence,
 1546 measurement, corrective action, or record.
 1547
 1548 e) For a control device other than a thermal vapor incinerator, catalytic vapor
 1549 incinerator, flare, boiler, process heater, condenser or carbon adsorption system,
 1550 monitoring and inspection information indicating proper operation and
 1551 maintenance of the control device must be recorded in the facility operating
 1552 record.
 1553
 1554 f) Up-to-date information and data used to determine whether or not a process vent
 1555 is subject to the requirements in Section 725.932, including supporting
 1556 documentation as required by Section 725.934(d)(2), when application of the
 1557 knowledge of the nature of the hazardous waste stream or the process by which it
 1558 was produced is used, must be recorded in a log that is kept in the facility
 1559 operating record.

1560
 1561 (Source: Amended at 40 Ill. Reg. _____, effective _____)
 1562

1563 **SUBPART BB: AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS**
 1564

1565 **Section 725.952 Standards: Pumps in Light Liquid Service**
 1566

- 1567 a) Monitoring.
 1568
 1569 1) Each pump in light liquid service must be monitored monthly to detect

- 1570 leaks by the methods specified in Section 725.963(b), except as provided
 1571 in subsections (d), (e), and (f) of this Section.
 1572
- 1573 2) Each pump in light liquid service must be checked by visual inspection
 1574 each calendar week for indications of liquids dripping from the pump seal.
 1575
- 1576 b) Leaks.
- 1577
- 1578 1) If an instrument reading of 10,000 ppm or greater is measured, a leak is
 1579 detected.
 1580
- 1581 2) If there are indications of liquids dripping from the pump seal, a leak is
 1582 detected.
 1583
- 1584 c) Repairs.
- 1585
- 1586 1) When a leak is detected, it must be repaired as soon as practicable, but not
 1587 later than 15 calendar days after it is detected, except as provided in
 1588 Section 725.959.
 1589
- 1590 2) A first attempt at repair (e.g., tightening the packing gland) must be made
 1591 no later than 5 calendar days after each leak is detected.
 1592
- 1593 d) Each pump equipped with a dual mechanical seal system that includes a barrier
 1594 fluid system is exempt from the requirements of subsection (a) of this Section,
 1595 provided the following requirements are met:
 1596
- 1597 1) Each dual mechanical seal system must be as follows:
- 1598
- 1599 A) Operated with the barrier fluid at a pressure that is at all times
 1600 greater than the pump stuffing box pressures;
 1601
- 1602 B) Equipped with a barrier fluid degassing reservoir that is connected
 1603 by a closed-vent system to a control device that complies with the
 1604 requirements of Section 725.960; or
 1605
- 1606 C) Equipped with a system that purges the barrier fluid into a
 1607 hazardous wastestream with no detectable emissions to the
 1608 atmosphere;
 1609
- 1610 2) The barrier fluid system must not be a hazardous waste with organic
 1611 concentrations 10 percent or greater by weight;
 1612

- 1613 3) Each barrier fluid system must be equipped with a sensor that will detect
 1614 failure of the seal system, the barrier fluid system, or both;
 1615
- 1616 4) Each pump must be checked by visual inspection, each calendar week, for
 1617 indications of liquids dripping from the pump seals;
 1618
- 1619 5) Alarms.
 1620
- 1621 A) Each sensor, as described in subsection (d)(3) of this Section, must
 1622 be checked daily or be equipped with an audible alarm that must be
 1623 checked monthly to ensure that it is functioning properly.
 1624
- 1625 B) The owner or operator must determine, based on design
 1626 considerations and operating experience, a criterion that indicates
 1627 failure of the seal system, the barrier fluid system, or both; and
 1628
- 1629 6) Leaks.
 1630
- 1631 A) If there are indications of liquids dripping from the pump seal or
 1632 the sensor indicates failure of the seal system, the barrier fluid
 1633 system, or both, based on the criterion determined in subsection
 1634 (d)(5)(B) of this Section, a leak is detected.
 1635
- 1636 B) When a leak is detected, it must be repaired as soon as practicable,
 1637 but not later than 15 calendar days after it is detected, except as
 1638 provided in Section 725.959.
 1639
- 1640 C) A first attempt at repair (e.g., relapping the seal) must be made no
 1641 later than five calendar days after each leak is detected.
 1642
- 1643 e) Any pump that is designated, as described in Section 725.964(g)(2), for no
 1644 detectable emissions, as indicated by an instrument reading of less than 500 ppm
 1645 above background, is exempt from the requirements of subsections (a), (c), and
 1646 (d) of this Section, if the pump meets the following requirements:
 1647
- 1648 1) Must have no externally actuated shaft penetrating the pump housing;
 1649
- 1650 2) Must operate with no detectable emissions as indicated by an instrument
 1651 reading of less than 500 ppm above background as measured by the
 1652 methods specified in Section 725.963(c); and
 1653
- 1654 3) Must be tested for compliance with subsection (e)(2) of this Section,
 1655 initially upon designation, annually and at other times as specified by the

1656 Agency pursuant to Section 725.950(e).

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- 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.

1663

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

1664

1665 **Section 725.964 Recordkeeping Requirements**

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1667

- a) Lumping Units.

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- 1) Each owner or operator subject to the provisions of this Subpart BB must comply with the recordkeeping requirements of this Section.

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- 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.

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- b) Owners and operators must record the following information in the facility operating record:

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- 1) For each piece of equipment to which this Subpart BB applies, the following:

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1683

- A) Equipment identification number and hazardous waste management unit identification;

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1686

- B) Approximate locations within the facility (e.g., identify the hazardous waste management unit on a facility plot plan);

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1689

- C) Type of equipment (e.g., a pump or pipeline valve);

1690

1691

- D) Percent-by-weight total organics in the hazardous wastestream at the equipment;

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1694

- E) Hazardous waste state at the equipment (e.g., gas/vapor or liquid); and

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1697

- F) Method of compliance with the standard (e.g., "monthly leak

1698

- 1699 detection and repair" or "equipped with dual mechanical seals");
1700
1701 2) For facilities that comply with the provisions of Section 725.933(a)(2), an
1702 implementation schedule, as specified in that Section;
1703
1704 3) Where an owner or operator chooses to use test data to demonstrate the
1705 organic removal efficiency or total organic compound concentration
1706 achieved by the control device, a performance test plan, as specified in
1707 Section 725.935(b)(3); and
1708
1709 4) Documentation of compliance with Section 725.960, including the
1710 detailed design documentation or performance test results specified in
1711 Section 725.935(b)(4).
1712
1713 c) When each leak is detected, as specified in Section 725.952, 725.953, 725.957, or
1714 725.958, the following requirements apply:
1715
1716 1) A weatherproof and readily visible identification, marked with the
1717 equipment identification number, the date evidence of a potential leak was
1718 found in accordance with Section 725.958(a), and the date the leak was
1719 detected, must be attached to the leaking equipment;
1720
1721 2) The identification on equipment except on a valve, may be removed after
1722 it has been repaired; and
1723
1724 3) The identification on a valve may be removed after it has been monitored
1725 for two successive months as specified in Section 725.957(c) and no leak
1726 has been detected during those two months.
1727
1728 d) When each leak is detected, as specified in Sections 725.952, 725.953, 725.957,
1729 or 725.958, the following information must be recorded in an inspection log and
1730 must be kept in the facility operating record:
1731
1732 1) The instrument and operator identification numbers and the equipment
1733 identification number;
1734
1735 2) The date evidence of a potential leak was found in accordance with
1736 Section 725.958(a);
1737
1738 3) The date the leak was detected and the dates of each attempt to repair the
1739 leak;
1740
1741 4) Repair methods applied in each attempt to repair the leak;

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- 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.
 - 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

- 1785 indicated by an instrument reading of less than 500 ppm above
1786 background, under the provisions of Sections 725.952(e),
1787 725.953(i), and 725.957(f).
1788
- 1789 B) The designation of this equipment as subject to the requirements of
1790 Section 725.952(e), 725.953(i), or 725.957(f) must be signed by
1791 the owner or operator.
1792
- 1793 3) A list of equipment identification numbers for pressure relief devices
1794 required to comply with Section 725.954(a).
1795
- 1796 4) Compliance tests.
1797
- 1798 A) The dates of each compliance test required in Sections 725.952(e),
1799 725.953(i), 725.954, and 725.957(f).
1800
- 1801 B) The background level measured during each compliance test.
1802
- 1803 C) The maximum instrument reading measured at the equipment
1804 during each compliance test.
1805
- 1806 5) A list of identification numbers for equipment in vacuum service.
1807
- 1808 6) Identification, either by list or location (area or group) of equipment that
1809 contains or contacts hazardous waste with an organic concentration of at
1810 least 10 percent by weight for less than 300 hours per year.
1811
- 1812 h) The following information pertaining to all valves subject to the requirements of
1813 Section 725.957(g) and (h) must be recorded in a log that is kept in the facility
1814 operating record:
1815
- 1816 1) A list of identification numbers for valves that are designated as unsafe to
1817 monitor, an explanation for each valve stating why the valve is unsafe to
1818 monitor, and the plan for monitoring each valve; and
1819
- 1820 2) A list of identification numbers for valves that are designated as difficult
1821 to monitor, an explanation for each valve stating why the valve is difficult
1822 to monitor, and the planned schedule for monitoring each valve.
1823
- 1824 i) The following information must be recorded in the facility operating record for
1825 valves complying with Section 725.962:
1826
- 1827 1) A schedule of monitoring; and

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- 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.
- 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

1871 CFR 60 (Standards of Performance for New Stationary Sources), 61 (National
 1872 Emission Standards for Hazardous Air Pollutants), or 63 (National Emission
 1873 Standards for Hazardous Air Pollutants for Source Categories), pursuant to the
 1874 relevant provisions of 40 CFR 60, 61, or 63, each incorporated by reference in 35
 1875 Ill. Adm. Code 720.111(b). The documentation of compliance under the
 1876 regulation at 40 CFR 60, 61, or 63 must be kept with or made readily available
 1877 with the facility operating record.

1878
 1879 (Source: Amended at 40 Ill. Reg. _____, effective _____)

1880
 1881 SUBPART CC: AIR EMISSION STANDARDS FOR TANKS, SURFACE
 1882 IMPOUNDMENTS, AND CONTAINERS

1883
 1884 **Section 725.983 Standards: General**

- 1885
 1886 a) This Section applies to the management of hazardous waste in tanks, surface
 1887 impoundments, and containers subject to this Subpart CC.
 1888
 1889 b) The owner or operator must control air pollutant emissions from each hazardous
 1890 waste management unit in accordance with the standards specified in Sections
 1891 725.985 through 725.988, as applicable to the hazardous waste management unit,
 1892 except as provided for in subsection (c) of this Section.
 1893
 1894 c) A tank, surface impoundment, or container is exempted from standards specified
 1895 in Sections 725.985 through 725.988, provided that all hazardous waste placed in
 1896 the waste management unit is one of the following:
 1897
 1898 1) A tank, surface impoundment, or container for which all hazardous waste
 1899 entering the unit has an average VO concentration at the point of waste
 1900 origination of less than 500 parts per million by weight (ppmw). The
 1901 average VO concentration must be determined by the procedures specified
 1902 in Section 725.984(a). The owner or operator must review and update, as
 1903 necessary, this determination at least once every 12 months following the
 1904 date of the initial determination for the hazardous waste streams entering
 1905 the unit;
 1906
 1907 2) A tank, surface impoundment, or container for which the organic content
 1908 of all the hazardous waste entering the waste management unit has been
 1909 reduced by an organic destruction or removal process that achieves any
 1910 one of the following conditions:
 1911
 1912 A) The process removes or destroys the organics contained in the
 1913 hazardous waste to such a level that the average VO concentration

- 1914 of the hazardous waste at the point of waste treatment is less than
1915 the exit concentration limit (C_t) established for the process. The
1916 average VO concentration of the hazardous waste at the point of
1917 waste treatment and the exit concentration limit for the process
1918 must be determined using the procedures specified in Section
1919 725.984(b);
1920
- 1921 B) The process removes or destroys the organics contained in the
1922 hazardous waste to such a level that the organic reduction
1923 efficiency (R) for the process is equal to or greater than 95 percent,
1924 and the average VO concentration of the hazardous waste at the
1925 point of waste treatment is less than 100 ppmw. The organic
1926 reduction efficiency for the process and the average VO
1927 concentration of the hazardous waste at the point of waste
1928 treatment must be determined using the procedures specified in
1929 Section 725.984(b);
1930
- 1931 C) The process removes or destroys the organics contained in the
1932 hazardous waste to such a level that the actual organic mass
1933 removal rate (MR) for the process is equal to or greater than the
1934 required organic mass removal rate (RMR) established for the
1935 process. The required organic mass removal rate and the actual
1936 organic mass removal rate for the process must be determined
1937 using the procedures specified in Section 725.984(b);
1938
- 1939 D) The process is a biological process that destroys or degrades the
1940 organics contained in the hazardous waste so that either of the
1941 following conditions is met:
1942
- 1943 i) The organic reduction efficiency (R) for the process is
1944 equal to or greater than 95 percent, and the organic
1945 biodegradation efficiency (R_{bio}) for the process is equal to
1946 or greater than 95 percent. The organic reduction
1947 efficiency and the organic biodegradation efficiency for the
1948 process must be determined using the procedures specified
1949 in Section 725.984(b); and
1950
- 1951 ii) The total actual organic mass biodegradation rate (MR_{bio})
1952 for all hazardous waste treated by the process is equal to or
1953 greater than the required organic mass removal rate (RMR).
1954 The required organic mass removal rate and the actual
1955 organic mass biodegradation rate for the process must be
1956 determined using the procedures specified in Section

725.984(b);

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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 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

- 2000 individual waste streams entering the process is less than 10,000
 2001 ppmw. The organic reduction efficiency for the process and the
 2002 average VO concentration of the hazardous waste at the point of
 2003 waste origination must be determined using the procedures
 2004 specified in Sections 725.984(b)~~Section 724.983(b)~~ and
 2005 725.984(a)~~Section 724.983(a)~~, respectively;
- 2006
- 2007 G) A hazardous waste incinerator for which either of the following
 2008 conditions is true:
- 2009
- 2010 i) The owner or operator has been issued a final permit under
 2011 35 Ill. Adm. Code 702, 703, and 705 that implements the
 2012 requirements of Subpart O of 35 Ill. Adm. Code 724; or
- 2013
- 2014 ii) The owner or operator has designed and operates the
 2015 incinerator in accordance with the interim status
 2016 requirements of Subpart O of this Part;
- 2017
- 2018 H) A boiler or industrial furnace for which either of the following
 2019 conditions is true:
- 2020
- 2021 i) The owner or operator has been issued a final permit under
 2022 35 Ill. Adm. Code 702, 703, and 705 that implements the
 2023 requirements of Subpart H of 35 Ill. Adm. Code 726; or
- 2024
- 2025 ii) The owner or operator has designed and operates the
 2026 industrial furnace or incinerator in accordance with the
 2027 interim status requirements of Subpart H of 35 Ill. Adm.
 2028 Code 726; and
- 2029
- 2030 I) For the purpose of determining the performance of an organic
 2031 destruction or removal process in accordance with the conditions
 2032 in each of subsections (c)(2)(A) through (c)(2)(F) ~~of this Section,~~
 2033 the owner or operator must account for VO concentrations
 2034 determined to be below the limit of detection of the analytical
 2035 method by using the following VO concentration:
- 2036
- 2037 i) If Reference Method 25D (Determination of the Volatile
 2038 Organic Concentration of Waste Samples) in appendix A to
 2039 40 CFR 60 (Test Methods), incorporated by reference in 35
 2040 Ill. Adm. Code 720.111(b), is used for the analysis, one-
 2041 half the blank value determined in the method at Section
 2042 4.4 of Reference Method 25D or a value of 25 ppmw,

2086 T – Criteria for and Verification of a Permanent or Temporary
 2087 Total Enclosure" under appendix B to 40 CFR 52.741 (VOM
 2088 Measurement Techniques for Capture Efficiency), incorporated by
 2089 reference in 35 Ill. Adm. Code 720.111(b). The enclosure may
 2090 have permanent or temporary openings to allow worker access;
 2091 passage of material into or out of the enclosure by conveyor,
 2092 vehicles, or other mechanical or electrical equipment; or to direct
 2093 air flow into the enclosure. The owner or operator must perform
 2094 the verification procedure for the enclosure as specified in Section
 2095 5.0 to "Procedure T – Criteria for and Verification of a Permanent
 2096 or Temporary Total Enclosure" annually.
 2097

- 2098 d) The Agency may at any time perform or request that the owner or operator
 2099 perform a waste determination for a hazardous waste managed in a tank, surface
 2100 impoundment, or container that is exempted from using air emission controls
 2101 under the provisions of this Section as follows:
 2102
- 2103 1) The waste determination for average VO concentration of a hazardous
 2104 waste at the point of waste origination must be performed using direct
 2105 measurement in accordance with the applicable requirements of Section
 2106 725.984(a). The waste determination for a hazardous waste at the point of
 2107 waste treatment must be performed in accordance with the applicable
 2108 requirements of Section 725.984(b);
 2109
 - 2110 2) In performing a waste determination pursuant to subsection (d)(1) ~~of this~~
 2111 ~~Section~~, the sample preparation and analysis must be conducted as
 2112 follows:
 2113
 - 2114 A) In accordance with the method used by the owner or operator to
 2115 perform the waste analysis, except in the case specified in
 2116 subsection (d)(2)(B) ~~of this Section~~; and
 2117
 - 2118 B) If the Agency determines that the method used by the owner or
 2119 operator was not appropriate for the hazardous waste managed in
 2120 the tank, surface impoundment, or container, then the Agency may
 2121 choose an appropriate method;
 2122
 - 2123 3) Where the owner or operator is requested to perform the waste
 2124 determination, the Agency may elect to have an authorized representative
 2125 observe the collection of the hazardous waste samples used for the
 2126 analysis;
 2127
 - 2128 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 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

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

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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 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).

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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 1.8×10^{-6} atmospheres/gram-mole/m³) 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. Constituent-specific adjustment factors (f_{m25D}) can be obtained in writing from the Agency 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 1.8×10^{-6} atmospheres/gram-mole/m³) 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:

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

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
- 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.

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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).

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 at Section 4.4 of Reference Method 25D.

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- 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 1.8×10^{-6} atmospheres/gram-mole/m³) at 25° 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.

- 4) Use of 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

2410 samples been analyzed using Reference Method 25D. To adjust
 2411 these data, the measured concentration for each individual
 2412 chemical constituent contained in the waste is multiplied by the
 2413 appropriate constituent-specific adjustment factor (f_{m25D}).
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2415 D) In the event that the Agency and the owner or operator disagree on
 2416 a determination of the average VO concentration for a hazardous
 2417 waste stream using knowledge, then the results from a
 2418 determination of average VO concentration using direct
 2419 measurement, as specified in subsection (a)(3) ~~of this Section~~,
 2420 must be used to establish compliance with the applicable
 2421 requirements of this Subpart CC. The Agency may perform or
 2422 request that the owner or operator perform this determination using
 2423 direct measurement. The owner or operator may choose one or
 2424 more appropriate methods to analyze each collected sample in
 2425 accordance with the requirements of subsection (a)(3)(C) ~~of this~~
 2426 ~~Section~~.
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2428 b) Waste determination procedures for treated hazardous waste.
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2430 1) An owner or operator must perform the applicable waste determination for
 2431 each treated hazardous waste placed in a waste management unit
 2432 exempted under the provisions of Section 725.983(c)(2)(A) through
 2433 (c)(2)(F) from using air emission controls in accordance with the standards
 2434 specified in Sections 725.985 through 725.988, as applicable to the waste
 2435 management unit.
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2437 A) An owner or operator must make an initial determination of the
 2438 average VO concentration of the waste stream before the first time
 2439 any portion of the material in the treated waste stream is placed in
 2440 the waste management unit exempt under Section 725.983(c)(2),
 2441 (c)(3), or (c)(4) from using air emission controls. Thereafter, an
 2442 owner or operator must update the information used for the waste
 2443 determination at least once every 12 months following the date of
 2444 the initial waste determination.
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2446 B) An owner or operator must perform a new waste determination
 2447 whenever changes to the process generating or treating the waste
 2448 stream are reasonably likely to cause the average VO concentration
 2449 of the hazardous waste to increase to such a level that the
 2450 applicable treatment conditions specified in Section 725.983(c)(2),
 2451 (c)(3), or (c)(4) are not achieved.
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- 2453 2) The owner or operator must designate and record the specific provision in
 2454 Section 725.983(c)(2) under which the waste determination is being
 2455 performed. The waste determination for the treated hazardous waste must
 2456 be performed using the applicable procedures specified in subsections
 2457 (b)(3) through (b)(9) of this Section.
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- 2459 3) Procedure to determine the average VO concentration of a hazardous
 2460 waste at the point of waste treatment.
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- 2462 A) Identification. The owner or operator must identify and record the
 2463 point of waste treatment for the hazardous waste.
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- 2465 B) Sampling. Samples of the hazardous waste stream must be
 2466 collected at the point of waste treatment in such a manner that
 2467 volatilization of organics contained in the waste and in the
 2468 subsequent sample is minimized and an adequately representative
 2469 sample is collected and maintained for analysis by the selected
 2470 method.
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- 2472 i) The averaging period to be used for determining the
 2473 average VO concentration for the hazardous waste stream
 2474 on a mass-weighted average basis must be designated and
 2475 recorded. The averaging period can represent any time
 2476 interval that the owner or operator determines is
 2477 appropriate for the hazardous waste stream but must not
 2478 exceed one year.
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- 2480 ii) A sufficient number of samples, but no fewer than four
 2481 samples, must be collected and analyzed for a hazardous
 2482 waste determination. All of the samples for a given waste
 2483 determination must be collected within a one-hour period.
 2484 The average of the four or more sample results constitutes a
 2485 waste determination for the hazardous waste stream. One
 2486 or more waste determinations may be required to represent
 2487 the complete range of waste compositions and quantities
 2488 that occur during the entire averaging period due to normal
 2489 variations in the operating conditions for the process
 2490 generating or treating the hazardous waste stream.
 2491 Examples of such normal variations are seasonal variations
 2492 in waste quantity or fluctuations in ambient temperature.
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- 2494 iii) All samples must be collected and handled in accordance
 2495 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 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 1.8×10^{-6} atmospheres/gram-mole/m³) at 25° C (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. To adjust these data, the measured concentration of each individual chemical constituent contained in the waste is multiplied by the constituent-

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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. Constituent-specific adjustment factors (f_{m25D}) can be obtained in writing from the Agency 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 1.8×10^{-6} atmospheres/gram-mole/m³) 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:

\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
- 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.

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

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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
- \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.

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- 5) Procedure to determine the organic reduction efficiency (R) for a treated hazardous waste
 - 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,

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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:

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

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

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
 $\overline{C_{bj}}$ = 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.

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- 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
- 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.

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- 6) Procedure 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

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

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- 7) Procedure 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 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:

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

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 m^3/hr
- k_y = Density of hazardous waste stream "y," in kg/m^3

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.

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- 8) Procedure 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.
 - 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
- 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.

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- 9) Procedure 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.

- 2732 B) The waste organic mass flow entering the process (E_b) must be
 2733 determined in accordance with the requirements of subsection
 2734 (b)(5)(D) ~~of this Section~~.
 2735
 2736 C) The fraction of organic biodegraded (F_{bio}) must be determined
 2737 using the procedure specified in appendix C to 40 CFR 63
 2738 (Determination of the Fraction Biodegraded (F_{bio}) in a Biological
 2739 Treatment Unit), incorporated by reference in 35 Ill. Adm. Code
 2740 720.111(b).
 2741
 2742 D) The actual organic mass biodegradation rate (MR_{bio}) must be
 2743 calculated by using the mass flow rates and fraction of organic
 2744 biodegraded, as determined in accordance with the requirements of
 2745 subsections (b)(9)(B) and (b)(9)(C) ~~of this Section~~, respectively,
 2746 and the following equation:
 2747

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

2748 Where:

- 2749 MR_{bio} = Actual organic mass biodegradation rate, in
 2750 kg/hr
 E_b = Waste organic mass flow entering the process,
 2751 as determined in accordance with the
 requirements of subsection (b)(5)(D) ~~of this~~
~~Section~~, in kg/hr
 F_{bio} = Fraction of organic biodegraded, as determined
 in accordance with the requirements of
 subsection (b)(9)(C) ~~of this Section~~.

- 2752 c) Procedure to determine the maximum organic vapor pressure of a hazardous
 2753 waste in a tank.
 2754
 2755 1) An owner or operator must determine the maximum organic vapor
 2756 pressure for each hazardous waste placed in a tank using Tank Level 1
 2757 controls in accordance with standards specified in Section 725.985(c).
 2758
 2759 2) An owner or operator must use either direct measurement, as specified in
 2760 subsection (c)(3) ~~of this Section~~, or knowledge of the waste, as specified
 2761 by subsection (c)(4) ~~of this Section~~, to determine the maximum organic
 2762 vapor pressure that is representative of the hazardous waste composition
 2763 stored or treated in the tank.
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- 3) Direct 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 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

2809 waste is less than the maximum vapor pressure limit listed in Section
 2810 725.985(b)(1)(A) for the applicable tank design capacity category. An
 2811 example of information that may be used is documentation that the
 2812 hazardous waste is generated by a process for which at other locations it
 2813 previously has been determined by direct measurement that the waste
 2814 maximum organic vapor pressure is less than the maximum vapor pressure
 2815 limit for the appropriate tank design capacity category.
 2816

2817 d) The procedure for determining no detectable organic emissions for the purpose of
 2818 complying with this Subpart CC is as follows:
 2819

2820 1) The test must be conducted in accordance with the procedures specified in
 2821 Reference Method 21 (Determination of Volatile Organic Compound
 2822 Leaks) of appendix A to 40 CFR 60 (Test Methods), incorporated by
 2823 reference in 35 Ill. Adm. Code 720.111(b). Each potential leak interface
 2824 (i.e., a location where organic vapor leakage could occur) on the cover and
 2825 associated closure devices must be checked. Potential leak interfaces that
 2826 are associated with covers and closure devices include, but are not limited
 2827 to, any of the following: the interface of the cover and its foundation
 2828 mounting, the periphery of any opening on the cover and its associated
 2829 closure device, and the sealing seat interface on a spring-loaded pressure
 2830 relief valve.
 2831

2832 2) The test must be performed when the unit contains a hazardous waste
 2833 having an organic concentration representative of the range of
 2834 concentrations for the hazardous waste expected to be managed in the unit.
 2835 During the test, the cover and closure devices must be secured in the
 2836 closed position.
 2837

2838 3) The detection instrument must meet the performance criteria of Reference
 2839 Method 21, except the instrument response factor criteria in Section
 2840 3.1.2(a) of Reference Method 21 must be for the average composition of
 2841 the organic constituents in the hazardous waste placed in the waste
 2842 management unit, not for each individual organic constituent.
 2843

2844 4) The detection instrument must be calibrated before use on each day of its
 2845 use by the procedures specified in Reference Method 21.
 2846

2847 5) Calibration gases must be as follows:
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2849 A) Zero air (less than 10 ppmv hydrocarbon in air), and
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2851 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. 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. 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

2895 specified in subsections (b)(1)(A) through (b)(1)(C) of this Section, the
 2896 owner or operator must control air pollutant emissions from the tank in
 2897 accordance with the Tank Level 1 controls specified in subsection (c) of
 2898 this Section or the Tank Level 2 controls specified in subsection (d) of this
 2899 Section.

2900
 2901 A) The hazardous waste in the tank has a maximum organic vapor
 2902 pressure that is less than the maximum organic vapor pressure limit
 2903 for the tank's design capacity category, as follows:

2904
 2905 i) For a tank design capacity equal to or greater than 151 m³
 2906 (5333 ft³ or 39,887 gal), the maximum organic vapor
 2907 pressure limit for the tank is 5.2 kPa (0.75 psia or 39
 2908 mmHg);

2909
 2910 ii) For a tank design capacity equal to or greater than 75 m³
 2911 (2649 ft³ or 19,810 gal) but less than 151 m³ (5333 ft³ or
 2912 39,887 gal), the maximum organic vapor pressure limit for
 2913 the tank is 27.6 kPa (4.0 psia or 207 mmHg); or

2914
 2915 iii) For a tank design capacity less than 75 m³ (2649 ft³ or
 2916 19,810 gal), the maximum organic vapor pressure limit for
 2917 the tank is 76.6 kPa (11.1 psia or 574 mmHg).

2918
 2919 B) The hazardous waste in the tank is not heated by the owner or
 2920 operator to a temperature that is greater than the temperature at
 2921 which the maximum organic vapor pressure of the hazardous waste
 2922 is determined for the purpose of complying with subsection
 2923 (b)(1)(A) of this Section.

2924
 2925 C) The hazardous waste in the tank is not treated by the owner or
 2926 operator using a waste stabilization process, as defined in Section
 2927 725.981.

2928
 2929 2) For a tank that manages hazardous waste that does not meet all of the
 2930 conditions specified in subsections (b)(1)(A) through (b)(1)(C) of this
 2931 Section, the owner or operator must control air pollutant emissions from
 2932 the tank by using Tank Level 2 controls in accordance with the
 2933 requirements of subsection (d) of this Section. Examples of tanks required
 2934 to use Tank Level 2 controls include the following: a tank used for a waste
 2935 stabilization process and a tank for which the hazardous waste in the tank
 2936 has a maximum organic vapor pressure that is equal to or greater than the
 2937 maximum organic vapor pressure limit for the tank's design capacity

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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 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

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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).

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.

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- 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:
 - 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.

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- 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 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

- 3110 requirements specified in subsection (i) of this Section.
 3111
 3112 e) The owner or operator that controls air pollutant emissions from a tank using a
 3113 fixed roof with an internal floating roof must meet the requirements specified in
 3114 subsections (e)(1) through (e)(3) of this Section.
 3115
 3116 1) The tank must be equipped with a fixed roof and an internal floating roof
 3117 in accordance with the following requirements:
 3118
 3119 A) The internal floating roof must be designed to float on the liquid
 3120 surface except when the floating roof must be supported by the leg
 3121 supports.
 3122
 3123 B) The internal floating roof must be equipped with a continuous seal
 3124 between the wall of the tank and the floating roof edge that meets
 3125 either of the following requirements:
 3126
 3127 i) A single continuous seal that is either a liquid-mounted seal
 3128 or a metallic shoe seal, as defined in Section 725.981; or
 3129
 3130 ii) Two continuous seals mounted one above the other. The
 3131 lower seal may be a vapor-mounted seal.
 3132
 3133 C) The internal floating roof must meet the following specifications:
 3134
 3135 i) Each opening in a noncontact internal floating roof except
 3136 for automatic bleeder vents (vacuum breaker vents) and the
 3137 rim space vents is to provide a projection below the liquid
 3138 surface;
 3139
 3140 ii) Each opening in the internal floating roof must be equipped
 3141 with a gasketed cover or a gasketed lid except for leg
 3142 sleeves, automatic bleeder vents, rim space vents, column
 3143 wells, ladder wells, sample wells, and stub drains;
 3144
 3145 iii) Each penetration of the internal floating roof for the
 3146 purpose of sampling must have a slit fabric cover that
 3147 covers at least 90 percent of the opening;
 3148
 3149 iv) Each automatic bleeder vent and rim space vent must be
 3150 gasketed;
 3151
 3152 v) Each penetration of the internal floating roof that allows for

3153 passage of a ladder must have a gasketed sliding cover; and

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- 3156 vi) Each penetration of the internal floating roof that allows for
3157 passage of a column supporting the fixed roof must have a
3158 flexible fabric sleeve seal or a gasketed sliding cover.

3159

- 3160 2) The owner or operator must operate the tank in accordance with the
3161 following requirements:

3162

- 3163 A) When the floating roof is resting on the leg supports, the process of
3164 filling, emptying, or refilling must be continuous and must be
3165 completed as soon as practical;

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- 3167 B) Automatic bleeder vents are to be set closed at all times when the
3168 roof is floating, except when the roof is being floated off or is
3169 being landed on the leg supports; and

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- 3171 C) Prior to filling the tank, each cover, access hatch, gauge float well
3172 or lid on any opening in the internal floating roof must be bolted or
3173 fastened closed (i.e., no visible gaps). Rim space vents are to be
3174 set to open only when the internal floating roof is not floating or
3175 when the pressure beneath the rim exceeds the manufacturer's
3176 recommended setting.

3177

- 3178 3) The owner or operator must inspect the internal floating roof in
3179 accordance with the procedures specified as follows:

3180

- 3181 A) The floating roof and its closure devices must be visually inspected
3182 by the owner or operator to check for defects that could result in
3183 air pollutant emissions. Defects include, but are not limited to, the
3184 following: when the internal floating roof is not floating on the
3185 surface of the liquid inside the tank; when liquid has accumulated
3186 on top of the internal floating roof; when any portion of the roof
3187 seals have detached from the roof rim; when holes, tears, or other
3188 openings are visible in the seal fabric; when the gaskets no longer
3189 close off the hazardous waste surface from the atmosphere; or
3190 when the slotted membrane has more than 10 percent open area;

3191

- 3192 B) The owner or operator must inspect the internal floating roof
3193 components as follows, except as provided in subsection (e)(3)(C)
3194 of this Section:

3195

- i) Visually inspect the internal floating roof components

- 3196 through openings on the fixed roof (e.g., manholes and roof
 3197 hatches) at least once every 12 months after initial fill, and
 3198
 3199 ii) Visually inspect the internal floating roof, primary seal,
 3200 secondary seal (if one is in service), gaskets, slotted
 3201 membranes, and sleeve seals (if any) each time the tank is
 3202 emptied and degassed and at least once every 10 years;
 3203
 3204 C) As an alternative to performing the inspections specified in
 3205 subsection (e)(3)(B) ~~of this Section~~ for an internal floating roof
 3206 equipped with two continuous seals mounted one above the other,
 3207 the owner or operator may visually inspect the internal floating
 3208 roof, primary and secondary seals, gaskets, slotted membranes, and
 3209 sleeve seals (if any) each time the tank is emptied and degassed
 3210 and at least every five years;
 3211
 3212 D) Prior to each inspection required by subsection (e)(3)(B) or
 3213 (e)(3)(C) ~~of this Section~~, the owner or operator must notify the
 3214 Agency in advance of each inspection to provide the Agency with
 3215 the opportunity to have an observer present during the inspection.
 3216 The owner or operator must notify the Agency of the date and
 3217 location of the inspection as follows:
 3218
 3219 i) Prior to each visual inspection of an internal floating roof in
 3220 a tank that has been emptied and degassed, written
 3221 notification must be prepared and sent by the owner or
 3222 operator so that it is received by the Agency at least 30
 3223 calendar days before refilling the tank, except when an
 3224 inspection is not planned, as provided for in subsection
 3225 (e)(3)(D)(ii) ~~of this Section~~; and
 3226
 3227 ii) When a visual inspection is not planned and the owner or
 3228 operator could not have known about the inspection 30
 3229 calendar days before refilling the tank, the owner or
 3230 operator must notify the Agency as soon as possible, but no
 3231 later than seven calendar days before refilling of the tank.
 3232 This notification may be made by telephone and
 3233 immediately followed by a written explanation for why the
 3234 inspection is unplanned. Alternatively, written notification,
 3235 including the explanation for the unplanned inspection,
 3236 may be sent so that it is received by the Regional
 3237 Administrator at least seven calendar days before refilling
 3238 the tank;

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- 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
 - 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 (cm²) per meter (10.0 in² 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 cm² per meter (1.0 in² per foot) of tank diameter, and the width of any portion of these gaps must not exceed 1.3 cm (0.5 inch); and

- 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

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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) 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

- 3368 calendar days after initial operation of the tank following
3369 installation of the floating roof and, thereafter, at least once
3370 every five years;
- 3371
- 3372 ii) The owner or operator must perform measurements of gaps
3373 between the tank wall and the secondary seal within 60
3374 calendar days after initial operation of the tank following
3375 installation of the floating roof and, thereafter, at least once
3376 every year;
- 3377
- 3378 iii) If a tank ceases to hold hazardous waste for a period of one
3379 year or more, subsequent introduction of hazardous waste
3380 into the tank must be considered an initial operation for the
3381 purposes of subsections (f)(3)(A)(i) and (f)(3)(A)(ii) of this
3382 Section;
- 3383
- 3384 iv) The owner or operator must determine the total surface area
3385 of gaps in the primary seal and in the secondary seal
3386 individually using the procedure set forth in subsection
3387 (f)(3)(D) of this Section;
- 3388
- 3389 v) In the event that the seal gap measurements do not conform
3390 to the specifications in subsection (f)(1)(B) of this Section,
3391 the owner or operator must repair the defect in accordance
3392 with the requirements of subsection (k) of this Section; and
3393
- 3394 vi) The owner or operator must maintain a record of the
3395 inspection in accordance with the requirements specified in
3396 Section 725.990(b);
- 3397
- 3398 B) The owner or operator must visually inspect the external floating
3399 roof in accordance with the following requirements:
- 3400
- 3401 i) The floating roof and its closure devices must be visually
3402 inspected by the owner or operator to check for defects that
3403 could result in air pollutant emissions. Defects include, but
3404 are not limited to any of the following: holes, tears, or other
3405 openings in the rim seal or seal fabric of the floating roof; a
3406 rim seal detached from the floating roof; all or a portion of
3407 the floating roof deck being submerged below the surface
3408 of the liquid in the tank; broken, cracked, or otherwise
3409 damaged seals or gaskets on closure devices; and broken or
3410 missing hatches, access covers, caps, or other closure

- 3411 devices;
- 3412
- 3413 ii) The owner or operator must perform an initial inspection of
- 3414 the external floating roof and its closure devices on or
- 3415 before the date that the tank becomes subject to this
- 3416 Section. Thereafter, the owner or operator must perform
- 3417 the inspections at least once every year except for the
- 3418 special conditions provided for in subsection (l) ~~of this~~
- 3419 ~~Section~~;
- 3420
- 3421 iii) In the event that a defect is detected, the owner or operator
- 3422 must repair the defect in accordance with the requirements
- 3423 of subsection (k) ~~of this Section~~; and
- 3424
- 3425 iv) The owner or operator must maintain a record of the
- 3426 inspection in accordance with the requirements specified in
- 3427 Section 725.990(b);
- 3428
- 3429 C) Prior to each inspection required by subsection (f)(3)(A) or
- 3430 (f)(3)(B) ~~of this Section~~, the owner or operator must notify the
- 3431 Agency in advance of each inspection to provide the Agency with
- 3432 the opportunity to have an observer present during the inspection.
- 3433 The owner or operator must notify the Agency of the date and
- 3434 location of the inspection as follows:
- 3435
- 3436 i) Prior to each inspection to measure external floating roof
- 3437 seal gaps as required under subsection (f)(3)(A) ~~of this~~
- 3438 ~~Section~~, written notification must be prepared and sent by
- 3439 the owner or operator so that it is received by the Agency at
- 3440 least 30 calendar days before the date the measurements are
- 3441 scheduled to be performed;
- 3442
- 3443 ii) Prior to each visual inspection of an external floating roof
- 3444 in a tank that has been emptied and degassed, written
- 3445 notification must be prepared and sent by the owner or
- 3446 operator so that it is received by the Agency at least 30
- 3447 calendar days before refilling the tank except when an
- 3448 inspection is not planned, as provided for in subsection
- 3449 (f)(3)(C)(iii) ~~of this Section~~; and
- 3450
- 3451 iii) When a visual inspection is not planned and the owner or
- 3452 operator could not have known about the inspection 30
- 3453 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

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

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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 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

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- 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 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;

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- 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 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~~.

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- 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 to "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 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

3669 transferring a hazardous waste to the tank under any of the following
 3670 conditions:

- 3671
- 3672 A) The hazardous waste meets the average VO concentration
- 3673 conditions specified in Section 725.983(c)(1) at the point of waste
- 3674 origination;
- 3675
- 3676 B) The hazardous waste has been treated by an organic destruction or
- 3677 removal process to meet the requirements in Section
- 3678 725.983(c)(2); and
- 3679
- 3680 C) The hazardous waste meets the requirements of Section
- 3681 725.983(c)(4).
- 3682

3683 k) The owner or operator must repair each defect detected during an inspection
 3684 performed in accordance with the requirements of subsection (c)(4), (e)(3), (f)(3),
 3685 or (g)(3) ~~of this Section~~ as follows:

- 3686
- 3687 1) The owner or operator must make first efforts at repair of the defect no
- 3688 later than five calendar days after detection, and repair must be completed
- 3689 as soon as possible but no later than 45 calendar days after detection
- 3690 except as provided in subsection (k)(2) ~~of this Section~~; and
- 3691
- 3692 2) Repair of a defect may be delayed beyond 45 calendar days if the owner or
- 3693 operator determines that repair of the defect requires emptying or
- 3694 temporary removal from service of the tank and no alternative tank
- 3695 capacity is available at the site to accept the hazardous waste normally
- 3696 managed in the tank. In this case, the owner or operator must repair the
- 3697 defect the next time the process or unit that is generating the hazardous
- 3698 waste managed in the tank stops operation. Repair of the defect must be
- 3699 completed before the process or unit resumes operation.

3700

3701 l) Following the initial inspection and monitoring of the cover as required by the
 3702 applicable provisions of this Subpart CC, subsequent inspection and monitoring
 3703 may be performed at intervals longer than one year under the following special
 3704 conditions:

- 3705
- 3706 1) Where inspecting or monitoring the cover would expose a worker to
- 3707 dangerous, hazardous, or other unsafe conditions, then the owner or
- 3708 operator may designate a cover as an "unsafe to inspect and monitor
- 3709 cover" and comply with all of the following requirements:

- 3710
- 3711 A) Prepare a written explanation for the cover stating the reasons why

3712 the cover is unsafe to visually inspect or to monitor, if required;
 3713 and

3714
 3715 B) Develop and implement a written plan and schedule to inspect and
 3716 monitor the cover, using the procedures specified in the applicable
 3717 Section of this Subpart CC, as frequently as practicable during
 3718 those times when a worker can safely access the cover; and
 3719

3720 2) In the case when a tank is buried partially or entirely underground, an
 3721 owner or operator is required to inspect and monitor, as required by the
 3722 applicable provisions of this Section, only those portions of the tank cover
 3723 and those connections to the tank (e.g., fill ports, access hatches, gauge
 3724 wells, etc.) that are located on or above the ground surface.
 3725

3726 (Source: Amended at 40 Ill. Reg. _____, effective _____)
 3727

3728 **Section 725.987 Standards: Containers**
 3729

3730 a) The provisions of this Section apply to the control of air pollutant emissions from
 3731 containers for which Section 725.983(b) references the use of this Section for
 3732 those such air emission control.
 3733

3734 b) General requirements
 3735

3736 1) The owner or operator must control air pollutant emissions from each
 3737 container subject to this Section in accordance with the following
 3738 requirements, as applicable to the container, except when the following
 3739 special provisions for waste stabilization processes specified in subsection
 3740 (b)(2) ~~of this Section~~ apply to the container:
 3741

3742 A) For a container having a design capacity greater than 0.1 m³ (26
 3743 gal) and less than or equal to 0.46 m³ (120 gal), the owner or
 3744 operator must control air pollutant emissions from the container in
 3745 accordance with the Container Level 1 standards specified in
 3746 subsection (c) ~~of this Section~~;
 3747

3748 B) For a container having a design capacity greater than 0.46 m³ (120
 3749 gal) that is not in light material service, the owner or operator must
 3750 control air pollutant emissions from the container in accordance
 3751 with the Container Level 1 standards specified in subsection (c) ~~of~~
 3752 ~~this Section~~; and
 3753

3754 C) For a container having a design capacity greater than 0.46 m³ (120

3755 gal) that is in light material service, the owner or operator must
 3756 control air pollutant emissions from the container in accordance
 3757 with the Container Level 2 standards specified in subsection (d) ~~of~~
 3758 this Section.
 3759

3760 2) When a container having a design capacity greater than 0.1 m³ (26 gal) is
 3761 used for treatment of a hazardous waste by a waste stabilization process,
 3762 the owner or operator must control air pollutant emissions from the
 3763 container in accordance with the Container Level 3 standards specified in
 3764 subsection (e) ~~of this Section~~ at those times during the waste stabilization
 3765 process when the hazardous waste in the container is exposed to the
 3766 atmosphere.
 3767

3768 c) Container Level 1 standards
 3769

3770 1) A container using Container Level 1 controls is one of the following:
 3771

3772 A) A container that meets the applicable USDOT regulations on
 3773 packaging hazardous materials for transportation, as specified in
 3774 subsection (f) ~~of this Section~~;
 3775

3776 B) A container equipped with a cover and closure devices that form a
 3777 continuous barrier over the container openings so that when the
 3778 cover and closure devices are secured in the closed position there
 3779 are no visible holes, gaps, or other open spaces into the interior of
 3780 the container. The cover may be a separate cover installed on the
 3781 container (e.g., a lid on a drum or a suitably secured tarp on a roll-
 3782 off box) or may be an integral part of the container structural
 3783 design (e.g., a "portable tank" or bulk cargo container equipped
 3784 with a screw-type cap); and
 3785

3786 C) An open-top container in which an organic-vapor suppressing
 3787 barrier is placed on or over the hazardous waste in the container so
 3788 that no hazardous waste is exposed to the atmosphere. One
 3789 example of such a barrier is application of a suitable organic-vapor
 3790 suppressing foam.
 3791

3792 2) A container used to meet the requirements of subsection (c)(1)(B) or
 3793 (c)(1)(C) ~~of this Section~~ must be equipped with covers and closure
 3794 devices, as applicable to the container, that are composed of suitable
 3795 materials to minimize exposure of the hazardous waste to the atmosphere
 3796 and to maintain the equipment integrity for as long as it is in service.
 3797 Factors to be considered in selecting the materials of construction and

3798 designing the cover and closure devices must include the following: the
3799 organic vapor permeability; the effects of contact with the hazardous
3800 waste or its vapor managed in the container; the effects of outdoor
3801 exposure of the closure device or cover material to wind, moisture, and
3802 sunlight; and the operating practices for which the container is intended to
3803 be used.

3804
3805 3) Whenever a hazardous waste is in a container using Container Level 1
3806 controls, the owner or operator must install all covers and closure devices
3807 for the container, as applicable to the container, and secure and maintain
3808 each closure device in the closed position except as follows:

3809
3810 A) Opening of a closure device or cover is allowed for the purpose of
3811 adding hazardous waste or other material to the container, as
3812 follows:

3813
3814 i) In the case when the container is filled to the intended final
3815 level in one continuous operation, the owner or operator
3816 must promptly secure the closure devices in the closed
3817 position and install the covers, as applicable to the
3818 container, upon conclusion of the filling operation; and

3819
3820 ii) In the case when discrete quantities or batches of material
3821 intermittently are added to the container over a period of
3822 time, the owner or operator must promptly secure the
3823 closure devices in the closed position and install covers, as
3824 applicable to the container, upon either the container being
3825 filled to the intended final level; the completion of a batch
3826 loading after which no additional material will be added to
3827 the container within 15 minutes; the person performing the
3828 loading operation leaving the immediate vicinity of the
3829 container; or the shutdown of the process generating the
3830 material being added to the container, whichever condition
3831 occurs first;

3832
3833 B) Opening of a closure device or cover is allowed for the purpose of
3834 removing hazardous waste from the container as follows:

3835
3836 i) For the purpose of meeting the requirements of this
3837 Section, an empty container, as defined in 35 Ill. Adm.
3838 Code 721.107(b), may be open to the atmosphere at any
3839 time (i.e., covers and closure devices are not required to be
3840 secured in the closed position on an empty container); and

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ii) 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 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

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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) 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 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) 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

3927 the defect no later than 24 hours after detection, and repair must be
 3928 completed as soon as possible but no later than five calendar days
 3929 after detection. If repair of a defect cannot be completed within
 3930 five calendar days, then the hazardous waste must be removed
 3931 from the container and the container must not be used to manage
 3932 hazardous waste until the defect is repaired.
 3933

3934 5) The owner or operator must maintain at the facility a copy of the
 3935 procedure used to determine that containers with capacity of 0.46 m³ (120
 3936 gal) or greater which do not meet applicable USDOT regulations, as
 3937 specified in subsection (f) ~~of this Section~~, are not managing hazardous
 3938 waste in light material service.
 3939

3940 d) Container Level 2 standards

3941 1) A container using Container Level 2 controls is one of the following:

3942 A) A container that meets the applicable USDOT regulations on
 3943 packaging hazardous materials for transportation as specified in
 3944 subsection (f) ~~of this Section~~;

3945 B) A container that operates with no detectable organic emissions, as
 3946 defined in Section 725.981, and determined in accordance with the
 3947 procedure specified in subsection (g) ~~of this Section~~; and

3948 C) A container that has been demonstrated within the preceding 12
 3949 months to be vapor-tight by using Reference Method 27
 3950 (Determination of Vapor Tightness of Gasoline Delivery Tank
 3951 Using Pressure-Vacuum Test) in appendix A to 40 CFR 60 (Test
 3952 Methods), incorporated by reference in 35 Ill. Adm. Code
 3953 720.111(b), in accordance with the procedure specified in
 3954 subsection (h) ~~of this Section~~.

3955 2) Transfer of hazardous waste into or out of a container using Container
 3956 Level 2 controls must be conducted in such a manner as to minimize
 3957 exposure of the hazardous waste to the atmosphere, to the extent practical,
 3958 considering the physical properties of the hazardous waste and good
 3959 engineering and safety practices for handling flammable, ignitable,
 3960 explosive, reactive or other hazardous materials. Examples of container
 3961 loading procedures that the USEPA considers to meet the requirements of
 3962 this subsection (d)(2) include using any one of the following: a
 3963 submerged-fill pipe or other submerged-fill method to load liquids into the
 3964 container; a vapor-balancing system or a vapor-recovery system to collect
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3970 and control the vapors displaced from the container during filling
3971 operations; or a fitted opening in the top of a container through which the
3972 hazardous waste is filled and subsequently purging the transfer line before
3973 removing it from the container opening.
3974

3975 3) Whenever a hazardous waste is in a container using Container Level 2
3976 controls, the owner or operator must install all covers and closure devices
3977 for the container, and secure and maintain each closure device in the
3978 closed position, except as follows:
3979

3980 A) Opening of a closure device or cover is allowed for the purpose of
3981 adding hazardous waste or other material to the container, as
3982 follows:
3983

3984 i) In the case when the container is filled to the intended final
3985 level in one continuous operation, the owner or operator
3986 must promptly secure the closure devices in the closed
3987 position and install the covers, as applicable to the
3988 container, upon conclusion of the filling operation; and
3989

3990 ii) In the case when discrete quantities or batches of material
3991 intermittently are added to the container over a period of
3992 time, the owner or operator must promptly secure the
3993 closure devices in the closed position and install covers, as
3994 applicable to the container, upon either the container being
3995 filled to the intended final level; the completion of a batch
3996 loading after which no additional material will be added to
3997 the container within 15 minutes; the person performing the
3998 loading operation leaving the immediate vicinity of the
3999 container; or the shutdown of the process generating the
4000 material being added to the container, whichever condition
4001 occurs first;
4002

4003 B) Opening of a closure device or cover is allowed for the purpose of
4004 removing hazardous waste from the container as follows:
4005

4006 i) For the purpose of meeting the requirements of this
4007 Section, an empty container as defined in 35 Ill. Adm.
4008 Code 721.107(b) may be open to the atmosphere at any
4009 time (i.e., covers and closure devices are not required to be
4010 secured in the closed position on an empty container); and
4011

4012 ii) In the case when discrete quantities or batches of material

4013 are removed from the container but the container does not
 4014 meet the conditions to be an empty container as defined in
 4015 35 Ill. Adm. Code 721.107(b), the owner or operator must
 4016 promptly secure the closure devices in the closed position
 4017 and install covers, as applicable to the container, upon the
 4018 completion of a batch removal after which no additional
 4019 material will be removed from the container within 15
 4020 minutes or the person performing the unloading operation
 4021 leaves the immediate vicinity of the container, whichever
 4022 condition occurs first;

4023
 4024 C) Opening of a closure device or cover is allowed when access inside
 4025 the container is needed to perform routine activities other than
 4026 transfer of hazardous waste. Examples of such activities include
 4027 those times when a worker needs to open a port to measure the
 4028 depth of or sample the material in the container, or when a worker
 4029 needs to open a manhole hatch to access equipment inside the
 4030 container. Following completion of the activity, the owner or
 4031 operator must promptly secure the closure device in the closed
 4032 position or reinstall the cover, as applicable to the container;

4033
 4034 D) Opening of a spring-loaded, pressure-vacuum relief valve,
 4035 conservation vent, or similar type of pressure relief device that
 4036 vents to the atmosphere is allowed during normal operations for
 4037 the purpose of maintaining the internal pressure of the container in
 4038 accordance with the container design specifications. The device
 4039 must be designed to operate with no detectable organic emission
 4040 when the device is secured in the closed position. The settings at
 4041 which the device opens must be established so that the device
 4042 remains in the closed position whenever the internal pressure of the
 4043 container is within the internal pressure operating range
 4044 determined by the owner or operator based on container
 4045 manufacturer recommendations, applicable regulations, fire
 4046 protection and prevention codes, standard engineering codes and
 4047 practices, or other requirements for the safe handling of
 4048 flammable, ignitable, explosive, reactive, or hazardous materials.
 4049 Examples of normal operating conditions that may require these
 4050 devices to open are during those times when the internal pressure
 4051 of the container exceeds the internal pressure operating range for
 4052 the container as a result of loading operations or diurnal ambient
 4053 temperature fluctuations; and

4054
 4055 E) Opening of a safety device, as defined in Section 725.981, is

4056 allowed at any time conditions require doing so to avoid an unsafe
 4057 condition.

4058
 4059 4) The owner or operator of containers using Container Level 2 controls must
 4060 inspect the containers and their covers and closure devices as follows:

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 4062 A) In the case when a hazardous waste already is in the container at
 4063 the time the owner or operator first accepts possession of the
 4064 container at the facility and the container is not emptied within 24
 4065 hours after the container is accepted at the facility (i.e., it does not
 4066 meet the conditions for an empty container as specified in 35 Ill.
 4067 Adm. Code 721.107(b)), the owner or operator must visually
 4068 inspect the container and its cover and closure devices to check for
 4069 visible cracks, holes, gaps, or other open spaces into the interior of
 4070 the container when the cover and closure devices are secured in the
 4071 closed position. The container visual inspection must be
 4072 conducted on or before the date on which the container is accepted
 4073 at the facility (i.e., the date when the container becomes subject to
 4074 the Subpart CC container standards). For the purposes of this
 4075 requirement, the date of acceptance is the date of signature that the
 4076 facility owner or operator enters on Item 20 of the Uniform
 4077 Hazardous Waste Manifest, in the appendix to 40 CFR 262
 4078 (Uniform Hazardous Waste Manifest and Instructions (USEPA
 4079 Forms 8700-22 and 8700-22A and Their Instructions)), as required
 4080 under Section 725.171. If a defect is detected, the owner or
 4081 operator must repair the defect in accordance with the
 4082 requirements of subsection (d)(4)(C) ~~of this Section~~;

4083
 4084 B) In the case when a container used for managing hazardous waste
 4085 remains at the facility for a period of one year or more, the owner
 4086 or operator must visually inspect the container and its cover and
 4087 closure devices initially and thereafter, at least once every 12
 4088 months, to check for visible cracks, holes, gaps, or other open
 4089 spaces into the interior of the container when the cover and closure
 4090 devices are secured in the closed position. If a defect is detected,
 4091 the owner or operator must repair the defect in accordance with the
 4092 requirements of subsection (d)(4)(C) ~~of this Section~~; and

4093
 4094 C) When a defect is detected in the container, cover, or closure
 4095 devices, the owner or operator must make first efforts at repair of
 4096 the defect no later than 24 hours after detection, and repair must be
 4097 completed as soon as possible but no later than five calendar days
 4098 after detection. If repair of a defect cannot be completed within

4099 five calendar days, then the hazardous waste must be removed
 4100 from the container and the container must not be used to manage
 4101 hazardous waste until the defect is repaired.
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4103 e) Container Level 3 standards
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4105 1) A container using Container Level 3 controls is one of the following:
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4107 A) A container that is vented directly through a closed-vent system to
 4108 a control device in accordance with the requirements of subsection
 4109 (e)(2)(B) ~~of this Section~~; or
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4111 B) A container that is vented inside an enclosure that is exhausted
 4112 through a closed-vent system to a control device in accordance
 4113 with the requirements of subsections (e)(2)(A) and (e)(2)(B) ~~of this~~
 4114 ~~Section~~.
 4115

4116 2) The owner or operator must meet the following requirements, as
 4117 applicable to the type of air emission control equipment selected by the
 4118 owner or operator:
 4119

4120 A) The container enclosure must be designed and operated in
 4121 accordance with the criteria for a permanent total enclosure, as
 4122 specified in "Procedure T – Criteria for and Verification of a
 4123 Permanent or Temporary Total Enclosure" under appendix B to 40
 4124 CFR 52.741 (VOM Measurement Techniques for Capture
 4125 Efficiency), incorporated by reference in 35 Ill. Adm. Code
 4126 720.111(b). The enclosure may have permanent or temporary
 4127 openings to allow worker access; passage of containers through the
 4128 enclosure by conveyor or other mechanical means; entry of
 4129 permanent mechanical or electrical equipment; or direct airflow
 4130 into the enclosure. The owner or operator must perform the
 4131 verification procedure for the enclosure, as specified in Section 5.0
 4132 to "Procedure T – Criteria for and Verification of a Permanent or
 4133 Temporary Total Enclosure" initially when the enclosure is first
 4134 installed and, thereafter, annually; and
 4135

4136 B) The closed-vent system and control device must be designed and
 4137 operated in accordance with the requirements of Section 725.988.
 4138

4139 3) Safety devices, as defined in Section 725.981, may be installed and
 4140 operated as necessary on any container, enclosure, closed-vent system, or
 4141 control device used to comply with the requirements of subsection (e)(1)

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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 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);

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- 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 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 ± 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 750 Pascals (0.11 psig) within five minutes after it is pressurized to a minimum of 4,500 Pascals (0.65 psig), then the container is determined to be vapor-

4228 tight.

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4230 (Source: Amended at 40 Ill. Reg. _____, effective _____)

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4232 SUBPART DD: CONTAINMENT BUILDINGS

4233

4234 **Section 725.1101 Design and Operating Standards**

4235

4236 a) All containment buildings must comply with the following design and operating
4237 standards:

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4239 1) The containment building must be completely enclosed with a floor, walls,
4240 and a roof to prevent exposure to the elements (e.g. precipitation, wind,
4241 run on) and to assure containment of managed wastes;

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4243 2) The floor and containment walls of the unit, including the secondary
4244 containment system if required under subsection (b) ~~of this Section~~, must
4245 be designed and constructed of materials of sufficient strength and
4246 thickness to support themselves, the waste contents, and any personnel and
4247 heavy equipment that operate within the unit, and to prevent failure due to
4248 pressure gradients, settlement, compression, or uplift, physical contact
4249 with the hazardous wastes to which they are exposed; climatic conditions;
4250 and the stresses of daily operation, including the movement of heavy
4251 equipment within the unit and contact of such equipment with containment
4252 walls. The unit must be designed so that it has sufficient structural
4253 strength to prevent collapse or other failure. All surfaces to be in contact
4254 with hazardous wastes must be chemically compatible with those wastes.
4255 The containment building must meet the structural integrity requirements
4256 established by professional organizations generally recognized by the
4257 industry such as the American Concrete Institute (ACI) and the American
4258 Society of Testing Materials (ASTM). If appropriate to the nature of the
4259 waste management operation to take place in the unit, an exception to the
4260 structural strength requirement may be made for light-weight doors and
4261 windows that meet these criteria:

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4263 A) They provide an effective barrier against fugitive dust emissions
4264 under subsection (c)(1)(D) ~~of this Section~~; and

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4266 B) The unit is designed and operated in a fashion that assures that
4267 wastes will not actually come in contact with these openings;

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4269 3) Incompatible hazardous wastes or treatment reagents must not be placed in
4270 the unit or its secondary containment system if they could cause the unit or

- 4271 secondary containment system to leak, corrode, or otherwise fail; and
 4272
 4273 4) A containment building must have a primary barrier designed to withstand
 4274 the movement of personnel, waste, and handling equipment in the unit
 4275 during the operating life of the unit and appropriate for the physical and
 4276 chemical characteristics of the waste to be managed.
 4277
 4278 b) For a containment building used to manage hazardous wastes containing free
 4279 liquids or treated with free liquids (the presence of which is determined by the
 4280 paint filter test, a visual examination, or other appropriate means), the owner or
 4281 operator must include the following design features:
 4282
 4283 1) A primary barrier designed and constructed of materials to prevent the
 4284 migration of hazardous constituents into the barrier (e.g., a geomembrane
 4285 covered by a concrete wear surface).
 4286
 4287 2) A liquid collection and removal system to minimize the accumulation of
 4288 liquid on the primary barrier of the containment building:
 4289
 4290 A) The primary barrier must be sloped to drain liquids to the
 4291 associated collection system; and
 4292
 4293 B) Liquids and waste must be collected and removed to minimize
 4294 hydraulic head on the containment system at the earliest
 4295 practicable time.
 4296
 4297 3) A secondary containment system including a secondary barrier designed
 4298 and constructed to prevent migration of hazardous constituents into the
 4299 barrier, and a leak detection system that is capable of detecting failure of
 4300 the primary barrier and collecting accumulated hazardous wastes and
 4301 liquids at the earliest practicable time.
 4302
 4303 A) The requirements of the leak detection component of the secondary
 4304 containment system are satisfied by installation of a system that is,
 4305 at a minimum, as follows:
 4306
 4307 i) It is constructed with a bottom slope of 1 percent or more;
 4308 and
 4309
 4310 ii) It is constructed of a granular drainage material with a
 4311 hydraulic conductivity of 1×10^{-2} cm/sec or more and a
 4312 thickness of 12 inches (30.5 cm) or more, or constructed of
 4313 synthetic or geonet drainage materials with a transmissivity

of 3×10^{-5} m²/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 725.293(e)(1). In addition, the containment building must meet the requirements of subsections 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:

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- 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 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

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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 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 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.

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- 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.

 - 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 _____)