### ILLINOIS REGISTER

### POLLUTION CONTROL BOARD

### NOTICE OF PROPOSED AMENDMENTS

- 1) <u>Heading of the Part</u>: Organic Material Emission Standards and Limitations for the Metro East Area
- 2) <u>Code Citation</u>: 35 Ill. Adm. Code 219
- 3) <u>Section Numbers</u>: <u>Proposed Action</u>: 219.105 Amend 219.112 Amend 219.583 Amend

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- 4) <u>Statutory Authority</u>: Implementing Section 10 of the Environmental Protection Act [415 ILCS 5/10] and authorized by Sections 27 and 28 of the Environmental Protection Act [415 ILCS 5/27, 28]
- 5) <u>A Complete Description of the Subjects and Issues Involved</u>: This proposal repeals, as a matter of clean-up, State II vapor recovery test methods and a Stage II vapor recovery guidance document because the Stage II vapor recovery rule/program in the Metro-East nonattainment area was repealed in 1994. In addition, this proposal repeals the Stage I vapor recovery registration provision (35 Ill. Adm. Code 219.583(e)) due to overlapping federal notification requirements and other State tracking systems for gasoline dispensing operations. The available permit exemption (currently conditioned upon registration) provided by this Stage I registration provision will be relocated to 35 Ill. Adm. Code 201 and will not require registration.
- 6) <u>Published studies or reports, and sources of underlying data, used to compose this</u> rulemaking:

Clean Air Act (42 USC 7401 et seq.)

40 CFR 63, Subpart CCCCCC (2012)

- 7) Will this proposed rulemaking replace any emergency rule currently in effect? No
- 8) <u>Does this rulemaking contain an automatic repeal date</u>? No
- 9) Does this proposed rulemaking contain incorporations by reference? Yes
- 10) Are there any other proposed amendments pending on this Part? No
- 11) <u>Statement of Statewide Policy Objectives</u>: This proposed rulemaking does not create or

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enlarge a State mandate, as defined in Section 3(b) of the State Mandates Act. [30 ILCS 805/3(b)].

12) <u>Time, Place, and Manner in which interested persons may comment on this proposed</u> <u>rulemaking</u>: The Board will accept written public comments on this proposal for a period of at least 45 days after the date of publication in the *Illinois Register*. Public comments must be filed with the Clerk of the Board. Public comments may be filed at the following address:

John Therriault, Assistant Clerk Pollution Control Board JRTC 100 W. Randolph Street, Suite 11-500 Chicago, IL 60601 312/819-3620

Public comments may also be filed electronically through the Clerk's Office On-Line (COOL) on the Board's Web site at www.ipcb.state.il.us.

In addition, two public hearings will be held. The first hearing will take place in Springfield on May 8, 2013. The second hearing will take place in Chicago on June 5, 2013.

### 13) Initial Regulatory Flexibility Analysis:

- A) <u>Types of small businesses, small municipalities and not for profit corporations</u> <u>affected</u>: Any small business, small municipality, or not for profit corporation engaged in storage tank filling at gasoline dispensing operations located in the Metro-East nonattainment area.
- B) <u>Reporting, bookkeeping or other procedures required for compliance</u>: This proposal repeals the Stage I registration provision.
- C) <u>Types of professional skills necessary for compliance</u>: None.
- 14) <u>Regulatory Agenda on which this rulemaking was summarized</u>: January 2013

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7		PART 219						
8		ORGANIC MATERIAL EMISSION STANDARDS AND LIMITATIONS						
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170 219.480 Applicability	170	219,480	Applicability
171 219.481 Control of Reactors, Distillation Units, Crystallizers, Centrifuges and Vacuum	171	219,481	Control of Reactors, Distillation Units, Crystallizers, Centrifuges and Vacuum
172 Dryers	172		Dryers

173219.482Control of Air Dryers, Production Equipment Exhaust Systems and Filters174219.483Material Storage and Transfer175219.483In-Process Tanks176219.485Leaks177219.486Other Emission Units178219.487Testing179219.488Monitoring for Air Pollution Control Equipment180219.489Recordkeeping for Air Pollution Control Equipment181SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES183184Section185219.500Applicability for Batch Operations186219.501Control Requirements for Batch Operations187219.502Determination of Uncontrolled Total Annual Mass Emissions and Actual188Weighted Average Flow Rate Values for Batch Operations189219.503Performance and Testing Requirements for Batch Operations189219.504Monitoring Requirements for Batch Operations			JCAR350219-1306083r01
<ul> <li>174 219.483 Material Storage and Transfer</li> <li>175 219.484 In-Process Tanks</li> <li>176 219.485 Leaks</li> <li>177 219.486 Other Emission Units</li> <li>178 219.487 Testing</li> <li>179 219.488 Monitoring for Air Pollution Control Equipment</li> <li>180 219.489 Recordkeeping for Air Pollution Control Equipment</li> <li>181</li> <li>182 SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES</li> <li>183</li> <li>184 Section</li> <li>185 219.500 Applicability for Batch Operations</li> <li>186 219.501 Control Requirements for Batch Operations</li> <li>187 219.502 Determination of Uncontrolled Total Annual Mass Emissions and Actual</li> <li>188 Weighted Average Flow Rate Values for Batch Operations</li> <li>189 219.503 Performance and Testing Requirements for Batch Operations</li> <li>190 219.504 Monitoring Requirements for Batch Operations</li> </ul>	173	219.482	Control of Air Dryers, Production Equipment Exhaust Systems and Filters
<ul> <li>175 219.484 In-Process Tanks</li> <li>176 219.485 Leaks</li> <li>177 219.486 Other Emission Units</li> <li>178 219.487 Testing</li> <li>179 219.488 Monitoring for Air Pollution Control Equipment</li> <li>180 219.489 Recordkeeping for Air Pollution Control Equipment</li> <li>181</li> <li>182 SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES</li> <li>183</li> <li>184 Section</li> <li>185 219.500 Applicability for Batch Operations</li> <li>186 219.501 Control Requirements for Batch Operations</li> <li>187 219.502 Determination of Uncontrolled Total Annual Mass Emissions and Actual</li> <li>188 Weighted Average Flow Rate Values for Batch Operations</li> <li>189 219.503 Performance and Testing Requirements for Batch Operations</li> <li>190 219.504 Monitoring Requirements for Batch Operations</li> </ul>	174	219.483	Material Storage and Transfer
<ul> <li>176 219.485 Leaks</li> <li>177 219.486 Other Emission Units</li> <li>178 219.487 Testing</li> <li>179 219.488 Monitoring for Air Pollution Control Equipment</li> <li>180 219.489 Recordkeeping for Air Pollution Control Equipment</li> <li>181</li> <li>182 SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES</li> <li>183</li> <li>184 Section</li> <li>185 219.500 Applicability for Batch Operations</li> <li>186 219.501 Control Requirements for Batch Operations</li> <li>187 219.502 Determination of Uncontrolled Total Annual Mass Emissions and Actual</li> <li>188 Weighted Average Flow Rate Values for Batch Operations</li> <li>189 219.503 Performance and Testing Requirements for Batch Operations</li> <li>190 219.504 Monitoring Requirements for Batch Operations</li> </ul>	175	219.484	In-Process Tanks
<ul> <li>177 219.486 Other Emission Units</li> <li>178 219.487 Testing</li> <li>179 219.488 Monitoring for Air Pollution Control Equipment</li> <li>180 219.489 Recordkeeping for Air Pollution Control Equipment</li> <li>181</li> <li>182 SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES</li> <li>183</li> <li>184 Section</li> <li>185 219.500 Applicability for Batch Operations</li> <li>186 219.501 Control Requirements for Batch Operations</li> <li>187 219.502 Determination of Uncontrolled Total Annual Mass Emissions and Actual</li> <li>188 Weighted Average Flow Rate Values for Batch Operations</li> <li>189 219.503 Performance and Testing Requirements for Batch Operations</li> <li>190 219.504 Monitoring Requirements for Batch Operations</li> </ul>	176	219.485	Leaks
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<ul> <li>181</li> <li>182 SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES</li> <li>183</li> <li>184 Section</li> <li>185 219.500 Applicability for Batch Operations</li> <li>186 219.501 Control Requirements for Batch Operations</li> <li>187 219.502 Determination of Uncontrolled Total Annual Mass Emissions and Actual</li> <li>188 Weighted Average Flow Rate Values for Batch Operations</li> <li>189 219.503 Performance and Testing Requirements for Batch Operations</li> <li>190 219.504 Monitoring Requirements for Batch Operations</li> </ul>	180	219.489	Recordkeeping for Air Pollution Control Equipment
182SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES183184184185219.500186219.501187219.502188189219.503189219.504180219.504180181182183184185185186219.503187219.504188189219.504180219.504180219.504180219.504181182183184185185186187219.503188189219.504180180181182183184185185186187187188189180 <td< td=""><td>181</td><td></td><td>R et</td></td<>	181		R et
<ul> <li>183</li> <li>184 Section</li> <li>185 219.500 Applicability for Batch Operations</li> <li>186 219.501 Control Requirements for Batch Operations</li> <li>187 219.502 Determination of Uncontrolled Total Annual Mass Emissions and Actual</li> <li>188 Weighted Average Flow Rate Values for Batch Operations</li> <li>189 219.503 Performance and Testing Requirements for Batch Operations</li> <li>190 219.504 Monitoring Requirements for Batch Operations</li> </ul>	182	SU	JBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES
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<ul> <li>186 219.501 Control Requirements for Batch Operations</li> <li>187 219.502 Determination of Uncontrolled Total Annual Mass Emissions and Actual</li> <li>188 Weighted Average Flow Rate Values for Batch Operations</li> <li>189 219.503 Performance and Testing Requirements for Batch Operations</li> <li>190 219.504 Monitoring Requirements for Batch Operations</li> </ul>	185	219.500	Applicability for Batch Operations
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190 219.504 Monitoring Requirements for Batch Operations	189	219.503	Performance and Testing Requirements for Batch Operations
	190	219.504	Monitoring Requirements for Batch Operations
191 219.505 Reporting and Recordkeeping for Batch Operations	191	219.505	Reporting and Recordkeeping for Batch Operations
192 219.506 Compliance Date	192	219.506	Compliance Date
193 219.520 Emission Limitations for Air Oxidation Processes	193	219.520	Emission Limitations for Air Oxidation Processes
194 219.521 Definitions (Repealed)	194	219.521	Definitions (Repealed)
195 219.522 Savings Clause	195	219.522	Savings Clause
196 219.523 Compliance	196	219.523	Compliance
197 219.524 Determination of Applicability	197	219.524	Determination of Applicability
198 219.525 Emission Limitations for Air Oxidation Processes (Renumbered)	198	219.525	Emission Limitations for Air Oxidation Processes (Renumbered)
199 219.526 Testing and Monitoring	199	219.526	lesting and Monitoring
200 219.527 Compliance Date (Repealed)	200	219.527	Compliance Date (Repealed)
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200 207 SUBDART V. CONSTRUCTION	200		SUBDART V. CONSTRUCTION
207 SUBFARTA, CONSTRUCTION	207		SUBFARTA. CONSTRUCTION
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212 217.505 Cultack Asphan 213	212	217.303	Outour Asphan
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219	219.583	Gasoline Dispensing Operations – Storage Tank Filling Operations
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288	219.784	Equipment Specifications
289	219.786	Surface Preparation Materials
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294	219.791	Compliance Date
293	219.792	Applicability of Subport DD (Donumbered)
290	219.873	Emissions Limitation at Delustrance Diants (Denumbered)
271	217.0//	Compliance Date (Renealed)
270 200	217.0/7 210.001	Compliance Date (Repeated)
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201	217.003	Emissions Testing (Donumbered)
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304		
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306	219.890	Applicability
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321		MANUFACTURING PROCESSES
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326	219.926	Control Requirements
327	219.927	Compliance Schedule
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331		MANUFACTURING PROCESSES
332		
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335	219.943	Permit Conditions
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337	219.947	Compliance Schedule
338	219.948	Testing
339		
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341		MANUFACTURING PROCESSES
342	<b>a</b>	
343	Section	A 1 1 1 1 1 1 .
344	219.960	Applicability

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345 346	<ul><li>219.963 Permit Conditions</li><li>219.966 Control Requirements</li></ul>						
347	219.967	Compliance Schedule					
348	219.968	Testing					
349			-				
350			SUBPART TT: OTHER EMISSION UNITS				
351							
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353	219.980	Applicability					
354	219.983	Permit	Conditions				
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359		SU	JBPART UU: RECORDKEEPING AND REPORTING				
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362	219.990	Exemp	t Emission Units				
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365	219.APPENDIX A List of Chemicals Defining Synthetic Organic Chemical and Polymer						
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367	219.APPEND	IX B	VOM Measurement Techniques for Capture Efficiency (Repealed)				
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370	219.APPENDIX E		List of Affected Marine Terminals				
371	219.APPEND	IX G	TRE Index Measurements for SOCMI Reactors and Distillation Units				
372	219.APPENDIX H Baseline VOM Content Limitations for Subpart F, Section 219.212 Cross						
373	Line Averaging						
374							
375	AUTHORITY: Implementing Section 10 and authorized by Sections 27, 28 and 28.5 of the						
376	Environmental Protection Act [415 ILCS 5/10, 27, 28 and 28.5].						
377							
378	SOURCE: Adopted in R91-8 at 15 Ill. Reg. 12491, effective August 16, 1991; amended in R91-						
379	24 at 16 Ill. Reg. 13597, effective August 24, 1992; amended in R91-30 at 16 Ill. Reg. 13883,						
380	effective August 24, 1992; emergency amendment in R93-12 at 17 Ill. Reg. 8295, effective May						
381	24, 1993, for a maximum of 150 days; amended in R93-9 at 17 Ill. Reg. 16918, effective						
382	September 27, 1993 and October 21, 1993; amended in R93-28 at 18 Ill. Reg. 4242, effective						
383	March 3, 1994	; ameno	led in R94-12 at 18 Ill. Reg. 14987, effective September 21, 1994;				
384	amended in R9	94-15 at	18 Ill. Reg. 16415, effective October 25, 1994; amended in R94-16 at 18				
385	III. Reg. 16980	), effect	ive November 15, 1994; emergency amendment in R95-10 at 19 Ill. Reg.				
386	3059, effective	Februa	ary 28, 1995, for a maximum of 150 days; amended in R94-21, R94-31 and				
387	R94-32 at 19 Ill. Reg. 6958, effective May 9, 1995; amended in R94-33 at 19 Ill. Reg. 7385,						

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388	effective May	y 22, 19	95; ame	nded in R96-2 at 20 Ill. Reg. 3848, effective February 15, 1996;				
389	amended in H	R96-13 a	ıt 20 Ill.	Reg. 14462, effective October 28, 1996; amended in R97-24 at 21				
390	Ill. Reg. 772	l, effecti	, effective June 9, 1997; amended in R97-31 at 22 Ill. Reg. 3517, effective					
391	February 2, 1	998; am	998; amended in R04-12/20 at 30 III. Reg. 9799. effective May 15, 2006; amended					
392	in R06-21 at	31 III. R	.eg. 711	0, effective April 30, 2007; amended in R10-10 at 34 III, Reg. 5392.				
393	effective Mar	rch 23, 2	2010; an	nended in R10-8 at 34 Ill. Reg. 9253, effective June 25, 2010;				
394	amended in H	R10-20 a	ıt 34 <sup>°</sup> Ill.	Reg. 14326, effective September 14, 2010; amended in R10-8(A) at				
395	35 Ill. Reg. 4	96, effe	ctive De	ecember 21, 2010; amended in R11-23 at 35 Ill. Reg. 13676.				
396	effective July	27, 201	1; ame	nded in R11-23(A) at 35 Ill. Reg. 18830, effective October 25, 2011:				
397	amended in F	R12-24 a	11. it 37 Ill.	Reg. 1722, effective January 28, 2013; amended in R13-18 at 37 Ill.				
398	Reg.	effectiv	/e	· · · · · · · · · · · · · · · · · · ·				
399		,						
400			S	UBPART A: GENERAL PROVISIONS				
401	Section 210	105 Ta	4 <b>N</b> / - 4L	ada and Ducardumer				
402	Section 219.	105 168	st ivietn	ous and rrocedures				
403		Contin	aga Inla	a and Fountain Solutions				
404	a)	The fe	igs, mk	s and Foundam Solutions				
405			mowing	g test methods and procedures shall be used to determine compliance				
400		this De	of as applied coatings, inks, and fountain solutions with the limitations set forth in					
407		uns ra	111.					
408		1)	Sampl	ing: Samples collected for analyses shall be one liter taken into a				
410		1)	one-lit	ter container at a location and time such that the sample will be				
411			repres	entative of the coating as applied (i.e. the sample shall include any				
417 //12			dilutio	on solvent or other VOM added during the manufacturing process)				
412			The co	ontoiner must be tightly sealed immediately after the sample is taken				
413				olvent or other VOM added after the sample is taken must be				
414			mageu	and accounted for in the calculations in subsection (a)(2) of this				
415			Sectio	n For multiple peakage continger concrete complex of each				
410			Sectio	II. For multiple package coalings, separate samples of each				
417			will or	re in the container. Sompling procedures shall follow the				
410			midel	ine more container. Sampling procedures shall follow the				
419			guiuci	mes presented m.				
420			۵)	ASTMD 3025-81 (1985) standard practice for sampling liquid				
421			A)	naints and related nigment coating. This practice is incorrected				
422				by reference in Section 210, 112 of this Part				
423				by reference in Section 217.112 of this 1 art.				
727 125			R)	ASTM F 300-86 standard practice for sampling industrial				
425			Б)	chemicals. This practice is incorporated by reference in Section				
+20 197				210 112 of this Part				
72/ 170				217.112 01 UIIS I alt.				
+∠0 /20		2)	Analy	ses. The applicable analytical methods apositized below shall be				
427 120		2)	miary	ses. The applicable analytical methods specified below shall be a determine the composition of costings, inks, or fountain relations				
430			useu lo	o determine the composition of coatings, inks, or fountain solutions				

as applied.

- A) Method 24 of 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part, shall be used to determine the VOM content and density of coatings. If it is demonstrated to the satisfaction of the Agency and the USEPA that plant coating formulation data are equivalent to Method 24 results, formulation data may be used. In the event of any inconsistency between a Method 24 test and a facility's formulation data, the Method 24 test will govern.
- B) Method 24A of 40 CFR 60, appendix Appendix A, incorporated by reference in Section 219.112, shall be used to determine the VOM content and density of rotogravure printing inks and related coatings. If it is demonstrated to the satisfaction of the Agency and USEPA that the plant coating formulation data are equivalent to Method 24A results, formulation data may be used. In the event of any inconsistency between a Method 24A test and formulation data, the Method 24A test will govern.
- C) The following ASTM methods are the analytical procedures for determining VOM:
  - i) ASTM D 1475-85: Standard test method for density of paint, varnish, lacquer and related products. This test method is incorporated by reference in Section 219.112 of this Part.
  - ii) ASTM D 2369-87: Standard test method for volatile content of a coating. This test method is incorporated by reference in Section 219.112 of this Part.
  - ASTM D 3792-86: Standard test method for water content iii) of water-reducible paints by direct injection into a gas chromatograph. This test method is incorporated by reference in Section 219.112 of this Part.
  - iv) ASTM D 4017-81 (1987): Standard test method for water content in paints and paint materials by the Karl Fischer method. This test method is incorporated by reference in Section 219.112 of this Part.
  - v) ASTM D 4457-85: Standard test method for determination

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4/6       procedure delineated above can be used to develop         477       protocols for any compounds specifically exempted from         478       the definition of VOM.) This test method is incorporated         479       reference in Section 219.112 of this Part.         480       vi)       ASTM D 2697-86: Standard test method for volume non         482       volatile matter in clear or pigmented coatings. This test         483       method is incorporated by reference in Section 219.112 of         484       this Part.         485       vii)       ASTM D 3980-87: Standard practice for interlaboratory         486       viii)       ASTM D 3980-87: Standard practice for interlaboratory         487       testing of paint and related materials. This practice is         488       incorporated by reference in Section 219.112 of this Part.         490       viii)       ASTM E 180-85: Standard practice for determining the         491       precision of ASTM methods for analysis of and testing of         492       industrial chemicals. This practice is incorporated by         493       reference in Section 219.112 of this Part.         494       incorporated by reference in Section 219.112 of this Part.         495       ix)       ASTM D 2372-85: Standard methods specified in subsection (a)(2)(A), (B), and (C) of this Section may not be use	474 475				of dichloromethane and 1,1,1, trichloroethane in paints and coatings by direct injection into a gas chromatograph. (The
47/       protocols for any compounds specifically exempted from         478       the definition of VOM.) This test method is incorporated         479       reference in Section 219.112 of this Part.         480       vi)       ASTM D 2697-86: Standard test method for volume non         volatile matter in clear or pigmented coatings. This test       method is incorporated by reference in Section 219.112 of         481       vi)       ASTM D 3980-87: Standard practice for interlaboratory         485       vii)       ASTM D 3980-87: Standard practice for interlaboratory         486       vii)       ASTM D 3980-87: Standard practice for interlaboratory         487       testing of paint and related materials. This practice is         488       incorporated by reference in Section 219.112 of this Part.         489       viii)       ASTM D 2372-85: Standard practice for determining the         491       precision of ASTM methods for analysis of and testing of         493       reference in Section 219.112 of this Part.         494       ix)       ASTM D 2372-85: Standard method of separation of         495       ix)       ASTM D 2372-85: Standard methods specified in         499       D)       Use of an adaptation to any of the analytical methods specified in         499       D)       Use of an adaptation to any of this Section may not be use <td>476</td> <td></td> <td></td> <td></td> <td>procedure delineated above can be used to develop</td>	476				procedure delineated above can be used to develop
478       the definition of VOM.) This test method is incorporated         479       reference in Section 219.112 of this Part.         480       vi)       ASTM D 2697-86: Standard test method is oncorporated         481       vi)       ASTM D 2697-86: Standard test method is incorporated by reference in Section 219.112 of         483       method is incorporated by reference in Section 219.112 of         484       this Part.         485       vii)       ASTM D 3980-87: Standard practice for interlaboratory         486       viii)       ASTM D 19980-87: Standard practice for interlaboratory         487       testing of paint and related materials. This practice is incorporated by reference in Section 219.112 of this Part.         489       viii)       ASTM E 180-85: Standard practice for determining the         491       precision of ASTM methods for analysis of and testing of         492       industrial chemicals. This practice is incorporated by         493       reference in Section 219.112 of this Part.         494       ix)       ASTM D 2372-85: Standard method specified in         499       D)       Use of an adaptation to any of the analytical methods specified ir         499       D)       Use of an adaptation to any of the analytical methods specified in subsections (a)(2)(A), (B), and (C) of this Section may not be uses         501       unl	477				protocols for any compounds specifically exempted from
479       reference in Section 219.112 of this Part.         480       vi)       ASTM D 2697-86: Standard test method for volume non volatile matter in clear or pigmented coatings. This test method is incorporated by reference in Section 219.112 of this Part.         483       method is incorporated by reference in Section 219.112 of this Part.         484       this Part.         485       vii)       ASTM D 3980-87: Standard practice for interlaboratory testing of paint and related materials. This practice is incorporated by reference in Section 219.112 of this Part.         489       viii)       ASTM E 180-85: Standard practice for determining the precision of ASTM methods for analysis of and testing of industrial chemicals. This practice is incorporated by reference in Section 219.112 of this Part.         490       viii)       ASTM D 2372-85: Standard method of separation of vehicle from solvent-reducible paints. This method is incorporated by reference in Section 219.112 of this Part.         498       ulses of an adaptation to any of the analytical methods specified in subsections (a)(2)(A), (B), and (C) of this Section may not be use unless approved by the Agency and USEPA. An owner or operator must submit sufficient documentation for the Agency ar USEPA to find that the analytical methods specified in subsection (a)(2)(A), (B), and (C) of this Section will yield inaccurate result and that the proposed adaptation is appropriate.         506       Calculations: Calculations for determining the VOM content, water content and the content of any compounds which are specified in subsection (a)(2)(A), (B), and (C) of this Section will yield inaccurate result an	478				the definition of VOM.) This test method is incorporated by
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481       vi)       ASTM D 2697-86: Standard test method for volume non volatile matter in clear or pigmented coatings. This test method is incorporated by reference in Section 219.112 of this Part.         483       wii)       ASTM D 3980-87: Standard practice for interlaboratory testing of paint and related materials. This practice is incorporated by reference in Section 219.112 of this Part.         484       wiii)       ASTM E 180-85: Standard practice for determining the precision of ASTM methods for analysis of and testing of industrial chemicals. This practice is incorporated by reference in Section 219.112 of this Part.         490       viii)       ASTM D 2372-85: Standard method of separation of vehicle from solvent-reducible paints. This method is incorporated by reference in Section 219.112 of this Part.         495       ix)       ASTM D 2372-85: Standard method of separation of vehicle from solvent-reducible paints. This method is incorporated by reference in Section 219.112 of this Part.         498       uses of an adaptation to any of the analytical methods specified in subsections (a)(2)(A), (B), and (C) of this Section may not be use unless approved by the Agency and USEPA. An owner or operator must submit sufficient documentation for the Agency ar USEPA to find that the analytical methods specified in subsection (a)(2)(A), (B), and (C) of this Section will yield inaccurate result and that the proposed adaptation is appropriate.         506       Calculations: Calculations for determining the VOM content, water content and the content of any compounds which are specifically exempted from the definition of VOM of coatings, inks and fountain solutions as applied shall follow the guidance provided in the f	480				
482       volatile matter in clear or pigmented coatings. This test method is incorporated by reference in Section 219.112 of this Part.         486       vii)       ASTM D 3980-87: Standard practice for interlaboratory testing of paint and related materials. This practice is incorporated by reference in Section 219.112 of this Part.         489       viii)       ASTM E 180-85: Standard practice for determining the precision of ASTM methods for analysis of and testing of industrial chemicals. This practice is incorporated by reference in Section 219.112 of this Part.         490       viii)       ASTM E 180-85: Standard practice for determining the precision of ASTM methods for analysis of and testing of industrial chemicals. This practice is incorporated by reference in Section 219.112 of this Part.         493       reference in Section 219.112 of this Part.         494       ix)       ASTM D 2372-85: Standard method of separation of vehicle from solvent-reducible paints. This method is incorporated by reference in Section 219.112 of this Part.         498       D)       Use of an adaptation to any of the analytical methods specified in subsections (a)(2)(A), (B), and (C) of this Section may not be use unless approved by the Agency and USEPA. An owner or operator must submit sufficient documentation for the Agency ar USEPA to find that the analytical methods specified in subsection (a)(2)(A), (B), and (C) of this Section will yield inaccurate result and that the proposed adaptation is appropriate.         506       So       Calculations: Calculations for determining the VOM content, water content and the content of any compounds which are specifically exempted from the definit	481			vi)	ASTM D 2697-86: Standard test method for volume non-
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<ul> <li>486</li> <li>vii) ASTM D 3980-87: Standard practice for interlaboratory testing of paint and related materials. This practice is incorporated by reference in Section 219.112 of this Part.</li> <li>489</li> <li>490</li> <li>491</li> <li>492</li> <li>493</li> <li>494</li> <li>495</li> <li>495</li> <li>496</li> <li>497</li> <li>498</li> <li>498</li> <li>498</li> <li>498</li> <li>499</li> <li>499</li> <li>490</li> <li>491</li> <li>491</li> <li>494</li> <li>495</li> <li>495</li> <li>496</li> <li>497</li> <li>498</li> <li>498</li> <li>498</li> <li>498</li> <li>499</li> <li>499</li> <li>490</li> <li>491</li> <li>498</li> <li>499</li> <li>491</li> <li>494</li> <li>495</li> <li>495</li> <li>496</li> <li>497</li> <li>498</li> <li>498</li> <li>498</li> <li>499</li> <li>409</li> <li>410</li> <li>411</li> <li>412</li> <li>412</li> <li>412</li> <li>414</li> <li>415</li> <li>414</li> <li>415</li> <li>414</li> <li>415</li> <li>414</li> <li>415</li> <li>414</li> <li>415</li> <li>414</li> <li>415</li> <li>415</li> <li>414</li> <li>415</li> <li>415</li> <li>416</li> <li>417</li> <li>418</li> <li>418</li> <li>418</li> <li>418</li> <li>418</li> <li>418</li> <li>418</li> <li>418</li> <li>411</li> <li>411</li> <li>411</li> <li>412</li> <li>412</li> <li>412</li> <li>414</li> <li>415</li> <li>414</li> <li>414<td>485</td><td></td><td></td><td></td><td></td></li></ul>	485				
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491       precision of ASTM methods for analysis of and testing of industrial chemicals. This practice is incorporated by reference in Section 219.112 of this Part.         493       reference in Section 219.112 of this Part.         494       ix)       ASTM D 2372-85: Standard method of separation of vehicle from solvent-reducible paints. This method is incorporated by reference in Section 219.112 of this Part.         498       ix)       ASTM D 2372-85: Standard method of separation of vehicle from solvent-reducible paints. This method is incorporated by reference in Section 219.112 of this Part.         498       D)       Use of an adaptation to any of the analytical methods specified in subsections (a)(2)(A), (B), and (C) of this Section may not be use unless approved by the Agency and USEPA. An owner or operator must submit sufficient documentation for the Agency ar USEPA to find that the analytical methods specified in subsection (a)(2)(A), (B), and (C) of this Section will yield inaccurate result and that the proposed adaptation is appropriate.         506       507       3)       Calculations: Calculations for determining the VOM content, water content and the content of any compounds which are specifically exempted from the definition of VOM of coatings, inks and fountain solutions as applied shall follow the guidance provided in the following documents:         512       A)       "A Guide for Surface Coating Calculation", EPA-340/1-86-016, incorporated by reference in Section 219.112 of this Part.         515       B)       "Procedures for Certifying Quantity of Volatile Organic	490			viii)	ASTM E 180-85: Standard practice for determining the
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<ul> <li>ix) ASTM D 2372-85: Standard method of separation of vehicle from solvent-reducible paints. This method is incorporated by reference in Section 219.112 of this Part.</li> <li>D) Use of an adaptation to any of the analytical methods specified in subsections (a)(2)(A), (B), and (C) of this Section may not be use unless approved by the Agency and USEPA. An owner or operator must submit sufficient documentation for the Agency ar USEPA to find that the analytical methods specified in subsections (a)(2)(A), (B), and (C) of this Section will yield inaccurate result (a)(2)(A), (B), and (C) of this Section will yield inaccurate result and that the proposed adaptation is appropriate.</li> <li>Calculations: Calculations for determining the VOM content, water content and the content of any compounds which are specifically exempted from the definition of VOM of coatings, inks and fountain solutions as applied shall follow the guidance provided in the following documents:</li> <li>A) "A Guide for Surface Coating Calculation", EPA-340/1-86-016, incorporated by reference in Section 219.112 of this Part.</li> <li>B) "Procedures for Certifying Quantity of Volatile Organic</li> </ul>	494				
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<ul> <li>501 unless approved by the Agency and USEPA. An owner or 502 operator must submit sufficient documentation for the Agency ar 503 USEPA to find that the analytical methods specified in subsectio 504 (a)(2)(A), (B), and (C) of this Section will yield inaccurate result 505 and that the proposed adaptation is appropriate.</li> <li>506 507 3) Calculations: Calculations for determining the VOM content, water 508 content and the content of any compounds which are specifically 509 exempted from the definition of VOM of coatings, inks and fountain 510 solutions as applied shall follow the guidance provided in the following 511 documents:</li> <li>512 A) "A Guide for Surface Coating Calculation", EPA-340/1-86-016, 514 incorporated by reference in Section 219.112 of this Part.</li> <li>515</li> <li>516 B) "Procedures for Certifying Quantity of Volatile Organic</li> </ul>	500		/	subsec	tions (a)(2)(A), (B), and (C) of this Section may not be used
502operator must submit sufficient documentation for the Agency ar503USEPA to find that the analytical methods specified in subsection504(a)(2)(A), (B), and (C) of this Section will yield inaccurate result505and that the proposed adaptation is appropriate.5065075073)Calculations: Calculations for determining the VOM content, water508content and the content of any compounds which are specifically509exempted from the definition of VOM of coatings, inks and fountain510solutions as applied shall follow the guidance provided in the following511documents:512A)"A Guide for Surface Coating Calculation", EPA-340/1-86-016, incorporated by reference in Section 219.112 of this Part.515B)"Procedures for Certifying Quantity of Volatile Organic	501			unless	approved by the Agency and USEPA. An owner or
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505and that the proposed adaptation is appropriate.5063)Calculations: Calculations for determining the VOM content, water508content and the content of any compounds which are specifically509exempted from the definition of VOM of coatings, inks and fountain510solutions as applied shall follow the guidance provided in the following511documents:512A)"A Guide for Surface Coating Calculation", EPA-340/1-86-016,514incorporated by reference in Section 219.112 of this Part.515B)"Procedures for Certifying Quantity of Volatile Organic	504			(a)(2)(	A), (B), and (C) of this Section will yield inaccurate results
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<ul> <li>3) Calculations: Calculations for determining the VOM content, water</li> <li>content and the content of any compounds which are specifically</li> <li>exempted from the definition of VOM of coatings, inks and fountain</li> <li>solutions as applied shall follow the guidance provided in the following</li> <li>documents:</li> <li>A) "A Guide for Surface Coating Calculation", EPA-340/1-86-016,</li> <li>incorporated by reference in Section 219.112 of this Part.</li> <li>B) "Procedures for Certifying Quantity of Volatile Organic</li> </ul>	506				The Last and the set of the set
<ul> <li>508 content and the content of any compounds which are specifically</li> <li>509 exempted from the definition of VOM of coatings, inks and fountain</li> <li>510 solutions as applied shall follow the guidance provided in the following</li> <li>511 documents:</li> <li>512</li> <li>513 A) "A Guide for Surface Coating Calculation", EPA-340/1-86-016, incorporated by reference in Section 219.112 of this Part.</li> <li>515</li> <li>516 B) "Procedures for Certifying Quantity of Volatile Organic</li> </ul>	507	3)	Calcul	ations:	Calculations for determining the VOM content water
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<ul> <li>510 solutions as applied from the domination of volve of coatings, finds and rounnamination of volve of coating statements of the following documents:</li> <li>512</li> <li>513</li> <li>514</li> <li>515</li> <li>516</li> <li>B) "Procedures for Certifying Quantity of Volve o</li></ul>	509		exempt	ted from	the definition of VOM of coatings inks and fountain
511documents:512513513A)514incorporated by reference in Section 219.112 of this Part.515516B)"Procedures for Certifying Quantity of Volatile Organic	510		solutio	ns as ar	mlied shall follow the guidance provided in the following
<ul> <li>512</li> <li>513</li> <li>514</li> <li>515</li> <li>516</li> <li>B) "Procedures for Certifying Quantity of Volatile Organic</li> </ul>	511		docum	ents:	provided in the guidance provided in the following
<ul> <li>A) "A Guide for Surface Coating Calculation", EPA-340/1-86-016, incorporated by reference in Section 219.112 of this Part.</li> <li>B) "Procedures for Certifying Quantity of Volatile Organic</li> </ul>	512		accuitt	-1163.	
515 A Guide for Surface Coating Calculation, Er A-540/1-80-010, 514 incorporated by reference in Section 219.112 of this Part. 515 516 B) "Procedures for Certifying Quantity of Volatile Organic	513		۵)	"A Gui	de for Surface Costing Calculation" EDA 240/1 86 016
515 516 B) "Procedures for Certifying Quantity of Volatile Organic	514		<i>[</i> ]	incorne	brated by reference in Section 210, 112 of this Dart
516 B) "Procedures for Certifying Quantity of Volatile Organic	515			meorpe	stated by reference in Section 217.112 of this Falt.
The second construction of the second constructi	516		B)	"Proce	dures for Certifying Quantity of Valatila Organia
b) I rocourtes for certifying Quantity of Volatile Organic	510		J)	11000	unce for Certifying Quantity of Volatile Organic

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517 518 519				Compounds Emitted by Paint, Ink and Other Coatings" (revised June 1986), EPA-450/3-84-019, incorporated by reference in Section 219.112 of this Part.
520 521 522 523			C)	"A Guide for Graphic Arts Calculations", August 1988, EPA- 340/1-88-003, incorporated by reference in Section 219.112 of this Part.
525 526	b)	Autom	obile or	Light-Duty Truck Test Protocol
520 527 528 529 530		1)	The proceed	otocol for testing, including determining the transfer efficiency of g applicators, at primer surfacer operations and topcoat operations at pmobile or light-duty truck assembly source shall follow the ures in the following:
531 532 533 534 535 536			A)	Prior to May 1, 2012: "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations" ("topcoat protocol"), December 1988, EPA-450/3-88-018, incorporated by reference in Section 219.112 of this Part.
537 538 539 540 541 542			B)	On and after May 1, 2012: "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations" (topcoat protocol), September 2008, EPA-453/R-08-002, incorporated by reference in Section 219.112 of this Part.
543 544 545 546 547 548		2)	Prior to operato limit in (a)(2)(l which	testing pursuant to the applicable topcoat protocol, the owner or or of a coating operation subject to the topcoat or primer surfacer a Section 219.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or E) shall submit a detailed testing proposal specifying the method by testing will be conducted and how compliance will be demonstrated
549 550 551			consist include	ent with the applicable topcoat protocol. The proposal shall e, at a minimum, a comprehensive plan (including a rationale) for ining the transfer efficiency at each booth through the use of in
552 553			plant of dete	r pilot testing, the selection of coatings to be tested (for the purpose rmining transfer efficiency) including the rationale for coating
554			groupii	ngs, the method for determining the analytic VOM content of as
555 556			coating	s, and a description of the records of coating VOM content as
557 558			applied	and coating's usage that will be kept to demonstrate compliance.
559			demon	stration for a coating line may proceed.

560				
561	c)	Captur	e Syster	m Efficiency Test Protocols
562		-	-	
563		1)	Applic	ability
564			The red	quirements of subsection (c)(2) of this Section shall apply to all
565			VOM	emitting process emission units employing capture equipment (e.g.,
566			hoods.	ducts), except those cases noted in this subsection $(c)(1)$ .
567			· · · · · · · · · · · · · · · · · · ·	
568			A)	If an emission unit is equipped with (or uses) a permanent total
569			/	enclosure (PTE) that meets Agency and USEPA specifications
570				and which directs all VOM to a control device, then the emission
571				unit is exempted from the requirements described in subsection
572				(c)(2) of this Section. The Agency and USEPA specifications to
573				determine whether a structure is considered a PTE are given in
574				Method 204 of appendix M of 40 CFR 51 incorporated by
575				reference in Section 219 112 of this Part. In this instance, the
576				capture efficiency is assumed to be 100 percent and the emission
577				unit is still required to measure control efficiency using appropriate
578				test methods as specified in subsection (d) of this Section
579				test methods as specified in subsection (d) of this bection.
580			B)	If an emission unit is equipped with (or uses) a control device
581			D)	designed to collect and recover VOM (e.g., carbon adsorber) an
582				evolicit measurement of canture efficiency is not necessary
582				provided that the conditions given below are not. The overall
501				provided that the conditions given below are filet. The overall
505				input liquid VOM to the recovered liquid VOM. The concern
506				input liquid v Ow to the recovered liquid v Ow. The general
507				procedure for use in this situation is given in 40 CFR 60.455,
287 599				following additional matrix is an
288				Tonowing additional restrictions:
500				The second
590				1) The source owner or operator shall obtain data each
591				operating day for the solvent usage and solvent recovery to
592				permit the determination of the solvent recovery efficiency
593				of the system each operating day using a 7-day rolling
594				period. The recovery efficiency for each operating day is
595				computed as the ratio of the total recovered solvent for that
596				day and the most recent prior 6 operating days to the total
597				solvent usage for the same 7-day period used for the
598				recovered solvent, rather than a 30-day weighted average as
599				given in 40 CFR 60.433 incorporated by reference in
600				Section 219.112 of this Part. This ratio shall be expressed
601				as a percentage. The ratio shall be computed within 72
602				hours following each 7-day period. A source that believes

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603 604 605 606 607 608			that the 7-day rolling period is not appropriate may use an alternative multi-day rolling period not to exceed 30 days, with the approval of the Agency and USEPA. In addition, the criteria in subsection $(c)(1)(B)(ii)$ or subsection $(c)(1)(B)(iii)$ below-must be met.
609		ł	ii) The solvent recovery system (i.e., conture and control
610			system) must be dedicated to a single coating line printing
611			line or other discrete activity that by itself is subject to an
612			applicable VOM emission standard or if <del>iji) If</del> the solvent
613			recovery system controls more than one coating line
614			nrinting line or other discrete activity that by itself is
615			subject to an applicable VOM emission standard the
616			overall control (i.e., the total recovered VOM divided by
617			the sum of liquid VOM input from all lines and other
618			activities venting to the control system) must meet or
619			exceed the most stringent standard applicable to any line or
620			other discrete activity venting to the control system.
621			
622	2)	Capture	e Efficiency Protocols
623		The cap	oture efficiency of an emission unit shall be measured using one of
624		the prot	tocols given below. Appropriate test methods to be utilized in each
625		of the ca	apture efficiency protocols are described in appendix M of 40 CFR
626		51, inco	prporated by reference in Section 219.112 of this Part. Any error
627		margin	associated with a test method or protocol may not be incorporated
628		into the	results of a capture efficiency test. If these techniques are not
629		suitable	e for a particular process, then an alternative capture efficiency
630		protocol	l may be used, pursuant to the provisions of Section 219.108(b) of
631		this Par	t.
632			
633		A) (	Gas/gas method using temporary total enclosure (TTE). The
634			Agency and USEPA specifications to determine whether a
635		1	temporary enclosure is considered a TTE are given in Method 204
636		(	of appendix M of 40 CFR 51, incorporated by reference in Section
637			219.112 of this Part. The capture efficiency equation to be used
638		i	for this protocol is:
639			
640			$CE = \frac{G_w}{G_w + F_w}$
641			
642		v	where:
643			
			CE = capture efficiency, decimal fraction;

.

		G <sub>w</sub> = mass of VOM captured and delivered to control device using a TTE;
		$F_w$ = mass of uncaptured VOM that escapes from a TTE.
644		
645		Method 204B or 204C contained in appendix M of 40 CFR 51,
040 647		incorporated by reference in Section 219.112 of this Part, is used to
047 648		incorporated by reference in Section 210 112 of this Part is used to
649		obtain F
650		
651	B)	Liquid/gas method using TTE. The Agency and USEPA
652	_)	specifications to determine whether a temporary enclosure is
653		considered a TTE are given in Method 204 of appendix M of 40
654		CFR 51, incorporated by reference in Section 219.112 of this Part.
655		The capture efficiency equation to be used for this protocol is:
656		
657		$CE = \frac{L - F_{W}}{L}$
658		
659		where:
660		CE = capture efficiency, decimal fraction;
		L = mass of liquid VOM input to process emission unit;
661		$F_w$ = mass of uncaptured VOM that escapes from a TTE.
662		Method 204A or 204F contained in appendix M of 40 CFR 51.
663		incorporated by reference in Section 219.112 of this Part is used to
664		obtain L. Method 204 in appendix M of 40 CFR 51, incorporated
665		by reference in Section 219.112 of this Part is used to obtain $F_w$ .
666		
667	C)	Gas/gas method using the building or room (building or room
668		enclosure), in which the affected coating line, printing line or other
669		emission unit is located, as the enclosure, as determined by Method
0/0		204 of appendix M of 40 CFK 51, incorporated by reference in
0/1 672		Section 219.112 of this Part, and in which " $F_B$ " and "U" are
673		All fans and blowers in the building or room must be operated as
674		they would under normal production. The capture efficiency
675		equation to be used for this protocol is:

676		
677		$CE = \frac{G}{G + F_B}$
678 679 680		where:
		CE = capture efficiency, decimal fraction;
		G = mass of VOM captured and delivered to control device;
		$F_B$ = mass of uncaptured VOM that escapes from building enclosure.
681 682 683 684 685 686		Method 204B or 204C contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part <sub>4</sub> is used to obtain G. Method 204E in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part is used to obtain $F_B$ .
680 687 688 689 690 691 692 693 694 695 696	D)	Liquid/gas method using the building or room (building or room enclosure), in which the affected coating line, printing line or other emission unit is located, as the enclosure as determined by Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, and in which "F <sub>B</sub> " and "L" are measured while operating only the affected line emission unit. All fans and blowers in the building or room must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:
697		$CE = \frac{L - F_B}{L}$
698 699 700		where: CE = capture efficiency, decimal fraction;
		L = mass of liquid VOM input to process emission unit;
701		$F_B$ = mass of uncaptured VOM that escapes from building enclosure.
702 703 704		Method 204A or 204F contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, is used to obtain L. Method 204E in appendix M of 40 CFR 51, incorporated

#### 705 by reference in Section 219.112 of this Part, is used to obtain $F_B$ . 706 707 E) Mass balance using Data Quality Objective (DQO) or Lower 708 Confidence Limit (LCL) protocol. For a liquid/gas input where an 709 owner or operator is using the DQO/LCL protocol and not using an 710 enclosure as described in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, the 711 712 VOM content of the liquid input (L) must be determined using 713 Method 204A or 204F in appendix M of 40 CFR 51, incorporated 714 by reference in Section 219.112 of this Part. The VOM content of the captured gas stream (G) to the control device must be 715 determined using Method 204B or 204C in appendix M of 40 CFR 716 717 51, incorporated by reference in Section 219.112 of this Part. The 718 results of capture efficiency calculations (G/L) must satisfy the 719 DQO or LCL statistical analysis methodology as described in 720 Section 3 of USEPA's "Guidelines for Determining Capture 721 Efficiency,", incorporated by reference at Section 219.112 of this Part. Where capture efficiency testing is done to determine 722 723 emission reductions for the purpose of establishing emission 724 credits for offsets, shutdowns, and trading, the LCL protocol cannot be used for these applications. In enforcement cases, the 725 726 LCL protocol cannot confirm non-compliance; capture efficiency must be determined using a protocol under subsection (c)(2)(A), 727 728 (B), (C) or (D) of this Section, the DQO protocol of this subsection 729 (c)(2)(E), or an alternative protocol pursuant to Section 219.108(b) 730 of this Part. 731 732 BOARD NOTE: Where LCL was used in testing emission units 733 that are the subject of later requests for establishing emission credits for offsets, shutdowns, and trading, prior LCL results may 734 not be relied upon to determine the appropriate amount of credits. 735 736 Instead, to establish the appropriate amount of credits, additional testing may be required that would satisfy the protocol of Section 737 738 219.105(c)(2)(A), (B), (C) or (D), the DQO protocol of Section 219.105(c)(2)(E), or an alternative protocol pursuant to Section 739 740 219.108(b) of this Part. 741 3) 742 Simultaneous testing of multiple lines or emission units with a common 743 control device. If an owner or operator has multiple lines sharing a

common control device, the capture efficiency of the lines may be tested

simultaneously, subject to the following provisions:

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744 745 746

747 748 749 750		A)	Multiple line testing must meet the criteria of Section 4 of USEPA's "Guidelines for Determining Capture Efficiency;", incorporated by reference at Section 219.112 of this Part;
751 752 753		B)	The most stringent capture efficiency required for any individual line or unit must be met by the aggregate of lines or units; and
754 755 756		C)	Testing of all the lines of emission units must be performed with the same capture efficiency test protocol.
757 758	4)	Record	dkeeping and Reporting
759 760 761		A)	All owners or operators affected by this subsection must maintain a copy of the capture efficiency protocol submitted to the Agency and the USEPA on file. All results of the appropriate test methods
762 763 764			and capture efficiency protocols must be reported to the Agency within 60 days after the test date. A copy of the results must be kept on file with the source for a period of 3 years.
765 766 767		B)	If any changes are made to capture or control equipment, then the source is required to notify the Agency and the USEPA of these
768 769 770			changes and a new test may be required by the Agency or the USEPA.
771 772 773 774 775		C)	The source must notify the Agency 30 days prior to performing any capture efficiency or control test. At that time, the source must notify the Agency which capture efficiency protocol and control device test methods will be used. Notification of the actual date and expected time of testing must be submitted a minimum of 5
776 777 778 779			working days prior to the actual date of the test. The Agency may at its discretion accept notification with shorter advance notice provided that such arrangements do not interfere with the Agency's ability to review the protocol and/or observe testing.
780 781 782 783 784 785		D)	Sources utilizing a PTE must demonstrate that this enclosure meets the requirement given in Method 204 in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, for a PTE during any testing of their control device.
786 787 788 789		E)	Sources utilizing a TTE must demonstrate that their TTE meets the requirements given in Method 204 in appendix M or 40 CFR 51, incorporated by reference in Section 219.112 of this Part, for a TTE during any testing of their control device. The source must

790 791				also pr	ovide documentation that the quality assurance criteria for a
791					ave been achieved.
792			E)	1	where will give the DOO or I CI meeted all must submit the
795			L)	fallan	ing information to the A series with each test report.
794				10110W	ing mornation to the Agency with each test report.
795				3	A comment all test mother to Orcelite A commence (Orcelite
790				1)	A copy of all test methods, Quality Assurance/Quality
797					Control procedures, and calibration procedures to be used
/98					from those described in appendix M of 40 CFR 51,
/99					incorporated by reference in Section 219.112 of this Part;
800				•••	
801				11)	A table with information on each sample taken, including
802					the sample identification and the VOM content of the
803					sample;
804				•••	
805				iii)	The quantity of material used for each test run;
806				• •	
807				iv)	The quantity of captured VOM for each test run;
808					
809				v)	The capture efficiency calculations and results for each test
810					run;
811					
812				vi)	The DQO and/or LCL calculations and results; and
813					
814				vii)	The Quality Assurance/Quality Control results, including
815					how often the instruments were calibrated, the calibration
816					results, and the calibration gases used.
817					
818	d)	Contro	l Devic	e Effici	ency Testing and Monitoring
819					
820		1)	The co	ntrol de	vice efficiency shall be determined by simultaneously
821			measur	ing the	inlet and outlet gas phase VOM concentrations and gas
822			volume	etric flo	w rates in accordance with the gas phase test methods
823			specific	ed in su	bsection (f) of this Section.
824			•		
825		2)	An own	ner or o	perator:
826					•
827			A)	That us	ses an afterburner or carbon adsorber to comply with any
828			,	Section	n of this Part <del>219</del> shall use Agency and USEPA approved
829				continu	ious monitoring equipment which is installed, calibrated.
830				mainta	ined, and operated according to vendor specifications at all
831				times t	he control device is in use except as provided in subsection
832				(d)(3)	of this Section. The continuous monitoring equipment must

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833 834		monitor	the following parameters:
835 836		i) F tł	or each afterburner which does not have a catalyst bed, ne combustion chamber temperature of each afterburner.
837 838 839 840		ii) F k a	or each afterburner which has a catalyst bed, commonly nown as a catalytic afterburner, the temperature rise cross each catalytic afterburner bed or VOM concentration
841 842		0	f exhaust.
843 844 845		iii) F ca n	or each carbon adsorber, the VOM concentration of each arbon adsorption bed exhaust or the exhaust of the bed ext in sequence to be desorbed.
846 847 848 849 850 851 852 852	B)	Must ins manufact temperat computer measured greater.	tall, calibrate, operate and maintain, in accordance with turer's specifications, a continuous recorder on the ure monitoring device, such as a strip chart, recorder or r, having an accuracy of $\pm 1$ percent of the temperature d, expressed in degrees Celsius or $\pm 0.5^{\circ}$ C, whichever is
853 854 855 856 857 858 858	C)	Of an aut topcoat of separate alternative of the Cle	tomobile or light-duty truck primer surfacer operation or operation subject to subsection $(d)(2)(A)$ , shall keep a record of the following data for the control devices, unless we provisions are set forth in a permit pursuant to Title V ean Air Act:
860 861 862 863 864 865 866		i) F te w 2 m de	or thermal afterburners for which combustion chamber emperature is monitored, all 3-hour periods of operation in which the average combustion temperature was more than $8^{\circ}$ C (50° F) below the average combustion temperature measured during the most recent performance test that emonstrated that the operation was in compliance.
800 867 868 869 870 871 872 873		ii) F m av th in m op	or catalytic afterburners for which temperature rise is nonitored, all 3-hour periods of operation in which the verage gas temperature before the catalyst bed is more han 28° C (50° F) below the average gas temperature nmediately before the catalyst bed measured during the nost recent performance test that demonstrated that the peration was in compliance.
874 875		iii) F	or catalytic afterburners and carbon adsorbers for which

876 877 878 879 880 881 882 883 884				VOM concentration is monitored, all 3-hour periods of operation during which the average VOM concentration or the reading of organics in the exhaust gases is more than 20 percent greater than the average exhaust gas concentration or reading measured by the organic monitoring device during the most recent determination of the recovery efficiency of a carbon adsorber or performance test for a catalytic afterburner, which determination or test that demonstrated that the operation was in compliance.
885				* *
886		3)	An ow	mer or operator that uses a carbon adsorber to comply with Section
887		-)	219.40	1) of this Part may operate the adsorber during periods of
888			monito	pring equipment malfunction, provided that:
889				8 - 1
890			A)	The owner or operator notifies in writing the Agency and USEPA.
891			)	within 10 days after the conclusion of any 72 hour period during
892				which the adsorber is operated and the associated monitoring
893				equipment is not operational, of such monitoring equipment failure
894				and provides the duration of the malfunction, a description of the
895				repairs made to the equipment, and the total to date of all hours in
896				the calendar year during which the adsorber was operated and the
897				associated monitoring equipment was not operational;
898				
899			B)	During such period of malfunction the adsorber is operated using
900			,	timed sequences as the basis for periodic regeneration of the
901				adsorber;
902				, ,
903			C)	The period of such adsorber operation does not exceed 360 hours
904			,	in any calendar year without the approval of the Agency and
905				USEPA; and
906				,
907			D)	The total of all hours in the calendar year during which the
908			/	adsorber was operated and the associated monitoring equipment
909				was not operational shall be reported, in writing, to the Agency and
910				USEPA by January 31 of the following calendar year.
911				
912	e)	Overal	l Efficie	ency
913	,			5
914		1)	The ov	verall efficiency of the emission control system shall be determined
915			as the	product of the capture system efficiency and the control device
916			efficier	ncy or by the liquid/liquid test protocol as specified in 40 CFR
917			60.433	, incorporated by reference in Section 219.112 of this Part. (and
918			revised	by subsection (c)(1)(B) of this Section) for each solvent recovery

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system. In those cases in which the overall efficiency is being determined for an entire line, the capture efficiency used to calculate the product of the capture and control efficiency is the total capture efficiency over the entire line.

2) For coating lines which are both chosen by the owner or operator to comply with Section 219.207(a), (d), (e), (f), (g), (l), or (m) of this Part by the alternative in Section 219.207(b)(2) of this Part and meet the criteria allowing them to comply with Section 219.207 instead of Section 219.204 of this Part, the overall efficiency of the capture system and control device, as determined by the test methods and procedures specified in subsections (c), (d) and (e)(1) of this Section, shall be no less than the equivalent overall efficiency which shall be calculated by the following equation:

$$E = \frac{VOM_a - VOM_l}{VOM_a} \times 100$$

where:

- E = Equivalent overall efficiency of the capture system and control device as a percentage;
- VOM<sub>a</sub> = Actual VOM content of a coating, or the dailyweighted average VOM content of two or more coatings (if more than one coating is used), as applied to the subject coating line as determined by the applicable test methods and procedures specified in subsection (a)(4)(i) of this Part in units of kg VOM/1 (lb VOM/gal) of coating solids as applied;
- $VOM_1$  = The VOM emission limit specified in Sections 219.204 or 219.205 of this Part in units of kg VOM/1 (lb VOM/gal) of coating solids as applied.

in Section 219.112 of this Part as appropriate to the conditions at the site.

- f) Volatile Organic Material Gas Phase Source Test Methods
  The methods in 40 CFR 60, appendix A, incorporated by reference in Section
  219.112 of this Part delineated below shall be used to determine control device
  efficiencies.
  943
  944
  1) 40 CFR 60, appendix A, Method 18, 25 or 25A, incorporated by reference
- 945

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946 947 948 949 950 951 952 953		shall be used to determine VOM concentration. Method selection shall be based on consideration of the diversity of organic species present and their total concentration and on consideration of the potential presence of interfering gases. Except as indicated in subsections $(f)(1)(A)$ and $(B)$ below, the test shall consist of three separate runs, each lasting a minimum of 60 min, unless the Agency and the USEPA determine that process variables dictate shorter sampling times.
954		$\Delta$ ) When the method is to be used to determine the efficiency of a
955		carbon adsorption system with a common exhaust stack for all the
956		individual adsorber vessels, the test shall consist of three separate
957		runs each coinciding with one or more complete sequences
958		through the adsorption cycles of all the individual adsorber vessels
959		anough the adsorption cycles of an the marvialar adsorber vessels.
960		B) When the method is to be used to determine the efficiency of a
961		carbon adsorption system with individual exhaust stacks for each
962		adsorber vessel, each adsorber vessel shall be tested individually.
963		The test for each adsorber vessel shall consist of three separate
964		runs. Each run shall coincide with one or more complete
965		adsorption cycles.
966		
967	2)	40 CFR 60, appendix A, Method 1 or 1A, incorporated by reference in
968		Section 219.112 of this Part, shall be used for sample and velocity
969		traverses.
970	200	
971	3)	40 CFR 60, appendix A, Method 2, 2A, 2C or 2D, incorporated by
972		reference in Section 219.112 of this Part, shall be used for velocity and
973		volumetric flow rates.
974		
975	4)	40 CFR 60, appendix A, Method 3, incorporated by reference in Section
970		219.112 of this Part, shall be used for gas analysis.
977	5)	10 CED 60 annondix A Mathad 1 incomparated by reference in Section
970	3)	210 112 of this Part, shall be used for stack as moisture
980		219.112 of this I art, shall be used for stack gas moisture.
981	ഖ	40 CFR 60 appendix A Methods 2 2A 2C 2D 3 and 4 incorporated by
982	0)	reference in Section 219 112 of this Part shall be performed as
983		applicable, at least twice during each test run.
984		
985	7)	Use of an adaptation to any of the test methods specified in subsections
986	10	(f)(1), (2), (3), (4), (5) and (6) of this Section may not be used unless
987		approved by the Agency and the USEPA on a case by case basis. An
988		owner or operator must submit sufficient documentation for the Agency

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989 990		and the USEPA to find that the test methods specified in subsections $(f)(1), (2), (3), (4), (5)$ and (6) of this Section will yield inaccurate results								
991			and that the proposed adaptation is appropriate.							
992	ς.	<b>T</b> 1	<b>D</b>							
993	g)	Leak	Detectio	on Me	thods for Volatile Organic Material					
994		Owne	ers or op	erator	s required by this Part to carry out a leak detection monitoring					
995		progra	am shal	l comp	bly with the following requirements:					
996				~						
997		1)	Leak	Detect	ion Monitoring					
998										
999			A)	Mon	itoring shall comply with 40 CFR 60, appendix A, Method 21,					
1000				inco	porated by reference in Section 219.112 of this Part.					
1001										
1002			B)	The	detection instrument shall meet the performance criteria of					
1003				Meth	nod 21.					
1004			-							
1005			C)	The	instrument shall be calibrated before use on each day of its use					
1006				by th	e methods specified in Method 21.					
1007										
1008			D)	Calil	oration gases shall be:					
1009										
1010				i)	Zero air (less than 10 ppm of hydrocarbon in air); and					
1011										
1012				ii)	A mixture of methane or n-hexane and air at a					
1013					concentration of approximately, but no less than, 10,000					
1014					ppm methane or n-hexane.					
1015										
1016			E)	The	instrument probe shall be traversed around all potential leak					
1017				inter	faces as close to the interface as possible as described in					
1018				Meth	nod 21.					
1019										
1020		2)	When	equip	ment is tested for compliance with no detectable emissions as					
1021			requir	ed, the	e test shall comply with the following requirements:					
1022										
1023			A)	The	requirements of subsections $(g)(1)(A)$ through $(g)(1)(E)$ of this					
1024				Secti	on shall apply.					
1025										
1026			B)	The	background level shall be determined as set forth in Method					
1027				21.						
1028										
1029		3)	Leak	detecti	on tests shall be performed consistent with:					
1030										
1031			A)	"AP	I Course SI 417 controlling Volatile Organic Compound					

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1032 1033				Emissions from Leaking Process Equipment", EPA-450/2-82-015, incorporated by reference in Section 219.112 of this Part.
1034			e D)	
1035			В)	"Portable Instrument User's Manual for Monitoring VOM
1036				Sources", EPA-340/1-86-015, incorporated by reference in Section
1037				219.112 of this Part.
1038			~	
1039			C)	"Protocols for Generating Unit-Specific Emission Estimates for
1040				Equipment Leaks of VOM and VHAP", EPA-450/3-88-010,
1041				incorporated by reference in Section 219.112 of this Part.
1042				
1043			D)	"Petroleum Refinery Enforcement Manual", EPA-340/1-80-008,
1044				incorporated by reference in Section 219.112 of this Part.
1045				
1046	h)	Bulk C	Jasoline	Delivery System Test Protocol
1047				
1048		1)	The me	ethod for determining the emissions of gasoline from a vapor
1049			recove	ry system are delineated in 40 CFR 60, subpart Subpart XX, section
1050			60.503	, incorporated by reference in Section 219.112 of this Part.
1051				
1052		2)	Other t	ests shall be performed consistent with:
1053				
1054			A)	"Inspection Manual for Control of Volatile Organic Emissions
1055				from Gasoline Marketing Operations: Appendix D", EPA-340/1-
1056				80-012, incorporated by reference in Section 219.112 of this Part.
1057				
1058			B)	"Control of Hydrocarbons from Tank Truck Gasoline Loading
1059			<i>,</i>	Terminals: Appendix A", EPA-450/2-77-026, incorporated by
1060				reference in Section 219.112 of this Part.
1061				
1062	i)	Notwi	thstandi	ng other requirements of this Part, upon request of the Agency
1063	,	where	it is nec	essary to demonstrate compliance, an owner or operator of an
1064		emissi	on unit v	which is subject to this Part shall, at his own expense, conduct tests
1065		in acco	ordance	with the applicable test methods and procedures specific in this
1066		Part. 1	Nothing	in this Section shall limit the authority of the USEPA pursuant to
1067		the Cle	ean Air	Act, as amended, to require testing.
1068				
1069	÷	Stage ]	H Gasol	ine Vapor Recovery Test-Methods
1070	J <i>)</i>	The m	ethods f	or determining the acceptable performance of Stage-II Gasoline
1071		Vanor	Recove	ry System are delineated in "Technical Guidance Stage II Vapor
1072		Recow	erv Svet	ems for Control of Vehicle Refueling Emissions at Gasoling
1073		Disner	sing Fa	cilities " found at EPA 450/3-91-022h and incorporated by
1074		referer	<u>ce in Sc</u>	ention 219 112 of this Part Specifically the test methods are as
10/7		Tererer		Secon 217.112 of uns 1 are. Specifically, the test methods are as

1075		follov	<del>vs:</del>
1076			
1077		<del>1)</del>	Dynamic Backpressure Test is a test procedure used to determine the
1078			pressure drop (flow resistance) through balance vapor collection and
1079			control systems (including nozzles, vapor hoses, swivels, dispenser piping
1080			and underground piping) at prescribed flow rates.
1081			
1082		<del>2)</del>	Pressure Decay/Leak Test is a test procedure used to quantify the vapor
1083			tightness of a vapor collection and control system installed at gasoline
1084			dispensing facilities.
1085			
1086		<del>3)</del>	Liquid Blockage Test is a test procedure used to detect low points in any
1087			vapor collection and control system where condensate may accumulate.
1088			
1089	(Sour	ce: Am	ended at 37 Ill. Reg., effective )
1090	× ×		
1091	Section 219.	112 Inc	corporations by Reference
1092			A V
1093	The following	g mater	ials are incorporated by reference and do not contain any subsequent
1094	additions or a	amendm	ients:
1095			
1096	a)	Amer	ican Society for Testing and Materials, 100 Barr Harbor Drive, West
1097	,	Consl	nohocken PA 19428-9555
1098			
1099		1)	ASTM D 2879-86
1100		,	
1101		2)	ASTM D 323-08
1102		,	
1103		3)	ASTM D 86-82
1104		·	
1105		4)	ASTM D 369-69 (1971)
1106			
1107		5)	ASTM D 396-69
1108			
1109		6)	ASTM D 2880-71
1110			
1111		7)	ASTM D 975-68
1112			
1113		8)	ASTM D 3925-81 (1985)
1114		-	
1115		9)	ASTM E 300-86
1116		-	
1117		10)	ASTM D 1475-85

1118			
1119		11)	ASTM D 2369-87
1120			
1121		12)	ASTM D 3792-86
1122			
1123		13)	ASTM D 4017-81 (1987)
1124			
1125		14)	ASTM D 4457-85
1126			
1127		15)	ASTM D 2697-86
1128			
1129		16)	ASTM D 3980-87
1130		17)	
1131		17)	ASIM E 180-85
1132		10)	A STM D 2272 95
1133		18)	ASTM D 2372-85
1134		10)	4 STM D 07 66
1135		19)	ASTM D 97-00
1130		20)	ASTM F 168-87 (1977)
1138		20)	ASTALE 100-07 (1777)
1139		21)	ASTM E 169-87
1140		21)	
1141		22)	ASTM E 260-91
1142			
1143		23)	ASTM D 2504-83
1144			
1145		24)	ASTM D 2382-83
1146			
1147	b)	Stand	ard Industrial Classification Manual, published by Executive Office of the
1148		Presid	lent, Office of Management and Budget, Washington, D.C., 1987.
1149			
1150	c)	Amer	ican Petroleum Institute Bulletin 2517, "Evaporation Loss From Floating
1151		Roof	Tanks", Second ed., February 1980.
1152			
1153	d)	40 CF	<sup>5</sup> R 60 (July 1, 1991).
1154			
1155	e)	40 CF	FR 61 (July 1, 1991).
1156	0		
1157	t)	40 CF	rK 50 (July 1, 1991).
1158	、	10.07	
1159	g)	40 CF	K 51 (July 1, 1991) and 40 CFR 51, appendix M, Methods 204-204F (July
1160		1, 199	79).

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1161		
1162	h)	40 CFR 52 (July 1, 1991).
1163	,	
1164	i)	"A Guide for Surface Coating Calculation", July 1986, United States
1165	,	Environmental Protection Agency, Washington, D.C., EPA-340/1-86-016.
1166		
1167	j)	"Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by
1168	57	Paint, Ink and Other Coating" (revised June 1986), United States Environmental
1169		Protection Agency, Washington D.C., EPA-450/3-84-019.
1170		
1171	k)	"A Guide for Graphic Arts Calculations", August 1988, United States
1172	,	Environmental Protection Agency, Washington D.C., EPA-340/1-88-003.
1173		
1174	1)	"Protocol for Determining the Daily Volatile Organic Compound Emission Rate
1175	/	of Automobile and Light-Duty Truck Topcoat Operations", December 1988,
1176		United States Environmental Protection Agency, Washington D.C., EPA-450/3-
1177		88-018.
1178		
1179	m)	"Control of Volatile Organic Emissions from Manufacturing of Synthesized
1180		Pharmaceutical Products", December 1978, United States Environmental
1181		Protection Agency, Washington, D.C., EPA-450/2-78-029.
1182		
1183	n)	"Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and
1184	,	Vapor Collection Systems", December 1978, Appendix B, United States
1185		Environmental Protection Agency, Washington, D.C., EPA-450/2-78-051.
1186		
1187	o)	"Control of Volatile Organic Compound Emissions from Large Petroleum Dry
1188	,	Cleaners", September 1982, United States Environmental Protection Agency,
1189		Washington, D.C., EPA-450/3-82-009.
1190		
1191	p)	"APTI Course SI417 Controlling Volatile Organic Compound Emissions from
1192		Leaking Process Equipment", 1982, United States Environmental Protection
1193		Agency, Washington, D.C., EPA-450/2-82-015.
1194		
1195	q)	"Portable Instrument User's Manual for Monitoring VOM Sources", June 1986,
1196		United States Environmental Protection Agency, Washington, D.C., EPA-340/1-
1197		86-015.
1198		
1199	r)	"Protocols for Generating Unit-Specific Emission Estimates for Equipment Leaks
1200		of VOM and VHAP", October 1988, United States Environmental Protection
1201		Agency, Washington, D.C., EPA-450/3-88-010.
1202		
1203	s)	"Petroleum Refinery Enforcement Manual", March 1980, United States

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1204		Environmental Protection Agency, Washington, D.C., EPA-340/1-80-008.
1205		"Insurantian Manual for Control of Walstill Orace in E. S. C. C. I'
1200	U)	Inspection Manual for Control of Volatile Organic Emissions from Gasoline
1207		Marketing Operations: Appendix D <sup>-</sup> , 1980, United States Environmental
1208		Protection Agency, wasnington, D.C., EPA-340/1-80-012.
1209	、 、	
1210	u)	"Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals:
1211		Appendix A", December 1977, United States Environmental Protection Agency,
1212		Washington, D.C., EPA-450/2-77-026.
1213		
1214	<del>v)</del>	"Technical Guidance Stage II Vapor Recovery Systems for Control of Vehicle
1215		Refueling Emissions at Gasoline Dispensing Facilities", November 1991, United
1216		States Environmental Protection Agency, Washington, D.C., EPA-450/3-91-022b.
1217		
1218	<u>v)</u> <del>w)</del>	California Air Resources Board, Compliance Division. Compliance Assistance
1219		Program: Gasoline Marketing and Distribution: Gasoline Facilities Phase I & II
1220		(October 1988, rev. November 1993) (CARB Manual).
1221		
1222	<u>w)</u> <del>x)</del>	"Guidelines for Determining Capture Efficiency", January 1995, Office of Air
1223		Quality Planning and Standards, United States Environmental Protection Agency,
1224		Research Triangle Park NC.
1225		
1226	<u>x)<del>y)</del></u>	Memorandum "Revised Capture Efficiency Guidance for Control of Volatile
1227		Organic Compound Emissions", February 1995, John S. Seitz, Director, Office of
1228		Air Quality Planning and Standards, United States Environmental Protection
1229		Agency.
1230		
1231	<u>y)<del>z)</del></u>	"Protocol for Determining the Daily Volatile Organic Compound Emission Rate
1232		of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations",
1233		September 2008, United States Environmental Protection Agency, Washington,
1234		D.C., EPA-453/R-08-002.
1235		
1236	<u>z)aa)</u>	40 CFR 63 subpart PPPP, appendix A (2008).
1237		
1238	<u>aa)<del>bb)</del></u>	46 CFR subchapter Q (2007).
1239		
1240	bb) <del>cc)</del>	46 CFR subchapter T (2008).
1241	/	
1242	(Sourc	e: Amended at 37 Ill. Reg., effective )
1243		
1244		SUBPART Y: GASOLINE DISTRIBUTION
1245		
1246	Section 219.5	83 Gasoline Dispensing Operations – Storage Tank Filling Operations

1247				
1248	a)	Subjec	et to sub	protection (b) below, no person shall cause or allow the transfer of
1249	<i>`</i>	gasolii	ne from	any delivery vessel into any stationary storage tank at a gasoline
1250		dispen	sing op	peration unless:
1251			0 1	
1252		1)	The ta	ink is equipped with a submerged loading pipe: and
1253		-,		
1254		2)	The v	apors displaced from the storage tank during filling are processed by
1255		-)	a vanc	or control system that includes one or more of the following:
1256			u .upc	
1257			A)	A vapor collection system that meets the requirements of
1258			)	subsection (d)(4) below: or
1259				Subsection (a)(1) below, of
1257			B)	A refrigeration-condensation system or any other system approved
1260			D)	hy the Agency and approved by the USEPA as a SIP revision that
1267				recovers at least 90 percent by weight of all vanorized organic
1262				material from the equipment being controlled; and
1203				material from the equipment being controlled, and
1204			()	The delivery vessel displays the appropriate sticker pursuant to the
1205			C)	requirements of Section 210 584(b) or (d) of this Bort, and
1200				requirements of Section 219.384(0) of (a) of this Fait, and
1207		2)	DVM	arch 15, 1005, all tank want nings are aquinned with
1200		5)	Dy IVIA	arch 15, 1995, all talk vent pipes are equipped with
1209			pressu	ne vacuum rener varves with the following design specifications:
1270			• >	
1271			A)	The pressure/vacuum relief valve shall be set to resist a pressure of
1272				at least 3.5 inches water column and to resist a vacuum of no less
1273				than 6.0 inches water column; or
1274				
1275			В)	The pressure/vacuum relief valve shall meet the requirements of 35
1276				III. Adm. Code 218.586(c); and
1277			<b>T</b> 1	
1278		4)	The or	wher or operator of a gasoline dispensing operation demonstrates
1279			compl	iance with subsection (a)(3) of this Section, by March 15, 1995 or
1280			30 day	's after installation of each pressure/vacuum relief valve, whichever
1281			is later	r, and at least annually thereafter, by measuring and recording the
1282			pressu	re indicated by a pressure/vacuum gauge at each tank vent pipe.
1283			The te	st shall be performed on each tank vent pipe within two hours after
1284			produc	ct delivery into the respective storage tank. For manifolded tank
1285			vent s	ystems, observations at any point within the system shall be
1286			adequa	ate. The owner or operator shall maintain any records required by
1287			this su	bsection for a period of three years.
1288				
1289	b)	The re-	quirem	ents of subsections $(a)(2)$ and $(a)(3)$ above shall not apply to

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1290		transf	ers of gasoline to a stationary storage tank at a gasoline dispensing operation
1291		if:	
1292			
1293		1)	The tank is equipped with a floating roof, or other system of equal or
1294			better emission control as approved by the Agency and approved by the
1295			USEPA as a SIP revision;
1296			
1297		2)	The tank has a capacity of less than 2000 gallons and was in place and
1298		,	operating before January 1, 1979; or
1299			
1300		3)	The tank has a capacity of less than 575 gallons.
1301		,	
1302	c)	Subje	ct to subsection (b) above, each owner of a gasoline dispensing operation
1303		shall:	
1304			
1305		1)	Install all control systems and make all process modifications required by
1306		/	subsection (a) above:
1307			
1308		2)	Provide instructions to the operator of the gasoline dispensing operation
1309		,	describing necessary maintenance operations and procedures for prompt
1310			notification of the owner in case of any malfunction of a vapor control
1311			system: and
1312			
1313		3)	Repair, replace or modify any worn out or malfunctioning component or
1314		- /	element of design.
1315			
1316	d)	Subje	ct to subsection (b) above, each operator of a gasoline dispensing operation
1317	,	shall:	
1318			
1319		1)	Maintain and operate each vapor control system in accordance with the
1320			owner's instructions:
1321			
1322		2)	Promptly notify the owner of any scheduled maintenance or malfunction
1323		,	requiring replacement or repair of a major component of a vapor control
1324			system:
1325			
1326		3)	Maintain gauges, meters or other specified testing devices in proper
1327			working order;
1328			<b>č</b> ,
1329		4)	Operate the vapor collection system and delivery vessel unloading points
1330		/	in a manner that prevents:
1331			
1332			A) A reading equal to or greater than 100 percent of the lower
			, <u> </u>

h the procedure described in EPA 450/2-78-051 corporated by reference at Section 219.112 of this
corporated by reference at Section 219.112 of this
a of liquid during the filling of storage tenkes and
s of liquid during the filling of storage tenks, and
s of liquid during the filling of storage tenks, and
s of inquid during the mining of storage tanks, and
s after discovery of the leak by the owner, operator,
nd retest a vapor collection system which exceeds
(d)(4)(A) above.
operation subject to subsection (a) above shall be
ements specified under 35 Ill. Adm. Code 201.142,
d that:
of the gasoline dispensing operation submits to the
which provides, at a minimum, the operation name
of the owner or operator, the location (including
address and telephone number) of records and
Section, the number of underground tanks, the
, and the date of completion of installation of the
nd pressure/vacuum relief valve.
-
nitted to the Agency by March 15, 1995 or 30 days
apor control system or pressure/vacuum relief
er.
pate is displayed at the gasoline dispensing
n existing vapor control system or
valve, the owner or operator of the gasoline
ibmits to the Agency a registration that details the
tion provided in the previous registration and which
of the owner or operator. The registration must be
y within 30 days after completion of such
· · · · · · · · · · · · · · · · · · ·
, effective)

2 A.A. 4

### ILLINOIS REGISTER JCAR350219-1306083r01

### POLLUTION CONTROL BOARD

NOTICE OF PROPOSED AMENDMENTS

## TITLE 35: ENVIRONMENTAL PROTECTION SUBTITLE B: AIR POLLUTION CHAPTER I: POLLUTION CONTROL BOARD SUBCHAPTER c: EMISSIONS STANDARDS AND LIMITATIONS FOR STATIONARY SOURCES

### PART 219 ORGANIC MATERIAL EMISSION STANDARDS AND LIMITATIONS FOR THE METRO EAST AREA

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- 219.102 Abbreviations and Conversion Factors
- 219.103 Applicability
- 219.104 Definitions
- 219.105 Test Methods and Procedures
- 219.106 Compliance Dates
- 219.107 Operation of Afterburners
- 219.108 Exemptions, Variations, and Alternative Means of Control or Compliance Determinations
- 219.109 Vapor Pressure of Volatile Organic Liquids
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- 219.113 Monitoring for Negligibly-Reactive Compounds

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- 219.119 Applicability for VOL
- 219.120 Control Requirements for Storage Containers of VOL
- 219.121 Storage Containers of VPL
- 219.122 Loading Operations
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219.APPENDIX G	TRE Index Measurements for SOCMI Reactors and Distillation Units
219.APPENDIX H	Baseline VOM Content Limitations for Subpart F, Section 219.212
	Cross-Line Averaging

AUTHORITY: Implementing Section 10 and authorized by Sections 27, 28 and 28.5 of the Environmental Protection Act [415 ILCS 5/10, 27, 28 and 28.5].

SOURCE: Adopted in R91-8 at 15 III. Reg. 12491, effective August 16, 1991; amended in R91-24 at 16 III. Reg. 13597, effective August 24, 1992; amended in R91-30 at 16 III. Reg. 13883, effective August 24, 1992; emergency amendment in R93-12 at 17 III. Reg. 8295, effective May 24, 1993, for a maximum of 150 days; amended in R93-9 at 17 III. Reg. 16918, effective September 27, 1993 and October 21, 1993; amended in R93-28 at 18 III. Reg. 4242, effective March 3, 1994; amended in R94-12 at 18 III. Reg. 14987, effective September 21, 1994; amended in R94-15 at 18 III. Reg. 16415, effective October 25, 1994; amended in R94-16 at 18 III. Reg. 16980, effective November 15, 1994; emergency amendment in R95-10 at 19 III. Reg. 3059, effective February 28, 1995, for a maximum of 150 days; amended in R94-21, R94-31 and R94-32 at 19 III. Reg. 6958, effective May 9, 1995; amended in R94-33 at 19 III. Reg. 7385, effective May 22, 1995; amended in R96-2 at 20 III. Reg. 3848, effective February 15, 1996; amended in R96-13 at 20 III. Reg. 14462, effective October 28, 1996; amended in R97-24 at 21 III. Reg. 7721, effective June 9, 1997; amended in R97-31 at 22 III. Reg. 3517, effective February

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2, 1998; amended in R04-12/20 at 30 Ill. Reg. 9799, effective May 15, 2006; amended in R06-21 at 31 Ill. Reg. 7110, effective April 30, 2007; amended in R10-10 at 34 Ill. Reg. 5392, effective March 23, 2010; amended in R10-8 at 34 Ill. Reg. 9253, effective June 25, 2010; amended in R10-20 at 34 Ill. Reg. 14326, effective September 14, 2010; amended in R10-8(A) at 35 Ill. Reg. 496, effective December 21, 2010; amended in R11-23 at 35 Ill. Reg. 13676, effective July 27, 2011; amended in R11-23(A), at 35 Ill. Reg. 18830, effective October 25, 2011); amended in R12-24 at 37 Ill. Reg. 1722, effective January 28, 2013; amended in R13-18 at 37 Ill. Reg.

## SUBPART A: GENERAL PROVISIONS

### Section 219.105 Test Methods and Procedures

- a) Coatings, Inks and Fountain Solutions The following test methods and procedures shall be used to determine compliance of as applied coatings, inks, and fountain solutions with the limitations set forth in this Part.
  - Sampling: Samples collected for analyses shall be one-liter taken into a one-liter container at a location and time such that the sample will be representative of the coating as applied (i.e., the sample shall include any dilution solvent or other VOM added during the manufacturing process). The container must be tightly sealed immediately after the sample is taken. Any solvent or other VOM added after the sample is taken must be measured and accounted for in the calculations in subsection (a)(3) of this Section. For multiple package coatings, separate samples of each component shall be obtained. A mixed sample shall not be obtained as it will cure in the container. Sampling procedures shall follow the guidelines presented in:
    - A) ASTM D 3925-81 (1985) standard practice for sampling liquid paints and related pigment coating. This practice is incorporated by reference in Section 219.112 of this Part.
    - B) ASTM E 300-86 standard practice for sampling industrial chemicals. This practice is incorporated by reference in Section 219.112 of this Part.
  - 2) Analyses: The applicable analytical methods specified below shall be used

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to determine the composition of coatings, inks, or fountain solutions as applied.

- A) Method 24 of 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part, shall be used to determine the VOM content and density of coatings. If it is demonstrated to the satisfaction of the Agency and the USEPA that plant coating formulation data are equivalent to Method 24 results, formulation data may be used. In the event of any inconsistency between a Method 24 test and a facility's formulation data, the Method 24 test will govern.
- B) Method 24A of 40 CFR 60, appendix Appendix A, incorporated by reference in Section 219.112, shall be used to determine the VOM content and density of rotogravure printing inks and related coatings. If it is demonstrated to the satisfaction of the Agency and USEPA that the plant coating formulation data are equivalent to Method 24A results, formulation data may be used. In the event of any inconsistency between a Method 24A test and formulation data, the Method 24A test will govern.
- C) The following ASTM methods are the analytical procedures for determining VOM:
  - ASTM D 1475-85: Standard test method for density of paint, varnish, lacquer and related products. This test method is incorporated by reference in Section 219.112 of this Part.
  - ii) ASTM D 2369-87: Standard test method for volatile content of a coating. This test method is incorporated by reference in Section 219.112 of this Part.
  - iii) ASTM D 3792-86: Standard test method for water content of water-reducible paints by direct injection into a gas chromatograph. This test method is incorporated by reference in Section 219.112 of this Part.
  - iv) ASTM D 4017-81 (1987): Standard test method for water

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content in paints and paint materials by the Karl Fischer method. This test method is incorporated by reference in Section 219.112 of this Part.

- v) ASTM D 4457-85: Standard test method for determination of dichloromethane and 1,1,1, trichloroethane in paints and coatings by direct injection into a gas chromatograph. (The procedure delineated above can be used to develop protocols for any compounds specifically exempted from the definition of VOM.) This test method is incorporated by reference in Section 219.112 of this Part.
- vi) ASTM D 2697-86: Standard test method for volume non-volatile matter in clear or pigmented coatings. This test method is incorporated by reference in Section 219.112 of this Part.
- vii) ASTM D 3980-87: Standard practice for interlaboratory testing of paint and related materials. This practice is incorporated by reference in Section 219.112 of this Part.
- viii) ASTM E 180-85: Standard practice for determining the precision of ASTM methods for analysis of and testing of industrial chemicals. This practice is incorporated by reference in Section 219.112 of this Part.
- ix) ASTM D 2372-85: Standard method of separation of vehicle from solvent-reducible paints. This method is incorporated by reference in Section 219.112 of this Part.
- D) Use of an adaptation to any of the analytical methods specified in subsections (a)(2)(A), (B), and (C) of this Section may not be used unless approved by the Agency and USEPA. An owner or operator must submit sufficient documentation for the Agency and USEPA to find that the analytical methods specified in subsections (a)(2)(A), (B), and (C) of this Section will yield inaccurate results and that the proposed adaptation is appropriate.
- 3) Calculations: Calculations for determining the VOM content, water

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content and the content of any compounds which are specifically exempted from the definition of VOM of coatings, inks and fountain solutions as applied shall follow the guidance provided in the following documents:

- A) "A Guide for Surface Coating Calculation", EPA-340/1-86-016, incorporated by reference in Section 219.112 of this Part.
- B) "Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink and Other Coatings" (revised June 1986), EPA-450/3-84-019, incorporated by reference in Section 219.112 of this Part.
- C) "A Guide for Graphic Arts Calculations", August 1988, EPA-340/1-88-003, incorporated by reference in Section 219.112 of this Part.
- b) Automobile or Light-Duty Truck Test Protocol
  - 1) The protocol for testing, including determining the transfer efficiency of coating applicators, at primer surfacer operations and topcoat operations at an automobile or light-duty truck assembly source shall follow the procedures in the following:
    - A) Prior to May 1, 2012: "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations" ("topcoat protocol"), December 1988, EPA-450/3-88-018, incorporated by reference in Section 219.112 of this Part.
    - B) On and after May 1, 2012: "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations" (topcoat protocol), September 2008, EPA-453/R-08-002, incorporated by reference in Section 219.112 of this Part.
  - 2) Prior to testing pursuant to the applicable topcoat protocol, the owner or operator of a coating operation subject to the topcoat or primer surfacer limit in Section 219.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(E) shall submit a detailed testing proposal specifying the method by

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which testing will be conducted and how compliance will be demonstrated consistent with the applicable topcoat protocol. The proposal shall include, at a minimum, a comprehensive plan (including a rationale) for determining the transfer efficiency at each booth through the use of in-plant or pilot testing, the selection of coatings to be tested (for the purpose of determining transfer efficiency) including the rationale for coating groupings, the method for determining the analytic VOM content of as applied coatings and the formulation solvent content of as applied coatings, and a description of the records of coating VOM content as applied and coating's usage that will be kept to demonstrate compliance. Upon approval of the proposal by the Agency and USEPA, the compliance demonstration for a coating line may proceed.

- c) Capture System Efficiency Test Protocols
  - 1) Applicability

The requirements of subsection (c)(2) of this Section shall apply to all VOM emitting process emission units employing capture equipment (e.g., hoods, ducts), except those cases noted in this subsection (c)(1).

- A) If an emission unit is equipped with (or uses) a permanent total enclosure (PTE) that meets Agency and USEPA specifications, and which directs all VOM to a control device, then the emission unit is exempted from the requirements described in subsection (c)(2) of this Section. The Agency and USEPA specifications to determine whether a structure is considered a PTE are given in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part. In this instance, the capture efficiency is assumed to be 100 percent and the emission unit is still required to measure control efficiency using appropriate test methods as specified in subsection (d) of this Section.
- B) If an emission unit is equipped with (or uses) a control device designed to collect and recover VOM (e.g., carbon adsorber), an explicit measurement of capture efficiency is not necessary provided that the conditions given below are met. The overall control of the system can be determined by directly comparing the input liquid VOM to the recovered liquid VOM. The general procedure for use in this situation is given in 40 CFR 60.433,

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incorporated by reference in Section 219.112 of this Part, with the following additional restrictions:

- i) The source owner or operator shall obtain data each operating day for the solvent usage and solvent recovery to permit the determination of the solvent recovery efficiency of the system each operating day using a 7-day rolling period. The recovery efficiency for each operating day is computed as the ratio of the total recovered solvent for that day and the most recent prior 6 operating days to the total solvent usage for the same 7-day period used for the recovered solvent, rather than a 30-day weighted average as given in 40 CFR 60.433 incorporated by reference in Section 219.112 of this Part. This ratio shall be expressed as a percentage. The ratio shall be computed within 72 hours following each 7-day period. A source that believes that the 7-day rolling period is not appropriate may use an alternative multi-day rolling period not to exceed 30 days, with the approval of the Agency and USEPA. In addition, the criteria in subsection (c)(1)(B)(ii) or subsection-(c)(1)(B)(iii) below must be met.
- The solvent recovery system (i.e., capture and control system) must be dedicated to a single coating line, printing line, or other discrete activity that by itself is subject to an applicable VOM emission standard, or iii) Ifif the solvent recovery system controls more than one coating line, printing line or other discrete activity that by itself is subject to an applicable VOM emission standard, the overall control (i.e., the total recovered VOM divided by the sum of liquid VOM input from all lines and other activities venting to the control system) must meet or exceed the most stringent standard applicable to any line or other discrete activity venting to the control system.

### 2) Capture Efficiency Protocols

The capture efficiency of an emission unit shall be measured using one of the protocols given below. Appropriate test methods to be utilized in each of the capture efficiency protocols are described in appendix M of 40 CFR

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51, incorporated by reference in Section 219.112 of this Part. Any error margin associated with a test method or protocol may not be incorporated into the results of a capture efficiency test. If these techniques are not suitable for a particular process, then an alternative capture efficiency protocol may be used, pursuant to the provisions of Section 219.108(b) of this Part.

A) Gas/gas method using temporary total enclosure (TTE). The Agency and USEPA specifications to determine whether a temporary enclosure is considered a TTE are given in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part. The capture efficiency equation to be used for this protocol is:

$$CE = \frac{G_w}{G_w + F_w}$$

where:

- C = capture efficiency, decimal fraction; E
- G<sub>w</sub> = mass of VOM captured and delivered to control device using a TTE;
- $F_w$  = mass of uncaptured VOM that escapes from a TTE.

Method 204B or 204C contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, is used to obtain  $G_w$ . Method 204D in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, is used to obtain  $F_w$ .

B) Liquid/gas method using TTE. The Agency and USEPA specifications to determine whether a temporary enclosure is considered a TTE are given in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part. The capture efficiency equation to be used for this protocol is:

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$$CE = \frac{L - F_{W}}{L}$$

where:

CE = capture efficiency, decimal fraction;L = mass of liquid VOM input to process emission unit; = mass of uncaptured VOM that escapes from a TTE. Fw

Method 204A or 204F contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part is used to obtain L. Method 204 in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part is used to obtain Fw.

Gas/gas method using the building or room (building or room C) enclosure), in which the affected coating line, printing line or other emission unit is located, as the enclosure, as determined by Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, and in which "F<sub>B</sub>" and "G" are measured while operating only the affected line or emission unit. All fans and blowers in the building or room must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:

$$CE = \frac{G}{G + F_{R}}$$

where:

FB

= capture efficiency, decimal fraction; CE mass of VOM captured and delivered to control device; G = = mass of uncaptured VOM that escapes from building

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enclosure.

Method 204B or 204C contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part<sub>a</sub> is used to obtain G. Method 204E in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part is used to obtain  $F_B$ .

D) Liquid/gas method using the building or room (building or room enclosure), in which the affected coating line, printing line or other emission unit is located, as the enclosure as determined by Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, and in which "F<sub>B</sub>" and "L" are measured while operating only the affected line emission unit. All fans and blowers in the building or room must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:

$$CE = \frac{L - F_B}{L}$$

where:

- C = capture efficiency, decimal fraction; E
- L = mass of liquid VOM input to process emission unit;
- $F_B$  = mass of uncaptured VOM that escapes from building enclosure.

Method 204A or 204F contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, is used to obtain L. Method 204E in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, is used to obtain  $F_B$ .

E) Mass balance using Data Quality Objective (DQO) or Lower
Confidence Limit (LCL) protocol. For a liquid/gas input where an owner or operator is using the DQO/LCL protocol and not using an

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enclosure as described in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, the VOM content of the liquid input (L) must be determined using Method 204A or 204F in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part. The VOM content of the captured gas stream (G) to the control device must be determined using Method 204B or 204C in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part. The results of capture efficiency calculations (G/L) must satisfy the DOO or LCL statistical analysis methodology as described in Section 3 of USEPA's "Guidelines for Determining Capture Efficiency"," incorporated by reference at Section 219.112 of this Part. Where capture efficiency testing is done to determine emission reductions for the purpose of establishing emission credits for offsets, shutdowns, and trading, the LCL protocol cannot be used for these applications. In enforcement cases, the LCL protocol cannot confirm non-compliance; capture efficiency must be determined using a protocol under subsection (c)(2)(A), (B), (C) or (D) of this Section, the DQO protocol of this subsection (c)(2)(E), or an alternative protocol pursuant to Section 219.108(b) of this Part.

BOARD NOTE: Where LCL was used in testing emission units that are the subject of later requests for establishing emission credits for offsets, shutdowns, and trading, prior LCL results may not be relied upon to determine the appropriate amount of credits. Instead, to establish the appropriate amount of credits, additional testing may be required that would satisfy the protocol of Section 219.105(c)(2)(A), (B), (C) or (D), the DQO protocol of Section 219.105(c)(2)(E), or an alternative protocol pursuant to Section 219.108(b) of this Part.

3) Simultaneous testing of multiple lines or emission units with a common control device. If an owner or operator has multiple lines sharing a common control device, the capture efficiency of the lines may be tested simultaneously, subject to the following provisions:

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- A) Multiple line testing must meet the criteria of Section 4 of USEPA's "Guidelines for Determining Capture Efficiency<sub>5</sub>", incorporated by reference at Section 219.112 of this Part;
- B) The most stringent capture efficiency required for any individual line or unit must be met by the aggregate of lines or units; and
- C) Testing of all the lines of emission units must be performed with the same capture efficiency test protocol.
- 4) Recordkeeping and Reporting
  - A) All owners or operators affected by this subsection must maintain a copy of the capture efficiency protocol submitted to the Agency and the USEPA on file. All results of the appropriate test methods and capture efficiency protocols must be reported to the Agency within 60 days after the test date. A copy of the results must be kept on file with the source for a period of 3 years.
  - B) If any changes are made to capture or control equipment, then the source is required to notify the Agency and the USEPA of these changes and a new test may be required by the Agency or the USEPA.
  - C) The source must notify the Agency 30 days prior to performing any capture efficiency or control test. At that time, the source must notify the Agency which capture efficiency protocol and control device test methods will be used. Notification of the actual date and expected time of testing must be submitted a minimum of 5 working days prior to the actual date of the test. The Agency may at its discretion accept notification with shorter advance notice provided that such arrangements do not interfere with the Agency's ability to review the protocol and/or observe testing.
  - D) Sources utilizing a PTE must demonstrate that this enclosure meets the requirement given in Method 204 in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part, for a PTE during any testing of their control device.

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- E) Sources utilizing a TTE must demonstrate that their TTE meets the requirements given in Method 204 in appendix M or 40 CFR 51, incorporated by reference in Section 219.112 of this Part, for a TTE during any testing of their control device. The source must also provide documentation that the quality assurance criteria for a TTE have been achieved.
- F) Any source utilizing the DQO or LCL protocol must submit the following information to the Agency with each test report:
  - A copy of all test methods, Quality Assurance/Quality Control procedures, and calibration procedures to be used from those described in appendix M of 40 CFR 51, incorporated by reference in Section 219.112 of this Part;
  - ii) A table with information on each sample taken, including the sample identification and the VOM content of the sample;
  - iii) The quantity of material used for each test run;
  - iv) The quantity of captured VOM for each test run;
  - v) The capture efficiency calculations and results for each test run;
  - vi) The DQO and/or LCL calculations and results; and
  - vii) The Quality Assurance/Quality Control results, including how often the instruments were calibrated, the calibration results, and the calibration gases used.
- d) Control Device Efficiency Testing and Monitoring
  - 1) The control device efficiency shall be determined by simultaneously measuring the inlet and outlet gas phase VOM concentrations and gas volumetric flow rates in accordance with the gas phase test methods specified in subsection (f) of this Section.

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- 2) An owner or operator:
  - A) That uses an afterburner or carbon adsorber to comply with any Section of this Part-219 shall use Agency and USEPA approved continuous monitoring equipment which is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use except as provided in subsection (d)(3) of this Section. The continuous monitoring equipment must monitor the following parameters:
    - i) For each afterburner which does not have a catalyst bed, the combustion chamber temperature of each afterburner.
    - ii) For each afterburner which has a catalyst bed, commonly known as a catalytic afterburner, the temperature rise across each catalytic afterburner bed or VOM concentration of exhaust.
    - iii) For each carbon adsorber, the VOM concentration of each carbon adsorption bed exhaust or the exhaust of the bed next in sequence to be desorbed.
  - B) Must install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring device, such as a strip chart, recorder or computer, having an accuracy of  $\pm 1$  percent of the temperature measured, expressed in degrees Celsius or  $\pm 0.5^{\circ}$  C, whichever is greater.
  - C) Of an automobile or light-duty truck primer surfacer operation or topcoat operation subject to subsection (d)(2)(A)<sub>5</sub> shall keep a separate record of the following data for the control devices, unless alternative provisions are set forth in a permit pursuant to Title V of the Clean Air Act:
    - For thermal afterburners for which combustion chamber temperature is monitored, all 3-hour periods of operation in which the average combustion temperature was more than 28° C (50° F) below the average combustion temperature

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measured during the most recent performance test that demonstrated that the operation was in compliance.

- ii) For catalytic afterburners for which temperature rise is monitored, all 3-hour periods of operation in which the average gas temperature before the catalyst bed is more than 28° C (50° F) below the average gas temperature immediately before the catalyst bed measured during the most recent performance test that demonstrated that the operation was in compliance.
- iii) For catalytic afterburners and carbon adsorbers for which VOM concentration is monitored, all 3-hour periods of operation during which the average VOM concentration or the reading of organics in the exhaust gases is more than 20 percent greater than the average exhaust gas concentration or reading measured by the organic monitoring device during the most recent determination of the recovery efficiency of a carbon adsorber or performance test for a catalytic afterburner, which determination or test that demonstrated that the operation was in compliance.
- 3) An owner or operator that uses a carbon adsorber to comply with Section 219.401 of this Part may operate the adsorber during periods of monitoring equipment malfunction, provided that:
  - A) The owner or operator notifies in writing the Agency and USEPA, within 10 days after the conclusion of any 72 hour period during which the adsorber is operated and the associated monitoring equipment is not operational, of such monitoring equipment failure and provides the duration of the malfunction, a description of the repairs made to the equipment, and the total to date of all hours in the calendar year during which the adsorber was operated and the associated monitoring equipment was not operational;
  - B) During such period of malfunction the adsorber is operated using timed sequences as the basis for periodic regeneration of the adsorber;

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- C) The period of such adsorber operation does not exceed 360 hours in any calendar year without the approval of the Agency and USEPA; and
- D) The total of all hours in the calendar year during which the adsorber was operated and the associated monitoring equipment was not operational shall be reported, in writing, to the Agency and USEPA by January 31 of the following calendar year.
- e) Overall Efficiency
  - 1) The overall efficiency of the emission control system shall be determined as the product of the capture system efficiency and the control device efficiency or by the liquid/liquid test protocol as specified in 40 CFR 60.433, incorporated by reference in Section 219.112 of this Part, (and revised by subsection (c)(1)(B) of this Section) for each solvent recovery system. In those cases in which the overall efficiency is being determined for an entire line, the capture efficiency used to calculate the product of the capture and control efficiency is the total capture efficiency over the entire line.
  - 2) For coating lines which are both chosen by the owner or operator to comply with Section 219.207(a), (d), (e), (f), (g), (l), or (m) of this Part by the alternative in Section 219.207(b)(2) of this Part and meet the criteria allowing them to comply with Section 219.207 instead of Section 219.204 of this Part, the overall efficiency of the capture system and control device, as determined by the test methods and procedures specified in subsections (c), (d) and (e)(1) of this Section, shall be no less than the equivalent overall efficiency which shall be calculated by the following equation:

$$E = \frac{VOM_a - VOM_l}{VOM_a} \times 100$$

where:

E

 Equivalent overall efficiency of the capture system and control device as a percentage;

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- VOM<sub>a</sub> = Actual VOM content of a coating, or the daily-weighted average VOM content of two or more coatings (if more than one coating is used), as applied to the subject coating line as determined by the applicable test methods and procedures specified in subsection (a)(4)(i) of this Part in units of kg VOM/1 (lb VOM/gal) of coating solids as applied;
- VOM<sub>1</sub> = The VOM emission limit specified in Sections 219.204 or 219.205 of this Part in units of kg VOM/1 (lb VOM/gal) of coating solids as applied.
- f) Volatile Organic Material Gas Phase Source Test Methods The methods in 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part delineated below shall be used to determine control device efficiencies.
  - 40 CFR 60, appendix A, Method 18, 25 or 25A, incorporated by reference in Section 219.112 of this Part as appropriate to the conditions at the site, shall be used to determine VOM concentration. Method selection shall be based on consideration of the diversity of organic species present and their total concentration and on consideration of the potential presence of interfering gases. Except as indicated in subsections (f)(1)(A) and (B) below, the test shall consist of three separate runs, each lasting a minimum of 60 min, unless the Agency and the USEPA determine that process variables dictate shorter sampling times.
    - A) When the method is to be used to determine the efficiency of a carbon adsorption system with a common exhaust stack for all the individual adsorber vessels, the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all the individual adsorber vessels.
    - B) When the method is to be used to determine the efficiency of a carbon adsorption system with individual exhaust stacks for each adsorber vessel, each adsorber vessel shall be tested individually. The test for each adsorber vessel shall consist of three separate

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runs. Each run shall coincide with one or more complete adsorption cycles.

- 2) 40 CFR 60, appendix A, Method 1 or 1A, incorporated by reference in Section 219.112 of this Part, shall be used for sample and velocity traverses.
- 3) 40 CFR 60, appendix A, Method 2, 2A, 2C or 2D, incorporated by reference in Section 219.112 of this Part, shall be used for velocity and volumetric flow rates.
- 4) 40 CFR 60, appendix A, Method 3, incorporated by reference in Section 219.112 of this Part, shall be used for gas analysis.
- 5) 40 CFR 60, appendix A, Method 4, incorporated by reference in Section 219.112 of this Part, shall be used for stack gas moisture.
- 6) 40 CFR 60, appendix A, Methods 2, 2A, 2C, 2D, 3 and 4, incorporated by reference in Section 219.112 of this Part, shall be performed, as applicable, at least twice during each test run.
- 7) Use of an adaptation to any of the test methods specified in subsections (f)(1), (2), (3), (4), (5) and (6) of this Section may not be used unless approved by the Agency and the USEPA on a case by case basis. An owner or operator must submit sufficient documentation for the Agency and the USEPA to find that the test methods specified in subsections (f)(1), (2), (3), (4), (5) and (6) of this Section will yield inaccurate results and that the proposed adaptation is appropriate.
- g) Leak Detection Methods for Volatile Organic Material Owners or operators required by this Part to carry out a leak detection monitoring program shall comply with the following requirements:
  - 1) Leak Detection Monitoring
    - A) Monitoring shall comply with 40 CFR 60, appendix A, Method 21, incorporated by reference in Section 219.112 of this Part.
    - B) The detection instrument shall meet the performance criteria of

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Method 21.

- C) The instrument shall be calibrated before use on each day of its use by the methods specified in Method 21.
- D) Calibration gases shall be:
  - i) Zero air (less than 10 ppm of hydrocarbon in air); and
  - ii) A mixture of methane or n-hexane and air at a concentration of approximately, but no less than, 10,000 ppm methane or n-hexane.
- E) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21.
- 2) When equipment is tested for compliance with no detectable emissions as required, the test shall comply with the following requirements:
  - A) The requirements of subsections (g)(1)(A) through (g)(1)(E) of this Section shall apply.
  - B) The background level shall be determined as set forth in Method 21.
- 3) Leak detection tests shall be performed consistent with:
  - A) "APTI Course SI 417 controlling Volatile Organic Compound Emissions from Leaking Process Equipment", EPA-450/2-82-015, incorporated by reference in Section 219.112 of this Part.
  - B) "Portable Instrument User's Manual for Monitoring VOM Sources", EPA-340/1-86-015, incorporated by reference in Section 219.112 of this Part.
  - C) "Protocols for Generating Unit-Specific Emission Estimates for Equipment Leaks of VOM and VHAP", EPA-450/3-88-010, incorporated by reference in Section 219.112 of this Part.

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- D) "Petroleum Refinery Enforcement Manual", EPA-340/1-80-008, incorporated by reference in Section 219.112 of this Part.
- h) Bulk Gasoline Delivery System Test Protocol
  - The method for determining the emissions of gasoline from a vapor recovery system are delineated in 40 CFR 60, <u>Subpartsubpart</u> XX, section 60.503, incorporated by reference in Section 219.112 of this Part.
  - 2) Other tests shall be performed consistent with:
    - A) "Inspection Manual for Control of Volatile Organic Emissions from Gasoline Marketing Operations: Appendix D", EPA-340/1-80-012, incorporated by reference in Section 219.112 of this Part.
    - B) "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals: Appendix A", EPA-450/2-77-026, incorporated by reference in Section 219.112 of this Part.
- i) Notwithstanding other requirements of this Part, upon request of the Agency where it is necessary to demonstrate compliance, an owner or operator of an emission unit which is subject to this Part shall, at his own expense, conduct tests in accordance with the applicable test methods and procedures specific in this Part. Nothing in this Section shall limit the authority of the USEPA pursuant to the Clean Air Act, as amended, to require testing.

 j) Stage II Gasoline Vapor Recovery Test Methods
The methods for determining the acceptable performance of Stage-II Gasoline Vapor Recovery System are delineated in "Technical Guidance-Stage II Vapor Recovery Systems for Control of Vehicle Refueling Emissions at Gasoline-Dispensing Facilities," found at EPA 450/3-91-022b and incorporated by reference in Section 219.112 of this Part.-Specifically, the test methods are as follows:

1) Dynamic Backpressure Test is a test procedure used to determine the pressure drop (flow resistance) through balance vapor collection and

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control systems (including nozzles, vapor hoses, swivels, dispenser pipingand underground piping) at prescribed flow rates.

- 2) Pressure Decay/Leak Test is a test procedure used to quantify the vaportightness of a vapor collection and control system installed at gasoline dispensing facilities.
- 3) Liquid Blockage Test is a test procedure used to detect low points in any vapor collection and control system where condensate may accumulate.

(Source: Amended at 37 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

## Section 219.112 Incorporations by Reference

The following materials are incorporated by reference and do not contain any subsequent additions or amendments:

- a) American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken PA 19428-9555
  - 1) ASTM D 2879-86
  - 2) ASTM D 323-08
  - 3) ASTM D 86-82
  - 4) ASTM D 369-69 (1971)
  - 5) ASTM D 396-69
  - 6) ASTM D 2880-71
  - 7) ASTM D 975-68
  - 8) ASTM D 3925-81 (1985)
  - 9) ASTM E 300-86

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- 10) ASTM D 1475-85
- 11) ASTM D 2369-87
- 12) ASTM D 3792-86
- 13) ASTM D 4017-81 (1987)
- 14) ASTM D 4457-85
- 15) ASTM D 2697-86
- 16) ASTM D 3980-87
- 17) ASTM E 180-85
- 18) ASTM D 2372-85
- 19) ASTM D 97-66
- 20) ASTM E 168-87 (1977)
- 21) ASTM E 169-87
- 22) ASTM E 260-91
- 23) ASTM D 2504-83
- 24) ASTM D 2382-83
- b) Standard Industrial Classification Manual, published by Executive Office of the President, Office of Management and Budget, Washington, D.C., 1987.
- c) American Petroleum Institute Bulletin 2517, "Evaporation Loss From Floating Roof Tanks", Second ed., February 1980.
- d) 40 CFR 60 (July 1, 1991).
- e) 40 CFR 61 (July 1, 1991).

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- f) 40 CFR 50 (July 1, 1991).
- g) 40 CFR 51 (July 1, 1991) and 40 CFR 51, appendix M, Methods 204-204F (July 1, 1999).
- h) 40 CFR 52 (July 1, 1991).
- i) "A Guide for Surface Coating Calculation", July 1986, United States Environmental Protection Agency, Washington, D.C., EPA-340/1-86-016.
- j) "Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink and Other Coating" (revised June 1986), United States Environmental Protection Agency, Washington D.C., EPA-450/3-84-019.
- k) "A Guide for Graphic Arts Calculations", August 1988, United States Environmental Protection Agency, Washington D.C., EPA-340/1-88-003.
- "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations", December 1988, United States Environmental Protection Agency, Washington D.C., EPA-450/3-88-018.
- m) "Control of Volatile Organic Emissions from Manufacturing of Synthesized Pharmaceutical Products", December 1978, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-78-029.
- n) "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems", December 1978, Appendix B, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-78-051.
- o) "Control of Volatile Organic Compound Emissions from Large Petroleum Dry Cleaners", September 1982, United States Environmental Protection Agency, Washington, D.C., EPA-450/3-82-009.
- p) "APTI Course SI417 Controlling Volatile Organic Compound Emissions from Leaking Process Equipment", 1982, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-82-015.

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- Portable Instrument User's Manual for Monitoring VOM Sources", June 1986, United States Environmental Protection Agency, Washington, D.C., EPA-340/1-86-015.
- r) "Protocols for Generating Unit-Specific Emission Estimates for Equipment Leaks of VOM and VHAP", October 1988, United States Environmental Protection Agency, Washington, D.C., EPA-450/3-88-010.
- s) "Petroleum Refinery Enforcement Manual", March 1980, United States Environmental Protection Agency, Washington, D.C., EPA-340/1-80-008.
- t) "Inspection Manual for Control of Volatile Organic Emissions from Gasoline Marketing Operations: Appendix D", 1980, United States Environmental Protection Agency, Washington, D.C., EPA-340/1-80-012.
- u) "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals: Appendix A", December 1977, United States Environmental Protection Agency, Washington, D.C., EPA-450/2-77-026.
- <del>v)</del> "Technical Guidance Stage II Vapor Recovery Systems for Control of Vehicle Refueling Emissions at Gasoline Dispensing Facilities", November 1991, United States Environmental Protection Agency, Washington, D.C., EPA 450/3-91-022b.
- YWY California Air Resources Board, Compliance Division. Compliance Assistance Program: Gasoline Marketing and Distribution: Gasoline Facilities Phase I & II (October 1988, rev. November 1993) (CARB Manual).
- "WXW) "Guidelines for Determining Capture Efficiency", January 1995, Office of Air Quality Planning and Standards, United States Environmental Protection Agency, Research Triangle Park NC.
- Memorandum "Revised Capture Efficiency Guidance for Control of Volatile Organic Compound Emissions", February 1995, John S. Seitz, Director, Office of Air Quality Planning and Standards, United States Environmental Protection Agency.
- yzy) "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations", September 2008, United States Environmental Protection Agency, Washington,

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D.C., EPA-453/R-08-002.

**Zaa**Z) 40 CFR 63 subpart PPPP, appendix A (2008).

- aabbaa) 46 CFR subchapter Q (2007).
- bbccbb) 46 CFR subchapter T (2008).

(Source: Amended at 37 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

# SUBPART Y: GASOLINE DISTRIBUTION

## Section 219.583 Gasoline Dispensing Operations - Storage Tank Filling Operations

- a) Subject to subsection (b) below, no person shall cause or allow the transfer of gasoline from any delivery vessel into any stationary storage tank at a gasoline dispensing facilityoperation unless:
  - 1) The tank is equipped with a submerged loading pipe; and
  - 2) The vapors displaced from the storage tank during filling are processed by a vapor control system that includes one or more of the following:
    - A) A vapor collection system that meets the requirements of subsection (d)(4) below; or
    - B) A refrigeration-condensation system or any other system approved by the Agency and approved by the USEPA as a SIP revision, that recovers at least 90 percent by weight of all vaporized organic material from the equipment being controlled; and
    - C) The delivery vessel displays the appropriate sticker pursuant to the requirements of Section 219.584(b) or (d) of this Part; and
  - 3) By March 15, 1995, all tank vent pipes are equipped with pressure/vacuum relief valves with the following design specifications:
    - A) The pressure/vacuum relief valve shall be set to resist a pressure of at least 3.5 inches water column and to resist a vacuum of no less

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than 6.0 inches water column; or

- B) The pressure/vacuum relief valve shall meet the requirements of 35 Ill. Adm. Code 218.586(c); and
- 4) The owner or operator of a gasoline dispensing operation demonstrates compliance with subsection (a)(3) of this Section, by March 15, 1995 or 30 days after installation of each pressure/vacuum relief valve, whichever is later, and at least annually thereafter, by measuring and recording the pressure indicated by a pressure/vacuum gauge at each tank vent pipe. The test shall be performed on each tank vent pipe within two hours after product delivery into the respective storage tank. For manifoldmanifolded tank vent systems, observations at any point within the system shall be adequate. The owner or operator shall maintain any records required by this subsection for a period of three years.
- b) The requirements of subsections (a)(2) and (a)(3) above shall not apply to transfers of gasoline to a stationary storage tank at a gasoline dispensing facilityoperation if:
  - 1) The tank is equipped with a floating roof, or other system of equal or better emission control as approved by the Agency and approved by the USEPA as a SIP revision;
  - 2) The tank has a capacity of less than 2000 gallons and was in place and operating before January 1, 1979; or
  - 3) The tank has a capacity of less than 575 gallons.
- c) Subject to subsection (b) above, each owner of a gasoline dispensing facilityoperation shall:
  - 1) Install all control systems and make all process modifications required by subsection (a) above;
  - Provide instructions to the operator of the gasoline dispensing facilityoperation describing necessary maintenance operations and procedures for prompt notification of the owner in case of any malfunction of a vapor control system; and

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- 3) Repair, replace or modify any worn out or malfunctioning component or element of design.
- d) Subject to subsection (b) above, each operator of a gasoline dispensing operation shall:
  - 1) Maintain and operate each vapor control system in accordance with the owner's instructions;
  - 2) Promptly notify the owner of any scheduled maintenance or malfunction requiring replacement or repair of a major component of a vapor control system;
  - Maintain gauges, meters or other specified testing devices in proper working order;
  - 4) Operate the vapor collection system and delivery vessel unloading points in a manner that prevents:
    - A) A reading equal to or greater than 100 percent of the lower explosive limit (LEL measured as propane) when tested in accordance with the procedure described in EPA 450/2-78-051 Appendix B incorporated by reference at Section 219.112 of this Part, and
    - B) Avoidable leaks of liquid during the filling of storage tanks; and
  - 5) Within 15 business days after discovery of the leak by the owner, operator, or the Agency, repair and retest a vapor collection system which exceeds the limits of subsection (d)(4)(A) above.
- e) (Reserved)Any retail gasoline dispensing operation subject to subsection (a) above shall be exempt from the permit requirements specified under 35 Ill. Adm.-Code 201.142, 201.143, and 201.144 provided that:
  - 1) The owner or operator of the gasoline dispensing operation submits to the Agency a registration which provides, at a minimum, the operation name and address, signature of the owner or operator, the location (including

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contact person's name, address and telephone number) of records and reports required by this Section, the number of underground tanks, the number of tank pipe vents, and the date of completion of installation of the vapor control system and pressure/vacuum relief valve.

- 2) The registration is submitted to the Agency by March 15, 1995 or 30 days after installation of a vapor control system or pressure/vacuum relief valve, whichever is later.
- 3) The registration certificate is displayed at the gasoline dispensing operation.
- 4) Upon modification of an existing vapor control system or pressure/vacuumrelief valve, the owner or operator of the gasoline dispensing operation submits to the Agency a registration that details the changes to the information provided in the previous registration and which includes the signature of the owner or operator. The registration must be submitted to the Agency within 30 days after completion of such modification.

(Source: Amended at 37 Ill. Reg.\_\_\_\_\_, effective \_\_\_\_\_)
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