

From: [McGill, Richard](#)
To: [Brown, Don](#)
Subject: PC for R18-21 (Part 218)
Date: Monday, April 2, 2018 9:42:43 AM
Attachments: [35-218.docx](#)
[35-218ProposedChanges.docx](#)

Good morning, Mr. Clerk:

Please add this email and two attachments to the R18-21 record as a PC from Jonathan Eastvold of JCAR staff.

Please indicate in the docket entry that this concerns Part 218.

If you have any questions, please let me know. Thank you.

From: Eastvold, Jonathan C. [mailto:JonathanE@ilga.gov]
Sent: Tuesday, March 27, 2018 1:48 PM
To: McGill, Richard <Richard.McGill@illinois.gov>
Subject: [External] 35 IAC 218

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<u>Line</u>	<u>Citation</u>	<u>Change</u>
1.	735 218.105(c)(B)(i)	"alterative" to "alternative"
2.	2718 218.183(a)(10)	"U.S.C." to "USC"
3.	2763 218.184(a)(1)	"U.S.C." to "USC"
4.	3013 218.187(b)(1)(E)	"1" to "l" (one to L)
5.	4042 218.206	"1" to "l" (one to L)
6.	4108 218.207(b)(2)(C)	VOM ₁ to VOM _l (one to L)
7.	5149 218.213(a)(3)	"form" to "from"
8.	5574 218.219(a)(6)	Is this citation correct?
9.	5733 218.401(a)(2)(A)	"owners operators" to "owners or operators"
10.	7858 218.415(c)(2)	"Method24" to "Method 24"
11.	8899 218.434(a)	"degress" to "degrees"
12.	9153 218.442	"wellcovers" to "well covers"
13.	9365 218.461	"treadend" to "tread end"
14.	9369 218.461(a)	"treadend" to "tread end"
15.	9430 218.463	"treadend" to "tread end"
16.	13598 218.901(b), (2)(N)	"propylenediene" to "propylene diene"
17.	13621 218.901(c)(2), V _i	"units of 1" to "units of l" (one to L)
18.	15169 218.APPENDIX A, 78-00-2	"Tetraethyllead" to "Tetra ethyl lead"
19.	15169 218.APPENDIX A, 75-74-1	"Tetramethyllead" to "Tetra methyl lead"
20.	15169 218.APPENDIX A, 112-49-2	"glycoldimethyl" to "glycol dimethyl"
21.	15174 218.APPENDIX A(a)	"do no have" to "do not have"
22.	15437 218.APPENDIX G(a)(6), H _T	"enthaply" to "enthalpy"

1 TITLE 35: ENVIRONMENTAL PROTECTION
2 SUBTITLE B: AIR POLLUTION
3 CHAPTER I: POLLUTION CONTROL BOARD
4 SUBCHAPTER c: EMISSIONS STANDARDS AND
5 LIMITATIONS FOR STATIONARY SOURCES

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7 PART 218
8 ORGANIC MATERIAL EMISSION STANDARDS AND
9 LIMITATIONS FOR THE CHICAGO AREA

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385

386 218.APPENDIX A List of Chemicals Defining Synthetic Organic Chemical and Polymer
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388 218.APPENDIX B VOM Measurement Techniques for Capture Efficiency (Repealed)

389 218.APPENDIX C Reference Methods and Procedures

390 218.APPENDIX D Coefficients for the Total Resource Effectiveness Index (TRE) Equation

391 218.APPENDIX E List of Affected Marine Terminals

392 218.APPENDIX G TRE Index Measurements for SOCOMI Reactors and Distillation Units

393 218.APPENDIX H Baseline VOM Content Limitations for Subpart F, Section 218.212

394 Cross-Line Averaging

395

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

398

399 SOURCE: Adopted at R91-7 at 15 Ill. Reg. 12231, effective August 16, 1991; amended in R91-
400 24 at 16 Ill. Reg. 13564, effective August 24, 1992; amended in R91-28 and R91-30 at 16 Ill.
401 Reg. 13864, effective August 24, 1992; amended in R93-9 at 17 Ill. Reg. 16636, effective
402 September 27, 1993; amended in R93-14 at 18 Ill. Reg. 1945, effective January 24, 1994;
403 amended in R94-12 at 18 Ill. Reg. 14973, effective September 21, 1994; amended in R94-15 at
404 18 Ill. Reg. 16392, effective October 25, 1994; amended in R94-16 at 18 Ill. Reg. 16950,
405 effective November 15, 1994; amended in R94-21, R94-31 and R94-32 at 19 Ill. Reg. 6848,
406 effective May 9, 1995; amended in R94-33 at 19 Ill. Reg. 7359, effective May 22, 1995;
407 amended in R96-13 at 20 Ill. Reg. 14428, effective October 17, 1996; amended in R97-24 at 21
408 Ill. Reg. 7708, effective June 9, 1997; amended in R97-31 at 22 Ill. Reg. 3556, effective
409 February 2, 1998; amended in R98-16 at 22 Ill. Reg. 14282, effective July 16, 1998; amended in
410 R02-20 at 27 Ill. Reg. 7283, effective April 8, 2003; amended in R04-12/20 at 30 Ill. Reg. 9684,
411 effective May 15, 2006; amended in R06-21 at 31 Ill. Reg. 7086, effective April 30, 2007;
412 amended in R08-8 at 32 Ill. Reg. 14874, effective August 26, 2008; amended in R10-10 at 34 Ill.
413 Reg. 5330, effective March 23, 2010; amended in R10-8 at 34 Ill. Reg. 9096, effective June 25,
414 2010; amended in R10-20 at 34 Ill. Reg. 14174, effective September 14, 2010; amended in R10-

415 8(A) at 35 Ill. Reg. 469, effective December 21, 2010; amended in R11-23 at 35 Ill. Reg. 13473,
416 effective July 27, 2011; amended in R11-23(A) at 35 Ill. Reg. 18813, effective October 25, 2011;
417 amended in R12-24 at 37 Ill. Reg. 1699, effective January 28, 2013; amended in R13-18 at 38 Ill.
418 Reg. 1032, effective December 23, 2013.

419

420

SUBPART A: GENERAL PROVISIONS

421

Section 218.100 Introduction

422

423

424

- a) This Part contains standards and limitations for emissions of organic material and
425 volatile organic material from stationary sources located in the Chicago area,
426 which is comprised of Cook, DuPage, Kane, Lake, McHenry and Will Counties
427 and Aux Sable Township and Goose Lake Township in Grundy County and
428 Oswego Township in Kendall County.

429

430

- b) Sources subject to this Part may be subject to the following:

431

432

- 1) Permits required under 35 Ill. Adm. Code 201 and

433

434

- 2) Air quality standards under 35 Ill. Adm. Code 243.

435

436

- c) This Part is divided into Subparts which are grouped as follows:

437

438

- 1) Subpart A: General Provisions;

439

440

- 2) Subparts B-F: Emissions from equipment and operations in common to
441 more than one industry;

442

443

- 3) Subpart G: Emissions from use of organic material;

444

445

- 4) Subparts H-RR: Rules for various industry groups.

446

447

- 5) Subpart TT: Rules for emission units not otherwise addressed.

448

449

- 6) Subpart UU: Recordkeeping and reporting for equipment and operations
450 addressed by Subparts PP, QQ, RR, and TT.

451

(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

452

453

454

Section 218.101 Savings Clause

455

456

- a) Every owner or operator of an emission unit formerly subject to 35 Ill. Adm.
457 Code 215 shall have complied with its standards and limitations by the dates and
458 schedules applicable to the emission unit in accordance with 35 Ill. Adm. Code
459 215 or upon initial start-up. All compliance dates or schedules found in 35 Ill.
460 Adm. Code 215 are not superseded by this Part and remain in full force and

461 effect.

- 462
- 463 b) Nothing in this Part shall affect the responsibility of any owner or operator that is
- 464 now or has been subject to the FIP to comply with its requirements thereunder by
- 465 the dates specified in the FIP.
- 466
- 467 c) Nothing in this Part as it is amended from time to time shall relieve the owner or
- 468 operator of a source subject to the requirements of this Part from the obligation to
- 469 comply with the applicable requirements and compliance dates set forth in
- 470 Section 218.106 of this Subpart or any specific schedules contained within the
- 471 applicable Subparts of this Part even though those compliance dates may have
- 472 been expressly superseded by subsequent amendments.
- 473

474 (Source: Amended at 18 Ill. Reg. 16392, effective October 25, 1994)

475

476 **Section 218.102 Abbreviations and Conversion Factors**

477

478 The abbreviations and conversion factors of 35 Ill. Adm. Code 211 apply to this Part.

479

480 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

481

482 **Section 218.103 Applicability**

483

484 The provisions of this Part shall apply to all sources located in the Chicago area, which is

485 composed of Cook, DuPage, Kane, Lake, McHenry, and Will Counties, and Aux Sable

486 Township and Goose Lake Township in Grundy County, and Oswego Township in Kendall

487 County.

488

- 489 a) The provisions of this Part shall become effective on July 1, 1991 with the
- 490 following exceptions:
- 491
- 492 1) The provisions of this Part shall become effective on September 1, 1991
- 493 for each appellant, including the constituents represented by appellants
- 494 who are associations, who has appealed the federal implementation plan
- 495 (FIP) for the Chicago area (Illinois Regulatory Group v. USEPA, No. 90-
- 496 2778 (and consolidated cases) (7th Cir.)).
- 497
- 498 2) The effectiveness of any provision of this Part applicable to any individual
- 499 source or category of sources which has appealed the FIP shall be stayed
- 500 to the extent that such individual source or category of sources received a
- 501 stay of the effectiveness of the FIP, pending reconsideration, from the
- 502 USEPA or from the court in the FIP appeal cited in subsection
- 503 218.103(a)(1) above. When USEPA has published in the Federal Register
- 504 final action to revise or affirm the provisions of the FIP specifically
- 505 applicable to such individual source or category of sources or such stay is
- 506 otherwise terminated, the Board shall take corresponding action and the

507 Agency shall submit such action to USEPA for approval. Until such time
508 as USEPA approves the corresponding amendment to this Part, the FIP
509 rule shall remain the applicable implementation plan for that source or
510 category of sources under the Clean Air Act.

511
512 3) The provisions of this Part shall become effective on November 15, 1992
513 for all sources located in Aux Sable Township or Goose Lake Township in
514 Grundy County, or in Oswego Township in Kendall County.

515
516 b) The provisions of the Part shall not apply to Viskase Corporation; Allsteel,
517 Incorporated; Stepan Company; or Ford Motor Company to the extent such
518 source has obtained an adjusted standard from the Board or an exclusion from the
519 General Assembly for any Subpart of this Part or of 35 Ill. Adm. Code 215.

520
521 (Board Note: Subsection 218.103(b) of this Section shall be effective at the federal level only
522 upon approval by USEPA.)

523
524 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

525
526 **Section 218.104 Definitions**

527
528 The definitions of 35 Ill. Adm. Code 211 apply to this Part.

529
530 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

531
532 **Section 218.105 Test Methods and Procedures**

533
534 a) Coatings, Inks and Fountain Solutions
535 The following test methods and procedures shall be used to determine
536 compliance of as applied coatings, inks, and fountain solutions with the
537 limitations set forth in this Part.

538
539 1) Sampling: Samples collected for analyses shall be one-liter taken into a
540 one-liter container at a location and time such that the sample will be
541 representative of the coating as applied (i.e., the sample shall include any
542 dilution solvent or other VOM added during the manufacturing process).
543 The container must be tightly sealed immediately after the sample is taken.
544 Any solvent or other VOM added after the sample is taken must be
545 measured and accounted for in the calculations in subsection (a)(3) of this
546 Section. For multiple package coatings, separate samples of each
547 component shall be obtained. A mixed sample shall not be obtained as it
548 will cure in the container. Sampling procedures shall follow the
549 guidelines presented in:

550
551 A) ASTM D 3925-81 (1985) standard practice for sampling liquid
552 paints and related pigment coating. This practice is incorporated

- 553 by reference in Section 218.112 of this Part.
554
555 B) ASTM E 300-86 standard practice for sampling industrial
556 chemicals. This practice is incorporated by reference in Section
557 218.112 of this Part.
558
- 559 2) Analyses: The applicable analytical methods specified below shall be
560 used to determine the composition of coatings, inks, or fountain solutions
561 as applied.
562
- 563 A) Method 24 of 40 CFR 60, appendix A, incorporated by reference
564 in Section 218.112 of this Part, shall be used to determine the
565 VOM content and density of coatings. If it is demonstrated to the
566 satisfaction of the Agency and the USEPA that plant coating
567 formulation data are equivalent to Method 24 results, formulation
568 data may be used. In the event of any inconsistency between a
569 Method 24 test and a facility's formulation data, the Method 24 test
570 will govern.
571
- 572 B) Method 24A of 40 CFR 60, appendix A, incorporated by reference
573 in Section 218.112 of this Part, shall be used to determine the
574 VOM content and density of rotogravure printing inks and related
575 coatings. If it is demonstrated to the satisfaction of the Agency
576 and USEPA that the plant coating formulation data are equivalent
577 to Method 24A results, formulation data may be used. In the event
578 of any inconsistency between a Method 24A test and formulation
579 data, the Method 24A test will govern.
580
- 581 C) The following ASTM methods are the analytical procedures for
582 determining VOM:
583
- 584 i) ASTM D 1475-85: Standard test method for density of
585 paint, varnish, lacquer and related products. This test
586 method is incorporated by reference in Section 218.112 of
587 this Part.
588
- 589 ii) ASTM D 2369-87: Standard test method for volatile
590 content of a coating. This test method is incorporated by
591 reference in Section 218.112 of this Part.
592
- 593 iii) ASTM D 3792-86: Standard test method for water content
594 of water-reducible paints by direct injection into a gas
595 chromatograph. This test method is incorporated by
596 reference in Section 218.112 of this Part.
597
- 598 iv) ASTM D 4017-81 (1987): Standard test method for water

599 content in paints and paint materials by the Karl Fischer
600 method. This test method is incorporated by reference in
601 Section 218.112 of this Part.

602
603 v) ASTM D 4457-85: Standard test method for determination
604 of dichloromethane and 1,1,1, trichloroethane in paints and
605 coatings by direct injection into a gas chromatograph. (The
606 procedure delineated above can be used to develop
607 protocols for any compounds specifically exempted from
608 the definition of VOM.) This test method is incorporated by
609 reference in Section 218.112 of this Part.

610 vi) ASTM D 2697-86: Standard test method for volume non-
611 volatile matter in clear or pigmented coatings. This test
612 method is incorporated by reference in Section 218.112 of
613 this Part.

614
615 vii) ASTM D 3980-87: Standard practice for interlaboratory
616 testing of paint and related materials. This practice is
617 incorporated by reference in Section 218.112 of this Part.

618
619 viii) ASTM E 180-85: Standard practice for determining the
620 precision data of ASTM methods for analysis of and testing
621 of industrial chemicals. This practice is incorporated by
622 reference in Section 218.112 of this Part.

623
624 ix) ASTM D 2372-85: Standard method of separation of
625 vehicle from solvent-reducible paints. This method is
626 incorporated by reference in Section 218.112 of this Part.

627
628 D) Use of an adaptation to any of the analytical methods specified in
629 subsections (a)(2)(A), (B), and (C) of this Section may not be used
630 unless approved by the Agency and USEPA. An owner or
631 operator must submit sufficient documentation for the Agency and
632 USEPA to find that the analytical methods specified in subsections
633 (a)(2)(A), (B), and (C) of this Section will yield inaccurate results
634 and that the proposed adaptation is appropriate.

635
636 3) Calculations: Calculations for determining the VOM content, water
637 content and the content of any compounds which are specifically
638 exempted from the definition of VOM of coatings, inks and fountain
639 solutions as applied shall follow the guidance provided in the following
640 documents:

641
642 A) "A Guide for Surface Coating Calculation", EPA-340/1-86-016,
643 incorporated by reference in Section 218.112 of this Part.
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- 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 218.112 of this Part.
 - C) "A Guide for Graphic Arts Calculations", August 1988, EPA-340/1-88-003, incorporated by reference in Section 218.112 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 218.112 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 218.112 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 218.204(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 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.

- 691 c) Capture System Efficiency Test Protocols
692
693 1) Applicability
694 The requirements of subsection (c)(2) of this Section shall apply to all
695 VOM emitting process emission units employing capture equipment (e.g.,
696 hoods, ducts), except those cases noted in this subsection (c)(1).
697
698 A) If an emission unit is equipped with (or uses) a permanent total
699 enclosure (PTE) that meets Agency and USEPA specifications,
700 and which directs all VOM to a control device, then the emission
701 unit is exempted from the requirements described in subsection
702 (c)(2) of this Section. The Agency and USEPA specifications to
703 determine whether a structure is considered a PTE are given in
704 Method 204 of appendix M of 40 CFR 51, incorporated by
705 reference in Section 218.112 of this Part. In this instance, the
706 capture efficiency is assumed to be 100 percent and the emission
707 unit is still required to measure control efficiency using appropriate
708 test methods as specified in subsection (d) of this Section.
709
710 B) If an emission unit is equipped with (or uses) a control device
711 designed to collect and recover VOM (e.g., carbon adsorber), an
712 explicit measurement of capture efficiency is not necessary
713 provided that the conditions given below are met. The overall
714 control of the system can be determined by directly comparing the
715 input liquid VOM to the recovered liquid VOM. The general
716 procedure for use in this situation is given in 40 CFR 60.433,
717 incorporated by reference in Section 218.112 of this Part, with the
718 following additional restrictions:
719
720 i) Unless otherwise specified in subsection (c)(1)(B)(ii), the
721 owner or operator shall obtain data each operating day for
722 the solvent usage and solvent recovery to permit the
723 determination of the solvent recovery efficiency of the
724 system each operating day using a 7-day rolling period.
725 The recovery efficiency for each operating day is computed
726 as the ratio of the total recovered solvent for that day and
727 the most recent prior 6 operating days to the total solvent
728 usage for the same 7-day period used for the recovered
729 solvent, rather than a 30-day weighted average as given in
730 40 CFR 60.433 incorporated by reference at Section
731 218.112 of this Part. This ratio shall be expressed as a
732 percentage. The ratio shall be computed within 72 hours
733 following each 7-day period. A source that believes that
734 the 7-day rolling period is not appropriate may use an
735 ~~alternative~~[alternative](#) multi-day rolling period not to exceed
736 30 days, with the approval of the Agency and USEPA. In

737 addition, the criteria in subsection (c)(1)(B)(iii) or
738 subsection (c)(1)(B)(iv) must be met.

739
740 ii) The owner or operator of the source engaged in printing
741 located at 350 E. 22nd Street, Chicago, Illinois, shall obtain
742 data each operating day for the solvent usage and solvent
743 recovery to permit the determination of the solvent
744 recovery efficiency of the system each operating day using
745 a 14-day rolling period. The recovery efficiency for each
746 operating day is computed as the ratio of the total recovered
747 solvent for that day and the most recent prior 13 operating
748 days to the total solvent usage for the same 14-day period
749 used for the recovered solvent, rather than a 30-day
750 weighted average as given in 40 CFR 60.433, incorporated
751 by reference in Section 218.112 of this Part. This ratio
752 shall be expressed as a percentage. The ratio shall be
753 computed within 17 days following each 14-day period. In
754 addition, the criteria in subsection (c)(1)(B)(iii) or
755 subsection (c)(1)(B)(iv) must be met.

756
757 iii) The solvent recovery system (i.e., capture and control
758 system) must be dedicated to a single coating line, printing
759 line, or other discrete activity that by itself is subject to an
760 applicable VOM emission standard, or

761
762 iv) If the solvent recovery system controls more than one
763 coating line, printing line or other discrete activity that by
764 itself is subject to an applicable VOM emission standard,
765 the overall control (i.e., the total recovered VOM divided
766 by the sum of liquid VOM input from all lines and other
767 activities venting to the control system) must meet or
768 exceed the most stringent standard applicable to any line or
769 other discrete activity venting to the control system.

770
771 2) Capture Efficiency Protocols

772 The capture efficiency of an emission unit shall be measured using one of
773 the protocols given below. Appropriate test methods to be utilized in each
774 of the capture efficiency protocols are described in appendix M of 40 CFR
775 51, incorporated by reference at Section 218.112 of this Part. Any error
776 margin associated with a test method or protocol may not be incorporated
777 into the results of a capture efficiency test. If these techniques are not
778 suitable for a particular process, then an alternative capture efficiency
779 protocol may be used, pursuant to the provisions of Section 218.108(b) of
780 this Part.

781
782 A) Gas/gas method using temporary total enclosure (TTE). The

783 Agency and USEPA specifications to determine whether a
 784 temporary enclosure is considered a TTE are given in Method 204
 785 of appendix M of 40 CFR 51, incorporated by reference in Section
 786 218.112 of this Part. The capture efficiency equation to be used
 787 for this protocol is:
 788

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

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where:

- CE = Capture efficiency, decimal fraction;
- G_w = Mass of VOM captured and delivered to control device using a TTE;
- F_w = Mass of uncaptured VOM that escapes from a TTE.

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Method 204B or 204C contained in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, is used to obtain G_w. Method 204D in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, is used to obtain F_w.

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- 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 218.112 of this Part. The capture efficiency equation to be used for this protocol is:

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

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809

where:

- CE = Capture efficiency, decimal fraction;
- L = Mass of liquid VOM input to process emission unit;
- F_w = Mass of uncaptured VOM that escapes from a TTE.

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Method 204A or 204F contained in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, is used to obtain L. Method 204 D in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, is used to obtain F_w.

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- C) Gas/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

820 204 of appendix M of 40 CFR 51, incorporated by reference in
821 Section 218.112 of this Part, and in which "F_B" and "G" are
822 measured while operating only the affected line or emission unit.
823 All fans and blowers in the building or room must be operated as
824 they would under normal production. The capture efficiency
825 equation to be used for this protocol is:
826

$$CE = \frac{G}{G + F_B}$$

827
828 where:
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830

- 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.

831
832 Method 204B or 204C contained in appendix M of 40 CFR 51,
833 incorporated by reference in Section 218.112 of this Part is used to
834 obtain G. Method 204E in appendix M of 40 CFR 51, incorporated
835 by reference in Section 218.112 of this Part is used to obtain F_B.
836

- 837 D) Liquid/gas method using the building or room (building or room
838 enclosure), in which the affected coating line, printing line or other
839 emission unit is located, as the enclosure as determined by Method
840 204 of appendix M of 40 CFR 51, incorporated by reference in
841 Section 218.112 of this Part, and in which "F_B" and "L" are
842 measured while operating only the affected line or emission unit.
843 All fans and blowers in the building or room must be operated as
844 they would under normal production. The capture efficiency
845 equation to be used for this protocol is:
846

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

847
848 where:
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850

- CE = Capture efficiency, decimal fraction;
- L = Mass of liquid VOM input to process emission unit;
- F_B = Mass of uncaptured VOM that escapes from building enclosure.

851
852 Method 204A or 204F contained in appendix M of 40 CFR 51,
853 incorporated by reference in Section 218.112 of this Part is used to
854 obtain L. Method 204E in appendix M of 40 CFR 51, incorporated

855 by reference in Section 218.112 of this Part is used to obtain F_B .

- 856
857 E) Mass balance using Data Quality Objective (DQO) or Lower
858 Confidence Limit (LCL) protocol. For a liquid/gas input where an
859 owner or operator is using the DQO/LCL protocol and not using an
860 enclosure as described in Method 204 of appendix M of 40 CFR
861 51, incorporated by reference in Section 218.112 of this Part, the
862 VOM content of the liquid input (L) must be determined using
863 Method 204A or 204F in appendix M of 40 CFR 51, incorporated
864 by reference in Section 218.112 of this Part. The VOM content of
865 the captured gas stream (G) to the control device must be
866 determined using Method 204B or 204C in appendix M of 40 CFR
867 51, incorporated by reference in Section 218.112 of this Part. The
868 results of capture efficiency calculations (G/L) must satisfy the
869 DQO or LCL statistical analysis protocol as described in Section 3
870 of USEPA's "Guidelines for Determining Capture Efficiency,"
871 incorporated by reference at Section 218.112 of this Part. Where
872 capture efficiency testing is done to determine emission reductions
873 for the purpose of establishing emission credits for offsets,
874 shutdowns, and trading, the LCL protocol cannot be used for these
875 applications. In enforcement cases, the LCL protocol cannot
876 confirm non-compliance; capture efficiency must be determined
877 using a protocol under subsection (c)(2)(A), (B), (C) or (D) of this
878 Section, the DQO protocol of this subsection (c)(2)(E), or an
879 alternative protocol pursuant to Section 218.108(b) of this Part.

880
881 BOARD NOTE: Where LCL was used in testing emission units
882 that are the subject of later requests for establishing emission
883 credits for offsets, shutdowns, and trading, prior LCL results may
884 not be relied upon to determine the appropriate amount of credits.
885 Instead, to establish the appropriate amount of credits, additional
886 testing may be required that would satisfy the protocol of Section
887 218.105(c)(2)(A), (B), (C) or (D), the DQO protocol of Section
888 218.105(c)(2)(E), or an alternative protocol pursuant to Section
889 218.108(b) of this Part.

- 890
891 3) Simultaneous testing of multiple lines or emission units with a common
892 control device. If an owner or operator has multiple lines sharing a
893 common control device, the capture efficiency of the lines may be tested
894 simultaneously, subject to the following provisions:

- 895
896 A) Multiple line testing must meet the criteria of Section 4 of
897 USEPA's "Guidelines for Determining Capture Efficiency,"
898 incorporated by reference at Section 218.112 of this Part;
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- 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 or observe testing.
 - D) Sources utilizing a PTE must demonstrate that this enclosure meets the requirements given in Method 204 in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, for a PTE during any testing of their control device.
 - E) Sources utilizing a TTE must demonstrate that their TTE meets the requirements given in Method 204 in appendix M of 40 CFR 51, incorporated by reference in Section 218.112 of this Part, for a TTE during 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:

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- i) 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 218.112 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.
 - 2) An owner or operator:
 - A) That uses an afterburner or carbon adsorber to comply with any Section of Part 218 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.

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- 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 ± 1 percent of the temperature measured 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), 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:
 - i) 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 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 demonstrated that the operation was in compliance.
 - 3) An owner or operator that uses a carbon adsorber to comply with Section 218.401 of this Part may operate the adsorber during periods of monitoring equipment malfunction, provided that:

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- A) The owner or operator notifies in writing the Agency 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;
 - 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 218.112 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 218.207(c), (d), (e), (f), (g), (m), or (n) of this Part by the alternative in Section 218.207(b)(2) of this Part and meet the criteria allowing them to comply with Section 218.207 of this Part instead of Section 218.204 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_a = 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) of this Section in units of kg VOM/l (lb VOM/gal) of coating solids as applied;

VOM_l = The VOM emission limit specified in Section 218.204 or 218.205 of this Part in units of kg VOM/l (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 218.112 of this Part delineated below shall be used to determine control device efficiencies.
- 1) 40 CFR 60, appendix A, Method 18, 25 or 25A, incorporated by reference in Section 218.112 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 minutes, 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 runs. Each run shall coincide with one or more complete

- 1113 adsorption cycles.
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1115 2) 40 CFR 60, appendix A, Method 1 or 1A, incorporated by reference in
1116 Section 218.112 of this Part, shall be used for sample and velocity
1117 traverses.
1118
1119 3) 40 CFR 60, appendix A, Method 2, 2A, 2C or 2D, incorporated by
1120 reference in Section 218.112 of this Part, shall be used for velocity and
1121 volumetric flow rates.
1122
1123 4) 40 CFR 60, appendix A, Method 3, incorporated by reference in Section
1124 218.112 of this Part, shall be used for gas analysis.
1125
1126 5) 40 CFR 60, appendix A, Method 4, incorporated by reference in Section
1127 218.112 of this Part, shall be used for stack gas moisture.
1128
1129 6) 40 CFR 60, appendix A, Methods 2, 2A, 2C, 2D, 3 and 4, incorporated by
1130 reference in Section 218.112 of this Part, shall be performed, as
1131 applicable, at least twice during each test run.
1132
1133 7) Use of an adaptation to any of the test methods specified in subsections
1134 (f)(1), (2), (3), (4), (5) and (6) of this Section may not be used unless
1135 approved by the Agency and the USEPA on a case by case basis. An
1136 owner or operator must submit sufficient documentation for the Agency
1137 and the USEPA to find that the test methods specified in subsections
1138 (f)(1), (2), (3), (4), (5) and (6) of this Section will yield inaccurate results
1139 and that the proposed adaptation is appropriate.
1140
1141 g) Leak Detection Methods for Volatile Organic Material
1142 Owners or operators required by this Part to carry out a leak detection monitoring
1143 program shall comply with the following requirements:
1144
1145 1) Leak Detection Monitoring
1146
1147 A) Monitoring shall comply with 40 CFR 60, appendix A, Method 21,
1148 incorporated by reference in Section 218.112 of this Part.
1149
1150 B) The detection instrument shall meet the performance criteria of
1151 Method 21.
1152
1153 C) The instrument shall be calibrated before use on each day of its use
1154 by the methods specified in Method 21.
1155
1156 D) Calibration gases shall be:
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1158 i) Zero air (less than 10 ppm of hydrocarbon in air); and

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- 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 218.112 of this Part.
 - B) "Portable Instrument User's Manual for Monitoring VOC Sources", EPA-340/1-86-015, incorporated by reference in Section 218.112 of this Part.
 - C) "Protocols for Generating Unit-Specific Emission Estimates for Equipment Leaks of VOC and VHAP", EPA-450/3-88-010, incorporated by reference in Section 218.112 of this Part.
 - D) "Petroleum Refinery Enforcement Manual", EPA-340/1-80-008, incorporated by reference in Section 218.112 of this Part.
 - h) Bulk Gasoline Delivery System Test Protocol
 - 1) The method for determining the emissions of gasoline from a vapor recovery system are delineated in 40 CFR 60, Subpart XX, section 60.503, incorporated by reference in Section 218.112 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 218.112 of this Part.

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- B) "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals: Appendix A", EPA-450/2-77-026, incorporated by reference in Section 218.112 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 218.112 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 control systems (including nozzles, vapor hoses, swivels, dispenser piping and underground piping) at prescribed flow rates.
 - 2) Pressure Decay/Leak Test is a test procedure used to quantify the vapor tightness 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 35 Ill. Reg. 13473, effective July 27, 2011)

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1239 **Section 218.106 Compliance Dates**
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- a) Except as otherwise provided in this Section or as otherwise provided in a specific Subpart of this Part, compliance with the requirements of all rules is required by July 1, 1991, or September 1, 1991, for all sources located in Cook, DuPage, Kane, Lake, McHenry, or Will Counties, consistent with the appropriate provisions of Section 218.103 of this Subpart.
 - b) Except as otherwise provided in this Section or as otherwise provided in a specific Subpart of this Part, compliance with the requirements of this Part is required by November 15, 1993, for all sources located in Aux Sable Township or Goose Lake Township in Grundy County, or in Oswego Township in Kendall County.

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- c) All emission units which meet the applicability requirements of Sections 218.402(a)(2), 218.611(b), 218.620(b), 218.660(a), 218.680(a), 218.920(b), 218.940(b), 218.960(b) or 218.980(b) of this Part, including emission units at sources which are excluded from the applicability criteria of Sections 218.402(a)(1), 218.611(a), 218.620(a), 218.920(a), 218.940(a), 218.960(a), or 218.980(a) of this Part by virtue of permit conditions or other enforceable means, must comply with the requirements of Subparts H, Z, AA, CC, DD, PP, QQ, RR or TT of this Part, respectively, by March 15, 1995. Any owner or operator of an emission unit which has already met the applicability requirements of Sections 218.402(a)(1), 218.611(a), 218.620(a), 218.920(a), 218.940(a), 218.960(a) or 218.980(a) of this Part on or by the effective date of this subsection is required to comply with all compliance dates or schedules found in Sections 218.106(a) or 218.106(b), as applicable.
 - d) Any owner or operator of a source with an emission unit subject to the requirements of Section 218.204(m)(2) or (m)(3) of this Part shall comply with those requirements by March 25, 1995.
 - e) Any owner or operator of a source subject to the requirements of Section 218.204(c)(2), 218.204(g)(2), or 218.204(h)(2) of this Part shall comply with the applicable requirements in the applicable subsections, as well as all applicable requirements in Sections 218.205 through 218.214 and 218.218, by May 1, 2012.
 - f) Any owner or operator of a source subject to the requirements of Section 218.204(p) of this Part shall comply with the requirements in Section 218.204(p), as well as all applicable requirements in Sections 218.205 through 218.211, 218.214, and 218.217 by August 1, 2010.
 - g) Any owner or operator of a source subject to the requirements of Section 218.204(a)(2) or 218.204(q) of this Part shall comply with the applicable requirements in those Sections, as well as all applicable requirements in Sections 218.205 through 218.214 and 218.219, by May 1, 2012.

1285 (Source: Amended at 34 Ill. Reg. 14174, effective September 14, 2010)

1286 **Section 218.107 Operation of Afterburners**

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1289 The operation of any natural gas fired afterburner and capture system used to comply with this
1290 Part is not required during the period of November 1 of any year to April 1 of the following year
1291 provided that the operation of such devices is not required for purposes of occupational safety or
1292 health, or for the control of toxic substances, odor nuisances, or other regulated pollutants.

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1294 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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1296 **Section 218.108 Exemptions, Variations, and Alternative Means of Control or Compliance**

1297 **Determinations**

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1299 Notwithstanding the provisions of any other Sections of this Part:

1300

1301 a) Any exemptions, variations or alternatives adopted by the Board pursuant to
1302 Section 28, 28.1 or 35 of the Act to the control requirements, emission limitations,
1303 or test methods set forth in this Part shall be effective only when approved by the
1304 USEPA as a SIP revision.

1305

1306 b) Any equivalent alternative control plan, equivalent device, or other equivalent
1307 alternative practice authorized by the Agency where this Part provides for such
1308 alternative or equivalent practice or equivalent variations or alterations to test
1309 methods approved by the Agency shall be effective only when included in a
1310 federally enforceable permit or approved as a SIP revision.

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1312 (Source: Amended at 18 Ill. Reg. 1945, effective January 24, 1994)

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1314 **Section 218.109 Vapor Pressure of Volatile Organic Liquids**

1315

1316 a) If the VOL consists of only a single compound, the vapor pressure shall be
1317 determined by ASTM Method D2879-86 (incorporated by reference in Section
1318 218.112 of this Part) or the vapor pressure may be obtained from a publication
1319 such as: Boublik, T., V. Fried and E. Hala, "The Vapor Pressure of Pure
1320 Substances," Elsevier Scientific Publishing Co., New York (1973); Perry's
1321 Chemical Engineer's Handbook, McGraw-Hill Book Company (1984); CRC
1322 Handbook of Chemistry and Physics, Chemical Rubber Publishing Company
1323 (1986-87); and Lange's Handbook of Chemistry, John A. Dean, editor, McGraw-
1324 Hill Book Company (1985).

1325

1326 b) If the VOL is a mixture, the vapor pressure shall be determined by ASTM Method
1327 D2879-86 (incorporated by reference in Section 218.112) or by the following
1328 equation:

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$$P_{vol} = \sum_{i=1}^n P_i X_i$$

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where:

P_{vol} = Total vapor pressure of the mixture;

n = Number of components in the mixture;

i = Subscript denoting an individual component;

P_i = Vapor pressure of a component determined in
accordance with subsection (a) of this Section;

X_i = Mole fraction of the component in the total mixture.

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(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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Section 218.110 Vapor Pressure of Organic Material or Solvent

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- a) If the organic material or solvent consists of only a single compound, the vapor pressure shall be determined by ASTM Method D2879-86 (incorporated by reference in Section 218.112 of this Part) or the vapor pressure may be obtained from a publication such as: Boublik, T., V. Fried and E. Hala, "The Vapor Pressure of Pure Substances," Elsevier Scientific Publishing Co., New York (1973); Perry's Chemical Engineer's Handbook, McGraw-Hill Book Company (1984); CRC Handbook of Chemistry and Physics, Chemical Rubber Publishing Company (1986-87); and Lange's Handbook of Chemistry, John A. Dean, editor, McGraw-Hill Book Company (1985).
- b) If the organic material or solvent is in a mixture made up of both organic material compounds and compounds which are not organic material, the vapor pressure shall be determined by the following equation:

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$$P_{om} = i = 1 \frac{\sum_{i=1}^n P_i X_i}{\sum_{i=1}^n X_i}$$

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where:

- P_{om} = Total vapor pressure of the portion of the mixture which is composed of organic material;
 n = Number of organic material components in the mixture;
 i = Subscript denoting an individual component;
 P_i = Vapor pressure of an organic material component determined in accordance with subsection (a) of this Section;
 X_i = Mole fraction of the organic material component of the total organic mixture.

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- c) If the organic material or solvent is in a mixture made up of only organic material compounds, the vapor pressure shall be determined by ASTM Method D2879-86 (incorporated by reference in Section 218.112 of this Part) or by the above equation.

(Source: Amended at 20 Ill. Reg. 14428, effective October 17, 1996)

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Section 218.111 Vapor Pressure of Volatile Organic Material

- a) If the VOM consists of only a single compound, the vapor pressure shall be determined by ASTM Method D2879-86 (incorporated by reference in Section 218.112 of this Part) or the vapor pressure may be obtained from a publication such as: Boublik, T., V. Fried and E. Hala, "The Vapor Pressure of Pure Substances," Elsevier Scientific Publishing Co., New York (1973); Perry's Chemical Engineer's Handbook, McGraw-Hill Book Company (1984); CRC Handbook of Chemistry and Physics, Chemical Rubber Publishing Company (1986-87); and Lange's Handbook of Chemistry, John A. Dean, editor, McGraw-Hill Book Company (1985).
- b) If the VOM is in a mixture made up of both VOM compounds and compounds which are not VOM, the vapor pressure shall be determined by the following equation:

$$P_{om} = \frac{\sum_{i=1}^n P_i X_i}{\sum_{i=1}^n X_i}$$

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where:

- P_{vom} = Total vapor pressure of the portion of the mixture which is composed of VOM;
- n = Number of VOM components in the mixture;
- i = Subscript denoting an individual component;
- P_i = Vapor pressure of a VOM component determined in accordance with subsection (a) of this Section;
- X_i = Mole fraction of the VOM component of the total organic mixture.

- c) If the VOM is in a mixture made up of only VOM compounds, the vapor pressure shall be determined by ASTM Method D2879-86 (incorporated by reference in Section 218.112 of this Part) or by the above equation.

(Source: Amended at 20 Ill. Reg. 14428, effective October 17, 1996)

Section 218.112 Incorporations by Reference

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

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- 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
 - 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 168-67 (1977)
 - 21) ASTM E 169-87

- 1442 22) ASTM E 260-91
1443
1444 23) ASTM D 2504-83
1445
1446 24) ASTM D 2382-83
1447
1448 25) ASTM D 2099-00
1449
1450 b) Standard Industrial Classification Manual, published by Executive Office of the
1451 President, Office of Management and Budget, Washington, D.C., 1987.
1452
1453 c) American Petroleum Institute Bulletin 2517, "Evaporation Loss From Floating
1454 Roof Tanks", Second ed., February 1980.
1455
1456 d) 40 CFR 60 (July 1, 1991) and 40 CFR 60, appendix A, Method 24 (57 FR 30654,
1457 July 10, 1992).
1458
1459 e) 40 CFR 61 (July 1, 1991).
1460
1461 f) 40 CFR 50 (July 1, 1991).
1462
1463 g) 40 CFR 51 (July 1, 1991) and 40 CFR 51, appendix M, Methods 204-204F (July 1,
1464 1999).
1465
1466 h) 40 CFR 52 (July 1, 1991).
1467
1468 i) "A Guide for Surface Coating Calculation", July 1986, United States
1469 Environmental Protection Agency, Washington, D.C., EPA-340/1-86-016.
1470
1471 j) "Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by
1472 Paint, Ink and Other Coating" (revised June 1986), United States Environmental
1473 Protection Agency, Washington, D.C., EPA-450/3-84-019.
1474
1475 k) "A Guide for Graphic Arts Calculations", August 1988, United States
1476 Environmental Protection Agency, Washington, D.C., EPA-340/1-88-003.
1477
1478 l) "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of
1479 Automobile and Light-Duty Truck Topcoat Operations", December 1988, United
1480 States Environmental Protection Agency, Washington, D.C., EPA-450/3-88-018.
1481
1482 m) "Control of Volatile Organic Emissions from Manufacturing of Synthesized
1483 Pharmaceutical Products", December 1978, United States Environmental
1484 Protection Agency, Washington, D.C., EPA-450/2-78-029.
1485
1486 n) "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and
1487 Vapor Collection Systems", December 1978, Appendix B, United States

- 1488 Environmental Protection Agency, Washington, D.C., EPA-450/2-78-051.
1489
1490 o) "Control of Volatile Organic Compound Emissions from Large Petroleum Dry
1491 Cleaners", September 1982, United States Environmental Protection Agency,
1492 Washington, D.C., EPA-450/3-82-009.
1493
1494 p) "APTI Course SI417 Controlling Volatile Organic Compound Emissions from
1495 Leaking Process Equipment", 1982, United States Environmental Protection
1496 Agency, Washington, D.C., EPA-450/2-82-015.
1497
1498 q) "Portable Instrument User's Manual for Monitoring VOC Sources", June 1986,
1499 United States Environmental Protection Agency, Washington, D.C., EPA-340/1-
1500 86-015.
1501
1502 r) "Protocols for Generating Unit-Specific Emission Estimates for Equipment Leaks
1503 of VOC and VHAP", October 1988, United States Environmental Protection
1504 Agency, Washington, D.C., EPA-450/3-88-010.
1505
1506 s) "Petroleum Refinery Enforcement Manual", March 1980, United States
1507 Environmental Protection Agency, Washington, D.C., EPA-340/1-80-008.
1508
1509 t) "Inspection Manual for Control of Volatile Organic Emissions from Gasoline
1510 Marketing Operations: Appendix D", 1980, United States Environmental
1511 Protection Agency, Washington, D.C., EPA-340/1-80-012.
1512
1513 u) "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals:
1514 Appendix A", December 1977, United States Environmental Protection Agency,
1515 Washington, D.C., EPA-450/2-77-026.
1516
1517 v) "Technical Guidance – Stage II Vapor Recovery Systems for Control of Vehicle
1518 Refueling Emissions at Gasoline Dispensing Facilities", November 1991, United
1519 States Environmental Protection Agency, Washington, D.C., EPA-450/3-91-022b.
1520
1521 w) California Air Resources Board, Compliance Division. Compliance Assistance
1522 Program: Gasoline Marketing and Distribution: Gasoline Facilities Phase I & II
1523 (October 1988, rev. November 1993) (CARB Manual).
1524
1525 x) South Coast Air Quality Management District (SCAQMD), Applied Science &
1526 Technology Division, Laboratory Services Branch, SCAQMD Method 309-91,
1527 Determination of Static Volatile Emissions (February 1993).
1528
1529 y) South Coast Air Quality Management District (SCAQMD), Applied Science &
1530 Technology Division, Laboratory Services Branch, SCAQMD Method 312-91,
1531 Determination of Percent Monomer in Polyester Resins (April 1996).
1532

- 1533 z) "Guidelines for Determining Capture Efficiency", January 1995, Office of Air
1534 Quality Planning and Standards, United States Environmental Protection Agency,
1535 Research Triangle Park NC.
1536
- 1537 aa) Memorandum "Revised Capture Efficiency Guidance for Control of Volatile
1538 Organic Compound Emissions", February 1995, John S. Seitz, Director, Office of
1539 Air Quality Planning and Standards, United States Environmental Protection
1540 Agency.
1541
- 1542 bb) "Protocol for Determining the Daily Volatile Organic Compound Emission Rate
1543 of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations",
1544 September 2008, United States Environmental Protection Agency, Washington,
1545 D.C., EPA-453/R-08-002.
1546
- 1547 cc) 40 CFR 63, subpart P, appendix A (2008).
1548
- 1549 dd) 46 CFR subchapter Q (2007).
1550
- 1551 ee) 46 CFR subchapter T (2008).
1552
- 1553 ff) Petroleum Equipment Institute, "Recommended Practices for Installation and
1554 Testing of Vapor-Recovery Systems at Vehicle-Fueling Sites", PEI/RP300-09
1555 (2009).
1556

1557 (Source: Amended at 38 Ill. Reg. 1032, effective December 23, 2013)
1558

1559 **Section 218.113 Monitoring for Negligibly-Reactive Compounds**
1560

1561 The requirements of 35 Ill. Adm. Code 215.109, which allows the Agency to require testing and
1562 monitoring for negligibly-reactive compound as a precondition to their exemption from the
1563 definition of "volatile organic compound", shall apply to owners and operators of sources subject
1564 to this Part.

1565 (Source: Added at 16 Ill. Reg. 13564, effective August 24, 1992)
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1568 **Section 218.114 Compliance with Permit Conditions**
1569

1570 No person shall violate any terms or conditions of a permit reflecting the requirements of this
1571 Part, operate any source except in compliance with its permit, or violate any other applicable
1572 requirements.

1573 (Source: Added at 18 Ill. Reg. 1945, effective January 24, 1994)
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1576 **SUBPART B: ORGANIC EMISSIONS FROM STORAGE AND LOADING OPERATIONS**
1577

1578 **Section 218.119 Applicability for VOL**

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1580 The limitations of Section 218.120 of this Subpart shall apply to all storage containers of volatile
1581 organic liquid (VOL) with a maximum true vapor pressure of 0.5 psia or greater in any stationary
1582 tank, reservoir, or other container of 151 cubic meters (40,000 gal) capacity or greater, except to
1583 vessels as provided below:

- 1584
- 1585 a) Vessels with a capacity greater than or equal to 40,000 gallons storing a liquid
1586 with a maximum true pressure of less than 0.5 psia;
 - 1587
 - 1588 b) Vessels of coke oven by-product plants;
 - 1589
 - 1590 c) Pressure vessels designed to operate in excess of 29.4 psia and without emissions
1591 to the atmosphere;
 - 1592
 - 1593 d) Vessels permanently attached to mobile vehicles such as trucks, rail cars, barges,
1594 or ships;
 - 1595
 - 1596 e) Vessels storing petroleum liquids; or
 - 1597
 - 1598 f) Vessels used to store beverage alcohol.
 - 1599
 - 1600 g) Vessels with storage capacity less than 40,000 gallons must comply with Section
1601 218.129(f).
 - 1602

1603 (Source: Added at 18 Ill. Reg. 16950, effective November 15, 1994)

1604
1605 **Section 218.120 Control Requirements for Storage Containers of VOL**

- 1606
- 1607 a) Every owner or operator storing VOL in a vessel of 40,000 gallons or greater with
1608 a maximum true vapor pressure equal to 0.75 psia but less than 11.1 psia shall
1609 reduce VOM emissions from storage tanks, reservoirs, or other containers as
1610 follows:
 - 1611
 - 1612 1) Each fixed roof tank shall be equipped with an internal floating roof that
1613 meets the following specifications or that is equipped with a vapor control
1614 system that meets the specifications contained in subsection (a)(4) below:
 - 1615
 - 1616 A) The internal floating roof shall rest or float on the liquid surface
1617 (but not necessarily in complete contact with it) inside a storage
1618 vessel that has a fixed roof. The internal floating roof shall be
1619 floating on the liquid surface at all times, except during initial fill
1620 and during those intervals when the storage vessel is completely
1621 emptied and subsequently refilled. When the roof is resting on the
1622 leg supports, the process of filling, emptying, or refilling shall be
1623 continuous and shall be accomplished as rapidly as possible.
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- B) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:
 - i) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank;
 - ii) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous; or
 - iii) A mechanical shoe seal, which is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.
 - C) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.
 - D) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.
 - E) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.
 - F) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.
 - G) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit

- 1671 fabric cover that covers at least 90 percent of the opening.
1672
1673 H) Each penetration of the internal floating roof that allows for
1674 passage of a ladder shall have a gasketed sliding cover.
1675
- 1676 2) During the next scheduled tank cleaning or before March 15, 2004,
1677 whichever comes first, each internal floating roof tank shall meet the
1678 specifications set forth in subsections (a)(1)(A) through (H) above.
1679
- 1680 3) Each external floating roof tank shall meet the following specifications:
1681
- 1682 A) Each external floating roof shall be equipped with a closure device
1683 between the wall of the storage vessel and the roof edge. The
1684 closure device is to consist of two seals, one above the other. The
1685 lower seal is referred to as the primary seal, and the upper seal is
1686 referred to as the secondary seal.
1687
- 1688 i) Except as provided in Section 218.127(b)(4) of this
1689 Subpart, the primary seal shall completely cover the
1690 annular space between the edge of the floating roof and
1691 tank wall and shall be either a liquid mounted seal or a shoe
1692 seal.
1693
- 1694 ii) The secondary seal shall completely cover the annular
1695 space between the external floating roof and the wall of the
1696 storage vessel in a continuous fashion except as allowed in
1697 Section 218.127(b)(4) of this Subpart.
1698
- 1699 iii) The tank shall be equipped with the closure device after the
1700 next scheduled tank cleaning, but no later than March 15,
1701 2004.
1702
- 1703 B) Except for automatic bleeder vents and rim space vents, each
1704 opening in a noncontact external floating roof shall provide a
1705 projection below the liquid surface. Except for automatic bleeder
1706 vents, rim space vents, roof drains, and leg sleeves, each opening
1707 in the roof is to be equipped with a gasketed cover, seal, or lid that
1708 is to be maintained in a closed position at all times (i.e., no visible
1709 gap) except when the device is in actual use. Automatic bleeder
1710 vents are to be closed at all times when the roof is floating except
1711 when the roof is being floated off or is being landed on the roof leg
1712 supports. Rim vents are to be set to open when the roof is being
1713 floated off the roof leg supports or at the manufacturer's
1714 recommended setting. Automatic bleeder vents and rim space
1715 vents are to be gasketed. Each emergency roof drain is to be
1716 provided with a slotted membrane fabric cover that covers at least

- 1717 90 percent of the area of the opening.
1718
1719 C) The roof shall be floating on the liquid at all times (i.e., off the roof
1720 leg supports) except when the tank is completely emptied and
1721 subsequently refilled. The process of filling, emptying, or refilling
1722 when the roof is resting on the leg supports shall be continuous and
1723 shall be accomplished as rapidly as possible.
1724
1725 4) A closed vent system and control device respectively shall meet the
1726 following specifications:
1727
1728 A) The closed vent system shall be designed to collect all VOM
1729 vapors and gases discharged from the storage vessel and operated
1730 with no detectable emissions as indicated by an instrument reading
1731 of less than 500 ppm above background and visual inspections, as
1732 determined by the methods specified in 40 CFR 60.485(c),
1733 incorporated by reference at Section 218.112(d) of this Part.
1734
1735 B) The control device shall be designed and operated to reduce inlet
1736 VOM emissions by 95 percent or greater. If a flare is used as the
1737 control device, it shall meet the specifications described in the
1738 general control device requirements of 40 CFR 60.18, incorporated
1739 by reference at Section 218.112(d) of this Part.
1740
1741 5) An alternative emission control plan equivalent to the requirements of
1742 subsection (a)(1), (a)(2), (a)(3), or (a)(4) above that has been approved by
1743 the Agency and the USEPA in a federally enforceable permit or as a SIP
1744 revision.
1745
1746 b) The owner or operator of each storage vessel with a design capacity equal to or
1747 greater than 40,000 gallons which contains VOL that, as stored, has a maximum
1748 true vapor pressure greater than or equal to 11.1 psia shall equip each storage
1749 vessel with a closed vent system and control device as specified in subsection
1750 (a)(4) above.
1751
1752 c) Notwithstanding subsection (b) of this Section, where an owner or operator can
1753 demonstrate that the control device installed on a storage vessel on or before
1754 December 31, 1992, was designed to reduce inlet VOM emissions by greater than
1755 or equal to 90 percent but less than 95 percent, the control device shall be
1756 operated to reduce inlet VOM emission by 90 percent or greater.
1757

1758 (Source: Added at 18 Ill. Reg. 16950, effective November 15, 1994)
1759

1760 **Section 218.121 Storage Containers of VPL**
1761

1762 No person shall cause or allow the storage of any volatile petroleum liquid (VPL) with a vapor

1763 pressure of 10.34 kPa (1.5 psia) or greater at 294.3° K (70° F) or any gaseous organic material
1764 in any stationary tank, reservoir or other container of more than 151 cubic meters (40,000 gal)
1765 capacity unless such tank, reservoir or other container:

- 1766
- 1767 a) Is a pressure tank capable of withstanding the vapor pressure of such liquid or the
1768 pressure of the gas, so as to prevent vapor or gas loss to the atmosphere at all
1769 times; or
- 1770
- 1771 b) Is designed and equipped with one of the following vapor loss control devices:
- 1772
- 1773 1) A floating roof which rests on the surface of the VPL and is equipped with
1774 a closure seal or seals between the roof edge and the tank wall. Such
1775 floating roof shall not be permitted if the VPL has a vapor pressure of
1776 86.19 kPa (12.5 psia) or greater at 294.3° K (70° F). No person shall
1777 cause or allow the emission of air contaminants into the atmosphere from
1778 any gauging or sampling devices attached to such tanks, except during
1779 sampling or maintenance operations.
- 1780
- 1781 2) A vapor recovery system consisting of:
- 1782
- 1783 A) A vapor gathering system capable of collecting 85% or more of the
1784 uncontrolled VOM that would be otherwise emitted to the
1785 atmosphere; and
- 1786
- 1787 B) A vapor disposal system capable of processing such VOM so as to
1788 prevent its emission to the atmosphere. No person shall cause or
1789 allow the emission of air contaminants into the atmosphere from
1790 any gauging or sampling devices attached to such tank, reservoir or
1791 other container except during sampling.
- 1792
- 1793 3) Other equipment or means of equal efficiency approved by the Agency
1794 according to the provisions of 35 Ill. Adm. Code 201, and further
1795 processed consistent with Section 218.108.

1796 (Source: Amended at 18 Ill. Reg. 16950, effective November 15, 1994)

1797

1798

1799 **Section 218.122 Loading Operations**

- 1800
- 1801 a) No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of
1802 organic material into the atmosphere during the loading of any organic material
1803 from the aggregate loading pipes of any loading area having through-put of
1804 greater than 151 cubic meters per day (40,000 gal/day) into any railroad tank car,
1805 tank truck or trailer unless such loading area is equipped with submerged loading
1806 pipes or a device that is equally effective in controlling emissions and is approved
1807 by the Agency according to the provisions of 35 Ill. Adm. Code 201, and further
1808 processed consistent with Section 218.108.

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- b) No person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Agency according to the provisions of 35 Ill. Adm. Code 201, and further processed consistent with Section 218.108 of this Part, or unless such tank is a pressure tank as described in Section 218.121(a) of this Part or is fitted with a recovery system as described in Section 218.121(b)(2) of this Part.
 - c) Exception: If no odor nuisance exists the limitations of this Section shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3° K (70° F).

1822 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

1823
1824 **Section 218.123 Petroleum Liquid Storage Tanks**

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- a) The requirements of subsection (b) of this Section shall not apply to any stationary storage tank:
 - 1) Equipped before January 1, 1979 with one of the vapor loss control devices specified in Section 218.121(b) of this Part, except Section 218.121(b)(1) of this Part;
 - 2) With a capacity of less than 151.42 cubic meters (40,000 gal);
 - 3) With a capacity of less than 1,600 cubic meters (422,400 gal) and used to store produced crude oil and condensate prior to custody transfer;
 - 4) With a capacity of less than 1,430 cubic meters (378,000 gal) and used to store produced oil or condensate in crude oil gathering;
 - 5) Subject to new source performance standards for storage vessels of petroleum liquid, 40 CFR 60, as regulations promulgated by the U.S. Environmental Protection Agency under Section 111 of the Clean Air Act (42 USC 7411), as amended. *The provisions of Section 111 of the Clean Air Act ... are applicable in this State and are enforceable under [the Environmental Protection Act]* (Ill. Rev. Stat. 1991, ch. 111 1/2, par. 1009.1(b)) [415 ILCS 5/9.1(b)];
 - 6) In which volatile petroleum liquid is not stored; or
 - 7) Which is a pressure tank as described in Section 218.121(a) of this Part.
 - b) Subject to subsection (a) of this Section no owner or operator of a stationary storage tank shall cause or allow the storage of any volatile petroleum liquid in

1855 the tank unless:

- 1856
1857 1) The tank is equipped with one of the vapor loss control devices specified
1858 in Section 218.121(b) of this Part;
1859
1860 2) There are no visible holes, tears or other defects in the seal or any seal
1861 fabric or material of any floating roof;
1862
1863 3) All openings of any floating roof deck, except stub drains, are equipped
1864 with covers, lids or seals such that:
1865
1866 A) The cover, lid or seal is in the closed position at all times except
1867 when petroleum liquid is transferred to or from the tank;
1868
1869 B) Automatic bleeder vents are closed at all times except when the
1870 roof is floated off or landed on the roof leg supports; and
1871
1872 C) Rim vents, if provided, are set to open when the roof is being
1873 floated off the roof leg supports or at the manufacturer's
1874 recommended setting;
1875
1876 4) Routine inspections of floating roof seals are conducted through roof
1877 hatches once every six months;
1878
1879 5) A complete inspection of the cover and seal of any floating roof tank is
1880 made whenever the tank is emptied for reasons other than the transfer of
1881 petroleum liquid during the normal operation of the tank, or whenever
1882 repairs are made as a result of any semi-annual inspection or incidence of
1883 roof damage or defect; and
1884
1885 6) A record of the results of each inspection conducted under subsection
1886 (b)(4) or (b)(5) of this Section is maintained.

1887
1888 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

1889 **Section 218.124 External Floating Roofs**

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1892 a) In addition to meeting the requirements of Section 218.123(b) of this Part, no
1893 owner or operator of a stationary storage tank equipped with an external floating
1894 roof shall cause or allow the storage of any volatile petroleum liquid in the tank
1895 unless:
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1897 1) The tank has been fitted:
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1899 A) With a continuous secondary seal extending from the floating roof
1900 to the tank wall (rim mounted secondary seal), or

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- B) With any other equipment or means of equal efficiency approved by the Agency according to the provisions of 35 Ill. Adm. Code 201, and further processed consistent with Section 218.108 of this Part;
 - 2) Each seal closure device meets the following requirements:
 - A) The seal is intact and uniformly in place around the circumference of the floating roof between the floating roof and tank wall; and
 - B) The accumulated area of gaps exceeding 0.32 centimeter ($\frac{1}{8}$ inch) in width between the secondary seal and the tank wall shall not exceed 21.2 square centimeters per meter of tank diameter (1.0 square inches per foot of tank diameter). Compliance with this requirement shall be determined by:
 - i) Physically measuring the length and width of all gaps around the entire circumference of the secondary seal in each place where a 0.32 cm (0.125 in.) uniform diameter probe passes freely (without forcing or binding against the seal) between the seal and the tank wall; and
 - ii) Summing the area of the individual gaps.
 - 3) Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers across at least 90 percent of the area of the opening;
 - 4) Openings are equipped with projections into the tank which remain below the liquid surface at all times;
 - 5) Inspections are conducted prior to May 1 of each year to insure compliance with subsection (a) of this Section;
 - 6) The secondary seal gap is measured prior to May 1 of each year and within 30 days of a written request to demonstrate compliance with subsection (2)(B) of this Section;
 - 7) Records of the types of volatile petroleum liquid stored, the maximum true vapor pressure of the liquid as stored, the results of the inspections and the results of the secondary seal gap measurements are maintained and available to the Agency, upon verbal or written request, at any reasonable time for a minimum of two years after the date on which the record was made.
- b) Subsection (a) above does not apply to any stationary storage tank equipped with

- 1947 an external floating roof:
1948
1949 1) Exempted under Section 218.123(a)(2) through 218.123(a)(6) of this Part;
1950
1951 2) Of welded construction equipped with a metallic type shoe seal having a
1952 secondary seal from the top of the shoe seal to the tank wall (shoe-
1953 mounted secondary seal);
1954
1955 3) Of welded construction equipped with a metallic type shoe seal, a liquid-
1956 mounted foam seal, a liquid-mounted liquid-filled-type seal, or other
1957 closure device of equivalent control efficiency approved by the Agency in
1958 which a petroleum liquid with a true vapor pressure less than 27.6 kPa (4.0
1959 psia) at 294.3° K (70° F) is stored; or
1960
1961 4) Used to store crude oil with a pour point of 50° F or higher as determined
1962 by ASTM Standard D97-66 incorporated by reference in Section 218.112
1963 of this Part.
1964

1965 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
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1967 **Section 218.125 Compliance Dates**
1968

1969 Every owner or operator of a VOL or VPL storage vessel subject to the requirements of this
1970 Subpart shall comply with the requirements of this Subpart in accordance with the compliance
1971 schedule specified in the applicable subsection below:
1972

- 1973 a) Every owner or operator of a VPL storage vessel of the type included in Sections
1974 218.121, 218.123 and 218.124 of this Subpart shall have complied with the
1975 requirements of Sections 218.121, 218.123 and 218.124 by the date set forth in
1976 Section 218.106(a) or (b) of this Part.
1977
1978 b) Every owner or operator of a VOL storage vessel of the type identified in Section
1979 218.119 of this Subpart shall comply with the requirements of Section 218.120 of
1980 this Subpart as follows:
1981
1982 1) For fixed roof tanks (Section 218.120(a)(1) of this Subpart), March 15,
1983 1996.
1984
1985 2) For internal floating roof tanks (Section 218.120(a)(2) of this Subpart),
1986 either during the next scheduled tank cleaning or by March 15, 2004,
1987 whichever comes first;
1988
1989 3) For external floating roof tanks (Section 218.120(a)(3) of this Subpart),
1990 either during the next scheduled tank cleaning or by March 15, 2004,
1991 whichever comes first; and
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- 4) For closed vent system and control device equipped tanks (Section 218.120(a)(4) of this Subpart), by March 15, 1996.

(Source: Added at 18 Ill. Reg. 16950, effective November 15, 1994)

Section 218.126 Compliance Plan (Repealed)

(Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)

Section 218.127 Testing VOL Operations

The owner or operator of each storage vessel specified in Section 218.119 of this Subpart shall comply with the requirements of subsection (a), (b), or (c) below. The applicable subsection for a particular storage vessel depends on the control equipment installed to meet the requirements of this Subpart.

- a) After installing the control equipment necessary for the source to comply with the requirements of Section 218.120(a)(1) or (2) of this Subpart (permanently affixed roof and internal floating roof), each owner or operator shall:
- 1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service) prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.
- 2) For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or if there is liquid accumulated on the roof, or if the seal is detached, or if there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this subsection cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, the owner or operator may request a 30-day extension from the Agency in the inspection report required in Section 218.129(a)(3) of this Subpart. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the owner or operator will take that will assure that the control equipment will be repaired or the vessel will be emptied within 30 days.
- 3) For vessels equipped with both primary and secondary seals:

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- A) Visually inspect the vessel as specified in subsection (a)(4) below at least every 5 years; or
 - B) Visually inspect the vessel as specified in subsection (a)(2) above.
- 4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal, or if the seal fabric or the secondary seal has holes, tears, or other openings in the seal, or if the seal fabric or the gaskets no longer close off the liquid surfaces from the atmosphere, or if the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this subsection exists before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in subsections (a)(2) and (a)(3)(B) above and at intervals no greater than 5 years in the case of vessels specified in subsection (a)(3)(A) above.
- 5) Notify the Agency in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by subsections (a)(1) and (a)(4) above to afford the Agency the opportunity to have an observer present. If the inspection required by subsection (a)(4) above is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Agency at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Agency at least 7 days prior to the refilling.
- b) The owner or operator of external floating roof tanks shall:
- 1) Determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel.
 - A) Measurements of gaps between the tank wall the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days after the initial fill with VOL and at least once every 5 years thereafter.

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- B) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days after the initial fill with VOL and at least once per year thereafter.
- C) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of subsections (b)(1)(A) and (b)(1)(B) above.
- 2094 2) Determine gap widths and areas in the primary and secondary seals individually according to the following procedures:
- 2095
2096
2097 A) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports;
- 2098
2099 B) Measure seal gaps around the entire circumference of the tank in each place where a 1/8 inch in diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location; and
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2105 C) Determine the total surface area of each gap described in subsection (b)(2)(B) above by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.
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2111 3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each by the nominal diameter of the tank and compare each ratio to the respective standards in subsection (b)(4) below.
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2116 4) Make necessary repairs or empty the storage vessel within 45 days after identification in any inspection for seals not meeting the requirements listed in subsections (b)(4)(A) and (B) below:
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2120 A) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 10 in.(2) per foot of tank diameter, and the width of any portion of any gap shall not exceed 1.5 in. There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.
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2126 B) The secondary seal is to meet the following requirements:
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2128 i) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof
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- 2131 edge and the tank wall except as provided in subsection
2132 (b)(2)(C) above.
- 2133
- 2134 ii) The accumulated area of gaps between the tank wall and
2135 the secondary seal used in combination with a metallic shoe
2136 or liquid-mounted primary seal shall not exceed 1.0 in.(2)
2137 per foot of tank diameter, and the width of any portion of
2138 any gap shall not exceed 0.5 in. There shall be no gaps
2139 between the tank wall and the secondary seal when used in
2140 combination with a vapor mounted primary seal.
- 2141
- 2142 iii) There are to be no holes, tears, or other openings in the seal
2143 or seal fabric.
- 2144
- 2145 C) If a failure that is detected during inspections required in Section
2146 218.127(b)(1) of this Subpart cannot be repaired within 45 days
2147 and if the vessel cannot be emptied within 45 days, the owner or
2148 operator may request a 30-day extension from the Agency in the
2149 inspection report required in Section 218.129(b)(4) of this Subpart.
2150 Such extension request must include a demonstration of
2151 unavailability of alternate storage capacity and a specification of a
2152 schedule that will assure that the control equipment will be
2153 repaired or the vessel will be emptied as soon as possible.
- 2154
- 2155 5) Notify the Agency 30 days in advance of any gap measurements required
2156 by subsection (b)(1) above to afford the Agency the opportunity to have an
2157 observer present.
- 2158
- 2159 6) Visually inspect the external floating roof, the primary seal, secondary
2160 seal, and fittings each time the vessel is emptied and degassed.
- 2161
- 2162 A) If the external floating roof has defects, if the primary seal has
2163 holes, tears, or other openings in the seal or the seal fabric, or if the
2164 secondary seal has holes, tears, or other openings in the seal or the
2165 seal fabric, the owner or operator shall repair the items as
2166 necessary so that none of the conditions specified in this subsection
2167 exist before filling or refilling the storage vessel with VOL.
- 2168
- 2169 B) For all the inspections required by subsection (b)(6) above, the
2170 owner or operator shall notify the Agency in writing at least 30
2171 days prior to filling or refilling of each storage vessel to afford the
2172 Agency the opportunity to inspect the storage vessel prior to the
2173 refilling of the storage vessel. Notification shall be made by
2174 telephone immediately followed by written documentation
2175 demonstrating why the inspection was unplanned. Alternatively,
2176 this notification including the written documentation may be sent

2177 by express mail so that it is received by the Agency at least 7 days
2178 prior to the refilling.

2179
2180 c) The owner or operator of each source that is equipped with a closed vent system
2181 and a flare to meet the requirements of Section 218.120(a)(4) of this Subpart shall
2182 meet the requirements specified in the general control device requirements of 40
2183 CFR 60.18(e) and (f), incorporated by reference at Section 218.112(d) of this Part.

2184
2185 (Source: Added at 18 Ill. Reg. 16950, effective November 15, 1994)

2186
2187 **Section 218.128 Monitoring VOL Operations**

2188
2189 a) Except as provided in subsection (d), the owner or operator of each storage vessel
2190 with a design capacity greater than or equal to 40,000 gallons storing a liquid with
2191 a maximum true vapor pressure that is normally less than 0.75 psia shall notify
2192 the Agency within 30 days when the maximum true vapor pressure of the liquid
2193 exceeds 0.75 psia.

2194
2195 b) Available data on the storage temperature may be used to determine the maximum
2196 true vapor pressure.

2197
2198 1) For vessels operated above or below ambient temperatures, the maximum
2199 true vapor pressure is calculated based upon the highest expected
2200 calendar-month average of the storage temperature. For vessels operated
2201 at ambient temperatures, the maximum true vapor pressure is calculated
2202 based upon the maximum local monthly average ambient temperature as
2203 reported by the National Weather Service.

2204
2205 2) For other liquids, the vapor pressure:
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2207 A) Determined by ASTM Method D 879-83, incorporated by
2208 reference at Section 218.112(a) of this Part;
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2210 B) Measured by an appropriate method approved by the Agency and
2211 USEPA; or
2212
2213 C) Calculated by an appropriate method approved by the Agency and
2214 USEPA.

2215
2216 c) The owner or operator of each vessel storing a mixture of indeterminate or
2217 variable composition shall be subject to the following:

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2219 1) Prior to the initial filling of the vessel, the maximum true vapor pressure
2220 for the range of anticipated liquid compositions to be stored will be
2221 determined using the methods described in subsection (b).
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- 2) For vessels in which the vapor pressure of the anticipated liquid composition is 0.5 psia or greater but less than 0.75 psia, an initial physical test of the vapor pressure is required; a physical test at least once every 6 months thereafter is required as determined by the following methods:
- A) ASTM Method D 2879-83, incorporated by reference at Section 218.112(a) of this Part;
- B) ASTM Method D 323-08, incorporated by reference at Section 218.112(a) of this Part; or
- C) As measured by an appropriate method approved by the Agency.
- d) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specifications of Section 218.120 of this Subpart is exempt from the requirements of subsections (a) and (b).

2241 (Source: Amended at 37 Ill. Reg. 1669, effective January 28, 2013)

2242
2243 **Section 218.129 Recordkeeping and Reporting for VOL Operations**

2244
2245 The owner or operator of each storage vessel specified in Section 218.120(a) of this Subpart shall
2246 maintain records and furnish reports as required by subsection (a), (b), or (c) below as
2247 appropriate for the control equipment installed to meet the requirements of Section 218.120. The
2248 owner or operator shall keep copies of all reports and records required by this Section, except for
2249 the records required by subsection (c)(1) below, for at least 3 years. The records required by
2250 subsection (c)(1) below shall be kept for the life of the control equipment.

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- a) After installing control equipment in accordance with Section 218.120(a)(1) or (2) of this Subpart (fixed roof and internal floating roof), the owner or operator shall:
- 1) Furnish the Agency with a report that describes the control equipment and certifies that the control equipment meets the specifications of Section 218.120(a)(1) and 218.127(a)(1) of this Subpart;
- 2) Keep a record of each inspection performed as required by Section 218.127(a)(1), (a)(2), (a)(3), and (a)(4) of this Subpart. Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings);
- 3) If any of the conditions described in Section 218.127(a)(2) of this Subpart are detected during the annual visual inspection required by Section 218.127(a)(2), report to the Agency within 30 days after the inspection the

- 2269 identity of the storage vessel, the nature of the defects, and the date the
2270 storage vessel was emptied or the nature of and date the repair was made;
2271 and
2272
- 2273 4) After each inspection required by Section 218.127(a)(3) of this Subpart
2274 where holes or tears in the seal or seal fabric, or defects in the internal
2275 floating roof, or other control equipment defects listed in Section
2276 218.127(a)(3)(B) of this Subpart are discovered, report to the Agency
2277 within 30 days after the inspection the identity of the storage vessel and
2278 the reason it did not meet the specifications of Section 218.120(a)(1) or (2)
2279 or Section 218.127(a) of this Subpart, and list each repair made.
2280
- 2281 b) After installing control equipment in accordance with Section 218.120(a)(3) of
2282 this Subpart (external floating roof), the owner or operator shall:
2283
- 2284 1) Furnish the Agency with a report that describes the control equipment and
2285 certify that the control equipment meets the specifications of Sections
2286 218.120(a)(3) and 218.127(b)(2), (b)(3), and (b)(4) of this Subpart;
2287
- 2288 2) Within 60 days after performing the seal gap measurements required by
2289 Section 218.127(b)(1) of this Subpart, furnish the Agency with a report
2290 that contains:
2291
- 2292 A) The date of measurement;
2293
- 2294 B) The raw data obtained in the measurement; and
2295
- 2296 C) The calculations of this Subpart described in Section 218.127(b)(2)
2297 and (b)(3) of this Subpart;
2298
- 2299 3) Maintain records of each gap measurement performed as required by
2300 Section 218.127(b) of this Subpart. Such records shall identify the storage
2301 vessel in which the measurement was performed and shall contain:
2302
- 2303 A) The date of measurement;
2304
- 2305 B) The raw data obtained in the measurement; and
2306
- 2307 C) The calculations described in Section 218.127(b)(2) and (b)(3) of
2308 this Subpart;
2309
- 2310 4) After each seal gap measurement that detects gaps exceeding the
2311 limitations specified by Section 218.127(b)(4) of this Subpart, submit a
2312 report to the Agency within 30 days after the inspection identifying the
2313 vessel and containing the information specified in subsection (b)(2) above
2314 and the date the vessel was emptied or the repairs were made and the date

- 2315 of repair.
2316
2317 c) After installing control equipment in accordance with Section 218.127(a)(4) or
2318 (b)(1) of this Subpart (closed vent system and control device other than a flare),
2319 the owner or operator shall maintain the following records:
2320
2321 1) A copy of the operating plan; and
2322
2323 2) The measured values of the parameters monitored in accordance with
2324 Section 218.127(c)(2) of this Subpart.
2325
2326 d) After installing a closed vent system and flare to comply with Section 218.127 of
2327 this Subpart, the owner or operator shall:
2328
2329 1) Provide the Agency with a report containing the measurements required
2330 by 40 CFR 60.18(f)(1), (2), (3), (4), (5), and (6), incorporated by reference
2331 at Section 218.112(d) of this Part, within 6 months after the initial start-up
2332 date;
2333
2334 2) Maintain records of all periods of operation during which the flare pilot
2335 flame is absent; and
2336
2337 3) Report semiannually all periods recorded under 40 CFR 60.115b(d)(2),
2338 incorporated by reference at Section 218.112(d) of this Part, in which the
2339 pilot flame was absent.
2340
2341 e) The owner or operator shall maintain all records required by this Section, except
2342 for the records required by subsection (f) below, for at least 3 years. The records
2343 required by subsection (f) below shall be kept for the life of the source.
2344
2345 f) The owner or operator of each storage vessel specified in Section 218.119 of this
2346 Subpart shall maintain readily accessible records of the dimension of the storage
2347 vessel and an analysis of the capacity of the storage vessel. Each storage vessel
2348 with a design capacity less than 40,000 gallons is subject to no provisions of this
2349 Part other than those required by maintaining readily accessible records of the
2350 dimensions of the storage vessel and analysis of the capacity of the storage vessel.
2351
2352 g) Except as provided in Section 218.128(c) and (d) of this Subpart, the owner or
2353 operator of each storage vessel subject to the requirements in Section 218.120
2354 with a design capacity greater than or equal to 40,000 gallons storing a liquid with
2355 a maximum true vapor pressure greater than or equal to 0.5 psia but less than 0.75
2356 psia shall maintain a record of the VOL storage, the period of storage, and the
2357 maximum true vapor pressure of the VOL during the respective storage period.
2358
2359 (Source: Added at 18 Ill. Reg. 16950, effective November 15, 1994)
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2361 SUBPART C: ORGANIC EMISSIONS FROM MISCELLANEOUS EQUIPMENT

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2363 **Section 218.141 Separation Operations**

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2365 a) No person shall use any single or multiple compartment effluent water separator
2366 which receives effluent water containing 757 l/day (200 gal/day) or more of
2367 organic material from any equipment processing, refining, treating, storing or
2368 handling organic material unless such effluent water separator is equipped with
2369 air pollution control equipment capable of reducing by 85 percent or more the
2370 uncontrolled organic material emitted to the atmosphere. Exception: If no odor
2371 nuisance exists the limitations of this subsection shall not apply if the vapor
2372 pressure of the organic material is below 17.24 kPa (2.5 psia) at 294.3° K (70° F).

2373

2374 b) Subsection (a) of this Section shall not apply to water and crude oil separation in
2375 the production of Illinois crude oil, if the vapor pressure of such crude oil is less
2376 than 34.5 kPa (5 psia).

2377

(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

2379

2380 **Section 218.142 Pumps and Compressors**

2381

2382 No person shall cause or allow the discharge of more than 32.8 ml (2 cu in) of VOL with vapor
2383 pressure of 17.24 kPa (2.5 psia) or greater at 294.3° K (70° F) into the atmosphere from any
2384 pump or compressor in any 15 minute period at standard conditions.

2385

2386 **Section 218.143 Vapor Blowdown**

2387

2388 No person shall cause or allow the emission of organic material into the atmosphere from any
2389 vapor blowdown system or any safety relief valve, except such safety relief valves not capable of
2390 causing an excessive release, unless such emission is controlled:

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2392 a) To 10 ppm equivalent methane (molecular weight 16.0) or less; or,

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2394 b) By combustion in a smokeless flare; or,

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2396 c) By other air pollution control equipment approved by the Agency according to the
2397 provisions of 35 Ill. Adm. Code 201, and further processed consistent with
2398 Section 218.108 of this Part.

2399

(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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2401 **Section 218.144 Safety Relief Valves**

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2403 Section 218.143 of this Part shall not apply to any set of unregulated safety relief valves capable
2404 of causing excessive releases, provided the owner or operator thereof, by October 1, 1972,
2405 supplied the Agency with the following:
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- a) A historical record of each such set (or, if such records were unavailable, of similar sets which, by virtue of operation under similar circumstances, may reasonably have been presumed to have the same or greater frequency of excessive releases) for a three-year period immediately preceding October 1, 1972, indicating:
 - 1) Dates on which excessive releases occurred from each such set; and
 - 2) Duration in minutes of each such excessive release; and
 - 3) Quantities (in pounds) of mercaptans and/or hydrogen sulfide emitted into the atmosphere during each such excessive release;
 - b) Proof, using such three-year historical records, that no excessive release is likely to occur from any such set, either alone or in combination with such excessive releases from other sets owned or operated by the same person and located within a ten-mile radius from the center point of any such set, more frequently than 3 times in any 12 month period;
 - c) Accurate maintenance records pursuant to the requirements of subsection (a) of this Section; and,
 - d) Proof, at three-year intervals, using such three-year historical records, that such set conforms to the requirements of subsection (c) of this Section.
- (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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SUBPART E: SOLVENT CLEANING

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Section 218.181 Solvent Cleaning Degreasing Operations

2439 The requirements of Sections 218.182, 218.183, 218.184, and 218.186 of this Subpart shall apply
2440 to all cold cleaning, open top vapor degreasing, and conveyORIZED degreasing operations which
2441 use volatile organic materials.

2442 (Source: Amended at 34 Ill. Reg. 9096, effective June 25, 2010)

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Section 218.182 Cold Cleaning

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- a) Operating Procedures: No person shall operate a cold cleaning degreaser unless:
 - 1) Waste solvent is stored in covered containers only and not disposed of in such a manner that more than 20% of the waste solvent (by weight) is allowed to evaporate into the atmosphere;

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- 2) The cover of the degreaser is closed when parts are not being handled; and
 - 3) Parts are drained until dripping ceases.
- b) Equipment Requirements: No person shall operate a cold cleaning degreaser unless:
- 1) The degreaser is equipped with a cover which is closed whenever parts are not being handled in the cleaner. The cover shall be designed to be easily operated with one hand or with the mechanical assistance of springs, counter-weights or a powered system if:
 - A) The solvent vapor pressure is greater than 2 kPa (15 mmHg or 0.3 psi) measured at 38° C (100° F);
 - B) The solvent is agitated; or
 - C) The solvent is heated above ambient room temperature.
 - 2) The degreaser is equipped with a device for draining cleaned parts. The drainage device shall be constructed so that parts are enclosed under the cover while draining unless:
 - A) The solvent vapor pressure is less than 4.3 kPa (32 mmHg or 0.6 psi) measured at 38° C (100° F); or
 - B) An internal drainage device cannot be fitted into the cleaning system, in which case the drainage device may be external.
 - 3) The degreaser is equipped with one of the following control devices if the vapor pressure of the solvent is greater than 4.3 kPa (32 mmHg or 0.6 psi) measured at 38° C (100° F) or if the solvent is heated above 50° C (120° F) or its boiling point:
 - A) A freeboard height of $\frac{7}{10}$ of the inside width of the tank or 91 cm (36 in), whichever is less; or
 - B) Any other equipment or system of equivalent emission control as approved by the Agency and further processed consistent with Section 218.108 of this Part. Such a system may include a water cover, refrigerated chiller or carbon adsorber.
 - 4) A permanent conspicuous label summarizing the operating procedure is affixed to the degreaser; and
 - 5) If a solvent spray is used, the degreaser is equipped with a solid fluid

2499 stream spray, rather than a fine, atomized or shower spray.

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c) Material and Control Requirements:

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1) On and after March 15, 1999, no person shall:

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A) Cause or allow the sale of solvent with a vapor pressure which exceeds 2.0 mmHg (0.038 psi) measured at 20° C (68° F) in units greater than five gallons, for use in cold cleaning degreasing operations located in the area covered by Section 218.103 of this Part.

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B) Operate a cold cleaning degreaser with a solvent vapor pressure which exceeds 2.0 mmHg (0.038 psi) measured at 20° C (68° F).

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2) On and after March 15, 2001, no person shall:

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A) Cause or allow the sale of solvent with a vapor pressure which exceeds 1.0 mmHg (0.019 psi) measured at 20° C (68° F) in units greater than five gallons, for use in cold cleaning degreasing operations located in the area covered by Section 218.103 of this Part.

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B) Operate a cold cleaning degreaser with a solvent vapor pressure which exceeds 1.0 mmHg (0.019 psi) measured at 20° C (68° F).

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3) On and after May 30, 2007 no person shall:

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A) Cause or allow the sale of solvent with a vapor pressure which exceeds 1.0 mmHg (0.019 psi) measured at 20° C (68° F) in units greater than five gallons, for use in cold cleaning degreasing operations located in the area covered by Section 218.103 of this Part, unless the purchaser provides a copy of a valid State or federal construction or operating permit or a copy of the Federal Register demonstrating that the purchaser is in compliance with the control requirements of subsection (c)(4) of this Section or is exempt under subsection (f) or (g) of this Section.

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B) Operate a cold cleaning degreaser with a solvent vapor pressure which exceeds 1.0 mmHg (0.019 psi) measured at 20° C (68° F), unless the person is in compliance with the control requirements of subsection (c)(4) of this Section or is exempt under subsection (f) or (g) of this Section.

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4) Control Requirements:

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- A) A person may operate a cold cleaning degreaser using solvent with a vapor pressure greater than 1.0 mmHg (0.019 psi) but less than 56 mmHg (1.064 psi) measured at 20° C (68° F) provided add-on control devices demonstrating at least 95 percent overall capture and control of emissions are used. The add-on controls may include, but are not limited to, carbon adsorbers or afterburners.
 - B) An equivalent alternative control plan may be used to meet the control requirements of this Section pursuant to Section 218.108 of this Part. Pursuant to the material requirements of subsection (c)(3)(B) of this Section, a solvent with a vapor pressure of 1.0 mmHg (0.019 psi) measured at 20° C (68° F) shall be the basis for assessment of equivalent emissions from any equivalent alternative control plan. If used as an equivalent alternative control plan, an add-on control must demonstrate at least a 95 percent overall capture and control efficiency. A control plan approved by the Agency shall be effective only when included in a federally enforceable permit or approved by the USEPA as a SIP revision pursuant to Section 218.108 of this Part.
 - C) Add-on controls operating at a source prior to May 30, 2007, shall be tested by August 31, 2007. Add-on controls constructed on or after May 30, 2007, shall be tested within 90 days after initial startup. Testing procedures and recordkeeping for add-on controls and equivalent alternative controls subject to subsections (c)(4)(A) and (B) of this Section are to be performed pursuant to Section 218.105(c), (d), (e) and (f) of this Part.
- d) Recordkeeping and Reporting Requirements: On and after March 15, 1999:
- 1) All persons subject to the requirements of subsections (c)(1)(A), (c)(2)(A), and (c)(3)(A) of this Section must maintain records which include for each sale:
 - A) The name and address of the solvent purchaser;
 - B) The date of sale;
 - C) The type of solvent;
 - D) The unit volume of solvent;
 - E) The total volume of solvent; and
 - F) The vapor pressure of the solvent measured in mmHg at 20° C (68° F).

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- 2) All persons subject to the requirements of subsections (c)(1)(B), (c)(2)(B), and (c)(3)(B) of this Section must maintain records which include for each purchase:
 - A) The name and address of the solvent supplier;
 - B) The date of purchase;
 - C) The type of solvent;
 - D) The vapor pressure of the solvent measured in mmHg at 20° C (68° F); and
 - E) For any mixture of solvents, the vapor pressure of the mixture, as used, measured in mmHg at 20° C (68° F).
 - 3) All persons subject to the requirements of subsection (c)(4) of this Section shall maintain records, which include for each purchase:
 - A) The name and address of the solvent supplier;
 - B) The date of purchase;
 - C) The type of solvent;
 - D) The unit volume of solvent;
 - E) The total volume of solvent;
 - F) The vapor pressure of the solvent measured in mmHg at 20° C (68° F); and
 - G) For any mixture of solvents, the vapor pressure of the mixture, as used, measured in mmHg at 20° C (68° F).
 - 4) All persons subject to the requirements of subsection (c)(4) of this Section shall maintain records documenting the use of good operating practices consistent with the equipment manufacturer's specifications for the cold cleaning degreasers and add-on control equipment. At a minimum these records shall include:
 - A) Records for periodic inspection of the cold cleaning degreasers and add-on control equipment with date of inspection, individual performing the inspection, and nature of inspection;

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- B) Records for repair of malfunctions and breakdowns with identification and description of incident, date identified, date repaired, nature of repair, and the amount of VOM that escaped into the atmosphere as a result of the incident;
 - C) Control device monitoring and recording data; and
 - D) A daily log of operating time for the control device, monitoring equipment, and all associated degreasers.
- 5) All persons subject to the requirements of subsection (c) of this Section shall notify the Agency at least 30 days before changing the method of compliance between subsection (c)(3) and (c)(4) of this Section. Such notification shall include a demonstration of compliance with the newly applicable subsection.
- 6) All persons subject to the requirements of subsection (b) or (c) of this Section shall notify the Agency of any violation of subsection (b) or (c) of this Section by sending a description of the violation and copies of records documenting such violations to the Agency within 30 days following the occurrence of the violation.
- e) All records required by subsection (d) of this Section shall be retained for three years and shall be made available to the Agency upon request.
 - f) The cleaning of electronic components as defined in 35 Ill. Adm. Code Section 211.1885 is exempt from the requirements of subsection (c) of this Section.
 - g) Any cold cleaning taking place in a Detrex cold batch degreaser Model #2D-CC-SPL Size 24-4-10, or substantial equivalent, including automated loading of parts, totally enclosed operation (excluding loading or unloading) and permitted by the Agency, is exempt from the requirements of subsection (c) of this Section.

(Source: Amended at 31 Ill. Reg. 7086, effective April 30, 2007)

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2672 **Section 218.183 Open Top Vapor Degreasing**
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- a) Operating Requirements: No person shall operate an open top vapor degreaser unless:
 - 1) The cover of the degreaser is closed when workloads are not being processed through the degreaser;
 - 2) Solvent carry out emissions are minimized by:
 - A) Racking parts to allow complete drainage;

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- B) Moving parts in and out of the degreaser at less than 3.3 m/min (11 ft/min);
 - C) Holding the parts in the vapor zone until condensation ceases;
 - D) Tipping out any pools of solvent on the cleaned parts before removal from the vapor zone; and
 - E) Allowing parts to dry within the degreaser until visually dry;
- 3) Porous or absorbent materials, such as cloth, leather, wood or rope, are not degreased;
 - 4) Less than half of the degreaser's open top area is occupied with a workload;
 - 5) The degreaser is not loaded to the point where the vapor level would drop more than 10 cm (4 in) when the workload is removed from the vapor zone;
 - 6) Spraying is done below the vapor level only;
 - 7) Solvent leaks are repaired immediately;
 - 8) Waste solvent is stored in covered containers only and not disposed of in such a manner that more than 20% of the waste solvent (by weight) is allowed to evaporate into the atmosphere;
 - 9) Water is not visually detectable in solvent exiting from the water separator; and
 - 10) Exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of degreaser open area is not used, unless necessary to meet the requirements of the Occupational Safety and Health Act (29 [USC U.S.C.](#) Section 651 et seq.).
- b) Equipment Requirements: No person shall operate an open top vapor degreaser unless:
- 1) The degreaser is equipped with a cover designed to open and close easily without disturbing the vapor zone;
 - 2) The degreaser is equipped with the following switches:
 - A) One which shuts off the sump heat if the amount of condenser

- 2729 coolant is not sufficient to maintain the designed vapor level; and
2730
2731 B) One which shuts off the spray pump if the vapor level drops more
2732 than 10 cm (4 in) below the bottom condenser coil; and
2733
2734 C) One which shuts off the sump heat source when the vapor level
2735 exceeds the design level;
2736
2737 3) A permanent conspicuous label summarizing the operating procedure is
2738 affixed to the degreaser;
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2740 4) The degreaser is equipped with one of the following devices:
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2742 A) A freeboard height of $\frac{3}{4}$ of the inside width of the degreaser tank
2743 or 91 cm (36 in), whichever is less; and if the degreaser opening is
2744 greater than 1 square meter (10.8 square feet), a powered or
2745 mechanically assisted cover; or
2746
2747 B) Any other equipment or system of equivalent emission control as
2748 approved by the Agency and further processed consistent with
2749 Section 218.108 of this Part. Such equipment or system may
2750 include a refrigerated chiller, an enclosed design or a carbon
2751 adsorption system.
2752

(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

2753
2754 **Section 218.184 ConveyORIZED Degreasing**
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2757 a) Operating Requirements: No person shall operate a conveyORIZED degreaser
2758 unless:
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2760 1) Exhaust ventilation exceeding 20 cubic meters per minute per square
2761 meter (65 cubic feet per minute per square foot) of area of loading and
2762 unloading opening is not used, unless necessary to meet the requirements
2763 of the Occupational Safety and Health Act (29 [USCU.S.C.](#) Section 651 et
2764 seq.);
2765
2766 2) Solvent carryout emissions are minimized by:
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2768 A) Racking parts for best drainage; and
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2770 B) Maintaining the vertical conveyor speed at less than 3.3 m/min (11
2771 ft/min);
2772
2773 3) Waste solvent is stored in covered containers only and not disposed of in
2774 such a manner that more than 20% of the waste solvent (by weight) is

- 2775 allowed to evaporate into the atmosphere;
2776
2777 4) Solvent leaks are repaired immediately;
2778
2779 5) Water is not visually detectable in solvent exiting from the water
2780 separator; and
2781
2782 6) Downtime covers are placed over entrances and exits of conveyORIZED
2783 degreasers immediately after the conveyors and exhausts are shut down
2784 and not removed until just before start-up.
2785
2786 b) Equipment Requirements: No person shall operate a conveyORIZED degreaser
2787 unless:
2788
2789 1) The degreaser is equipped with a drying tunnel, rotating (tumbling) basket
2790 or other equipment sufficient to prevent cleaned parts from carrying out
2791 solvent liquid or vapor;
2792
2793 2) The degreaser is equipped with the following switches:
2794
2795 A) One which shuts off the sump heat source if the amount of
2796 condenser coolant is not sufficient to maintain the designed vapor
2797 level;
2798
2799 B) One which shuts off the spray pump or the conveyor if the vapor
2800 level drops more than 10 cm (4 in) below the bottom condenser
2801 coil; and
2802
2803 C) One which shuts off the sump heat source when the vapor level
2804 exceeds the design level.
2805
2806 3) The degreaser is equipped with openings for entrances and exits that
2807 silhouette workloads so that the average clearance between the parts and
2808 the edge of the degreaser opening is less than 10 cm (4 in) or less than 10
2809 percent of the width of the opening;
2810
2811 4) The degreaser is equipped with downtime covers for closing off entrances
2812 and exits when the degreaser is shut down; and
2813
2814 5) The degreaser is equipped with one of the following control devices, if the
2815 air/vapor interface is larger than 2.0 square meters (21.6 square feet):
2816
2817 A) A carbon adsorption system with ventilation greater than or equal
2818 to 15 cubic meters per minute per square meter (50 cubic feet per
2819 minute per square foot) of air/vapor area when downtime covers
2820 are open, and exhausting less than 25 ppm of solvent by volume

2821 averaged over a complete adsorption cycle; or

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- 2824 B) Any other equipment or system of equivalent emission control as
2825 approved by the Agency, and further processed consistent with
2826 Section 218.108 of this Part. Such equipment or system may
2827 include a refrigerated chiller.

2828 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

2829

2830 **Section 218.185 Compliance Schedule (Repealed)**

2831

2832 (Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)

2833

2834 **Section 218.186 Test Methods**

2835

2836 The following test methods shall be used to demonstrate compliance with this Subpart:

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2838 a) Vapor pressures shall be determined by using the procedure specified in Section
2839 218.110 of this Part.

2840

2841 b) Exhaust ventilation rates shall be determined by using the procedures specified in
2842 Section 218.105(f)(3) of this Part.

2843

2844 c) The performance of control devices shall be determined by using the procedures
2845 specified in Section 218.105(f) of this Part.

2846

2847 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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2849 **Section 218.187 Other Industrial Solvent Cleaning Operations**

2850

2851 a) Applicability. On and after January 1, 2012:

2852

2853 1) Except as provided in subsection (a)(2) of this Section, the requirements of
2854 this Section shall apply to all cleaning operations that use organic
2855 materials at sources that emit a total of 226.8 kg per calendar month (500
2856 lbs per calendar month) or more of VOM, in the absence of air pollution
2857 control equipment, from cleaning operations at the source other than
2858 cleaning operations identified in subsection (a)(2) of this Section. For
2859 purposes of this Section, "cleaning operation" means the process of
2860 cleaning products, product components, tools, equipment, or general work
2861 areas during production, repair, maintenance, or servicing, including but
2862 not limited to spray gun cleaning, spray booth cleaning, large and small
2863 manufactured components cleaning, parts cleaning, equipment cleaning,
2864 line cleaning, floor cleaning, and tank cleaning, at sources with emission
2865 units;

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- 2) Notwithstanding subsection (a)(1) of this Section:
- A) The following cleaning operations shall be exempt from the requirements of subsections (b), (c), (d), (e), (f), and (g) of this Section:
- i) Cleaning operations subject to the limitations in Sections 218.182, 218.183, or 218.184;
 - ii) Janitorial cleaning;
 - iii) Stripping of cured coatings, inks, or adhesives;
 - iv) Cleaning operations in printing pre-press areas, including the cleaning of film processors, color scanners, plate processors, film cleaning, and plate cleaning;
- B) Cleaning operations for emission units within the following categories shall be exempt from the requirements of subsections (b), (c), (d), (e), (f), and (g) of this Section:
- i) Flexible package printing;
 - ii) Lithographic printing;
 - iii) Letterpress printing;
 - iv) Flat wood paneling coating;
 - v) Large appliance coating;
 - vi) Metal furniture coating;
 - vii) Paper, film, and foil coating;
 - viii) Wood furniture coating;
 - ix) Plastic parts coating;
 - x) Miscellaneous metal parts coating;
 - xi) Fiberglass boat manufacturing;
 - xii) Miscellaneous industrial adhesives; and

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- xiii) Auto and light-duty truck assembly coating;
 - C) The following cleaning operations shall be exempt from the requirements of subsections (b), (c), (f), and (g) of this Section:
 - i) Cleaning of solar cells, laser hardware, scientific instruments, and high-precision optics;
 - ii) Cleaning conducted as part of performance laboratory tests on coatings, adhesives, or inks; research and development operations; or laboratory tests in quality assurance laboratories;
 - iii) Cleaning of paper-based gaskets and clutch assemblies where rubber is bonded to metal by means of an adhesive;
 - iv) Cleaning of cotton swabs to remove cottonseed oil before cleaning of high-precision optics;
 - v) Cleaning of medical device and pharmaceutical manufacturing operations if the facility uses no more than 5.7 liters (1.5 gallons) per day of solvents for such cleaning;
 - vi) Cleaning of adhesive application equipment used for thin metal laminating;
 - vii) Cleaning of electronic or electrical cables;
 - viii) Touch-up cleaning performed on printed circuit boards where surface mounted devices have already been attached;
 - ix) Cleaning of coating and adhesive application processes utilized to manufacture transdermal drug delivery products using no more than three gallons per day of ethyl acetate;
 - x) Cleaning of application equipment used to apply coatings on satellites and radiation effect coatings;
 - xi) Cleaning of application equipment used to apply solvent-borne fluoropolymer coatings;
 - xii) Cleaning of ultraviolet or electron beam adhesive application;

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- xiii) Cleaning of sterilization indicating ink application equipment if the facility uses no more than 5.7 liters (1.5 gallons) per day of solvents for such cleaning;
 - xiv) Cleaning of metering rollers, dampening rollers, and printing plates;
 - xv) Cleaning of numismatic dies;
 - xvi) Cleaning operations associated with digital printing;
 - xvii) Cleaning with aerosol products if the facility uses no more than 4.7 liters (1.25 gallons) per day of such products;
 - xviii) Cleaning of plastic-based or vinyl-based substrates for use in the screen printing process when using UV curable ink and coating systems;
 - xix) Cleaning conducted as part of performance tests on coatings, adhesives, or inks that are in research and development and that are not yet commercially used for the applications for which they are being tested. This exemption is limited to the use of up to a total of 90.9 liters (24 gallons) of cleaning solvent per calendar month and 416.3 liters (110 gallons) per calendar year for such cleaning.
- b) Material and Control Requirements. No owner or operator of a source subject to this Section, other than manufacturers of coatings, inks, adhesives, or resins, shall perform any cleaning operation subject to this Section unless the owner or operator meets the requirements in subsection (b)(1), (b)(2), or (b)(3). No owner or operator of a source that manufactures coatings, inks, adhesives, or resins shall perform any cleaning operation subject to this Section unless the owner or operator meets the requirements in at least one of the following subsections: (b)(1), (b)(2), (b)(3), (b)(4), or (b)(5).
- 1) The VOM content of the as-used cleaning solutions does not exceed the following emissions limitations:
 - A) Product cleaning during manufacturing process or surface preparation for coating, adhesive, or ink application:
 - i) Electrical apparatus components and electronic components
- | | | | |
|--|--|------|--------|
| | | kg/l | lb/gal |
| | | 0.10 | 0.83 |

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- ii) Medical device and pharmaceutical manufacturing 0.80 6.7
- B) Repair and maintenance cleaning:
 - i) Electrical apparatus components and electronic components kg/1 lb/gal
0.10 0.83
 - ii) Medical device and pharmaceutical manufacturing tools, equipment, and machinery 0.80 6.7
 - iii) Medical device and pharmaceutical manufacturing general work surfaces 0.60 5.0

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- C) Cleaning of ink application equipment:
 - i) Rotogravure printing that does not print flexible packaging kg/1 lb/gal
0.10 0.83
 - ii) Screen printing, including screen reclamation activities 0.50 4.2
 - iii) Ultraviolet ink and electron beam ink application equipment, except screen printing 0.65 5.4
 - iv) Flexographic printing that does not print flexible packaging 0.10 0.83

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- D) Cleaning of equipment used in the manufacture of coatings, inks, adhesives, or resins kg/1 lb/gal
0.20 1.67
- E) All other cleaning operations not subject to a specific limitation in subsections (b)(1)(A) through (b)(1)(D) of this Section kg/1 lb/gal
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- 2) The VOM composite vapor pressure of each as-used cleaning solution used does not exceed 8.0 mmHg measured at 20°C (68°F);
 - 3) An afterburner or carbon adsorber is installed and operated that reduces VOM emissions from the subject cleaning operation by at least 85 percent overall, or for sources that manufacture coatings, inks, adhesives, or resins, an afterburner or carbon adsorber is installed and operated that reduces VOM emissions from the subject cleaning operation by at least 80 percent overall and has a 90 percent efficiency. The owner or operator may use an emissions control system other than an afterburner or carbon adsorber if such device reduces VOM emissions from the subject cleaning operation in accordance with the applicable capture and control requirements of this subsection (b)(3), the owner or operator submits a plan to the Agency detailing appropriate monitoring devices, test methods, recordkeeping requirements, and operating parameters for such control device, and such plan is approved by the Agency and USEPA within federally enforceable permit conditions;
 - 4) For sources that manufacture coatings, inks, adhesives, or resins, the owner or operator complies with the following work practices:
 - A) Equipment being cleaned is maintained leak-free;
 - B) VOM-containing cleaning materials are drained from the cleaned equipment upon completion of cleaning;
 - C) VOM-containing cleaning materials, including waste solvent, are not stored or disposed of in such a manner that will cause or allow evaporation into the atmosphere; and
 - D) VOM-containing cleaning materials are stored in closed containers;
 - 5) Sources that manufacture coatings, inks, adhesives, or resins may utilize solvents that do not comply with subsection (b)(1) or (b)(2) of this Section provided that all of the following requirements are met:
 - A) No more than 228 l (60 gal) of fresh solvent is used per calendar month. Solvent that is reused or recycled, either onsite or offsite, for further use in equipment cleaning or in the manufacture of coatings, inks, adhesives, or resins, shall not be included in this limit;
 - B) Solvents, including cleanup solvents, are collected and stored in closed containers; and

- 3065 C) Records are maintained in accordance with subsection (e)(6).
3066
3067 c) The owner or operator of a subject source shall demonstrate compliance with this
3068 Section by using the applicable test methods and procedures specified in
3069 subsection (g) of this Section and by complying with the recordkeeping and
3070 reporting requirements specified in subsection (e) of this Section.
3071
3072 d) Operating Requirements. The owner or operator of a source subject to the
3073 requirements of this Section shall comply with the following for each subject
3074 cleaning operation. Such requirements are in addition to work practices set forth
3075 in subsections (b)(4) and (b)(5) of this Section, as applicable:
3076
3077 1) Cover open containers and properly cover and store applicators
3078 used to apply cleaning solvents;
3079
3080 2) Minimize air circulation around the cleaning operation;
3081
3082 3) Dispose of all used cleaning solutions, cleaning towels, and applicators
3083 used to apply cleaning solvents in closed containers;
3084
3085 4) Utilize equipment practices that minimize emissions;
3086
3087 5) When using cleaning solvent for wipe cleaning, sources that manufacture
3088 coatings, inks, adhesives, or resins shall:
3089
3090 A) Cover open containers used for the storage of spent or fresh
3091 organic compounds used for cleanup or coating, ink, adhesive, or
3092 resin removal; and
3093
3094 B) Cover open containers used for the storage or disposal of cloth or
3095 paper impregnated with organic compounds that are used for
3096 cleanup or coating, ink, adhesive, or resin removal.
3097
3098 e) Recordkeeping and Reporting Requirements
3099
3100 1) The owner or operator of a source exempt from the limitations of this
3101 Section because of the criteria in subsection (a)(1) of this Section shall
3102 comply with the following:
3103
3104 A) By January 1, 2012, or upon initial start-up of the source,
3105 whichever is later, submit a certification to the Agency that
3106 includes:
3107
3108 i) A declaration that the source is exempt from the
3109 requirements of this Section because of the criteria in
3110 subsection (a)(1);

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- ii) Calculations that demonstrate that combined emissions of VOM from cleaning operations at the source, other than cleaning operations identified in subsection (a)(2) of this Section, never equal or exceed 226.8 kg/month (500 lbs/month), in the absence of air pollution control equipment. An emission adjustment factor of 0.50 shall be used in calculating emissions from used shop towels if the VOM composite vapor pressure of each associated cleaning solution is demonstrated to be less than 10 mmHg at 20°C (68°F) and the used shop towels are kept in closed containers. For cleaning solutions with VOM composite vapor pressures of equal to or greater than 10 mmHG measured at 20°C (68°F) and for shop towels that are not kept in closed containers, no emission adjustment factor shall be used;
 - B) On and after January 1, 2012, collect and record the following information each month for each cleaning operation, other than cleaning operations identified in subsection (a)(2) of this Section:
 - i) The name and identification of each VOM-containing cleaning solution as applied in each cleaning operation;
 - ii) The VOM content of each cleaning solution as applied in each cleaning operation;
 - iii) The weight of VOM per volume and the volume of each as-used cleaning solution; and
 - iv) The total monthly VOM emissions from cleaning operations at the source;
 - C) Notify the Agency of any record that shows that the combined emissions of VOM from cleaning operations at the source, other than cleaning operations identified in subsection (a)(2) of this Section, ever equal or exceed 226.8 kg/month (500 lbs/month), in the absence of air pollution control equipment, within 30 days after the event occurs.
- 2) All sources subject to the requirements of this Section shall:
- A) By January 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes:

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- i) A declaration that all subject cleaning operations are in compliance with the requirements of this Section;
 - ii) Identification of each subject cleaning operation and each VOM-containing cleaning solution used as of the date of certification in such operation;
 - iii) If complying with the emissions control system requirement, what type of emissions control system will be used;
 - iv) Initial documentation that each subject cleaning operation will comply with the applicable limitation, including copies of manufacturer's specifications, test results (if any), formulation data, and calculations;
 - v) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;
 - vi) A description of the practices and procedures that the source will follow to ensure compliance with the limitations in subsection (d), and, if applicable, subsection (b)(4); and
 - vii) A description of each cleaning operation exempt pursuant to subsection (a)(2), if any, and a listing of the emission units on which the exempt cleaning operation is performed;
- B) At least 30 calendar days before changing the method of compliance between subsections (b)(1), (b)(2), (b)(4), or (b)(5) and subsection (b)(3) of this Section, notify the Agency in writing of such change. The notification shall include a demonstration of compliance with the newly applicable subsection;
- 3) All sources complying with this Section pursuant to the requirements of subsection (b)(1) of this Section shall collect and record the following information for each cleaning solution used:
- A) For each cleaning solution that is prepared at the source with automatic equipment:
 - i) The name and identification of each cleaning solution;
 - ii) The VOM content of each cleaning solvent in the cleaning solution;

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- iii) Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);
 - iv) The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;
 - v) The VOM content of the as-used cleaning solution, with supporting calculations; and
 - vi) A calibration log for the automatic equipment, detailing periodic checks;
- B) For each batch of cleaning solution that is not prepared at the source with automatic equipment:
- i) The name and identification of each cleaning solution;
 - ii) Date, time of preparation, and each subsequent modification of the batch;
 - iii) The VOM content of each cleaning solvent in the cleaning solution;
 - iv) The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and
 - v) The VOM content of the as-used cleaning solution, with supporting calculations. For cleaning solutions that are not prepared at the site but are used as purchased, the manufacturer's specifications for VOM content may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 218.105(a) of this Part;
- 4) All sources complying with this Section pursuant to the requirements of subsection (b)(2) of this Section shall collect and record the following information for each cleaning solution used:
- A) The name and identification of each cleaning solution;

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- B) Date, time of preparation, and each subsequent modification of the batch;
 - C) The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with the applicable methods and procedures specified in Section 218.110 of this Part;
 - D) The total amount of each cleaning solvent used to prepare the as-used cleaning solution; and
 - E) The VOM composite partial vapor pressure of each as-used cleaning solution, as determined in accordance with the applicable methods and procedures specified in Section 218.110 of this Part;
- 5) All sources complying with this Section pursuant to the requirements of subsection (b)(3) of this Section shall comply with the following:
- A) By January 1, 2012, or upon initial start-up of the source, whichever is later, and upon initial start-up of a new emissions control system, include in the certification required by subsection (e)(3) of this Section a declaration that the monitoring equipment required under subsection (f) of this Section has been properly installed and calibrated according to manufacturer's specifications;
 - B) If testing of an emissions control system is conducted pursuant to subsection (g) of this Section, the owner or operator shall, within 90 days after conducting such testing, submit a copy of all test results to the Agency and shall submit a certification to the Agency that includes the following:
 - i) A declaration that all tests and calculations necessary to demonstrate compliance with subsection (b)(3) of this Section have been properly performed;
 - ii) A statement whether the subject cleaning operation is or is not in compliance with subsection (b)(3) of this Section; and
 - iii) The operating parameters of the emissions control system during testing, as monitored in accordance with subsection (f) of this Section;
 - C) Collect and record daily the following information for each cleaning operation subject to the requirements of subsection (b)(3) of this Section:

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- i) Emissions control system monitoring data in accordance with subsection (f) of this Section, as applicable;
 - ii) A log of operating time for the emissions control system, monitoring equipment, and the associated cleaning equipment;
 - iii) A maintenance log for the emissions control system and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages;
- D) Maintain records documenting the use of good operating practices consistent with the equipment manufacturer's specifications for the cleaning equipment being used and the emissions control system equipment. At a minimum, these records shall include:
- i) Records for periodic inspection of the cleaning equipment and emissions control system equipment with date of inspection, individual performing the inspection, and nature of inspection;
 - ii) Records for repair of malfunctions and breakdowns with identification and description of incident, date identified, date repaired, nature of repair, and the amount of VOM released into the atmosphere as a result of the incident;
- 6) All sources complying with this Section pursuant to the requirements of subsection (b)(5) of this Section shall collect and record monthly the following information for each cleaning operation subject to the requirements of subsection (b)(5) of this Section:
- A) The name, identification, and volume of each VOM-containing cleaning solution as applied in each cleaning operation;
 - B) The volume of each fresh cleaning solvent used for cleaning coating, ink, adhesive, or resin manufacturing equipment;
 - C) The volume of cleaning solvent recovered for either offsite or onsite reuse or recycling for further use in the cleaning of coating, ink, adhesive, or resin manufacturing equipment;
- 7) The owner or operator of a source with cleaning operations that fall under one or more of the exclusions set forth in subsection (a)(2)(C)(v), (a)(2)(C)(xiii), or (a)(2)(C)(xvii) including sources exempt from the

- 3341 limitations of this Section because of the criteria in subsection (a)(1),
3342 shall:
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3344 A) By January 1, 2012, or upon initial start-up of the source,
3345 whichever is later, submit a certification to the Agency that
3346 includes a declaration that the source has cleaning operations that
3347 fall under one or more of the exclusions set forth in subsection
3348 (a)(2)(C)(v), (a)(2)(C)(xiii), or (a)(2)(C)(xvii) and a statement
3349 identifying each such cleaning operation and the exclusion
3350 applicable to each cleaning operation;
3351
3352 B) Collect and record the name, identification, and volume of each
3353 cleaning solvent as applied each day in each cleaning operation
3354 that falls under one or more of the exclusions set forth in
3355 subsection (a)(2)(C)(v), (a)(2)(C)(xiii), or (a)(2)(C)(xvii); and
3356
3357 C) Notify the Agency in writing if the amount of cleaning solvent
3358 used in the cleaning of medical device and pharmaceutical
3359 manufacturing operations or of sterilization indicating ink
3360 application equipment at the source ever exceeds 5.7 liters (1.5
3361 gallons) per day, or if the amount of aerosol cleaning products used
3362 at the source ever exceeds 4.7 liters (1.25 gallons) per day, within
3363 30 days after the exceedance occurs;
3364
3365 8) The owner or operator of a source with cleaning operations that fall under
3366 one or more of the exclusions set forth in subsection (a)(2)(C)(xviii) or
3367 (a)(2)(C)(xix), including sources exempt from the limitations of this
3368 Section because of the criteria in subsection (a)(1), shall:
3369
3370 A) By January 1, 2012, or upon initial start-up of the source,
3371 whichever is later, submit a certification to the Agency that
3372 includes a declaration that the source has cleaning operations that
3373 fall under one or more of the exclusions set forth in subsection
3374 (a)(2)(C)(xviii) or (a)(2)(C)(xix), and a statement identifying each
3375 such cleaning operation and the exclusion applicable to each
3376 cleaning operation;
3377
3378 B) Collect and record the name, identification, volume, and VOM
3379 content of each cleaning solvent as applied each month in each
3380 cleaning operation that falls under one or more of the exclusions
3381 set forth in subsection (a)(2)(C)(xviii) or (a)(2)(C)(xix);
3382
3383 C) For cleaning operations that fall under the exclusion set forth in
3384 subsection (a)(2)(C)(xviii), collect and record each month
3385 information demonstrating that the exempt cleaning solvent is
3386 being used exclusively for the cleaning of plastic-based or vinyl-

- 3387 based substrates for use in the screen printing process when using
3388 UV curable ink and coating systems; and
3389
3390 D) For cleaning operations that fall under the exclusion set forth in
3391 subsection (a)(2)(C)(xix), collect and record each month
3392 information demonstrating that the exempt cleaning solvent is
3393 being used exclusively for production line performance testing of
3394 coatings that are in research and development and are not yet
3395 commercially used for the applications for which they are being
3396 tested;
3397
3398 9) All sources subject to the requirements of subsections (b) and (d) of this
3399 Section shall notify the Agency of any violation of subsection (b) or (d) by
3400 providing a description of the violation and copies of records documenting
3401 the violation to the Agency within 30 days following the occurrence of the
3402 violation;
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3404 10) All records required by this subsection (e) shall be retained by the source
3405 for at least three years and shall be made available to the Agency upon
3406 request.
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3408 f) Monitoring Requirements
3409
3410 1) If an afterburner is used to demonstrate compliance, the owner or operator
3411 of a source subject to subsection (b)(3) of this Section shall:
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3413 A) Install, calibrate, operate, and maintain temperature monitoring
3414 devices with an accuracy of 3°C or 5°F on the emissions control
3415 system in accordance with Section 218.105(d)(2) of this Part and
3416 in accordance with the manufacturer's specifications. Monitoring
3417 shall be performed at all times when the emissions control system
3418 is operating; and
3419
3420 B) Install, calibrate, operate and maintain, in accordance with
3421 manufacturer's specifications, a continuous recorder on the
3422 temperature monitoring devices, such as a strip chart, recorder or
3423 computer, with at least the same accuracy as the temperature
3424 monitor;
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3426 2) If a carbon adsorber is used to demonstrate compliance, the owner or
3427 operator of a source subject to subsection (b)(3) shall use Agency and
3428 USEPA approved continuous monitoring equipment that is installed,
3429 calibrated, maintained, and operated according to vendor specifications at
3430 all times the control device is in use. The continuous monitoring
3431 equipment shall monitor the VOM concentration of each carbon
3432 adsorption bed or the exhaust of the bed next in sequence to be desorbed;

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- 3441 g) Testing Requirements
- 3442
- 3443 1) Testing to demonstrate compliance with the requirements of this Section
- 3444 shall be conducted by the owner or operator within 90 days after a request
- 3445 by the Agency, or as otherwise specified in this Section. Such testing
- 3446 shall be conducted at the expense of the owner or operator and the owner
- 3447 or operator shall notify the Agency in writing 30 days in advance of
- 3448 conducting the testing to allow the Agency to be present during the
- 3449 testing;
- 3450
- 3451 2) Testing to demonstrate compliance with the VOM content limitations in
- 3452 subsection (b)(1) of this Section, and to determine the VOM content of
- 3453 cleaning solvents and cleaning solutions, shall be conducted as follows:
- 3454
- 3455 A) The applicable test methods and procedures specified in Section
- 3456 218.105(a) of this Part shall be used, provided; however, Method
- 3457 24, incorporated by reference in Section 218.112 of this Part, shall
- 3458 be used to demonstrate compliance; or
- 3459
- 3460 B) The manufacturer's specifications for VOM content for cleaning
- 3461 solvents may be used if such manufacturer's specifications are
- 3462 based on results of tests of the VOM content conducted in
- 3463 accordance with methods specified in Section 218.105(a) of this
- 3464 Part; provided, however, Method 24 shall be used to determine
- 3465 compliance. In the event of any inconsistency between a Method
- 3466 24 test and the manufacturer's specifications, the Method 24 test
- 3467 shall govern;
- 3468
- 3469 3) Testing to determine the VOM composite partial vapor pressure of
- 3470 cleaning solvents, cleaning solvent concentrates, and as-used cleaning
- 3471 solutions shall be conducted in accordance with the applicable methods
- 3472 and procedures specified in Section 218.110 of this Part;
- 3473
- 3474 4) For afterburners and carbon adsorbers, the methods and procedures of
- 3475 Section 218.105(d) through (f) shall be used for testing to demonstrate
- 3476 compliance with the requirements of subsection (b)(3) of this Section, as
- 3477 follows:
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- A) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part;
 - B) To determine the volumetric flow rate of the exhaust stream, Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part;
 - C) To determine the VOM concentration of the exhaust stream entering and exiting the emissions control system, Method 25 or 25A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part. For thermal and catalytic afterburners, Method 25 must be used except under the following circumstances, in which case Method 25A must be used:
 - i) The allowable outlet concentration of VOM from the emissions control system is less than 50 ppmv, as carbon;
 - ii) The VOM concentration at the inlet of the emissions control system and the required level of control result in exhaust concentrations of VOM of 50 ppmv, or less, as carbon; and
 - iii) Due to the high efficiency of the emissions control system, the anticipated VOM concentration at the emissions control system exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or Method 25A. If the retest is conducted using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest using Method 25;
 - D) During testing, the cleaning equipment shall be operated at representative operating conditions and flow rates;
- 5) An owner or operator using an emissions control system other than an afterburner or carbon adsorber shall conduct testing to demonstrate compliance with the requirements of subsection (b)(3) of this Section as

3525 set forth in the owner's or operator's plan approved by the Agency and
 3526 USEPA as federally enforceable permit conditions pursuant to subsection
 3527 (b)(3).
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3529 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)

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 3531 **SUBPART F: COATING OPERATIONS**
 3532

3533 **Section 218.204 Emission Limitations**
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3535 Except as provided in Sections 218.205, 218.207, 218.208, 218.212, 218.215 and 218.216 of this
 3536 Subpart, no owner or operator of a coating line shall apply at any time any coating in which the
 3537 VOM content exceeds the following emission limitations for the specified coating. Except as
 3538 otherwise provided in subsections (a), (c), (g), (h), (j), (l), (n), (p), and (q) of this Section,
 3539 compliance with the emission limitations marked with an asterisk in this Section is required on
 3540 and after March 15, 1996, and compliance with emission limitations not marked with an asterisk
 3541 is required until March 15, 1996. The following emission limitations are expressed in units of
 3542 VOM per volume of coating (minus water and any compounds which are specifically exempted
 3543 from the definition of VOM) as applied at each coating applicator, except where noted.
 3544 Compounds which are specifically exempted from the definition of VOM should be treated as
 3545 water for the purpose of calculating the "less water" part of the coating composition.
 3546 Compliance with this Subpart must be demonstrated through the applicable coating analysis test
 3547 methods and procedures specified in Section 218.105(a) of this Part and the recordkeeping and
 3548 reporting requirements specified in Section 218.211(c) of this Subpart except where noted.
 3549 (Note: The equation presented in Section 218.206 of this Part shall be used to calculate emission
 3550 limitations for determining compliance by add-on controls, credits for transfer efficiency,
 3551 emissions trades and cross-line averaging.) The emission limitations are as follows:
 3552

a)	Automobile or Light-Duty Truck Coating	kg/l	lb/gal
	1) Prior to May 1, 2012:		
	A) Prime coat	0.14	(1.2)
		0.14*	(1.2)*
	B) Primer surface coat	1.81	(15.1)
		1.81*	(15.1)*

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 3554 **BOARD NOTE:** The primer surface coat limitation is in units of kg (lbs)
 3555 of VOM per l (gal) of coating solids deposited. Compliance with the
 3556 limitation shall be based on the daily-weighted average from an entire
 3557 primer surfacer operation. Compliance shall be demonstrated in
 3558 accordance with the topcoat protocol referenced in Section
 3559 218.105(b)(1)(A) and the recordkeeping and reporting requirements
 3560 specified in Section 218.211(f). Testing to demonstrate compliance shall
 3561 be performed in accordance with the topcoat protocol and a detailed

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testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 218.205 does not apply to the primer surfacer limitation.

C)	Topcoat	kg/l	lb/gal
		1.81	(15.1)
		1.81*	(15.1)*

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BOARD NOTE: The topcoat limitation is in units of kg (lbs) of VOM per l (gal) of coating solids deposited. Compliance with the limitation shall be based on the daily-weighted average from an entire topcoat operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 218.105(b)(1)(A) of this Part and the recordkeeping and reporting requirements specified in Section 218.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 218.205 of this Part does not apply to the topcoat limitation.

D)	Final repair coat	kg/l	lb/gal
		0.58	(4.8)
		0.58*	(4.8)*

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- 2) On and after May 1, 2012, subject automobile and light-duty truck coating lines shall comply with the following limitations. These limitations shall not apply to materials supplied in containers with a net volume of 0.47 liters (16 oz) or less, or a net weight of 0.45 kg (1 lb) or less:

- A) Electrodeposition primer (EDP) operations. For purposes of this subsection (a)(2)(A), "electrodeposition" means a water-borne dip coating process in which opposite electrical charges are applied to the substrate and the coating. The coating is attracted to the substrate due to the electrochemical potential difference that is created.

	kg VOM/l coating solids applied	lb VOM/gal coating solids applied
i) When solids turnover ratio (R_T) is greater than or equal to 0.160	0.084	(0.7)
ii) When R_T is greater than or	0.084 x	(0.084 x

	equal to 0.040 and less than 0.160	$350^{0.160-R_T}$	$350^{0.160-R_T} \times$ 8.34)
B)	Primer surfacer operations	kg VOM/l coating solids deposited	lb VOM/gal coating solids deposited
	i)	VOM content limitation	1.44 (12.0)
	ii)	Compliance with the limitation set forth in subsection (a)(2)(B)(i) shall be based on the daily-weighted average from an entire primer surfacer operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 218.105(b)(1)(B) and the recordkeeping and reporting requirements specified in Section 218.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 218.205 does not apply to the primer surfacer limitation.	
C)	Topcoat operations	kg VOM/l coating solids deposited	lb VOM/gal coating solids deposited
	i)	VOM content limitation	1.44 (12.0)
	ii)	Compliance with the limitation set forth in subsection (a)(2)(C)(i) shall be based on the daily-weighted average from an entire topcoat operation. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 218.105(b)(1)(B) and the recordkeeping and reporting requirements specified in Section 218.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 218.205 does not apply to the topcoat limitation.	
D)	Combined primer surfacer and topcoat operations	kg VOM/l coating solids	lb VOM/gal coating solids deposited

deposited

i) VOM content limitation 1.44 (12.0)

ii) Compliance with the limitation set forth in subsection (a)(2)(D)(i) shall be based on the daily-weighted average from the combined primer surfacer and topcoat operations. Compliance shall be demonstrated in accordance with the topcoat protocol referenced in Section 218.105(b)(1)(B) and the recordkeeping and reporting requirements specified in Section 218.211(f). Testing to demonstrate compliance shall be performed in accordance with the topcoat protocol and a detailed testing proposal approved by the Agency and USEPA specifying the method of demonstrating compliance with the protocol. Section 218.205 does not apply to the combined primer surfacer and topcoat limitation.

E) Final repair coat operations kg/l lb/gal
coatings coatings

i) VOM content limitation 0.58 (4.8)

ii) Compliance with the final repair operations limitation set forth in subsection (a)(2)(E)(i) shall be on an occurrence-weighted average basis, calculated in accordance with the equation below, in which clear coatings shall have a weighting factor of 2 and all other coatings shall have a weighting factor of 1. For purposes of this subsection (a)(2)(E)(ii), an "occurrence" is the application of the combination of coatings that constitute a final repair coat for a single automobile or light-duty truck. Section 218.205 does not apply to the final repair coat limitation.

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$$VOM_{tot} = \frac{2VOM_{cc} + \sum_{i=1}^n VOM_i}{n + 2}$$

where:

VOM_{tot} = Total VOM content of all coatings, as applied, on an occurrence weighted average basis, and used to determine compliance with this subsection (a)(2)(E).

i = Subscript denoting a specific coating applied.

- n = Total number of coatings applied in the final repair operation, other than clear coatings.
- VOM_{cc} = The VOM content, as applied, of the clear coat used in the final repair operation.
- VOM_i = The VOM content of each coating used in the final repair operation, as applied, other than clear coatings.

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F) Miscellaneous Materials. For reactive adhesives subject to this subsection (a)(2)(F), compliance shall be demonstrated in accordance with the methods and procedures set forth in appendix A to Subpart PPPP of 40 CFR 63, incorporated by reference in Section 218.112 of this Part.

		kg/l	lb/gal
i)	Glass bonding primer	0.90	(7.51)
ii)	Adhesive	0.25	(2.09)
iii)	Cavity wax	0.65	(5.42)
iv)	Trunk sealer	0.65	(5.42)
v)	Deadener	0.65	(5.42)
vi)	Gasket/gasket sealing material	0.20	(1.67)
vii)	Underbody coating	0.65	(5.42)
viii)	Trunk interior coating	0.65	(5.42)
ix)	Bedliner	0.20	(1.67)
x)	Weatherstrip adhesive	0.75	(6.26)
xi)	Lubricating wax/compound	0.70	(5.84)

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b)	Can Coating	kg/l	lb/gal
1)	Sheet basecoat and overvarnish		
A)	Sheet basecoat	0.34 0.26*	(2.8) (2.2)*

	B) Overvarnish	0.34	(2.8)
		0.34	(2.8)*
2)	Exterior basecoat and overvarnish	0.34	(2.8)
		0.25*	(2.1)*
3)	Interior body spray coat		
	A) Two piece	0.51	(4.2)
		0.44*	(3.7)*
	B) Three piece	0.51	(4.2)
		0.51*	(4.2)*
4)	Exterior end coat	0.51	(4.2)
		0.51*	(4.2)*
5)	Side seam spray coat	0.66	(5.5)
		0.66*	(5.5)*
6)	End sealing compound coat	0.44	(3.7)
		0.44*	(3.7)*

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c) Paper Coating

1)	Prior to May 1, 2011:	kg/l	lb/gal
		0.28	(2.3)
2)	On and after May 1, 2011, the owner or operator shall comply with either the limit in weight of VOM per weight of solids applied or weight of VOM per weight of coatings applied:	kg VOM/kg	kg VOM/kg
		(lb VOM/lb) solids applied	(lb VOM/lb) coatings applied
	A) Pressure sensitive tape and label surface coatings	0.20	(0.067)
		0.20	(0.067)
	B) All other paper coatings	0.40	(0.08)
		0.40	(0.08)

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3607 3) The paper coating limitation set forth in this subsection (c) shall not
 3608 apply to any owner or operator of any paper coating line on which
 3609 flexographic, rotogravure, lithographic, or letterpress printing is
 3610 performed if the paper coating line complies with the applicable
 3611 emissions limitations in Subpart H of this Part. In addition, screen
 3612 printing on paper is not regulated as paper coating, but is regulated under
 3613 Subpart TT of this Part. On and after May 1, 2011, the paper coating
 3614 limitation shall also not apply to coating performed on or in-line with
 3615 any digital printing press, or to size presses and on-machine coaters on
 3616 papermaking machines applying sizing or water-based clays.
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d)	Coil Coating	kg/l 0.31 0.20*	lb/gal (2.6) (1.7)*
e)	Fabric Coating	0.35 0.28*	(2.9) (2.3)*
f)	Vinyl Coating	0.45 0.28*	(3.8) (2.3)*
g)	Metal Furniture Coating		
1)	Prior to May 1, 2011:		
	A) Air dried	kg/l 0.34	lb/gal (2.8)
	B) Baked	0.28	(2.3)
2)	On and after May 1, 2011, the owner or operator shall comply with either the limit in weight of VOM per volume of coating applied or weight of VOM per volume of solids applied:		
		kg/l (lb/gal) coatings applied	kg/l (lb/gal) solids applied
	A) General, One-Component	0.275 (2.3)	0.40 (3.3)
	B) General, Multi-Component		
	i) Air dried	0.340 (2.8)	0.55 (4.5)

	ii) Baked	0.275 (2.3)	0.40 (3.3)
C)	Extreme High Gloss		
	i) Air dried	0.340 (2.8)	0.55 (4.5)
	ii) Baked	0.360 (3.0)	0.61 (5.1)
D)	Extreme Performance		
	i) Air dried	0.420 (3.5)	0.80 (6.7)
	ii) Baked	0.360 (3.0)	0.61 (5.1)
E)	Heat Resistant		
	i) Air dried	0.420 (3.5)	0.80 (6.7)
	ii) Baked	0.360 (3.0)	0.61 (5.1)
F)	Metallic	0.420 (3.5)	0.80 (6.7)
G)	Pretreatment Coatings	0.420 (3.5)	0.80 (6.7)
H)	Solar Absorbent		
	i) Air dried	0.420 (3.5)	0.80 (6.7)
	ii) Baked	0.360 (3.0)	0.61 (5.1)

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- 3) On and after May 1, 2011, the limitations set forth in this subsection (g) shall not apply to stencil coatings, safety-indicating coatings, solid-film lubricants, electric-insulating and thermal-conducting coatings, touch-up and repair coatings, or coating applications utilizing hand-held aerosol cans.

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h) Large Appliance Coating			
1)	Prior to May 1, 2011:		
	A) Air dried	kg/l 0.34	lb/gal (2.8)
	B) Baked	0.28	(2.3)
2)	On and after May 1, 2011, the owner or operator shall comply with either the limit in weight of VOM per volume of coatings applied or weight of VOM per volume of solids applied:	kg/l	kg/l (lb/gal)
		(lb/gal)	solids applied
		coatings applied	
A)	General, One Component	0.275 (2.3)	0.40 (3.3)
B)	General, Multi-Component		
	i) Air dried	0.340 (2.8)	0.55 (4.5)
	ii) Baked	0.275 (2.3)	0.40 (3.3)
C)	Extreme High Gloss		
	i) Air dried	0.340 (2.8)	0.55 (4.5)
	ii) Baked	0.360 (3.0)	0.61 (5.1)
D)	Extreme Performance		
	i) Air dried	0.420 (3.5)	0.80 (6.7)
	ii) Baked	0.360 (3.0)	0.61 (5.1)
E)	Heat Resistant		
	i) Air dried	0.420 (3.5)	0.80 (6.7)
	ii) Baked	0.360	0.61

		(3.0)	(5.1)
F)	Metallic	0.420 (3.5)	0.80 (6.7)
G)	Pretreatment Coatings	0.420 (3.5)	0.80 (6.7)
H)	Solar Absorbent		
	i) Air dried	0.420 (3.5)	0.80 (6.7)
	ii) Baked	0.360 (3.0)	0.61 (5.1)

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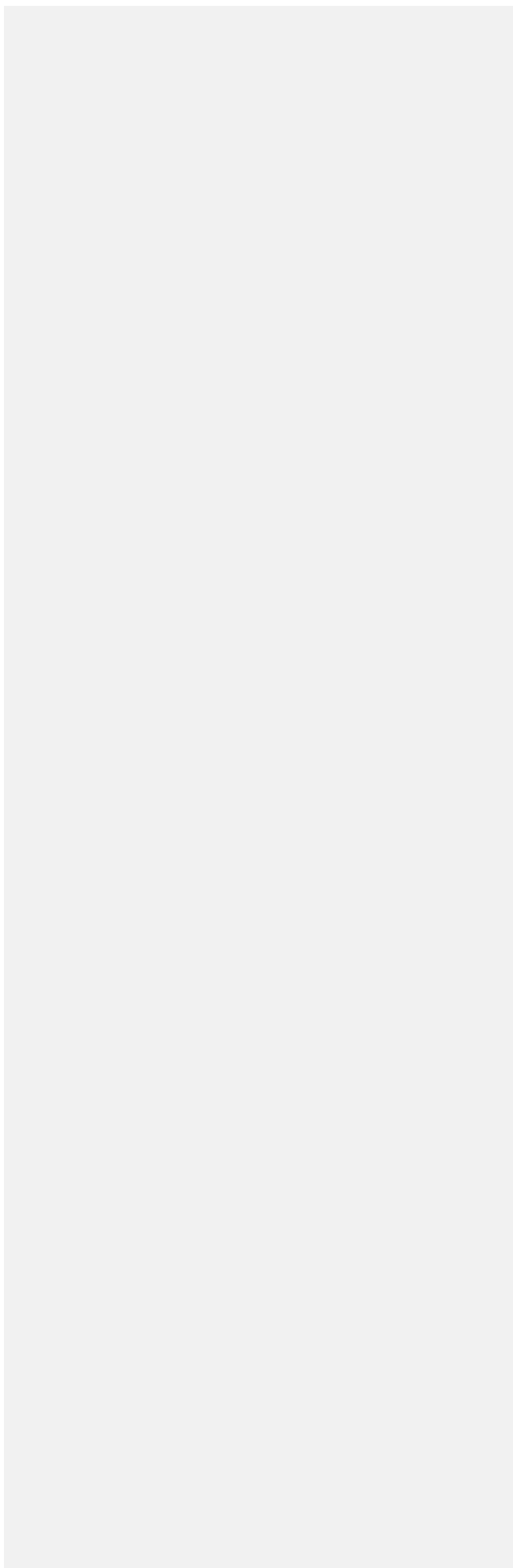
3) The limitations set forth in this subsection (h) shall not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of coating does not exceed 0.95 l (1 quart) in any one rolling eight-hour period. On and after May 1, 2011, these limitations shall also not apply to stencil coatings, safety-indicating coatings, solid-film lubricants, electric-insulating and thermal-conducting coatings, touch-up and repair coatings, or coating applications utilizing hand-held aerosol cans.

i)	Magnet Wire Coating	kg/l 0.20 0.20*	lb/gal (1.7) (1.7)*
j)	Prior to May 1, 2012: Miscellaneous Metal Parts and Products Coating		
	1) Clear coating	0.52 0.52*	(4.3) (4.3)*
	2) Extreme performance coating		
	A) Air dried	0.42 0.42*	(3.5) (3.5)*
	B) Baked	0.42 0.40*	(3.5) (3.3)*
	3) Steel pail and drum interior coating	0.52 0.52*	(4.3) (4.3)*
	4) All other coatings		

A)	Air dried	0.42	(3.5)
		0.40*	(3.3)*
B)	Baked	0.36	(3.0)
		0.34*	(2.8)*
5)	Marine engine coating		
A)	Air dried	0.42	(3.5)
		0.42*	(3.5)*
B)	Baked		
i)	Primer/Topcoat	0.42	(3.5)
		0.42*	(3.5)*
ii)	Corrosion resistant basecoat	0.42	(3.5)
		0.28*	(2.3)*
C)	Clear Coating	0.52	(4.3)
		0.52*	(4.3)*
6)	Metallic Coating		
A)	Air dried	0.42	(3.5)
		0.42*	(3.5)*
B)	Baked	0.36	(3.0)
		0.36	(3.0)*

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- 7) Definitions
- A) For purposes of subsection (j)(5) of this Section, the following terms are defined:
- i) "Corrosion resistant basecoat" means, for purposes of subsection (j)(5)(B)(ii) of this Section, a water-borne epoxy coating applied via an electrodeposition process to a metal surface prior to spray coating, for the purpose of enhancing corrosion resistance.
- ii) "Electrodeposition process" means, for purposes of subsection (j)(5) of this Section, a water-borne dip coating process in which opposite electrical charges are applied to the substrate and the coating. The coating is attracted to the substrate due to the electrochemical potential difference that is created.



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iii) "Marine engine coating" means, for purposes of subsection (j)(5) of this Section, any extreme performance protective, decorative or functional coating applied to an engine that is used to propel watercraft.

B) For purposes of subsection (j)(6) of this Section, "metallic coating" means a coating which contains more than ¼ lb/gal of metal particles, as applied.

BOARD NOTE: On and after May 1, 2012, the limitations in Section 218.204(q) shall apply to this category of coating.

k)	Heavy Off-Highway Vehicle Products Coating	kg/l	lb/gal
	1) Extreme performance prime coat	0.42	(3.5)
		0.42*	(3.5)*
	2) Extreme performance topcoat (air dried)	0.42	(3.5)
		0.42*	(3.5)*
	3) Final repair coat (air dried)	0.42	(3.5)
		0.42*	(3.5)*
	4) All other coatings are subject to the emission limitations for miscellaneous metal parts and products coatings in subsection (j).		
l)	Wood Furniture Coating		
	1) Limitations before March 15, 1998:	kg/l	lb/gal
	A) Clear topcoat	0.67	(5.6)
	B) Opaque stain	0.56	(4.7)
	C) Pigmented coat	0.60	(5.0)
	D) Repair coat	0.67	(5.6)
	E) Sealer	0.67	(5.6)
	F) Semi-transparent stain	0.79	(6.6)
	G) Wash coat	0.73	(6.1)

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3671 BOARD NOTE: Prior to March 15, 1998, an owner or operator of a
 3672 wood furniture coating operation subject to this Section shall apply all
 3673 coatings, with the exception of no more than 37.8 l (10 gal) of coating per
 3674 day used for touch-up and repair operations, using one or more of the
 3675 following application systems: airless spray application system, air-
 3676 assisted airless spray application system, electrostatic spray application
 3677 system, electrostatic bell or disc spray application system, heated airless
 3678 spray application system, roller coating, brush or wipe coating application
 3679 system, dip coating application system or high volume low pressure
 3680 (HVLP) application system.

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 3682 2) On and after March 15, 1998, wood furniture sealers and topcoats must
 3683 comply with one of the limitations specified in subsections (1)(2)(A)
 3684 through (E):
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		kg VOM/ kg solids	lb VOM/ lb solids
A)	Topcoat	0.8	(0.8)
B)	Sealers and topcoats with the following limits:		
	i) Sealer other than acid-cured alkyd amino vinyl sealer	1.9	(1.9)
	ii) Topcoat other than acid-cured alkyd amino conversion varnish topcoat	1.8	(1.8)
	iii) Acid-cured alkyd amino vinyl sealer	2.3	(2.3)
	iv) Acid-cured alkyd amino conversion varnish topcoat	2.0	(2.0)

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 3687 C) Meet the provisions of Section 218.215 of this Subpart for use of
 3688 an averaging approach;
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 3690 D) Achieve a reduction in emissions equivalent to the requirements of
 3691 subsection (1)(2)(A) or (B) of this Section, as calculated using
 3692 Section 218.216 of this Subpart; or
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 3694 E) Use a combination of the methods specified in subsections
 3695 (1)(2)(A) through (D) of this Section.

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3) Other wood furniture coating limitations on and after March 15, 1998:

	kg/l	lb/gal
A) Opaque stain	0.56	(4.7)
B) Non-topcoat pigmented coat	0.60	(5.0)
C) Repair coat	0.67	(5.6)
D) Semi-transparent stain	0.79	(6.6)
E) Wash coat	0.73	(6.1)

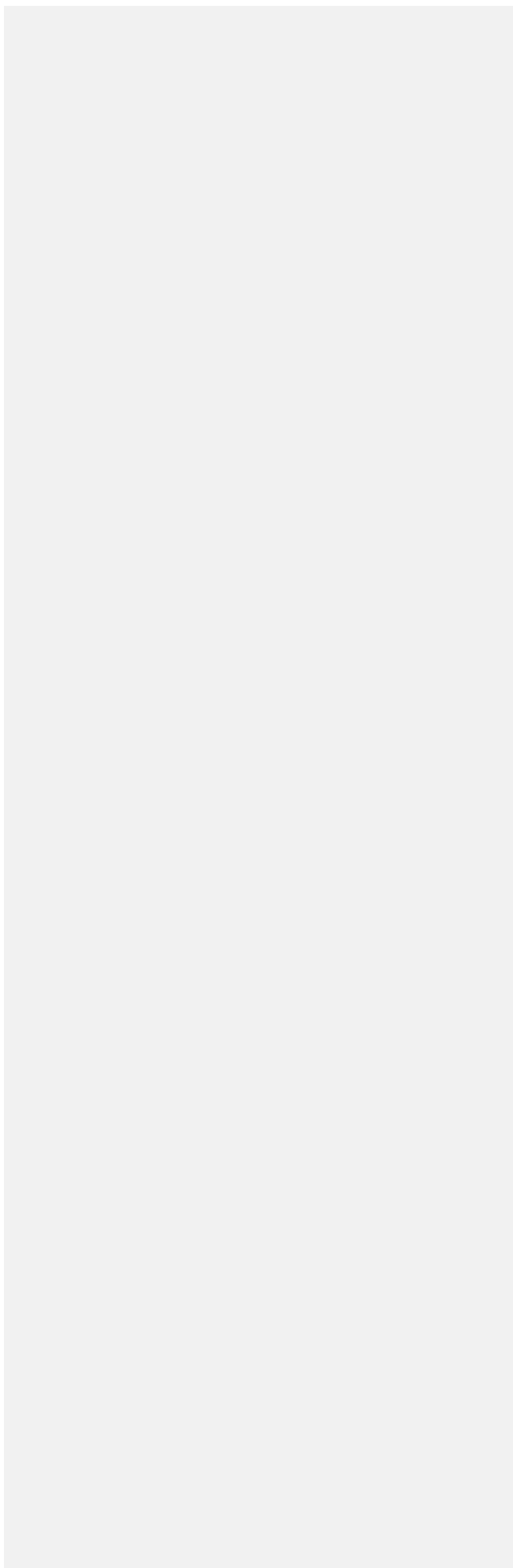
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4) Other wood furniture coating requirements on and after March 15, 1998:

- A) No source subject to the limitations of subsection (1)(2) or (3) of this Section and utilizing one or more wood furniture coating spray booths shall use strippable spray booth coatings containing more than 0.8 kg VOM/kg solids (0.8 lb VOM/lb solids), as applied.
- B) Any source subject to the limitations of subsection (1)(2) or (3) of this Section shall comply with the requirements of Section 218.217 of this Subpart.
- C) Any source subject to the limitations of subsection (1)(2)(A) or (B) of this Section and utilizing one or more continuous coaters shall, for each continuous coater, use an initial coating which complies with the limitations of subsection (1)(2)(A) or (B) of this Section. The viscosity of the coating in each reservoir shall always be greater than or equal to the viscosity of the initial coating in the reservoir. The owner or operator shall:
 - i) Monitor the viscosity of the coating in the reservoir with a viscosity meter or by testing the viscosity of the initial coating and retesting the coating in the reservoir each time solvent is added;
 - ii) Collect and record the reservoir viscosity and the amount and weight of VOM per weight of solids of coating and solvent each time coating or solvent is added; and
 - iii) Maintain these records at the source for a period of three years.

m)	Existing Diesel-Electric Locomotive Coating Lines in Cook County	kg/l	lb/gal
1)	Extreme performance prime coat	0.42 0.42*	(3.5) (3.5)*
2)	Extreme performance top-coat (air dried)	0.42 0.42*	(3.5) (3.5)*
3)	Final repair coat (air dried)	0.42 0.42*	(3.5) (3.5)*
4)	High-temperature aluminum coating	0.72 0.72*	(6.0) (6.0)*
5)	All other coatings	0.36 0.36*	(3.0) (3.0)*
n)	Prior to May 1, 2012: Plastic Parts Coating: Automotive/Transportation	kg/l	lb/gal
1)	Interiors		
A)	Baked		
i)	Color coat	0.49*	(4.1)*
ii)	Primer	0.46*	(3.8)*
B)	Air dried		
i)	Color coat	0.38*	(3.2)*
ii)	Primer	0.42*	(3.5)*
2)	Exteriors (flexible and non-flexible)		
A)	Baked		
i)	Primer	0.60*	(5.0)*
ii)	Primer non-flexible	0.54*	(4.5)*
iii)	Clear coat	0.52*	(4.3)*
iv)	Color coat	0.55*	(4.6)*

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B)	Air dried		
i)	Primer	0.66*	(5.5)*
ii)	Clear coat	0.54*	(4.5)*
iii)	Color coat (red & black)	0.67*	(5.6)*
iv)	Color coat (others)	0.61*	(5.1)*
3)	Specialty		
A)	Vacuum metallizing basecoats, texture base coats	0.66*	(5.5)*
B)	Black coatings, reflective argent coatings, air bag cover coatings, and soft coatings	0.71*	(5.9)*
C)	Gloss reducers, vacuum metallizing topcoats, and texture topcoats	0.77*	(6.4)*
D)	Stencil coatings, adhesion primers, ink pad coatings, electrostatic prep coatings, and resist coatings	0.82*	(6.8)*
E)	Headlamp lens coatings	0.89*	(7.4)*

BOARD NOTE: On and after May 1, 2012, the limitations in Section [218.204\(q\)](#)~~218.240(q)~~ shall apply to this category of coating.

o)	Prior to May 1, 2012: Plastic Parts Coating: Business Machine	kg/l	lb/gal
1)	Primer	0.14*	(1.2)*
2)	Color coat (non-texture coat)	0.28*	(2.3)*
3)	Color coat (texture coat)	0.28*	(2.3)*
4)	Electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings	0.48*	(4.0)*

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5)	Specialty coatings		
	A) Soft coat	0.52*	(4.3)*
	B) Plating resist	0.71*	(5.9)*
	C) Plating sensitizer	0.85*	(7.1)*

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BOARD NOTE: On and after May 1, 2012, the limitations in Section 218.204(q) shall apply to this category of coating.

- p) Flat Wood Paneling Coatings. On and after August 1, 2010, flat wood paneling coatings shall comply with one of the following limitations:
- 1) 0.25 kg VOM/1 of coatings (2.1 lb VOM/gal coatings); or
 - 2) 0.35 kg VOM/1 solids (2.9 lb VOM/gal solids).
- q) Miscellaneous Metal Parts and Products Coatings and Plastic Parts and Products Coatings On and After May 1, 2012. On and after May 1, 2012, the owner or operator of a miscellaneous metal or plastic parts coating line shall comply with the limitations in this subsection (q). The limitations in this subsection (q) shall not apply to ~~aerosol coating products, powder coatings, or~~ primer sealants and ejection cartridge sealants used in ammunition manufacturing, [aerosol coating products, or powder coatings](#). Primer sealants and ejection cartridge sealants shall instead be regulated under Subpart TT of this Part.
- 1) Metal Parts and Products. For purposes of this subsection (q)(1), "corrosion resistant basecoat" means a water-borne epoxy coating applied via an electrodeposition process to a metal surface prior to spray coating, for the purpose of enhancing corrosion resistance. The limitations in this subsection (q)(1) shall not apply to stencil coats, safety-indicating coatings, solid-film lubricants, electric-insulating and thermal-conducting coatings, magnetic data storage disk coatings, and plastic extruded onto metal parts to form a coating. The limitations in Section 218.219, however, shall apply to these coatings unless specifically excluded in Section 218.219. [The owner or operator shall comply with either the limit in weight of VOM per volume of coatings applied or weight of VOM per volume of solids applied.](#)

		kg/l (lb/gal) coatings	kg/l (lb/gal) solids
A)	General one component coating		
	i) Air dried	0.34	0.54

		(2.8)	(4.52)
ii)	Baked	0.28 (2.3)	0.40 (3.35)
B)	General multi-component coating		
i)	Air dried	0.34 (2.8)	0.54 (4.52)
ii)	Baked	0.28 (2.3)	0.40 (3.35)
C)	Camouflage coating	0.42 (3.5)	0.80 (6.67)
D)	Electric-insulating varnish	0.42 (3.5)	0.80 (6.67)
E)	Etching filler	0.42 (3.5)	0.80 (6.67)
F)	Extreme high-gloss coating		
i)	Air dried	0.42 (3.5)	0.80 (6.67)
ii)	Baked	0.36 (3.0)	0.61 (5.06)
G)	Extreme performance coating		
i)	Air dried	0.42 (3.5)	0.80 (6.67)
ii)	Baked	0.36 (3.0)	0.61 (5.06)
H)	Heat-resistant coating		
i)	Air dried	0.42 (3.5)	0.80 (6.67)

	ii) Baked	0.36 (3.0)	0.61 (5.06)
I)	High performance architectural coating	0.42 (3.5)	0.80 (6.67)
J)	High temperature coating	0.42 (3.5)	0.80 (6.67)
K)	Metallic coating		
	i) Air dried	0.42 (3.5)	0.80 (6.67)
	ii) Baked	0.36 (3.0)	0.61 (5.06)
L)	Military specification coating		
	i) Air dried	0.34 (2.8)	0.54 (4.52)
	ii) Baked	0.28 (2.3)	0.40 (3.35)
M)	Mold-seal coating	0.42 (3.5)	0.80 (6.67)
N)	Pan backing coating	0.42 (3.5)	0.80 (6.67)
O)	Prefabricated architectural coating: multi-component		
	i) Air dried	0.42 (3.5)	0.80 (6.67)
	ii) Baked	0.28 (2.3)	0.40 (3.35)
P)	Prefabricated architectural coating: one-component		
	i) Air dried	0.42 (3.5)	0.80 (6.67)

	ii) Baked	0.28 (2.3)	0.40 (3.35)
Q)	Pretreatment coating	0.42 (3.5)	0.80 (6.67)
R)	Repair coats and touch-up coatings		
	i) Air dried	0.42 (3.5)	
	ii) Baked	0.36 (3.01)	
S)	Silicone release coating	0.42 (3.5)	0.80 (6.67)
T)	Solar-absorbent coating		
	i) Air dried	0.42 (3.5)	0.80 (6.67)
	ii) Baked	0.36 (3.0)	0.61 (5.06)
U)	Vacuum-metalizing coating	0.42 (3.5)	0.80 (6.67)
V)	Drum coating, new, exterior	0.34 (2.8)	0.54 (4.52)
W)	Drum coating, new, interior	0.42 (3.5)	0.80 (6.67)
X)	Drum coating, reconditioned, exterior	0.42 (3.5)	0.80 (6.67)
Y)	Drum coating, reconditioned, interior	0.50 (4.2)	1.17 (9.78)
Z)	Ammunition Sealants		
	i) Air dried	0.42 (3.5)	0.80 (6.67)

ii)	Baked	0.36 (3.0)	0.61 (5.06)
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AA) Electrical switchgear compartment coatings

i)	Air dried	0.42 (3.5)	0.80 (6.67)
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ii)	Baked	0.36 (3.0)	0.61 (5.06)
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~~BB)~~ ~~All other coatings~~

i)	Air dried	0.40 (3.3)	0.73 (5.98)
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ii)	Baked	0.34 (2.8)	0.54 (4.52)
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2) Plastic Parts and Products: Miscellaneous. For purposes of this subsection (q)(2), miscellaneous plastic parts and products are plastic parts and products that are not subject to subsection (q)(3), (q)(4), (q)(5), or (q)(6) of this Section. The limitations in subsection (q)(2) shall not apply to touch-up and repair coatings; stencil coats applied on clear or transparent substrates; clear or translucent coatings; coatings applied at a paint manufacturing facility while conducting performance tests on the coatings; any individual coating category used in volumes less than 189.2 liters (50 gallons) in any one calendar year, if the total usage of all such coatings does not exceed 756.9 liters (200 gallons) per calendar year per source and substitute compliant coatings are not available; reflective coatings applied to highway cones; mask coatings that are less than 0.5 mm thick (dried) if the area coated is less than 25 square inches; electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings; and heparin-benzalkonium chloride (HBAC)-containing coatings applied to medical devices if the total usage of all such coatings does not exceed 378.4 liters (100 gallons) per calendar year per source. The limitations in Section 218.219, however, shall apply to such coatings unless specifically excluded in Section 218.219. [The owner or operator shall comply with either the limit in weight of VOM per volume of coatings applied or weight of VOM per volume of solids applied.](#)

kg/l	kg/l
(lb/gal)	(lb/gal)
coatings	solids

A)	General one component coating	0.28	0.40
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		(2.3)	(3.35)
B)	General multi-component	0.42 (3.5)	0.80 (6.67)
C)	Electric dissipating coatings and shock-free coatings	0.80 (6.7)	8.96 (74.7)
D)	Extreme performance (2-pack coatings)	0.42 (3.5)	0.80 (6.67)
E)	Metallic coating	0.42 (3.5)	0.80 (6.67)
F)	Military specification coating		
	i) 1-pack coatings	0.28 (2.3)	0.54 (4.52)
	ii) 2-pack coatings	0.42 (3.5)	0.80 (6.67)
G)	Mold-seal coating	0.76 (6.3)	5.24 (43.7)
H)	Multi-colored coating	0.68 (5.7)	3.04 (25.3)
I)	Optical coating	0.80 (6.7)	8.96 (74.7)
J)	Vacuum-metalizing coating	0.80 (6.7)	8.96 (74.7)

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- 3) Plastic Parts and Products:
Automotive/Transportation
[The owner or operator shall comply with either the limit in weight of VOM per volume of coatings applied or weight of VOM per volume of solids applied](#)

kg/l	kg/l
(lb/gal)	(lb/gal)
coatings	solids

- A) High bake coatings – interior and exterior parts

i)	Flexible primer	0.54 (4.5)	1.39 (11.58)
ii)	Non-flexible primer	0.42 (3.5)	0.80 (6.67)
iii)	Basecoats	0.52 (4.3)	1.24 (10.34)
iv)	Clear coat	0.48 (4.0)	1.05 (8.76)
v)	Non-basecoat/clear coat	0.52 (4.3)	1.24 (10.34)
B)	Low bake/air dried coatings – exterior parts		
i)	Primers	0.58 (4.8)	1.66 (13.80)
ii)	Basecoat	0.60 (5.0)	1.87 (15.59)
iii)	Clear coats	0.54 (4.5)	1.39 (11.58)
iv)	Non-basecoat/clear coat	0.60 (5.0)	1.87 (15.59)
C)	Low bake/air dried coatings – interior parts		
i)	Color coat	0.38 (3.2)	0.67 (5.66)
ii)	Primer	0.42 (3.5)	0.80 (6.67)
D)	Touchup and repair coatings	0.62 (5.2)	2.13 (17.72)
E)	Specialty		
i)	Vacuum metallizing	0.66	2.62

basecoats (5.5) (21.8)

ii) Vacuum metallizing topcoats 0.77 6.06
(6.4) (49.1)

F) Red, yellow, and black coatings: Subject coating lines shall comply with a limit determined by multiplying the appropriate limit in subsections (q)(3)(A) through (q)(3)(C) of this Section by 1.15.

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4) Plastic Parts and Products: Business Machine. The limitations of this subsection (q)(4) shall not apply to vacuum metallizing coatings, gloss reducers, texture topcoats, adhesion primers, electrostatic preparation coatings, stencil coats, and resist coats other than plating resist coats. The limitations in Section 218.219, however, shall apply to such coatings unless specifically excluded in Section 218.219. [The owner or operator shall comply with either the limit in weight of VOM per volume of coatings applied or weight of VOM per volume of solids applied.](#)

		kg/l (lb/gal) coatings	kg/l (lb/gal) solids
A)	Primers	0.35 (2.9)	0.57 (4.80)
B)	Topcoat	0.35 (2.9)	0.57 (4.80)
C)	Color coat (texture coat)	0.28 (2.3)	0.40 (4.80)
D)	Color coat (non-texture coat)	0.28 (2.3)	0.40 (4.80)
E)	Texture coats other than color texture coats	0.35 (2.9)	0.57 (4.80)
F)	EMI/RFI shielding coatings	0.48 (4.0)	1.05 (8.76)
G)	Fog coat	0.26 (2.2)	0.38 (3.14)

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- H) Touchup and repair 0.35 0.57
- 5) Pleasure Craft Surface Coatings: [The owner or operator shall comply with either the limit in weight of VOM per volume of coatings applied or weight of VOM per volume of solids applied.](#)

		kg/l (lb/gal) coatings	kg/l (lb/gal) solids
A)	Extreme high gloss coating – topcoat	0.60 (5.0)	1.88 (15.6)
B)	High gloss coating – topcoat	0.42 (3.5)	0.80 (6.7)
C)	Pretreatment wash primer	0.78 (6.5)	6.67 (55.6)
D)	Finish primer/surfacer		
	Prior to January 1, 2014	0.60 (5.0)	1.88 (15.6)
	On and after January 1, 2014	0.42 (3.5)	0.80 (6.7)
E)	High build primer/surfacer	0.34 (2.8)	0.55 (4.6)
F)	Aluminum substrate antifoulant coating	0.56 (4.7)	1.53 (12.8)
G)	Other substrate antifoulant coating	<u>0.40</u> <u>(3.3)</u>	<u>0.73</u> <u>(5.8)</u>
H)	Antifouling Sealer/Tie Coat	0.42 (3.5)	0.80 (6.7)
I)	All other pleasure craft surface coatings for metal or plastic	0.42 (3.5)	0.80 (6.7)

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- 6) Motor Vehicle Materials

		kg/l (lb/gal) coatings
A)	Cavity wax	0.65 (5.42)
B)	Sealer	0.65 (5.42)
C)	Deadener	0.65 (5.42)
D)	Gasket/gasket sealing material	0.20 (1.67)
E)	Underbody coating	0.65 (5.42)
F)	Trunk interior coating	0.65 (5.42)
G)	Bedliner	0.20 (1.67)
H)	Lubricating wax/compound	0.70 (5.84)

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3819 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)

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3821 **Section 218.205 Daily-Weighted Average Limitations**

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3823 No owner or operator of a coating line subject to the limitations of Section 218.204 of this
3824 Subpart and complying by means of this Section shall operate the subject coating line unless the
3825 owner or operator has demonstrated compliance with subsection (a), (b), (c), (d), (e), (f), (g), (h),
3826 (i), (j), or (k) of this Section (depending upon the category of coating) through the applicable
3827 coating analysis test methods and procedures specified in Section 218.105(a) of this Part and the
3828 recordkeeping and reporting requirements specified in Section 218.211(d) of this Subpart:

- 3829
3830 a) No owner or operator of a coating line subject to only one of the limitations from
3831 among Section 218.204(a)(1)(A), (a)(1)(D), (a)(2)(A), (a)(2)(E), (a)(2)(F), (c)(1),
3832 (d), (e), (f), (i), or (p) of this Subpart shall apply coatings on any such coating
3833 line, during any day, whose daily-weighted average VOM content exceeds the
3834 emission limitation to which the coatings are subject.
3835
3836 b) Prior to May 1, 2012, no owner or operator of a miscellaneous metal parts and
3837 products coating line subject to the limitations of Section 218.204(j) of this

3838 Subpart shall apply coatings to miscellaneous metal parts or products on the
3839 subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this
3840 Section are met.

- 3841
- 3842 1) For each coating line which applies multiple coatings, all of which are
3843 subject to the same numerical emission limitation within Section
3844 218.204(j) during the same day (e.g., all coatings used on the line are
3845 subject to 0.42 kg/l (3.5 lbs/gal)), the daily-weighted average VOM
3846 content shall not exceed the coating VOM content limit corresponding to
3847 the category of coating used; or
- 3848
- 3849 2) For each coating line which applies coatings subject to more than one
3850 numerical emission limitation in Section 218.204(j) of this Subpart, during
3851 the same day, the owner or operator shall have a site-specific proposal
3852 approved by the Agency and approved by the USEPA as a SIP revision.
3853 To receive approval, the requirements of USEPA's Emissions Trading
3854 Policy Statement (and related policy), 51 Fed. Reg. 43814 (December 4,
3855 1986), must be satisfied.

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3857 c) No owner or operator of a can coating line subject to the limitations of Section
3858 218.204(b) of this Subpart shall operate the subject coating line using a coating
3859 with a VOM content in excess of the limitations specified in Section 218.204(b)
3860 of this Subpart unless all of the following requirements are met:

- 3861
- 3862 1) An alternative daily emission limitation shall be determined for the can
3863 coating operation, i.e., for all of the can coating lines at the source,
3864 according to subsection (c)(2) of this Section. Actual daily emissions shall
3865 never exceed the alternative daily emission limitation and shall be
3866 calculated by use of the following equation.

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$$E_d = \sum_{i=1}^n V_i C_i$$

3869 where:

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E_d = Actual VOM emissions for the day in units of kg/day
(lbs/day);

i = Subscript denoting a specific coating applied;

n = Total number of coatings applied in the can coating
operation, i.e., all can coating lines at the source;

V_i = Volume of each coating applied for the day in units of l/day
(gal/day) of coating (minus water and any compounds that
are specifically exempted from the definition of VOM);

C_i = The VOM content of each coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds that are specifically exempted from the definition of VOM).

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- 2) The alternative daily emission limitation (A_d) shall be determined for the can coating operation, i.e., for all of the can coating lines at the source, on a daily basis as follows:

$$A_d = \sum_{i=1}^n V_i L_i \left(\frac{D_i - C_i}{D_i - L_i} \right)$$

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where:

A_d = The VOM emissions allowed for the day in units of kg/day (lbs/day);

i = Subscript denoting a specific coating applied;

n = Total number of surface coatings applied in the can coating operation;

C_i = The VOM content of each surface coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds that are specifically exempted from the definition of VOM);

D_i = The density of VOM in each coating applied. For the purposes of calculating A_d , the density is 0.882 kg VOM/l VOM (7.36 lbs VOM/gal VOM);

V_i = Volume of each surface coating applied for the day in units of l (gal) of coating (minus water and any compounds that are specifically exempted from the definition of VOM);

L_i = The VOM emission limitation for each surface coating applied as specified in Section 218.204(b) of this Subpart in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds that are specifically exempted from the definition of VOM).

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- d) No owner or operator of a heavy off-highway vehicle products coating line subject to the limitations of Section 218.204(k) of this Subpart shall apply coatings to heavy off-highway vehicle products on the subject coating line unless the requirements of subsection (d)(1) or (d)(2) of this Section are met.

- 1) For each coating line which applies multiple coatings, all of which are

- 3888 subject to the same numerical emission limitation within Section
3889 218.204(k) of this Subpart, during the same day (e.g., all coatings used on
3890 the line are subject to 0.42 kg/l (3.5 lbs/gal)), the daily-weighted average
3891 VOM content shall not exceed the coating VOM content limit
3892 corresponding to the category of coating used: or
3893
- 3894 2) For each coating line which applies coatings subject to more than one
3895 numerical emission limitation in Section 218.204(k) of this Subpart,
3896 during the same day, the owner or operator shall have a site specific
3897 proposal approved by the Agency and approved by the USEPA as a SIP
3898 revision. To receive approval, the requirements of USEPA's Emissions
3899 Trading Policy Statement (and related policy), 51 Fed. Reg. 43814
3900 (December 4, 1986), must be satisfied.
3901
- 3902 e) No owner or operator of a wood furniture coating line subject to the limitations of
3903 Section 218.204(l)(1) or (l)(3) of this Subpart shall apply coatings to wood
3904 furniture on the subject coating line unless the requirements of subsection (e)(1)
3905 or subsection (e)(2) of this Section, in addition to the requirements specified in the
3906 note to Section 218.204(l)(1) of this Subpart, are met.
3907
- 3908 1) For each coating line which applies multiple coatings, all of which are
3909 subject to the same numerical emission limitation within Section
3910 218.204(l)(1) or (l)(3) of this Subpart, during the same day (e.g., all
3911 coatings used on the line are subject to 0.67 kg/l (5.6 lbs/gal)), the daily-
3912 weighted average VOM content shall not exceed the coating VOM content
3913 limit corresponding to the category of coating used; or
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- 3915 2) For each coating line which applies coatings subject to more than one
3916 numerical emission limitation in Section 218.204(l)(1) or (l)(3) of this
3917 Subpart, during the same day, the owner or operator shall have a site
3918 specific proposal approved by the Agency and approved by the USEPA as
3919 a SIP revision. To receive approval, the requirements of USEPA's
3920 Emissions Trading Policy Statement (and related policy), 51 Fed. Reg.
3921 43814 (December 4, 1986), must be satisfied.
3922
- 3923 f) No owner or operator of an existing diesel-electric locomotive coating line in
3924 Cook County, subject to the limitations of Section 218.204(m) of this Subpart
3925 shall apply coatings to diesel-electric locomotives on the subject coating line
3926 unless the requirements of subsection (f)(1) or (f)(2) of this Section are met.
3927
- 3928 1) For each coating line which applies multiple coatings, all of which are
3929 subject to the same numerical emission limitation within Section
3930 218.204(m) of this Subpart, during the same day (e.g., all coatings used on
3931 the line are subject to 0.42 kg/l (3.5 lbs/gal)), the daily-weighted average
3932 VOM content shall not exceed the coating VOM content limit
3933 corresponding to the category of coating used; or

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- 2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 218.204(m) of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) must be satisfied.
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- g) Prior to May 1, 2012, no owner or operator of a plastic parts coating line, subject to the limitations of Section 218.204(n) or (o) of this Subpart shall apply coatings to business machine or automotive/transportation plastic parts on the subject coating line unless the requirements of subsection (g)(1) or (g)(2) of this Section are met:
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- 1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 218.204(n) or (o) of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.42 kg/l (3.5 lbs/gal)), the daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used; or
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- 2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 218.204(n) or (o) of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) must be satisfied.
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- h) No owner or operator of a metal furniture coating line, subject to the limitations of Section 218.204(g) of this Subpart shall apply coatings on the subject coating line unless the requirements of subsection (h)(1) or (h)(2) of this Section are met:
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- 1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 218.204(g) of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.34 kg/l (2.8 lbs/gal)), the daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used; or
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- 2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 218.204(g) of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) must be satisfied.

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- i) No owner or operator of a large appliance coating line, subject to the limitations of Section 218.204(h) of this Subpart shall apply coatings on the subject coating line unless the requirements of subsection (i)(1) or (i)(2) of this Section are met:
 - 1) For each coating line which applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 218.204(h) of this Subpart, during the same day (e.g., all coatings used on the line are subject to 0.34 kg/l (2.8 lbs/gal)), the daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used; or
 - 2) For each coating line which applies coatings subject to more than one numerical emission limitation in Section 218.204(h) of this Subpart, during the same day, the owner or operator shall have a site specific proposal approved by the Agency and approved by the USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy) must be satisfied.
 - j) On and after May 1, 2011, no owner or operator of a paper coating line subject to the limitations of Section 218.204(c) of this Subpart shall apply coatings on the subject coating line unless the requirements in subsection (j)(1) or (j)(2) of this Section are met:
 - 1) For each coating line that applies multiple coatings, all of which are subject to the same numerical emission limitation within Section 218.204(c) during the same day (e.g., all coatings used on the line are subject to 0.40 kg/kg solids (0.08 kg/kg coatings)), the daily-weighted average VOM content shall not exceed the coating VOM content limit corresponding to the category of coating used; or
 - 2) For each coating line that applies coatings subject to more than one numerical emission limitation in Section 218.204(c) during the same day, the owner or operator shall have a site-specific proposal approved by the Agency and approved by USEPA as a SIP revision. To receive approval, the requirements of USEPA's Emissions Trading Policy Statement (and related policy), 51 Fed. Reg. 43814 (December 4, 1986), must be satisfied.
 - k) On and after May 1, 2012, no owner or operator of a miscellaneous metal parts and products coating line, plastic parts or products coating line, pleasure craft surface coating line, or motor vehicle materials coating line subject to the limitations of Section 218.204(q) of this Subpart shall apply coatings on the subject coating line unless the requirements of subsection (k)(1) or (k)(2) of this Section are met:
 - 1) For each coating line that applies multiple coatings, all of which are subject to the same numerical emission limitation within Section

4026 218.204(q) of this Subpart, during the same day (e.g., all coatings used on
4027 the line are subject to 0.42 kg/l (3.5 lbs/gal)), the daily-weighted average
4028 VOM content shall not exceed the coating VOM content limit
4029 corresponding to the category of coating used; or
4030

- 4031 2) For each coating line that applies coatings subject to more than one
4032 numerical emission limitation in Section 218.204(q) of this Subpart,
4033 during the same day, the owner or operator shall have a site specific
4034 proposal approved by the Agency and approved by USEPA as a SIP
4035 revision. To receive approval, the requirements of USEPA's Emissions
4036 Trading Policy Statement (and related policy) must be satisfied.
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4038 (Source: Amended at 34 Ill. Reg. 14174, effective September 14, 2010)
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4040 **Section 218.206 Solids Basis Calculation**

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4042 Limitations in terms of kg (lbs) of VOM emissions per $\frac{1}{D}$ (gal) of solids as applied at each
4043 coating applicator shall be determined by the following equation:
4044

4045
$$S = 1 - \frac{C}{(C/D)}$$

4046 where:
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- S = The limitation on VOM emissions in terms of kg VOM/l (lbs VOM/gal) of solids;
- C = The limitation on VOM emissions in terms of kg/l (lbs/gal) of coating (minus water and any compounds which are specifically excluded from the definition of VOM) specified in Section 218.204 of this Part;
- D = The density of VOM in the coating. For the purposes of calculating S, the density is 0.882 kg VOM/l VOM (7.36 lbs VOM/gal VOM).

4049 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
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4052 **Section 218.207 Alternative Emission Limitations**

- 4053
4054 a) Any owner or operator of a coating line subject to Section 218.204 of this
4055 Subpart, except coating lines subject to Section 218.204(q)(6), may comply with
4056 this Section, rather than with Section 218.204 of this Subpart, if a capture system
4057 and control device are operated at all times the coating line is in operation and the
4058 owner or operator demonstrates compliance with subsections (c), (d), (e), (f), (g),
4059 (h), (i), (j), (k), (l), (m), or (n) of this Section (depending upon the source
4060 category) through the applicable coating analysis and capture system and control
4061 device efficiency test methods and procedures specified in Section 218.105 of this
4062 Part and the recordkeeping and reporting requirements specified in Section

4063 218.211(e) of this Subpart; and the control device is equipped with the applicable
4064 monitoring equipment specified in Section 218.105(d) of this Part and the
4065 monitoring equipment is installed, calibrated, operated and maintained according
4066 to vendor specifications at all times the control device is in use. A capture system
4067 and control device, which does not demonstrate compliance with subsection (c),
4068 (d), (e), (f), (g), (h), (i), (j), (k), (l), (m), or (n) of this Section may be used as an
4069 alternative to compliance with Section 218.204 of this Subpart only if the
4070 alternative is approved by the Agency and approved by the USEPA as a SIP
4071 revision.

4072
4073 b) Alternative Add-On Control Methodologies

4074
4075 1) The coating line is equipped with a capture system and control device that
4076 provides 81 percent reduction in the overall emissions of VOM from the
4077 coating line and the control device has a 90 percent efficiency; or

4078
4079 2) The system used to control VOM from the coating line is demonstrated to
4080 have an overall efficiency sufficient to limit VOM emissions to no more
4081 than what is allowed under Section 218.204 of this Subpart. Use of any
4082 control system other than an afterburner, carbon adsorption, condensation,
4083 or absorption scrubber system can be allowed only if approved by the
4084 Agency and approved by the USEPA as a SIP revision. The use of transfer
4085 efficiency credits can be allowed only if approved by the Agency and
4086 approved by the USEPA as a SIP revision. Baseline transfer efficiencies
4087 and transfer efficiency test methods must be approved by the Agency and
4088 the USEPA. Such overall efficiency is to be determined as follows:

4089
4090 A) Obtain the emission limitation from the appropriate subsection in
4091 Section 218.204 of this Subpart;

4092
4093 B) Unless complying with an emission limitation in Section 218.204
4094 that is already expressed in terms of weight of VOM per volume of
4095 solids, calculate "S" according to the equation in Section 218.206
4096 of this Subpart. For coating lines subject to an emission limitation
4097 in Section 218.204 that is already expressed in terms of weight of
4098 VOM per volume of solids, "S" is equal to such emission
4099 limitation;

4100
4101 C) Calculate the overall efficiency required according to Section
4102 218.105(e) of this Part. For the purposes of calculating this value,
4103 according to the equation in Section 218.105(e)(2) of this Part,
4104 VOM_i is equal to the value of "S" as determined in subsection
4105 (b)(2)(B) of this Section. If the coating line is subject to an
4106 emission limitation in Section 218.204 of this Subpart that is
4107 already expressed in terms of weight of VOM per volume of
4108 solids, $\frac{VOM_i}{VOM_i}$ is equal to that emission limitation.

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- c) No owner or operator of a coating line subject to only one of the emission limitations from among Section 218.204(a)(1)(A), (a)(1)(D), (a)(2)(A), (a)(2)(E), (a)(2)(F), (c)(1), (d), (e), (f), or (i) of this Subpart and equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met. No owner or operator of a coating line subject to Section 218.204(a)(1)(B),r (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart and equipped with a capture system and control device shall operate the coating line unless the owner or operator demonstrates compliance with such limitation in accordance with the topcoat protocol referenced in Section 218.105(b)(1)(A) or (b)(1)(B), as applicable.
 - d) No owner or operator of a miscellaneous metal parts and products coating line that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(j) of this Subpart (e.g., all coatings used on the line are subject to 0.42 kg/1 (3.5 lbs/gal), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.
 - e) No owner or operator of a heavy off-highway vehicle products coating line that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(k) of this Subpart (e.g., all coatings used on the line are subject to 0.42 kg/1 (3.5 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.
 - f) No owner or operator of an existing diesel-electric locomotive coating line in Cook County that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(m) of this Subpart (e.g., all coatings used on the line are subject to 0.42 kg/1 (3.5 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met.
 - g) No owner or operator of a wood furniture coating line that applies one or more coatings during the same day, all of which are subject to the same numerical emission limitation within Section 218.204(l) of this Subpart (e.g., all coatings used on the line are subject to 0.67 kg/1 (5.6 lbs/gal)), and that is equipped with a capture system and control device shall operate the subject coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section are met. If compliance is achieved by meeting the requirements in subsection (b)(2) of this Section, then the provisions in the note to Section 218.204(l) of this Subpart must also be met.

4155 h) No owner or operator of a can coating line that is equipped with a capture system
4156 and control device shall operate the subject coating line unless the requirements in
4157 subsection (h)(1) or (h)(2) of this Section are met.

4158
4159 1) An alternative daily emission limitation shall be determined for the can
4160 coating operation, i.e., for all of the can coating lines at the source,
4161 according to Section 218.205(c)(2) of this Subpart. Actual daily emissions
4162 shall never exceed the alternative daily emission limitation and shall be
4163 calculated by use of the following equation:
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4165
$$E_d = \sum_{i=1}^n V_i C_i (1 - F_i)$$

4166 where:
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- E_d = Actual VOM emissions for the day in units of kg/day (lbs/day);
- i = Subscript denoting the specific coating applied;
- n = Total number of surface coatings as applied in the can coating operation;
- V_i = Volume of each coating as applied for the day in units of l/day (gal/day) of coating (minus water and any compounds that are specifically exempted from the definition of VOM);
- C_i = The VOM content of each coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds that are specifically exempted from the definition of VOM); and
- F_i = Fraction, by weight, of VOM emissions from the surface coating, reduced or prevented from being emitted to the ambient air. This is the overall efficiency of the capture system and control device.

4169 2) The coating line is equipped with a capture system and control device that
4170 provide 75 percent reduction in the overall emissions of VOM from the
4171 coating line and the control device has a 90 percent efficiency.

4172
4173 i) No owner or operator of a plastic parts coating line, that applies one or more
4174 coatings during the same day, all of which are subject to the same numerical
4175 emission limitation within Section 218.204(n) or (o) of this Subpart (e.g., all
4176 coatings used on the line are subject to 0.42 kg/l (3.5 lbs/gal)), and that is
4177 equipped with a capture system and control device shall operate the subject
4178

- 4179 coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section
4180 are met.
4181
- 4182 j) Prior to May 1, 2011, no owner or operator of a metal furniture coating line that
4183 applies one or more coatings during the same day, all of which are subject to the
4184 same numerical emission limitation within Section 218.204(g) of this Subpart
4185 (e.g., all coatings used on the line are subject to 0.34 kg/l (2.8 lbs/gal)), and that is
4186 equipped with a capture system and control device shall operate the subject
4187 coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section
4188 are met.
4189
- 4190 k) Prior to May 1, 2011, no owner or operator of a large appliance coating line that
4191 applies one or more coatings during the same day, all of which are subject to the
4192 same numerical emission limitation within Section 218.204(h) of this Subpart
4193 (e.g., all coatings used on the line are subject to 0.34 kg/l (2.8 lbs/gal)), and that is
4194 equipped with a capture system and control device shall operate the subject
4195 coating line unless the requirements in subsection (b)(1) or (b)(2) of this Section
4196 are met.
4197
- 4198 l) On and after May 1, 2011, no owner or operator of a paper coating line, metal
4199 furniture coating line, or large appliance coating line that is equipped with a
4200 capture system and control device shall operate the subject coating line unless
4201 either:
4202
- 4203 1) The capture system and control device provide at least 90 percent
4204 reduction in the overall emissions of VOM from the coating line; or
4205
- 4206 2) The owner or operator complies with the applicable limitation set forth in
4207 Section 218.204 of this Subpart by utilizing a combination of low-VOM
4208 coatings and a capture system and control device.
4209
- 4210 m) No owner or operator of a flat wood paneling coating line that is equipped with a
4211 capture system and control device shall operate the subject coating line unless
4212 either:
4213
- 4214 1) The capture system and control device provide at least 90 percent
4215 reduction in the overall emissions of VOM from the coating line; or
4216
- 4217 2) The owner or operator of the flat wood paneling coating line complies
4218 with all requirements set forth in subsection (b)(2) of this Section.
4219
- 4220 n) On and after May 1, 2012, no owner or operator of a miscellaneous metal parts
4221 and products coating line, plastic parts and products coating line, or pleasure craft
4222 surface coating line that is equipped with a capture system and control device
4223 shall operate the subject coating line unless:
4224

- 4225 1) The capture system and control device provide at least 90 percent
4226 reduction in the overall emissions of VOM from the coating line; or
4227
4228 2) The owner or operator of the coating line complies with all requirements
4229 set forth in subsection (b)(2) of this Section.
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4231 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)
4232

4233 **Section 218.208 Exemptions from Emission Limitations**
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- 4235 a) Exemptions for all coating categories except wood furniture coating. The
4236 limitations of this Subpart shall not apply to coating lines within a source, that
4237 otherwise would be subject to the same subsection of Section 218.204 (because
4238 they belong to the same coating category, e.g., can coating), provided that
4239 combined actual emissions of VOM from all lines at the source subject to that
4240 subsection never exceed 6.8 kg/day (15 lbs/day) before the application of capture
4241 systems and control devices. (For example, can coating lines within a source
4242 would not be subject to the limitations of Section 218.204(b) of this Subpart if the
4243 combined actual emissions of VOM from the can coating lines never exceed 6.8
4244 kg/day (15 lbs/day) before the application of capture systems and control
4245 devices.) Prior to May 1, 2012, volatile organic material emissions from heavy
4246 off-highway vehicle products coating lines must be combined with VOM
4247 emissions from miscellaneous metal parts and products coating lines to determine
4248 applicability. On and after May 1, 2012, VOM emissions from heavy off-
4249 highway vehicle products coating lines shall be combined with VOM emissions
4250 from miscellaneous metal parts and products coating lines and plastic parts and
4251 products coating lines to determine applicability. Any owner or operator of a
4252 coating source shall comply with the applicable coating analysis test methods and
4253 procedures specified in Section 218.105(a) of this Part and the recordkeeping and
4254 reporting requirements specified in Section 218.211(a) of this Subpart if total
4255 VOM emissions from the subject coating lines are always less than or equal to 6.8
4256 kg/day (15 lbs/day) before the application of capture systems and control devices
4257 and, therefore, are not subject to the limitations of Section 218.204 of this
4258 Subpart. Once a category of coating lines at a source is subject to the limitations
4259 in Section 218.204 of this Subpart the coating lines are always subject to the
4260 limitations in Section 218.204 of this Subpart.
4261
4262 b) Applicability for wood furniture coating
4263
4264 1) The limitations of this Subpart shall apply to a source's wood furniture
4265 coating lines if the source contains process emission units, not regulated
4266 by Subparts B, E, F (excluding Section 218.204(l) of this Subpart), H
4267 (excluding Section 218.405 of this Part), Q, R, S, T (excluding Section
4268 218.486 of this Part), V, X, Y, or BB of this Part, which as a group both:
4269
4270 A) Have a maximum theoretical emissions of 91 Mg (100 tons) or

- 4271 more per calendar year of VOM if no air pollution control
4272 equipment were used; and
4273
4274 B) Are not limited to less than 91 Mg (100 tons) of VOM per calendar
4275 year if no air pollution control equipment were used, through
4276 production or capacity limitations contained in a federally
4277 enforceable permit or SIP revision.
4278
- 2) The limitations of this Subpart shall apply to a source's wood furniture
4279 coating lines, on and after March 15, 1996, if the source contains process
4280 emission units, which as a group, have a potential to emit 22.7 Mg (25
4281 tons) or more of VOM per calendar year and have not limited emissions to
4282 less than 22.7 Mg (25 tons) of VOM per calendar year through production
4283 or capacity limitations contained in a federally enforceable operating
4284 permit or SIP revision, and that:
4285
4286 A) Are not regulated by Subparts B, E, F (excluding Section
4287 218.204(l) of this Subpart), H, Q, R, S, T (excluding Section
4288 218.486 of this Part), V, X, Y, Z or BB of this Part; and
4289
4290 B) Are not included in any of the following categories: synthetic
4291 organic chemical manufacturing industry (SOCMI) distillation,
4292 SOCMI reactors, plastic parts coating (business machines), plastic
4293 parts coating (other), offset lithography, industrial wastewater,
4294 autobody refinishing, SOCMI batch processing, volatile organic
4295 liquid storage tanks and clean-up solvents operations.
4296
4297 3) If a source ceases to fulfill the criteria of subsection (b)(1) or (b)(2) of this
4298 Section, the limitations of Section 218.204(l) of this Subpart shall continue
4299 to apply to any wood furniture coating line which was ever subject to the
4300 limitations of Section 218.204(l) of this Subpart.
4301
4302 4) For the purposes of subsection (b) of this Section, an emission unit shall
4303 be considered to be regulated by a Subpart if it is subject to the limitations
4304 of that Subpart. An emission unit is not considered regulated by a Subpart
4305 if it is not subject to the limits of that Subpart, e.g., the emission unit is
4306 covered by an exemption in the Subpart or the applicability criteria of the
4307 Subpart are not met.
4308
4309 5) Any owner or operator of a wood furniture coating line to which the
4310 limitations of this Subpart are not applicable due to the criteria in
4311 subsection (b) of this Section shall, upon request by the Agency or the
4312 USEPA, submit records to the Agency and the USEPA within 30 calendar
4313 days from the date of the request that document that the coating line is
4314 exempt from the limitations of this Subpart.
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- c) On and after March 15, 1996, the limitations of this Subpart shall not apply to touch-up and repair coatings used by a coating source described by Section 218.204(b), (d), (f), (g), (i), and (q)(5) of this Subpart; provided that the source-wide volume of such coatings used does not exceed 0.95 l (1 quart) per eight-hour period or exceed 209 l/yr (55 gal/yr) for any rolling 12 month period. Recordkeeping and reporting for touch-up and repair coatings shall be consistent with subsection (e) of this Section.
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- d) Prior to May 1, 2012, the limitations of this Subpart shall not apply to touch-up and repair coatings used by a coating source described by Section 218.204(j), (n), and (o) of this Subpart, provided that the source-wide volume of the coatings used does not exceed 0.95 l (1 quart) per eight-hour period or exceed 209 l/yr (55 gal/yr) for any rolling 12 month period. Recordkeeping and reporting for touch-up and repair coatings shall be consistent with subsection (e) of this Section.
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- e) On and after March 15, 1996, the owner or operator of a coating line or a group of coating lines using touch-up and repair coatings that are exempted from the limitations of Section 218.204(b), (d), (f), (g), (i), (j), (n), (o), and (q)(5) of this Subpart because of the provisions of subsection 218.208(c) or (d) of this section shall:
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- 1) Collect and record the name, identification number, and volume used of each touch-up and repair coating, as applied on each coating line, per eight-hour period and per month;
 - 2) Perform calculations on a daily basis, and maintain at the source records of such calculations, of the combined volume of touch-up and repair coatings used source-wide for each eight-hour period;
 - 3) Perform calculations on a monthly basis, and maintain at the source records of such calculations, of the combined volume of touch-up and repair coatings used source-wide for the month and the rolling 12 month period;
 - 4) Prepare and maintain at the source an annual summary of the information required to be compiled pursuant to subsections (e)(1) and (e)(2) of this Section on or before January 31 of the following year;
 - 5) Maintain at the source for a minimum period of three years all records required to be kept under this subsection (e) and make such records available to the Agency upon request;
 - 6) Notify the Agency in writing if the use of touch-up and repair coatings at the source ever exceeds a volume of 0.95 l (1 quart) per eight-hour period or exceeds 209 l/yr (55 gal/yr) for any rolling 12 month period within 30 days after any such exceedance. Such notification shall include a copy of

4363 any records of such exceedance; and

4364
4365 7) "Touch-up and repair coatings" means, for purposes of 35 Ill. Adm. Code
4366 218.208, any coating used to cover minor scratches and nicks that occur
4367 during manufacturing and assembly processes.

4368
4369 (Source: Amended at 35 Ill. Reg. 18813, effective October 25, 2011)

4370 **Section 218.209 Exemption From General Rule on Use of Organic Material**

4371
4372
4373 No owner or operator of a coating line subject to the limitations of Section 218.204 of this Part is
4374 required to meet the limitations of Subpart G (Section 218.301 or 218.302) of this Part, after the
4375 date by which the coating line is required to meet Section 218.204 of this Part.

4376
4377 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

4378
4379 **Section 218.210 Compliance Schedule**

4380
4381 Every owner or operator of a coating line (of a type included within Section 218.204 of this
4382 Subpart) shall comply with the requirements of Section 218.204, 218.205, 218.207 or 218.208
4383 and Section 218.211 or Sections 218.212 and 218.213 of this Subpart in accordance with the
4384 appropriate compliance schedule as specified in subsection (a), (b), (c), (d), (e), (f), (g), (h), or (i)
4385 of this Section:

4386
4387 a) No owner or operator of a coating line that is exempt from the limitations of
4388 Section 218.204 of this Subpart because of the criteria in Section 218.208(a) or
4389 (b) of this Subpart shall operate said coating line on or after a date consistent with
4390 Section 218.106 of this Part, unless the owner or operator has complied with, and
4391 continues to comply with, Section 218.211(b) of this Subpart.

4392
4393 b) No owner or operator of a coating line complying by means of Section 218.204 of
4394 this Subpart shall operate said coating line on or after a date consistent with
4395 Section 218.106 of this Part, unless the owner or operator has complied with, and
4396 continues to comply with, Sections 218.204 and 218.211(c) of this Subpart.

4397
4398 c) No owner or operator of a coating line complying by means of Section 218.205 of
4399 this Subpart shall operate said coating line on or after a date consistent with
4400 Section 218.106 of this Part, unless the owner or operator has complied with, and
4401 continues to comply with, Sections 218.205 and 218.211(d) of this Subpart.

4402
4403 d) No owner or operator of a coating line complying by means of Section 218.207 of
4404 this Subpart shall operate said coating line on or after a date consistent with
4405 Section 218.106 of this Part, unless the owner or operator has complied with, and
4406 continues to comply with, Sections 218.207 and 218.211(e) of this Subpart.

4407
4408 e) No owner or operator of a coating line subject to one or more of the emission

- 4409 limitations contained in Section 218.204 of this Subpart on or after March 15,
4410 1996, choosing to comply by means of Section 218.204, 218.205 or 218.207 of
4411 this Subpart, shall operate said coating line on or after March 15, 1996, unless the
4412 owner or operator complies with and continues to comply with, respectively, the
4413 applicable requirements in Section 218.204, or the alternative control options in
4414 Section 218.205 or 218.207 and the requirements of Section 218.211.
4415
- 4416 f) No owner or operator of a coating line subject to one or more of the emission
4417 limitations contained in Section 218.204 of this Subpart on or after March 15,
4418 1996, choosing to comply by means of Section 218.212 of this Subpart, shall
4419 operate said coating line on or after March 15, 1996, unless the owner or operator
4420 complies with and continues to comply with the requirements of Sections 218.212
4421 and 218.213 of this Subpart.
4422
- 4423 g) No owner or operator of a coating line subject to the emission limitations in
4424 Section 218.204(c)(2), (g)(2), or (h)(2) of this Subpart shall operate that coating
4425 line on or after a date consistent with Section 218.106(f) of this Part, unless the
4426 owner or operator has complied with, and continues to comply with, Section
4427 218.204(c)(2), (g)(2), or (h)(2), as applicable, or the alternative control options in
4428 Section 218.205 or 218.207, and all applicable requirements in Sections 218.211
4429 and 218.218 of this Subpart.
4430
- 4431 h) No owner or operator of a coating line subject to the emission limitations
4432 contained in Section 218.204 (p) of this Subpart shall operate that coating line on
4433 or after a date consistent with Section 218.106(f) of this Part, unless the owner or
4434 operator has complied with, and continues to comply with, Section 218.204(p) or
4435 the alternative control options in Section 218.205 or 218.207, and the
4436 requirements of Sections 218.211 and 218.217 of this Subpart, as applicable.
4437
- 4438 i) No owner or operator of a coating line subject to the emission limitations in
4439 Section 218.204(a)(2) or (q) of this Subpart, or subject to the limitations in
4440 Section 218.219 of this Subpart, shall operate the coating line on or after a date
4441 consistent with Section 218.106(g) of this Part, unless the owner or operator has
4442 complied with, and continues to comply with, Section 218.204(a)(2) or (q), if
4443 applicable, or the alternative control options in Section 218.205 or 218.207, and
4444 all applicable requirements in Sections 218.211 and 218.219 of this Subpart.
4445

4446 (Source: Amended at 34 Ill. Reg. 14174, effective September 14, 2010)
4447

4448 **Section 218.211 Recordkeeping and Reporting**
4449

- 4450 a) The VOM content of each coating and the efficiency of each capture system and
4451 control device shall be determined by the applicable test methods and procedures
4452 specified in Section 218.105 of this Part to establish the records required under
4453 this Section.
4454

4455 b) Any owner or operator of a coating line that is exempted from the limitations of
4456 Section 218.204 of this Subpart because of Section 218.208(a) or (b) of this
4457 Subpart shall comply with the following:
4458

4459 1) For sources exempt under Section 218.208(a) of this Subpart, by a date
4460 consistent with Section 218.106 of this Part, the owner or operator of a
4461 coating line or a group of coating lines referenced in subsection (b) of this
4462 Section shall certify to the Agency that the coating line or group of coating
4463 lines is exempt under the provisions of Section 218.208(a) of this Subpart.
4464 Such certification shall include:

4465 A) A declaration that the coating line or group of coating lines is
4466 exempt from the limitations of Section 218.204 of this Subpart
4467 because of Section 218.208(a) of this Subpart; and
4468

4469 B) Calculations that demonstrate that the combined VOM emissions
4470 from the coating lines or group of coating lines never exceed 6.8
4471 kg (15 lbs) per day before the application of capture systems and
4472 control devices. The following equation shall be used to calculate
4473 total VOM emissions:
4474
4475

$$T_e = \sum_{j=1}^m \sum_{i=1}^n (A_i B_i)_j$$

4476
4477 where:
4478
4479

- T_e = Total VOM emissions from coating lines each day before the application of capture systems and control devices in units of kg/day (lbs/day);
- m = Number of coating lines at the source that otherwise would be subject to the same subsection of Section 218.104 of this Part (because they belong to the same category, e.g., can coating);
- j = Subscript denoting an individual coating line;
- n = Number of different coatings as applied each day on each coating line;
- i = Subscript denoting an individual coating;
- A_i = Weight of VOM per volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line in units of kg VOM/l (lbs VOM/gal); and

B_i = Volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line in units of l/day (gal/day). The instrument or method by which the owner or operator accurately measured or calculated the volume of each coating as applied on each coating line each day shall be described in the certification to the Agency.

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- 2) For sources exempt under Section 218.208(b) of this Subpart, by March 15, 1998, or upon initial start-up, the owner or operator of a coating line or a group of coating lines referenced in subsection (b) of this Section shall certify to the Agency that the source is exempt under the provisions of Section 218.208(b) of this Subpart. Such certification shall include:
 - A) A declaration that the source is exempt from the limitations of Section 218.204(l) of this Subpart because of Section 218.208(b) of this Subpart; and
 - B) Calculations that demonstrate that the source meets the criteria for exemption because of Section 218.208(b) of this Subpart.
 - 3) For sources exempt under Section 218.208(a) of this Subpart, on and after a date consistent with Section 218.106 of this Part, the owner or operator of a coating line or group of coating lines referenced in this subsection shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:
 - A) The name and identification number of each coating as applied on each coating line; and
 - B) The weight of VOM per volume and the volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line.
 - 4) For sources exempt under Section 218.208(b) of this Subpart, on and after March 15, 1998, the owner or operator of a coating line or group of coating lines referenced in this subsection (b) shall collect and record all of the following information for each coating line and maintain the information at the source for a period of three years:
 - A) The name and identification number of each coating as applied on each coating line; and

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- B) The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied on each coating line on a monthly basis.
 - 5) On and after a date consistent with Section 218.106 of this Part, the owner or operator of a coating line or group of coating lines exempted from the limitations of Section 218.204 of this Subpart because of Section 218.208(a) of this Subpart shall notify the Agency of any record showing that total VOM emissions from the coating line or group of coating lines exceed 6.8 kg (15 lbs) in any day before the application of capture systems and control devices by sending a copy of such record to the Agency within 30 days after the exceedance occurs.
 - 6) On and after March 15, 1998, any owner or operator of a source exempt from the limitations of Section 218.204(l) of this Subpart because of Section 218.208(b) of this Subpart shall notify the Agency if the source's VOM emissions exceed the limitations of Section 218.208(b) of this Subpart by sending a copy of calculations showing such an exceedance within 30 days after the change occurs.
 - c) Any owner or operator of a coating line subject to the limitations of Section 218.204 of this Subpart other than Section 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart and complying by means of Section 218.204 of this Subpart shall comply with the following:
 - 1) By a date consistent with Section 218.106 of this Part, or upon initial start-up of a new coating line, or upon changing the method of compliance from an existing subject coating line from Section 218.205, Section 218.207, Section 218.215, or Section 218.216 of this Subpart to Section 218.204 of this Subpart; the owner or operator of a subject coating line shall certify to the Agency that the coating line will be in compliance with Section 218.204 of this Subpart on and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date. The certification shall include:
 - A) The name and identification number of each coating as applied on each coating line;
 - B) The weight of VOM per volume of each coating (minus water and any compounds that are specifically exempted from the definition of VOM) as applied each day on each coating line;
 - C) On and after March 15, 1998, for coating lines subject to the limitations of Section 218.204(l)(2)(A) or (B) of this Subpart, the weight of VOM per weight of solids in each coating as applied

- 4564 each day on each coating line;
4565
4566
4567 D) For coating lines subject to the limitations of Section 218.204(c)(2)
4568 of this Subpart, the weight of VOM per weight of solids (or the
4569 weight of VOM per weight of coatings, as applicable) in each
4570 coating as applied each day on each coating line;
4571
4572 E) For coating lines subject to the limitations of Section 218.204(g)(2)
4573 or (h)(2) of this Subpart, the application methods used to apply
4574 coatings on the subject coating line and the weight of VOM per
4575 volume of each coating (or the weight of VOM per volume of
4576 solids in each coating, as applicable) as applied each day on each
4577 coating line;
4578
4579 F) For coating lines subject to the limitations of Section 218.204(p) of
4580 this Subpart, the weight of VOM per volume of coatings or solids,
4581 as applicable, for each coating, as applied each day on each coating
4582 line;
4583
4584 G) For coating lines subject to the limitations of Section
4585 218.204(a)(2)(A) of this Subpart, the weight of VOM per volume
4586 of solids in each coating as applied each day on each coating line,
4587 and the solids turnover ratio of the EDP operation, with supporting
4588 calculations;
4589
4590 H) For coating lines subject to the limitations of Section
4591 218.204(a)(2)(E), the weight of VOM per volume and volume of
4592 each coating used in the final repair coat operation, and the weight
4593 of VOM per volume of the final repair coat as applied, calculated
4594 on an occurrence weighted average basis;
4595
4596 I) For coating lines subject to the limitations of Section 218.204(q) of
4597 this Subpart, the weight of VOM per volume of each coating, or
4598 the weight of VOM per volume of solids in each coating, as
4599 applicable, as applied each day on each coating line.
4600 2) On and after a date consistent with Section 218.106 of this Part, or on and
4601 after the initial start-up date, the owner or operator of a subject coating
4602 line shall collect and record all of the following information each day,
4603 unless otherwise specified, for each coating line and maintain the
4604 information at the source for a period of three years:
4605
4606 A) The name and identification number of each coating as applied on
4607 each coating line;
4608
4609 B) The weight of VOM per volume of each coating (minus water and

- 4610 any compounds that are specifically exempted from the definition
4611 of VOM) as applied each day on each coating line;
- 4612
- 4613 C) On and after March 15, 1998, for coating lines subject to the
4614 limitations of Section 218.204(l)(2)(A) or (B) of this Subpart, the
4615 weight of VOM per weight of solids in each coating as applied
4616 each day on each coating line and certified product data sheets for
4617 each coating;
- 4618
- 4619 D) On and after March 15, 1998, for wood furniture coating spray
4620 booths subject to the limitations of Section 218.204(l)(4)(A) of this
4621 Subpart, the weight of VOM per weight of solids in each strippable
4622 spray booth coating as applied each day on each spray booth and
4623 certified product data sheets for each coating;
- 4624
- 4625 E) For coating lines subject to the limitations of Section 218.204(c)(2)
4626 of this Subpart, the weight of VOM per weight of solids (or the
4627 weight of VOM per weight of coatings, as applicable) in each
4628 coating as applied each day on each coating line, and certified
4629 product data sheets for each coating;
- 4630
- 4631 F) For coating lines subject to the limitations of Section 218.204(g)(2)
4632 or 218.204(h)(2) of this Subpart, the weight of VOM per volume
4633 of each coating (or the weight of VOM per volume of solids in
4634 each coating, as applicable) as applied each day on each coating
4635 line, and certified product data sheets for each coating;
- 4636
- 4637 G) For coating lines subject to the limitations of Section 218.204(p) of
4638 this Subpart, the weight of VOM per volume of coatings or solids,
4639 as applicable, for each coating, as applied each day on each coating
4640 line;
- 4641
- 4642 H) For coating lines subject to the limitations of Section
4643 218.204(a)(2)(A) of this Subpart, the weight of VOM per volume
4644 of solids in each coating as applied each day on each coating line,
4645 certified product data sheets for each coating, and the solid
4646 turnover ratio for the EDP operation, calculated on a calendar
4647 monthly basis, with supporting calculations;
- 4648
- 4649 I) For coating lines subject to the limitations of Section
4650 218.204(a)(2)(E), the weight of VOM per volume and volume of
4651 each coating used in the final repair coat operation, the weight of
4652 VOM per volume of the final repair coat as applied, calculated on
4653 an occurrence weighted average basis, and certified product data
4654 sheets for each coating;
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- J) For coating lines subject to the limitations of Section 218.204(q) of this Subpart, the weight of VOM per volume of each coating, or the weight of VOM per volume of solids in each coating, as applicable, as applied each day on each coating line, and certified product data sheets for each coating.
 - 3) On and after a date consistent with Section 218.106 of this Part, the owner or operator of a subject coating line shall notify the Agency in the following instances:
 - A) Any record showing violation of Section 218.204 of this Subpart shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.
 - B) At least 30 calendar days before changing the method of compliance from Section 218.204 of this Subpart to Section 218.205 or Section 218.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (d)(1) or (e)(1) of this Section, as applicable. Upon changing the method of compliance from Section 218.204 of this Subpart to Section 218.205 of this Subpart or Section 218.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (d) or (e) of this Section, as applicable.
 - d) Any owner or operator of a coating line subject to the limitations of Section 218.204 of this Subpart and complying by means of Section 218.205 of this Subpart shall comply with the following:
 - 1) By a date consistent with Section 218.106 of this Part, or upon initial start-up of a new coating line, or upon changing the method of compliance for an existing subject coating line from Section 218.204 or Section 218.207 of this Subpart to Section 218.205 of this Subpart; the owner or operator of the subject coating line shall certify to the Agency that the coating line will be in compliance with Section 218.205 of this Subpart on and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date. The certification shall include:
 - A) The name and identification number of each coating line which will comply by means of Section 218.205 of this Subpart.
 - B) The name and identification number of each coating as applied on each coating line.
 - C) The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating

- 4702 line.
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4704
4705 D) On and after March 15, 1998, for coating lines subject to the
4706 limitations of Section 218.204(l)(2)(A) or (B) of this Subpart, the
4707 weight of VOM per weight of solids in each coating as applied
4708 each day on each coating line.
4709
4710 E) For coating lines subject to the limitations of Section
4711 218.204(a)(2)(A) of this Subpart, the weight of VOM per volume
4712 of solids in each coating as applied each day on each coating line.
4713
4714 F) For coating lines subject to the limitations of Section 218.204(c)(2)
4715 of this Subpart, the weight of VOM per weight of solids (or the
4716 weight of VOM per weight of coatings, as applicable) in each
4717 coating as applied each day on each coating line.
4718
4719 G) For coating lines subject to the limitations of Section 218.204(g)(2)
4720 or (h)(2) of this Subpart, the weight of VOM per volume of each
4721 coating (or the weight of VOM per volume of solids in each
4722 coating, as applicable) as applied each day on each coating line.
4723
4724 H) For coating lines subject to the limitations of Section 218.204(p) of
4725 this Subpart, the weight of VOM per volume of coatings or solids,
4726 as applicable, for each coating, as applied each day on each coating
4727 line.
4728
4729 I) For coating lines subject to the limitations of Section 218.204(q) of
4730 this Subpart, the weight of VOM per volume of each coating, or
4731 the weight of VOM per volume of solids in each coating, as
4732 applicable, as applied each day on each coating line.
4733
4734 J) The instrument or method by which the owner or operator will
4735 accurately measure or calculate the volume of each coating as
4736 applied each day on each coating line.
4737
4738 K) The method by which the owner or operator will create and
4739 maintain records each day as required in subsection (d)(2) of this
4740 Section.
4741
4742 L) An example of the format in which the records required in
4743 subsection (d)(2) of this Section will be kept.
4744
2) On and after a date consistent with Section 218.106 of this Part, or on and
4745 after the initial start-up date, the owner or operator of a subject coating
4746 line shall collect and record all of the following information each day for
4747 each coating line and maintain the information at the source for a period of

- 4748 three years:
4749
4750 A) The name and identification number of each coating as applied on
4751 each coating line.
4752
4753 B) The weight of VOM per volume and the volume of each coating
4754 (minus water and any compounds that are specifically exempted
4755 from the definition of VOM) as applied each day on each coating
4756 line.
4757
4758 C) On and after March 15, 1998, for coating lines subject to the
4759 limitations of Section 218.204(l)(2)(A) or (B) of this Subpart, the
4760 weight of VOM per weight of solids in each coating as applied
4761 each day on each coating line.
4762
4763 D) For coating lines subject to the limitations of Section
4764 218.204(a)(2)(A) of this Subpart, the weight of VOM per volume
4765 of solids in each coating as applied each day on each coating line.
4766
4767 E) For coating lines subject to the limitations of Section 218.204(c)(2)
4768 of this Subpart, the weight of VOM per weight of solids (or the
4769 weight of VOM per weight of coatings, as applicable) in each
4770 coating as applied each day on each coating line.
4771
4772 F) For coating lines subject to the limitations of Section 218.204(g)(2)
4773 or (h)(2) of this Subpart, the weight of VOM per volume of each
4774 coating (or the weight of VOM per volume of solids in each
4775 coating, as applicable) as applied each day on each coating line.
4776
4777 G) For coating lines subject to the limitations of Section 218.204(p) of
4778 this Subpart, the weight of VOM per volume of coatings or solids,
4779 as applicable, for each coating, as applied each day on each coating
4780 line.
4781
4782 H) For coating lines subject to the limitations of Section 218.204(q) of
4783 this Subpart, the weight of VOM per volume of each coating, or
4784 the weight of VOM per volume of solids in each coating, as
4785 applicable, as applied each day on each coating line.
4786
4787 I) The daily-weighted average VOM content of all coatings as
4788 applied on each coating line as defined in Section 218.104 of this
4789 Part.
4790
4791 3) On and after a date consistent with Section 218.106 of this Part, the owner
4792 or operator of a subject coating line shall notify the Agency in the
4793 following instances:

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- A) Any record showing violation of Section 218.205 of this Subpart shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.
 - B) At least 30 calendar days before changing the method of compliance with this Subpart from Section 218.205 of this Subpart to Section 218.204 or Section 218.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (c)(1) or (e)(1) of this Section, as applicable. Upon changing the method of compliance with this Subpart from Section 218.205 to Section 218.204 or Section 218.207 of this Subpart, the owner or operator shall comply with all requirements of subsection (c) or (e) of this Section, as applicable.
- e) Any owner or operator of a coating line subject to the limitations of Section 218.207 of this Subpart and complying by means of Section 218.207(c), (d), (e), (f), (g), (h), (l), (m), or (n) of this Subpart shall comply with the following:
- 1) By a date consistent with Section 218.106 of this Part, or upon initial start-up of a new coating line, or upon changing the method of compliance for an existing coating line from Section 218.204 or Section 218.205 of this Subpart to Section 218.207 of this Subpart, the owner or operator of the subject coating line shall perform all tests and submit to the Agency the results of all tests and calculations necessary to demonstrate that the subject coating line will be in compliance with Section 218.207 of this Subpart on and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date.
 - 2) On and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject coating line shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:
 - A) The weight of VOM per volume of coating solids as applied each day on each coating line, if complying pursuant to Section 218.207(b)(2) of this Subpart.
 - B) Control device monitoring data.
 - C) A log of operating time for the capture system, control device, monitoring equipment and the associated coating line.
 - D) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine

- 4840 maintenance performed including dates and duration of any
4841 outages.
4842
- 4843 3) On and after a date consistent with Section 218.106 of this Part, the owner
4844 or operator of a subject coating line shall notify the Agency in the
4845 following instances:
4846
- 4847 A) Any record showing violation of Section 218.207 of this Subpart
4848 shall be reported by sending a copy of such record to the Agency
4849 within 30 days following the occurrence of the violation.
4850
- 4851 B) At least 30 calendar days before changing the method of
4852 compliance with this Subpart from Section 218.207 of this Subpart
4853 to Section 218.204 or Section 218.205 of this Subpart, the owner
4854 or operator shall comply with all requirements of subsection (c)(1)
4855 or (d)(1) of this Section, respectively. Upon changing the method
4856 of compliance with this Subpart from Section 218.207 of this
4857 Subpart to Section 218.204 or Section 218.205 of this Subpart, the
4858 owner or operator shall comply with all requirements of subsection
4859 (c) or (d) of this Section, respectively.
4860
- 4861 f) Any owner or operator of a primer surfacer operation or topcoat operation, or
4862 combined primer surfacer and topcoat operation, subject to the limitations of
4863 Section 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this
4864 Subpart shall comply with the following:
4865
- 4866 1) By a date consistent with Section 218.106 of this Part, or upon initial start-
4867 up of a new coating operation, the owner or operator of a subject coating
4868 operation shall certify to the Agency that the operation will be in
4869 compliance with Section 218.204 of this Subpart on and after a date
4870 consistent with Section 218.106 of this Part, or on and after the initial
4871 start-up date. The certification shall include:
4872
- 4873 A) The name and identification number of each coating operation that
4874 will comply by means of Section 218.204(a)(1)(B), (a)(1)(C),
4875 (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart and the name and
4876 identification number of each coating line in each coating
4877 operation.
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- 4879 B) The name and identification number of each coating as applied on
4880 each coating line in the coating operation.
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- 4882 C) The weight of VOM per volume of each coating (minus water and
4883 any compounds which are specifically exempted from the
4884 definition of VOM) as applied each day on each coating line.
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- D) The transfer efficiency and control efficiency measured for each coating line.
 - E) Test reports, including raw data and calculations documenting the testing performed to measure transfer efficiency and control efficiency.
 - F) The instrument or method by which the owner or operator will accurately measure or calculate the volume of each coating as applied each day on each coating line.
 - G) The method by which the owner or operator will create and maintain records each day as required in subsection (f)(2) of this Section.
 - H) An example format for presenting the records required in subsection (f)(2) of this Section.
- 2) On and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject coating operation shall collect and record all of the following information each day for each operation and maintain the information at the source for a period of three years:
- A) All information necessary to demonstrate compliance with the topcoat protocol referenced in Section 218.105(b)(1)(B) and to calculate the daily-weighted average VOM emissions from the coating operations in kg/l (lbs/gal) of coating solids deposited in accordance with the proposal submitted, and approved pursuant to Section 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart including:
 - i) The name and identification number of each coating as applied on each coating operation.
 - ii) The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating operation.
 - B) If a control device or devices are used to control VOM emissions, control device monitoring data; a log of operating time for the capture system, control device, monitoring equipment and the associated coating operation; and a maintenance log for the capture system, control device and monitoring equipment, detailing all routine and non-routine maintenance performed including dates

- 4932 and duration of any outages.
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4935 3) On and after a date consistent with Section 218.106 of this Part or on and
4936 after the initial start-up date, the owner or operator of a subject coating
4937 operation shall determine and record the daily VOM emissions in kg/l
4938 (lbs/gal) of coating solids deposited in accordance with the proposal
4939 submitted and approved pursuant to Section 218.204(a)(1)(B), (a)(1)(C),
4940 (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart within 10 days from the
4941 end of the month and maintain this information at the source for a period
4942 of three years.
- 4943 4) On and after a date consistent with Section 218.106 of this Part, the owner
4944 or operator of a subject coating operation shall notify the Agency in the
4945 following instances:
4946
4947 A) Any record showing a violation of Section 218.204(a)(1)(B),
4948 (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) of this Subpart shall be
4949 reported by sending a copy of such record to the Agency within 15
4950 days from the end of the month in which the violation occurred.
4951
4952 B) The owner or operator shall notify the Agency of any change to the
4953 operation at least 30 days before the change is effected. The
4954 Agency shall determine whether or not compliance testing is
4955 required. If the Agency determines that compliance testing is
4956 required, then the owner or operator shall submit a testing proposal
4957 to the Agency within 30 days and test within 30 days after the
4958 approval of the proposal by the Agency and USEPA.
4959
- 4960 g) On and after a date consistent with Section 218.106(e) of this Part, or on and after
4961 the initial startup date, whichever is later, the owner or operator of a coating line
4962 subject to the requirements of Section 218.218 of this Subpart shall comply with
4963 the following:
4964
4965 1) By May 1, 2011, or upon initial startup, whichever is later, submit a
4966 certification to the Agency that includes a description of the practices and
4967 procedures that the source will follow to ensure compliance with the
4968 applicable requirements in Section 218.218 of this Subpart;
4969
4970 2) Notify the Agency of any violation of Section 218.218 of this Subpart by
4971 providing a description of the violation and copies of records documenting
4972 the violation to the Agency within 30 days following the occurrence of the
4973 violation; and
4974
4975 3) Maintain at the source all records required by this subsection (g) for a
4976 minimum of three years from the date the document was created and make
4977 those records available to the Agency upon request.

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- h) On and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date, whichever is later, the owner or operator of a coating line subject to the requirements of Section 218.219 of this Subpart shall comply with the following:
 - 1) By May 1, 2012, or upon initial start-up, whichever is later, submit a certification to the Agency that includes:
 - A) A description of the practices and procedures that the source will follow to ensure compliance with the applicable requirements in Section 218.219 of this Subpart;
 - B) For sources subject to Section 218.219(a)(6), the work practices plan specified in that Section;
 - C) For sources subject to Section 218.219(b)(6), the application methods used to apply coatings on the subject coating line;
 - 2) Notify the Agency of any violation of Section 218.219 of this Subpart by providing a description of the violation and copies of records documenting the violation to the Agency within 30 days following the occurrence of the violation; and
 - 3) Maintain at the source all records required by this subsection (h) for a minimum of three years from the date the document was created and make those records available to the Agency upon request.
 - i) On and after a date consistent with Section 218.106(f) of this Part, or on and after the initial start-up date, whichever is later, the owner or operator of a flat wood paneling coating line subject to the requirements in Section 218.217 of this Subpart shall comply with the following:
 - 1) By August 1, 2010, or upon initial start-up, whichever is later, submit a certification to the Agency that includes a description of the practices and procedures that the source will follow to ensure compliance with the applicable requirements in Section 218.217(c) and (d) of this Subpart; and
 - 2) Notify the Agency of any violation of Section 218.217 of this Subpart by providing a description of the violation and copies of records documenting such violation to the Agency within 30 days following the occurrence of the violation.

(Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)

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5023 **Section 218.212 Cross-Line Averaging to Establish Compliance for Coating Lines**

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- a) On and after March 15, 1996, any owner or operator of a coating line subject to the limitations set forth in Section 218.204 of this Subpart, except coating lines subject to the limitations in Section 218.204(a)(2), (c)(2), (g)(2), (h)(2), (p), or (q) of this Subpart, and with coating lines in operation prior to January 1, 1991 (pre-existing coating lines), may, for pre-existing coating lines only, elect to comply with the requirements of this Section, rather than complying with the applicable emission limitations set forth in Section 218.204, if an operational change of the type described below has been made after January 1, 1991, to one or more pre-existing coating lines at the source. An operational change occurs when a pre-existing coating line is replaced with a line using lower VOM coating for the same purpose as the replaced line (replacement line). A source electing to rely on this Section to demonstrate compliance with the requirements of this Subpart shall operate pursuant to federally enforceable permit conditions approved by the Agency and USEPA.
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- b) An owner or operator of pre-existing coating lines subject to a VOM content limitation in Section 218.204 of this Subpart and electing to rely on this Section to demonstrate compliance with this Subpart must establish, by use of the equations in subsection (d) of this Section, that the calculated actual daily VOM emissions from all participating coating lines, as defined in this subsection, are less than the calculated daily allowable VOM emissions from the same group of coating lines. For any pre-existing coating line to be aggregated for the purposes of Section 218.212, 218.213, or 218.214 of this Subpart ("participating coating lines"), the source must establish that:
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- 1) All coatings applied on the participating coating line shall, at all times, have a VOM content less than or equal to the applicable VOM content limitation for such coating listed in Appendix H of this Part; and
- 2) On the date the source elects to rely on this Section to demonstrate compliance with this Subpart, all coatings applied on the participating coating line are not already in compliance with the VOM content limitation for such coating effective on or after March 15, 1996; or the participating coating line is a replacement line, as defined in subsection (a) of this Section with an operational change occurring on or after January 1, 1991.
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- c) Notwithstanding subsection (a) of this Section, any owner or operator of a coating line subject to the limitations set forth in Section 218.204 of this Subpart and electing to rely on this Section to demonstrate compliance with this Subpart, may also include as a participating coating line, until December 31, 1999, only, any replacement line that satisfies all of the following conditions:
- 1) The replacement line is operated as a powder coating line;

- 5070 2) The replacement line was added after July 1, 1988; and
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5072 3) The owner or operator also includes as a participating coating line one or
5073 more coating lines that satisfy the criteria of a replacement line, as
5074 described in subsection (a) of this Section.
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5076 d) To demonstrate compliance with this Section, a source shall establish the
5077 following:
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5079 1) An alternative daily emission limitation shall be determined for all
5080 participating coating lines at the source according to subsection (d)(2) of
5081 this Section. All participating coating lines shall be factored in each day
5082 to demonstrate compliance. Provided compliance is established pursuant
5083 to the requirements in this subsection, nothing in this Section requires
5084 daily operation of each participating line. Actual daily emissions from all
5085 participating coating lines (E_d) shall never exceed the alternative daily
5086 emission limitation (A_d) and shall be calculated by use of the following
5087 equation:
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$$E_d = \sum_{i=1}^n V_i C_i$$

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5090 where:
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- E_d = Actual daily VOM emissions from participating coating lines
in units of kg/day (lbs/day);
- i = Subscript denoting a specific coating applied;
- n = Total number of coatings applied by all participating coating
lines at the source;
- V_i = Volume of each coating applied for the day in units of l/day
(gal/day) of coating (minus water and any compounds that
are specifically exempted from the definition of VOM); and
- C_i = The VOM content of each coating as applied in units of kg
VOM/l (lbs VOM/gal) of coating (minus water and any
compounds that are specifically exempted from the definition
of VOM).

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5094 2) The alternative daily emission limitation (A_d) shall be determined for all
5095 participating coating lines at the source on a daily basis as follows:
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$$A_d = A_i + A_p$$

5098 where A_i and A_p are defined in subsections (d)(2)(A) and (d)(2)(B) of this
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Section.

- A) The portion of the alternative daily emissions limitation for coating operations at a source using non-powder coating (A_i) shall be determined for all such participating non-powder coating lines on a daily basis as follows:

$$A_i = \sum_{i=1}^n V_i L_i \left(\frac{D_i - C_i}{D_i - L_i} \right)$$

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where:

- A_i = The VOM emissions allowed for the day in units of kg/day (lbs/day);
- i = Subscript denoting a specific coating applied;
- n = Total number of coatings applied in the participating coating lines;
- C_i = The VOM content of each coating as applied in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds that are specifically exempted from the definition of VOM);
- D_i = The density of VOM in each coating applied. For the purposes of calculating A_i , the density is 0.882 kg VOM/l VOM (7.36 lbs VOM/gal VOM);
- V_i = Volume of each coating applied for the day in units of l (gal) of coating (minus water and any compounds that are specifically exempted from the definition of VOM); and
- L_i = The VOM emission limitation for each coating applied, as specified in Section 218.204 of this Subpart, in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds that are specifically exempted from the definition of VOM).

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- B) The portion of the alternative daily emission limitation for coating operations at a source using powdered coating (A_p) shall be determined for all such participating powder coating lines at the source on a daily basis as follows:

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$$A_p = \sum_{h=1}^m \sum_{j=1}^n \frac{V_j L_j D_j K_h}{(D_j - L_j)}$$

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where:

- A_p = The VOM emissions allowed for the day in units of kg/day (lbs/day);
- h = Subscript denoting a specific powder coating line;
- j = Subscript denoting a specific powder coating applied;
- m = Total number of participating powder coating lines;
- n = Total number of powder coatings applied in the participating coating lines;
- D_j = The assumed density of VOM in liquid coating, 0.882 kg VOM/l VOM (7.36 lbs VOM/gal VOM);
- V_j = Volume of each powder coating consumed for the day in units of l (gal) of coating;
- L_j = The VOM emission limitation for each coating applied, as specified in Section 218.204 of this Subpart, in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds that are specifically exempted from the definition of VOM); and
- K = A constant for each individual coating line representing the ratio of the volume of coating solids consumed on the liquid coating system that has been replaced to the volume of powder coating consumed on the replacement line to accomplish the same coating job. This value shall be determined by the source based on tests conducted and records maintained pursuant to the requirements of Section 218.213 of this Subpart demonstrating the amount of coating solids consumed as both liquid powder. Test methods and recordkeeping requirements shall be approved by the Agency and USEPA and shall be contained in the source's operating permit as federally enforceable permit conditions, subject to the following restrictions:
 - K cannot exceed 0.9 for non-recycled powder coating systems; or

-) K cannot exceed 2.0 for recycled powder coating systems.

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(Source: Amended at 34 Ill. Reg. 14174, effective September 14, 2010)

Section 218.213 Recordkeeping and Reporting for Cross-Line Averaging Participating Coating Lines

Any owner or operator of a coating line that elects to comply by means of Section 218.212 of this Subpart shall establish the following:

- a) By the date consistent with Section 218.210(f) of this Subpart, or upon initial start-up of a new coating line replacing a pre-existing coating line, as defined in Section 218.212 of this Subpart, or upon changing the method of compliance for a pre-existing coating line from the requirements of Section 218.204 or Section 218.207 of this Subpart to the requirements of Section 218.212 of this Subpart, the owner or operator of the source shall certify to the Agency that each participating coating line, as determined in accordance with Section 218.212 of this Subpart, will be in compliance with Section 218.212 of this Subpart on and after a date consistent with Section 218.210(f) of this Subpart, or on and after the initial start-up date of such participating coating lines. Such certification shall also include:
 - 1) The name and identification number of each participating coating line;
 - 2) The name and identification number of each coating as applied on each participating coating line;
 - 3) The weight of VOM per volume of each coating and the volume of each coating (minus water and any compounds which are specifically exempted ~~from~~ [from](#) the definition of VOM) as applied each day on each participating coating line;
 - 4) The instrument or method by which the owner or operator will accurately measure or calculate the volume of each coating as applied each day on each participating coating line;
 - 5) The method by which the owner or operator will create and maintain records each day as required in subsection (b) of this Section;
 - 6) An example of the format in which the records required in subsection (b) of this Section will be kept;
 - 7) A statement that all coatings used on participating coating lines have a VOM content less than or equal to the applicable VOM limitation for such

- 5164 coating set forth within Appendix H of this Part, and that all lines either:
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5166 A) Underwent a change in operations incorporating a lower VOM
5167 coating on each applicable participating coating line after the date
5168 of January 1, 1991; or
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5170 B) Are not in compliance and continued compliance with the coating
5171 limitations in Section 218.204 of this Subpart, compliance with
5172 which is required on or after March 15, 1996.
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5174 8) The method by which the owner or operator has calculated K, for the
5175 equation contained in Section 218.212(d)(2)(B) of this Subpart, if
5176 applicable.
5177
5178 b) On and after a date consistent with Section 218.210(f) of this Subpart, or on and
5179 after the initial start-up date, the owner or operator of a source electing to comply
5180 with the requirements of this Subpart by means of Section 218.212 of this Subpart
5181 shall collect and record the following information on a daily basis for each
5182 participating coating line and maintain the information at the source for a period
5183 of three years:
5184
5185 1) The name and identification number of each coating as applied on each
5186 participating coating line;
5187
5188 2) The weight of VOM per volume and the volume of each coating (minus
5189 water and any compounds which are specifically exempted from the
5190 definition of VOM) as applied on each participating coating line on a daily
5191 basis; and
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5193 3) The daily weighted average VOM content of all coatings as applied on
5194 each coating line as defined at 35 Ill. Adm. Code 211.1230.
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5196 c) On and after a date consistent with Section 218.210(f) of this Subpart, the owner
5197 or operator of participating coating lines shall:
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5199 1) Notify the Agency within 30 days following an occurrence of a violation
5200 of Section 218.212 of this Subpart; and
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5202 2) Send to the Agency any record showing a violation of Section 218.212 of
5203 this Subpart within 30 days following the occurrence of a violation.
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(Source: Added at 19 Ill. Reg. 6848, effective May 9, 1995)

Section 218.214 Changing Compliance Methods

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5209 a) At least 30 calendar days before changing the method of compliance with this

5210 Subpart from Section 218.212 of this Subpart to Section 218.204 or Section
 5211 218.207 of this Subpart, the owner or operator of a source relying on Section
 5212 218.212 to demonstrate compliance with this Subpart for one or more pre-existing
 5213 coating lines shall comply with all requirements of Section 218.211(c)(1) or (e)(1)
 5214 of this Subpart, respectively.

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 5216 b) Upon changing the method of compliance with this Subpart from Section 218.212
 5217 to Section 218.204 or Section 218.207 of this Subpart, the owner or operator of a
 5218 source shall comply with the requirements of Section 218.211(c) or (e) of this
 5219 Subpart, respectively.

5220
 5221 c) The owner or operator shall certify that all remaining participating coating lines,
 5222 if any, comply and continue to comply with the requirements of Section 218.212
 5223 of this Subpart.

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 5225 (Source: Added at 19 Ill. Reg. 6848, effective May 9, 1995)

5226
 5227 **Section 218.215 Wood Furniture Coating Averaging Approach**

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 5229 a) On and after March 15, 1998, any owner or operator of a source subject to the
 5230 limitations of Section 218.204(l) of this Subpart may elect to comply with the
 5231 requirements of this Section rather than complying with the applicable emission
 5232 limitations set forth in Section 218.204(l)(2)(A) or (B) of this Subpart. The
 5233 source must continue to comply with the limitations set forth in Section
 5234 218.204(l)(3) and (4) of this Subpart. A source electing to rely on this Section to
 5235 demonstrate compliance with the requirements of this Subpart shall operate
 5236 pursuant to federally enforceable permit conditions approved by the Agency and
 5237 USEPA.

5238
 5239 b) An owner or operator of a source subject to the limitations of Section 218.204(l)
 5240 of this Subpart and electing to rely on this Section to demonstrate compliance
 5241 with this Subpart must establish, by use of subsection (b)(1) or (b)(2) of this
 5242 Section, that, on a daily basis, actual emissions from the affected source are less
 5243 than or equal to ninety percent of the allowable emissions, that is $V_a \leq V_p$:

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 5245 1) Option I:

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 5247 A)
$$V_a = \sum_{i=1}^n (ER_{TC_i} \times TC_i); \text{ and}$$

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 5249 B)
$$V_p = 0.9 \times \sum_{i=1}^n (0.8 \times TC_i)$$

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 5251 2) Option II:
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5253 A)
$$V_a = \sum_{i=1}^n [(ER_{TC_i} \times TC_i) + (ER_{SE_i} \times SE_i) + (ER_{WC_i} \times WC_i) +$$

 5254
$$(ER_{PC_i} \times PC_i) + (ER_{ST_i} \times ST_i)]; \text{ and}$$

5255
 5256 B)
$$V_p = 0.9 \times \sum_{i=1}^n [(1.8 \times TC_i) + (1.9 \times SE_i) + (9.0 \times WC_i) +$$

 5257
$$(1.2 \times PC_i) + (0.791 \times ST_i)]$$

5258 where:

- 5259 V_a = Actual VOM emissions from the source;
- 5260 V_p = 90% of the allowable VOM emissions from the source;
- n = Number of different wood furniture coatings as applied each day on each coating line;
- i = Subscript denoting an individual coating;
- TC_i = kilograms of solids in topcoat "i" used;
- SE_i = kilograms of solids in sealer "i" used;
- WC_i = kilograms of solids in wash coat "i" used;
- PC_i = kilograms of solids in non-topcoat pigmented coat "i" used;
- ST_i = liters of stain "i" used;
- ER_{TC_i} = VOM content of topcoat "i" in kg VOM/kg solids, as applied;
- ER_{SE_i} = VOM content of sealer "i" in kg VOM/kg solids, as applied;
- ER_{WC_i} = VOM content of washcoat "i" in kg VOM/kg solids, as applied;
- ER_{PC_i} = VOM content of non-topcoat pigmented coat "i" in kg VOM/kg solids, as applied;
- ER_{ST_i} = VOM content of stain "i" in kg VOM/liter (kg/l), as applied;

5261 c) Within the structure of the source's federally enforceable permit conditions, an
 5262 owner or operator of a source electing to rely on this Section to demonstrate
 5263 compliance with this Subpart shall provide to the Agency:

- 5264 1) The name and identification number of each participating coating line;
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- 2) The name and identification number of each coating as applied on each participating coating line;
 - 3) A summary of how averaging will be used to meet the emission limitations;
 - 4) Documentation that $V_a \leq V_p$, as calculated in subsection (b)(1) or (2) of this Section;
 - 5) A description of which types of coating materials will be included in the source's averaging program, which may include stains, basecoats, washcoats, sealers, and topcoats. Coating materials that are applied using continuous coaters may be used in an averaging program only if the source can determine the amount of coating used each day;
 - 6) A description of methods and procedures for quantifying emissions on a daily basis, including methods to determine the VOM content of each coating and the daily usage of each coating; and
 - 7) A summary of the monitoring, recordkeeping, and reporting procedures that will be used to demonstrate daily compliance with the inequalities in subsections (b)(1) and (2) of this Section. These procedures shall be structured such that the Agency and the owner or operator of the source can determine the source's compliance status for any given day.
- d) On and after March 15, 1998, or on and after the initial start-up date, the owner or operator of a source electing to rely on this Section to comply with the requirements of this Subpart shall, for each coating line relying on this Section, collect and record the following information on a daily basis and maintain the information at the source for a period of three years:
- 1) The name and identification number of each coating as applied on the coating line;
 - 2) The weight of VOM per weight of solids (kg VOM/kg solids) and the weight of solids (kg) of each coating as applied on each coating line on a daily basis;
 - 3) Certified product data sheets for each coating; and
 - 4) The calculations showing the source has met the conditions of the inequalities in subsection (b)(1) or (2) of this Section.
- e) On and after March 15, 1998, or on and after the initial start-up date, the owner or operator of a source electing to rely on this Section to comply with the

5313 requirements of this Subpart shall:

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- 5315 1) Notify the Agency within 30 calendar days following an occurrence of a
- 5316 violation of this Section; and
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- 5318 2) Send to the Agency any record showing a violation of this Section within
- 5319 30 calendar days following the occurrence of a violation.
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- 5321 f) At least 30 calendar days before changing the method of compliance with this
- 5322 Subpart from reliance on this Section to reliance on Section 218.204(1)(2)(A) or
- 5323 (B) of this Subpart, the owner or operator of a source relying on this Section to
- 5324 demonstrate compliance with this Subpart for one or more wood furniture coating
- 5325 lines shall:
- 5326
- 5327 1) Comply with all requirements of Section 218.211(c)(1) of this Subpart;
- 5328 and
- 5329
- 5330 2) Certify that all remaining coating lines relying on this Section to comply
- 5331 with the requirements of this Subpart, if any, comply and continue to
- 5332 comply with the requirements of this Section.
- 5333

5334 (Source: Added at 22 Ill. Reg. 3556, effective February 2, 1998)

5335 **Section 218.216 Wood Furniture Coating Add-On Control Use**

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5338 The owner or operator of a source subject to the requirements of Section 218.204(1)(2) of this

5339 Subpart may choose to comply with those limitations by relying on Section 218.204(1)(2)(D) of

5340 this Subpart if all of the following requirements are met:

- 5341
- 5342 a) For each coating applied, determine the overall control efficiency needed to
- 5343 demonstrate compliance using the following equation:
- 5344

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$$R = \left[\frac{(C - L)}{C} \right] \times 100$$

5346 where:

- 5347
- 5348
- R = the necessary overall capture and control efficiency of the control system, as a percentage;
- C = the VOM content of the coating, in kilograms of VOM per kilograms of coating solids (kg VOM/kg solids), as applied;
- L = the emission limitation for that coating, as given in Section 218.204(1)(2)(B) of this Subpart

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- b) Calculate the equivalent overall capture and control efficiency of the control device using the procedures of Section 218.105(c), (d), and (e) of this Part.
 - c) Demonstrate that the equivalent overall capture and control efficiency calculated using the procedures in Section 218.105(c), (d), and (e) of this Part is equal to or greater than the largest value of R calculated for each coating by the equation in subsection (a) of this Section.
 - d) Install, calibrate, operate, and maintain the applicable monitoring equipment for the control device as specified in Section 218.105(d) of this Part.
 - e) On and after March 15, 1998, or on and after the initial start-up date, the owner or operator of a source electing to rely on this Section to comply with the requirements of this Subpart shall, for each coating line relying on this Section, collect and record the following information on a daily basis and maintain the information at the source for a period of three years:
 - 1) The name and identification number of each coating as applied on the coating line;
 - 2) The weight of VOM per weight of solids (kg VOM/kg solids) of each coating as applied on each coating line on a daily basis;
 - 3) Certified product data sheets for each coating;
 - 4) Control device monitoring data;
 - 5) A log of operating time for the capture system, control device, monitoring equipment and the associated coating line; and
 - 6) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.
 - f) On and after March 15, 1998, or on and after the initial start-up date, the owner or operator of a source electing to rely on this Section to comply with the requirements of this Subpart shall:
 - 1) Notify the Agency within 30 calendar days following an occurrence of a violation of this Section; and
 - 2) Send to the Agency any record showing a violation of this Section within 30 calendar days following the occurrence of a violation.
 - g) At least 30 calendar days before changing the method of compliance with this Subpart from reliance on this Section to reliance on Section 218.204(l)(2)(A) or

5396 (B) of this Subpart, the owner or operator of a source relying on this Section to
5397 demonstrate compliance with this Subpart for one or more wood furniture coating
5398 lines shall:

- 5399
- 5400 1) Comply with all requirements of Section 218.211(c)(1) of this Subpart;
 - 5401 and
 - 5402
 - 5403 2) Certify that all remaining coating lines relying on this Section to comply
 - 5404 with the requirements of this Subpart, if any, comply and continue to
 - 5405 comply with the requirements of this Section.
 - 5406

5407 (Source: Added at 22 Ill. Reg. 3556, effective February 2, 1998)

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5409 **Section 218.217 Wood Furniture Coating and Flat Wood Paneling Coating Work Practice**
5410 **Standards**

- 5411
- 5412 a) Spray booth cleaning. Each owner or operator of a source subject to the
 - 5413 limitations of Section 218.204(l) of this Subpart shall not use compounds
 - 5414 containing more than 8.0 percent, by weight, of VOM for cleaning spray booth
 - 5415 components other than conveyors, continuous coaters and their enclosures, and
 - 5416 metal filters, unless the spray booth is being refurbished. If the spray booth is
 - 5417 being refurbished, that is, the spray booth coating or other material used to cover
 - 5418 the booth is being replaced, the affected source shall use no more than 1.0 gallon
 - 5419 of organic solvent to prepare the booth prior to applying the booth coating.
 - 5420
 - 5421 b) Application equipment requirements. No owner or operator of a source subject to
 - 5422 the limitations of Section 218.204(l) of this Subpart shall use conventional air
 - 5423 spray guns to apply coating materials to wood furniture under the circumstances
 - 5424 specified in subsections (b)(1) through (4) of this Section:
 - 5425
 - 5426 1) To apply coating materials that have a VOM content no greater than 1.0
 - 5427 kg VOM/kg solids (1.0 lb VOM/lb solids), as applied;
 - 5428
 - 5429 2) For repair coating under the following circumstances:
 - 5430
 - 5431 A) The coating materials are applied after the completion of the
 - 5432 coating operation; or
 - 5433
 - 5434 B) The coating materials are applied after the stain and before any
 - 5435 other type of coating material is applied, and the coating materials
 - 5436 are applied from a container that has a volume of no more than 2.0
 - 5437 gallons;
 - 5438
 - 5439 3) If the spray gun is aimed and triggered automatically, rather than
 - 5440 manually; or
 - 5441

- 5442 4) If emissions from the finishing application station are directed to a control
5443 device pursuant to Section 218.216 of this Subpart
5444
- 5445 c) Cleaning and storage requirements. Each owner or operator of a source subject to
5446 the limitations of Section 218.204(l) or (p) of this Subpart shall:
5447
- 5448 1) Keep, store, and dispose of all coating, cleaning, and washoff materials in
5449 closed containers;
5450
- 5451 2) Pump or drain all organic solvent used for line cleaning into closed
5452 containers;
5453
- 5454 3) Collect all organic solvent used to clean spray guns in closed containers;
5455 and
5456
- 5457 4) Control emissions from washoff operations by using closed tanks.
5458
- 5459 d) Additional cleaning and storage requirements for flat wood paneling coating lines.
5460 Every owner or operator of a source subject to the limitations of Section
5461 218.204(p) of this Subpart shall:
5462
- 5463 1) Minimize spills of VOM-containing coatings, thinners, and cleaning
5464 materials and clean up spills immediately;
5465
- 5466 2) Minimize emissions of VOM during the cleaning of storage, mixing, and
5467 conveying equipment;
5468
- 5469 3) Keep mixing vessels that contain VOM-containing coatings and other
5470 VOM-containing materials closed except when specifically in use;
5471
- 5472 4) On and after January 1, 2012, convey VOM-containing coatings, thinners,
5473 and cleaning materials in closed containers or pipes.
5474

5475 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)
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5477 **Section 218.218 Work Practice Standards for Paper Coatings, Metal Furniture Coatings,**
5478 **and Large Appliance Coatings**
5479

- 5480 a) On and after May 1, 2011, every owner or operator of a source subject to the
5481 requirements of Section 218.204(c) of this Subpart shall:
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- 5483 1) Store all VOM-containing cleaning materials in closed containers;
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- 5485 2) Ensure that mixing and storage containers used for VOM-containing
5486 materials are kept closed at all times except when depositing or removing
5487 those materials;

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- 3) Minimize spills of VOM-containing cleaning materials;
 - 4) Convey VOM-containing cleaning materials from one location to another in closed containers or pipes; and
 - 5) Minimize VOM emissions from the cleaning of storage, mixing, and conveying equipment.
- b) On and after May 1, 2011, every owner or operator of a source subject to the requirements of Section 218.204(g) or 218.204(h) of this Subpart shall:
- 1) Store all VOM-containing coatings, thinners, coating-related waste materials, cleaning materials, and used shop towels in closed containers;
 - 2) Ensure that mixing and storage containers used for VOM-containing coatings, thinners, coating-related waste materials, and cleaning materials are kept closed at all times except when depositing or removing those materials;
 - 3) Minimize spills of VOM-containing coatings, thinners, coating-related waste materials, and cleaning materials, and clean up spills immediately;
 - 4) Convey VOM-containing coatings, thinners, coating-related waste materials, and cleaning materials from one location to another in closed containers or pipes;
 - 5) Minimize VOM emissions from the cleaning of storage, mixing, and conveying equipment; and
 - 6) Apply all coatings using one or more of the following application methods:
 - A) Electrostatic spray;
 - B) High volume low pressure (HVLP) spray;
 - C) Flow coating. For the purposes of this subsection (b), flow coating means a non-atomized technique of applying coating to a substrate with a fluid nozzle with no air supplied to the nozzle;
 - D) Roll coating;
 - E) Dip coating, including electrodeposition. For purposes of this subsection (b), electrodeposition means a water-borne dip coating process in which opposite electrical charges are applied to the

- 5534 substrate and the coating. The coating is attracted to the substrate
5535 due to the electrochemical potential difference that is created;
5536
5537 F) Brush coating, if subject to the requirements of Section
5538 218.204(h); or
5539
5540 G) Another coating application method capable of achieving a transfer
5541 efficiency equal to or better than that achieved by HVLP spraying,
5542 if such method is approved in writing by the Agency.
5543

5544 (Source: Added at 34 Ill. Reg. 5330, effective March 23, 2010)
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5546 **Section 218.219 Work Practice Standards for Automobile and Light-Duty Truck Assembly**
5547 **Coatings and Miscellaneous Metal and Plastic Parts Coatings**
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- 5549 a) Every owner or operator of a coating line subject to the requirements of Section
5550 218.204(a)(2) of this Subpart shall:
5551
5552 1) Store all VOM-containing coatings, thinners, coating-related waste
5553 materials, cleaning materials, and used shop towels in closed containers;
5554
5555 2) Ensure that mixing and storage containers used for VOM-containing
5556 coatings, thinners, and coating-related waste materials are kept closed at
5557 all times except when depositing or removing those materials;
5558
5559 3) Minimize spills of VOM-containing coatings, thinners, and coating-related
5560 waste materials;
5561
5562 4) Convey VOM-containing coatings, thinners, and coating-related waste
5563 materials from one location to another in closed containers or pipes;
5564
5565 5) Minimize VOM emissions from cleaning of storage, mixing, and
5566 conveying equipment;
5567
5568 6) Develop and implement a work practice plan to minimize VOM emissions
5569 from cleaning and from purging of equipment associated with coating
5570 lines subject to the limitations in Section 218.204(a)(2). The plan shall
5571 specify practices and procedures that the source will follow to ensure that
5572 VOM emissions from the operations listed in this subsection (a)(6) are
5573 minimized. If the owner or operator of the subject coating line has already
5574 implemented a work practice plan for the coating line pursuant to Subpart
5575 III of 40 CFR 63, incorporated by reference in Section 218.112 of this
5576 Part, the owner or operator may revise the plan as necessary to comply
5577 with this Section.
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5579 A) Vehicle body wiping;

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- B) Coating line purging;
 - C) Flushing of coating systems;
 - D) Cleaning of spray booth grates, walls, and equipment; and
 - F) Cleaning of external spray booth areas.
- b) Except as provided in subsection (c) of this Section, every owner or operator of a coating line described in Section 218.204(q) of this Subpart shall:
- 1) Store all VOM-containing coatings, thinners, coating-related waste materials, cleaning materials, and used shop towels in closed containers;
 - 2) Ensure that mixing and storage containers used for VOM-containing coatings, thinners, coating-related waste materials, and cleaning materials are kept closed at all times except when depositing or removing these materials;
 - 3) Minimize spills of VOM-containing coatings, thinners, coating-related waste materials, and cleaning materials;
 - 4) Convey VOM-containing coatings, thinners, coating-related waste materials, and cleaning materials from one location to another in closed containers or pipes;
 - 5) Minimize VOC emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers; and
 - 6) Apply all coatings using one or more of the following application methods:
 - A) Electrostatic spray;
 - B) High volume low pressure (HVLP) spray;
 - C) Flow coating. For the purposes of this subsection (b)(6)(C), flow coating means a non-atomized technique of applying coating to a substrate with a fluid nozzle with no air supplied to the nozzle;
 - D) Roll coating;
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- 5625 E) Dip coating, including electrodeposition. For purposes of this
5626 subsection (b)(6)(E), electrodeposition means a water-borne dip
5627 coating process in which opposite electrical charges are applied to
5628 the substrate and the coating. The coating is attracted to the
5629 substrate due to the electrochemical potential difference that is
5630 created;
- 5631 F) Airless spray;
- 5632
5633 G) Air-assisted airless spray; or
- 5634
5635 H) Another coating application method capable of achieving a transfer
5636 efficiency equal to or better than that achieved by HVLP spraying,
5637 if the method is approved in writing by the Agency.
5638
5639
- 5640 c) Notwithstanding subsection (b) of this Section, the application method limitations
5641 in subsection (b)(6) shall not apply to the following:
5642
- 5643 1) Coating lines complying with Section 218.207(n)(1);
 - 5644
5645 2) For metal parts and products coating operations: touch-up coatings, repair
5646 coatings, textured finishes, stencil coatings, safety-indicating coatings,
5647 solid-film lubricants, electric-insulating and thermal-conducting coatings,
5648 magnetic data storage disk coatings, and plastic extruded onto metal parts
5649 to form a coating;
 - 5650
5651 3) For pleasure craft surface coating operations: extreme high gloss coatings;
 - 5652
5653 4) For plastic parts and products coating operations: airbrush operations
5654 using 18.9 liters (5 gallons) or less of coating per year;
 - 5655
5656 5) For ammunition sealant operations: cap sealants and mouth waterproofing
5657 sealants.
5658

5659 (Source: Added at 34 Ill. Reg. 14174, effective September 14, 2010)

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5661 **SUBPART G: USE OF ORGANIC MATERIAL**

5662
5663 **Section 218.301 Use of Organic Material**

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5665 No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material
5666 into the atmosphere from any emission unit, except as provided in Sections 218.302, 218.303,
5667 218.304 of this Part and the following exception: If no odor nuisance exists the limitation of this
5668 Subpart shall apply only to photochemically reactive material.
5669

5670 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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5672 **Section 218.302 Alternative Standard**

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5674 Emissions of organic material in excess of those permitted by Section 218.301 of this Part are
5675 allowable if such emissions are controlled by one of the following methods:

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5677 a) Flame, thermal or catalytic incineration so as either to reduce such emissions to
5678 10 ppm equivalent methane (molecular weight 16) or less, or to convert 85
5679 percent of the hydrocarbons to carbon dioxide and water; or

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5681 b) A vapor recovery system which adsorbs and/or condenses at least 85 percent of
5682 the total uncontrolled organic material that would otherwise be emitted to the
5683 atmosphere; or,

5684

5685 c) Any other air pollution control equipment approved by the Agency and approved
5686 by the USEPA as a SIP revision capable of reducing by 85 percent or more the
5687 uncontrolled organic material that would be otherwise emitted to the atmosphere.

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5689 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

5690

5691 **Section 218.303 Fuel Combustion Emission Units**

5692

5693 The provisions of Sections 218.301 and 218.302 of this Part shall not apply to fuel combustion
5694 emission units.

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5696 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

5697

5698 **Section 218.304 Operations with Compliance Program**

5699

5700 The provisions of Sections 218.301 and 218.302 of this Part shall not apply to any owner,
5701 operator, user or manufacturer of paint, varnish, lacquer, coatings or printing ink whose
5702 compliance program and project completion schedule, as required by 35 Ill. Adm. Code 201,
5703 provided for the reduction of organic material used in such process to 20 percent or less of total
5704 volume by May 30, 1977.

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5706 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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5708 **SUBPART H: PRINTING AND PUBLISHING**

5709

5710 **Section 218.401 Flexographic and Rotogravure Printing**

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- 5712 a) No owner or operator of a subject flexographic or rotogravure printing line shall
5713 apply at any time any coating or ink unless the VOM content does not exceed the
5714 limitation specified in either subsection (a)(1) or (a)(2), as applicable.
5715 Compliance with this Section must be demonstrated through the applicable
5716 coating or ink analysis test methods and procedures specified in Section

- 5717 218.105(a) of this Part and the recordkeeping and reporting requirements
5718 specified in Section 218.404(c) of this Part. As an alternative to compliance with
5719 this subsection, a subject printing line may meet the requirements of subsection
5720 (b) or (c).
5721
- 5722 1) Prior to August 1, 2010, either:
5723
5724 A Forty percent VOM by volume of the coating and ink (minus water and
5725 any compounds which are specifically exempted from the
5726 definition of VOM); or
5727
5728 B) Twenty-five percent VOM by volume of the volatile content in the
5729 coating and ink; and
5730
- 5731 2) On and after August 1, 2010:
5732
5733 A) For owners or operators of flexographic or rotogravure printing
5734 lines that do not print flexible packaging, either:
5735
5736 i) Forty percent VOM by volume of the coating and ink
5737 (minus water and any compounds that are specifically
5738 exempted from the definition of VOM); or
5739
5740 ii) Twenty-five percent VOM by volume of the volatile
5741 content in the coating and ink;
5742
- 5743 B) For owners or operators of flexographic or rotogravure printing
5744 lines that print flexible packaging, or that print flexible packaging
5745 and non-flexible packaging on the same line, either:
5746
5747 i) 0.8 kg VOM/kg (0.8 lbs VOM/lb) solids applied; or
5748
5749 ii) 0.16 kg VOM/kg (0.16 lbs VOM/lb) inks and coatings
5750 applied.
5751
- 5752 b) Weighted Averaging Alternative
5753
- 5754 1) Prior to August 1, 2010, no owner or operator of a subject flexographic or
5755 rotogravure printing line shall apply coatings or inks on the subject
5756 printing line unless the weighted average, by volume, VOM content of all
5757 coatings and inks as applied each day on the subject printing line does not
5758 exceed the limitation specified in either subsection (a)(1)(A) (as
5759 determined by subsection (b)(1)(A)) or subsection (a)(1)(B)) (as
5760 determined by subsection (b)(1)(B)). Compliance with this subsection must
5761 be demonstrated through the applicable coating or ink analysis test
5762 methods and procedures specified in Section 218.105(a) of this Part and

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the recordkeeping and reporting requirements specified in Section 218.404(d) of this Part.

- A) The following equation shall be used to determine if the weighted average VOM content of all coatings and inks as applied each day on the subject printing line exceeds the limitation specified in subsection (a)(1)(A) of this Section.

$$VOM_{(i)(A)} = \frac{\sum_{i=1}^n C_i L_i (V_{si} + V_{VOMi})}{\sum_{i=1}^n L_i (V_{si} + V_{VOMi})}$$

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where:

- $VOM_{(i)(A)}$ = The weighted average VOM content in units of percent VOM by volume of all coatings and inks (minus water and any compounds that are specifically exempted from the definition of VOM) used each day;
- i = Subscript denoting a specific coating or ink as applied;
- n = The number of different coatings and/or inks as applied each day on a printing line;
- C_i = The VOM content in units of percent VOM by volume of each coating or ink as applied (minus water and any compounds that are specifically exempted from the definition of VOM);
- L_i = The liquid volume of each coating or ink as applied in units of l (gal);
- V_{si} = The volume fraction of solids in each coating or ink as applied; and
- V_{VOMi} = The volume fraction of VOM in each coating or ink as applied.

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- B) The following equation shall be used to determine if the weighted average VOM content of all coatings and inks as applied each day on the subject printing line exceeds the limitation specified in subsection (a)(1)(B) of this Section.

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$$VOM_{(i)(B)} = \frac{\sum_{i=1}^n C_i L_i V_{VMi}}{\sum_{i=1}^n L_i V_{VMi}}$$

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where:

- VOM_{(i)(B)} = The weighted average VOM content in units of percent VOM by volume of the volatile content of all coatings and inks used each day;
- i = Subscript denoting a specific coating or ink as applied;
- n = The number of different coatings and/or inks as applied each day on each printing line;
- C_i = The VOM content in units of percent VOM by volume of the volatile matter in each coating or ink as applied;
- L_i = The liquid volume of each coating or ink as applied in units of l (gal) and
- V_{VMi} = The volume fraction of volatile matter in each coating or ink as applied.

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- 2) On and after August 1, 2010, no owner or operator of a subject flexographic or rotogravure printing line that does not print flexible packaging shall apply coatings or inks on the subject printing line unless the weighted average, by weight, VOM content of all coatings and inks as applied each day on the subject printing line does not exceed the limitation specified in either subsection (a)(2)(A)(i) (calculated in accordance with the equation in subsection (b)(1)(A)) or (a)(2)(A)(ii) (calculated in accordance with the equation in subsection (b)(1)(B)) of this Section. Compliance with this subsection (b)(2) shall be demonstrated through the applicable coating or ink analysis test methods and procedures specified in Section 218.105(a) of this Part and the recordkeeping and reporting requirements specified in Section 218.404(d) of this Subpart.
- 3) On and after August 1, 2010, no owner or operator of a subject flexographic or rotogravure printing line that prints flexible packaging, or that prints flexible packaging and non-flexible packaging on the same line, shall apply coatings or inks on the subject printing line unless the weighted average, by weight, VOM content of all coatings and inks as applied each day on the subject printing line does not exceed the limitation specified in either subsection (a)(2)(B)(i) (calculated in accordance with the equation in subsection (b)(3)(A)) or subsection (a)(2)(B)(ii) (calculated

5807 in accordance with the equation in subsection (b)(3)(B)) of this Section.
 5808 Compliance with this subsection (b)(3) shall be demonstrated through the
 5809 applicable coating or ink analysis test methods and procedures specified in
 5810 Section 218.105(a) of this Part and the recordkeeping and reporting
 5811 requirements specified in Section 218.404(d) of this Subpart.
 5812

- A) The following equation shall be used to determine if the weighted average VOM content of all coatings and inks as applied each day on the subject printing line exceeds the limitation specified in subsection (a)(2)(B)(i) of this Section.

$$VOM_{(A)} = \frac{\sum_{i=1}^n C_i W_i}{\sum_{i=1}^n W_i}$$

where:

- $VOM_{(A)}$ = The weighted average VOM content in units of kg VOM per kg (lbs VOM per lb) solids of all coatings and inks used each day;
- i = Subscript denoting a specific coating or ink as applied;
- n = The number of different coatings and/or inks as applied each day on a printing line;
- C_i = The VOM content in units of kg VOM per kg (lbs VOM per lb) solids of each coating or ink as applied;
- W_i = Weight of solids in each coating or ink, as applied, in units of kg (lb).

- B) The following equation shall be used to determine if the weighted average VOM content of all coatings and inks as applied each day on the subject printing line exceeds the limitation specified in subsection (a)(2)(B)(ii) of this Section.

$$VOM_{(B)} = \frac{\sum_{i=1}^n C_i L_i}{\sum_{i=1}^n L_i}$$

where:

- VOM_(B) = The weighted average VOM content in units of kg (lbs) VOM per weight in kg (lbs) of all coatings or inks as applied each day;
- i = Subscript denoting a specific coating or ink as applied;
- n = The number of different coatings and/or inks as applied each day on each printing line;
- C_i = The VOM content in units of kg (lbs) VOM per weight in kg (lbs) of each coating or ink as applied;
- L_i = The weight of each coating or ink, as applied, in units of kg (lb).

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c) Capture System and Control Device Requirements

- 1) Prior to August 1, 2010, no owner or operator of a subject flexographic or rotogravure printing line equipped with a capture system and control device shall operate the subject printing line unless the owner or operator meets the requirements in subsection (c)(1)(A)(i), (c)(1)(A)(ii), or (c)(1)(A)(iii), as well as subsections (c)(1)(D), (c)(5), and (c)(6).

A One of:

- i) A carbon adsorption system is used that reduces the captured VOM emissions by at least 90 percent by weight; or
- ii) An incineration system is used that reduces the captured VOM emissions by at least 90 percent by weight; or
- iii) An alternative VOM emission reduction system is used that is demonstrated to have at least a 90 percent control device efficiency, approved by the Agency and approved by USEPA as a SIP revision; and

B) The printing line is equipped with a capture system and control device that provides an overall reduction in VOM emissions of at least:

- i) 75 percent where a publication rotogravure printing line is employed; or
- ii) 65 percent where a packaging rotogravure printing line is employed; or

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- iii) 60 percent where a flexographic printing line is employed;
 - 2) On and after August 1, 2010, no owner or operator of a flexographic or rotogravure printing line that does not print flexible packaging and that is equipped with a capture system and control device shall operate the subject printing line unless the owner or operator meets the requirements in subsection (c)(1)(A)(i), (c)(1)(A)(ii), or (c)(1)(A)(iii), as well as subsections (c)(1)(B), (c)(5), and (c)(6) of this Section;
 - 3) On and after August 1, 2010, no owner or operator of a flexographic or rotogravure printing line that prints flexible packaging and that is equipped with a capture system and control device shall operate the subject printing line unless the owner or operator meets the requirements in subsections (c)(5) and (c)(6) of this Section and the capture system and control device provides an overall reduction in VOM emissions of at least:
 - A) 65 percent in cases in which a subject printing line was first constructed at the subject source prior to March 14, 1995 and utilizes a control device that was first constructed at the subject source prior to January 1, 2010; or
 - B) 70 percent when a subject printing line was first constructed at the subject source prior to March 14, 1995 and utilizes a control device that was first constructed at the subject source on or after January 1, 2010; or
 - C) 75 percent when a subject printing line was first constructed at the subject source on or after March 14, 1995 and utilizes a control device that was first constructed at the subject source prior to January 1, 2010; or
 - D) 80 percent when a subject printing line was first constructed at the subject source on or after March 14, 1995 and utilizes a control device that was first constructed at the subject source on or after January 1, 2010;
 - 4) On and after August 1, 2010, the owner or operator of a flexographic or rotogravure printing line that prints flexible packaging and non-flexible packaging on the same line and that is equipped with a control device shall be subject to the requirements of either subsection (c)(1)(B) or (c)(3) of this Section, whichever is more stringent, as well as subsections (c)(5) and (c)(6) of this Section;
 - 5) The control device is equipped with the applicable monitoring equipment specified in Section 218.105(d)(2) of this Part and except as provided in

- 5910 Section 218.105(d)(3) of this Part, the monitoring equipment is installed,
5911 calibrated, operated and maintained according to vendor specifications at
5912 all times the control device is in use; and
5913
- 5914 6) The capture system and control device are operated at all times when the
5915 subject printing line is in operation. The owner or operator shall
5916 demonstrate compliance with this subsection by using the applicable
5917 capture system and control device test methods and procedures specified
5918 in Section 218.105(c) through Section 218.105(f) of this Part and by
5919 complying with the recordkeeping and reporting requirements specified in
5920 Section 218.404(e) of this Part. The owner or operator of a printing line
5921 subject to the requirements in subsection (c)(1)(B) or (c)(2) of this Section
5922 that performed all testing necessary to demonstrate compliance with
5923 subsection (c)(1)(B) prior to August 1, 2010 is not required to retest
5924 pursuant to this subsection (c)(6). The owner or operator of a printing line
5925 subject to the requirements in subsection (c)(3) shall perform testing in
5926 compliance with this subsection (c)(6), even if the owner or operator
5927 already performed such testing prior to August 1, 2010, unless the
5928 following conditions are met. Nothing in this subsection (c)(6), however,
5929 shall limit the Agency's ability to require that the owner or operator
5930 perform testing pursuant to 35 Ill. Adm. Code 201.282:
5931
- 5932 A) On or after May 1, 2000, the owner or operator of the subject
5933 printing line performed all testing necessary to demonstrate
5934 compliance with subsection (c)(1)(B);
5935
- 5936 B) Such testing also demonstrated an overall control efficiency equal
5937 to or greater than the applicable control efficiency requirements in
5938 subsection (c)(3);
5939
- 5940 C) The owner or operator submitted the results of such tests to the
5941 Agency, and the tests were not rejected by the Agency;
5942
- 5943 D) The same capture system and control device subject to the tests
5944 referenced in subsection (c)(6)(A) of this Section is still being used
5945 by the subject printing line; and
5946
- 5947 E) The owner or operator complies with all recordkeeping and
5948 reporting requirements in Section 218.404(e)(1)(B).
5949
- 5950 d) No owner or operator of subject flexographic or rotogravure printing lines that
5951 print flexible packaging or print flexible packaging and non-flexible packaging on
5952 the same line shall cause or allow VOM containing cleaning materials, including
5953 used cleaning towels, associated with the subject flexographic or rotogravure
5954 printing lines to be kept, stored, or disposed of in any manner other than in closed

5955 containers, or conveyed from one location to another in any manner other than in
5956 closed containers or pipes, except when specifically in use.

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5958 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)

5959

5960 **Section 218.402 Applicability**

5961

5962 a) Except as otherwise provided in Section 218.401, the limitations of Section
5963 218.401 of this Subpart apply to all flexographic and rotogravure printing lines at
5964 a subject source. Sources with flexographic and/or rotogravure printing lines are
5965 subject sources if:

5966

5967 1) Total maximum theoretical emissions of VOM from all flexographic and
5968 rotogravure printing lines (including solvents used for cleanup operations
5969 associated with flexographic and rotogravure printing lines) at the source
5970 ever exceed 90.7 Mg (100 tons) per calendar year and the flexographic
5971 and rotogravure printing lines (including solvents used for cleanup
5972 operations associated with flexographic and rotogravure printing lines) at
5973 the source are not limited to less than 90.7 Mg (100 tons) of VOM
5974 emissions per calendar year in the absence of air pollution control
5975 equipment through production or capacity limitations contained in a
5976 federally enforceable permit or a SIP revision; or

5977

5978 2) The flexographic and rotogravure printing lines (including solvents used
5979 for cleanup operations associated with flexographic and rotogravure
5980 printing lines) at the source have a combined potential to emit 22.7 Mg (25
5981 tons) or more of VOM per year.

5982

5983 b) The limitations of Section 218.401(d) shall apply to all owners or operators of
5984 flexographic or rotogravure printing lines that print flexible packaging, or that
5985 print flexible packaging and non-flexible packaging on the same line, at a source
5986 where the combined emissions of VOM from all flexographic and rotogravure
5987 printing lines total 6.8 kg/day (15 lbs/day) or more (including solvents used for
5988 cleanup operations associated with flexographic and rotogravure printing lines), in
5989 the absence of air pollution control equipment.

5990

5991 c) Upon achieving compliance with this Subpart, the flexographic and rotogravure
5992 printing lines are not required to meet Subpart G (Section 218.301 or 218.302 of
5993 this Part). Flexographic and rotogravure printing lines exempt from this Subpart
5994 are subject to Subpart G (Section 218.301 or 218.302 of this Part). Rotogravure
5995 or flexographic equipment used for both roll printing and paper coating is subject
5996 to this Subpart.

5997

5998 d) Once subject to the limitations of Section 218.401, a flexographic or rotogravure
5999 printing line is always subject to the limitations of Section 218.401 of this Part.

6000

- 6001 e) Any owner or operator of any flexographic or rotogravure printing line that is
6002 exempt from any of the limitations of Section 218.401 of this Part because of the
6003 criteria in this Section is subject to the recordkeeping and reporting requirements
6004 specified in Section 218.404(b) and (f) of this Part, as applicable.
6005

6006 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)
6007

6008 **Section 218.403 Compliance Schedule**
6009

6010 Every owner or operator of a flexographic and/or rotogravure printing line shall comply with the
6011 applicable requirements of Section 218.401 and Section 218.404 of this Part in accordance with
6012 the applicable compliance schedule or schedules specified in subsection (a), (b), (c), (d), (e), (f),
6013 or (g):
6014

- 6015 a) No owner or operator of a flexographic or rotogravure printing line that is exempt
6016 from the limitations of Section 218.401 of this Part because of the criteria in
6017 Section 218.402(a) of this Part shall operate said printing line on or after a date
6018 consistent with Section 218.106 of this Part, unless the owner or operator has
6019 complied with, and continues to comply with, Section 218.404(b) of this Part.
6020
- 6021 b) No owner or operator of a flexographic or rotogravure printing line complying by
6022 means of Section 218.401(a)(1) of this Part shall operate said printing line on or
6023 after a date consistent with Section 218.106 of this Part, unless the owner or
6024 operator has complied with, and continues to comply with, Section 218.401(a)(1)
6025 and Section 218.404(c) of this Part.
6026
- 6027 c) No owner or operator of a flexographic or rotogravure printing line complying by
6028 means of Section 218.401(b)(1) of this Part shall operate said printing line on or
6029 after a date consistent with Section 218.106 of this Part, unless the owner or
6030 operator has complied with, and continues to comply with, Section 218.401(b)(1)
6031 and Section 218.404(d) of this Part.
6032
- 6033 d) No owner or operator of a flexographic or rotogravure printing line complying by
6034 means of Section 218.401(c)(1)(B) of this Part shall operate said printing line on
6035 or after a date consistent with Section 218.106 of this Part, unless the owner or
6036 operator has complied with, and continues to comply with, the applicable
6037 provisions in Sections 218.401(c) and 218.404(e) of this Part.
6038
- 6039 e) No owner or operator of a flexographic or rotogravure printing line complying by
6040 means of Section 218.401(a)(2), (b)(2), or (b)(3) or complying by means of
6041 Section 218.401(c)(2), (c)(3), or (c)(4), shall operate the printing line on or after
6042 August 1, 2010, unless the owner or operator has complied with, and continues to
6043 comply with, Section 218.401(a)(2), (b)(2) or (b)(3), and Section 218.401(c), as
6044 applicable, and all applicable provisions in Section 218.404 of this Part.
6045

- 6046 f) No owner or operator of a flexographic or rotogravure printing line that prints
6047 flexible packaging, or that prints flexible packaging and non-flexible packaging
6048 on the same line, shall operate the printing line on or after August 1, 2010, unless
6049 the owner or operator has complied with, and continues to comply with, Section
6050 218.401(d) and Section 218.404(g) of this Part.
6051
- 6052 g) No owner or operator of a flexographic or rotogravure printing line that prints
6053 flexible packaging, or that prints flexible packaging and non-flexible packaging
6054 on the same line, and that is exempt from the limitations of Section 218.401(d)
6055 because of the criteria in Section 218.402(b) of this Part shall operate the printing
6056 line on or after August 1, 2010, unless the owner or operator has complied with,
6057 and continues to comply with, Section 218.402(b) and Section 218.404(f) of this
6058 Part.
6059

6060 (Source: Amended at 34 Ill. Reg. 9096, effective June 25, 2010)
6061

6062 **Section 218.404 Recordkeeping and Reporting**
6063

- 6064 a) The VOM content of each coating and ink and the efficiency of each capture
6065 system and control device shall be determined by the applicable test methods and
6066 procedures specified in Section 218.105 of this Part to establish the records
6067 required under this Section.
6068
- 6069 b) Any owner or operator of a printing line which is exempted from any of the
6070 limitations of Section 218.401 of this Part because of the criteria in Section
6071 218.402(a) of this Part shall comply with the following:
6072
- 6073 1) By a date consistent with Section 218.106 of this Part or, for flexographic
6074 or rotogravure printing lines that print flexible packaging or that print
6075 flexible packaging and non-flexible packaging on the same line, by
6076 January 1, 2012, the owner or operator of a flexographic or rotogravure
6077 printing line to which this subsection (b) is applicable shall certify to the
6078 Agency that the flexographic and rotogravure printing line is exempt
6079 under the provisions of Section 218.402(a) of this Part. Such certification
6080 shall include:
6081
- 6082 A) A declaration that the flexographic and rotogravure printing line is
6083 exempt from the limitations of the criteria in Section 218.401 of
6084 this Part because of Section 218.402(a) of this Part; and
6085
- 6086 B) Calculations that demonstrate that the combined potential to emit
6087 of all flexographic and rotogravure printing lines at the source
6088 never equals or exceeds 22.7 Mg (25 tons) of VOM per year, and
6089 that total maximum theoretical emissions of VOM from all
6090 flexographic and rotogravure printing lines at the source never
6091 exceed 90.7 Mg (100 tons) per calendar year before the application

6092 of capture systems and control devices. Total maximum
6093 theoretical emissions of VOM for a flexographic or rotogravure
6094 printing source is the sum of maximum theoretical emissions of
6095 VOM from each flexographic and rotogravure printing line at the
6096 source. The following equation shall be used to calculate total
6097 maximum theoretical emissions of VOM per calendar year before
6098 the application of capture systems and control devices for each
6099 flexographic and rotogravure printing line at the source:

$$E_p = A \times B + 1095 (C \times D \times F)$$

6102 where:

- 6103 E_p = Total maximum theoretical emissions of VOM from
6104 one flexographic or rotogravure printing line in units
of kg/year (lbs/year);
- A = Weight of VOM per volume of solids of the coating
or ink with the highest VOM content as applied each
year on the printing line in units of kg VOM/l (lbs
VOM/gal) of coating or ink solids;
- B = Total volume of solids for all coatings and inks that
can potentially be applied each year on the printing
line in units of l/year (gal/year). The method by which
the owner or operator accurately calculated the
volume of each coating and ink as applied and the
amount that can potentially be applied each year on
the printing line shall be described in the certification
to the Agency;
- C = Weight of VOM per volume of material for the
cleanup material or solvent with the highest VOM
content as used each year on the printing line in units
of kg/l (lbs VOM/gal);
- D = The greatest volume of cleanup material or solvent
used in any 8-hour period;
- F = The highest fraction of cleanup material or solvent
which is not recycled or recovered for offsite disposal
during any 8-hour period.

6105 2) On and after a date consistent with Section 218.106 of this Part, or, for
6106 flexographic or rotogravure printing lines that print flexible packaging or
6107 that print flexible packaging and non-flexible packaging on the same line,
6108 on and after January 1, 2012, the owner or operator of a flexographic and
6109 rotogravure printing line referenced in this subsection shall collect and
6110 record all of the following information each year for each printing line and
6111

- 6112 maintain the information at the source for a period of three years:
6113
6114 A) The name and identification number of each coating and ink as
6115 applied on each printing line.
6116
6117 B) The VOM content and the volume of each coating and ink as
6118 applied each year on each printing line.
6119
6120 3) On and after a date consistent with Section 218.106 of this Part, or, for
6121 flexographic or rotogravure printing lines that print flexible packaging or
6122 that print flexible packaging and non-flexible packaging on the same line,
6123 on and after January 1, 2012, the owner or operator of a flexographic and
6124 rotogravure printing line exempted from the limitations of Section 218.401
6125 of this Part because of the criteria in Section 218.402(a) of this Part shall
6126 notify the Agency of any record showing that total maximum theoretical
6127 emissions of VOM from all printing lines exceed 90.7 Mg (100 tons) in
6128 any calendar year before the application of capture systems and control
6129 devices, or that the combined potential to emit of all flexographic and
6130 rotogravure printing lines at the source equals or exceeds 22.7 Mg (25
6131 tons) of VOM in any calendar year, by sending a copy of such record to
6132 the Agency within 30 days after the exceedance occurs.
6133
6134 c) Any owner or operator of a printing line subject to the limitations of Section
6135 218.401 of this Part and complying by means of Section 218.401(a) of this Part
6136 shall comply with the following:
6137
6138 1) By a date consistent with Section 218.106 of this Part, or Section
6139 218.403(e), as applicable, or upon initial start-up of a new printing line, or
6140 upon changing the method of compliance from an existing subject printing
6141 line from Section 218.401(b) or Section 218.401(c) of this Part to Section
6142 218.401(a) of this Part, the owner or operator of a subject printing line
6143 shall certify to the Agency that the printing line will be in compliance with
6144 Section 218.401(a) of this Part on and after a date consistent with Section
6145 218.106 of this Part, or Section 218.403(e), as applicable, or on and after
6146 the initial start-up date. The owner or operator of a printing line subject to
6147 the requirements in Section 218.401(a)(2)(B) shall certify in accordance
6148 with this subsection (c)(1) even if the owner or operator of such line
6149 submitted a certification prior to January 1, 2010. Such certification shall
6150 include:
6151
6152 A) The name and identification number of each coating and ink as
6153 applied on each printing line.
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6155 B) The VOM content of each coating and ink as applied each day on
6156 each printing line.
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- 2) On and after a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or on and after the initial start-up date, the owner or operator of a printing line subject to the limitations of Section 218.401 of this Part and complying by means of Section 218.401(a) of this Part shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:
 - A) The name and identification number of each coating and ink as applied on each printing line.
 - B) The VOM content of each coating and ink as applied each day on each printing line.
 - 3) On and after a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, the owner or operator of a subject printing line shall notify the Agency in the following instances:
 - A) Any record showing violation of Section 218.401(a) of this Part shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.
 - B) At least 30 calendar days before changing the method of compliance with Section 218.401 of this Part from Section 218.401(a) of this Part to Section 218.401(b) or (c) of this Part, the owner or operator shall comply with all requirements of subsection (d)(1) or (e)(1) of this Section, respectively. Upon changing the method of compliance with Section 218.401 of this Part from Section 218.401(a) of this Part to Section 218.401(b) or (c) of this Part, the owner or operator shall comply with all requirements of subsection (d) or (e) of this Section, respectively.
 - d) Any owner or operator of a printing line subject to the limitations of Section 218.401 of this Part and complying by means of Section 218.401(b) shall comply with the following:
 - 1) By a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or upon initial start-up of a new printing line, or upon changing the method of compliance for an existing subject printing line from Section 218.401(a) or (c) of this Part to Section 218.401(b) of this Part, the owner or operator of the subject printing line shall certify to the Agency that the printing line will be in compliance with Section 218.401(b) of this Part on and after a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or on and after the initial start-up date. The owner or operator of a printing line subject to the requirements in Section 218.401(b)(3) shall certify in accordance with this

- 6204 subsection (d)(1) even if the owner or operator of such line submitted a
6205 certification prior to January 1, 2010. Such certification shall include:
6206
- 6207 A) The name and identification number of each printing line which
6208 will comply by means of Section 218.401(b) of this Part.
6209
- 6210 B) The name and identification number of each coating and ink
6211 available for use on each printing line.
6212
- 6213 C) The VOM content of each coating and ink as applied each day on
6214 each printing line.
6215
- 6216 D) The method by which the owner or operator will accurately
6217 calculate the volume, or weight of solids, as applicable, of each
6218 coating and ink as applied each day on each printing line, and on
6219 and after January 1, 2012, the weight of each coating or ink.
6220
- 6221 E) The method by which the owner or operator will create and
6222 maintain records each day as required in subsection (d)(2) of this
6223 Section.
6224
- 6225 F) An example of the format in which the records required in
6226 subsection (d)(2) of this Section will be kept.
6227
- 6228 2) On and after a date consistent with Section 218.106 of this Part, or Section
6229 218.403(e), as applicable, or on and after the initial start-up date, the
6230 owner or operator of a printing line subject to the limitations of Section
6231 218.401 of this Part and complying by means of Section 218.401(b) of this
6232 Part shall collect and record all of the following information each day for
6233 each printing line and maintain the information at the source for a period
6234 of three years:
6235
- 6236 A) The name and identification number of each coating and ink as
6237 applied on each printing line.
6238
- 6239 B) The VOM content and the volume, or weight of solids, as
6240 applicable, of each coating and ink as applied each day on each
6241 printing line, and on and after January 1, 2012, the weight of each
6242 coating or ink.
6243
- 6244 C) The daily-weighted average VOM content of all coatings and inks
6245 as applied on each printing line.
6246
- 6247 3) On and after a date consistent with Section 218.106 of this Part, or Section
6248 218.403(e), as applicable, the owner or operator of a subject printing line
6249 shall notify the Agency in the following instances:

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- A) Any record showing violation of Section 218.401(b) of this Part shall be reported by sending a copy of such record to the Agency within 30 days following the occurrence of the violation.
 - B) At least 30 calendar days before changing the method of compliance with Section 218.401 of this Part from Section 218.401(b) of this Part to Section 218.401(a) or (c) of this Part, the owner or operator shall comply with all requirements of subsection (c)(1) or (e)(1) of this Section, respectively. Upon changing the method of compliance with Section 218.401 of this Part from Section 218.401(b) of this Part to Section 218.401(a) or (c) of this Part, the owner or operator shall comply with all requirements of subsection (c) or (e) of this Section, respectively.
- e) Any owner or operator of a printing line subject to the limitations of Section 218.401 of this Part and complying by means of Section 218.401(c) of this Part shall comply with the following:
- 1) By a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or upon initial start-up of a new printing line, or upon changing the method of compliance for an existing printing line from Section 218.401(a) or (b) of this Part to Section 218.401(c) of this Part, the owner or operator of the subject printing line shall either:
 - A) Perform all tests and submit to the Agency the results of all tests and calculations necessary to demonstrate that the subject printing line will be in compliance with Section 218.401(c) of this Part on and after a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or on and after the initial start-up date; or
 - B) If not required to perform such testing pursuant to Section 218.401(c)(6), submit a certification to the Agency that includes:
 - i) A declaration that the owner or operator is not required to perform testing pursuant to Section 218.401(c)(6);
 - ii) The dates that testing demonstrating compliance with Section 218.401(c)(3) was performed; and
 - iii) The dates that the results of such testing were submitted to the Agency.
 - 2) On and after a date consistent with Section 218.106 of this Part, or Section 218.403(e), as applicable, or on and after the initial start-up date, the owner or operator of a printing line subject to the limitations of Section

- 6296 218.401 of this Part and complying by means of Section 218.401(c) of this
6297 Part shall collect and record all of the following information each day for
6298 each printing line and maintain the information at the facility for a period
6299 of three years:
6300
- 6301 A) Control device monitoring data.
 - 6302
 - 6303 B) A log of operating time for the capture system, control device,
6304 monitoring equipment and the associated printing line.
 - 6305
 - 6306 C) A maintenance log for the capture system, control device and
6307 monitoring equipment detailing all routine and non-routine
6308 maintenance performed including dates and duration of any
6309 outages.
 - 6310
- 6311 3) On and after a date consistent with Section 218.106 of this Part, or Section
6312 218.403(e), as applicable, the owner or operator of a subject printing line
6313 shall notify the Agency in the following instances:
6314
- 6315 A) Any record showing violation of Section 218.401(c) of this Part
6316 shall be reported by sending a copy of such record to the Agency
6317 within 30 days following the occurrence of the violation.
 - 6318
 - 6319 B) At least 30 calendar days before changing the method of
6320 compliance with Section 218.401 of this Part from Section
6321 218.401(c) of this Part to Section 218.401(a) or (b) of this Part, the
6322 owner or operator shall comply with all requirements of subsection
6323 (c)(1) or (d)(1) of this Section, respectively. Upon changing the
6324 method of compliance with Section 218.401 of this Part from
6325 Section 218.401(c) of this Part to Section 218.401(a) or (b) of this
6326 Part, the owner or operator shall comply with all requirements of
6327 subsection (c) or (d) of this Section, respectively.
 - 6328
- 6329 4) By August 1, 2010, or upon initial start-up of a new printing line,
6330 whichever is later, the owner or operator of a printing line subject to the
6331 requirements in Section 218.401(c)(3) or (c)(4) shall submit to the Agency
6332 records documenting the date the printing line was constructed at the
6333 subject source and the date the control device for such printing line was
6334 constructed at the subject source.
- 6335
- 6336 f) Any owner or operator of a flexographic or rotogravure printing line that prints
6337 flexible packaging, or that prints flexible packaging and non-flexible packaging
6338 on the same line, and that is exempt from the limitations of Section 218.401(d)
6339 because of the criteria in Section 218.402(b) shall:
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- 1) By August 1, 2010, or upon initial start-up of a new printing line, whichever is later, and upon modification of a printing line, submit a certification to the Agency that includes:
 - A) A declaration that the source is exempt from the requirements in Section 218.401(d) because of the criteria in Section 218.402(b);
 - B) Calculations that demonstrate that combined emissions of VOM from all flexographic and rotogravure printing lines (including inks and solvents used for cleanup operations associated with such printing lines) at the source never equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment;
 - 2) On and after January 1, 2012, collect and record the following information each day for each subject printing line:
 - A) The name and identification number of each coating, ink, and cleaning solvent as applied each day on each printing line;
 - B) The VOM content of each coating and ink (measured in weight of VOM per volume of coating or ink, or in weight of VOM per weight of coating or ink) as applied each day on each printing line, and the volume or weight of each coating or ink, as applicable;
 - C) The weight of VOM per volume of each cleaning solvent and the volume of each cleaning solvent used each day on each printing line;
 - D) The total daily emissions of VOM from each printing line (including solvents used for cleanup operations associated with the printing line) and the sum of daily emissions from all subject printing lines at the source; and
 - 3) Notify the Agency in writing if the combined emissions of VOM from all flexographic and rotogravure printing lines (including inks and solvents used for cleanup operations associated with the flexographic and rotogravure lines) at the source ever equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, within 30 days after the event occurs
- g) Any owner or operator of a printing line subject to the limitations of Section 218.401(d) shall:
- 1) By August 1, 2010, or upon initial start-up of a new printing line, whichever is later, submit a certification to the Agency describing the

6386 practices and procedures that the owner or operator will follow to ensure
6387 compliance with the limitations of Section 218.401(d); and

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6389 2) Notify the Agency of any violation of Section 218.401(d) by sending a
6390 description of the violation and copies of records documenting such
6391 violations to the Agency within 30 days following the occurrence of the
6392 violation.

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6394 h) All records required by subsections (f) and (g) of this Section shall be retained for
6395 at least three years and shall be made available to the Agency upon request.

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6397 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)

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6399 **Section 218.405 Lithographic Printing: Applicability**

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6402 a) Every owner or operator of lithographic printing lines is subject to the
6403 recordkeeping and reporting requirements in Section 218.411 of this Subpart.

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6405 b) Prior to August 1, 2010, Sections 218.407 through 218.410 of this Subpart shall
6406 apply to:

6407
6408 1) All owners or operators of heatset web offset lithographic printing lines
6409 unless:

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6411 A) Total maximum theoretical emissions of VOM from all heatset
6412 web offset lithographic printing lines (including solvents used for
6413 cleanup operations associated with heatset web offset lithographic
6414 printing lines) at the source never exceed 90.7 Mg (100 tons) per
6415 calendar year before the application of capture systems and control
6416 devices. To determine a source's total maximum theoretical
6417 emissions of VOM for the purposes of this subsection (b)(1)(A),
6418 the owner or operator shall use the calculations set forth in Section
6419 218.411(a)(1)(C) of this Subpart; or

6420
6421 B) Federally enforceable permit conditions or SIP revision for all
6422 heatset web offset lithographic printing lines at the source requires
6423 the owner or operator to limit production or capacity of these
6424 printing lines to total VOM emissions of 90.7 Mg/yr (100 TPY) or
6425 less, before the application of capture systems and control devices;

6426
6427 2) All owners or operators of lithographic printing lines, unless the
6428 combined emissions of VOM from all lithographic printing lines at the
6429 source (including solvents used for cleanup operations associated with the
6430 lithographic printing lines) never exceed 45.5 kg/day (100 lbs/day), as
6431 determined in accordance with Section 218.411(a)(1)(B), before the

6432 application of capture systems and control devices.

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c) On and after August 1, 2010:

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1) The requirements in Section 218.407(a)(1)(B) through (a)(1)(E) and 218.407(b) and all applicable provisions in Sections 218.409 through 218.411 of this Subpart shall apply to all owners or operators of heatset web offset lithographic printing lines, if the combined emissions of VOM from all lithographic printing lines at the source (including solvents used for cleanup operations associated with the lithographic printing lines) ever exceed 45.5 kg/day (100 lbs/day), calculated in accordance with Section 218.411(b)(2)(B), before the application of capture systems and control devices;

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2) The requirements in Section 218.407(a)(1)(A) and (a)(2) through (a)(5) and all applicable provisions in Sections 218.409 through 218.411 of this Subpart shall apply to all owners or operators of lithographic printing lines if the combined emissions of VOM from all lithographic printing lines at the source (including solvents used for cleanup operations associated with the lithographic printing lines) ever equal or exceed 6.8 kg/day (15 lbs/day), calculated in accordance with Section 218.411(b)(1)(B), before the application of capture systems and control devices;

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3) Notwithstanding subsection (c)(2) of this Section, at sources where the combined emissions of VOM from all lithographic printing lines at the source (including solvents used for cleanup operations associated with the lithographic printing lines) equal or exceed 6.8 kg/day (15 lbs/day) but do not exceed 45.5 kg/day (100 lbs/day), calculated in accordance with Section 218.411(b)(1)(B), before the application of capture systems and control devices, the following exclusions shall apply unless the owner or operator of the source certifies pursuant to Section 218.411(g)(1)(B) that the source will not make use of any such exclusions:

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A) The requirements of Section 218.407(a)(1)(A), (a)(2), and (a)(3) of this Subpart shall not apply to lithographic printing lines with a total fountain solution reservoir of less than 3.8 liters (1 gallon);

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B) The requirements of Section 218.407(a)(3) of this Subpart shall not apply to sheet-fed offset lithographic printing lines with maximum sheet size of 11x17 inches or smaller;

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C) The requirements of Section 218.407(a)(4) of this Subpart shall not apply to up to a total of 416.3 liters (110 gallons) per year of cleaning materials used on all lithographic printing lines at the source;

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6478 D) The requirements of Section 218.407(a)(4)(A)(i) shall not apply to
6479 lithographic printing lines at the source. Instead, the requirements
6480 of Section 218.407(a)(4)(A)(ii) shall apply to such lines.

6481
6482 d) If a lithographic printing line at a source is or becomes subject to one or more of
6483 the limitations in Section 218.407 of this Subpart, the lithographic printing lines at
6484 the source are always subject to the applicable provisions of this Subpart.

6485
6486 (Source: Amended at 34 Ill. Reg. 9096, effective June 25, 2010)

6487
6488 **Section 218.406 Provisions Applying to Heatset Web Offset Lithographic Printing Prior to**
6489 **March 15, 1996 (Repealed)**

6490
6491 (Source: Repealed at 34 Ill. Reg. 9096, effective June 25, 2010)

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6493 **Section 218.407 Emission Limitations and Control Requirements for Lithographic**
6494 **Printing Lines**

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6496 a) No owner or operator of lithographic printing lines subject to the requirements of
6497 this Subpart shall:

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6499 1) Cause or allow the operation of any heatset web offset lithographic
6500 printing line unless:

6501 A) The total VOM content in the as-applied fountain solution meets
6502 one of the following conditions:

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6504 i) 1.6 percent or less, by weight;
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6506 ii) 3 percent or less, by weight, and the temperature of the
6507 fountain solution is maintained below 15.6°C (60°F),
6508 measured at the reservoir or the fountain tray; or
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6510 iii) 5 percent or less, by weight, and the as-applied fountain
6511 solution contains no alcohol;
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6513 B) The air pressure in the dryer is maintained lower than the air
6514 pressure of the press room, such that air flow through all openings
6515 in the dryer, other than the exhaust, is into the dryer at all times
6516 when the printing line is operating;
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6518 C) An afterburner is installed and operated so that VOM emissions
6519 (excluding methane and ethane) from the press dryer exhausts are
6520 reduced as follows:

- 6521
6522 i) Prior to August 1, 2010, by 90 percent, by weight, or to a
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- 6524 maximum afterburner exhaust outlet concentration of 20
6525 ppmv (as carbon); and
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6527 ii) On and after August 1, 2010, by at least 90 percent, by
6528 weight, for afterburners first constructed at the source prior
6529 to January 1, 2010; by at least 95 percent, by weight, for
6530 afterburners first constructed at the source on or after
6531 January 1, 2010; or to a maximum afterburner exhaust
6532 outlet concentration of 20 ppmv (as carbon);
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6534 D) The afterburner complies with all monitoring provisions specified
6535 in Section 218.410(c) of this Subpart ; and
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6537 E) The afterburner is operated at all times when the printing line is in
6538 operation, except the afterburner may be shut down between
6539 November 1 and April 1 as provided in Section 218.107 of this
6540 Part;
6541
6542 2) Cause or allow the operation of any non-heatset web offset lithographic
6543 printing line unless the VOM content of the as-applied fountain solution is
6544 5 percent or less, by weight, and the as-applied fountain solution contains
6545 no alcohol;
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6547 3) Cause or allow the operation of any sheet-fed offset lithographic printing
6548 line unless:
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6550 A) The VOM content of the as-applied fountain solution is 5 percent
6551 or less, by weight; or
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6553 B) The VOM content of the as-applied fountain solution is 8.5 percent
6554 or less, by weight, and the temperature of the fountain solution is
6555 maintained below 15.6°C (60°F), measured at the reservoir or the
6556 fountain tray;
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6558 4) Cause or allow the use of a cleaning solution on any lithographic printing
6559 line unless:
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6561 A) The VOM content of the as-used cleaning solution is less than or
6562 equal to:
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6564 i) 30 percent, by weight; or
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6566 ii) On and after August 1, 2010, for owners or operators of
6567 sources that meet the applicability criteria in Section
6568 218.405(c)(3) and do not certify pursuant to Section
6569 218.411(g)(1)(B) that the source will not make use of any

- 6570 of the exclusions in Section 218.405(c)(3), 70 percent, by
6571 weight; or
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6573 B) The VOM composite partial vapor pressure of the as-used cleaning
6574 solution is less than 10 mmHg at 20°C (68°F);
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6576 5) Cause or allow VOM containing cleaning materials, including used
6577 cleaning towels, associated with any lithographic printing line to be kept,
6578 stored or disposed of in any manner other than in closed containers, except
6579 when specifically in use.
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6581 b) An owner or operator of a heatset web offset lithographic printing line subject to
6582 the requirements of subsection (a)(1)(C) of this Section may use a control device
6583 other than an afterburner, if:
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6585 1) The control device reduces VOM emissions from the press dryer exhausts
6586 as follows
6587
6588 A) Prior to August 1, 2010, by at least 90 percent, by weight, or to a
6589 maximum control device exhaust outlet concentration of 20 ppmv
6590 (as carbon); and
6591
6592 B) On and after August 1, 2010:
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6594 i) By at least 90 percent, by weight, for control devices first
6595 constructed at the source prior to January 1, 2010;
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6597 ii) By at least 95 percent, by weight, for control devices first
6598 constructed at the source on or after January 1, 2010; or
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6600 iii) To a maximum control device exhaust outlet concentration
6601 of 20 ppmv (as carbon);
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6603 2) The owner or operator submits a plan to the Agency detailing appropriate
6604 monitoring devices, test methods, recordkeeping requirements, and
6605 operating parameters for the control device; and
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6607 3) The use of the control device with testing, monitoring, and recordkeeping
6608 in accordance with this plan is approved by the Agency and USEPA as
6609 federally enforceable permit conditions.
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6611 (Source: Amended at 34 Ill. Reg. 9096, effective June 25, 2010)
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6613 **Section 218.408 Compliance Schedule for Lithographic Printing On and After March 15,**
6614 **1996 (Repealed)**
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(Source: Repealed at 34 Ill. Reg. 9096, effective June 25, 2010)

Section 218.409 Testing for Lithographic Printing

- a) Testing to demonstrate compliance with the requirements of Section 218.407 of this Subpart shall be conducted by January 1, 2012, unless such testing was conducted on or after May 9, 1995, the test was conducted pursuant to a test method approved by USEPA, the current operating conditions and operating capacity of the press are consistent with the operation of the press during such testing, and the test results were submitted to the Agency. If an owner or operator of a printing line performed such testing prior to May 9, 1995, the owner or operator shall either retest pursuant to this Section or submit to the Agency all information necessary to demonstrate that the prior testing was conducted pursuant to a test method approved by USEPA, and that the current operating conditions and operating capacity of the press are consistent with the operation of the press during prior testing. Thereafter, testing shall be conducted by the owner or operator within 90 days after a request by the Agency, or as otherwise specified in this Subpart. Such testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Agency in writing 30 days in advance of conducting such testing to allow the Agency to be present during such testing.
- b) The methods and procedures of Section 218.105(d) and (f) shall be used for testing to demonstrate compliance with the requirements of Section 218.407(a)(1)(C) or (b)(1) of this Subpart, as follows:
 - 1) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 218.112 of this Part. The sampling sites for determining efficiency in reducing VOM from the dryer exhaust shall be located between the dryer exhaust and the control device inlet, and between the outlet of the control device and the exhaust to the atmosphere;
 - 2) To determine the volumetric flow rate of the exhaust stream, Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 218.112 of this Part;
 - 3) To determine the VOM concentration of the exhaust stream entering and exiting the control device, Method 25 or 25A, as appropriate, 40 CFR 60, appendix A, incorporated by reference at Section 218.112 of this Part. For thermal and catalytic afterburners, Method 25 must be used except under the following circumstances, in which case Method 25A must be used:
 - A) The allowable outlet concentration of VOM from the control device is less than 50 ppmv, as carbon;

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- B) The VOM concentration at the inlet of the control device and the required level of control result in exhaust concentrations of VOM of 50 ppmv, or less, as carbon; and
 - C) Due to the high efficiency of the control device, the anticipated VOM concentration at the control device exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or Method 25A. If the retest is conducted using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest using Method 25;
- 4) Notwithstanding the criteria or requirements in Method 25 that specifies a minimum probe temperature of 129°C (265°F), the probe must be heated to at least the gas stream temperature of the dryer exhaust, typically close to 176.7°C (350°F);
 - 5) During testing, the printing lines shall be operated at representative operating conditions and flow rates; and
 - 6) During testing, an air flow direction indicating device, such as a smoke stick, shall be used to demonstrate 100 percent emissions capture efficiency for the dryer in accordance with Section 218.407(a)(1)(B) of this Subpart.
- c) Testing to demonstrate compliance with the VOM content limitations in Section 218.407(a)(1)(A), (a)(2), (a)(3) and (a)(4)(A) of this Subpart, and to determine the VOM content of fountain solutions, fountain solution additives, cleaning solvents, cleaning solutions, and inks (pursuant to the requirements of Section 218.411(a)(1)(B), (b)(1)(B), or (b)(2)(B) of this Subpart, as applicable, shall be conducted upon request of the Agency or as otherwise specified in this Subpart, as follows:
 - 1) The applicable test methods and procedures specified in Section 218.105(a) of this Part shall be used; provided, however, Method 24, incorporated by reference at Section 218.112 of this Part, shall be used to demonstrate compliance; or

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- 2) The manufacturer's specifications for VOM content for fountain solution additives, cleaning solvents, and inks may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 218.105(a) of this Part; provided, however, Method 24 shall be used to determine compliance.
 - d) Testing to demonstrate compliance with the requirements of Section 218.407(b) of this Subpart shall be conducted as set forth in the owner or operator's plan approved by the Agency and USEPA as federally enforceable permit conditions pursuant to Section 218.407(b) of this Subpart.
 - e) Testing to determine the VOM composite partial vapor pressure of cleaning solvents, cleaning solvent concentrates, and as-used cleaning solutions shall be conducted in accordance with the applicable methods and procedures specified in Section 218.110 of this Part.

(Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)

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6726 **Section 218.410 Monitoring Requirements for Lithographic Printing**

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- a) Fountain Solution Temperature
 - 1) The owner or operator of any lithographic printing lines relying on the temperature of the fountain solution to demonstrate compliance shall install, maintain, and continuously operate a temperature monitor of the fountain solution in the reservoir or fountain tray, as applicable.
 - 2) The temperature monitor must be capable of reading with an accuracy of 1°C or 2°C, and must be attached to an automatic, continuous recording device such as a strip chart, recorder, or computer, with at least the same accuracy, that is installed, calibrated and maintained in accordance with the manufacturer's specifications. If the automatic, continuous recording device malfunctions, the owner or operator shall record the temperature of the fountain solution at least once every two operating hours. The automatic, continuous recording device shall be repaired or replaced as soon as practicable.
 - b) Fountain Solution VOM Content. The owner or operator of any lithographic printing lines subject to Section 218.407(a)(1)(A), (a)(2) or (a)(3) of this Subpart shall:
 - 1) For a fountain solution to which VOM is not added automatically:
 - A) Maintain records of the VOM content of the fountain solution in accordance with Section 218.411(e)(2)(C); or

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- B) Take a sample of the as-applied fountain solution from the fountain tray or reservoir, as applicable, each time a fresh batch of fountain solution is prepared or each time VOM is added to an existing batch of fountain solution in the fountain tray or reservoir, and shall determine compliance with the VOM content limitation of the as-applied fountain solution by using one of the following options:
 - i) With a refractometer or hydrometer with a visual, analog, or digital readout and with an accuracy of 0.5 percent. The refractometer or hydrometer must be calibrated with a standard solution for the type of VOM used in the fountain solution, in accordance with manufacturer's specifications, against measurements performed to determine compliance. The refractometer or hydrometer must be corrected for temperature at least once per 8-hour shift or once per batch of fountain solution prepared or modified, whichever is longer; or
 - ii) With a conductivity meter if it is demonstrated that a refractometer and hydrometer cannot distinguish between compliant and noncompliant fountain solution for the type and amount of VOM in the fountain solution. A source may use a conductivity meter if it demonstrates that both hydrometers and refractometers fail to provide significantly different measurements for standard solutions containing 95 percent, 100 percent and 105 percent of the applicable VOM content limit. The conductivity meter reading for the fountain solution must be referenced to the conductivity of the incoming water. A standard solution shall be used to calibrate the conductivity meter for the type of VOM used in the fountain solution, in accordance with manufacturer's specifications;
 - 2) For fountain solutions to which VOM is added at the source with automatic feed equipment, determine the VOM content of the as-applied fountain solution based on the setting of the automatic feed equipment which makes additions of VOM up to a pre-set level. Records must be retained of the VOM content of the fountain solution in accordance with Section 218.411(e)(2)(D) of this Subpart. The equipment used to make automatic additions must be installed, calibrated, operated and maintained in accordance with manufacturer's specifications.
 - c) Afterburners for Heatset Web Offset Lithographic Printing Lines.
If an afterburner is used to demonstrate compliance, the owner or operator of a heatset web offset lithographic printing line subject to Section 218.407(a)(1)(C) of this Subpart shall:

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- 1) Install, calibrate, maintain, and operate temperature monitoring devices with an accuracy of 3°C or 5°F on the afterburner in accordance with Section 218.105(d)(2) of this Part and in accordance with the manufacturer's specifications. Monitoring shall be performed at all times when the afterburner is operating; and
 - 2) Install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring devices, such as a strip chart, recorder or computer, with at least the same accuracy as the temperature monitor.
- d) Other Control Devices for Heatset Web Offset Lithographic Printing Lines. If a control device other than an afterburner is used to demonstrate compliance, the owner or operator of a heatset web offset lithographic printing line subject to this Subpart shall install, maintain, calibrate and operate such monitoring equipment as set forth in the owner or operator's plan approved by the Agency and USEPA pursuant to Section 218.407(b) of this Subpart.
- e) Cleaning Solution
- 1) The owner or operator of any lithographic printing line relying on the VOM content of the cleaning solution to comply with Section 218.407(a)(4)(A) of this Subpart must:
 - A) For cleaning solutions that are prepared at the source with equipment that automatically mixes cleaning solvent and water (or other non-VOM):
 - i) Install, operate, maintain, and calibrate the automatic feed equipment in accordance with manufacturer's specifications to regulate the volume of each of the cleaning solvent and water (or other non-VOM), as mixed; and
 - ii) Pre-set the automatic feed equipment so that the consumption rates of the cleaning solvent and water (or other non-VOM), as applied, comply with Section 218.407(a)(4)(A) of this Subpart;
 - B) For cleaning solutions that are not prepared at the source with automatic feed equipment, keep records of the usage of cleaning solvent and water (or other non-VOM) as set forth in Section 218.411(f)(2) of this Subpart.
 - 2) The owner or operator of any lithographic printing line relying on the vapor pressure of the cleaning solution to comply with Section

6846 218.407(a)(4)(B) of this Subpart must keep records for such cleaning
6847 solutions used on any such lines as set forth in Section 218.411(f)(2)(C) of
6848 this Subpart.
6849

6850 (Source: Amended at 34 Ill. Reg. 9096, effective June 25, 2010)
6851

6852 **Section 218.411 Recordkeeping and Reporting for Lithographic Printing**
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6854 a) Exempt Units prior to August 1, 2010. An owner or operator of lithographic
6855 printing lines exempt from the limitations of Section 218.407 of this Subpart prior
6856 to August 1, 2010, because of the criteria in Section 218.405(b) of this Subpart,
6857 shall comply with the following:
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6859 1) Upon initial start-up of a new lithographic printing line, and upon
6860 modification of a lithographic printing line, submit a certification to the
6861 Agency that includes:
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6863 A) A declaration that the source is exempt from the control
6864 requirements in Section 218.407 of this Part because of the criteria
6865 in Section 218.405(b) of this Subpart;
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6867 B) Calculations that demonstrate that combined emissions of VOM
6868 from all lithographic printing lines (including inks, fountain
6869 solutions, and solvents used for cleanup operations associated with
6870 the lithographic printing lines) at the source never exceed 45.5
6871 kg/day (100 lbs/day) before the use of capture systems and control
6872 devices, as follows:
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6874 i) To calculate daily emissions of VOM, the owner or
6875 operator shall determine the monthly emissions of VOM
6876 from all lithographic printing lines at the source (including
6877 solvents used for cleanup operations associated with the
6878 lithographic printing lines) and divide this amount by the
6879 number of days during that calendar month that
6880 lithographic printing lines at the source were in operation;
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6882 ii) To determine the VOM content of the inks, fountain
6883 solution additives and cleaning solvents, the tests methods
6884 and procedures set forth in Section 218.409(c) of this
6885 Subpart shall be used;
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6887 iii) To determine VOM emissions from inks used on
6888 lithographic printing lines at the source, an ink emission
6889 adjustment factor of 0.05 shall be used in calculating
6890 emissions from all non-heatset inks except when using an
6891 impervious substrate, and a factor of 0.80 shall be used in

6892 calculating emissions from all heatset inks to account for
6893 VOM retention in the substrate except when using an
6894 impervious substrate. For impervious substrates such as
6895 metal or plastic, no emission adjustment factor is used. The
6896 VOM content of the ink, as used, shall be multiplied by this
6897 factor to determine the amount of VOM emissions from the
6898 use of ink on the printing lines; and

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6900 iv) To determine VOM emissions from fountain solutions and
6901 cleaning solvents used on lithographic printing lines at the
6902 source, no retention factor is used;

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6904 C) Either a declaration that the source, through federally enforceable
6905 permit conditions, has limited its maximum theoretical emissions
6906 of VOM from all heatset web offset lithographic printing lines
6907 (including solvents used for cleanup operations associated with
6908 heatset web offset printing lines) at the source to no more than 90.7
6909 Mg (100 tons) per calendar year before the application of capture
6910 systems and control devices or calculations which demonstrate that
6911 the source's total maximum theoretical emissions of VOM do not
6912 exceed 90.7 Mg/yr (100 tons/yr). Total maximum theoretical
6913 emissions of VOM for a heatset web offset lithographic printing
6914 source is the sum of maximum theoretical emissions of VOM from
6915 each heatset web offset lithographic printing line at the source.
6916 The following equation shall be used to calculate total maximum
6917 theoretical emissions of VOM per calendar year in the absence of
6918 air pollution control equipment for each heatset web offset
6919 lithographic printing line at the source:

$$E_p = (R \times A \times B) + (C \times D) + 1095 (F \times G \times H)$$

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6922 where:

E_p = Total maximum theoretical emissions of VOM from one
heatset web offset printing line in units of kg/yr (lb/yr);

A = Weight of VOM per volume of solids of ink with the
highest VOM content as applied each year on the
printing line in units of kg/l (lb/gal) of solids;

B = Total volume of solids for all inks that can potentially be
applied each year on the printing line in units of l/yr
(gal/yr). The method by which the owner or operator
accurately calculated the volume of each ink as applied
and the amount that can potentially be applied each year
on the printing line shall be described in the certification

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to the Agency;

- C = Weight of VOM per volume of fountain solution with the highest VOM content as applied each year on the printing line in units of kg/l (lb/gal);
- D = The total volume of fountain solution that can potentially be used each year on the printing line in units of 1/yr (gal/yr). The method by which the owner or operator accurately calculated the volume of each fountain solution used and the amount that can potentially be used each year on the printing line shall be described in the certification to the Agency;
- F = Weight of VOM per volume of material for the cleanup material or solvent with the highest VOM content as used each year on the printing line in units of kg/l (lb/gal) of such material;
- G = The greatest volume of cleanup material or solvent used in any 8-hour period;
- H = The highest fraction of cleanup material or solvent that is not recycled or recovered for offsite disposal during any 8-hour period;
- R = The multiplier representing the amount of VOM not retained in the substrate being used. For paper, R = 0.8. For metal, plastic, or other impervious substrates, R = 1.0;

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- D) A description and the results of all tests used to determine the VOM content of inks, fountain solution additives, and cleaning solvents, and a declaration that all such tests have been properly conducted in accordance with Section 218.409(c)(1) of this Subpart;
 - 2) Notify the Agency in writing if the combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source ever exceed 45.5 kg/day (100 lbs/day), before the use of capture systems and control devices, within 30 days after the event occurs. Such notification shall include a copy of all records of such event.
- b) Exempt Units on and after August 1, 2010

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- 1) Lithographic Printing Lines Exempt pursuant to Section 218.405(c)(2). By August 1, 2010, or upon initial start-up of a new lithographic printing line, whichever is later, and upon modification of a lithographic printing line, an owner or operator of lithographic printing lines exempt from the limitations in Section 218.407 of this Subpart because of the criteria in Section 218.405(c)(2) of this Subpart shall submit a certification to the Agency that includes the information specified in either subsections (b)(1)(A), (b)(1)(B), and (b)(1)(D) of this Section or subsections (b)(1)(A) and (b)(1)(C) of this Section, as applicable. An owner or operator complying with subsection (b)(1)(B) shall also comply with the requirements in subsection (b)(1)(E) of this Section. An owner or operator complying with subsection (b)(1)(C) shall also comply with the requirements in subsection (b)(1)(F) of this Section:
 - A) A declaration that the source is exempt from the requirements in Section 218.407 of this Subpart because of the criteria in Section 218.405(c)(2) of this Subpart;
 - B) Calculations that demonstrate that combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source do not equal or exceed 6.8 kg/day (15 lbs/day), before the use of capture systems and control devices, as follows:
 - i) To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM from all lithographic printing lines at the source (including solvents used for cleanup operations associated with the lithographic printing lines) and divide this amount by the number of days during that calendar month that lithographic printing lines at the source were in operation;
 - ii) To determine the VOM content of the inks, fountain solution additives and cleaning solvents, the test methods and procedures set forth in Section 218.409(c) of this Subpart shall be used;
 - iii) To determine VOM emissions from inks used on lithographic printing lines at the source, an ink emission adjustment factor of 0.05 shall be used in calculating emissions from all non-heatset inks except when using an impervious substrate, and a factor of 0.80 shall be used in calculating emissions from all heatset inks to account for VOM retention in the substrate except when using an impervious substrate. For impervious substrates such as

6987 metal or plastic, no emission adjustment factor is used. The
6988 VOM content of the ink, as used, shall be multiplied by this
6989 factor to determine the amount of VOM emissions from the
6990 use of ink on the printing lines; and
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6992 iv) To determine VOM emissions from cleaning solutions used
6993 on lithographic printing lines at the source, an emission
6994 adjustment factor of 0.50 shall be used in calculating
6995 emissions from used shop towels if the VOM composite
6996 vapor pressure of each associated cleaning solution is
6997 demonstrated to be less than 10 mmHg measured at 20
6998 °C/20°C (68 °F/68°F) and the shop towels are kept in closed
6999 containers. For cleaning solutions with VOM composite
7000 vapor pressures of equal to or greater than 10 mmHg
7001 measured at 20 °C/20°C (68 °F/68°F) and for shop towels
7002 that are not kept in closed containers, no emission
7003 adjustment factor is used;
7004
7005 C) As an alternative to the calculations in subsection (b)(1)(B), a
7006 statement that the source uses less than the amount of material
7007 specified in subsection (b)(1)(C)(i) or (ii), as applicable, during
7008 each calendar month. A source may determine that it emits below
7009 6.8 kg/day (15 lbs/day) of VOM based upon compliance with such
7010 material use limitations. If the source exceeds this amount of
7011 material use in a given calendar month, the owner or operator
7012 must, within 15 days after the end of that month, complete the
7013 emissions calculations of subsection (b)(1)(B) to determine daily
7014 emissions for applicability purposes. If the source ever exceeds this
7015 amount of material use for six consecutive calendar months, it is
7016 no longer eligible to use this subsection (b)(1)(C) as an alternative
7017 to the calculations in subsection (b)(1)(B). If a source has both
7018 heatset web offset and either nonheatset web offset or sheetfed
7019 lithographic printing operations, or has all three types of printing
7020 operations, the owner or operator may not make use of this
7021 alternative and must use the calculations in subsection (b)(1)(B).
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7023 i) The sum of all sheetfed and nonheatset web offset
7024 lithographic printing operations at the source: 242.3 liters
7025 (64 gallons) of cleaning solvent and fountain solution
7026 additives, combined; or
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7028 ii) The sum of all heatset web offset lithographic printing
7029 operations at the source: 204.1 kg (450 lbs) of ink, cleaning
7030 solvent, and fountain solution additives, combined;
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- D) A description and the results of all tests used to determine the VOM content of inks, fountain solution additives, and cleaning solvents, and a declaration that all such tests have been properly conducted in accordance with Section 218.409(c)(1) of this Subpart;
 - E) For sources complying with subsection (b)(1)(B) of this Section, notify the Agency in writing if the combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source ever equal or exceed 6.8 kg/day (15 lbs/day), before the use of capture systems and control devices, within 30 days after the event occurs. If such emissions of VOM at the source equal or exceed 6.8 kg/day (15 lbs/day) but do not exceed 45.5 kg/day (100 lbs/day), the source shall comply with the requirements in subsection (b)(2) of this Section;
 - F) For sources complying with subsection (b)(1)(C) of this Section, comply with the following:
 - i) Maintain material use records showing that the source uses less than the amount of material specified in subsections (b)(1)(C)(i) and (b)(1)(C)(ii) during each calendar month, or, if the source exceeds the material use limitations, records showing that the source exceeded the limitations but did not emit 6.8 kg/day (15 lbs/day) or more of VOM, and provide such records to the Agency upon request. On and after January 1, 2012, such records shall include the name, identification number, and VOM content of each cleaning solvent and fountain solution additive used per calendar month, the volume of each cleaning solvent and fountain solution additive used per calendar month for each sheetfed and nonheatset web offset lithographic printing operation, and the weight of each cleaning solvent, ink, and fountain solution additive used per calendar month for each heatset web offset lithographic printing operation;
 - ii) Notify the Agency in writing if the source exceeds the material use limitations for six consecutive calendar months, or if the source changes its method of compliance from subsection (b)(1)(C) to subsection (b)(1)(B) of this Section, within 30 days after the event occurs;
 - 2) Heatset web offset lithographic printing lines exempt pursuant to Section 218.405(c)(1) but not exempt pursuant to Section 218.405(c)(2). By

7078 August 1, 2010, or upon initial start-up of a new heatset web offset
7079 lithographic printing line, whichever is later, and upon modification of a
7080 heatset web offset lithographic printing line, an owner or operator of
7081 heatset web offset lithographic printing lines that are exempt from the
7082 limitations in Section 218.407 of this Subpart pursuant to the criteria in
7083 Section 218.405(c)(1) of this Subpart, but that are not exempt pursuant to
7084 the criteria in Section 218.405(c)(2) of this Subpart, shall submit a
7085 certification to the Agency that includes the information specified in
7086 subsections (b)(2)(A) through (b)(2)(C) of this Section. Such owner or
7087 operator shall also comply with the requirements in subsection (b)(2)(D)
7088 of this Section:

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7090 A) A declaration that the source is exempt from the control
7091 requirements in Section 218.407 of this Subpart because of the
7092 criteria in Section 218.405(c)(1) of this Subpart, but is not exempt
7093 pursuant to the criteria in Section 218.405(c)(2) of this Subpart;

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7095 B) Calculations that demonstrate that combined emissions of
7096 VOM from all lithographic printing lines (including inks,
7097 fountain solutions, and solvents used for cleanup operations
7098 associated with the lithographic printing lines) at the source
7099 never exceed 45.5 kg/day (100 lbs/day) before the use of
7100 capture systems and control devices, as follows (the
7101 following methodology shall also be used to calculate
7102 whether a source exceeds 45.5 kg/day (100 lbs/day) for
7103 purposes of determining eligibility for the exclusions set
7104 forth in Section 218.415(c)(3), in accordance with Sections
7105 218.411(g)(2)(A)(i):

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7107 i) To calculate daily emissions of VOM, the owner or
7108 operator shall determine the monthly emissions of
7109 VOM from all lithographic printing lines at the
7110 source (including solvents used for cleanup
7111 operations associated with the lithographic printing
7112 lines) and divide this amount by the number of days
7113 during that calendar month that lithographic
7114 printing lines at the source were in operation;

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7116 ii) To determine the VOM content of the inks, fountain
7117 solution additives and cleaning solvents, the test
7118 methods and procedures set forth in Section
7119 218.409(c) of this Subpart shall be used;

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7121 iii) To determine VOM emissions from inks used on
7122 lithographic printing lines at the source, an ink
7123 emission adjustment factor of 0.05 shall be used in

- 7124 calculating emissions from all non-heatset inks
7125 except when using an impervious substrate, and a
7126 factor of 0.80 shall be used in calculating emissions
7127 from all heatset inks to account for VOM retention
7128 in the substrate except when using an impervious
7129 substrate. For impervious substrates such as metal
7130 or plastic, no emission adjustment factor is used.
7131 The VOM content of the ink, as used, shall be
7132 multiplied by this factor to determine the amount of
7133 VOM emissions from the use of ink on the printing
7134 lines;
- 7135
- 7136 iv) To determine VOM emissions from cleaning
7137 solvents used on lithographic printing lines at the
7138 source, an emission adjustment factor of 0.50 shall
7139 be used in calculating emissions from cleaning
7140 solution in shop towels if the VOM composite
7141 vapor pressure of such cleaning solution is
7142 demonstrated to be less than 10 mmHg measured at
7143 20 °C (68 °F) and the shop towels are kept in
7144 closed containers. For cleaning solutions with
7145 VOM composite vapor pressures of equal to or
7146 greater than 10 mmHg measured at 20 °C (68
7147 °F) and for shop towels that are not kept in closed
7148 containers, no emission adjustment factor is used;
- 7149
- 7150 C) A description and the results of all tests used to determine
7151 the VOM content of inks, fountain solution additives, and
7152 cleaning solvents, and a declaration that all such tests have
7153 been properly conducted in accordance with Section
7154 218.409(c)(1) of this Subpart;
- 7155
- 7156 D) Notify the Agency in writing if the combined emissions of
7157 VOM from all lithographic printing lines (including inks,
7158 fountain solutions, and solvents used for cleanup operations
7159 associated with the lithographic printing lines) at the source
7160 ever exceed 45.5 kg/day (100 lbs/day), before the use of
7161 capture systems and control devices, within 30 days after
7162 the event occurs.
- 7163
- 7164 c) Unless complying with subsections (b)(1)(C) and (b)(1)(F) of this Section, an
7165 owner or operator of lithographic printing lines subject to the requirements of
7166 subsection (a) or (b) of this Section shall collect and record either the information
7167 specified in subsection (c)(1) or (c)(2) of this Section for all lithographic printing
7168 lines at the source:
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- 1) Standard recordkeeping, including the following:
 - A) The name and identification of each fountain solution additive, lithographic ink, and cleaning solvent used on any lithographic printing line, recorded each month;
 - B) A daily record which shows whether a lithographic printing line at the source was in operation on that day;
 - C) The VOM content and the volume of each fountain solution additive, lithographic ink, and cleaning solvent used on any lithographic printing line, recorded each month;
 - D) The total VOM emissions at the source each month, determined as the sum of the product of usage and VOM content for each fountain solution additive, cleaning solvent, and lithographic ink (with the applicable ink VOM emission adjustment) used at the source, calculated each month;
 - E) The VOM emissions in lbs/day for the month, calculated in accordance with subsection (a)(1)(B), (b)(1)(B), or (b)(2)(B) of this Section, as applicable;
 - 2) Purchase and inventory recordkeeping, including the following:
 - A) The name, identification, and VOM content of each fountain solution additive, lithographic ink, and cleaning solvent used on any lithographic printing line, recorded each month;
 - B) Inventory records from the beginning and end of each month indicating the total volume of each fountain solution additive, lithographic ink, and cleaning solvent to be used on any lithographic printing line at the source;
 - C) Monthly purchase records for each fountain solution additive, lithographic ink, and cleaning solvent used on any lithographic printing line at the source;
 - D) A daily record which shows whether a lithographic printing line at the source was in operation on that day;
 - E) The total VOM emissions at the source each month, determined as the sum of the product of usage and VOM content for each fountain solution additive, cleaning solvent, and lithographic ink (with the applicable ink VOM emission adjustment) used at the source, calculated each month based on the monthly inventory and

- 7216 purchase records required to be maintained pursuant to subsections
7217 (c)(2)(A), (c)(2)(B), and (c)(2)(C) of this Section;
7218
- 7219 F) The VOM emissions in lbs/day for the month, calculated in
7220 accordance with subsection (a)(1)(B), (b)(1)(B), or (b)(2)(B) of this
7221 Section, as applicable.
7222
- 7223 d) An owner or operator of a heatset web offset lithographic printing line subject to
7224 the control requirements of Section 218.407(a)(1)(C) or (b)(1) of this Subpart
7225 shall comply with the following:
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- 7227 1) By August 1, 2010, upon initial start-up of a new printing line, and upon
7228 initial start-up of a new control device for a heatset web offset printing
7229 line, submit a certification to the Agency that includes the following:
7230
- 7231 A) An identification of each heatset web offset lithographic printing
7232 line at the source;
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- 7234 B) A declaration that each heatset web offset lithographic printing line
7235 is in compliance with the requirements of Section
7236 218.407(a)(1)(B), (a)(1)(C), (a)(1)(D) and (a)(1)(E) or (b) of this
7237 Subpart, as appropriate;
7238
- 7239 C) The type of afterburner or other approved control device used to
7240 comply with the requirements of Section 218.407(a)(1)(C) or
7241 (b)(1) of this Subpart and the date that such device was first
7242 constructed at the source;
7243
- 7244 D) The control requirements in Section 218.407(a)(1)(C) or (b)(1) of
7245 this Subpart with which the lithographic printing line is complying;
7246
- 7247 E) The results of all tests and calculations necessary to demonstrate
7248 compliance with the control requirements of Section
7249 218.407(a)(1)(C) or (b)(1) of this Subpart, as applicable; and
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- 7251 F) A declaration that the monitoring equipment required under
7252 Section 218.407(a)(1)(D) or (b) of this Subpart, as applicable, has
7253 been properly installed and calibrated according to manufacturer's
7254 specifications;
7255
- 7256 2) If testing of the afterburner or other approved control device is conducted
7257 pursuant to Section 218.409(b) of this Subpart, the owner or operator
7258 shall, within 90 days after conducting such testing, submit a copy of all
7259 test results to the Agency and shall submit a certification to the Agency
7260 that includes the following:
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- A) A declaration that all tests and calculations necessary to demonstrate whether the lithographic printing lines are in compliance with Section 218.407(a)(1)(C) or (b)(1) of this Subpart, as applicable, have been properly performed;
 - B) A statement whether the lithographic printing lines are or are not in compliance with Section 218.407(a)(1)(C) or (b)(1) of this Subpart, as applicable; and
 - C) The operating parameters of the afterburner or other approved control device during testing, as monitored in accordance with Section 218.410(c) or (d) of this Subpart, as applicable;
- 3) Except as provided in subsection (d)(3)(D)(ii) of this Section, collect and record daily the following information for each heatset web offset lithographic printing line subject to the requirements of Section 218.407(a)(1)(C) or (b)(1) of this Subpart:
- A) Afterburner or other approved control device monitoring data in accordance with Section 218.410(c) or (d) of this Subpart, as applicable;
 - B) A log of operating time for the afterburner or other approved control device, monitoring equipment, and the associated printing line;
 - C) A maintenance log for the afterburner or other approved control device and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages; and
 - D) A log detailing checks on the air flow direction or air pressure of the dryer and press room to ensure compliance with the requirements of Section 218.407(a)(1)(B) of this Subpart as follows:
 - i) Prior to August 1, 2010, at least once per 24-hour period while the line is operating; and
 - ii) On and after August 1, 2010, at least once per calendar month while the line is operating
- 4) Notify the Agency in writing of any violation of Section 218.407(a)(1)(C) or (b)(1) of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation;

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- 5) If changing its method of compliance between subsections (a)(1)(C) and (b) of Section 218.407 of this Subpart, certify compliance for the new method of compliance in accordance with subsection (d)(1) of this Section at least 30 days before making such change, and perform all tests and calculations necessary to demonstrate that such printing lines will be in compliance with the requirements of Section 218.407(a)(1)(B), (a)(1)(C), (a)(1)(D) and (a)(1)(E) of this Subpart, or Section 218.407(b) of this Subpart, as applicable.
 - e) An owner or operator of a lithographic printing line subject to Section 218.407(a)(1)(A), (a)(2), or (a)(3) of this Subpart shall:
 - 1) By August 1, 2010, and upon initial start-up of a new lithographic printing line, certify to the Agency that fountain solutions used on each lithographic printing line will be in compliance with the applicable VOM content limitation. Such certification shall include:
 - A) Identification of each lithographic printing line at the source, by type, e.g., heatset web offset, non-heatset web offset, or sheet-fed offset;
 - B) Identification of each centralized fountain solution reservoir and each lithographic printing line that it serves;
 - C) A statement that the fountain solution will comply with the VOM content limitations in Section 218.407(a)(1)(A), (a)(2), or (a)(3), as applicable;
 - D) Initial documentation that each type of fountain solution will comply with the applicable VOM content limitations, including copies of manufacturer's specifications, test results, if any, formulation data and calculations;
 - E) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitation, e.g., a refractometer, hydrometer, conductivity meter, or recordkeeping procedures with detailed description of the compliance methodology; and
 - F) A sample of the records that will be kept pursuant to subsection (e)(2) of this Section.
 - 2) Collect and record the following information for each fountain solution:
 - A) The name and identification of each batch of fountain solution

- 7354 prepared for use on one or more lithographic printing lines, the
7355 lithographic printing lines or centralized reservoir using such batch
7356 of fountain solution, and the applicable VOM content limitation for
7357 the batch;
7358
- 7359 B) If an owner or operator uses a hydrometer, refractometer, or
7360 conductivity meter, pursuant to Section 218.410(b)(1)(B), to
7361 demonstrate compliance with the applicable VOM content limit in
7362 Section 218.407(a)(1)(A), (a)(2), or (a)(3) of this Subpart:
7363
- 7364 i) The date and time of preparation, and each subsequent
7365 modification, of the batch;
7366
- 7367 ii) The results of each measurement taken in accordance with
7368 Section 218.410(b) of this Subpart;
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- 7370 iii) Documentation of the periodic calibration of the meter in
7371 accordance with the manufacturer's specifications,
7372 including date and time of calibration, personnel
7373 conducting, identity of standard solution, and resultant
7374 reading; and
7375
- 7376 iv) Documentation of the periodic temperature adjustment of
7377 the meter, including date and time of adjustment, personnel
7378 conducting and results;
7379
- 7380 C) If the VOM content of the fountain solution is determined pursuant
7381 to Section 218.410(b)(1)(A) of this Subpart, for each batch of as-
7382 applied fountain solution:
7383
- 7384 i) Date and time of preparation and each subsequent
7385 modification of the batch;
7386
- 7387 ii) Volume or weight, as applicable, and VOM content of each
7388 component used in, or subsequently added to, the fountain
7389 solution batch;
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- 7391 iii) Calculated VOM content of the as-applied fountain
7392 solution; and
7393
- 7394 iv) Any other information necessary to demonstrate
7395 compliance with the applicable VOM content limits in
7396 Section 218.407(a)(1)(A), (a)(2) and (a)(3) of this Subpart,
7397 as specified in the source's operating permit;
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- D) If the VOM content of the fountain solution is determined pursuant to Section 218.410(b)(2) of this Subpart, for each setting:
 - i) VOM content limit corresponding to each setting;
 - ii) Date and time of initial setting and each subsequent setting;
 - iii) Documentation of the periodic calibration of the automatic feed equipment in accordance with the manufacturer's specifications; and
 - iv) Any other information necessary to demonstrate compliance with the applicable VOM content limits in Section 218.407(a)(1)(A), (a)(2) and (a)(3) of this Subpart, as specified in the source's operating permit;
 - E) If the owner or operator relies on the temperature of the fountain solution to comply with the requirements in Section 218.407(a)(1)(A)(ii) or (a)(3)(B) of this Subpart:
 - i) The temperature of the fountain solution at each printing line, as monitored in accordance with Section 218.410(a); and
 - ii) A maintenance log for the temperature monitoring devices and automatic, continuous temperature recorders detailing all routine and non-routine maintenance performed, including dates and duration of any outages.
 - 3) Notify the Agency in writing of any violation of Section 218.407 of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation.
 - f) For lithographic printing line cleaning operations, an owner or operator of a lithographic printing line subject to the requirements of Section 218.407 of this Subpart shall:
 - 1) By August 1, 2010, and upon initial start-up of a new lithographic printing line, certify to the Agency that all cleaning solutions, other than those excluded pursuant to Section 218.405(c)(3)(C), and the handling of all cleaning materials, will be in compliance with the requirements of Section 218.407(a)(4)(A) or (a)(4)(B) and (a)(5) of this Subpart, and such certification shall also include:
 - A) A statement that the cleaning solution will comply with the limitations in Section 218.407(a)(4);

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- B) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;
 - C) A sample of the records that will be kept pursuant to subsection (f)(2) of this Section; and
 - D) A description of the practices that ensure that VOM-containing cleaning materials are kept in closed containers;
- 2) Collect and record the following information for each cleaning solution used on each lithographic printing line:
- A) For each cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.407(a)(4)(A) of this Subpart and that is prepared at the source with automatic equipment:
 - i) The name and identification of each cleaning solution;
 - ii) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.409(c) of this Subpart;
 - iii) Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);
 - iv) The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;
 - v) The VOM content of the as-used cleaning solution, with supporting calculations; and
 - vi) A calibration log for the automatic equipment, detailing periodic checks;
 - B) For each batch of cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.407(a)(4)(A) of this Subpart, and that is not prepared at the source with automatic equipment:
 - i) The name and identification of each cleaning solution;

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- ii) Date and time of preparation, and each subsequent modification, of the batch;
 - iii) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.409(c) of this Subpart;
 - iv) The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and
 - v) The VOM content of the as-used cleaning solution, with supporting calculations. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM content may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 218.105(a) of this Part;
- C) For each batch of cleaning solution for which the owner or operator relies on the vapor pressure of the cleaning solution to demonstrate compliance with Section 218.407(a)(4)(B) of this Subpart:
- i) The name and identification of each cleaning solution;
 - ii) Date and time of preparation, and each subsequent modification, of the batch;
 - iii) The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with Section 218.409(e) of this Subpart. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM composite partial vapor pressure may be used if such manufacturer's specifications are based on results of tests conducted in accordance with methods specified in Sections 218.105(a) and 218.110 of this Part;
 - iv) The total amount of each cleaning solvent used to prepare the as-used cleaning solution; and
 - v) The VOM composite partial vapor pressure of each as-used cleaning solution, as determined in accordance with Section 218.409(e) of this Subpart. For cleaning solutions that are used as purchased, the manufacturer's specifications for

VOM composite partial vapor pressure may be used if such manufacturer's specifications are based on results of tests conducted in accordance with methods specified in Sections 218.105(a) and 218.110 of this Part;

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- D) The date, time and duration of scheduled inspections performed to confirm the proper use of closed containers to control VOM emissions, and any instances of improper use of closed containers, with descriptions of actual practice and corrective action taken, if any;
 - 3) Notify the Agency in writing of any violation of Section 218.407 of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation.
 - g) The owner or operator of lithographic printing lines subject to one or more of the exclusions set forth in Section 218.405(c)(3) shall:
 - 1) By August 1, 2010, or upon initial start-up of a new lithographic printing line that is subject to one or more of the exclusions set forth in Section 218.405(c)(3), whichever is later, submit a certification to the Agency that includes either:
 - A) A declaration that the source is subject to one or more of the exclusions set forth in Section 218.405(c)(3) and a statement indicating which such exclusions apply to the source; or
 - B) A declaration that the source will not make use of any of the exclusions set forth in Section 218.405(c)(3);
 - 2) Unless the source has certified in accordance with subsection (g)(1)(B) of this Section that it will not make use of any of the exclusions set forth in Section 218.405(c)(3):
 - A) Collect and record the following information for all lithographic printing lines at the source:
 - i) Calculations that demonstrate that combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source never exceed 45.5 kg/day (100 lbs/day) before the use of capture systems and control devices, determined in accordance with the calculations in subsection (b)(2)(B) of this Section;

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- ii) The name, identification, and volume of all cleaning materials used per calendar month on lithographic printing lines at the source that do not comply with the cleaning material limitations in Section 218.407(a)(4) of this Subpart;
 - B) Notify the Agency in writing if the combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source ever exceed 45.5 kg/day (100 lbs/day), before the use of capture systems and control devices, within 30 days after the event occurs;
 - 3) If changing from utilization of the exclusions set forth in Section 218.405(c)(3) to opting out of such exclusions pursuant to subsection (g)(1)(B) of this Section, or if there is a change at the source such that the exclusions no longer apply, certify compliance in accordance with subsection (g)(1)(B) of this Section within 30 days after making such change, and perform all tests and calculations necessary to demonstrate that such printing lines will be in compliance with the applicable requirements of Section 218.407 of this Subpart;
 - 4) If changing from opting out of the exclusions set forth in Section 218.405(c)(3) pursuant to subsection (g)(1)(B) of this Section to utilization of such exclusions, certify compliance in accordance with subsection (g)(1)(A) of this Section within 30 days after making such change.
 - h) The owner or operator shall maintain all records required by this Section at the source for a minimum period of three years and shall make all records available to the Agency upon request.
 - i) Provisions for Calculation of Emissions from Heatset Web Offset Lithographic Printing Operations. To calculate VOM emissions from heatset web offset lithographic printing operations for purposes other than the applicability thresholds specified in Section 218.405 of this Subpart, sources may use the following emission adjustment factors (for Annual Emissions Reports or permit limits, for example):
 - 1) A factor of 0.80 may be used in calculating emissions from all heatset inks to account for VOM retention in the substrate except when using an impervious substrate. For impervious substrates such as metal or plastic, no emission adjustment factor is used. The VOM content of the ink, as used, shall be multiplied by this factor to determine the amount of VOM emissions from the use of ink on the printing lines;

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2) To determine VOM emissions from fountain solutions that contain no alcohol, an emission adjustment factor may be used to account for carryover into the dryer, except when using an impervious substrate.

A) The VOM emitted from the fountain solution shall be calculated using the following equation:

$$VOM_{fs} = 0.30 \times VOM_{tot} + (0.70 \times VOM_{tot}) \times (1 - DE)$$

where:

VOM_{tot} = Total VOM in the fountain solution;

VOM_{fs} = VOM emitted from the fountain solution;

DE = Destruction efficiency of the control device on the associated dryer, in decimal form (i.e., 95% control is represented as 0.95). If no control device is present, DE = 0;

B) For fountain solutions that contain alcohol, impervious substrates such as metal or plastic, or non-heatset lithographic presses, no emission adjustment factor is used;

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3) To determine VOM emissions from cleaning solutions used on heatset web offset lithographic printing lines at the source, an emission adjustment factor of 0.50 may be used in calculating emissions from used shop towels if the VOM composite vapor pressure of each associated cleaning solution is less than 10 mmHg measured at 20 °C (68 °F) and the shop towels are kept in closed containers. To determine VOM emissions from automatic blanket wash solution with a VOM composite vapor pressure of less than 10 mmHg measured at 20 °C (68 °F), an emission adjustment factor may be used to account for carryover into the dryer, except when using an impervious substrate.

A) The VOM emitted from the automatic blanket wash solution shall be calculated using the following equation.

$$VOM_{bw} = 0.60 \times VOM_{tot} + (0.40 \times VOM_{tot}) \times (1 - DE)$$

where:

VOM_{tot} = Total VOM in the blanket wash;

VOM_{tow} = VOM emitted from the blanket wash;

DE = Destruction efficiency of the control device on the

associated dryer, in decimal form (i.e., 95% control is represented as 0.95). If no control device is present, DE = 0;

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- B) For cleaning solutions with VOM composite vapor pressures of equal to or greater than 10 mmHg measured at 20 °C (68 °F), for shop towels that are not kept in closed containers, and for impervious substrates such as metal or plastic, no emission adjustment factor is used.

(Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)

Section 218.412 Letterpress Printing Lines: Applicability

- a) Except as provided in subsection (b) of this Section, on and after August 1, 2010, the limitations in Sections 218.413 through 218.416 of this Subpart shall apply to:
 - 1) All heatset web letterpress printing lines at a source if all heatset web letterpress printing lines (including solvents used for cleanup operations associated with heatset web letterpress printing lines) at the source have a total potential to emit 22.7 Mg (25 tons) or more of VOM per year; and
 - 2) All letterpress printing lines at a source where the combined emissions of VOM from all letterpress printing lines at the source (including solvents used for cleanup operations associated with the letterpress printing lines) ever equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, calculated in accordance with Section 218.417(b)(1)(B).
- b) Notwithstanding subsection (a) of this Section, the requirements of Section 218.413(a)(2) of this Subpart shall not apply to up to 416.3 liters (110 gallons) per year of cleaning materials used on letterpress printing lines at a subject source.
- c) On and after August 1, 2010, the recordkeeping and reporting requirements in Section 218.417 of this Subpart shall apply to all owners or operators of letterpress printing lines.
- d) If a letterpress printing line at a source is or becomes subject to one or more of the limitations in Section 218.413 of this Subpart, the letterpress printing lines at the source are always subject to the applicable provisions of this Subpart.

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(Source: Added at 34 Ill. Reg. 9096, effective June 25, 2010)

Section 218.413 Emission Limitations and Control Requirements for Letterpress Printing Lines

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- a) No owner or operator of letterpress printing lines subject to the requirements of this Subpart shall:
- 1) Cause or allow the operation of any heatset web letterpress printing line that meets the applicability requirements of Section 218.412(a)(1) unless:
 - A) The air pressure in the dryer is maintained lower than the air pressure of the press room, such that air flow through all openings in the dryer, other than the exhaust, is into the dryer at all times when the printing line is operating;
 - B) An afterburner is installed and operated so that VOM emissions (excluding methane and ethane) from the press dryer exhausts are reduced as follows:
 - i) By 90 percent, by weight, for afterburners first constructed at the source prior to January 1, 2010;
 - ii) By 95 percent, by weight, for afterburners first constructed at the source on or after January 1, 2010; or
 - iii) To a maximum afterburner exhaust outlet concentration of 20 ppmv (as carbon);
 - C) The afterburner complies with all monitoring provisions specified in Section 218.416(a) of this Subpart; and
 - D) The afterburner is operated at all times when the printing line is in operation, except the afterburner may be shut down between November 1 and April 1 as provided in Section 218.107 of this Part;
 - 2) Cause or allow the use of a cleaning solution on any letterpress printing line unless:
 - A) The VOM content of the as-used cleaning solution is less than or equal to 70 percent, by weight; or
 - B) The VOM composite partial vapor pressure of the as-used cleaning solution is less than 10 mmHg at 20 °C (68 °F);
 - 3) Cause or allow VOM-containing cleaning materials, including used cleaning towels, associated with any letterpress printing line to be kept, stored, or disposed of in any manner other than in closed containers, except when specifically in use.

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- b) An owner or operator of a heatset web letterpress printing line subject to the requirements of subsection (a)(1)(B) of this Section may use a control device other than an afterburner, if:
- 1) The control device reduces VOM emissions from the press dryer exhausts as follows:
 - A) By 90 percent, by weight, for control devices first constructed at the source prior to January 1, 2010;
 - B) By 95 percent, by weight, for control devices first constructed at the source on or after January 1, 2010; or
 - C) To a maximum control device exhaust outlet concentration of 20 ppmv (as carbon);
 - 2) The owner or operator submits a plan to the Agency detailing appropriate monitoring devices, test methods, recordkeeping requirements, and operating parameters for the control device; and
 - 3) The use of the control device in accordance with this plan is approved by the Agency and USEPA as federally enforceable permit conditions.

7774 (Source: Added at 34 Ill. Reg. 9096, effective June 25, 2010)

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7776 **Section 218.415 Testing for Letterpress Printing Lines**
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- a) Testing to demonstrate compliance with the requirements of Section 218.413 of this Subpart shall be conducted by the owner or operator by January 1, 2012, unless such testing has been conducted within the two years immediately preceding January 1, 2012. Thereafter, testing shall be conducted by the owner or operator within 90 days after a request by the Agency, or as otherwise specified in this Subpart. Such testing shall be conducted at the expense of the owner or operator, and the owner or operator shall notify the Agency in writing 30 days in advance of conducting such testing to allow the Agency to be present during such testing.
- b) The methods and procedures of Section 218.105(d) and (f) shall be used for testing to demonstrate compliance with the requirements of Section 218.413(a)(1)(B) or (b)(1) of this Subpart, as follows:
- 1) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part. The sampling sites for determining efficiency in reducing VOM from the dryer exhaust shall be located between the dryer exhaust and the control

- 7796 device inlet, and between the outlet of the control device and the exhaust
7797 to the atmosphere;
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- 7799 2) To determine the volumetric flow rate of the exhaust stream, Method 2,
7800 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by
7801 reference in Section 218.112 of this Part;
7802
- 7803 3) To determine the VOM concentration of the exhaust stream entering and
7804 exiting the control device, Method 25 or 25A, as appropriate, 40 CFR 60,
7805 appendix A, incorporated by reference in Section 218.112 of this Part. For
7806 thermal and catalytic afterburners, Method 25 must be used except under
7807 the following circumstances, in which case Method 25A must be used:
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- 7809 A) The allowable outlet concentration of VOM from the control
7810 device is less than 50 ppmv, as carbon;
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- 7812 B) The VOM concentration at the inlet of the control device and the
7813 required level of control result in exhaust concentrations of VOM
7814 of 50 ppmv, or less, as carbon; and
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- 7816 C) Due to the high efficiency of the control device, the anticipated
7817 VOM concentration at the control device exhaust is 50 ppmv or
7818 less, as carbon, regardless of inlet concentration. If the source
7819 elects to use Method 25A under this option, the exhaust VOM
7820 concentration must be 50 ppmv or less, as carbon, and the required
7821 destruction efficiency must be met for the source to have
7822 demonstrated compliance. If the Method 25A test results show
7823 that the required destruction efficiency apparently has been met,
7824 but the exhaust concentration is above 50 ppmv, as carbon, a retest
7825 is required. The retest shall be conducted using either Method 25
7826 or Method 25A. If the retest is conducted using Method 25A and
7827 the test results again show that the required destruction efficiency
7828 apparently has been met, but the exhaust concentration is above 50
7829 ppmv, as carbon, the source must retest using Method 25;
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- 7831 4) Notwithstanding the criteria or requirements in Method 25 which specifies
7832 a minimum probe temperature of 129 °C (265 °F), the probe must be
7833 heated to at least the gas stream temperature of the dryer exhaust, typically
7834 close to 176.7 °C (350 °F);
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- 7836 5) During testing, the printing lines shall be operated at representative
7837 operating conditions and flow rates; and
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- 7839 6) During testing, an air flow direction indicating device, such as a smoke
7840 stick, shall be used to demonstrate 100 percent emissions capture

- 7841 efficiency for the dryer in accordance with Section 218.413(a)(1)(A) of
7842 this Subpart.
7843
7844 c) Testing to demonstrate compliance with the VOM content limitations in Section
7845 218.413(a)(2)(A) of this Subpart, and to determine the VOM content of cleaning
7846 solvents, cleaning solutions, and inks (pursuant to the requirements of Section
7847 218.417(b)(1)(B) of this Subpart), shall be conducted upon request of the Agency,
7848 or as otherwise specified in this Subpart, as follows:
7849
7850 1) The applicable test methods and procedures specified in Section
7851 218.105(a) of this Part shall be used; provided, however, Method 24,
7852 incorporated by reference in Section 218.112 of this Part, shall be used to
7853 demonstrate compliance; or
7854
7855 2) The manufacturer's specifications for VOM content for cleaning solvents
7856 and inks may be used if such manufacturer's specifications are based on
7857 results of tests of the VOM content conducted in accordance with methods
7858 specified in Section 218.105(a) of this Part; provided, however, [Method](#)
7859 [24](#) shall be used to determine compliance.
7860
7861 d) Testing to demonstrate compliance with the requirements of Section 218.413(b)
7862 of this Subpart shall be conducted as set forth in the owner or operator's plan
7863 approved by the Agency and USEPA as federally enforceable permit conditions
7864 pursuant to Section 218.413(b) of this Subpart.
7865
7866 e) Testing to determine the VOM composite partial vapor pressure of cleaning
7867 solvents, cleaning solvent concentrates, and as-used cleaning solutions shall be
7868 conducted in accordance with the applicable methods and procedures specified in
7869 Section 218.110 of this Part.

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7871 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)
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7873 **Section 218.416 Monitoring Requirements for Letterpress Printing Lines**
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- 7875 a) Afterburners for Heatset Web Letterpress Printing Lines. If an afterburner is used
7876 to demonstrate compliance, the owner or operator of a heatset web letterpress
7877 printing line subject to Section 218.413(a)(1)(B) of this Subpart shall:
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7879 1) Install, calibrate, maintain, and operate temperature monitoring devices
7880 with an accuracy of 3 °C or 5 °F on the afterburner in accordance with
7881 Section 218.105(d)(2) of this Part and in accordance with the
7882 manufacturer's specifications. Monitoring shall be performed at all times
7883 when the afterburner is operating; and
7884
7885 2) Install, calibrate, operate, and maintain, in accordance with manufacturer's
7886 specifications, a continuous recorder on the temperature monitoring

7887 devices, such as a strip chart, recorder or computer, with at least the same
7888 accuracy as the temperature monitor.
7889

7890 b) Other Control Devices for Heatset Web Letterpress Printing Lines. If a control
7891 device other than an afterburner is used to demonstrate compliance, the owner or
7892 operator of a heatset web letterpress printing line subject to this Subpart shall
7893 install, maintain, calibrate, and operate such monitoring equipment as set forth in
7894 the owner or operator's plan approved by the Agency and USEPA pursuant to
7895 Section 218.413(b) of this Subpart.
7896

7897 c) Cleaning Solution
7898

7899 1) The owner or operator of any letterpress printing line relying on the VOM
7900 content of the cleaning solution to comply with Section 218.413(a)(2)(A)
7901 of this Subpart must:
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7903 A) For cleaning solutions that are prepared at the source with
7904 equipment that automatically mixes cleaning solvent and water (or
7905 other non-VOM):
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7907 i) Install, operate, maintain, and calibrate the automatic feed
7908 equipment in accordance with manufacturer's specifications
7909 to regulate the volume of each of the cleaning solvent and
7910 water (or other non-VOM), as mixed; and
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7912 ii) Pre-set the automatic feed equipment so that the
7913 consumption rates of the cleaning solvent and water (or
7914 other non-VOM), as applied, comply with Section
7915 218.413(a)(2)(A) of this Subpart;
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7917 B) For cleaning solutions that are not prepared at the source with
7918 automatic feed equipment, keep records of the usage of cleaning
7919 solvent and water (or other non-VOM) as set forth in Section
7920 218.417(c)(2) of this Subpart.
7921

7922 2) The owner or operator of any letterpress printing line relying on the vapor
7923 pressure of the cleaning solution to comply with Section 218.413(a)(2)(B)
7924 of this Subpart must keep records for such cleaning solutions used on any
7925 such lines as set forth in Section 218.417(e)(2)(C) of this Subpart.
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7927 (Source: Added at 34 Ill. Reg. 9096, effective June 25, 2010)
7928

7929 **Section 218.417 Recordkeeping and Reporting for Letterpress Printing Lines**
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7931 a) By August 1, 2010, or upon initial start-up of a new heatset web letterpress
7932 printing line, whichever is later, and upon modification of a heatset web

- 7933 letterpress printing line, an owner or operator of a heatset web letterpress printing
7934 line exempt from any of the limitations of Section 218.413 of this Subpart
7935 because of the criteria in Section 218.412(a)(1) shall submit a certification to the
7936 Agency that includes:
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- 7938 1) A declaration that the source is exempt from the requirements in Section
7939 218.413 of this Subpart because of the criteria in Section 218.412(a)(1) of
7940 this Subpart;
 - 7941
 - 7942 2) Calculations which demonstrate that the source's total potential to emit
7943 VOM does not equal or exceed 22.7 Mg (25 tons) per year.
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- 7945 b) An owner or operator of a letterpress printing line exempt from any of the
7946 limitations of Section 218.413 of this Subpart because of the criteria in Section
7947 218.412(a)(2) shall:
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- 7949 1) By August 1, 2010, or upon initial start-up of a new letterpress printing
7950 line, whichever is later, and upon modification of a letterpress printing
7951 line, submit a certification to the Agency that includes the information
7952 specified in either subsections (b)(1)(A) through (b)(1)(C) of this Section,
7953 or subsections (b)(1)(A) and (b)(1)(D) of this Section, as applicable:
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 - 7955 A) A declaration that the source is exempt from the control
7956 requirements in Section 218.413 of this Part because of the criteria
7957 in Section 218.412(a)(2) of this Subpart;
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 - 7959 B) Calculations that demonstrate that combined emissions of VOM
7960 from all letterpress printing lines (including inks and solvents used
7961 for cleanup operations associated with the letterpress printing
7962 lines) at the source never equal or exceed 6.8 kg/day (15 lbs/day),
7963 in the absence of air pollution control equipment, as follows:
7964
 - 7965 i) To calculate daily emissions of VOM, the owner or
7966 operator shall determine the monthly emissions of VOM
7967 from all letterpress printing lines at the source (including
7968 solvents used for cleanup operations associated with the
7969 letterpress printing lines) and divide this amount by the
7970 number of days during that calendar month that letterpress
7971 printing lines at the source were in operation;
7972
 - 7973 ii) To determine the VOM content of the inks and cleaning
7974 solvents, the tests methods and procedures set forth in
7975 Section 218.415(c) of this Subpart shall be used;
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 - 7977 iii) To determine VOM emissions from inks used on letterpress
7978 printing lines at the source, an ink emission adjustment

7979 factor of 0.05 shall be used in calculating emissions from
7980 all non-heatset inks except when using an impervious
7981 substrate, and a factor of 0.80 shall be used in calculating
7982 emissions from all heatset inks to account for VOM
7983 retention in the substrate except when using an impervious
7984 substrate. For impervious substrates such as metal or
7985 plastic, no emission adjustment factor is used. The VOM
7986 content of the ink, as used, shall be multiplied by this factor
7987 to determine the amount of VOM emissions from the use of
7988 ink on the printing lines; and
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- 7990 iv) To determine VOM emissions from cleaning solutions used
7991 on letterpress printing lines at the source, an emission
7992 adjustment factor of 0.50 shall be used in calculating
7993 emissions from used shop towels if the VOM composite
7994 vapor pressure of each associated cleaning solution is less
7995 than 10 mmHg measured at 20°C (68°F) and the shop
7996 towels are kept in closed containers. Otherwise, no
7997 retention factor is used;
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- 7999 C) A description and the results of all tests used to determine the
8000 VOM content of inks and cleaning solvents, and a declaration that
8001 all such tests have been properly conducted in accordance with
8002 Section 218.415(c)(1) of this Subpart;
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- 8004 D) As an alternative to the calculations in subsection (b)(1)(B), a
8005 statement that the source uses less than the amount of material
8006 specified in subsections (b)(1)(D)(i) or (b)(1)(D)(ii), as applicable,
8007 during each calendar month. A source may determine that it emits
8008 below 6.8 kg/day (15 lbs/day) of VOM based upon compliance
8009 with such material use limitations. If the source exceeds this
8010 amount of material use in a given calendar month, the owner or
8011 operator must, within 15 days of the end of that month, complete
8012 the emissions calculations of subsection (b)(1)(B) to determine
8013 daily emissions for applicability purposes. If the source ever
8014 exceeds this amount of material use for six consecutive calendar
8015 months, it is no longer eligible to use this subsection as an
8016 alternative to the calculations in subsection (b)(1)(B).
8017

- 8018 i) The sum of all sheetfed and nonheatset web letterpress
8019 printing operations at the source: 242.3 liters (64 gallons)
8020 of cleaning solvent; or
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- 8022 ii) The sum of all heatset web letterpress printing operations at
8023 the source: 204.1 kg (450 lbs) of ink and cleaning solvent;
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- 2) For sources complying with subsection (b)(1)(B) of this Section, notify the Agency in writing if the combined emissions of VOM from all letterpress printing lines (including inks and solvents used for cleanup operations associated with the letterpress printing lines) at the source ever equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, within 30 days after the event occurs;
 - 3) For sources complying with subsection (b)(1)(D) of this Section, comply with the following:
 - A) Maintain material use records showing that the source uses less than the amount of material specified in subsections (b)(1)(D)(i) and (b)(1)(D)(ii) during each calendar month, or, if the source exceeds the material use limitations, records showing that the source exceeded the limitations but did not emit 6.8 kg/day (15 lbs/day) or more of VOM. On and after January 1, 2012, such records shall include the name, identification number, and VOM content of each cleaning solvent and ink used per calendar month, the volume of each cleaning solvent used per calendar month for each sheetfed and nonheatset web letterpress printing operation, and the weight of each cleaning solvent and ink used per calendar month for each heatset web letterpress printing operation;
 - B) Notify the Agency in writing if the source exceeds the material use limitations for six consecutive calendar months, or if the source changes its method of compliance from subsection (b)(1)(D) to subsection (b)(1)(B) of this Section, within 30 days after the event occurs.
 - c) Unless complying with subsections (b)(1)(D) and (b)(3) of this Section, on and after August 1, 2010, an owner or operator of a letterpress printing line exempt from any of the limitations in Section 218.413 of this Subpart because of the criteria in Section 218.412(a)(1) or (a)(2) shall collect and record either the information specified in subsection (c)(1) or (c)(2) of this Section for all letterpress printing lines at the source:
 - 1) Standard recordkeeping, including the following:
 - A) The name and identification of each letterpress ink and cleaning solvent used on any letterpress printing line, recorded each month;
 - B) A daily record that shows whether a letterpress printing line at the source was in operation on that day;

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- C) The VOM content and the volume of each letterpress ink and cleaning solvent used on any letterpress printing line, recorded each month;
 - D) The total VOM emissions at the source each month, determined as the sum of the product of usage and VOM content for each cleaning solvent and letterpress ink (with the applicable ink VOM emission adjustment) used at the source, calculated each month; and
 - E) The VOM emissions in lbs/day for the month, calculated in accordance with subsection (b)(1)(B) of this Section;
- 2) Purchase and inventory recordkeeping, including the following:
- A) The name, identification, and VOM content of each letterpress ink and cleaning solvent used on any letterpress printing line, recorded each month;
 - B) Inventory records from the beginning and end of each month indicating the total volume of each letterpress ink, and cleaning solvent to be used on any letterpress printing line at the source;
 - C) Monthly purchase records for each letterpress ink and cleaning solvent used on any letterpress printing line at the source;
 - D) A daily record that shows whether a letterpress printing line at the source was in operation on that day;
 - E) The total VOM emissions at the source each month, determined as the sum of the product of usage and VOM content for each cleaning solvent and letterpress ink (with the applicable ink VOM emission adjustment factor) used at the source, calculated each month based on the monthly inventory and purchase records required to be maintained pursuant to subsections (c)(2)(A), (c)(2)(B), and (c)(2)(C) of this Section; and
 - F) The VOM emissions in lbs/day for the month, calculated in accordance with subsection (b)(1)(B) of this Section;
- d) An owner or operator of a heatset web letterpress printing lines subject to the control requirements of Section 218.413(a)(1)(B) or (b)(1) of this Subpart shall comply with the following:
- 1) By August 1, 2010, or upon initial start-up of a new printing line, whichever is later, and upon initial start-up of a new control device for a

- 8115 heatset web printing line, submit a certification to the Agency that
8116 includes the following:
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- 8118 A) An identification of each heatset web letterpress printing line at the
8119 source;
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- 8121 B) A declaration that each heatset web letterpress printing line is in
8122 compliance with the requirements of Section 218.413 (a)(1) or (b)
8123 of this Subpart, as appropriate;
- 8124
- 8125 C) The type of afterburner or other approved control device used to
8126 comply with the requirements of Section 218.413(a)(1)(B) or
8127 (b)(1) of this Subpart, and the date that such device was first
8128 constructed at the subject source;
- 8129
- 8130 D) The control requirements in Section 218.413(a)(1)(B) or (b)(1) of
8131 this Subpart with which the letterpress printing line is complying;
- 8132
- 8133 E) The results of all tests and calculations necessary to demonstrate
8134 compliance with the control requirements of Section
8135 218.413(a)(1)(B) or (b)(1) of this Subpart, as applicable; and
- 8136
- 8137 F) A declaration that the monitoring equipment required under
8138 Section 218.413(a)(1)(C) or (b) of this Subpart, as applicable, has
8139 been properly installed and calibrated according to manufacturer's
8140 specifications;
- 8141
- 8142 2) If testing of the afterburner or other approved control device is conducted
8143 pursuant to Section 218.415(b) of this Subpart, the owner or operator
8144 shall, within 90 days after conducting such testing, submit a copy of all
8145 test results to the Agency and shall submit a certification to the Agency
8146 that includes the following:
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- 8148 A) A declaration that all tests and calculations necessary to
8149 demonstrate whether the letterpress printing lines is in compliance
8150 with Section 218.413(a)(1)(B) or (b)(1) of this Subpart, as
8151 applicable, have been properly performed;
- 8152
- 8153 B) A statement whether the heatset web letterpress printing lines are
8154 or are not in compliance with Section 218.413(a)(1)(B) or (b)(1) of
8155 this Subpart, as applicable; and
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- 8157 C) The operating parameters of the afterburner or other approved
8158 control device during testing, as monitored in accordance with
8159 Section 218.416(a) or (b) of this Subpart, as applicable;
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- 3) Except as provided in subsection (d)(3)(D) of this Section, collect and record daily the following information for each heatset web letterpress printing line subject to the requirements of Section 218.413(a)(1)(B) or (b)(1) of this Subpart:
 - A) Afterburner or other approved control device monitoring data in accordance with Section 218.416(a) or (b) of this Subpart, as applicable;
 - B) A log of operating time for the afterburner or other approved control device, monitoring equipment, and the associated printing line;
 - C) A maintenance log for the afterburner or other approved control device and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages; and
 - D) A log detailing checks on the air flow direction or air pressure of the dryer and press room to ensure compliance with the requirements of Section 218.413(a)(1)(A) of this Subpart at least once per calendar month while the line is operating;
 - 4) Notify the Agency in writing of any violation of Section 218.413(a)(1)(B) or (b)(1) of this Subpart within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation;
 - 5) If changing the method of compliance between Sections 218.413(a)(1)(B) and 218.413(b) of this Subpart, certify compliance for the new method of compliance in accordance with Section 218.413(b) at least 30 days before making such change, and perform all tests and calculations necessary to demonstrate that such printing lines will be in compliance with the requirements of Section 218.413(a)(1) of this Subpart, or Section 218.413(b) of this Subpart, as applicable.
- e) For letterpress printing line cleaning operations, an owner or operator of a letterpress printing line subject to the requirements of Section 218.413 of this Subpart shall:
- 1) By August 1, 2010, or upon initial start-up of a new letterpress printing line, whichever is later, certify to the Agency that all cleaning solutions, other than those excluded pursuant to Section 218.412(b), and the handling of all cleaning materials will be in compliance with the requirements of Section 218.413(a)(2)(A) or (a)(2)(B) and (a)(3) of this Subpart. Such certification shall include:

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- A) A statement that the cleaning solution will comply with the limitations in Section 218.413(a)(2);
 - B) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;
 - C) A sample of the records that will be kept pursuant to subsection (e)(2) of this Section; and
 - D) A description of the practices that ensure that VOM-containing cleaning materials are kept in closed containers;
- 2) Collect and record the following information for each cleaning solution used on each letterpress printing line:
- A) For each cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.413(a)(2)(A) of this Subpart and that is prepared at the source with automatic equipment:
 - i) The name and identification of each cleaning solution;
 - ii) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.415(c) of this Subpart;
 - iii) Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);
 - iv) The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;
 - v) The VOM content of the as-used cleaning solution, with supporting calculations; and
 - vi) A calibration log for the automatic equipment, detailing periodic checks;
 - B) For each batch of cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.413(a)(2)(A) of this Subpart, and that is not prepared at the source with automatic equipment:

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- i) The name and identification of each cleaning solution;
 - ii) Date and time of preparation, and each subsequent modification, of the batch;
 - iii) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.415(c) of this Subpart;
 - iv) The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and
 - v) The VOM content of the as-used cleaning solution, with supporting calculations. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM content may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in Section 218.105(a) of this Part;
- C) For each batch of cleaning solution for which the owner or operator relies on the vapor pressure of the cleaning solution to demonstrate compliance with Section 218.413(a)(2)(B) of this Subpart:
- i) The name and identification of each cleaning solution;
 - ii) Date and time of preparation, and each subsequent modification, of the batch;
 - iii) The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with Section 218.415(e) of this Subpart. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM composite partial vapor pressure may be used if such manufacturer's specifications are based on results of tests conducted in accordance with methods specified in Sections 218.105(a) and 218.110 of this Part;
 - iv) The total amount of each cleaning solvent used to prepare the as-used cleaning solution; and

- 8298 v) The VOM composite partial vapor pressure of each as-used
8299 cleaning solution, as determined in accordance with Section
8300 218.415(e) of this Subpart. For cleaning solutions that are
8301 used as purchased, the manufacturer's specifications for
8302 VOM composite partial vapor pressure may be used if such
8303 manufacturer's specifications are based on results of tests
8304 conducted in accordance with methods specified in
8305 Sections 218.105(a) and 218.110 of this Part;
8306
- 8307 D) The date, time, and duration of scheduled inspections performed to
8308 confirm the proper use of closed containers to control VOM
8309 emissions, and any instances of improper use of closed containers,
8310 with descriptions of actual practice and corrective action taken, if
8311 any;
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- 8313 E) The amount of cleaning materials used on letterpress printing lines
8314 at the source that do not comply with the cleaning material
8315 limitations set forth in Section 218.413(a)(2) of this Subpart;
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- 8317 3) Notify the Agency in writing of any violation of Section 218.413 of this
8318 Subpart within 30 days after the occurrence of such violation. Such
8319 notification shall include a copy of all records of such violation.
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- 8321 f) The owner or operator shall maintain all records required by this Section at the
8322 source for a minimum period of three years and shall make all records available to
8323 the Agency upon request.
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8325 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)
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8327 SUBPART Q: LEAKS FROM SYNTHETIC ORGANIC CHEMICAL AND POLYMER
8328 MANUFACTURING PLANT
8329

8330 **Section 218.421 General Requirements**
8331

8332 The owner or operator of a plant which processes more than 3660 mg/yr (4033 tons/year)
8333 gaseous and light liquid VOM, and whose components are used to manufacture the synthetic
8334 organic chemicals or polymers listed in Appendix A, shall comply with this Subpart. The
8335 provisions of this Subpart are applicable to components containing 10 percent or more by weight
8336 VOM as determined by ASTM method E-168, E-169 and E-260, incorporated by reference in
8337 Section 218.112 of this Part. Those components that are not process unit components are exempt
8338 from this Subpart. A component shall be considered to be leaking if the VOM is equal to, or is
8339 greater than 10,000 ppmv as methane or hexane as determined by USEPA Reference Method 21,
8340 as specified at 40 CFR 60, Appendix A, incorporated by reference in Section 218.112 of this
8341 Part, indication of liquids dripping, or indication by a sensor that a seal or barrier fluid system
8342 has failed. The provisions of this Subpart are not applicable if the equipment components are
8343 used to produce heavy liquid chemicals only from heavy liquid feed or raw materials.

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(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

Section 218.422 Inspection Program Plan for Leaks

8349 The owner or operator of a synthetic organic chemical or polymer manufacturing plant subject to
8350 Section 218.421 of this Part shall prepare an inspection program plan which contains, at a
8351 minimum:

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- a) An identification of all components and the period in which each will be monitored pursuant to Section 218.423 of this Part.
- b) The format for the monitoring log required by Section 218.425 of this Part.
- c) A description of the monitoring equipment to be used when complying with Section 218.423 of this Part; and
- d) A description of the methods to be used to identify all pipeline valves, pressure relief valves in gaseous service, all leaking components, and components exempted under Section 218.423(j) of this Part such that they are obvious and can be located by both plant personnel performing monitoring and Agency personnel performing inspections.

(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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Section 218.423 Inspection Program for Leaks

8371 The owner or operator of a synthetic organic chemical or polymer manufacturing plant subject to
8372 this Subpart shall, for the purposes of detecting leaks, conduct a component inspection program
8373 using the test methods specified in Method 21, 40 CFR 60, Appendix A (1986), incorporated by
8374 reference in Section 218.112 of this Part, consistent with the following provisions:

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- a) Test annually those components operated near extreme temperature or pressure such that they would be unsafe to routinely monitor and those components which would require the elevation of monitoring personnel higher than two meters above permanent worker access structures or surfaces.
- b) Test quarterly all other pressure relief valves in gas service, pumps in light liquid service, valves in light liquid service and in gas service, and compressors.
- c) If less than or equal to 2 percent of the valves in light liquid service and in gas service tested pursuant to subsection (b) of this Section are found to leak for five consecutive quarters, no leak tests shall be required for three consecutive quarters. Thereafter, leak tests shall resume for the next quarter. If that test shows less than or equal to 2 percent of the valves in light liquid service and in gas service are leaking, then no tests are required for the next three quarters. If more than 2

- 8390 percent are leaking, then tests are required for the next five quarters.
8391
8392 d) Observe visually all pump seals weekly.
8393
8394 e) Test immediately any pump seal from which liquids are observed dripping.
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8396 f) Test any relief valve within 24 hours after it has vented to the atmosphere.
8397
8398 g) Routine instrument monitoring of valves which are not externally regulated,
8399 flanges, and equipment in heavy liquid service, is not required. However, any
8400 valve which is not externally regulated, flange or piece of equipment in heavy
8401 liquid service that is found to be leaking on the basis of sight, smell or sound shall
8402 be repaired as soon as practicable but no later than 30 days after the leak is found.
8403
8404 h) Test immediately after repair any component that was found leaking.
8405
8406 i) Within one hour of its detection, a weatherproof, readily visible tag, in bright
8407 colors such as red or yellow, bearing an identification number and the date on
8408 which the leak was detected must be affixed on the leaking component and
8409 remain in place until the leaking component is repaired.
8410
8411 j) The following components are exempt from the monitoring requirements in this
8412 Section:
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8414 1) Any component that is in vacuum service, and
8415
8416 2) Any pressure relief valve that is connected to an operating flare header or
8417 vapor recovery device.
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8419 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
8420

8421 **Section 218.424 Repairing Leaks**
8422

8423 All leaking components must be repaired and retested as soon as practicable but no later than 15
8424 days after the leak is found unless the leaking component cannot be repaired until the process
8425 unit is shut down. Records of repairing and retesting must be maintained in accordance with
8426 Section 218.425 and 218.426 of this Part.
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8428 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
8429

8430 **Section 218.425 Recordkeeping for Leaks**
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- 8432 a) The owner or operator of a synthetic organic chemical or polymer manufacturing
8433 plant shall maintain a leaking components monitoring log which shall contain, at
8434 a minimum, the following information:
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- 8436 1) The name of the process unit where the component is located;
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8438 2) The type of component (e.g., valve, seal);
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8440 3) The identification number of the component;
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8442 4) The date on which a leaking component is discovered;
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8444 5) The date on which a leaking component is repaired;
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8446 6) The date and instrument reading of the recheck procedure after a leaking
8447 component is repaired;
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8449 7) A record of the calibration of the monitoring instrument;
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8451 8) The identification number of leaking components which cannot be
8452 repaired until process unit shutdown; and
8453
8454 9) The total number of valves in light liquid service and in gas service
8455 inspected; the total number and the percentage of these valves found
8456 leaking during the monitoring period.
8457
8458 b) Copies of the monitoring log shall be retained by the owner or operator for a
8459 minimum of two years after the date on which the record was made or the report
8460 was prepared.
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8462 c) Copies of the monitoring log shall be made available to the Agency upon verbal
8463 or written request prior to or at the time of inspection pursuant to Section 4(d) of
8464 the Environmental Protection Act (Act) (Ill. Rev. Stat. 1991, ch. 111½, pars. 1001
8465 et seq.) [415 ILCS 5/1 et seq.] at any reasonable time.
8466

(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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8469 **Section 218.426 Report for Leaks**
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8471 The owner or operator of a synthetic organic chemical or polymer manufacturing plant subject to
8472 Section 218.421 through 218.430 of this Part shall:
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- 8474 a) Submit quarterly reports to the Agency on or before March 31, June 30,
8475 September 30, and December 31 of each year, listing all leaking components
8476 identified pursuant to Section 218.423 of this Part but not repaired within 15 days,
8477 all leaking components awaiting process unit shutdown, the total number of
8478 components inspected, the type of components inspected, and the total number of
8479 components found leaking, the total number of valves in light liquid service and
8480 in gas service inspected and the number and percentage of valves in light liquid
8481 service and in gas service found leaking.

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8483 b) Submit a signed statement with the report attesting that all monitoring and repairs
8484 were performed as required under Section 218.421 through 218.427 of this Part.
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8486 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
8487

8488 **Section 218.427 Alternative Program for Leaks**
8489

8490 The Agency shall approve an alternative program of monitoring, recordkeeping, or reporting to
8491 that prescribed in this Subpart upon a demonstration by the owner or operator of such plant that
8492 the alternative program will provide source personnel and Agency personnel with an equivalent
8493 ability to identify and repair leaking components. Any alternative program can be allowed if
8494 approved by the Agency and approved by the USEPA as a SIP revision.
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8496 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
8497

8498 **Section 218.428 Open-Ended Valves**
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- 8500 a) Each open-ended valve shall be equipped with a cap, blind flange, plug, or a
8501 second valve, except during operations requiring fluid flow through the open-
8502 ended valve.
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- 8504 b) Each open-ended valve equipped with a second valve shall be operated in a
8505 manner such that the valve on the process fluid end is closed before the second
8506 valve is closed.
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- 8508 c) Components which are open-ended valves and which serve as a sampling
8509 connection shall be controlled such that they comply with subsection (c)(1), (c)(2)
8510 or (c)(3) below. This requirement does not apply to in-situ sampling systems.
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- 8512 1) A closed purge system or closed vent system shall return purged process
8513 fluid to the process line with no detectable VOM emissions to the
8514 atmosphere, or
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- 8516 2) A closed purge system or closed vent system shall collect and recycle
8517 purged process fluid to the process line with no detectable VOM
8518 emissions to the atmosphere, or
8519
- 8520 3) Purged process fluid shall be transported to a control device that complies
8521 with the requirements of Section 218.429 of this Part. If a container is
8522 used to transport purged process fluid to the control device, the container
8523 shall be a closed container designed and used to reduce the VOM
8524 emissions vented from purged process fluid after transfer to no detectable
8525 VOM emissions as determined by USEPA Reference Method 21, as
8526 specified in 40 CFR 60, Appendix A (1990 or 1991) incorporated by
8527 reference in Section 218.112 of this Part. For purposes of this Section, the

8528 phrase "after transfer" shall refer to the time at which the entire amount of
8529 purged process fluid resulting from a flushing or cleaning of the sample
8530 line enters the container, provided, however, that purged process fluid may
8531 be transferred from the initial container to another closed container prior
8532 to disposal, e.g., to a bulk waste storage container.
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8534 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
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8536 **Section 218.429 Standards for Control Devices**
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8538 Control devices used to comply with Section 218.428(c) of this Part shall comply with the
8539 following:
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- 8541 a) If the control device is a vapor recovery system (for example, condensers and
8542 adsorbers), it shall be designed and operated to recover the VOM emissions
8543 vented to it with an efficiency of 95 percent or greater.
8544
- 8545 b) If the control device is an enclosed combustion device, it shall be designed and
8546 operated to reduce the VOM emissions vented to it with an efficiency of 95
8547 percent or greater, or to provide a minimum residence time of 0.75 seconds at a
8548 minimum temperature of 816° C.
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- 8550 c) If the control device is a flare, it shall:
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- 8552 1) Be designed for and operated with no visible emissions as determined by
8553 USEPA Reference Method 22, 40 CFR 60, Appendix A (1986),
8554 incorporated by reference in Section 218.112, except for periods not to
8555 exceed a total of 5 minutes during any 2 consecutive hours.
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 - 8557 2) Be operated with a pilot flame present at all times and shall be monitored
8558 with a thermocouple or any other equivalent device to detect the presence
8559 of the pilot flame.
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 - 8561 3) Be steam-assisted, air assisted, or nonassisted.
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 - 8563 4) Be used only with the net heating value of the gas being combusted being
8564 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-
8565 assisted; or with the net heating value of the gas being combusted being
8566 7.45 MJ/scm or greater if the flare is nonassisted. The net heating value of
8567 the gas being combusted shall be calculated using the following equation:
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$$H_r = \sum_{i=1}^n C_i H_i$$

8570
8571 Where:
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H_r = Net heating value of the sample in MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25° C and 760 mmHg, but the standard temperature for determining the volume corresponding to one mole is 20° C;

K = Constant, 1.740×10^{-7} (l/ppm) (g-mole/scm) (MJ/Kcal)

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where

standard temperature for (g-mole/scm) is 20° C;

C_i = Concentration of sample component i in ppm as measured by USEPA reference method 18, 40 CFR 60, Appendix A (1986), and ASTM D 2504-83, both incorporated by reference in Section 218.112;

H_i = Net heat of combustion of sample component I, kcal/g mole. The heats of combustion may be determined using ASTM D 2382-83, incorporated by reference in Section 218.112 of this Part, if published values are not available or cannot be calculated.

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- 5) Steam-assisted and nonassisted flares shall be designed and operated with an exit velocity, as determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by USEPA Reference Method 2 or 2A, 40 CFR 60, Appendix A (1986) incorporated by reference in Section 218.112 of this Part, as appropriate, by the unobstructed (free) cross sectional area of the flare tip, less than 18 m/sec (60 ft/sec).
- 6) Air-assisted flares shall be designed and operated with an exit velocity less than the maximum permitted velocity, V_{max} as determined by the following equation:

$$V_{max} = 8.706 + 0.7084 (H_r);$$

V_{max} = Maximum permitted velocity, m/se;

8.706 = Constant;

0.7084 = Constant;

H_r = The net heating value as determined in subsection (c)(4) of this section.

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- d) The following information pertaining to closed vent systems and control devices

8595 subject to Section 218.429 shall be maintained by the owner or operator. These
8596 records shall be updated as necessary to describe current operation and
8597 equipment. The records shall be retained at a readily accessible location at the
8598 source for a minimum of two years after the control device is permanently
8599 shutdown.

- 8600
- 8601 1) Detailed schematics, design specifications, and piping and instrumentation
8602 diagrams;
 - 8603 2) The dates and description of any changes in design specifications;
 - 8604 3) A description of the parameter or parameters monitored and recorded as
8605 required in subsection (f)(1) to ensure that the control devices are operated
8606 and maintained in conformance with their design and an explanation why
8607 that parameter (or parameters) was selected for monitoring.
8608
- 8609
- 8610 e) The control device shall be operated at all times when emissions may be vented to
8611 it.
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 - 8613 f) Owners and operators of control devices used to comply with this Subpart shall
8614 monitor each control device to ensure that the control device is operated and
8615 maintained in conformance with its designs at all times that emissions may be
8616 vented to it. This monitoring shall be conducted in accordance with Section
8617 218.429(d)(3). The records prepared as part of this monitoring activity shall
8618 include the dates of startup and shutdown of control devices and identify periods
8619 when the devices are not operated as designed, including periods when a flare
8620 pilot light does not have a flame.
8621
 - 8622 g) The requirements of subsections (d), (e) and (f) shall not apply to a combustion
8623 device located at the source used for disposal of purged process fluid which is
8624 subject to the Burning of Hazardous Waste in Boilers and Industrials Furnaces
8625 (BIF) rules, 40 CFR Parts 260, 261, 264, 265, 266, and 270, or which is subject to
8626 the Resource Conservation and Recovery Act (RCRA) rules 35 Ill. Adm. Code
8627 Parts 703, 720, 721, 724, 725, and 726. The owner or operator of such combustion
8628 device shall satisfy applicable provisions of the RCRA or BIF rules.
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8630 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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8633 **Section 218.430 Compliance Date (Repealed)**

8634 (Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)

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8637 **Section 218.431 Applicability**

- 8638
- 8639 a) The provisions of Sections 218.431 through 218.436 of this Subpart shall apply
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- 1) Every owner or operator of any chemical manufacturing process unit that manufactures, as a primary product, one or more of the chemicals listed in Appendix A of this Part and that chemical manufacturing process unit causes or allows any reactor or distillation unit, either individually or in tandem, to discharge one or more process vent streams either directly to the atmosphere or to a recovery system; and
 - 2) All continuous distillation and reactor process emission units not subject to Section 218.520 through 218.527 of this Part, and located within Stepan Company's Millsdale manufacturing facility, Elwood, Illinois.
- b) Notwithstanding subsection (a) of this Section, the control requirements set forth within Section 218.432 of this Subpart shall not apply to the following:
- 1) Any process vent stream with a total resource effectiveness (TRE) index value greater than 1.0. However, such process vent stream remains subject to the performance testing requirements contained in Section 218.433 of this Subpart and the reporting and recordkeeping requirements contained in Section 218.435 of this Subpart;
 - 2) Any reactor or distillation unit that is designed and operated as a batch operation;
 - 3) Any reactor or distillation unit that is part of a polymer manufacturing operation;
 - 4) Any reactor or distillation unit that is part of the chemical manufacturing process unit with a total design capacity of less than 1 gigagram (1,100 tons) per year for all chemicals produced, as a primary product, within that process unit. However, such operations remain subject to the reporting and recordkeeping requirements contained in Section 218.435(d) of this Subpart;
 - 5) Any vent stream with a flow rate less than 0.0085 scm/min or a total VOM concentration of less than 500 ppmv, less methane and ethane, as measured by Method 18, or a concentration of VOM of less than 250 ppmv as measured by Method 25A. However, such operations remain subject to the performance testing requirement listed in Section 218.433 of this Subpart, as well as the reporting and recordkeeping requirements contained in Section 218.435 of this Subpart; or
 - 6) Any reactor or distillation unit included within an Early Reduction Program, as specified in 40 CFR 63, and published in 57 Fed. Reg. 61970 (December 29, 1992), evidenced by a timely enforceable commitment approved by USEPA.

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(Source: Amended at 20 Ill. Reg. 14428, effective October 17, 1996)

Section 218.432 Control Requirements

- a) Every owner or operator of a source subject to the requirements of this Subpart, as determined by Section 218.431 of this Subpart, shall either:
 - 1) Reduce emissions of VOM, less methane or ethane, by 98 weight-percent, or to 20 ppmv, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent;
 - 2) If a boiler or process heater is used to comply with this Subpart, the vent stream shall be introduced into the flame zone of the boiler or process heater; or
 - 3) If a flare is used to comply with this Subpart it shall comply with the requirements of 40 CFR 60.18, incorporated by reference at Section 218.112 of this Part. The flare operation requirements of 40 CFR 60.18 do not apply if a process, not subject to this Subpart, vents an emergency relief discharge into a common flare header and causes the flare servicing the process subject to this Subpart to not comply with one or more of the provisions of 40 CFR 60.18.
- b) Notwithstanding subsection (a) or (c) of this Section, and subject to subsection (b)(2) of this Section:
 - 1) No owner or operator of a source subject to Section 218.432 of this Subpart shall cause or allow VOM to be emitted through an existing control device unless the control device is operated to achieve:
 - A) 90 percent control of the VOM emissions vented to it; or
 - B) VOM emissions concentration of less than 50 ppmv, on a dry basis.
 - 2) Any existing control device subject to subsection (a) of this Section is required to meet the 98 percent emissions limit set forth in subsection (a)(1) upon the earlier to occur of the date the control device is replaced for any reason, including, but not limited to, normal maintenance, malfunction, accident, and obsolescence, or December 31, 1999. A control device is considered to be replaced when:
 - A) All of the device is replaced; or
 - B) When the cost to repair the device or the cost to replace part of the

8733 device exceeds 50 percent of the cost of replacing the entire device
8734 with a device that complies with the 98% emissions limitation in
8735 subsection (a)(1) of this Section.
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- 8737 c) For each individual vent stream within a chemical manufacturing process unit
8738 with a TRE index value greater than 1.0, the owner or operator shall maintain
8739 process vent stream parameters that retain a calculated TRE index value greater
8740 than 1.0 by means of recovery. Any recovery device shall have as its primary
8741 purpose the capture of chemicals for use, reuse, or sale. The TRE index value
8742 shall be calculated at the outlet of the final recovery device.
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8744 (Source: Added at 19 Ill. Reg. 6848, effective May 9, 1995)
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8746 **Section 218.433 Performance and Testing Requirements**
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- 8748 a) For the purpose of demonstrating compliance with the TRE index value in Section
8749 218.432(c) of this Subpart, an engineering assessment shall be made to determine
8750 process vent stream flow rate, net heating value, and VOM emission rate for the
8751 representative operating conditions expected to yield the lowest TRE index value.
8752 The source shall also calculate the TRE index values pursuant to the equations
8753 contained within Appendix G (b)(1) of this Part.
8754
- 8755 1) If the TRE index value calculated using such engineering assessment and
8756 the TRE equation in Appendix G (b)(1) of this Part is greater than 4.0,
8757 then the owner or operator is exempt from performing the measurements
8758 specified in Appendix G (a) of this Part.
8759
 - 8760 2) If the TRE index value calculated using such engineering assessment and
8761 the TRE equation in Appendix G (b)(1) of this Part is less than or equal to
8762 4.0, then the owner or operator shall perform the measurements specified
8763 in Appendix G (a) of this Part. An owner or operator of a source may, in
8764 the alternative, elect to comply with the control requirements specified in
8765 Section 218.432 of this Subpart rather than performing the measurements
8766 in Appendix G (a) of this Part.
8767
 - 8768 3) An engineering assessment shall include, but is not limited to, the
8769 following:
 - 8771 A) Previous test results, provided the tests are representative of
8772 current operating practices at the chemical manufacturing
8773 process unit;
 - 8774 B) Bench-scale or pilot-scale test data of the process under
8775 representative operating conditions;
 - 8776 C) Maximum flow rate, as stated within a permit limit,
8777 applicable to the process vent;
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- D) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to, the following:
 - i) Use of material balances based on process stoichiometry to estimate maximum VOM concentrations;
 - ii) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities;
 - iii) Estimation of VOM concentrations based on saturation conditions; and
 - iv) Estimation of maximum expected net heating value based on the stream concentration of each organic compound, or, alternatively, as if all VOM in the stream were the compound with the highest heating value.
 - E) All data, assumptions, and procedures used in the engineering assessment shall be documented.
- b) For the purpose of demonstrating compliance with the control requirements in Section 218.432 of this Subpart, the chemical manufacturing process unit shall be run at representative operating conditions and flow rates during any performance test.
- c) The following methods in 40 CFR 60, incorporated by reference at Section 218.112 of this Part, shall be used to demonstrate compliance with the reduction efficiency requirement listed in Section 218.432(a)(1) of this Subpart.
- 1) Method 1 or 1A, incorporated by reference at Section 218.112 of this Part, as appropriate, for selection of the sampling sites. The control device inlet sampling site for determination of vent stream molar composition or VOM content, less methane and ethane, reduction efficiency shall be located after the last recovery device but prior to the inlet of the control device, prior to any dilution of the process vent stream, and prior to release to the atmosphere.
 - 2) Method 2, 2A, 2C or 2D, incorporated by reference at Section 218.112 of this Part, as appropriate, for determination of gas stream volumetric flow rate.

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- 3) The emission rate correction factor, integrated sampling, and analysis procedure of Method 3, incorporated by reference at Section 218.112 of this Part, shall be used to determine the oxygen concentration (%O_{2d}) for the purpose of determining compliance with the 20 ppmv limitation. The sampling site for determining compliance with the 20 ppmv limitation shall be the same site used for the VOM samples, and samples shall be taken at the same time that the VOM samples are taken. The VOM concentration corrected to 3 percent oxygen (C_c) shall be computed using the following formula:

$$C_c = C_{VOM} \times \frac{17.9}{20.9 - \%O_{2d}}$$

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where:

C_c = Concentration of VOM (minus methane and ethane) corrected to 3 percent O₂, dry basis, ppmv.

C_{VOM} = Concentration of VOM (minus methane and ethane), dry basis, ppmv.

%O_{2d} = Concentration of oxygen, dry basis, percent by volume.

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- 4) Method 18, incorporated by reference at Section 218.112 of this Part, to determine the concentration of VOM, less methane and ethane, at the outlet of the control device when determining compliance with the 20 ppmv limitation in Section 218.432(a)(1) of this Subpart, or at both the control device inlet and outlet when the reduction efficiency of the control device is to be determined.

A) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used then the samples shall be taken at 15-minute intervals.

B) The emission reduction (R) of VOM, less methane and ethane, shall be determined using the following formula:

$$R = \frac{(E_i - E_o)}{E_i} \times 100$$

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where:

R = Emission reduction, percent by weight.

E_i = Mass rate of VOM (minus methane and ethane) entering the control device, kg VOM/hr.

E_o = Mass rate of VOM, less methane and ethane discharged to the atmosphere, kg VOM/hr.

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C) The mass rates of VOM ($E[i]$, $E[o]$) shall be computed using the following formula:

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$$E_i = K_2 \left(\sum_{j=1}^n C_{ij} M_{ij} \right) Q_i$$

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$$E_o = K_2 \left(\sum_{j=1}^n C_{oj} M_{oj} \right) Q_o$$

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where:

C_{ij} , C_{oj} = Concentration of sample component "j" of the gas stream at the inlet and outlet of the control device, respectively, dry basis, ppmv.

M_{ij} , M_{oj} = Molecular weight of sample component "j" of the gas stream at the inlet and outlet of the control device, respectively, grams/gram-mole.

Q_i , Q_o = Flow rate of gas stream at the inlet and outlet of the control device, respectively, dry space scm/min.

K_2 = 2.494×10^{-6} (liters/minute) (gram-mole per scm) (kg/g) (min/hr), where standard temperature for (gram-mole/scm) is 20° C.

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D) The representative VOM concentration ($C[VOM]$) is the sum of each of the individual components of VOM ($C[j]$) and shall be computed for each run using the following:

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$$C_{vom} = \sum_{j=1}^n C_j$$

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where:

C_{VOM} = Concentration of VOM (minus methane and ethane), dry basis, ppmv.

C_j = Concentration of sample component "j", dry basis, ppmv.

n = Number of components in the sample.

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5) When a boiler or process heater with a design heat input capacity of 44 megawatts or greater, or a boiler or process heater into which the process vent stream is introduced with the primary fuel, is used to comply with the control requirements, an initial performance test is not required.

d) When a flare is used to comply with the control requirements of this rule, the flare shall comply with the requirements of 40 CFR 60.18, incorporated by reference at Section 218.112 of this Part.

(Source: Added at 19 Ill. Reg. 6848, effective May 9, 1995)

Section 218.434 Monitoring Requirements

a) The owner or operator of a source subject to the control requirements in Section 218.432 of this Subpart that uses an incinerator to comply with the VOM emission limitation specified in Section 218.432(a)(1) shall install, calibrate, maintain, and operate, according to manufacturer's specifications, a temperature monitoring device equipped with a continuous recorder and having an accuracy of ± 1 percent of the temperature measured expressed in ~~degrees~~ Celsius, or $\pm 0.5^\circ$ C, whichever is greater.

1) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox.

2) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

b) The owner or operator of a source that uses a flare to comply with Section 218.432(a)(2) of this Subpart shall install, calibrate, maintain, and operate, according to manufacturer's specifications, a heat-sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light to indicate continuous presence of a flame.

c) The owner or operator of a source that uses a boiler or process heater with a design heat input capacity less than 44 megawatts to comply with Section 218.432(a)(1) of this Subpart shall install, calibrate, maintain, and operate, according to the manufacturer's specifications, a temperature monitoring device in the firebox. The monitoring device shall be equipped with a continuous recorder with an accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius or $\pm 0.5^\circ$ C, whichever is greater. Any boiler or process heater in

- 8922 which all vent streams are introduced with primary fuel is exempt from this
8923 requirement.
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- 8925 d) The owner or operator of a process vent with a TRE index value of 4.0 or less that
8926 uses one or more product recovery devices shall install either an organic
8927 monitoring device equipped with a continuous recorder or the monitoring
8928 equipment specified in subsections (d)(1), (d)(2), (d)(3) or (d)(4) of this Section,
8929 depending on the type of recovery device used. All monitoring equipment shall be
8930 installed, calibrated and maintained according to the manufacturer's
8931 specifications.
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- 8933 1) Where an absorber is the final recovery device in the recovery system, a
8934 scrubbing liquid temperature monitoring device and a specific gravity
8935 monitoring device, each equipped with a continuous recorder, shall be
8936 used.
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- 8938 2) Where a condenser is the final recovery device in the recovery system, a
8939 condenser exit (product side) temperature monitoring device equipped
8940 with a continuous recorder and having an accuracy of ± 1 percent of the
8941 temperature being monitored expressed in degrees Celsius or $\pm 0.5^\circ$ C,
8942 whichever is greater.
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- 8944 3) Where a carbon adsorber is the final recovery device in the recovery
8945 system, an integrating regeneration steam flow monitoring device having
8946 an accuracy of ± 10 percent, capable of recording the total regeneration
8947 steam mass flow for each regeneration cycle; and a carbon bed
8948 temperature monitoring device having an accuracy of ± 1 percent of the
8949 temperature being monitored expressed in degrees Celsius of $\pm 0.5^\circ$ C,
8950 capable of recording the carbon bed temperature after each regeneration
8951 and within 15 minutes of completing any cooling cycle.
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- 8953 4) Where a scrubber is used with an incinerator, boiler, or, in the case of
8954 halogenated vent streams, a process heater, the following monitoring
8955 equipment is required for the scrubber:
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- 8957 A) A pH monitoring device equipped with a continuous recorder to
8958 monitor the pH of the scrubber effluent; and
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- 8960 B) Flow meters equipped with a continuous recorder at the scrubber
8961 influent for liquid flow and the scrubber inlet for gas stream flow.
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- 8963 e) The owner or operator of a process vent using a vent system that contains bypass
8964 lines capable of diverting a vent stream away from the control device associated
8965 with a process vent shall comply with either (e)(1) or (e)(2) of this Section.
8966 Equipment needed for safety purposes, including, but not limited to, pressure
8967 relief devices, are not subject to this subsection.

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- 1) The owner or operator shall install, calibrate, maintain and operate a flow indicator that provides a record of vent stream flow at least once every 15 minutes. The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.
 - 2) The owner or operator shall secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.
- f) The owner or operator of a process vent may monitor by an equivalent alternative means or parameters other than those listed in subsections (a) through (d) of this Section. Any equivalent alternative shall be approved by the Agency and USEPA, and contained in the source's operating permit as federally enforceable permit conditions.

(Source: Amended at 20 Ill. Reg. 14428, effective October 17, 1996)

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8989 **Section 218.435 Recordkeeping and Reporting Requirements**
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- a) Every owner or operator of a reactor or distillation unit with a TRE index value of 4.0 or less shall keep records, for a minimum of 3 years, of the following parameters measured during a performance test or TRE determination required under Section 218.433 of this Subpart, and required to be monitored under Section 218.434 of this Subpart.
 - 1) Every owner or operator of a source that seeks to demonstrate compliance with Section 218.432(a)(1) of this Subpart through the use of either a thermal or catalytic incinerator shall maintain records of the following:
 - A) The average firebox temperature of the incinerator (or the average temperature upstream and downstream of the catalyst bed for a catalytic incinerator), measured at least every 15 minutes and averaged over the same time period of the performance testing; and
 - B) The percent reduction of VOM determined as specified in Section 218.433(c) of this Subpart achieved by the incinerator, or the concentration of VOM (ppmv, by compound) determined as specified in Section 218.433(c) of this Subpart at the outlet of the control device, on a dry basis, corrected to 3 percent oxygen.
 - 2) Every owner or operator of a source that seeks to demonstrate compliance with Section 218.432(a)(1) of this Subpart through the use of a boiler or

- 9014 process heater shall maintain the records described below. Any boiler or
9015 process heater in which all vent streams are introduced with primary fuel
9016 are exempt from these requirements.
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- 9018 A) A description of the location at which the vent stream is introduced
9019 into the boiler or process heater; and
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- 9021 B) The average combustion temperature of the boiler or process
9022 heater with a design heat input capacity of less than 44 megawatt
9023 measured at least every 15 minutes and averaged over the same
9024 time period of the performance testing.
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- 9026 3) Every owner or operator of a source that seeks to demonstrate compliance
9027 with Section 218.432(a)(2) of this Subpart through use of a smokeless
9028 flare, or flare design (i.e., steam-assisted, air-assisted, or nonassisted),
9029 shall maintain records of all visible emission readings, heat content
9030 determinations, flow rate measurements, and exit velocity determinations
9031 made during the performance test, continuous records of the flare pilot
9032 flame monitoring, and records of all periods of operations during which
9033 the pilot flame is absent.
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- 9035 4) Every owner or operator of a source that seeks to demonstrate compliance
9036 with Section 218.432(b) of this Subpart shall maintain records of the
9037 following:
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- 9039 A) Where an absorber is the final recovery device in the recovery
9040 system, the exit specific gravity (or alternative parameter which is
9041 a measure of the degree of absorbing liquid saturation, if approved
9042 by the Agency and USEPA, and average exit temperature of the
9043 absorbing liquid measured at least every 15 minutes and averaged
9044 over the same time period as the performance testing (both
9045 measured while the vent stream is normally routed and
9046 constituted);
9047
- 9048 B) Where a condenser is the final recovery device in the recovery
9049 system, the average exit (product side) temperature measured at
9050 least every 15 minutes and averaged over the same time period as
9051 the performance testing while the vent stream is normally routed
9052 and constituted;
9053
- 9054 C) Where a carbon absorber is the final recovery device in the
9055 recovery system, the total steam mass or volumetric flow measured
9056 at least every 15 minutes and averaged over the same time period
9057 as the performance testing (full carbon bed cycle), the temperature
9058 of the carbon bed after regeneration (and within 15 minutes of
9059 completion of any cooling cycle(s)), and duration of the carbon

- 9060 bed steaming cycle (all measured while the vent stream is normally
9061 routed and constituted);
9062
9063 D) As an alternative to subsection (a)(4)(A), (a)(4)(B) or (a)(4)(C) of
9064 this Section, the concentration level or reading indicated by the
9065 organic monitoring device at the outlet of the absorber, condenser,
9066 or carbon absorber, measured at least every 15 minutes and
9067 averaged over the same time period as the performance testing
9068 (measured while the vent stream is normally routed and
9069 constituted); or
9070
9071 E) All measurements and calculations performed to determine the
9072 flow rate, VOM concentration, heating value, and TRE index value
9073 of the vent stream.
9074
9075 b) Every owner or operator of a reactor or distillation unit with a TRE index value of
9076 less than 4.0 shall be subject to the exceedance reporting requirements of the draft
9077 Enhanced Monitoring Guidelines as published at 58 Fed. Reg. 54648 (October 22,
9078 1993).
9079
9080 c) Every owner or operator of a source seeking to comply with Section 218.432(b)
9081 of this Subpart shall maintain records of the following:
9082
9083 1) Any changes in production capacity, feedstock type, catalyst type, or of
9084 any replacement, removal, or addition of recovery equipment or reactors
9085 and distillation units; and
9086
9087 2) Any recalculation of the flow rate, VOM concentration, or TRE index
9088 value calculated according to subsection (c) of Appendix G of this Part.
9089
9090 d) Every owner or operator of a source claiming a design capacity of less than 1
9091 gigagram (1,100 tons) per year, as contained in Section 218.431(b) of this
9092 Subpart, shall maintain records of the design capacity or any changes in
9093 equipment or operations that may affect the design capacity.
9094
9095 e) Every owner or operator of a source claiming a vent stream flow rate or vent
9096 stream concentration exemption level, as contained in Section 218.431(b)(5) of
9097 this Subpart, shall maintain records to indicate that the stream flow rate is less
9098 than 0.0085 scm/min or the vent stream concentration is less than 500 ppmv.
9099

(Source: Amended at 20 Ill. Reg. 14428, effective October 17, 1996)

9100
9101
9102 **Section 218.436 Compliance Date**

9103
9104 Every owner or operator of an source subject to Sections 218.431, 218.432, 218.433, 218.434 or
9105 218.435 of this Subpart shall comply with its standards, limitations and mandates by March 15,

9106 1996.

9107

9108 (Source: Added at 19 Ill. Reg. 6848, effective May 9, 1995)

9109

9110 SUBPART R: PETROLEUM REFINING AND RELATED INDUSTRIES; ASPHALT

9111

9112

9113 **Section 218.441 Petroleum Refinery Waste Gas Disposal**

9114

9115 a) Except as provided in subsection (b) or (c) of this Section, no person shall cause
9116 or allow the discharge of organic materials in excess of 100 ppm equivalent
9117 methane (molecular weight 16.0) into the atmosphere from:

9118

9119 1) Any catalyst regenerator of a petroleum cracking system; or

9120

9121 2) Any petroleum fluid coker; or

9122

9123 3) Any other waste gas stream from any petroleum or petrochemical
9124 manufacturing process.

9125

9126 b) Exception. Existing sources subject to subsection (a)(3) of this Section may,
9127 alternatively, at their election, comply with the organic material emission
9128 limitations imposed by 35 Ill. Adm. Code 218.301 or 218.302; provided,
9129 however, that there shall be no increase in emissions from such sources above the
9130 level of emissions in existence on May 3, 1979.

9131

9132 c) New Sources. Sources subject to subsection (a)(3) of this Section, construction of
9133 which commenced on or after January 1, 1977, may, at their election, comply
9134 with the following emission limitations:

9135

9136 1) A maximum of eight pounds per hour of organic material; or

9137

9138 2) Emission of organic material in excess of the limitation of subsection
9139 (c)(1) of this Section is allowable if such emissions are controlled by air
9140 pollution control methods or equipment approved by the Agency capable
9141 of reducing by 85 percent or more the uncontrolled organic material that
9142 would otherwise be emitted to the atmosphere. Such methods or
9143 equipment must be approved by the Agency and approved by the USEPA
9144 as a SIP revision.

9145

9146 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

9147

9148 **Section 218.442 Vacuum Producing Systems**

9149

9150 No owner or operator of a petroleum refinery shall cause or allow the operation of any vacuum
9151 producing system unless the condensers, hot wells and accumulators of any such system are

9152 equipped with vapor loss control equipment including, but not limited to, piping, valves, flame
9153 arrestors and hot ~~well covers~~~~welleovers~~, to vent any VOM with a vapor pressure of 10.34 kPa
9154 (1.5 psia) or greater at 294.3° K (70° F) to a heater, fire box, flare, refinery fuel gas system, or
9155 other equipment or system of equal emission control as approved by the Agency and approved
9156 by the USEPA as a SIP revision. This Section shall not apply to vacuum producing systems on
9157 lube units.

9158
9159 **Section 218.443 Wastewater (Oil/Water) Separator**
9160

9161 No owner or operator of a petroleum refinery shall operate any wastewater (oil/water) separator
9162 at a petroleum refinery unless the separator is equipped with air pollution control equipment
9163 capable of reducing by 85 percent or more the uncontrolled organic material emitted to the
9164 atmosphere. If no odor nuisance exists, the limitation of this Section shall not apply if the vapor
9165 pressure of the organic material is below 10.34 kPa (1.5 psia) at 294.3° K (70° F) at all times.

9166 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
9167

9168
9169 **Section 218.444 Process Unit Turnarounds**
9170

- 9171 a) No owner or operator of a petroleum refinery shall cause or allow a refinery
9172 process unit turnaround except in compliance with an operating procedure as
9173 approved by the Agency.
9174
9175 b) Unless a procedure was already on file with the Agency as part of an approved
9176 operating permit no later than November 1, 1979, the owner or operator of a
9177 petroleum refinery shall submit to the Agency for approval a detailed procedure
9178 for reducing emissions of VOM during refinery process unit turnarounds from
9179 organic material with a vapor pressure of 10.34 kPa (1.5 psia) or greater at 294.3°
9180 K (70° F). The Agency shall not approve the procedure unless it provides for:
9181
9182 1) Depressurization of the refinery process unit or vessel to a flare, refinery
9183 fuel gas system, or other equipment or system of equal emission control,
9184 as approved by the Agency and approved by the USEPA as a SIP revision,
9185 until the internal pressure from the vessel or unit is less than 5.0 psig
9186 before allowing the vessel to be vented to the atmosphere;
9187
9188 2) Recordkeeping of the following items:
9189
9190 A) Each date that a refinery unit or vessel is shut down; and
9191
9192 B) The total estimated quantity of VOM emitted to the atmosphere
9193 and the duration of the emission in hours.
9194

9195 **Section 218.445 Leaks: General Requirements**
9196

9197 The owner or operator of a petroleum refinery shall:

- 9198
9199 a) Develop a monitoring program plan consistent with the provisions of Section
9200 218.446;
9201
9202 b) Conduct a monitoring program consistent with the provisions of Section 218.447;
9203
9204 c) Record all leaking components which have a volatile organic material
9205 concentration exceeding 10,000 ppm consistent with the provisions of Section
9206 218.448;
9207
9208 d) Identify each component consistent with the monitoring program plan submitted
9209 pursuant to Section 218.446;
9210
9211 e) Repair and retest the leaking components as soon as possible within 22 days after
9212 the leak is found, but no later than June 1 for the purposes of Section
9213 218.447(a)(1), unless the leaking components cannot be repaired until the unit is
9214 shut down for turnaround; and
9215
9216 f) Report to the Agency consistent with the provisions of Section 218.449.

9217 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
9218
9219

9220 **Section 218.446 Monitoring Program Plan for Leaks**
9221

9222 The owner or operator of a petroleum refinery shall prepare a monitoring program plan which
9223 contains, at a minimum:
9224

- 9225 a) An identification of all refinery components and the period in which each will be
9226 monitored pursuant to Section 218.447 of this Part;
9227
9228 b) The format for the monitoring log required by Section 218.448 of this Part;
9229
9230 c) A description of the monitoring equipment to be used pursuant to Section 218.447
9231 of this Part; and
9232
9233 d) A description of the methods to be used to identify all pipeline valves, pressure
9234 relief valves in gaseous service and all leaking components such that they are
9235 obvious to both refinery personnel performing monitoring and Agency personnel
9236 performing inspections.
9237

9238 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
9239

9240 **Section 218.447 Monitoring Program for Leaks**
9241

- 9242 a) The owner or operator of a petroleum refinery subject to Section 218.445 of this
9243 Part shall, for the purpose of detecting leaks, conduct a component monitoring

9244 program consistent with the following provisions:

- 9245
- 9246 1) Test once between March 1 and June 1 of each year, by methods
- 9247 referenced in Section 218.105(g) of this Part, all pump seals, pipeline
- 9248 valves in liquid service and process drains;
- 9249
- 9250 2) Test once each quarter of each calendar year, by methods referenced in
- 9251 Section 218.105(g) of this Part, all pressure relief valves in gaseous
- 9252 service, pipeline valves in gaseous service and compressor seals;
- 9253
- 9254 3) Inaccessible valves may be tested once each calendar year instead of once
- 9255 each quarter of each calendar year;
- 9256
- 9257 4) Observe visually all pump seals weekly;
- 9258
- 9259 5) Test immediately any pump seal from which liquids are observed
- 9260 dripping;
- 9261
- 9262 6) Test any relief valve within 24 hours after it has vented to the atmosphere;
- 9263 and
- 9264
- 9265 7) Test immediately after repair any component that was found leaking.
- 9266
- 9267 b) Storage tank valves and pressure relief devices connected to an operating flare
- 9268 header or vapor recovery device are exempt from the monitoring requirements in
- 9269 subsection (a) of this Section.
- 9270
- 9271 c) The Agency or the USEPA may require more frequent monitoring than would
- 9272 otherwise be required by subsection (a) for components which are demonstrated
- 9273 to have a history of leaking.
- 9274

(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

9275

9276 **Section 218.448 Recordkeeping for Leaks**

9277

- 9278
- 9279 a) The owner or operator of a petroleum refinery shall maintain a leaking
- 9280 components monitoring log which shall contain, at a minimum, the following
- 9281 information:
- 9282
- 9283 1) The name of the process unit where the component is located;
- 9284
- 9285 2) The type of component (e.g., valve, seal);
- 9286
- 9287 3) The identification number of the component;
- 9288
- 9289 4) The date on which a leaking component is discovered;

- 9290
9291 5) The date on which a leaking component is repaired;
9292
9293 6) The date and instrument reading of the recheck procedure after a leaking
9294 component is repaired;
9295
9296 7) A record of the calibration of the monitoring instrument;
9297
9298 8) The identification number of leaking components which cannot be
9299 repaired until turnaround; and
9300
9301 9) The total number of components inspected and the total number of
9302 components found leaking during that monitoring period.
9303
9304 b) Copies of the monitoring log shall be retained by the owner or operator for a
9305 minimum of two years after the date on which the record was made or the report
9306 prepared.
9307
9308 c) Copies of the monitoring log shall be made available to the Agency, upon verbal
9309 or written request, at any reasonable time.
9310

9311 **Section 218.449 Reporting for Leaks**

9312 The owner or operator of a petroleum refinery shall:

- 9313
9314
9315 a) Submit a report to the Agency prior to the 1st day of both July and September
9316 listing all leaking components identified pursuant to Section 218.447 of this Part
9317 but not repaired within 22 days, all leaking components awaiting unit turnaround,
9318 the total number of components inspected and the total number of components
9319 found leaking;
9320
9321 b) Submit a signed statement with the report attesting that all monitoring and repairs
9322 were performed as required under Sections 218.445 through 218.448 of this Part.
9323

9324 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
9325

9326 **Section 218.450 Alternative Program for Leaks**

9327
9328 The Agency may approve an alternative program of monitoring, recordkeeping or reporting to
9329 that prescribed in Sections 218.446 through 218.449 of this Part upon a demonstration by the
9330 owner or operator of a petroleum refinery that the alternative program will provide refinery,
9331 Agency and USEPA personnel with an equivalent ability to identify and repair leaking
9332 components. Any alternative program can be allowed only if approved by the USEPA as a SIP
9333 revision.
9334

9335 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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Section 218.451 Sealing Device Requirements

Except for safety pressure relief valves, no owner or operator of a petroleum refinery shall install or operate a valve at the end of a pipe or line containing VOMs unless the pipe or line is sealed with a second valve, blind flange, plug, cap or other sealing device. The sealing device may be removed only when a sample is being taken or during maintenance operations.

Section 218.452 Compliance Schedule for Leaks

The owner or operator of a petroleum refinery shall adhere to the increments of progress contained in the following schedule:

- a) Have submitted to the Agency a monitoring program consistent with Section 218.446 of this Part prior to September 1, 1990.
- b) Have submitted to the Agency the first monitoring report pursuant to Section 218.449 of this Part prior to October 1, 1990.

(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

Section 218.453 Compliance Dates (Repealed)

(Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)

SUBPART S: RUBBER AND MISCELLANEOUS PLASTIC PRODUCTS

Section 218.461 Manufacture of Pneumatic Rubber Tires

The owner or operator of an undertread cementing, ~~tread end~~ cementing or bead dipping operation at a pneumatic rubber tire manufacturing source shall install and operate:

- a) A capture system, with minimum capture efficiency of 65 percent by weight of VOM for ~~tread end~~ cementing or bead dipping operations and a capture system with a minimum capture efficiency of 55.5 percent by weight of VOM for undertread cementing; and
- b) A control device that meets the requirements of one of the following:
 - 1) A carbon adsorption system designed and operated in a manner such that there is at least a 90 percent removal of VOM by weight from the gases ducted to the control device;
 - 2) An afterburning system that oxidizes at least 90 percent of the captured nonmethane VOMs (VOM measured as total combustible carbon) to carbon dioxide and water; and

- 9382
9383
9384
9385
9386
- 3) An alternative VOM emission reduction system demonstrated to have at least a 90 percent overall reduction efficiency and approved by the Agency and approved by the USEPA as a SIP revision.

(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

9387
9388
9389 **Section 218.462 Green Tire Spraying Operations**
9390

9391 The owner or operator of a green tire spraying operation at a pneumatic rubber tire
9392 manufacturing source shall:

- 9393
9394 a) Install and operate:
- 9395
9396 1) A capture system with a minimum capture efficiency of 90 percent by
9397 weight of VOM; and
 - 9398
9399 2) A control device that meets the requirements of one of the following:
9400
9401 A) A carbon adsorption system designed and operated in a manner
9402 such that there is at least 90 percent removal of VOM by weight
9403 from the gases ducted to the control device;
9404
9405 B) An afterburning system that oxidizes at least 90 percent of the
9406 captured nonmethane VOM (measured as total combustible
9407 carbon) to carbon dioxide and water; or
9408
9409 C) An alternative VOM emission reduction system demonstrated to
9410 have at least a 90 percent overall reduction efficiency and
9411 approved by the Agency and approved by the USEPA as a SIP
9412 revision.
- 9413
9414 b) Substitute for the normal solvent-based mold release compound water-based
9415 sprays containing:
- 9416
9417 1) No more than five percent by volume of VOM as applied for the inside of
9418 tires;
 - 9419
9420 2) No more than ten percent by volume of VOM as applied for the outside of
9421 tires.

9422
9423 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
9424

9425 **Section 218.463 Alternative Emission Reduction Systems**
9426

9427 In lieu of complying with Section 218.461 or 218.462 of this Part, the owner or operator of an

9428 emission source may utilize an alternative volatile organic emission reduction system, including
9429 an alternative production process, which is demonstrated to be equivalent to Section 218.461 or
9430 218.462 of this Part on the basis of emissions of volatile organic material. A ~~tread end~~tread end
9431 cementing operation shall be considered equivalent to Section 218.461 or 218.462 of this Part for
9432 the purposes of this Section if the total volatile organic emission from such operation is 10 grams
9433 or less per tire.

9434 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

9435
9436 **Section 218.464 Emission Testing**

- 9437
9438
- 9439 a) Upon a reasonable request by the Agency, the owner or operator of a VOM
9440 emission source required to comply with a limit of Sections 218.461 through
9441 218.464 of this Part shall conduct emissions testing, at such person's own
9442 expense, to demonstrate compliance.
 - 9443
 - 9444 b) A person planning to conduct a VOM emission test to demonstrate compliance
9445 shall notify the Agency of that intent not less than 30 days before the planned
9446 initiation of the tests so the Agency may observe the test.

9447
9448 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

9449
9450 **Section 218.465 Compliance Dates (Repealed)**

9451 (Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)

9452
9453 **Section 218.466 Compliance Plan (Repealed)**

9454 (Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)

9455
9456
9457 **SUBPART T: PHARMACEUTICAL MANUFACTURING**

9458
9459 **Section 218.480 Applicability**

- 9460
9461
- 9462 a) The rules of this Subpart, except for Sections 218.483 through 218.485 of this
9463 Part, apply to all emission units of VOM, including but not limited to reactors,
9464 distillation units, dryers, storage tanks for VOL, equipment for the transfer of
9465 VOL, filters, crystallizers, washers, laboratory hoods, pharmaceutical coating
9466 operations, mixing operations and centrifuges used in manufacturing, including
9467 packaging, of pharmaceuticals, and emitting more than 6.8 kg/day (15 lbs/day)
9468 and more than 2,268 kg/year (2.5 tons/year) of VOM. If such an emission unit
9469 emits less than 2,268 kg/year (2.5 tons/year) of VOM, the requirements of this
9470 Subpart still apply to the emission unit if VOM emissions from the emission unit
9471 exceed 45.4 kg/day (100 lbs/day).
 - 9472
 - 9473 b) Notwithstanding subsection (a) of this Section, the air suspension coater/dryer,

- 9474 fluid bed dryers, tunnel dryers, and Accelacotas located in Libertyville Township,
9475 Lake County, Illinois shall be exempt from the rules of this Subpart, except for
9476 Sections 218.483 through 218.485, if emissions of VOM not vented to air
9477 pollution control equipment do not exceed the following levels:
9478
- 9479 1) For the air suspension coater/dryer: 2,268 kg/year (2.5 tons/year);
 - 9480
 - 9481 2) Except as set forth in subsection 218.480(b)(4) of this Section, for each
9482 fluid bed dryer: 4,535 kg/year (5.0 tons/year);
 - 9483
 - 9484 3) Except as set forth in subsection 218.480(b)(4) of this Section, for each
9485 tunnel dryer: 6,803 kg/year (7.5 tons/year);
 - 9486
 - 9487 4) For fluid bed dryers #1, #2, and #3 and for tunnel dryers #1, #2, #3, and
9488 #4, the combined total annual emissions from the dryers listed in this
9489 subsection 218.480(b)(4) shall not exceed 18,688 kg/year (20.6 tons/year).
9490
9491 [BOARD NOTE: tunnel dryers are otherwise referred to as warm air
9492 dryers]; and
9493
 - 9494 5) For each Accelacota: 6,803 kg/year (7.5 tons/year).
9495
- 9496 c) Sections 218.483 through 218.485 of this Part apply to a source having one or
9497 more emission units that:
9498
- 9499 1) Are used to manufacture pharmaceuticals, and
 - 9500
 - 9501 2) Emit more than 6.8 kg/day (15 lbs/day) of VOM and more than 2,268
9502 kg/year (2.5 tons/year) of VOM, or, if less than 2,268 kg/year (2.5
9503 tons/year), these Sections still apply if emissions from one or more sources
9504 exceed 45.4 kg/day (100 lbs/day).
9505
- 9506 d) No owner or operator shall violate any condition in a permit when the condition
9507 results in exclusion of an emission unit from this Subpart.
9508
- 9509 e) Any pharmaceutical manufacturing source that becomes subject to the provisions
9510 of this Subpart at any time shall remain subject to the provisions of this Subpart at
9511 all times.
9512
- 9513 f) Emissions subject to this Subpart shall be controlled at all times consistent with
9514 the requirements set forth in this Subpart.
9515
- 9516 g) Any control device required pursuant to this Subpart shall be operated at all times
9517 when the source it is controlling is operated.
9518
- 9519 h) Determinations of daily and annual emissions for purposes of this Section shall be

9520 made using both data on the hourly emission rate (or the emissions per unit of
9521 throughput) and appropriate daily and annual data from records of emission unit
9522 operation (or material throughput or material consumption data). In the absence
9523 of representative test data pursuant to Section 218.487 of this Part for the hourly
9524 emission rate (or the emissions per unit of throughput) such items shall be
9525 calculated using engineering calculations, including the methods described in
9526 Appendix B of "Control of Volatile Organic Emissions from Manufacturing of
9527 Synthesized Pharmaceutical Products" (EPA-450/2-78-029), incorporated by
9528 reference in Section 218.112 of this Part. (This subsection shall not affect the
9529 Agency's or the USEPA's authority to require emission tests to be performed
9530 pursuant to Section 218.487 of this Part.)
9531

- 9532 i) Equipment and operations emitting VOM at a source subject to subsection (a) or
9533 (c) of this Section and used to produce pharmaceutical products or a
9534 pharmaceutical-like product such as a hormone, enzyme, or antibiotic, shall be
9535 deemed to be engaged in the manufacture of pharmaceuticals for the purposes of
9536 this Subpart.
9537

9538 (Source: Amended at 32 Ill. Reg. 14874, effective August 26, 2008)
9539

9540 **Section 218.481 Control of Reactors, Distillation Units, Crystallizers, Centrifuges and**
9541 **Vacuum Dryers**
9542

- 9543 a) The owner or operator shall equip all reactors, distillation units, crystallizers,
9544 centrifuges and vacuum dryers that are used to manufacture pharmaceuticals with
9545 surface condensers or other air pollution control equipment listed in subsection
9546 (b) of this Section. If a surface condenser is used, it shall be operated such that
9547 the condenser outlet gas temperature does not exceed:
9548
- 9549 1) 248.2 ° K (-13° F) when condensing VOM of vapor pressure greater than
9550 40.0 kPa (5.8 psi) at 294.3° K (70° F), or
9551
 - 9552 2) 258.2 ° K (5 ° F) when condensing VOM of vapor pressure greater than
9553 20.0 kPa (2.9 psi) at 294.3° K (70 ° F), or
9554
 - 9555 3) 273.2 ° K (32 °F) when condensing VOM of vapor pressure greater than
9556 10.0 kPa (1.5 psi) at 294.3 ° K (70° F), or
9557
 - 9558 4) 283.2 ° K (50° F) when condensing VOM of vapor pressure greater than
9559 7.0 kPa (1.0 psi) at 294.3° K (70° F), or
9560
 - 9561 5) 298.2 ° K (77 ° F) when condensing VOM of vapor pressure greater than
9562 3.45 kPa (0.5 psi) at 294.3° K (70° F).
9563
- 9564 b) If a scrubber, carbon adsorber, thermal afterburner, catalytic afterburner, or other
9565 air pollution control equipment other than a surface condenser is used, such

9566 equipment shall provide a reduction in the emissions of VOM of 90 percent or
9567 more.

9568
9569 c) The owner or operator shall enclose all centrifuges used to manufacture
9570 pharmaceuticals and that have an exposed VOL surface, where the VOM in the
9571 VOL has a vapor pressure of 3.45 kPa (0.5 psi) or more at 294.3° K (70° F),
9572 except as production, sampling, maintenance, or inspection procedures require
9573 operator access.

9574
9575 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

9576
9577 **Section 218.482 Control of Air Dryers, Production Equipment Exhaust Systems and**
9578 **Filters**

9579
9580 a) The owner or operator of an air dryer or production equipment exhaust system
9581 used to manufacture pharmaceuticals shall control the emissions of VOM from
9582 such emission unit by air pollution control equipment which reduces by 90
9583 percent or more the VOM that would otherwise be emitted into the atmosphere.

9584
9585 b) The owner or operator shall enclose all rotary vacuum filters and other filters used
9586 to manufacture pharmaceuticals and that have an exposed VOL surface, where the
9587 VOM in the VOL has a vapor pressure of 3.45 kPa (0.5 psi) or more at 294.3° K
9588 (70° F), except as production, sampling, maintenance, or inspection procedures
9589 require operator access.

9590
9591 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

9592
9593 **Section 218.483 Material Storage and Transfer**

9594
9595 The owner or operator of a pharmaceutical manufacturing source shall:

9596
9597 a) Provide a vapor balance system that is at least 90 percent effective in reducing
9598 VOM emissions from truck or railcar deliveries to storage tanks with capacities
9599 equal to or greater than 7.57 m³ (2,000 gal) that store VOL with vapor pressures
9600 greater than 28.0 kPa (4.1 psi) at 294.3° K (70° F), and

9601
9602 b) Install, operate, and maintain pressure/vacuum conservation vents set at 0.2 kPa
9603 (0.03 psi) or greater on all storage tanks that store VOL with vapor pressures
9604 greater than 10 kPa (1.5 psi) at 294.3° K (70° F).

9605
9606 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

9607
9608 **Section 218.484 In-Process Tanks**

9609
9610 The owner or operator shall install covers on all in-process tanks used to manufacture
9611 pharmaceuticals and containing a VOL at any time. These covers must remain closed, except as

9612 production, sampling, maintenance or inspection procedures require operator access.

9613

9614 **Section 218.485 Leaks**

9615

9616 The owner or operator of a pharmaceutical manufacturing source shall repair any component
9617 from which a leak of VOL can be observed. The repair shall be completed as soon as practicable
9618 but no later than 15 days after the leak is found. If the leaking component cannot be repaired
9619 until the process unit is shut down, the leaking component must then be repaired before the unit
9620 is restarted.

9621

9622 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

9623

9624 **Section 218.486 Other Emission Units**

9625

9626 The owner or operator of a washer, laboratory hood, tablet coating operation, mixing operation
9627 or any other process emission unit not subject to Sections 218.481 through 218.485 of this Part,
9628 and used to manufacture pharmaceuticals shall control the emissions of VOM from such
9629 emission units by:

9630

9631 a) Air pollution control equipment which reduces by 81 percent or more the VOM
9632 that would otherwise be emitted to the atmosphere, or

9633

9634 b) A surface condenser which captures all the VOM which would otherwise be
9635 emitted to the atmosphere and which meets the requirements of Section
9636 218.481(a) of this Part.

9637

9638 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

9639

9640 **Section 218.487 Testing**

9641

9642 a) Upon request by the Agency or the USEPA, the owner or operator of any VOM
9643 source subject to this Subpart or exempt from this Subpart by virtue of the
9644 provisions of Section 218.480 of this Part shall, at his own expense, demonstrate
9645 compliance to the Agency and the USEPA by the methods or procedures listed in
9646 Section 218.105(f)(1) of this Part.

9647

9648 b) A person planning to conduct a VOM emissions test to demonstrate compliance
9649 with this Subpart shall notify the Agency and the USEPA of that intent not less
9650 than 30 calendar days before the planned initiation of the test.

9651

9652 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

9653

9654 **Section 218.488 Monitoring for Air Pollution Control Equipment**

9655

9656 a) At a minimum, continuous monitors for the following parameters shall be
9657 installed on air pollution control equipment used to control sources subject to this

- 9658 Subpart:
9659
9660 1) Destruction device combustion temperature.
9661
9662 2) Temperature rise across a catalytic afterburner bed.
9663
9664 3) VOM concentration on a carbon adsorption unit to determine
9665 breakthrough.
9666
9667 4) Outlet gas temperature of a refrigerated condenser.
9668
9669 5) Temperature of a non-refrigerated condenser coolant supply system.
9670
9671 b) Each monitor shall be equipped with a recording device.
9672
9673 c) Each monitor shall be calibrated quarterly.
9674
9675 d) Each monitor shall operate at all times while the associated control equipment is
9676 operating.
9677

9678 **Section 218.489 Recordkeeping for Air Pollution Control Equipment**
9679

- 9680 a) The owner or operator of a pharmaceutical manufacturing source shall maintain
9681 the following records:
9682
9683 1) Parameters listed in Section 218.488(a) of this Part shall be recorded.
9684
9685 2) For emission units subject to Section 218.481 of this Part, the vapor
9686 pressure of VOM being controlled shall be recorded for every process.
9687
9688 b) For any leak subject to Section 218.485 of this Part which cannot be readily
9689 repaired within one hour after detection, the following records shall be kept:
9690
9691 1) The name of the leaking equipment,
9692
9693 2) The date and time the leak is detected,
9694
9695 3) The action taken to repair the leak, and
9696
9697 4) The date and time the leak is repaired.
9698
9699 c) The following records shall be kept for emission units subject to Section 218.484
9700 of this Part which contain VOL:
9701
9702 1) For maintenance and inspection:
9703

- 9704 A) The date and time each cover is opened,
9705
9706 B) The length of time the cover remains open, and
9707
9708 C) The reason why the cover is opened.
9709
9710 2) For production and sampling, detailed written procedures or
9711 manufacturing directions specifying the circumstances under which covers
9712 may be opened and the procedures for opening covers.
9713
9714 d) For each emission unit used in the manufacture of pharmaceuticals for which the
9715 owner or operator of a pharmaceutical manufacturing source claims emission
9716 standards are not applicable, because the emissions are below the applicability
9717 cutoffs in Section 218.480(a) or 218.480(b) of this Part, the owner or operator
9718 shall:
9719
9720 1) Maintain a demonstration including detailed engineering calculations of
9721 the maximum daily and annual emissions for each such emission unit
9722 showing that the emissions are below the applicability cutoffs in Section
9723 218.480(a) or 218.480(b) of this Part, as appropriate, for the current and
9724 prior calendar years;
9725
9726 2) Maintain appropriate operating records for each such emission source to
9727 identify whether the applicability cutoffs in Section 218.480(a) or
9728 218.480(b) of this Part, as appropriate, are ever exceeded; and
9729
9730 3) Provide written notification to the Agency and the USEPA within 30 days
9731 of a determination that such an emission unit has exceeded the
9732 applicability cutoffs in Section 218.480(a) or 218.480(b) of this Part, as
9733 appropriate.
9734
9735 e) Records required under subsection (a) of this Section shall be maintained by the
9736 owner or operator for a minimum of two years after the date on which they are
9737 made.
9738
9739 f) Copies of the records shall be made available to the Agency or the USEPA upon
9740 verbal or written request.
9741

(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

SUBPART V: BATCH OPERATIONS AND AIR OXIDATION PROCESSES

Section 218.500 Applicability for Batch Operations

- 9746 a) The control requirements set forth in Section 218.501 of this Subpart shall apply
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- 1) Process vents associated with batch operations at sources identified by any of the following four-digit standard industrial classification ("SIC") codes, as defined in the 1987 edition of the Federal Standard Industrial Classification Manual: SIC 2821, 2833, 2834, 2861, 2865, 2869, and 2879; and
 - 2) All batch operations at Stepan Company's Millsdale manufacturing facility, Elwood, Illinois.
- b) The requirements of Sections 218.500 through 218.506 shall not apply to:
- 1) Any emission unit included within the category specified in 35 Ill. Adm. Code 218, Subpart B or T;
 - 2) Any emission unit included within the category specified in Sections 218.520 through 218.527 of this Subpart; and
 - 3) Any emission unit included within an Early Reduction Program, as specified in 40 CFR Part 63, and published in 57 Fed. Reg. 61970 (December 29, 1992), evidenced by a timely enforceable commitment approved by USEPA.
- c) The following single unit operations and batch process trains are subject to this Subpart but are considered to be de minimis and are, therefore, exempt from the control requirements of Section 218.501 of this Subpart. However, the recordkeeping and reporting requirements in Section 218.505 of this Subpart shall apply to such de minimis single unit operations and batch process trains:
- 1) Within a batch operation, any single unit operation with uncontrolled total annual mass emissions of less than or equal to 500 lb/yr of VOM. Such single unit operations are also excluded from the calculation of the total annual mass emissions for a batch process train. If the uncontrolled total annual mass emissions from such exempt single unit operation exceed 500 lb/yr of VOM in any subsequent year, the source shall calculate applicability in accordance with subsection (d) of this Section for both the individual single unit operation and the batch process train containing the single unit operation; and
 - 2) Any batch process train containing process vents that have, in the aggregate, uncontrolled total annual mass emissions, as determined in accordance with Section 218.502(a) of this Subpart, of less than 30,000 lb/yr of VOM for all products manufactured in such batch process train.
- d) The applicability equations in subsection (e) of this Section, which require the calculation of uncontrolled total annual mass emissions and flow rate value, shall

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be used to determine whether a single unit operation or a batch process train is subject to the control requirements set forth in Section 218.501 of this Subpart. The applicability equation shall be applied to the following:

- 1) Any single unit operation with uncontrolled total annual mass emissions that exceed 500 lb/yr and with a VOM concentration greater than 500 ppmv. In this individual determination, no applicability analysis shall be performed for any single unit operation with a VOM concentration of less than or equal to 500 ppmv; and
- 2) Any batch process train containing process vents which, in the aggregate, have uncontrolled total annual mass emissions of 30,000 lb/yr or more of VOM from all products manufactured in the batch process train. Any single unit operation with uncontrolled total annual mass emissions exceeding 500 lb/yr, regardless of VOM concentration, shall be included in the aggregate applicability analysis.

e) Applicability equations

- 1) The applicability equations in this subsection are specific to volatility.
- 2) For purposes of this subsection, the following abbreviations apply:
 - A) FR = Vent stream flow rate, scfm;
 - B) UTAME = Uncontrolled total annual mass emissions of VOM, expressed as lb/year;
 - C) WAV = Weighted average volatility;
 - D) MVOM_i = Mass of VOM component i;
 - E) MWVOM_i = Molecular weight of VOM component i; and
 - F) VP_i = Vapor pressure of VOM component i.

3) Weighted average volatility shall be calculated as follows:

$$WAV = \frac{\sum_{i=1}^n [(VP_i) \times \frac{(MVOM_i)}{(MWVOM_i)}]}{\sum_{i=1}^n [\frac{(MVOM_i)}{(MWVOM_i)}]}$$

4) For purposes of determining applicability, flow rate values shall be calculated as follows:

- A) Low WAV has a vapor pressure less than or equal to 75 mmHg at 20°C (68°F), and shall use the following equation:

$$FR = [0.07(UTAME)] - 1,821$$

- 9831
9832 B) Moderate WAV has a vapor pressure greater than 75 mmHg but
9833 less than or equal to 150 mmHg at 20°C (68°F), and shall use the
9834 following equation:
9835
9836
$$FR = [0.031(UTAME)] - 494$$

9837
9838 C) High WAV has a vapor pressure greater than 150 mmHg at 20°C
9839 (68°F), and shall use the following equation:
9840
9841
$$FR = [0.013(UTAME)] - 301$$

9842
9843 5) To determine the vapor pressure of VOM, the applicable methods and
9844 procedures in Section 218.111 of this Part shall apply.
9845

9846 (Source: Added at 19 Ill. Reg. 7359, effective May 22, 1995)
9847

9848 **Section 218.501 Control Requirements for Batch Operations**
9849

- 9850 a) Every owner or operator of a single unit operation with an average flow rate, as
9851 determined in accordance with Section 218.502(b) of this Subpart, below the flow
9852 rate value calculated by the applicability equations contained in Section
9853 218.500(e) of this Subpart, shall reduce uncontrolled VOM emissions from such
9854 single unit operation by an overall efficiency, on average, of at least 90 percent, or
9855 20 ppmv, per batch cycle.
9856
9857 b) Every owner or operator of a batch process train with an average flow rate, as
9858 determined in accordance with Section 218.502(b)(2) of this Subpart, below the
9859 flow rate value calculated by the applicability equations contained in Section
9860 218.500(e) of this Subpart, shall reduce uncontrolled VOM emissions from such
9861 batch process train by an overall efficiency, on average, of at least 90 percent, or
9862 20 ppmv, per batch cycle. For purposes of demonstrating compliance with the
9863 emission limitations set forth in this Section, any control device meeting the
9864 criteria in subsection (c) of this Section shall be deemed to achieve a control
9865 efficiency of 90 percent, or 20 ppmv, per batch cycle, as applicable.
9866
9867 c) Notwithstanding subsections (a) or (b) of this Section, any source that has
9868 installed on or before March 15, 1995, any control device which is demonstrated
9869 to the Agency's satisfaction to be unable to meet the applicable control
9870 requirements of this Section, scrubber, or shell and tube condenser using a non-
9871 refrigerated cooling media, and such device achieves at least 81 percent control
9872 efficiency of VOM emissions, is required to meet the 90 percent emission
9873 limitation or 20 ppmv VOM concentration set forth in subsections (a) or (b) of
9874 this Section, as applicable, upon the earlier to occur of the date the device is
9875 replaced for any reason, including, but not limited to, normal maintenance,
9876 malfunction, accident, and obsolescence, or December 31, 1999. A scrubber,

- 9877 shell and tube condenser using a non-refrigerated cooling media, or other control
9878 device meeting the criteria of this subsection, is considered replaced when:
9879
9880 1) All of the device is replaced; or
9881
9882 2) When either the cost to repair the device or the cost to replace part of the
9883 device exceeds 50 percent of the cost of replacing the entire device with a
9884 control device that complies with the 90 percent emission limitation or 20
9885 ppmv VOM concentration level in subsection (a) of this Section, as
9886 applicable.
9887
9888 d) If a boiler or process heater is used to comply with this Section, the vent stream
9889 shall be introduced into the flame zone of the boiler or process heater.
9890
9891 e) If a flare is used to comply with this Section, it shall comply with the
9892 requirements of 40 CFR 60.18, incorporated by reference at Section 218.112 of
9893 this Part. The flare operation requirements of 40 CFR 60.18 do not apply if a
9894 process, not subject to this Subpart, vents an emergency relief discharge into a
9895 common flare header and causes the flare servicing the process subject to this
9896 Subpart to not comply with one or more of the provisions of 40 CFR 60.18.
9897

9898 (Source: Added at 19 Ill. Reg. 7359, effective May 22, 1995)
9899

9900 **Section 218.502 Determination of Uncontrolled Total Annual Mass Emissions and Average**
9901 **Flow Rate Values for Batch Operations**

- 9902
9903 a) Uncontrolled total annual mass emissions shall be determined by the following
9904 methods:
9905
9906 1) Direct process vent emissions measurements taken prior to any release to
9907 the atmosphere, following any recovery device and prior to any control
9908 device, provided such measurements conform with the requirements of
9909 measuring the mass flow rate of VOM incoming to the control device as
9910 set forth in Section 218.503(f)(2), (f)(3)(A) and (f)(3)(B) of this Subpart;
9911 or
9912
9913 2) Engineering estimates of the uncontrolled VOM emissions from a process
9914 vent or process vents, in the aggregate, within a batch process train, using
9915 either the potential or permitted number of batch cycles per year or total
9916 production as represented in the source's operating permit as follows:
9917
9918 A) Engineering estimates of the uncontrolled VOM emissions shall be
9919 based upon accepted chemical engineering principles, measurable
9920 process parameters, or physical or chemical laws and their
9921 properties. Examples of methods include, but are not limited to,
9922 the following:

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- i) Use of material balances based on process stoichiometry to estimate maximum VOM concentrations;
 - ii) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities; and
 - iii) Estimation of VOM concentrations based on saturation conditions.
- B) All data, assumptions and procedures used in any engineering estimate shall be documented.

- b) Average flow rate shall be determined by any of the following methods:
- 1) Direct process vent flow rate measurements taken prior to any release to the atmosphere, following any recovery device and prior to any control device, provided such measurements conform with the requirements of measuring incoming volumetric flow rate set forth in Section 218.503(e)(2) of this Subpart;
 - 2) Average flow rate for a single unit operation having multiple emission events or batch process trains shall be the weighted average flow rate, calculated as follows:

9946
 9947
 9948

$$WAF = \frac{\sum_{i=1}^n [AFR_i \times ADE_i]}{\sum_{i=1}^n (ADE_i)}$$

9949
 9950
 9951

where:

- WAF = Actual weighted average flow rate for a single unit operation or batch process train;
- AFR_i = Average flow rate per emission event;
- ADE_i = Annual duration of emission event; and
- n = Number of emission events.

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For purposes of this formula, the term "emission event" shall be defined as a discrete period of venting that is associated with a single unit operation. For example, a displacement of vapor resulting from the charging of a single unit operation with VOM will result in a discrete emission event that will last through the duration of the charge and will have an average flow rate equal to the rate of the charge. The expulsion of expanded vapor space when the single unit operation is heated is also an emission event. Both of these examples of emission events and others may occur in the

9961 same single unit operation during the course of the batch cycle. If the
9962 flow rate measurement for any emission event is zero, according to
9963 Section 218.503(f)(2) of this Subpart, then such event is not an emission
9964 event for purposes of this Section.

9965 3) Engineering estimates calculated in accordance with the requirements in
9966 subsection (a)(2) of this Section.

9967
9968 c) For purposes of determining the average flow rate for steam vacuuming systems,
9969 the steam flow shall be included in the average flow rate calculation.

9970
9971 (Source: Added at 19 Ill. Reg. 7359, effective May 22, 1995)

9972
9973 **Section 218.503 Performance and Testing Requirements for Batch Operations**

9974
9975 a) Upon the Agency's request, the owner or operator of a batch operation shall
9976 conduct testing to demonstrate compliance with Section 218.501 of this Subpart.
9977 The owner or operator shall, at its own expense, conduct such tests in accordance
9978 with the applicable test methods and procedures specified in Section 218.503(d),
9979 (e), and (f) of this Subpart.

9980
9981 b) Notwithstanding subsection (a) of this Section, flares and process boilers used to
9982 comply with control requirements of Section 218.501 of this Subpart shall be
9983 exempt from performance testing requirements.

9984
9985 c) When a flare is used to comply with the control requirements of Section 218.501
9986 of this Subpart, the flare shall comply with the requirements of 40 CFR 60.18,
9987 incorporated by reference at Section 218.112 of this Part.

9988
9989 d) The owner or operator of a batch operation that is exempt from the control
9990 requirements of Section 218.501 of this Subpart shall demonstrate, upon the
9991 Agency's request, the absence of oversized gas moving equipment in any
9992 manifold. Gas moving equipment shall be considered oversized if it exceeds the
9993 maximum requirements of the exhaust flow rate by more than 30 percent.

9994
9995 e) For the purpose of demonstrating compliance with the control requirements in
9996 Section 218.501 of this Subpart, the batch operation shall be run at representative
9997 operating conditions and flow rates during any performance test.

9998
9999 f) The following methods in 40 CFR 60, Appendix A, incorporated by reference at
10000 Section 218.112 of this Part, shall be used to demonstrate compliance with the
10001 reduction efficiency requirement set forth in Section 218.501 of this Subpart:

10002
10003 1) Method 1 or 1A, as appropriate, for selection of the sampling sites if the
10004 flow measuring device is not a rotameter. The control device inlet
10005 sampling site for determination of vent stream VOM composition
10006 reduction efficiency shall be prior to the control device and after the

- 10007 control device;
10008
10009 2) Method 2, 2A, 2C, or 2D, as appropriate, for determination of gas stream
10010 volumetric flow rate flow measurements, which shall be taken
10011 continuously. No traverse is necessary when the flow measuring device is
10012 an ultrasonic probe;
10013
10014 3) Method 25A or Method 18, if applicable, to determine the concentration
10015 of VOM in the control device inlet and outlet;
10016
10017 A) The sampling time for each run shall be as follows:
10018
10019 i) For batch cycles less than eight hours in length, readings
10020 shall be taken continuously over the entire length of the
10021 batch cycle with a maximum of 15-minute intervals
10022 between measurements if using Method 25A. If using
10023 Method 18, readings shall be taken continuously with a
10024 maximum of 15-minute intervals between measurements
10025 throughout the batch cycle unless it becomes necessary to
10026 change the impinger train, in which case a 30-minute
10027 interval shall not be exceeded.
10028
10029 ii) For batch cycles of eight hours and greater in length, the
10030 owner or operator may either test in accordance with the
10031 test procedures defined in subsection (f)(3)(A)(i) of this
10032 Section or the owner or operator may elect to perform tests,
10033 pursuant to either Method 25A or Method 18, only during
10034 those portions of each emission event which define the
10035 emission profile of each emission event occurring within
10036 the batch cycle. For each emission event of less than four
10037 hours in duration, the owner or operator shall test
10038 continuously over the entire emission event as set forth in
10039 subsection (f)(3)(A)(i) of this Section. For each emission
10040 event of greater than four hours in duration, the owner or
10041 operator shall elect either to perform a minimum of three
10042 one hour test runs during the emission event or shall test
10043 continuously over the entire emission event within each
10044 single unit operation in the batch process train. To
10045 demonstrate that the portion of the emission event to be
10046 tested define the emission profile for the emission event,
10047 the owner or operator electing to rely on this option shall
10048 develop an emission profile for the entire emission event.
10049 Such emission profile shall be based upon either process
10050 knowledge or test data collected. Examples of information
10051 that could constitute process knowledge include, but are not
10052 limited to, calculations based on material balances and

- 10053 process stoichiometry. Previous test results may be used
10054 provided such results are still relevant to the current
10055 process vent stream conditions.
10056
- 10057 iii) For purposes of subsection (f)(3) of this Section, the term
10058 "emission event" shall be defined as a discrete period of
10059 venting that is associated with a single unit operation. For
10060 example, a displacement of vapor resulting from the
10061 charging of a single unit operation with VOM will result in
10062 a discrete emission event that will last through the duration
10063 of the charge and will have an average flow rate equal to
10064 the rate of the charge. The expulsion of expanded single
10065 unit operation vapor space when the vessel is heated is also
10066 an emission event. Both of these examples of emission
10067 events and others may occur in the same single unit
10068 operation during the course of the batch cycle. If the flow
10069 rate measurement for any emission event is zero, in
10070 accordance with subsection (f)(2) of this Section, then such
10071 event is not an emission event for purposes of this Section.
10072
- 10073 B) The mass emission rate from the process vent or inlet to the control
10074 device shall be determined by combining concentration and flow
10075 rate measurements taken simultaneously at sampling sites selected
10076 in accordance with subsection (f)(1) of this Section throughout the
10077 batch cycle;
10078
- 10079 C) The mass emission rate from the control device outlet shall be
10080 obtained by combining concentration and flow rate measurements
10081 taken simultaneously at sampling sites selected in accordance with
10082 subsection (f)(1) of this Section throughout the batch cycle; and
10083
- 10084 D) The efficiency of the control device shall be determined by
10085 integrating the mass emission rates obtained in subsections
10086 (f)(3)(B) and (f)(3)(C) of this Section, over the time of the batch
10087 cycle and dividing the difference in inlet and outlet mass flow
10088 totals by the inlet mass flow total.
10089
- 10090 g) Upon request by the Agency to conduct testing, an owner or operator of a batch
10091 operation which has installed a scrubber, a shell and tube condenser using a non-
10092 refrigerated cooling media, or any other control device which meets the criteria of
10093 Section 218.501(c) of this Subpart, shall demonstrate that such device achieves
10094 the control efficiency applicable within Section 218.501 of this Subpart upon the
10095 earlier to occur of the date the device is replaced or December 31, 1999.
10096
- 10097 h) The owner or operator of a batch operation may propose an alternative test
10098 method or procedures to demonstrate compliance with the control requirements

10099 set forth in Section 218.501 of this Subpart. Such method or procedures shall be
10100 approved by the Agency and USEPA as evidenced by federally enforceable
10101 permit conditions.

10102
10103 i) In the absence of a request by the Agency to conduct performance testing in
10104 accordance with the provisions of this Section, a source may demonstrate
10105 compliance by the use of engineering estimates or process stoichiometry.
10106

10107 (Source: Added at 19 Ill. Reg. 7359, effective May 22, 1995)
10108

10109 **Section 218.504 Monitoring Requirements for Batch Operations**
10110

10111 a) Every owner or operator using an afterburner to comply with Section 218.501 of
10112 this Subpart shall install, calibrate, maintain and operate, according to
10113 manufacturer's specifications, temperature monitoring devices with an accuracy of
10114 ± 1 percent of the temperature being measured expressed in degrees Celsius,
10115 equipped with continuous recorders.
10116

10117 1) Where a catalytic afterburner is used, temperature monitoring devices
10118 shall be installed in the gas stream immediately before and after the
10119 catalyst bed.
10120

10121 2) Where an afterburner other than a catalytic afterburner is used, a
10122 temperature monitoring device shall be installed in the combustion
10123 chamber.
10124

10125 b) Every owner or operator using a flare to comply with Section 218.501 of this
10126 Subpart shall install, calibrate, maintain and operate, according to manufacturer's
10127 specifications, a heat sensing device, such as an ultra-violet beam sensor or
10128 thermocouple, at the pilot light to indicate continuous presence of a flame.
10129

10130 c) Every owner or operator using a scrubber to comply with this Section 218.501 of
10131 this Subpart shall install, calibrate, maintain, and operate, according to
10132 manufacturer's specifications, the following:
10133

10134 1) A temperature monitoring device for scrubbant liquid having an accuracy
10135 of ± 1 percent of the temperature being monitored expressed in degrees
10136 Celsius and a specific gravity device for scrubbant liquid, each equipped
10137 with a continuous recorder; or
10138

10139 2) A VOM monitoring device used to indicate the concentration of VOM
10140 exiting the control device based on a detection principle such as infra-red
10141 photoionization, or thermal conductivity, each equipped with a continuous
10142 recorder.
10143

10144 d) Every owner or operator using a condenser to comply with Section 218.501 of

- 10145 this Subpart shall install, calibrate, maintain, and operate, according to
10146 manufacturer's specifications, the following:
10147
10148 1) A condenser exit temperature monitoring device equipped with a
10149 continuous recorder and having an accuracy of ± 1 percent of the
10150 temperature being monitored expressed in degrees Celsius; or
10151
10152 2) A VOM monitoring device used to indicate the concentration of VOM
10153 such as infra-red, photoionization, or thermal conductivity, each equipped
10154 with a continuous recorder.
10155
10156 e) Every owner or operator using a carbon absorber to comply with this Subpart
10157 shall install, calibrate, maintain, and operate, according to the manufacturer's
10158 specifications, the following equipment:
10159
10160 1) An integrating regeneration steam flow monitoring device having an
10161 accuracy of ± 10 percent, and a carbon bed temperature monitoring device
10162 having an accuracy of ± 1 percent of the temperature being monitored
10163 expressed in degrees Celsius, both equipped with a continuous recorder; or
10164
10165 2) A VOM monitoring device used to indicate the concentration level of
10166 VOM exiting such device based on a detection principle such as infra-red,
10167 photoionization, or thermal conductivity, each equipped with a continuous
10168 recorder.
10169
10170 f) Every owner or operator using a boiler or process heater with a design heat input
10171 capacity less than 44 Mw to comply with Section 218.501 of this Subpart shall
10172 install, calibrate, maintain, and operate, according to the manufacturer's
10173 specifications, a temperature monitoring device in the firebox with an accuracy of
10174 ± 1 percent of the temperature being measured expressed in degrees Celsius,
10175 equipped with a continuous recorder. Any boiler or process heater in which all
10176 process vent streams are introduced with primary fuel is exempt from this
10177 requirement.
10178
10179 g) The owner or operator of a process vent shall be permitted to monitor by an
10180 alternative method or may monitor parameters other than those listed in
10181 subsections (a) through (f) of this Section, if approved by the Agency and
10182 USEPA. Such alternative method or parameters shall be contained in the source's
10183 operating permit as federally enforceable permit conditions.
10184
10185 h) Notwithstanding subsections (a) through (g) of this Section, sources using a
10186 scrubber, shell and tube condenser using a non-refrigerated cooling media, or
10187 other control device meeting the criteria of Section 218.501(c) of this Subpart, are
10188 required to monitor compliance with the requirements of this Subpart on and after
10189 the earlier to occur of the date such device is replaced for any reason or December
10190 31, 1999.

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(Source: Added at 19 Ill. Reg. 7359, effective May 22, 1995)

Section 218.505 Reporting and Recordkeeping for Batch Operations

- a) Every owner or operator of a de minimis single unit operation or batch process train exempt under Section 218.500(c)(1) or (c)(2) of this Subpart shall keep records of the uncontrolled total annual mass emissions for any de minimis single unit operation or batch process train, as applicable, and documentation verifying these values or measurements. The documentation shall include the engineering calculations, any measurements made in accordance with Section 218.503 of this Subpart, and the potential or permitted number of batch cycles per year, or, in the alternative, total production as represented in the source's operating permit.
- b) Every owner or operator of a single unit operation exempt under Section 218.500(b)(3) or (d) of this Subpart shall keep the following records:
 - 1) The uncontrolled total annual mass emissions and documentation verifying these values or measurements. The documentation shall include any engineering calculations, any measurements made in accordance with Section 218.503 of this Subpart, and the potential or permitted number of batch cycles per year, or, in the alternative, total production as represented in the source's operating permit.
 - 2) The average flow rate in scfm and documentation verifying this value.
- c) Every owner or operator of a batch operation subject to the control requirements of Section 218.501 of this Subpart shall keep records of the following parameters required to be monitored under Section 218.504 of this Subpart:
 - 1) If using a thermal or catalytic afterburner to comply with Section 218.501 of this Subpart, records indicating the average combustion chamber temperature of the afterburner (or the average temperature upstream and downstream of the catalyst bed for a catalytic afterburner), measured continuously and averaged over the same time period as the performance test;
 - 2) If using a flare (i.e., steam-assisted, air-assisted or nonassisted) to comply with Section 218.501 of this Subpart, continuous records of the flare pilot flame monitoring and records of all periods of operations during which the pilot flame is absent.
 - 3) If using any of the following as a control device, the following records:
 - A) Where a scrubber is used, the exit specific gravity (or alternative parameter which is a measure of the degree of absorbing liquid

- 10237 saturation, if approved by the Agency) and the average exit
10238 temperature of the absorbing liquid, measured continuously and
10239 averaged over the same time period as the performance test (both
10240 measured while the vent stream is routed normally);
- 10241
- 10242 B) Where a condenser is used, the average exit (product side)
10243 temperature measured continuously and averaged over the same
10244 time period as the performance test while the vent stream is routed
10245 normally;
- 10246
- 10247 C) Where a carbon adsorber is used, the total steam mass flow
10248 measured continuously and averaged over the same time period as
10249 the performance test (full carbon bed cycle), temperature of the
10250 carbon bed after regeneration (and within 15 minutes after
10251 completion of any cooling cycle(s)), and duration of the carbon
10252 bed steaming cycle (all measured while the vent stream is routed
10253 normally); or
- 10254
- 10255 D) As an alternative to subsection (c)(3)(A), (c)(3)(B), or (c)(3)(C) of
10256 this Section, at a minimum, records indicating the concentration
10257 level or reading indicated by the VOM monitoring device at the
10258 outlet of the scrubber, condenser, or carbon adsorber, measured
10259 continuously and averaged over the same time period as the
10260 performance test (while the vent stream is routed normally).
- 10261
- 10262 d) Every owner or operator of a single unit operation claiming a vent stream
10263 concentration exemption level, as set forth in Section 218.500(d)(1) of this
10264 Subpart, shall maintain records to indicate the vent stream concentration is less
10265 than or equal to 500 ppmv, and shall notify the Agency in writing if the vent
10266 stream concentration at any time equals or exceeds 500 ppmv, within 60 days
10267 after such event. Such notification shall include a copy of all records of such
10268 event.
- 10269
- 10270 e) An owner or operator of a batch operation subject to the control requirements of
10271 Section 218.501 of this Subpart may maintain alternative records other than those
10272 listed in subsection (c) of this Section. Any alternative recordkeeping shall be
10273 approved by the Agency and USEPA and shall be contained in the source's
10274 operating permit as federally enforceable permit conditions.
- 10275
- 10276 f) Notwithstanding subsections (a) through (e) of this Section, any owner or operator
10277 of a batch operation which uses either a scrubber, shell and tube condenser using
10278 non-refrigerated cooling media, or other control device meeting the criteria of
10279 Section 218.501(c) of this Subpart, is required to monitor compliance with the
10280 requirements of this Subpart on and after the earlier to occur of the date such
10281 device is replaced for any reason or December 31, 1999.
- 10282

10283 g) The owner or operator of a de minimis single unit operation or batch process train
10284 exempt from the control requirements of Section 218.500(c) of this Subpart shall
10285 notify the Agency in writing if the uncontrolled total annual mass emissions from
10286 such de minimis single unit operation or batch process train exceed the threshold
10287 in Section 218.500(c)(1) or (c)(2) of this Subpart, respectively, within 60 days
10288 after the event occurs. Such notification shall include a copy of all records of
10289 such event.

10291 h) Every owner or operator of a batch operation required to keep records under this
10292 Section shall maintain such records at the source for a minimum period of three
10293 years and shall make all such records available to the Agency upon request.

10294 (Source: Added at 19 Ill. Reg. 7359, effective May 22, 1995)

10296 **Section 218.506 Compliance Date**

10299 Every owner or operator of a batch operation subject to Sections 218.500 through 218.506 of this
10300 Subpart shall comply with its standards, limitations and mandates by March 15, 1996, or upon
10301 initial start up, whichever is later.

10303 (Source: Added at 19 Ill. Reg. 7359, effective May 22, 1995)

10304 **Section 218.520 Emission Limitations for Air Oxidation Processes**

10307 a) No person shall cause or allow the emission of VOM from any process vent
10308 stream unless the process vent stream is vented to a combustion device which is
10309 designed and operated either:

- 10311 1) To reduce the volatile organic emissions vented to it with an efficiency of
10312 at least ninety eight percent (98%) by weight; or
- 10314 2) To emit VOM at a concentration less than twenty parts per million by
10315 volume, dry basis.

10317 b) Combustion Device at a Phthalic Anhydride Air Oxidation Process

- 10319 1) Notwithstanding subsection (a) above, and subject to subsection (b)(2)
10320 below, no person shall cause or allow the emissions of VOM through an
10321 existing combustion device at a phthalic anhydride air oxidation process,
10322 unless the combustion device is operated to achieve:

- 10324 A) 90% control of the volatile organic emissions vented to it; or
 - 10326 B) VOM emissions concentration of less than 50 parts per million by
10327 volume, dry basis.
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- 2) Any existing combustion device subject to subsection (b)(1) above is required to meet the 98 percent emissions limit set forth in subsection (a) above either upon replacing the combustion device for any reasons, including, but not be limited to, normal maintenance, malfunction, accident, and obsolescence, or the date of December 31, 1999, whichever comes first. A combustion device is considered to be replaced when:
- A) All of the device is replaced; or
- B) When the cost of the repair of the device or the cost of replacement of part of the device exceeds 50% of the cost of replacing the entire device with a device which complies.
- c) The limitations of subsection (a) above shall apply to any process vent stream or combination of process vent streams with a Total Resource Effectiveness Index (TRE) less than or equal to 6.0. TRE shall be determined by the following methods:
- 1) If an air oxidation process has more than one process vent stream, TRE shall be the more stringent of either the TRE based upon a combination of the process vent streams or the TRE based upon each individual process vent stream.
- 2) The TRE of a process vent stream and the TRE of a combination of process vent streams, whichever is applicable, shall be determined according to the following equation:
- $$TRE = E(-1)[a + bF(n) + cF + dFH + e(F \times H)(n) + fF(0.5)]$$
- where:
- n = 0.88;
TRE = Total resource effectiveness index;
F = Vent stream flowrate (scm/min), at a standard temperature of 20° C;
E = Hourly measured emissions in kg/hr;
H = Net heating value of vent stream (MJ/scm), where the net enthalpy per mole of offgas is based on combustion at 25° C and 760 mmHg, but the standard temperature for determining the volume corresponding to one mole is 20° C, as in the definition of "Flow";
a,b,c,d,e and f = Coefficients obtained by use of Appendix D.
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- 3) For nonchlorinated process vent streams, if the net heating value, H, is greater than 3.6 MJ/scm, F shall be replaced by F' for purposes of

10363 calculating TRE. F' is computed as follows:

10364
$$F' = FH / 3.6$$

10366 where F and H are as defined in subsection (c)(2) of this Section.

10368 4) The actual numerical values used in the equation described in subsection
10370 (c)(2) shall be determined as follows:

10372 A) All reference methods and procedures for determining the flow (F),
10373 hourly emissions (E), and net heating (H), value shall be in
10374 accordance with Appendix C.

10376 B) All coefficients described in subsection (c)(2) of this Section shall
10377 be in accordance with Appendix D.

10379 (Source: Renumbered from Section 218.525 and amended at 18 Ill. Reg. 16950, effective
10380 November 15, 1994)

10381
10382 **Section 218.521 Definitions (Repealed)**

10383
10384 (Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)

10385
10386 **Section 218.522 Savings Clause**

10387
10388 The owner or operator of an air oxidation process with a TRE of 1.0 or less shall have complied
10389 with the requirements of Section 218.520(a) of this Subpart by the dates set forth in Section
10390 218.106(a) and (b) of this Part. Sources that are subject to 218.520(b) of this Subpart that
10391 become subject to the control requirements of 218.520(a) of this Subpart after the compliance
10392 dates set out in 218.106(a) and (b) of this Part shall comply with the timetable set forth within
10393 Section 218.520(b).

10394
10395 (Source: Added at 18 Ill. Reg. 16950, effective November 15, 1994)

10396
10397 **Section 218.523 Compliance**

10398
10399 The emissions limitations for air oxidation processes located in Section 218.520(a) of this
10400 Subpart are applicable to air oxidation processes on October 25, 1994.

10401
10402 a) An owner or operator of an air oxidation process with a TRE of 6.0 or less that is
10403 subject to the requirements of Section 218.520(a) of this Subpart on October 25,
10404 1994 shall comply with the provisions of Section 218.520(a) by December 31,
10405 1999, or upon startup of the emission unit, whichever comes first. This
10406 subsection does not supersede the Savings Clause in Section 218.522 of this Part.

10407
10408 b) An owner or operator of an air oxidation process that becomes subject to the

10409 requirements of Section 218.520(a) of this Subpart after October 25, 1994 shall
10410 comply with the requirements of Section 218.520(a) upon startup of the emission
10411 unit.

10412
10413 (Source: Added at 18 Ill. Reg. 16950, effective November 15, 1994)
10414

10415 **Section 218.524 Determination of Applicability**
10416

10417 a) Sources subject to the requirements of Section 218.520(a) of this Subpart either
10418 through application of 218.520(c) of this Subpart or through continued application
10419 under 218.522 of this Subpart shall continue to be subject to the applicable
10420 limitations even if operations change so as to result in a TRE that is above that
10421 which initially made the regulation applicable to the source's operations.
10422

10423 b) Notwithstanding Section 218.520(c) of this Subpart, any air oxidation process that
10424 utilizes a combustion device to control process vent streams at any time shall
10425 maintain the process in compliance with the provisions of Section 218.520(a) of
10426 this Subpart at all times thereafter.
10427

10428 (Source: Added at 18 Ill. Reg. 16950, effective November 15, 1994)
10429

10430 **Section 218.525 Emission Limitations for Air Oxidation Processes (Renumbered)**
10431

10432 (Source: Section 218.525 renumbered to Section 218.520 at 18 Ill. Reg. 16950, effective
10433 November 15, 1994)
10434

10435 **Section 218.526 Testing and Monitoring**
10436

10437 a) Upon reasonable request by the Agency, the owner or operator of an air oxidation
10438 process shall demonstrate compliance with this Subpart by use of the methods
10439 specified in Appendix C. This Section does not limit the USEPA's authority,
10440 under the Clean Air Act, to require demonstrations of compliance.
10441

10442 b) A person planning to conduct a VOM emissions test to demonstrate compliance
10443 with this Subpart shall notify the Agency of that intent not less than 30 days
10444 before the planned initiation of the tests so that the Agency may observe the test.
10445

10446 **Section 218.527 Compliance Date (Repealed)**
10447

10448 (Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)
10449

10450 **SUBPART W: AGRICULTURE**
10451

10452 **Section 218.541 Pesticide Exception**
10453

10454 The provisions of Sections 218.301 and 218.302 of this Part shall not apply to the spraying or

10455 use of insecticides, herbicides or other pesticides.

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10457 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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Section 218.561 Architectural Coatings

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No person shall cause or allow the sale or use of any architectural coating containing more than 20 percent by volume of photo-chemically reactive material in containers having a capacity of more than one gallon.

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Section 218.562 Paving Operations

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The provisions of Sections 218.301 and 218.302 of this Part shall not apply to the application of paving asphalt and pavement marking paint from sunrise to sunset.

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(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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Section 218.563 Cutback Asphalt

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- a) No person shall cause or allow the use or application of cutback asphalt for paving, resurfacing, reconditioning, repairing or otherwise maintaining a roadway unless:

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- 1) The use or application of the cutback asphalt commences on or after October 1 of any year and such use or application is completed by April 30 of the following year; or

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- 2) The cutback asphalt is a long-life stockpile material which remains in stock after April 30 of each year and as such it may be used until depleted for patching potholes and for other similar repair work; or

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- 3) The cutback asphalt is to be used solely as an asphalt prime coat.

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- b) Sources subject to this Section are not required to submit or obtain an Agency approved compliance plan or project completion schedule under 35 Ill. Adm. Code 201, Subpart H.

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SUBPART Y: GASOLINE DISTRIBUTION

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Section 218.581 Bulk Gasoline Plants

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- a) Subject to subsection (e) of this Section, no person may cause or allow the transfer of gasoline from a delivery vessel into a stationary storage tank located at a bulk gasoline plant unless:

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- 1) The delivery vessel and the stationary storage tank are each equipped with a vapor collection system that meets the requirements of subsection (d)(4) of this Section;
 - 2) Each vapor collection system is operating;
 - 3) The delivery vessel displays the appropriate sticker pursuant to the requirements of Sections 218.584 (b) or (d) of this Part;
 - 4) The pressure relief valve(s) on the stationary storage tank and the delivery vessel are set to release at no less than 0.7 psi or the highest pressure allowed by state or local fire codes or the guidelines of the National Fire Prevention Association; and
 - 5) The stationary storage tank is equipped with a submerged loading pipe.
- b) Subject to subsection (f) of this Section, no person may cause or allow the transfer of gasoline from a stationary storage tank located at a bulk gasoline plant into a delivery vessel unless:
- 1) The requirements set forth in subsections (a)(1) through (a)(4) of this Section are met; and
 - 2) Equipment is available at the bulk gasoline plant to provide for the submerged filling of the delivery vessel or the delivery vessel is equipped for bottom loading.
- c) Subject to subsection (e) of this Section, each owner of a stationary storage tank located at a bulk gasoline plant shall:
- 1) Equip each stationary storage tank with a vapor control system that meets the requirements of subsection (a) or (b) of this Section, whichever is applicable;
 - 2) Provide instructions to the operator of the bulk gasoline plant describing necessary maintenance operations and procedures for prompt notification of the owner in case of any malfunction of a vapor control system; and
 - 3) Repair, replace or modify any worn out or malfunctioning component or element of design.
- d) Subject to subsection (e) of this Section, each operator of a bulk gasoline plant shall:
- 1) Maintain and operate each vapor control system in accordance with the

- 10547 owner's instructions;
10548
10549 2) Promptly notify the owner of any scheduled maintenance or malfunction
10550 requiring replacement or repair of a major component of a vapor control
10551 system; and
10552
10553 3) Maintain gauges, meters or other specified testing devices in proper
10554 working order;
10555
10556 4) Operate the bulk plant vapor collection system and gasoline loading
10557 equipment in a manner that prevents:
10558
10559 A) Gauge pressure from exceeding 45.7 cm (18 in.) of water and
10560 vacuum from exceeding 15.2 cm (6 in.) of water, as measured as
10561 close as possible to the vapor hose connection; and
10562
10563 B) A reading equal to or greater than 100 percent of the lower
10564 explosive limit (LEL measured as propane) when tested in
10565 accordance with the procedure described in "Control of Volatile
10566 Organic Compound Leaks from Gasoline Tank Trucks and Vapor
10567 Collection Systems", Appendix B, EPA 450/2-78-051,
10568 (incorporated by reference in Section 218.112) of this Part; and
10569
10570 C) Avoidable leaks of liquid during the loading or unloading
10571 operations.
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10573 5) Provide a pressure tap or equivalent on the bulk plant vapor collection
10574 system in order to allow the determination of compliance with subsection
10575 (d)(4)(A) of this Section; and
10576
10577 6) Within 15 business days after discovery of any leak by the owner, the
10578 operator, the Agency or the USEPA, repair and retest a vapor collection
10579 system which exceeds the limits of subsection (d)(4)(A) or (B) of this
10580 Section.
10581
10582 e) The requirements of subsections (a), (c) and (d) of this Section shall not apply to:
10583
10584 1) Any stationary storage tank with a capacity of less than 2,177 l (575 gal);
10585 or
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10587 2) Any bulk gasoline plant whose daily gasoline throughput is less than
10588 15,140 l (4,000 gal/day) on a thirty-day rolling average.
10589
10590 f) The requirements of subsection (b) of this Section shall apply only to bulk
10591 gasoline plants whose daily gasoline throughput is greater than or equal to 15,140
10592 l (4,000 gal/day) on a thirty-day rolling average.

10593
10594 g) Any bulk gasoline plant which is ever subject to subsections (a), (b), (c), or (d)
10595 shall always be subject to these paragraphs.
10596

10597 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
10598

10599 **Section 218.582 Bulk Gasoline Terminals**
10600

10601 a) No person shall cause or allow the transfer of gasoline into any delivery vessel
10602 from any bulk gasoline terminal unless:
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10604 1) The bulk gasoline terminal is equipped with a vapor control system that
10605 limits emission of VOM to 80 mg/1 (0.00067 lbs/gal) of gasoline loaded;
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10607 2) The vapor control system is operating and all vapors displaced in the
10608 loading of gasoline to the delivery vessel are vented only to the vapor
10609 control system;
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10611 3) There is no liquid drainage from the loading device when it is not in use;
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10613 4) All loading and vapor return lines are equipped with fittings which are
10614 vapor tight; and
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10616 5) The delivery vessel displays the appropriate sticker pursuant to the
10617 requirements of Section 218.584(b) or (d) of this Part; or, if the terminal is
10618 driver-loaded, the terminal owner or operator shall be deemed to be in
10619 compliance with this Section when terminal access authorization is limited
10620 to those owners and/or operators of delivery vessels who have provided a
10621 current certification as required by Section 218.584(c)(3) of this Part.
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10623 b) The operator of a bulk gasoline terminal shall:
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10625 1) Operate the terminal vapor collection system and gasoline loading
10626 equipment in a manner that prevents:
10627

10628 A) Gauge pressure from exceeding 18 inches of water and vacuum
10629 from exceeding 6 inches of water as measured as close as possible
10630 to the vapor hose connection; and
10631

10632 B) A reading equal to or greater than 100 percent of the lower
10633 explosive limit (LEL measured as propane) when tested in
10634 accordance with the procedure described in EPA 450/2-78-051
10635 Appendix B, incorporated by reference in Section 218.112 of this
10636 Part; and
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10638 C) Avoidable leaks of liquid during loading or unloading operations.

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- 2) Provide a pressure tap or equivalent on the terminal vapor collection system in order to allow the determination of compliance with Section 218.582(d)(1)(A) of this Part; and
 - 3) 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 (c)(1)(A) or (B) of this Section.

(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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10650 **Section 218.583 Gasoline Dispensing Operations – Storage Tank Filling Operations**
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- a) Subject to subsection (b), no person shall cause or allow the transfer of gasoline from any delivery vessel into any stationary storage tank at a gasoline dispensing operation 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); 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 218.584(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 than 6.0 inches water column; or
 - B) The pressure/vacuum relief valve shall meet the requirements of Section 218.586(c) of this Part; 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

10685 is later, and at least annually thereafter, by measuring and recording the
10686 pressure indicated by a pressure/vacuum gauge at each tank vent pipe.
10687 The test shall be performed on each tank vent pipe within two hours after
10688 product delivery into the respective storage tank. For manifold tank vent
10689 systems, observations at any point within the system shall be adequate.
10690 The owner or operator shall maintain any records required by this
10691 subsection for a period of three years.
10692

- 10693 b) The requirements of subsections (a)(2) and (a)(3) shall not apply to transfers of
10694 gasoline to a stationary storage tank at a gasoline dispensing operation if:
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- 10696 1) The tank is equipped with a floating roof, or other system of equal or
10697 better emission control approved by the Agency and approved by the
10698 USEPA as a SIP revision;
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 - 10700 2) The tank has a capacity of less than 2000 gallons and was in place and
10701 operating before January 1, 1979; or
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 - 10703 3) The tank has a capacity of less than 575 gallons.
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- 10705 c) Subject to subsection (b), each owner of a gasoline dispensing operation shall:
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- 10707 1) Install all control systems and make all process modifications required by
10708 subsection (a);
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 - 10710 2) Provide instructions to the operator of the gasoline dispensing operation
10711 describing necessary maintenance operations and procedures for prompt
10712 notification of the owner in case of any malfunction of a vapor control
10713 system; and
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 - 10715 3) Repair, replace or modify any worn out or malfunctioning component or
10716 element of design.
10717
- 10718 d) Subject to subsection (b), each operator of a gasoline dispensing operation shall:
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- 10720 1) Maintain and operate each vapor control system in accordance with the
10721 owner's instructions;
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 - 10723 2) Promptly notify the owner of any scheduled maintenance or malfunction
10724 requiring replacement or repair of a major component of a vapor control
10725 system;
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 - 10727 3) Maintain gauges, meters or other specified testing devices in proper
10728 working order;
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 - 10730 4) Operate the vapor collection system and delivery vessel unloading points
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- 10731 in a manner that prevents:
10732
10733 A) A reading equal to or greater than 100 percent of the lower
10734 explosive limit (LEL measured as propane) when tested in
10735 accordance with the procedure described in EPA 450/2-78-051
10736 appendix B incorporated by reference in Section 218.112 of this
10737 Part; and
10738
10739 B) Avoidable leaks of liquid during the filling of storage tanks; and
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10741 5) Within 15 business days after discovery of the leak by the owner, operator,
10742 or the Agency, repair and retest a vapor collection system which exceeds
10743 the limits of subsection (d)(4)(A).
10744

10745 (Source: Amended at 38 Ill. Reg. 1032, effective December 23, 2013)
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10747 **Section 218.584 Gasoline Delivery Vessels**
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- 10749 a) Any delivery vessel equipped for vapor control by use of vapor collection
10750 equipment:
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10752 1) Shall have a vapor space connection that is equipped with fittings which
10753 are vapor tight;
10754
10755 2) Shall have its hatches closed at all times during loading or unloading
10756 operations, unless a top loading vapor recovery system is used;
10757
10758 3) Shall not internally exceed a gauge pressure of 18 inches of water or a
10759 vacuum of 6 inches of water;
10760
10761 4) Shall be designed and maintained to be vapor tight at all times during
10762 normal operations;
10763
10764 5) Shall not be refilled in Illinois at other than:
10765
10766 A) A bulk gasoline terminal that complies with the requirements of
10767 Section 218.582 of this Part; or
10768
10769 B) A bulk gasoline plant that complies with the requirements of
10770 Section 218.581(b) of this Part.
10771
10772 6) Shall be tested annually in accordance with Method 27, 40 CFR 60,
10773 Appendix A, incorporated by reference in Section 218.105. Each vessel
10774 must be repaired and retested within 15 business days after discovery of
10775 the leak by the owner, operator, or the Agency, when it fails to sustain:
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- A) A pressure drop of no more than three inches of water in five minutes; and
 - B) A vacuum drop of no more than three inches of water in five minutes.
- b) Any delivery vessel meeting the requirements of subsection (a) of this Section shall have a sticker affixed to the tank adjacent to the tank manufacturer's data plate which contains the tester's name, the tank identification number and the date of the test. The sticker shall be in a form prescribed by the Agency, and, for those delivery vessels subject to 35 Ill. Adm. Code 215 as of December 31, 1987 shall have been displayed no later than December 31, 1987.
- c) The owner or operator of a delivery vessel shall:
- 1) Maintain copies of any test required under subsection (a)(6) of this Section for a period of 3 years;
 - 2) Provide copies of these tests to the Agency upon request; and
 - 3) Provide annual test result certification to bulk gasoline plants and terminals where the delivery vessel is loaded.
- d) Any delivery vessel which has undergone and passed a test in another state which has a USEPA-approved leak testing and certification program will satisfy the requirements of subsection (a) of this Section. Delivery vessels must display a sticker, decal or stencil approved by the state where tested or comply with the requirements of subsection (b) of this Section. All such stickers, decals or stencils shall have been displayed no later than December 31, 1987, for delivery vessels subject to 35 Ill. Adm. Code 215 as of December 31, 1987.

(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

10810 **Section 218.585 Gasoline Volatility Standards (Repealed)**

10811
10812 (Source: Repealed at 37 Ill. Reg. 1669, effective January 28, 2013)

10813
10814 **Section 218.586 Gasoline Dispensing Operations – Motor Vehicle Fueling Operations**

- 10815
10816 a) Definitions. For the purposes of this Section, the following definitions apply.
10817
10818 1) Average monthly volume means the amount of motor vehicle fuel
10819 dispensed per month from a gasoline dispensing operation based upon a
10820 monthly average for the 2-year period of November 1990 through October
10821 1992 or, if not available, the monthly average for the most recent twelve
10822 calendar months. Monthly averages are to include only those months

- 10823 when the operation was operating.
10824
- 10825 2) Certified means any vapor collection and control system which has been
10826 tested and approved by CARB as having a vapor recovery and removal
10827 efficiency of at least 95% (by weight) shall constitute a certified vapor
10828 collection and control system. CARB testing and approval is pursuant to
10829 the CARB manual, incorporated by reference at Section 218.112 of this
10830 Part.
10831
- 10832 3) Completion of installation means the successful passing of one or more of
10833 the following tests applicable to the installed vapor collection and control
10834 system: Dynamic Backpressure Test, Pressure Decay/Leak Test, and
10835 Liquid Blockage Test, incorporated by reference at Section 218.112 of this
10836 Part.
10837
- 10838 4) CARB means California Air Resources Board, P.O. Box 2815,
10839 Sacramento, CA 95812.
10840
- 10841 5) Employee means any person who performs work for an employer.
10842
- 10843 6) Operation means any building, structure, installation, operation or
10844 combination thereof located on contiguous properties and under common
10845 ownership that provides for the dispensing of motor vehicle fuel.
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- 10847 7) Gasoline dispensing operation means any operation where motor vehicle
10848 fuel is dispensed into motor vehicle fuel tanks or portable containers from
10849 a storage tank with a capacity of 2176 liters (575 gallons) or more.
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- 10851 8) Modification means any change, removal or addition, other than an
10852 identical replacement, of any component contained within the vapor
10853 collection and control system.
10854
- 10855 9) Motor vehicle means any self-propelled vehicle powered by an internal
10856 combustion engine including, but not limited to, automobiles and trucks.
10857 Specifically excluded from this definition are watercraft and aircraft.
10858
- 10859 10) Motor vehicle fuel means any petroleum distillate having a Reid vapor
10860 pressure of more than 27.6 kilopascals (kPa) (four pounds per square inch)
10861 and which is used to power motor vehicles.
10862
- 10863 11) Owner or operator means any person who owns, leases, operates,
10864 manages, supervises or controls (directly or indirectly) a gasoline
10865 dispensing operation.
10866
- 10867 12) Reid vapor pressure for gasoline shall be measured in accordance with the
10868 method ASTM D323-08, incorporated by reference in Section 218.112 of

10869 this Part.
10870

10871 13) Vapor collection and control system means any system certified by CARB
10872 which limits the discharge to the atmosphere of motor vehicle fuel vapors
10873 displaced during the dispensing of motor vehicle fuel into motor vehicle
10874 fuel tanks.
10875

10876 b) Applicability. The provisions of subsection (c) shall apply to any gasoline
10877 dispensing operation which dispenses an average monthly volume of more than
10878 10,000 gallons of motor vehicle fuel per month. Compliance shall be required
10879 and demonstrated in accordance with the schedule provided in subsection (d).
10880

10881 c) Vapor Collection and Control Systems. No owner or operator of a gasoline
10882 dispensing operation subject to the requirements of subsection (b) shall cause or
10883 allow the dispensing of motor vehicle fuel at any time from a motor fuel dispenser
10884 unless the dispenser is equipped with and utilizes a vapor collection and control
10885 system which is properly installed and operated as provided in this subsection (c):
10886

10887 1) Any vapor collection and control system installed, used or maintained has
10888 been CARB certified.
10889

10890 2) Any vapor collection and control system utilized is maintained in
10891 accordance with the manufacturer's specifications and the certification.
10892

10893 3) No elements or components of a vapor collection and control system are
10894 modified, removed, replaced or otherwise rendered inoperative in a
10895 manner which prevents the system from performing in accordance with its
10896 certification and design specifications.
10897

10898 4) A vapor collection and control system has no defective, malfunctioning or
10899 missing components.
10900

10901 5) Operators and employees of the gasoline dispensing operation are trained
10902 and instructed in the proper operation and maintenance of a vapor
10903 collection and control system.
10904

10905 6) Instructions are posted in a conspicuous and visible place within the motor
10906 fuel dispensing area and describe the proper method of dispensing motor
10907 vehicle fuel with the use of the vapor collection and control system.
10908

10909 d) Compliance. In conjunction with the compliance provisions of Section 218.105
10910 of this Part, gasoline dispensing operations subject to the requirements of
10911 subsection (c) shall comply and demonstrate compliance according to the
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- 1) Gasoline dispensing operations that operate at any time prior to January 1, 2014 shall comply with subsection (c) until decommissioning is allowed and commenced in accordance with subsections (i)(1) and (i)(2)(B).
 - 2) The provisions of subsection (c) shall not apply to any new gasoline dispensing operation that commences operating for the first time on or after January 1, 2014.
- e) Except as provided in subsection (d), any gasoline dispensing operation that becomes subject to the provisions of subsection (c) at any time shall remain subject to the provisions of subsection (c) at all times.
- f) Upon request by the Agency, the owner or operator of a gasoline dispensing operation which claims to be exempt from the requirements of subsection (c) shall submit records to the Agency within 30 calendar days from the date of the request which demonstrate that the gasoline dispensing operation is in fact exempt.
- g) Recordkeeping and Reporting
- 1) Any gasoline dispensing operation subject to subsection (c) shall retain at the operation copies of the registration information required at subsection (h).
 - 2) Except as provided in subsection (g)(4), records and reports required pursuant to this subsection (g) shall be made available to the Agency upon request.
 - 3) Records and reports, which shall be maintained by the owner or operator of a gasoline dispensing operation subject to subsection (c), shall clearly demonstrate:
 - A) That a certified vapor collection and control system has been installed and tested to verify its performance according to its specifications.
 - B) That proper maintenance has been conducted in accordance with the manufacturer's specifications and requirements.
 - C) The time period and duration of all malfunctions of the vapor collection and control system.
 - D) The motor vehicle fuel throughput of the operation for each calendar month of the previous year.
 - E) That operators and employees are trained and instructed in the

proper operation and maintenance of the vapor collection and control system and informed as to the potential penalties associated with the violation of any provision of this Section.

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- 4) Any and all records relating to decommissioning shall be maintained by the owner or operator of a gasoline dispensing operation for a period of 5 years after completion of decommissioning in accordance with subsection (i). For purposes of this subsection (g)(4), "records" include, but are not limited to, any documents, papers, reports, test results, logs, invoices, forms, certifications and receipts that relate to decommissioning. Records relating to decommissioning shall be made available to the Agency or its designee within 30 minutes after the Agency's, or its designee's, request.
- h) Any gasoline dispensing operation subject to subsection (c) shall comply with the following registration requirements:
 - 1) Upon the installation of a vapor collection and control system, the owner or operator of the gasoline dispensing operation shall submit to the Agency a registration which provides at minimum the operation name and address, signature of the owner or operator, the CARB Executive Order Number for the vapor collection and control system to be utilized, the number of nozzles (excluding diesel or kerosene) used for motor vehicle refueling, the monthly average volume of motor vehicle fuel dispensed, the location (including contact person's name, address, and telephone number) of records and reports required by this Section, and the date of completion of installation of the vapor collection and control system.
 - 2) The registration shall be submitted to the Agency within 30 days after completion of the installation.
 - 3) A copy of the registration information shall be maintained at the gasoline dispensing operation.
 - 4) Upon the modification of an existing vapor collection and control system, the owner or operator of the gasoline dispensing operation shall submit to the Agency a registration that details the changes to the information provided in the previous registration of the vapor collection and control system and which includes the signature of the owner or operator. The registration must be submitted to the Agency within 30 days after completion of the modification.
- i) Decommissioning. The owner or operator of a gasoline dispensing operation subject at any time to subsection (c) shall decommission vapor collection and control systems in accordance with the provisions of this subsection (i).
 - 1) Compliance

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- A) Beginning January 1, 2014, an owner or operator of a gasoline dispensing operation may commence decommissioning of vapor collection and control systems. The decommissioning of vapor collection and control systems must be conducted in accordance with all of the provisions specified in subsection (i)(2).
 - B) No later than December 31, 2016, an owner or operator of a gasoline dispensing operation shall complete the decommissioning of all vapor collection and control systems in accordance with all of the provisions specified in subsection (i)(2).
- 2) Decommissioning Procedures and Standards. The decommissioning of vapor collection and control systems shall be conducted as follows:
- A) The owner or operator of a gasoline dispensing operation shall complete and submit a notice of intent form, provided by the Agency, notifying the Agency of its intent to decommission. The completed notice of intent form shall be submitted to the Agency at least 10 days prior to commencing decommissioning in accordance with subsection (i)(2)(B);
 - B) The owner or operator of a gasoline dispensing operation shall decommission vapor collection and control systems in accordance with all of the procedures specified in Section 14.6, except Section 14.6.14, of the Petroleum Equipment Institute's "Recommended Practices for Installation and Testing of Vapor-Recovery Systems at Vehicle-Fueling Sites", PEI/RP 300-09 (PEI), incorporated by reference at Section 218.112 of this Part. In addition to Section 14.6 of the PEI, the following requirements apply to decommissioning:
 - i) All decommissioning procedures, except testing, shall be performed only by a contractor who is both registered with the Illinois Department of Agriculture, Bureau of Weights and Measures, in the 3-A Gasoline Pump Meters Code pursuant to Section 8.1 of the Weights and Measures Act [225 ILCS 470/8.1] and licensed by the Office of the State Fire Marshal (OSFM) in the installation/retrofitting licensure module pursuant to the Petroleum Equipment Contractors Licensing Act [225 ILCS 729] and implementing regulations at 41 Ill. Adm. Code 172. Any such contractor shall also have the appropriate dispenser-manufacturer certification and training, if any. In the event that product piping must be broken or an OSFM permit is otherwise required for any component of the work, the

- 11052 contractor shall ensure that the OSFM-permitted work is
11053 performed by the appropriate OSFM-licensed contractor
11054 and personnel;
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11056 ii) Decommissioning procedures related to testing shall be
11057 performed only by a contractor who is licensed by OSFM
11058 in the tank tightness testing licensure module pursuant to
11059 the Petroleum Equipment Contractors Licensing Act and
11060 implementing regulations at 41 Ill. Adm. Code 172; and
11061
11062 iii) The pressure decay test required by the PEI shall be passed
11063 in accordance with Appendix A of the PEI. The tie-tank
11064 test required by the PEI shall be conducted and passed in
11065 accordance with CARB TP201.3C to ensure that all tanks
11066 are properly vented; and
11067
11068 C) The owner or operator of a gasoline dispensing operation and the
11069 contractors that performed the decommissioning shall complete
11070 and sign a decommissioning checklist and certification, provided
11071 by the Agency, documenting the decommissioning procedures
11072 performed. Within 30 days after completion of the
11073 decommissioning procedures specified by subsection (i)(2)(B), the
11074 owner or operator shall provide the completed checklist and
11075 certification and the test results to the Agency.

11076
11077 (Source: Amended at 38 Ill. Reg. 1032, effective December 23, 2013)

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11079 **SUBPART Z: DRY CLEANERS**

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11081 **Section 218.601 Perchloroethylene Dry Cleaners (Repealed)**

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11083 (Source: Repealed at 30 Ill. Reg. 9684, effective May 15, 2006)

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11085 **Section 218.602 Applicability (Repealed)**

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11087 (Source: Repealed at 30 Ill. Reg. 9684, effective May 15, 2006)

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11089 **Section 218.603 Leaks (Repealed)**

11090
11091 (Source: Repealed at 30 Ill. Reg. 9684, effective May 15, 2006)

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11093 **Section 218.604 Compliance Dates (Repealed)**

11094
11095 (Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)

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11097 **Section 218.605 Compliance Plan (Repealed)**

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(Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)

Section 218.606 Exception to Compliance Plan (Repealed)

(Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)

Section 218.607 Standards for Petroleum Solvent Dry Cleaners

- a) The owner or operator of a petroleum solvent dry cleaning dryer shall either:
 - 1) Limit emissions of VOM to the atmosphere to an average of 3.5 kilograms of VOM per 100 kilograms dry weight of articles dry cleaned, or
 - 2) Install and operate a solvent recovery dryer in a manner such that the dryer remains closed and the recovery phase continues until a final solvent flow rate of 50 milliliters per minute is attained.
- b) The owner or operator of a petroleum solvent filtration system shall either:
 - 1) Reduce the VOM content in all filtration wastes to 1.0 kilogram or less per 100 kilograms dry weight of articles dry cleaned, before disposal, and exposure to the atmosphere, or
 - 2) Install and operate a cartridge filtration system, and drain the filter cartridges in their sealed housings for 8 hours or more before their removal.

Section 218.608 Operating Practices for Petroleum Solvent Dry Cleaners

In order to minimize fugitive solvent emissions, the owner or operator of a petroleum solvent dry cleaning source shall employ good housekeeping practices including the following:

- a) **General Housekeeping Requirements**
 - 1) Equipment containing solvent (washers, dryers, extractors and filters) shall remain closed at all times except during load transfer and maintenance. Lint filter and button trap covers shall remain closed except when solvent-laden material is being removed.
 - 2) Cans, buckets, barrels and other containers of solvent or of solvent-laden material shall be covered except when in use.
 - 3) Solvent-laden material shall be exposed to the atmosphere only for the minimum time necessary for load transfer.

- 11144 b) Installation and operation of equipment:
11145
11146 1) All cartridge filters shall be enclosed and operated in accordance with the
11147 procedures and specifications recommended by the manufacturer for the
11148 cartridge filter. After installation, the cartridges shall be inspected,
11149 monitored and maintained in accordance with the manufacturer's
11150 recommendations; and
11151
11152 2) Vents on containers for new solvent and for solvent-containing waste shall
11153 be constructed and maintained so as to minimize solvent vapor emissions.
11154 Criteria for the minimization of solvent vapor emissions include the
11155 elimination of solvent buckets and barrels standing open to the
11156 atmosphere, and the repair of gaskets and seals that expose solvent-rich
11157 environments to the atmosphere, to be determined through visual
11158 inspection.
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11160 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
11161

11162 **Section 218.609 Program for Inspection and Repair of Leaks**
11163

- 11164 a) The owner or operator of a petroleum solvent dry cleaning source shall conduct
11165 the following visual inspections on a weekly basis:
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11167 1) Washers, dryers, solvent filters, settling tanks, vacuum stills and
11168 containers and conveyors of petroleum solvent shall be inspected for
11169 visible leaks of solvent liquid.
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11171 2) Pipes, hoses and fittings shall be inspected for active dripping or
11172 dampness.
11173
11174 3) Pumps and filters shall be inspected for leaks around seals and access
11175 covers.
11176
11177 4) Gaskets and seals shall be inspected for wear and defects.
11178
11179 b) Leaks of petroleum solvent liquid and vapors shall be repaired within three
11180 working days of detection, unless necessary replacement parts are not on site.
11181
11182 1) If necessary, repair parts shall be ordered within three working days of
11183 detection of the leak.
11184
11185 2) The leak shall be repaired within three days of delivery of necessary parts.
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11187 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
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11189 **Section 218.610 Testing and Monitoring**

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- a) Compliance with Sections 218.607(b)(2), 218.608 and 218.609 of this Part shall be determined by visual inspection; and
 - b) Compliance with Sections 218.607(a)(2) and (b)(1) of this Part shall be determined by methods described in EPA-450/3-82-009 (1982) incorporated by reference in Section 218.112 of this Part.
 - c) If a control device is used to comply with Section 218.607(a)(1) of this Part, then compliance shall be determined using 40 CFR 60 Appendix A, Method 25 (1984) incorporated by reference in Section 218.112 of this Part.

11202 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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11204 **Section 218.611 Applicability for Petroleum Solvent Dry Cleaners**

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11206 The provisions of Sections 218.607 through 218.610 of this Part shall apply to petroleum solvent
11207 dry cleaning sources that:

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- a) Have maximum theoretical emissions of 90.7 Mg (100 tons) or more per calendar year of VOM, and are not limited to less than 90.7 Mg (100 tons) of VOM emissions per calendar year in the absence of air pollution control equipment through production or capacity limitations contained in a federally enforceable permit or a SIP revision; or

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- b) Have a potential to emit 22.7 Mg (25 tons) or more of VOM per year.

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11217 (Source: Amended at 18 Ill. Reg. 1945, effective January 24, 1994)

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11219 **Section 218.612 Compliance Dates (Repealed)**

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11221 (Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)

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11223 **Section 218.613 Compliance Plan (Repealed)**

11224

11225 (Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)

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11227 **SUBPART AA: PAINT AND INK MANUFACTURING**

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11229 **Section 218.620 Applicability**

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- a) This Subpart shall apply to all paint and ink manufacturing sources which:
 - 1) Include process emission units not subject to Subparts B, E, F (excluding Section 218.204(l) of this Part), H (excluding Section 218.405 of this Part), Q, R, S, T (excluding Section 218.486 of this Part), V, X, Y or Z or

11236 BB of this Part; and which as a group both:
11237

11238 A) Have maximum theoretical emissions of 90.7 Mg (100 tons) or
11239 more per calendar year of VOM if no air pollution control
11240 equipment were used, and
11241

11242 B) Are not limited to less than 90.7 Mg (100 tons) of VOM emissions
11243 per calendar year in the absence of air pollution control equipment,
11244 through production or capacity limitations contained in a federally
11245 enforceable permit or a SIP revision, or
11246

11247 2) Produce more than 7,570,820 l (2,000,000 gal) per calendar year of paint
11248 or ink formulations, which contain less than 10 percent (by weight) water,
11249 and ink formulations not containing as the primary solvents water, Magie
11250 oil or glycol.
11251

11252 b) This Subpart shall also apply to all paint and ink manufacturing sources which:
11253

11254 1) Have the potential to emit 22.7 Mg (25 tons) or more of VOM per year, in
11255 aggregate, from process emission units that:
11256

11257 A) Are not regulated by Subparts B, E, F, H, Q, R, S, T (excluding
11258 Section 218.486), V, X, Y, Z, or BB of this Part, or
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11260 B) Are not included in any of the following categories: synthetic
11261 organic chemical manufacturing industry (SOCMI) distillation,
11262 SOCMI reactors, wood furniture, plastic parts coating (business
11263 machines), plastic parts coating (other), offset lithography,
11264 industrial wastewater, autobody refinishing, SOCMI batch
11265 processing, volatile organic liquid storage tanks and clean-up
11266 solvents operations, or
11267

11268 2) Produce more than 1,892,705 l (500,000 gal) per calendar year of paint or
11269 ink formulations which contain less than 10% (by weight) water, and ink
11270 formulations not containing as the primary solvents water, Magie oil or
11271 glycol.
11272

11273 c) For the purposes of this Subpart, VOM emissions in the absence of air pollution
11274 control equipment are the emissions of VOM which would result if no air
11275 pollution control equipment were used.
11276

11277 (Source: Amended at 18 Ill. Reg. 1945, effective January 24, 1994)
11278

11279 **Section 218.621 Exemption for Waterbase Material and Heatset-Offset Ink**
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11281 The requirements of Sections 218.624 and 218.625 and Section 218.628(a) of this Part shall not

11282 apply to equipment while it is being used to produce either:

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11284 a) Paint or ink formulations which contain 10 percent or more (by weight) water, or

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11286 b) Inks containing Magie oil and glycol as the primary solvent.

11287

11288 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

11289

Section 218.623 Permit Conditions (Repealed)

11290

(Source: Repealed at 18 Ill. Reg. 1945, effective January 24, 1994)

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Section 218.624 Open-Top Mills, Tanks, Vats or Vessels

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11296 No person shall operate an open-top mill, tank, vat or vessel with a volume of more than 45 l (12

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gal) for the production of paint or ink unless:

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a) The mill, tank, vat or vessel is equipped with a cover which completely covers the mill, tank, vat or vessel opening except for an opening no larger than necessary to allow for safe clearance for a mixer shaft. Such cover shall extend at least 1.27

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cm (0.5 in) beyond the outer rim of the opening or be attached to the rim.

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b) The cover remains closed except when production, sampling, maintenance or inspection procedures require access.

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c) The cover is maintained in good condition such that, when in place, it maintains contact with the rim of the opening for at least 90 percent of the circumference of the rim.

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(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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Section 218.625 Grinding Mills

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a) No person shall operate a grinding mill for the production of paint or ink which is not maintained in accordance with the manufacturer's specifications.

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b) No person shall operate a grinding mill fabricated or modified after the effective date of this Subpart which is not equipped with fully enclosed screens.

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c) The manufacturer's specifications shall be kept on file at the plant by the owner or operator of the grinding mill and be made available to any person upon verbal or written request during business hours.

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Section 218.626 Storage Tanks

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a) The owner or operator shall equip tanks storing VOL with a vapor pressure

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11328 greater than 10 kPa (1.5 psi) at 20° C (68° F) with pressure/vacuum conservation
11329 vents set as a minimum at ± 0.2 kPa (0.029 psi). These controls shall be operated
11330 at all times. An alternative air pollution control system may be used if it results in
11331 a greater emission reduction than these controls. Any alternative control system
11332 can be allowed only if approved by the Agency and approved by the USEPA as a
11333 SIP revision.

11334
11335 b) Stationary VOL storage containers with a capacity greater than 946 l (250 gal)
11336 shall be equipped with a submerged-fill pipe or bottom fill. These controls shall
11337 be operated at all times. An alternative control system can be allowed only if
11338 approved by the Agency and approved by the USEPA as a SIP revision.

11339
11340 **Section 218.628 Leaks**

11341
11342 The owner or operator of a paint or ink manufacturing source shall, for the purpose of detecting
11343 leaks, conduct an equipment monitoring program as set forth below:

- 11344
- 11345 a) Each pump shall be checked by visual inspection each calendar week for
11346 indications of leaks, that is, liquids dripping from the pump seal. If there are
11347 indications of liquids dripping from the pump seal, the pump shall be repaired as
11348 soon as practicable, but no later than 15 calendar days after the leak is detected.
 - 11349
 - 11350 b) Any pump, valve, pressure relief valve, sampling connection, open-ended valve
11351 and flange or connector containing a fluid which is at least 10 percent VOM by
11352 weight which appears to be leaking on the basis of sight, smell or sound shall be
11353 repaired as soon as practicable, but no later than 15 calendar days after the leak is
11354 detected.
 - 11355
 - 11356 c) A weather proof, readily visible tag, in bright colors such as red or yellow,
11357 bearing an identification number and the date on which the leak was detected
11358 shall be attached to leaking equipment. The tag may be removed upon repair, that
11359 is, when the equipment is adjusted or otherwise altered to allow operation without
11360 leaking.
 - 11361
 - 11362 d) When a leak is detected, the owner or operator shall record the date of detection
11363 and repair and the record shall be retained at the source for at least two years from
11364 the date of each detection or each repair attempt. The record shall be made
11365 available to any person upon verbal or written request during business hours.

11366
11367 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

11368
11369 **Section 218.630 Clean Up**

- 11370
- 11371 a) No person shall clean paint or ink manufacturing equipment with organic solvent
11372 unless the equipment being cleaned is completely covered or enclosed except for
11373 an opening no larger than necessary to allow safe clearance for proper operation

11374 of the cleaning equipment, considering the method and materials being used.

- 11375
11376 b) No person shall store organic wash solvent in other than closed containers, unless
11377 closed containers are demonstrated to be a safety hazard, or dispose of organic
11378 wash solvent in a manner such that more than 20 percent by weight is allowed to
11379 evaporate into the atmosphere.

11380
11381 **Section 218.636 Compliance Schedule**

11382
11383 Every owner or operator of a source subject to the control requirements of this Subpart shall
11384 comply with the requirements thereof on and after a date consistent with Section 218.106 of this
11385 Part.

11386
11387 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

11388
11389 **Section 218.637 Recordkeeping and Reporting**

- 11390
11391 a) Upon request by the Agency, the owner or operator of an emission source which
11392 claims to be exempt from the requirements of this Subpart shall submit records to
11393 the Agency within 30 calendar days from the date of the request which document
11394 that the emission source is in fact exempt from this Subpart. These records shall
11395 include (but are not limited to) the percent water (by weight) in the paint or ink
11396 being produced and the quantity of Magie oil, glycol and other solvents in the ink
11397 being produced.

- 11398
11399 b) Every owner or operator of a source which is subject to the requirements of this
11400 Subpart shall maintain all records necessary to demonstrate compliance with those
11401 requirements at the source for three years.

11402
11403 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

11404
11405 **SUBPART BB: POLYSTYRENE PLANTS**

11406
11407 **Section 218.640 Applicability**

11408
11409 The provisions of this Subpart shall apply to polystyrene plants:

- 11410
11411 a) Which use continuous processes to manufacture polystyrene-polybutadiene co-
11412 polymer; and
11413
11414 b) Which fall within Standard Industrial Classification Group No. 282, Industry No.
11415 2821, except that the manufacture of polystyrene resins need not be the primary
11416 manufacturing process at the plant.

11417
11418 (Source: Renumbered from Section 218.875 and amended at 17 Ill. Reg. 16636, effective
11419 September 27, 1993)

11420

11421 **Section 218.642 Emissions Limitation at Polystyrene Plants**

11422

11423 No person shall cause or allow the emissions of VOM from the material recovery section to
11424 exceed 0.12 kg of Volatile Organic Material per 1000 kg of polystyrene resin produced.

11425

11426 (Source: Renumbered from Section 218.877 at 17 Ill. Reg. 16636, effective September
11427 27, 1993)

11428

11429 **Section 218.644 Emissions Testing**

11430

11431 a) Upon a reasonable request by the Agency, the owner or operator of a polystyrene
11432 plant subject to this Subpart shall at his own expense demonstrate compliance by
11433 use of the following method: 40 CFR 60, Appendix A, Method 25 -
11434 Determination of Total Gaseous Non-Methane Organic Emissions as Carbon
11435 (1984), incorporated by reference in Section 218.112 of this Part.

11436

11437 b) A person planning to conduct a VOM emissions test to demonstrate compliance
11438 with this Subpart shall notify the Agency of that intent not less than 30 days
11439 before the planned initiation of the tests so the Agency may observe the test.

11440

11441 (Source: Renumbered from Section 218.886 and amended at 17 Ill. Reg. 16636, effective
11442 September 27, 1993)

11443

11444 **SUBPART CC: POLYESTER RESIN PRODUCT MANUFACTURING PROCESS**

11445

11446 **Section 218.660 Applicability**

11447

11448 a) Potential to emit:

11449

11450 1) A source is subject to this Subpart if it is not subject to the requirements of
11451 Subparts PP, QQ, RR and TT and:

11452

11453 A) Not regulated by Subparts B, E, F, H, Q, R, S, T (excluding
11454 Section 218.486), V, X, Y, Z or BB of this Subpart, or

11455

11456 B) Not included in any of the following categories: synthetic organic
11457 chemical manufacturing industry (SOCMI) distillation, SOCMI
11458 reactors, wood furniture, plastic parts coating (business machines),
11459 plastic parts coating (other), offset lithography, industrial
11460 wastewater, autobody refinishing, SOCMI batch processing,
11461 volatile organic liquid storage tanks and clean-up solvent
11462 operations.

11463

11464 2) If a source is subject to this Subpart as provided above, the requirements
11465 of this Subpart shall apply to a source's polyester resin products

- 11466 manufacturing process emission units and associated handling of
11467 materials, cleanup activity, and formulation activity, if any, which are not
11468 regulated by Subparts B, E, F, H, Q, R, S, T, V, X, Y, Z, AA, BB, or DD
11469 of this Subpart.
11470
- 11471 b) If a source ceases to fulfill the criteria of subsection (a) above, the requirements of
11472 this Subpart shall continue to apply to a polyester resin products manufacturing
11473 process emissions unit which was subject to the control requirements of Section
11474 218.666 of this Part.
11475
- 11476 c) For the purposes of this Subpart, an emission unit shall be considered regulated by
11477 a Subpart if it is subject to the limits of that Subpart. An emission unit is
11478 considered not regulated by a Subpart if it is not subject to the limits of that
11479 Subpart, e.g., the emission unit is covered by an exemption in the Subpart or the
11480 applicability criteria of the Subpart are not met.
11481

11482 (Source: Added at 18 Ill. Reg. 1945, effective January 24, 1994)
11483

11484 **Section 218.666 Control Requirements**
11485

- 11486 a) Every owner or operator of a polyester resin products manufacturing process
11487 subject to this Subpart shall comply with the operating requirements below:
11488
- 11489 1) Any of the following:
11490
- 11491 A) Use polyester resin material with a monomer content as follows:
11492
- 11493 i) For polyester resin materials used for products requiring
11494 corrosion resistant or fire retardant materials, a monomer
11495 content of no more than 48% by weight as applied;
11496
- 11497 ii) For polyester resin materials for products requiring a tensile
11498 strength of 10,000 psi or more, including tooling resins, a
11499 monomer content of no more than 48% by weight as
11500 applied;
11501
- 11502 iii) For clear gel coat, a monomer content of no more than 50%
11503 by weight as applied;
11504
- 11505 iv) For other pigmented gel coats, a monomer content of no
11506 more than 45% by weight as applied; or
11507
- 11508 v) For all other polyester resin materials, a monomer content
11509 of no more than 35% by weight as applied.
11510
- 11511 B) Use a closed-mold system or pultrusion system which will result in

- 11512 less than 4% weight loss of polyester resin materials;
11513
11514 C) Use vapor suppressed polyester resin approved by the Agency in
11515 the source's permit such that weight loss from VOM emissions
11516 does not exceed 60 grams per square meter of exposed surface area
11517 during molding; or
11518
11519 D) Use any materials or processes that are demonstrated to the
11520 satisfaction of the Agency to achieve VOM emission levels
11521 equivalent to any of the above. This alternative must be approved
11522 by the Agency and the USEPA in a federally enforceable permit or
11523 as a SIP revision.
11524
11525 2) For spraying operations, in addition to the requirements specified in
11526 Section 218.666(a)(1) above, use only high-volume low pressure (HVLP),
11527 airless, air-assisted airless, or electrostatic spray equipment, except for
11528 touch-up and repair using a hand-held, air-atomized spray gun which has a
11529 container for polyester resin material as part of the gun.
11530
11531 b) Any owner or operator of a polyester resin products manufacturing process
11532 subject to this Subpart shall use closed containers for all polyester resin materials,
11533 cleaning materials which contain VOM (including waste cleaning materials), and
11534 other materials that contain VOM (including waste resin materials) in such a
11535 manner as to effectively control VOM emissions to the atmosphere and in
11536 accordance with the practices described in the certification pursuant to Section
11537 218.670(b)(2)(A).
11538
11539 c) Any owner or operator of a polyester resin products manufacturing process
11540 subject to this Subpart which formulates polyester resin material at the source
11541 shall comply with the following operating requirements:
11542
11543 1) A cover shall be in place on any tank, vat, or vessel with a capacity greater
11544 than 7.5 liters (2 gallons), including a container in which polyester resin
11545 materials are delivered to the source, while polyester resin materials are
11546 being formulated. The cover shall:
11547
11548 A) Completely cover the tank, vat, or vessel opening except for an
11549 opening no larger than necessary to allow for safe clearance for a
11550 mixer shaft;
11551
11552 B) Extend at least 1.27 cm (0.5 inch) beyond the outer rim of the
11553 opening or be attached to the rim;
11554
11555 C) Remain closed except when adding or removing material or when
11556 sampling or inspection procedures require access; and
11557

11558 D) Be maintained in good condition such that, when in place, the
11559 cover maintains contact with the rim of the opening for at least
11560 90% of the circumference of the rim.

11561
11562 2) Carry out emissions shall be minimized when a mixer used for
11563 formulation of polyester resin material is being removed from a tank, vat,
11564 or vessel containing polyester resin material by allowing the material
11565 retained on the mixer blades to drain back into the tank, vat, or vessel
11566 before the mixer is completely removed from the tank, vat, or vessel.

11567
11568 d) Any owner or operator of polyester resin products manufacturing processes
11569 subject to this Subpart which as a group use more than 4 gallons per day of
11570 cleaning materials which contain more than 200 grams of VOM per liter (1.7
11571 pound per gallon) shall use a solvent recovery system for such materials. Solvent
11572 recovery may be done at the source or by using an off-site commercial solvent
11573 recovery service. The waste residue from a solvent recovery system located at the
11574 source shall not contain more than 20% VOM by weight.

11575
11576 (Source: Added at 18 Ill. Reg. 1945, effective January 24, 1994)

11577
11578 **Section 218.667 Compliance Schedule**

11579
11580 Every owner or operator of an emission unit subject to the control requirements of this Subpart
11581 shall comply with the requirements thereof on and after the date consistent with Section 218.106
11582 of this Part.

11583
11584 (Source: Added at 18 Ill. Reg. 1945, effective January 24, 1994)

11585
11586 **Section 218.668 Testing**

11587
11588 a) Testing Methods.

11589
11590 1) The VOM content of fresh cleaning materials shall be determined from
11591 supplier data or by sampling and analysis using EPA Reference Method
11592 24, incorporated by reference in Section 218.112 of this Part.

11593
11594 2) The VOM content of waste residue from a solvent recovery system shall
11595 be determined by sampling and analysis using EPA Reference Method 24,
11596 incorporated by reference in Section 218.112 of the Part.

11597
11598 3) The monomer content of polyester resin materials shall be determined:

11599
11600 A) From supplier data and operating data;

11601
11602 B) By sampling and analysis by the methods set forth in SCAQMD
11603 Method 312-91, incorporated by reference in Section 218.112 of

- 11604 this Part; or
11605
11606 C) By site-specific sampling and analysis methods approved by the
11607 Agency and USEPA in a federally enforceable permit.
11608
11609 4) The weight loss from polyester resin material in a closed-mold system or
11610 pultrusion system during molding shall be determined:
11611
11612 A) From supplier data and operating data;
11613
11614 B) By testing of VOM emissions by the methods set forth in Section
11615 218.105; or
11616
11617 C) By material balance as follows:
11618
11619 Separately weigh the polyester resin material and the
11620 reinforcement materials before they are introduced into the mold.
11621 Weigh the molded product after it has cooled so that it can be
11622 manually handled but no sooner than one hour after removal of the
11623 product from the mold. The percent weight loss shall be
11624 determined according to the following equation:
11625
11626
$$PWL = \frac{[1 - (C - B) \times 100]}{A}$$

11627
11628 Where,
11629
PWL = Percent Weight Loss;
A = Weight of polyester resin materials;
B = Weight of reinforcement material;
C = Weight of cooled molded product after at one
hour elapsed time.
- 11630
11631 D) By site-specific sampling and analysis methods approved by the
11632 Agency and USEPA in a federally enforceable permit.
11633
11634 5) The weight loss from a vapor suppressed polyester resin material square
11635 meter of exposed surface area shall be determined:
11636
11637 A) From supplier data and operating data;
11638
11639 B) By sampling and analysis by the methods set forth in SCAQMD
11640 Method 309-91, incorporated by reference in Section 218.112; or
11641
11642 C) By site-specific sampling and analysis methods approved by the
11643 Agency and USEPA in a federally enforceable permit.

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- 6) In the event of a difference between data obtained by sampling and analysis and other data, the data from sampling and analysis shall govern.
 - b) When in the opinion of the Agency it is necessary to conduct sampling and analysis to demonstrate compliance with Section 218.668 of this Part, the owner or operator of a polyester resin products manufacturing process subject to the requirements of this Subpart shall, at his own expense, conduct such sampling and analysis in accordance with the applicable test methods and procedures specified in subsection (a) above. The Agency's decision to invoke this subsection may be based on such factors including, but not limited to, a change in operation of the polyester resin products manufacturing process, or a reasonable belief that a previous test resulted in erroneous data.
 - c) Nothing in this Section shall limit the authority of USEPA pursuant to the Clean Air Act, as amended, to require sampling and analysis.

11661 (Source: Added at 18 Ill. Reg. 1945, effective January 24, 1994)

11662
11663 **Section 218.670 Recordkeeping and Reporting for Exempt Emission Units**
11664

11665 Upon request by the Agency, the owner or operator of a polyester resin manufacturing process
11666 which is exempt from the requirements of Subpart CC of this Part shall submit to the Agency
11667 records that document that the polyester resin product manufacturing process is exempt from
11668 those requirements. These records shall be submitted within 30 calendar days from the date of
11669 the request.

11670
11671 (Source: Added at 18 Ill. Reg. 1945, effective January 24, 1994)

11672
11673 **Section 218.672 Recordkeeping and Reporting for Subject Emission Units**
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11689
- a) Any owner or operator of a polyester resin products manufacturing process which is subject to the requirements of this Subpart shall comply with the following:
 - 1) By a date consistent with Section 218.106 of this Part, or upon initial start-up of a process subject to this Subpart, the owner or operator of the subject process shall certify to the Agency that the process will be in compliance with Section 218.666(a) of this Subpart on and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date as demonstrated by testing in accordance with Section 218.668 of this Subpart. Such certification shall include:
 - A) The name and identification number of each polyester resin products manufacturing process at the source;
 - B) The name and identification number of each polyester resin

11690 material used in these processes, the means by which it may be
11691 applied and the classification of the polyester resin material under
11692 Section 218.666(a)(1)(A) of this Subpart;
11693
11694 C) The particular operating requirement with which each polyester
11695 resin material will comply, the actual monomer content of the
11696 material (percent by weight) and other relevant data to show
11697 compliance with the operating requirement, including:
11698
11699 i) For each polyester resin material which is classified as a
11700 material used for products requiring corrosion resistant or
11701 fire retardant materials, a material used for products
11702 requiring tensile strength of 10,000 psi or more, or a clear
11703 gel coat, justification for such classification if the material
11704 is applied to comply with the monomer content limitation
11705 of Section 218.666(a)(1)(A)(i), (ii), or (iii), respectively, of
11706 this Subpart;
11707
11708 ii) For each polyester resin material which is applied in a
11709 closed-mold or pultrusion system so as to comply with
11710 Section 218.666(a)(1)(B) of this Subpart, the weight loss
11711 from the polyester resin material (percent by weight) during
11712 molding;
11713
11714 iii) For each polyester resin material which is vapor suppressed
11715 so as to comply with Section 218.666(a)(1)(C) of this
11716 Subpart, the type and content (percent by weight) of
11717 catalyst in the materials, the maximum process temperature
11718 for resin application, the maximum gel time and the weight
11719 loss (grams per square meter exposed surface) during; and
11720
11721 iv) For each polyester resin material which is approved by the
11722 Agency and the USEPA in a federally enforceable permit
11723 or as a SIP revision so as to comply with Section
11724 218.666(a)(1)(D) of this Subpart, information showing the
11725 VOM emissions level which is achieved and the VOM
11726 emissions which would result from compliance with
11727 Section 218.666(a)(1)(A), (B) or (C).
11728
11729 D) A description of the testing which was performed, in accordance
11730 with Section 218.668 of this Part, to determine the monomer
11731 content of polyester resin materials and the information in
11732 subsections (a)(1)(C)(ii), (iii) and (iv) and (a)(1)(D) above,
11733 including data, calculations, and descriptions and results of the
11734 sampling and analysis that the owner or operator has relied upon to
11735 show compliance with Sections 218.666(a)(1) and (2) of this

- 11736 Subpart;
11737
11738 E) For spraying operations, the equipment for spraying polyester resin
11739 materials and the equipment for touch up and repair;
11740
11741 F) The method by which the owner or operator will create and
11742 maintain records required in subsections (b)(2) and (b)(3) below;
11743 and
11744
11745 G) An example of the format in which the records required in
11746 subsections (b)(2) and (b)(3) below will be kept.
11747
11748 2) On and after a date consistent with Section 218.106 of this Part or on and
11749 after initial start-up date, the owner or operator of a subject process shall
11750 collect and record the following information to maintain a complete record
11751 of all polyester resin materials which are used by such polyester resin
11752 products manufacturing process. This information shall be maintained at
11753 the source for a period of three years:
11754
11755 A) The name and identification number of each polyester resin
11756 material used in the process;
11757
11758 B) The particular operating requirement with which each polyester
11759 resin material will comply, the actual monomer content of the
11760 material (percent by weight) and other relevant data to show
11761 compliance with the operating requirement, including:
11762
11763 i) For each polyester resin material which is classified as a
11764 material used for products requiring corrosion resistant or
11765 fire retardant materials, a material used for products
11766 requiring tensile strength of 10,000 psi or more, or a clear
11767 gel coat, justification for such classification if the material
11768 is applied to comply with the monomer content limitation
11769 of Section 218.666(a)(1)(A)(i), (ii), or (iii), respectively, of
11770 this Subpart;
11771
11772 ii) For each polyester resin material which is applied in a
11773 closed-mold or pultrusion system so as to comply with
11774 Section 218.666(a)(1)(B) of this Subpart, the weight loss
11775 from the polyester resin material (percent by weight) during
11776 molding;
11777
11778 iii) For each polyester resin material which is vapor suppressed
11779 so as to comply with Section 218.666(a)(1)(C) of this
11780 Subpart, the type and content (percent by weight) of
11781 catalyst in the material, the maximum process temperature

11782 for resin application, the maximum gel time and the weight
11783 loss (grams per square meter exposed surface) during
11784 molding; and
11785
11786 iv) For each polyester resin material which is approved by the
11787 Agency and the USEPA in a federally enforceable permit
11788 or as a SIP revision so as to comply with Section
11789 218.666(a)(1)(D) of this Subpart, information showing the
11790 VOM emission level which is achieved and the VOM
11791 emissions which would result from compliance with
11792 Section 218.666(a)(1)(A), (B), or (C) of this Subpart;
11793
11794 C) A description of the testing which was performed, in accordance
11795 with Section 218.668 of this Part, to determine the monomer
11796 content of polyester resin materials and the information in
11797 subsections (a)(1)(C)(ii), (iii) and (iv) and (a)(1)(D) above,
11798 including data, calculations, and descriptions and results of the
11799 sampling and analysis that the owner or operator has relied upon to
11800 show compliance with Section 218.666(a)(1) of this Subpart;
11801
11802 D) The processes and applications for which each polyester resin
11803 material may be used in compliance with applicable operating
11804 requirements, including:
11805
11806 i) For each polyester resin material which is classified as a
11807 material used for products requiring corrosion resistant or
11808 fire retardant material or a material used for products
11809 requiring tensile strength of 10,000 psi or more which is
11810 applied to comply with the monomer content limitation of
11811 Section 218.666(a)(1)(A)(i) or (ii), respectively, of this
11812 Subpart, the required products or circumstances for the
11813 materials' use;
11814
11815 ii) For each polyester resin material which is applied in a
11816 closed-mold or pultrusion system so as to comply with
11817 Section 218.666(a)(1)(B) of this Subpart, the required
11818 process temperature and minimum mold cycle time or
11819 maximum pultrusion speed;
11820
11821 iii) For each polyester resin material which is vapor suppressed
11822 so as to comply with Section 218.666(a)(1)(C) of this
11823 Subpart, the required thickness of the manufactured
11824 product, the type and amount of catalyst in the resin, and
11825 the maximum process temperature and maximum gel time;
11826 and
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- iv) For each polyester resin material which is approved by the Agency and approved by the USEPA as a SIP revision so as to comply with Section 218.666(a)(1)(D) of this Subpart, the required process operating conditions or product specifications; and
 - E) For each polyester resin material which is applied in a spraying operation, the type of spray equipment with which the material will be applied so as to comply with Section 218.666(a)(2) of this Subpart.
 - 3) On and after the date consistent with Section 218.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject process shall collect and record all of the following information each day for each process and maintain the information at the source for a period of three years:
 - A) The name, identification number and amount of each polyester resin material applied on each process; and
 - B) The specific data identified pursuant to Section 218.672(a)(2)(D) of this Subpart to confirm that the polyester resin material was applied in such a manner that it complied with the applicable operating requirement.
 - 4) On and after a date consistent with Section 218.106 of this Part, the owner or operator of a subject process shall notify the Agency:
 - A) Of any violation of the operating requirements of this Subpart by sending a copy of such record to the Agency within 30 days following the occurrence of the violation; and
 - B) At least 30 calendar days before changing the method of compliance with this Subpart from one operating requirement among Section 218.666(a)(1)(A), (B), (C), or (D) of this Subpart to another operating requirement, of compliance with all requirements of subsection (a)(1) above. Upon changing the method of compliance with this Subpart from one operating requirement to another, the owner or operator shall comply with all applicable requirements of subsection (a) above.
 - b) Any owner or operator of a polyester resin product manufacturing process subject to the requirements of Subpart CC of this Part shall comply with the following:
 - 1) On a date consistent with Section 218.106 of this Part or upon initial start-up of a new source, the owner or operator of the source shall certify to the

- 11874 Agency that the source will be in compliance with Sections 218.666(b)
11875 and (d) of this Subpart on and after a date consistent with Section 218.106
11876 of this Part, or on or after the initial start-up date. Such certification shall
11877 include:
11878
- 11879 A) A description of the handling practices for polyester resin material,
11880 cleaning materials which contain VOM and waste materials which
11881 contain VOM including the use of closed containers and a
11882 statement that these practices effectively control VOM emissions
11883 to the atmosphere; and
11884
- 11885 B) The usage on a daily basis of each cleanup material which contains
11886 VOM, the VOM content per liter of each such material and
11887 whether a reclamation system is required by Section 218.666(d) of
11888 this Subpart for such material or will be used; a description of the
11889 solvent recovery practices if recovery is required or will be used;
11890 and a statement that where a solvent recovery system is required
11891 and will be at the source, that the waste residue contains 20% or
11892 less VOM by weight.
11893
- 11894 2) On and after a date consistent with Section 218.106 of this Part, or on and
11895 after the initial start-up date, the owner or operator of the process shall
11896 collect and record all the following information and maintain the
11897 information at the source for a period of three years:
11898
- 11899 A) The date, time and duration of scheduled inspections performed to
11900 confirm the proper use of closed containers to control VOM
11901 emissions, and any instances of improper use of closed containers,
11902 with descriptions of actual practice and corrective action taken, if
11903 any;
11904
- 11905 B) Information on a daily basis confirming the proper use of a
11906 recovery system if one is required or is used, including operation
11907 of a recovery system at the source to produce a waste residue that
11908 is 20% or less VOM by weight and information identifying any
11909 observation of noncompliance; and
11910
- 11911 C) Information on a daily basis on the use of cleaning materials which
11912 contain more than 200 grams of VOM per liter (1.7 pound per
11913 gallon) if a recovery system is not required or is not used. This
11914 information shall include the name, identification number, amount
11915 used and VOM content of each such cleaning material.
11916
- 11917 3) On and after a date consistent with Section 218.106 of this Part, the owner
11918 or operator of a subject process shall notify the Agency:
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- A) Of a violation of the requirements of this Subpart with respect to handling practices and solvent recovery for cleaning materials by sending a copy of all such records to the Agency within 30 days following the calendar quarter in which such violation occurred; or
 - B) Within 30 calendar days of changing the handling practices for polyester resin materials, cleaning materials and waste materials or changing source practice with respect to a solvent recovery system for cleaning materials, describing the change.
- c) Any owner or operator of a polyester resin product manufacturing process subject to the requirements of this Subpart that formulates polyester resin material at the source shall comply with the following:
- 1) On a date consistent with Section 218.106 of this Part or upon initial start-up of a new emission unit, the owner or operator of the source shall certify to the Agency that the emission unit will be in compliance with Section 218.666(c) of this Subpart on and after a date consistent with Section 218.106 of this Part or on and after the initial start-up date. Such certification shall include:
 - A) A description of the equipment used for formulation of polyester resin materials, including the types of tanks, vats, and vessels and their size and the types of mixers and the covers associated with this equipment; and
 - B) A description of the practices used to minimize VOM emissions to the atmosphere from formulation activity, including the use and maintenance of covers on tanks, vats, and vessels and drainage of mixers.
 - 2) On and after a date consistent with Section 218.106 of this Part or on and after the initial start-up date, the owner or operator of the process shall collect and record all the following information and maintain the information at the source for a period of three years:
 - A) The date, time, and duration of scheduled inspections to confirm the proper use and maintenance of covers on vats, vessels, and tanks and proper drainage of mixers and any instance of improper use, with description of actual practice and corrective action taken, if any;
 - B) A maintenance log for covers on vats, vessels, and tanks, detailing all routine and non-routine maintenance performed and initial use of new covers, including dates of such activities.

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- 3) On and after a date consistent with Section 218.106 of this Part, the owner or operator of a subject process shall notify the Agency:
- A) Of a violation of the requirements of this Subpart with respect to formulation of polyester resin material by sending a copy of all such records to the Agency within 30 days following the calendar quarter in which such violation occurred: or
- B) Within 30 calendar days of changing the handling practices for formulation of polyester resin materials, describing the change.

(Source: Added at 18 Ill. Reg. 1945, effective January 24, 1994)

SUBPART DD: AEROSOL CAN FILLING

Section 218.680 Applicability

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- a) Potential to emit:
- 1) A source is subject to this Subpart if it is not subject to the requirements of Subparts PP, QQ, RR and TT and has the potential to emit 22.7 Mg (25 tons) or more of VOM per year, in aggregate, from emission units that are:
- A) Not regulated by Subparts B, E, F (excluding Section 218.204(I)), H (excluding Section 218.405), Q, R, S, T (excluding Section 218.486), V, X, Y, Z or BB of this Subpart; or
- B) Not including in any of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, wood furniture, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch processing, volatile organic liquid storage tanks and clean up solvent operations.
- 2) If a source is subject to this Subpart as provided above, the requirements of this Subpart shall apply to a source's aerosol can filling lines and propellant booster pumps, which are not regulated by or addressed by Subparts B, E, F, H, Q, R, S, T, V, X, Y, Z, AA, BB, CC of this Subpart.
- b) If a source ceases to meet the criteria of subsection (a), the requirements of this Subpart shall continue to apply to an aerosol can filling line and propellant booster pump which was subject to the control requirements of Section 218.686 of this Part.
- c) For the purposes of this Subpart, an emission unit shall be considered regulated by

12012 a Subpart if it is subject to the limits of that Subpart. An emission unit is
12013 considered not regulated by a Subpart if it is not subject to the limits of that
12014 Subpart, e.g., the emission unit is covered by an exemption in the Subpart or the
12015 applicability criteria of the Subpart are not met.
12016

12017 (Source: Added at 18 Ill. Reg. 1945, effective January 24, 1994)
12018

12019 **Section 218.686 Control Requirements**
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- 12021 a) Every owner or operator of an aerosol can filling line that is filling cans with a
12022 propellant which contains propane, butane or other VOM subject to this Subpart
12023 shall comply with the following requirements:
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- 12025 1) Emission capture and control techniques which achieve an overall
12026 reduction in uncontrolled VOM emission of at least 81% from the
12027 propellant filling area, also known as the gas house, on each line; or
12028
 - 12029 2) As an alternative to compliance with subsection (a)(1) of this Subpart, the
12030 owner or operator of an aerosol can filling line shall comply with the
12031 following requirements:
12032
- 12033 A) Fill all cans, other than trial runs of cans to verify product quality,
12034 using through-the-valve fill or enhanced under-the-cup fill to
12035 minimize loss of VOM propellant; or use a reclamation system to
12036 recover surplus VOM propellant; or use another system approved
12037 in a federally enforceable permit which achieves at least 75%
12038 reduction of the emissions of under-the-cup fill;
12039
 - 12040 B) Fill on a monthly basis at least 90% of cans filled on such aerosol
12041 can filling lines that are capable of being filled by the through-the-
12042 valve method with through-the-valve fill. All cans shall be
12043 considered capable of being filled by the through-the-valve method
12044 unless, as demonstrated by the records required by Section
12045 218.692(b)(2) of this Part, the valve assembly is not adaptable to
12046 the through-the-valve fill; through-the-valve fill cannot be
12047 accomplished with at least 85% of the under-the-cup operating rate
12048 in cans per minute of filling; or performance, that is the discharge
12049 of the can's contents to accomplish its intended function, is
12050 negatively affected by through-the-valve fill considering factors
12051 such as propellant solubility in the can's contents and the amount
12052 of turbulence which the contents may experience during propellant
12053 filling; and
12054
 - 12055 C) Verify proper filling of cans with a VOM monitoring system in the
12056 gas house. This system may monitor VOM concentration as a
12057 percentage of the lower explosive limit.

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- b) Every owner or operator of a propellant booster pump associated with an aerosol can filling line subject to this Subpart shall comply with one of the following requirements:
- 1) Emission capture and control techniques which achieve an overall reduction in uncontrolled VOM emission of at least 81% from each pump. If the pumps are located in the gas house of a filling line, compliance with this reduction may be achieved by the combination of the pumps located in the gas house and the propellant filling area; or
 - 2) Work practices to prevent leaks from a pump, meaning a loss of VOM from the pump above background levels. Work practices shall include changing seals every four (4) weeks and plungers every 16 weeks unless a pump monitoring procedure approved in a federally enforceable permit establishes otherwise.

(Source: Amended at 19 Ill. Reg. 6848, effective May 9, 1995)

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12076
12077 **Section 218.688 Testing**
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- a) When in the opinion of the Agency it is necessary to conduct testing to demonstrate compliance or verify effectiveness with Section 218.686 of this Part, the owner or operator of a VOM emission unit subject to the requirements of this Subpart shall, at its own expense, conduct such tests in accordance with the applicable test methods and procedures specified in Section 218.105 of this Part.
- b) Nothing in this Section shall limit the authority of the USEPA pursuant to the Clean Air Act, as amended, to require testing.

(Source: Added at 18 Ill. Reg. 1945, effective January 24, 1994)

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12090 **Section 218.690 Recordkeeping and Reporting for Exempt Emission Units**
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12092 Upon request by the Agency, the owner or operator of an aerosol can filling line or propellant
12093 booster pump which is exempt from the requirements of Subpart DD of this Part shall submit to
12094 the Agency records documenting that the aerosol can filling line or propellant booster pump is
12095 exempt from those requirements. These records shall be submitted within 30 calendar days from
12096 the date of the request.

12097
12098 (Source: Added at 18 Ill. Reg. 1945, effective January 24, 1994)
12099

12100 **Section 218.692 Recordkeeping and Reporting for Subject Emission Units**
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- a) Any owner or operator of an aerosol can filling line or propellant booster pump which is subject to the requirements of Subpart DD of this Part and complying by

12104 means of the use of emission capture and control equipment shall comply with the
12105 following:

- 12106
- 12107 1) By a date consistent with Section 218.106 of this Part, or upon initial start-
- 12108 up of an aerosol can filling line or propellant booster pump, the owner or
- 12109 operator of the subject line or pump shall demonstrate to the Agency that
- 12110 the subject line or pump will be in compliance on and after a date
- 12111 consistent with Section 218.106 of this Part, or on and after the initial
- 12112 start-up date by submitting to the Agency all calculations and other
- 12113 supporting data, including descriptions and results of any tests the owner
- 12114 or operator may have performed.
- 12115
- 12116 2) On and after a date consistent with Section 218.106 of this Part, or on and
- 12117 after the initial start-up date, the owner or operator of a subject line or
- 12118 pump shall collect and record all of the following information each day
- 12119 and maintain the information at the source for a period of three years:
- 12120
- 12121 A) Control device monitoring data;
- 12122
- 12123 B) A log of operating time for the capture system, control device,
- 12124 monitoring equipment and the associated lines and pumps; and
- 12125
- 12126 C) A maintenance log for the capture system, control device and
- 12127 monitoring equipment detailing all routine and non-routine
- 12128 maintenance performed including dates and duration of any
- 12129 outages.
- 12130
- 12131 3) On and after a date consistent with Section 218.106 of this Part, the owner
- 12132 or operator of a subject line or pump shall notify the Agency:
- 12133
- 12134 A) Of a violation of the requirements of Subpart DD of this Part by
- 12135 sending a copy of any records showing the violation to the Agency
- 12136 within 30 days following the occurrence of the violation; and
- 12137
- 12138 B) At least 30 calendar days before changing the method of
- 12139 compliance with Subpart DD of this Part from the use of capture
- 12140 systems and control devices to methods of filling cans, including
- 12141 use of a reclamation system or pump work practice, the owner or
- 12142 operator shall comply with the requirements of subsections (b)(1)
- 12143 or (c)(1) below, respectively. Upon changing the method of
- 12144 compliance with Subpart DD of this Part from the use of capture
- 12145 systems and control devices to compliance with the methods of
- 12146 filling cans or work practices, the owner or operator shall comply
- 12147 with all requirements of subsections (b) or (c) below, respectively.
- 12148
- 12149 b) Any owner or operator of an aerosol can filling line which is subject to the

- 12150 requirements of Subpart DD of this Part and complying by means of the methods
12151 of filling cans including use of a reclamation system shall comply with the
12152 following:
12153
- 1) By a date consistent with Section 218.106 of this Part, or upon initial start-
12154 up of a line subject to Subpart DD of this Part, the owner or operator of
12155 the subject line shall certify to the Agency that the line will be in
12156 compliance on and after a date consistent with Section 218.106 of this
12157 Part, or on and after the initial start-up date. Such certification shall
12158 include:
12159
- A) The name and identification number of each line which will
12160 comply by means of the methods of filling cans;
12161
- B) The name and manufacturer's description of the can filling system;
12162
- C) Calculations and other data to demonstrate the propellant losses
12163 with these systems, including a description and results of any test
12164 the owner or operator has performed;
12165
- D) Technical and production data, along with calculations to
12166 demonstrate that the required percentage of cans capable of being
12167 filled by means of through-the-valve fill will be filled using
12168 through-the-valve fill;
12169
- E) For a reclamation system, the parameters which will be monitored
12170 to demonstrate proper system operation, with justification;
12171
- F) For a system approved in a federally enforceable permit,
12172 identification of such permit; and
12173
- G) An example of the records which will be kept pursuant to
12174 subsections (b)(2) and (b)(3) below.
12175
- 2) On and after a date consistent with Section 218.106 of this Part or on and
12176 after the initial start-up date, the owner or operator of a subject line shall
12177 collect and record the following information for each type of product that
12178 is not filled by the through-the-valve method. Information need be
12179 provided pursuant only to subsections (B), (C), (D) and (E) below to the
12180 extent that the information is relied upon by the owner or operator to
12181 demonstrate that a product is not capable of being filled by through-the-
12182 valve method. For this purpose, each formulation in a particular type of
12183 can with a particular type of valve assembly shall be addressed separately
12184 as a unique product considering the range of models of cans and valve
12185 assemblies, e.g., suppliers, sizes and weights of the type used for such
12186 product.
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- A) Identifying information for the product type, including identification and description of the cans' contents, type and model of cans, type and models of valve assembly, and type of propellant and nominal propellant charge;
 - B) Whether the valve assembly is able to be through-the-valve filled;
 - C) Under-the-cup operating rate and projected through-the-valve fill operating rate;
 - D) Information addressing the impact of through-the-valve fill on performance;
 - E) Other supporting data; and
 - F) Whether the product is deemed capable of being filled by the through-the-valve method.
- 3) On and after a date consistent with Section 218.106 of this Part or on and after the initial start-up date, the owner or operator of a subject line shall collect and record all of the following information each day for each line and maintain the information at the source for a period of three years:
- A) Operating data for the line and fill systems;
 - B) For a reclamation system, system monitoring data; and
 - C) Number of cans filled which are capable of being filled by means of through-the-valve fill, determined in accordance with the records kept pursuant to subsection (b)(2) above and percentage of such cans actually filled using through-the-valve fill.
- 4) On and after the date consistent with Section 218.106 of this Part, the owner or operator of a subject line shall notify the Agency:
- A) Of a violation of the requirements of Subpart DD of this Part by sending a copy of any record showing the violation to the Agency within 30 days following the calendar quarter in which the violation occurred;
 - B) At least 30 calendar days before changing the method of compliance with Subpart DD of this Part, from the methods of filling cans to the use of capture systems and control devices, the owner or operator shall comply with all requirements of subsection (a)(1) above. Upon changing the method of compliance, the owner

- 12242 or operator shall comply with all requirements of subsection (a)
12243 above.
12244
- 12245 c) Any owner or operator of a propellant booster pump which is subject to the
12246 requirements of Subpart DD of this Part and complying by means of work
12247 practices, shall comply with the following:
12248
- 12249 1) By a date consistent with Section 218.106 of this Part, or upon initial start-
12250 up of a pump subject to Subpart DD of this Part, the owner or operator of
12251 the subject pump shall certify to the Agency that the pump will be in
12252 compliance on and after a date consistent with Section 218.106 of this
12253 Part, or on and after the initial start-up date. Such certification shall
12254 include:
12255
- 12256 A) The name and identification number of each pump which will
12257 comply by means of work practices;
12258
- 12259 B) The work practices which will be followed for the pump, including
12260 the means which will be used to determine whether the pump is
12261 leaking, that is, experiencing loss of VOM compared to
12262 background levels;
12263
- 12264 C) For work practices approved in a federally enforceable permit,
12265 identification of such permit; and
12266
- 12267 D) An example of the records which will be kept pursuant to
12268 subsection (c)(2) below.
12269
- 12270 2) On and after the date consistent with Section 218.106 of this Part, or on
12271 and after the initial start-up date, the owner or operator of a subject pump
12272 shall collect and record all of the following information each day for each
12273 pump and maintain the information at the source for a period of three
12274 years:
12275
- 12276 A) Operating data for each pump, including date and time a leak in a
12277 pump is detected, date and time a leaking pump is removed from
12278 service and action taken to repair a pump; and
12279
- 12280 B) A maintenance log for the pump, detailing all routine and non-
12281 routine maintenance performed including dates and duration of any
12282 outages.
12283
- 12284 3) On and after a date consistent with Section 218.106 of this Part, the owner
12285 or operator of a subject pump shall notify the Agency:
12286
- 12287 A) Of a violation of the requirements of Subpart DD of this Part by

12288 sending a copy of any record showing the violation to the Agency
12289 within 30 days following the occurrence of the violation;

12290
12291 B) At least 30 calendar days before changing the method of
12292 compliance with Subpart DD of this Part from work practices to
12293 use of emission capture and control equipment, the owner or
12294 operator shall submit a revised certification pursuant to subsection
12295 (a)(1) above. Upon changing the method of compliance with
12296 Subpart DD of this Part, the owner or operator shall comply with
12297 all applicable requirements of subsection (a) above.
12298

12299 (Source: Added at 18 Ill. Reg. 1945, effective January 24, 1994)

12300

12301 SUBPART FF: BAKERY OVENS

12302

12303 **Section 218.720 Applicability (Repealed)**

12304

12305 (Source: Repealed at 20 Ill. Reg. 14428, effective October 17, 1996)

12306

12307 **Section 218.722 Control Requirements (Repealed)**

12308

12309 (Source: Repealed at 20 Ill. Reg. 14428, effective October 17, 1996)

12310

12311 **Section 218.726 Testing (Repealed)**

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12313 (Source: Repealed at 20 Ill. Reg. 14428, effective October 17, 1996)

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12315 **Section 218.727 Monitoring (Repealed)**

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12317 (Source: Repealed at 20 Ill. Reg. 14428, effective October 17, 1996)

12318

12319 **Section 218.728 Recordkeeping and Reporting (Repealed)**

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12321 (Source: Repealed at 20 Ill. Reg. 14428, effective October 17, 1996)

12322

12323 **Section 218.729 Compliance Date (Repealed)**

12324

12325 (Source: Repealed at 20 Ill. Reg. 14428, effective October 17, 1996)

12326

12327 **Section 218.730 Certification (Repealed)**

12328

12329 (Source: Repealed at 20 Ill. Reg. 14428, effective October 17, 1996)

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12331 SUBPART GG: MARINE TERMINALS

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12333 **Section 218.760 Applicability**

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- a) The requirements of this Subpart shall apply to sources that load or who are permitted to load gasoline or crude oil.
 - b) The requirements of this Subpart shall not apply to the following activities:
 - 1) Loading of liquids associated with the fueling of marine vessels; or
 - 2) The transfer of liquids from one marine vessel to another marine vessel.

12344 (Source: Added at 18 Ill. Reg. 16392, effective October 25, 1994)

12345
12346 **Section 218.762 Control Requirements**

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- a) Except as provided at subsection (c) of this Section, every owner or operator of a marine terminal subject to the requirements of this Subpart shall equip each terminal with a vapor collection and control system that:
 - 1) Captures the vapors displaced during the loading event and reduces overall VOM emissions by at least 95% by weight through the use of either a vapor combustion system or a vapor recovery system;
 - 2) Is maintained and operated so that it prevents visible liquid leaks, significant odors, and visible fumes in the liquid transfer and the vapor collection lines, and appurtenances during loading; and
 - 3) Has been certified as required by Coast Guard regulations found at 33 CFR 154.
 - b) From May 1 to September 15, the regulatory control period, every owner or operator of a marine terminal subject to the requirements of this Subpart shall load gasoline or crude oil only into marine vessels that are:
 - 1) Equipped with vapor collection equipment that has been certified as required by Coast Guard regulations found at 46 CFR 39;
 - 2) Connected to the vapor collection system; and
 - 3) Vapor-tight as described in the following subsections (b)(3)(A), (b)(3)(B), (b)(3)(C), or (b)(3)(D) of this Section:
 - A) The owner or operator of the marine terminal shall load each marine vessel with a vacuum assisted vapor collection system, instrumented in such a way that the pump(s) transferring gasoline or crude oil to the marine vessel will not operate unless the vapor collection system is properly connected and properly operating.

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- B) As an alternative to subsection (b)(3)(A) of this Section, the owner or operator of the marine terminal shall obtain documentation as described in Section 218.770(b) of this Subpart that the marine vessel has been vapor-tightness tested within either the preceding 12 months or the preceding 14 months, if the test is being conducted as part of the Coast Guard's reinspection of the vessel required under 46 CFR 31.10-17, using Method 21 of Part 60, Appendix A, incorporated by reference at Section 218.112 of this Part, as described in Section 218.768(b) of this Subpart.
 - C) If there is no documentation of a successful leak test conducted on the marine vessel in either the preceding 12 months or in the preceding 14 months, if the test is being conducted as part of the Coast Guard's reinspection of the vessel required under 46 CFR 31.10-17, the owner or operator of the marine terminal shall require that a leak test of the marine vessel be conducted during the final 20 percent of loading of the marine vessel or shall not load the vessel. The test shall be conducted when the marine vessel is being loaded at the maximum liquid transfer rate for that transfer operation. The owner or operator of the marine terminal shall require that the documentation described in Section 218.770(b) of this Subpart is completed prior to the departure of the vessel.
 - D) If the marine vessel has failed its most recent vapor-tightness leak test at the marine terminal, before the marine vessel can be loaded, the owner or operator of the marine terminal shall require that the owner or operator of the marine vessel provide documentation that the leaks detected during the previous vapor-tightness leak test have been repaired and that the marine vessel has been vapor-tightness tested since the leak(s) has been repaired pursuant to subsection (b)(3)(B) of this Section.
- c) As an alternative to the control requirements of subsections (a) and (b) of this Section, an owner or operator of a marine terminal subject to the control requirements of this Subpart may comply by showing:
- 1) Operation of a vapor collection and control system for the loading of gasoline or crude oil from marine vessels in accordance with the regulations adopted by the USEPA pursuant to Sections 112(d) or 183(f) of the CAA;
 - 2) Reduction of VOM emissions equivalent to the levels in Appendix E of this Part through a federally enforceable emission reduction plan; or
 - 3) An alternate procedure to those described that has been approved by the

12426 Agency and the USEPA in a federally enforceable permit or as a SIP
12427 revision.

- 12428
12429 d) Nothing in this Subpart shall supersede any U.S. Coast Guard regulation that is
12430 more stringent than that contained in this Subpart.

12431
12432 (Source: Added at 18 Ill. Reg. 16392, effective October 25, 1994)

12433
12434 **Section 218.764 Compliance Certification**

12435
12436 By May 1, 1996, or upon initial startup or upon change in method of compliance, the owner or
12437 operator of a source subject to the requirements of this Subpart must certify compliance with the
12438 requirements of this Subpart by submitting to the Agency the following:

- 12439 a) If complying with Sections 218.762(a) and (b), or (c)(1), or (c)(3) of this Subpart:
12440
12441 1) The type of vapor collection and control system utilized;
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12443 2) The date the system was installed;
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12445 3) A demonstration that the vapor collection and control system achieves an
12446 overall efficiency of 95%;
12447
12448 4) A copy of the U.S. Coast Guard certification required under 33 CFR 154;
12449 and
12450
12451 5) The location (including the contact person's name, address, and telephone
12452 number) of the records required by Section 218.770 of this Subpart.
12453
12454 b) If complying with Section 218.762(c)(2) of this Subpart, a federally enforceable
12455 emission reduction plan.
12456
12457 c) If not loading during the 1996 regulatory control period or the 1996 and 1997
12458 regulatory control periods, a statement that the source will not be loading gasoline
12459 or crude oil, the regulatory control period affected, and a date certain when the
12460 requirements of subsection (a) above will be met. Further, if the owner or operator
12461 is also required to comply with the control requirements for marine vessel loading
12462 adopted pursuant to Section 112(d) or Section 183(f) of the CAA, then the above
12463 statement of not loading may extend to subsequent regulatory control periods
12464 until installment and operation of the control equipment is required under Section
12465 112(d) or Section 183(f) of the CAA.
12466

12467 (Source: Added at 18 Ill. Reg. 16392, effective October 25, 1994)

12468
12469 **Section 218.766 Leaks**

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12471

12472 The owner or operator of a marine terminal shall comply with the requirements of Section
12473 218.445 of this Part with respect to all equipment associated with the vapor collection and
12474 control system required by Section 218.762(a) of this Subpart.

12475
12476 (Source: Added at 18 Ill. Reg. 16392, effective October 25, 1994)

12477
12478 **Section 218.768 Testing and Monitoring**

- 12479
- 12480 a) Compliance with Section 218.762(a)(2) of this Subpart shall be determined by
12481 visual inspection and by the leak detection methods contained in Section
12482 218.105(g) of this Part.
 - 12483
 - 12484 b) If the control device used to comply with Section 218.762(a)(1) of this Subpart is
12485 a flare, compliance shall be determined by methods described in Section
12486 218.429(c) of this Part.
 - 12487
 - 12488 c) For all other control devices used to comply with Section 218.762(a)(1) of this
12489 Subpart, compliance shall be determined by methods described in Section
12490 218.105(d) and (f) of this Part.
 - 12491
 - 12492 d) Compliance with Section 218.762(b)(3) of this Subpart shall be determined by
12493 one of the methods described in this Section:
 - 12494
 - 12495 1) A marine vessel loaded in accordance with Section 218.762(b)(3)(A) of
12496 this Subpart through the use of a vacuum assisted vapor collection system
12497 is assumed to be vapor-tight for the purposes of this Subpart.
 - 12498
 - 12499 2) A vapor-tightness test for marine vessels shall be conducted to include the
12500 final 20 percent of loading of each product tank of the marine vessel, and
12501 it shall be applied to any potential sources of vapor leaks on the vessel
12502 pursuant to Method 21 of 40 CFR 60, Appendix A, incorporated by
12503 reference at Section 218.112 of this Part. A reading of 10,000 ppmv or
12504 greater as methane shall constitute a leak.
 - 12505
 - 12506 3) As an alternative to subsection (d)(2) of this Section, an owner or operator
12507 of a marine terminal may use the vapor-tightness test described in 40 CFR
12508 61.304(f), incorporated by reference at Section 218.112 of this Part.
 - 12509
 - 12510 e) When in the opinion of the Agency or USEPA it is necessary to conduct testing to
12511 demonstrate compliance with or verify effectiveness of the vapor collection and
12512 control system required by Section 218.762(a), (c)(1), or (c)(3) of this Subpart,
12513 the owner or operator of a marine terminal shall, at its own expense, conduct such
12514 tests in accordance with the applicable test methods and procedures specified in
12515 subsections (a), (b), or (c) of this Section, as applicable.
 - 12516
 - 12517 f) An owner or operator of a marine terminal planning to conduct a VOM emissions

12518 test to demonstrate compliance with Sections 218.762(a), (c)(1), or (c)(3) of this
12519 Subpart shall notify the Agency of that intent not less than 30 days before the
12520 planned initiation of the tests so that the Agency may observe the test.
12521

12522 (Source: Added at 18 Ill. Reg. 16392, effective October 25, 1994)
12523

12524 **Section 218.770 Recordkeeping and Reporting**
12525

12526 a) The owner or operator of sources complying with Sections 219.762(a) and (b), or
12527 (c)(1), or (c)(3) of this Subpart shall maintain records regarding the marine
12528 terminal, and each time a marine vessel is loaded during the regulatory control
12529 period. The records shall include but are not limited to:
12530

- 12531 1) The date(s) and the time(s) at which the marine vessel was loaded from
12532 the marine terminal;
- 12533 2) The name, type, identification number, and owner of the vessel loaded;
- 12534 3) The type and amount of liquid loaded into the marine vessel;
- 12535 4) Records of any leaks found, repair attempts, and the results of the required
12536 fugitive monitoring and maintenance program, including appropriate
12537 dates, test methods, instrument readings, repair results, and corrective
12538 action taken as required by Sections 218.762(a)(2) and 218.766 of this
12539 Subpart;
- 12540 5) A copy of the Coast Guard certification demonstrating that the marine
12541 terminal's vapor collection and control system has been certified as
12542 required by Coast Guard regulations found at 33 CFR 154; and
12543 6) A copy of the Coast Guard certification demonstrating that the marine
12544 vessel has been inspected and certified as required by Coast Guard
12545 regulations found at 46 CFR 39. If a copy of the Coast Guard certificate is
12546 not available at the time of loading, then the date that the marine vessel
12547 was last inspected and the authorization that the marine vessel has
12548 functioning vapor control equipment must be recorded from the certificate.
12549 Further, a copy of the certificate must be obtained by the owner or
12550 operator of the marine terminal within 21 days after the loading event.
12551

12552 b) Owners or operators complying with Sections 218.762(b)(3)(B), (b)(3)(C), or
12553 (b)(3)(D) shall additionally maintain the following records concerning the vapor-
12554 tightness of the marine vessel:
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- 12556 1) Test title;
- 12557 2) Owner of the marine vessel tested;
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- 3) The identification number of the marine vessel tested;
 - 4) Testing location;
 - 5) Tester name and signature;
 - 6) Witnessing inspector, name, signature, and affiliation; and
 - 7) Test results.
- c) Owners or operators complying with the requirements of Section 218.762(c)(2) of this Subpart shall maintain records of daily product volumes loaded to demonstrate that the applicable emission reduction specified in Appendix E of this Part has been achieved.
- d) Owners or operators certifying compliance under Section 218.764(c) shall maintain the records specified in subsections (a)(1), (a)(2), and (a)(3) above.
- e) All records required by subsections (a), (b), (c), and (d) of this Section shall be maintained for at least three years and shall be made available to the Agency upon request.

(Source: Added at 18 Ill. Reg. 16392, effective October 25, 1994)

SUBPART HH: MOTOR VEHICLE REFINISHING

Section 218.780 Emission Limitations

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- a) Except as provided in Section 218.782 of this Subpart, no owner or operator of a motor vehicle refinishing operation shall coat motor vehicles, mobile equipment, or their parts and components, unless all coatings, except touch-up coatings, never exceed the VOM content limitations in this Section, expressed as units of VOM per volume of coating applied at each coating applicator, minus water and any compounds that are specifically exempted from the definition of VOM. The VOM content limitations are as follows:

	kg/l	(lb/gal)
1) Pretreatment wash primer	0.78	(6.5)
2) Precoat	0.66	(5.5)
3) Primer/primer surfacer coating	0.58	(4.8)
4) Primer sealer	0.55	(4.6)

5)	Topcoat system or basecoat/clearcoat	0.60	(5.0)
6)	Three or four stage topcoat system	0.63	(5.2)
7)	Specialty coatings	0.84	(7.0)
8)	Anti-glare/safety coating	0.84	(7.0)

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b) All coating shall be used according to manufacturer's specifications. If a coating requires the addition of a reducer, hardener, or other additive, in some combination, this addition must not cause the coating, as applied, to exceed the applicable VOM content limitation.

c) Specialty coatings shall represent no more than 5 percent, by volume, of all coatings applied at a source on a monthly basis.

d) The following equations shall be used to calculate the VOM content of topcoat systems:

1) The VOM content of basecoat/clearcoat systems shall be calculated in units of kg VOM/l (lbs VOM/gal) of coating, (minus water and any compounds which are specifically exempted from the definition of VOM), according to the following equation:

$$VOM_{T_{bc/cc}} = (VOM_{bc} + 2 VOM_{cc}) / 3$$

Where:

$VOM_{T_{bc/cc}}$ = The weighted average of the VOM content, as applied, in units of kg VOM/l (lbs VOM/gal) of coating, (minus water and any compounds which are specifically exempted from the definition of VOM), in the basecoat (bc) and clearcoat (cc) system;

VOM_{bc} = The VOM content, as applied, in units of kg VOM/l (lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM), of any given basecoat; and

VOM_{cc} = The VOM content, as applied, in units of kg VOM/l (lbs VOM/gal) of coating, (minus water and any compounds which are specifically exempted from the definition of VOM), of any given clearcoat.

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2) The VOM content for a three stage coating system shall be calculated in

12624 units of kg VOM/l (lbs VOM/gal) of coating, (minus water and any
12625 compounds which are specifically exempted from the definition of VOM),
12626 according to the following formula:
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$$VOM T_{ms} = (VOM_{bc} + VOM_{mc} + 2 VOM_{cc}) / 4$$

12629 Where:
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VOM T_{ms} = The weighted average of the VOM content, as applied,
in units of kg VOM/l (lbs VOM/gal) of coating, (minus
water and any compounds which are specifically
exempted from the definition of VOM), in the basecoat,
midcoat and clearcoat system;

VOM_{bc} = The VOM content, as applied, in units of kg VOM/l
(lbs VOM/gal) of coating, (minus water and any
compounds which are specifically exempted from the
definition of VOM), of any given basecoat;

VOM_{mc} = The VOM content, as applied, in units of kg VOM/l
(lbs VOM/gal) of coating, (minus water and any
compounds which are specifically exempted from the
definition of VOM), of any given midcoat; and

VOM_{cc} = The VOM content, as applied, in units of kg VOM/l
(lbs VOM/gal) of coating, (minus water and any
compounds which are specifically exempted from the
definition of VOM), of any given clearcoat.

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12633 3) The VOM content for a four stage coating system shall be calculated in
12634 units of kg VOM/l (lbs VOM/gal) of coating, (minus water and any
12635 compounds which are specifically exempted from the definition of VOM),
12636 according to the following formula:
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$$VOM T_{ms} = (VOM_{bc} + VOM_{mc1} + VOM_{mc2} + 2 VOM_{cc}) / 5$$

12639 Where:
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VOM T_{ms} = The weighted average of the VOM content, as applied,
in units of kg VOM/l (lbs VOM/gal) of coating, (minus
water and any compounds which are specifically
exempted from the definition of VOM), in the basecoat,
midcoats and clearcoat system;

- VOM_{bc} = The VOM content, as applied, in units of kg VOM/l (lbs VOM/gal) of coating, (minus water and any compounds which are specifically exempted from the definition of VOM), of any given basecoat;
- VOM_{mc1} = The VOM content, as applied, in units of kg VOM/l (lbs VOM/gal) of coating, (minus water and any compounds which are specifically exempted from the definition of VOM), of the first midcoat;
- VOM_{mc2} = The VOM content, as applied, in units of kg VOM/l (lbs VOM/gal) of coating, (minus water and any compounds which are specifically exempted from the definition of VOM), of the second midcoat; and
- VOM_{cc} = The VOM content, as applied, in units of kg VOM/l (lbs VOM/gal) of coating, (minus water and any compounds which are specifically exempted from the definition of VOM), of any given clearcoat.

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(Source: Added at 19 Ill. Reg. 6848, effective May 9, 1995)

Section 218.782 Alternative Control Requirements

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As an alternative to complying with the VOM content limitations in Section 218.780 of this Subpart, the owner or operator of a motor vehicle refinishing operation may operate control equipment that reduces VOM emissions at the source by at least 90 percent as provided in either subsection (a) or (b) of this Section.

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- a) An owner or operator may operate an afterburner or carbon adsorber; or
- b) An owner or operator may use an equivalent alternative control plan, other than an afterburner or carbon adsorber, if approved by the Agency and USEPA through federally enforceable permit conditions.

12657
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(Source: Added at 19 Ill. Reg. 6848, effective May 9, 1995)

Section 218.784 Equipment Specifications

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Every owner or operator of a motor vehicle refinishing operation, unless the source uses less than 20 gallons of coating per calendar year from all motor vehicle refinishing operations combined, shall:

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- a) Coat motor vehicles, mobile equipment, or their parts and components using one of the following coating applicators:
 - 1) Electrostatic spray equipment calibrated, operated and maintained in

- 12670 accordance with the manufacturer's specifications;
12671
12672 2) High Volume Low Pressure (HVL) spray equipment calibrated, operated
12673 and maintained in accordance with the manufacturer's specifications; or
12674
12675 3) An equivalent coating applicator technology that is demonstrated by the
12676 manufacturer to achieve transfer efficiency comparable to the HVL spray
12677 equipment technology listed in subsection (a)(2) of this Section for a
12678 comparable operation, and for which written approval has been obtained
12679 from USEPA. The owner or operator must maintain documentation of
12680 USEPA's approval at the motor vehicle refinishing operation; and
12681
12682 b) Clean all coating applicators with a device that:
12683
12684 1) Recirculates solvent during the cleaning process;
12685
12686 2) Collects spent solvent so it is available for disposal or recycling; and
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12688 3) Minimizes evaporation of solvents during cleaning, rinsing, draining, and
12689 storage.

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12691 (Source: Amended at 37 Ill. Reg. 1669, effective January 28, 2013)

12692
12693 **Section 218.786 Surface Preparation Materials**
12694

12695 Every owner or operator of a motor vehicle refinishing operation only shall use surface
12696 preparation materials that never exceed the following VOM content limitations for the specified
12697 substrate:
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		kg/l	(lb/gal)
a)	Plastic parts	0.78	(6.5)
b)	Other substrates	0.17	(1.4)

12699
12700 (Source: Added at 19 Ill. Reg. 6848, effective May 9, 1995)

12701
12702 **Section 218.787 Work Practices**
12703

- 12704 a) Every owner or operator of a motor vehicle refinishing operation shall ensure that
12705 fresh and spent solvent, cloth or paper used to apply solvents for surface
12706 preparation or cleanup, waste paint, and sludge are stored in closed containers.
12707
12708 b) Every owner or operator of a motor vehicle refinishing operation that is exempt
12709 from the equipment specifications in Section 218.784 of this Subpart because it
12710 uses less than 20 gallons of coating per year shall direct solvent used to clean
12711 coating applicator equipment and paint lines into a container for proper disposal

12712 or recycling.

12713

12714 (Source: Added at 19 Ill. Reg. 6848, effective May 9, 1995)

12715

12716 **Section 218.788 Testing**

12717

12718 a) Upon request by the Agency, the owner or operator of a motor vehicle refinishing
12719 operation shall, at its own expense, conduct tests to demonstrate compliance with
12720 Sections 218.780, 218.782 or 218.786 of this Subpart, in accordance with the
12721 applicable test methods and procedures specified in Section 218.105 of this Part
12722 and shall:

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12724 1) Notify the Agency 30 days prior to conducting such tests; and

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12726 2) Submit all test results to the Agency within 45 days after conducting the
12727 requisite tests.

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12729 b) For purposes of this Section, surface preparation materials shall be treated as
12730 coatings.

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12732 c) Nothing in this Section shall limit the authority of USEPA pursuant to the Clean
12733 Air Act, as amended, to require testing, or shall affect the authority of USEPA
12734 under Section 114 of the Clean Air Act (42 U.S.C. 7414 (1990)).

12735

12736 (Source: Added at 19 Ill. Reg. 6848, effective May 9, 1995)

12737

12738 **Section 218.789 Monitoring and Recordkeeping for Control Devices**

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12740 a) Every owner or operator of a motor vehicle refinishing operation that complies
12741 with this Subpart pursuant to Section 218.782 of this Subpart shall:

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12743 1) Install and operate equipment to continuously monitor each control device
12744 as specified in Section 218.105(d)(2)(A) of this Part;

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12746 2) Keep records of parameters for control devices as monitored pursuant to
12747 subsection (a)(1) of this Section;

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12749 3) Keep logs of operating time of the control device and monitoring
12750 equipment;

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12752 4) Keep logs of maintenance of the control device and monitoring
12753 equipment; and

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12755 5) Maintain all records required in this Section for the most recent
12756 consecutive three year period and make all such records available to the
12757 Agency immediately upon request.

12758
12759 b) An owner or operator may monitor with an alternative method or monitor other
12760 parameters than specified in subsection (a)(1) of this Section, if approved by the
12761 Agency and USEPA through federally enforceable permit conditions.
12762

12763 (Source: Added at 19 Ill. Reg. 6848, effective May 9, 1995)
12764

12765 **Section 218.790 General Recordkeeping and Reporting (Repealed)**
12766

12767 (Source: Repealed at 30 Ill. Reg. 9684, effective May 15, 2006)
12768

12769 **Section 218.791 Compliance Date**
12770

12771 Every owner or operator of a motor vehicle refinishing operation shall comply with the
12772 requirements of this Subpart by March 15, 1996, upon modification or upon initial startup.
12773

12774 (Source: Added at 19 Ill. Reg. 6848, effective May 9, 1995)
12775

12776 **Section 218.792 Registration (Repealed)**
12777

12778 (Source: Repealed at 37 Ill. Reg. 1669, effective January 28, 2013)
12779

12780 **Section 218.875 Applicability of Subpart BB (Renumbered)**
12781

12782 (Source: Renumbered to Section 218.640 at 17 Ill. Reg. 16636, effective September 27,
12783 1993)
12784

12785 **Section 218.877 Emissions Limitation at Polystyrene Plants (Renumbered)**
12786

12787 (Source: Renumbered to Section 218.642 at 17 Ill. Reg. 16636, effective September 27,
12788 1993)
12789

12790 **Section 218.879 Compliance Date (Repealed)**
12791

12792 (Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)
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12794 **Section 218.881 Compliance Plan (Repealed)**
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12796 (Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)
12797

12798 **Section 218.883 Special Requirements for Compliance Plan (Repealed)**
12799

12800 (Source: Repealed at 17 Ill. Reg. 16636, effective September 27, 1993)
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12802 **Section 218.886 Emissions Testing (Renumbered)**
12803

12804 (Source: Renumbered to Section 218.644 at 17 Ill. Reg. 16636, effective September 27,
12805 1993)

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12807 **SUBPART II: FIBERGLASS BOAT MANUFACTURING MATERIALS**
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12809 **Section 218.890 Applicability**
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- 12811 a) Except as provided in subsection (b) of this Section, on and after May 1, 2012, the
12812 requirements of this Subpart shall apply to the owners or operators of sources that
12813 manufacture hulls or decks of boats from fiberglass, or that build molds to make
12814 hulls or decks of boats from fiberglass, and that emit 6.8 kg/day (15 lbs/day) or
12815 more of VOM, calculated in accordance with Section 218.894(a)(1)(B), from
12816 open molding resin and gel coat operations, resin and gel coat mixing operations,
12817 and resin and gel coat application equipment cleaning operations, in the absence
12818 of air pollution control equipment. If a source is subject to this Subpart based
12819 upon such criteria, the limitations of this Subpart shall apply to the manufacture of
12820 all fiberglass boat parts at the source.
12821
- 12822 b) Notwithstanding subsection (a) of this Section, the requirements of this Subpart
12823 shall not apply to the following:
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- 12825 1) Surface coatings applied to fiberglass boats;
 - 12826 2) Industrial adhesives used in the assembly of fiberglass boats. Polyester
12827 resin putties used to assemble fiberglass parts shall not be considered
12828 industrial adhesives for purposes of this exclusion;
 - 12829 3) Closed molding operations.
12830
- 12831 c) If a source is or becomes subject to one or more of the limitations in this Subpart,
12832 the source is always subject to the applicable provisions of this Subpart.
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- 12834 d) The owner or operator of a source exempt from the limitations of this Subpart
12835 because of the criteria in this Section is subject to the recordkeeping and reporting
12836 requirements specified in Section 218.894(a) of this Subpart.
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12840 (Source: Added at 34 Ill. Reg. 14174, effective September 14, 2010)

12841 **Section 218.891 Emission Limitations and Control Requirements**
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- 12843 a) Except as provided in subsection (f) of this Section, no owner or operator of a
12844 source subject to the requirements of this Subpart shall use a subject resin or gel
12845 coat at the source unless the resin and gel coat comply with subsection (b)(1) or
12846 (b)(2), (c), or (d) of this Section, as well as with subsections (e), (g), and (h) of
12847 this Section. For sources complying pursuant to subsection (b) or (c) of this
12848 Section, if the non-monomer VOM content of a resin or gel coat exceeds 5
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12850 percent, by weight, the excess non-monomer VOM shall be added to the
 12851 monomer VOM content of the resin or gel coat. The excess non-monomer VOM
 12852 shall be calculated in accordance with the following equation:
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$$\frac{\text{Excess Non-Monomer VOM}}{\text{Monomer VOM}} = \frac{\text{Non-monomer VOM Content}}{- 5 \text{ percent, by weight}}$$

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 12855 b) VOM Content Limitations
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12857 1) Except as provided in subsection (e) of this Section, the monomer VOM
 12858 content of a subject resin or gel coat shall not exceed the following
 12859 limitations:
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	Weighted average monomer VOM content (weight percent)
A) Production resin	
i) Atomized spray	28
ii) Non-atomized	35
B) Pigmented gel coat	33
C) Clear gel coat	48
D) Tooling resin	
i) Atomized	30
ii) Non-atomized	39
E) Tooling gel coat	40

12861 2) Except as provided in subsection (e) of this Section, the weighted average
 12862 monomer VOM content of a subject resin or gel coat shall not exceed the
 12863 applicable limitation set forth in subsection (b)(1) of this Section on a 12-
 12864 month rolling average basis. Equation 1 below shall be used to determine
 12865 the weighted average monomer VOM content for resin and gel coat
 12866 materials.
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12868 Equation 1:
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$$\text{Weighted Average Monomer VOM Content} = \frac{\sum_{i=1}^n M_i \text{VOM}_i}{\sum_{i=1}^n M_i}$$

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where:

M_i = Mass of open molding resin or gel coat (i) used in the past 12 months in an operation, in megagrams;

VOM_i = Monomer VOM content, by weight percent, of open molding resin or gel coat (i) used in the past 12 months in an operation;

n = Number of different open molding resins or gel coats used in the past 12 months in an operation.

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c) Emissions Averaging Alternative. The owner or operator of a source subject to the requirements of this Subpart may elect to include some or all of the subject resin and gel coat operations at the source in the emissions averaging alternative. Resin and gel coat operations utilizing the emissions averaging alternative shall comply with a source-specific monomer VOM mass emission limit on a 12-month rolling average basis, calculated at the end of each calendar month. All subject resin and gel coat operations that do not utilize the emissions averaging alternative shall comply with the requirements in subsection (b) or (d) of this Section, as well as with all other applicable requirements in this Section.

1) The owner or operator of a source subject to this subsection (c) shall use Equation 2 to determine the source-specific monomer VOM mass emission limit for resin and gel coats included in the emissions average:

Equation 2:

$$\text{Monomer VOM Limit} = 46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})$$

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where:

Monomer VOM Limit = Total allowable monomer VOM that can be emitted from the open molding operations included in the average, expressed in kilograms per 12-month period;

M_R = Mass of production resin used in the past 12 months, excluding any materials that are exempt, expressed in megagrams (Mg);

- M_{PG} = Mass of pigmented gel coat used in the past 12 months, excluding any materials that are exempt, expressed in Mg;
- M_{CG} = Mass of clear gel coat used in the past 12 months, excluding any materials that are exempt, expressed in Mg;
- M_{TR} = Mass of tooling resin used in the past 12 months, excluding any materials that are exempt, expressed in Mg;
- M_{TG} = Mass of tooling gel coat used in the past 12 months, excluding any materials that are exempt, expressed in Mg.

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The numerical coefficients associated with each term on the right hand side of Equation 2 are the allowable monomer VOM emission rates for that particular material in units of kg VOM/Mg of material used.

- 2) At the end of the first 12-month averaging period, and at the end of each subsequent month, the owner or operator of a source subject to this subsection (c) shall use Equation 3 to calculate the monomer VOM emissions from the resin and gel coat operations included in the emissions average. The monomer VOM emissions calculated using Equation 3 shall not exceed the monomer VOM limit calculated using Equation 2.

Equation 3:

$$\begin{aligned} \text{Monomer VOM Emissions} = & (PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + \\ & (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG}) \end{aligned}$$

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where:

- Monomer VOM Emissions = Monomer VOM emissions calculated using the monomer VOM emission equations for each operation included in the average, expressed in kilograms;
- PV_R = Weighted-average monomer VOM emission rate for production resin used in the past 12 months, expressed in kg/Mg, calculated in accordance with Equation 4 in subsection (c)(3);
- M_R = Mass of production resin used in the past 12 months, expressed in Mg;

- PV_{PG} = Weighted-average monomer VOM emission rate for pigmented gel coat used in the past 12 months, expressed in kg/Mg, calculated pursuant to Equation 4;
- M_{PG} = Mass of pigmented gel coat used in the past 12 months, expressed in Mg;
- PV_{CG} = Weighted-average monomer VOM emission rate for clear gel coat used in the past 12 months, expressed in kg/Mg, calculated pursuant to Equation 4;
- M_{CG} = Mass of clear gel coat used in the past 12 months, expressed in Mg;
- PV_{TR} = Weighted-average monomer VOM emission rate for tooling resin used in the past 12 months, expressed in kg/Mg, calculated pursuant to Equation 4;
- M_{TR} = Mass of tooling resin used in the past 12 months, expressed in Mg;
- PV_{TG} = Weighted-average monomer VOM emission rate for tooling gel coat used in the past 12 months, expressed in kg/Mg, calculated pursuant to Equation 4;
- M_{TG} = Mass of tooling gel coat used in the past 12 months, expressed in Mg.

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- 3) For purposes of Equation 3, the owner or operator of a source subject to this subsection (c) shall use Equation 4 to calculate the weighted-average monomer VOM emission rate for the previous 12 months for each resin and gel coat operation included in the emissions average, except as provided in subsection (e) of this Section.

Equation 4:

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$$PV_{OP} = \frac{\sum_{i=1}^n M_i PV_i}{\sum_{i=1}^n M_i}$$

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where:

PV_{OP} = Weighted-average monomer VOM emission rate for each open molding operation (PV_R, PV_{PG}, PV_{CG}, PV_{TR}, and

PV_{TG}) included in the average, expressed in kg of monomer VOM per Mg of material applied;

M_i = Mass of resin or gel coat (i) used within an operation in the past 12 months, expressed in Mg;

n = Number of different open molding resins and gel coats used within an operation in the past 12 months;

PV_i = The monomer VOM emission rate for resin or gel coat (i) used within an operation in the past 12 months, expressed in kg of monomer VOM per Mg of material applied. The monomer VOM emission rate formulas in subsection (c)(4) of this Section shall be used to compute PV_i . If a source includes filled resins in the emissions average, the source shall use the value of PV_F , calculated using Equation 5 in subsection (e)(3) of this Section, as the value of PV_i for those resins;

i = Subscript denoting a specific open molding resin or gel coat applied.

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4) For purposes of Equation 4 and subsection (e)(3) of this Section, the following monomer VOM emission rate formulas shall apply. Such formulas calculate monomer VOM emission rates in terms of kg of monomer VOM per Mg of resin or gel coat applied. "VOM%" means the monomer VOM content as supplied, expressed as a weight percent value between 0 and 100 percent:

A) Production resin, tooling resin:

- i) Atomized: $0.014 \times (\text{Resin VOM}\%)^{2.425}$
- ii) Atomized, plus vacuum bagging with roll-out: $0.01185 \times (\text{Resin VOM}\%)^{2.425}$
- iii) Atomized, plus vacuum bagging without roll-out: $0.00945 \times (\text{Resin VOM}\%)^{2.425}$
- iv) Nonatomized: $0.014 \times (\text{Resin VOM}\%)^{2.275}$
- v) Nonatomized, plus vacuum bagging with roll-out: $0.0110 \times (\text{Resin VOM}\%)^{2.275}$
- vi) Nonatomized, plus vacuum bagging without roll-out: $0.0076 \times (\text{Resin VOM}\%)^{2.275}$

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- B) Pigmented gel coat, clear gel coat, tooling gel coat: $0.445 \times (\text{Gel Coat VOM}\%)^{1.675}$
- d) Capture System and Control Device Requirements. No owner or operator of a source subject to the requirements of this Subpart that is utilizing a capture system and control device for a subject resin or gel coat operation shall conduct that operation unless the following requirements are satisfied:
- 1) An afterburner or carbon adsorber is installed and operated that meets the limitations set forth in this subsection (d). The owner or operator may use an emissions control system other than an afterburner or carbon adsorber if that device complies with all limitations in this subsection (d), the owner or operator submits a plan to the Agency detailing appropriate monitoring devices, test methods, recordkeeping requirements, and operating parameters for the control device, and the plan is approved by the Agency and approved by USEPA as a SIP revision;
 - 2) The VOM emissions at the outlet of the control device meet an emissions limitation determined using Equation 2 in subsection (c)(1) of this Section. In Equation 2, however, instead of using the mass of each material used over the past 12 months to determine the emission limitation, the owner or operator shall use the mass of each material used during the applicable control device performance test;
 - 3) The owner or operator complies with all testing and monitoring requirements set forth in Section 218.892 of this Subpart.
- e) Filled Resins. For all filled production and tooling resins, the owner or operator of a source subject to this Subpart shall adjust the monomer VOM emission rates determined pursuant to subsections (b) and (c) of this Section using Equation 5 in subsection (e)(3). If complying pursuant to subsection (b), the emission rate determined using Equation 5 shall not exceed the limitations set forth in subsections (e)(1) and (e)(2) of this Section. If complying pursuant to subsection (c), the value of PV_F , calculated using Equation 5, shall be used as the value of PV_i in Equation 4, as set forth in subsection (c)(3) of this Section. If the non-monomer VOM content of a filled resin exceeds 5 percent, by weight, based on the unfilled resin, the excess non-monomer VOM shall be added to the monomer VOM content in accordance with the equation set forth in subsection (a).
- 1) Tooling Resin: 54 kg (119.1 lbs) monomer VOM/Mg filled resin applied;
 - 2) Production Resin: 46 kg (101.4 lbs) monomer VOM/Mg filled resin applied;
 - 3) Equation 5:

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$$PV_F = PV_U \times \frac{100 - \% \text{ Filler}}{100}$$

where:

- PV_F = The as-applied monomer VOM emission rate for the filled production resin or tooling resin, expressed in kg monomer VOM per Mg of filled material;
- PV_U = The monomer VOM emission rate for the unfilled resin, before filler is added, expressed in kg monomer VOM per Mg, as calculated using the formulas in Section 218.891(c)(4) of this Subpart;
- % Filler = The weight-percent of filler in the as-applied filled resin system.

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- f) The limitations in subsections (a) through (e) of this Section shall not apply to the following materials. These materials shall instead comply with the applicable requirements set forth in subsections (f)(1) through (f)(3).
- 1) Production resins, including skin coat resins, that must meet specifications for use in military vessels or must be approved by the United States Coast Guard for use in the construction of lifeboats, rescue boats, and other life-saving appliances approved under 46 CFR Subchapter Q, incorporated by reference in Section 218.112 of this Part, or for use in the construction of small passenger vessels regulated by 40 CFR Subchapter T, incorporated by reference in Section 218.112 of this Part. The owner or operator of a source subject to this Subpart shall apply all such resins with nonatomizing resin application equipment;
 - 2) Production and tooling resins, and pigmented, clear, and tooling gel coats used for part or mold repair and touch ups. These materials shall not exceed 1 percent, by weight, of all resins and gel coats used at a subject source on a 12-month rolling average basis;
 - 3) Pure, 100 percent vinylester resins used for skin coats. The owner or operator of a source subject to this Subpart shall apply these resins with non-atomizing resin application equipment, and the total amount of the resins shall not exceed 5 percent, by weight, of all resins used at the subject source on a 12-month rolling-average basis.
- g) No owner or operator of a source subject to this Subpart shall use VOM-containing cleaning solutions to remove cured resins and gel coats from fiberglass boat manufacturing application equipment. Additionally, no owner or operator

13029 shall use VOM-containing cleaning solutions for routine cleaning of application
13030 equipment unless:

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- 13032 1) The VOM content of the cleaning solution is less than or equal to 5
13033 percent, by weight; or
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- 13035 2) The composite vapor pressure of the cleaning solution is less than or equal
13036 to 0.50 mmHg at 68°F.
- 13037
- 13038 h) No owner or operator of a source subject to this Subpart shall use resin or gel coat
13039 mixing containers with a capacity equal to or greater than 208 liters (55 gallons),
13040 including those used for on-site mixing of putties and polyputties, unless such
13041 containers have covers with no visible gaps in place at all times, except when
13042 material is being manually added to or removed from a container or when mixing
13043 or pumping equipment is being placed in or removed from a container.

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13045 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)

13046

13047 **Section 218.892 Testing and Monitoring Requirements**

13048

- 13049 a) Testing to demonstrate compliance with the requirements of Section 218.891 of
13050 this Subpart shall be conducted by the owner or operator by May 1, 2012.
13051 Thereafter, testing shall be conducted within 90 days after a request by the
13052 Agency, or as otherwise specified in this Subpart. The testing shall be conducted
13053 at the expense of the owner or operator and the owner or operator shall notify the
13054 Agency in writing 30 days in advance of conducting the testing to allow the
13055 Agency to be present during testing.
- 13056
- 13057 b) Testing to demonstrate compliance with the monomer VOM content limitations
13058 for resin and gel coat materials in Section 218.891(b) of this Subpart shall be
13059 conducted upon request of the Agency, or as otherwise specified in this Subpart,
13060 in accordance with SCAQMD 312-91, incorporated by reference in Section
13061 218.112 of this Part.
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- 13063 c) The owner or operator of a source complying with this Subpart pursuant to
13064 Section 218.891(d) shall comply with the following:
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- 13066 1) By May 1, 2012, or upon initial start-up, whichever is later, and upon
13067 start-up of a new control device, conduct an initial performance test of the
13068 control device in accordance with this subsection (c) that demonstrates
13069 compliance with the emission limitation determined pursuant to Section
13070 218.891(d).
- 13071
- 13072 2) Subsequent to the initial performance test described in subsection (c)(1) of
13073 this Section, conduct at least one performance test per calendar year.
13074 Performance tests used to demonstrate compliance with Section

- 13075 218.891(d) shall be conducted at least six months apart, unless the
13076 performance test is being conducted following an exceedance of operating
13077 parameters as described in subsection (c)(3) of this Section, or per a
13078 request by the Agency.
13079
- 13080 3) Monitor and record relevant operating parameters, including the control
13081 efficiency of the control device and the amount of materials used in the
13082 fiberglass boat manufacturing process, during each control device
13083 performance test used to demonstrate compliance with Section 218.891(d).
13084 The owner or operator shall continue to operate the fiberglass boat
13085 manufacturing process within the parameters until another performance
13086 test is conducted that demonstrates compliance with Section 218.891(d).
13087 The owner or operator shall monitor the parameters at all times when the
13088 control device is in operation. If the fiberglass boat manufacturing process
13089 exceeds any operating parameter by more than 10 percent, the owner or
13090 operator shall conduct additional performance testing in accordance with
13091 this Section within 10 operating days after the exceedance.
13092
- 13093 4) The methods and procedures of Section 218.105(d) and (f) shall be used
13094 for testing to demonstrate compliance with the requirements of Section
13095 218.891(d) of this Subpart, as follows:
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- 13097 A) To select the sampling sites, Method 1 or 1A, as appropriate, 40
13098 CFR 60, appendix A, incorporated by reference at Section 218.112
13099 of this Part. The sampling sites for determining efficiency in
13100 reducing VOM from the dryer exhaust shall be located between the
13101 dryer exhaust and the control device inlet, and between the outlet
13102 of the control device and the exhaust to the atmosphere;
13103
- 13104 B) To determine the volumetric flow rate of the exhaust stream,
13105 Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A,
13106 incorporated by reference at Section 218.112 of this Part;
13107
- 13108 C) To determine the VOM concentration of the exhaust stream
13109 entering and exiting the control device, Method 25 or 25A, as
13110 appropriate, 40 CFR 60, appendix A, incorporated by reference at
13111 Section 218.112 of this Part. For thermal and catalytic
13112 afterburners, Method 25 must be used except under the following
13113 circumstances, in which case Method 25A must be used:
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- 13115 i) The allowable outlet concentration of VOM from the
13116 control device is less than 50 ppmv, as carbon;
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- 13118 ii) The VOM concentration at the inlet of the control device
13119 and the required level of control result in exhaust
13120 concentrations of VOM of 50 ppmv, or less, as carbon; and

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- iii) Due to the high efficiency of the control device, the anticipated VOM concentration at the control device exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or 25A. If the retest is conducted using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest again using Method 25;
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- D) Notwithstanding the criteria or requirements in Method 25, which specifies a minimum probe temperature of 129°C (265°F), the probe must be heated to at least the gas stream temperature of the dryer exhaust, typically close to 176.7°C (350°F); and
 - E) During testing, the fiberglass boat manufacturing operation shall be operated at representative operating conditions and flow rates.
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- 5) If an afterburner is used to demonstrate compliance, the owner or operator shall:
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 - A) Install, calibrate, operate, and maintain temperature monitoring devices with an accuracy of 3°C or 5°F on the emissions control system in accordance with Section 218.105(d)(2) of this Part and in accordance with the manufacturer's specifications. Monitoring shall be performed at all times when the emissions control system is operating; and
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 - B) Install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring devices, such as a strip chart, recorder or computer, with at least the same accuracy as the temperature monitor.
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- 6) If a carbon adsorber is used to demonstrate compliance, the owner or operator shall use Agency and USEPA approved continuous monitoring equipment that is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use. The

- 13167 continuous monitoring equipment shall monitor the VOM concentration of
13168 each carbon adsorption bed exhaust or the exhaust of the bed next in
13169 sequence to be desorbed.
13170
- 13171 7) If an emissions control system other than an afterburner or carbon
13172 adsorber is used to demonstrate compliance, the owner or operator shall
13173 install, maintain, calibrate, and operate the monitoring equipment as set
13174 forth in the owner's or operator's plan approved by the Agency and
13175 USEPA pursuant to Section 218.891(d).
13176
- 13177 d) Testing to demonstrate compliance with the VOM content limitations for cleaning
13178 solutions in Section 218.891(g) of this Subpart, and with the non-monomer VOM
13179 content limitations for resin and gel coat materials in Section 218.891(a) of this
13180 Subpart, shall be conducted upon request of the Agency, or as otherwise specified
13181 in this Subpart, as follows:
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- 13183 1) The applicable test methods and procedures specified in Section
13184 218.105(a) of this Part shall be used; provided, however, Method 24,
13185 incorporated by reference at Section 218.112 of this Part, shall be used to
13186 demonstrate compliance; or
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- 13188 2) For cleaning solvents, the manufacturer's specifications for VOM content
13189 may be used if the manufacturer's specifications are based on results of
13190 tests of the VOM content conducted in accordance with methods specified
13191 in Section 218.105(a) of this Part; provided, however, Method 24 shall be
13192 used to determine compliance. In the event of any inconsistency between
13193 a Method 24 test and the manufacturer's specifications, the Method 24 test
13194 shall govern.
13195
- 13196 e) The owner or operator of a source subject to this Subpart and relying on the VOM
13197 content of the cleaning solution to comply with Section 218.891(g)(1) of this
13198 Subpart shall:
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- 13200 1) For cleaning solutions that are prepared at the source with equipment that
13201 automatically mixes cleaning solvent and water (or other non-VOM):
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- 13203 A) Install, operate, maintain, and calibrate the automatic feed
13204 equipment in accordance with manufacturer's specifications to
13205 regulate the volume of each of the cleaning solvent and water (or
13206 other non-VOM), as mixed; and
13207
- 13208 B) Pre-set the automatic feed equipment so that the consumption rates
13209 of the cleaning solvent and water (or other non-VOM), as applied,
13210 comply with Section 218.891(g)(1);
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13212 2) For cleaning solutions that are not prepared at the source with automatic
13213 feed equipment, keep records of the usage of cleaning solvent and water
13214 (or other non-VOM) as set forth in Section 218.894(g) of this Subpart.
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13216 f) Testing to demonstrate compliance with the VOM composite partial vapor
13217 pressure limitation for cleaning solvents set forth in Section 218.891(g) of this
13218 Subpart shall be conducted in accordance with the applicable methods and
13219 procedures set forth in Section 218.110 of this Part.
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13221 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)
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13223 **Section 218.894 Recordkeeping and Reporting Requirements**
13224

13225 a) The owner or operator of a source exempt from the limitations of this Subpart
13226 because of the criteria in Section 218.890(a) of this Subpart shall:
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13228 1) By May 1, 2012, or upon initial start-up, whichever is later, submit a
13229 certification to the Agency that includes the following:
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13231 A) A declaration that the source is exempt from the requirements in
13232 this Subpart because of the criteria in Section 218.890(a);
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13234 B) Calculations that demonstrate that combined emissions of VOM
13235 from all subject fiberglass boat manufacturing operations
13236 (including solvents used for cleanup operations associated with the
13237 fiberglass boat manufacturing operation) at the source never equal
13238 or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution
13239 control equipment. To calculate daily emissions of VOM, the
13240 owner or operator shall determine the monthly emissions of VOM
13241 from fiberglass boat manufacturing operations at the source
13242 (including solvents used for cleanup operations associated with the
13243 fiberglass boat manufacturing operations) and divide the amount
13244 by the number of days during that calendar month that the
13245 fiberglass boat manufacturing operations were in operation;
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13247 2) Collect and record the following information and provide copies of the
13248 records to the Agency upon request:
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13250 A) The total pounds of all resins and gel coats used per calendar
13251 month;
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13253 B) The total gallons of all cleanup materials used per calendar month;
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13255 C) The VOM content of each resin, gel coat, and cleanup material
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- D) The total VOM emissions, in pounds, for all resins, gel coats, and cleanup materials employed per calendar month, before the application of control systems and devices.
 - 3) Notify the Agency of any record that shows that the combined emissions of VOM from subject fiberglass boat manufacturing operations at the source, including related cleaning activities, ever equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, within 30 days after the event occurs, and provide copies of the record upon request by the Agency.
 - b) All sources subject to the requirements of this Subpart shall:
 - 1) By May 1, 2012, or upon initial start-up of the source, whichever is later, and upon start-up of a new fiberglass boat manufacturing operation at the source, submit a certification to the Agency that includes:
 - A) Identification of each subject fiberglass boat manufacturing operation as of the date of certification;
 - B) A declaration that all subject fiberglass boat manufacturing operations, including related cleaning operations, are in compliance with the requirements of this Subpart;
 - C) The limitation with which each subject fiberglass boat manufacturing operation will comply (i.e., the VOM content limitation, the emissions averaging alternative, or the emissions control system alternative);
 - D) Initial documentation that each subject fiberglass boat manufacturing operation will comply with the applicable limitation, including copies of manufacturer's specifications, test results (if any), formulation data, and calculations;
 - E) Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;
 - F) A description of the practices and procedures that the source will follow to ensure compliance with the limitations in Section 218.891(h) of this Subpart;
 - G) A description of each fiberglass boat manufacturing operation exempt pursuant to Section 218.890(b) of this Subpart, if any;

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- H) A description of materials subject to Section 218.891(f) of this Subpart, if any, used in each fiberglass boat manufacturing operation;
 - 2) At least 30 calendar days before changing the method of compliance in accordance with Section 218.891(b), (c), and (d), notify the Agency in writing of the change. The notification shall include a demonstration of compliance with the newly applicable subsection;
 - 3) Notify the Agency in writing of any violation of the requirements of this Subpart within 30 days following the occurrence of the violation and provide records documenting the violation upon request by the Agency;
 - 4) Retain all records required by this Section for at least three years and make those records available to the Agency upon request.
- c) The owner or operator of a fiberglass boat manufacturing operation subject to the limitations of Section 218.891 of this Subpart and complying by means of Section 218.891(b) shall comply with the following.
- 1) By May 1, 2012, or upon initial start-up, whichever is later, submit a certification to the Agency that includes the name, identification number, and VOM content of each subject resin and gel coat as applied each day by each subject fiberglass boat manufacturing operation;
 - 2) Collect and record the following information each day for each fiberglass boat manufacturing operation complying with Section 218.891(b):
 - A) The name, identification number, and VOM content of each subject resin and gel coat as applied each day by each fiberglass boat manufacturing operation; and
 - B) If complying with Section 218.891(b)(2), the mass of each open molding resin or gel coat as applied each month by each subject fiberglass boat manufacturing operation and the weighted average VOM content of all subject resins and gel coats as applied by each subject fiberglass boat manufacturing operation.
- d) The owner or operator of a fiberglass boat manufacturing operation subject to the requirements of Section 218.891 of this Subpart and complying by means of Section 218.891(c) shall:
- 1) On and after May 1, 2012, collect and record the following information each month:

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- A) The amount of production resin, pigmented gel coat, clear gel coat, tooling resin, and tooling gel coat used in each subject fiberglass boat manufacturing operation;
 - B) The VOM content of each production resin, pigmented gel coat, clear gel coat, tooling resin, and tooling gel coat used in each subject fiberglass boat manufacturing operation;
 - C) Total monthly VOM emissions for all subject fiberglass boat manufacturing operations;
- 2) At the end of the first 12-month averaging period, and at the end of each subsequent month, collect and record the following information:
- A) The monomer VOM mass emission limit for all subject fiberglass boat manufacturing operations for the applicable 12-month averaging period, with supporting calculations;
 - B) The total actual emissions of VOM from all subject fiberglass boat manufacturing operations for the applicable 12-month averaging period.
- e) The owner or operator of a fiberglass boat manufacturing operation subject to the requirements of Section 218.891 of this Subpart and complying by means of Section 218.891(d) shall:
- 1) By May 1, 2012, or upon initial start-up, whichever is later, and upon start-up of a new control device, submit a certification to the Agency that includes the following:
 - A) The type of control device used to comply with the requirements of Section 218.891(d);
 - B) The results of all tests and calculations necessary to demonstrate compliance with the requirements of Section 218.891(d); and
 - C) A declaration that the monitoring equipment required under Section 218.892 of this Subpart has been properly installed and calibrated according to manufacturer's specifications;
 - 2) Within 90 days after conducting testing pursuant to Section 218.892, submit to the Agency a copy of all test results, as well as a certification that includes the following:
 - A) A declaration that all tests and calculations necessary to demonstrate whether the fiberglass boat manufacturing operation is

- 13393 in compliance with Section 218.891(d) have been properly
13394 performed;
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- 13396 B) A statement whether the fiberglass boat manufacturing operations
13397 are or are not in compliance with Section 218.891(d);
- 13398
- 13399 C) The emissions limitation applicable during the control device
13400 performance test, with supporting calculations;
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- 13402 D) The operating parameters of the fiberglass boat manufacturing
13403 process during testing, as monitored in accordance with Section
13404 218.892;
- 13405
- 13406 3) Collect and record daily the following information for each fiberglass boat
13407 manufacturing operation subject to the requirements of Section
13408 218.891(d), and submit that information to the Agency upon request:
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- 13410 A) Afterburner or other approved control device monitoring data in
13411 accordance with Section 218.892 of this Subpart;
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- 13413 B) A log of operating time for the control device and monitoring
13414 equipment;
- 13415
- 13416 C) A maintenance log for the control device and monitoring
13417 equipment detailing all routine and non-routine maintenance
13418 performed, including dates and duration of any outages;
- 13419
- 13420 D) Information to substantiate that the fiberglass boat manufacturing
13421 operation is operating in compliance with the parameters
13422 determined pursuant to Section 218.892.
- 13423
- 13424 f) The owner or operator of a source subject to the requirements in Section
13425 218.891(f) of this Subpart shall collect and record the following information for
13426 each fiberglass boat manufacturing operation:
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- 13428 1) The name and identification number of each material subject to Section
13429 218.891(f) as applied each day by each subject fiberglass boat
13430 manufacturing operation;
- 13431
- 13432 2) If subject to Section 218.891(f)(2), the amount of production and tooling
13433 resins, and pigmented, clear, and tooling gel coats used for part or mold
13434 repair and touch-ups, used each month at the subject source, and the total
13435 amount of all resins and gel coats used each month at the subject source;
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- 3) If subject to Section 218.891(f)(3), the amount of pure, 100 percent vinyl ester resins used for skin coats each month at the subject source, and the total amount of all resins used each month at the subject source.

 - g) The owner or operator of a source subject to the requirements of Section 218.891 of this Subpart shall collect and record the following information for each cleaning solution used in each fiberglass boat manufacturing operation:
 - 1) For each cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.891(g) of this Subpart and that is prepared at the source with automatic equipment:
 - A) The name and identification of each cleaning solution;
 - B) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.892(d) of this Subpart;
 - C) Each change to the setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);
 - D) The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;
 - E) The VOM content of the as-used cleaning solution, with supporting calculations; and
 - F) A calibration log for the automatic equipment, detailing periodic checks;
 - 2) For each batch of cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.891(g), and that is not prepared at the source with automatic equipment:
 - A) The name and identification of each cleaning solution;
 - B) Date and time of preparation, and each subsequent modification, of the batch;
 - C) The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.892(d);
 - D) The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and

- 13483
13484 E) The VOM content of the as-used cleaning solution, with
13485 supporting calculations;
13486
13487 3) For each batch of cleaning solution for which the owner or operator relies
13488 on the vapor pressure of the cleaning solution to demonstrate compliance
13489 with Section 218.891(g):
13490
13491 A) The name and identification of each cleaning solution;
13492
13493 B) Date and time of preparation, and each subsequent modification, of
13494 the batch;
13495
13496 C) The molecular weight, density, and VOM composite partial vapor
13497 pressure of each cleaning solvent, as determined in accordance
13498 with Section 218.892(f) of this Subpart;
13499
13500 D) The total amount of each cleaning solvent, including water, used to
13501 prepare the as-used cleaning solution; and
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13503 E) The VOM composite partial vapor pressure of each as-used
13504 cleaning solution, as determined in accordance with Section
13505 218.110 of this Part.
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13507 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)
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13509 **SUBPART JJ: MISCELLANEOUS INDUSTRIAL ADHESIVES**
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13511 **Section 218.900 Applicability**
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- 13513 a) Except as provided in subsection (b) of this Section, on and after May 1, 2012, the
13514 requirements of this Subpart shall apply to miscellaneous industrial adhesive
13515 application operations at sources where the total actual VOM emissions from all
13516 such operations, including related cleaning activities, equal or exceed 6.8 kg/day
13517 (15 lbs/day), calculated in accordance with Section 218.904(a)(1)(B), in the
13518 absence of air pollution control equipment.
13519
13520 b) Notwithstanding subsection (a) of this Section:
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13522 1) The requirements of this Subpart shall not apply to miscellaneous
13523 industrial adhesive application operations associated with the following:
13524
13525 A) Aerospace coatings;
13526
13527 B) Metal furniture coatings;
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- 13529 C) Large appliance coatings;
- 13530
- 13531 D) Flat wood paneling coatings;
- 13532
- 13533 E) Paper, film, and foil coatings;
- 13534
- 13535 F) Lithographic printing;
- 13536
- 13537 G) Letterpress printing;
- 13538
- 13539 H) Flexible package printing;
- 13540
- 13541 I) Coil coating;
- 13542
- 13543 J) Fabric coating;
- 13544
- 13545 K) Rubber tire manufacturing.
- 13546
- 13547 2) The requirements of Section 218.901(b) through (e) of this Subpart shall
- 13548 not apply to the following:
- 13549
- 13550 A) Adhesives or adhesive primers being tested or evaluated in any
- 13551 research and development operation or quality assurance or
- 13552 analytical laboratory;
- 13553
- 13554 B) Adhesives or adhesive primers used in the assembly, repair, or
- 13555 manufacture of aerospace or undersea-based weapon systems;
- 13556
- 13557 C) Adhesives or adhesive primers used in medical equipment
- 13558 manufacturing operations;
- 13559
- 13560 D) Cyanoacrylate adhesive application operations;
- 13561
- 13562 E) Aerosol adhesive and aerosol adhesive primer application
- 13563 operations;
- 13564
- 13565 F) Operations using polyester bonding putties to assemble fiberglass
- 13566 parts at fiberglass boat manufacturing facilities and at other
- 13567 reinforced plastic composite manufacturing facilities;
- 13568
- 13569 G) Operations using adhesives and adhesive primers that are supplied
- 13570 to the manufacturer in containers with a net volume of 0.47 liters
- 13571 (16 oz) or less, or a net weight of 0.45 kg (1 lb) or less.
- 13572
- 13573 c) If a miscellaneous industrial adhesive application operation at a source is or
- 13574 becomes subject to one or more of the limitations in this Subpart, the

13575 miscellaneous industrial adhesive application operation is always subject to the
 13576 applicable provisions of this Subpart.

13577
 13578 d) The owner or operator of a source exempt from the emission limitations and
 13579 control requirements of this Subpart because of the criteria in subsection (a) of
 13580 this Section is subject to the recordkeeping and reporting requirements specified
 13581 in Section 218.904(a) of this Subpart.
 13582

(Source: Added at 34 Ill. Reg. 14174, effective September 14, 2010)

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 13584
 13585 **Section 218.901 Emission Limitations and Control Requirements**
 13586

13587 a) The owner or operator of a source subject to the requirements of this Subpart shall
 13588 comply with the limitations in subsection (b), (c), or (d) of this Section, as well as
 13589 with the limitations in subsections (e) and (f) of this Section. Notwithstanding
 13590 this requirement, sources subject to Section 218.900(b)(2) shall comply with the
 13591 limitations in subsection (f) of this Section only.
 13592

13593 b) The owner or operator of adhesive application operations listed in this subsection
 13594 (b) shall comply with the following VOM emission limitations, minus water and
 13595 any compounds that are specifically exempted from the definition of VOM, as
 13596 applied. If an adhesive is used to bond dissimilar substrates together, the substrate
 13597 category with the highest VOM emission limitation shall apply:
 13598

		kg VOM/l adhesive or adhesive primer applied	lb VOM/gal adhesive or adhesive primer applied
1)	General adhesive application operations		
	A) Reinforced plastic composite	0.200	(1.7)
	B) Flexible vinyl	0.250	(2.1)
	C) Metal	0.030	(0.3)
	D) Porous material (except wood)	0.120	(1.0)
	E) Rubber	0.250	(2.1)
	F) Wood	0.030	(0.3)
	G) Other substrates	0.250	(2.1)
2)	Specialty adhesive application operations		

A)	Ceramic tile installation	0.130	(1.1)
B)	Contact adhesive	0.250	(2.1)
C)	Cove base installation	0.150	(1.3)
D)	Indoor floor covering installation	0.150	(1.3)
E)	Outdoor floor covering installation	0.250	(2.1)
F)	Installation of perimeter bonded sheet flooring	0.660	(5.5)
G)	Metal to urethane/rubber molding or casting	0.850	(7.1)
H)	Motor vehicle adhesive	0.250	(2.1)
I)	Motor vehicle weatherstrip adhesive	0.750	(6.3)
J)	Multipurpose construction	0.200	(1.7)
K)	Plastic solvent welding (acrylonitrile butadiene styrene (ABS) welding)	0.400	(3.3)
L)	Plastic solvent welding (except ABS welding)	0.500	(4.2)
M)	Sheet rubber lining installation	0.850	(7.1)
N)	Single-ply roof membrane installation/repair (except ethylene propylene diene propylene diene monomer (EPDM) roof membrane)	0.250	(2.1)
O)	Structural glazing	0.100	(0.8)
P)	Thin metal laminate	0.780	(6.5)
Q)	Tire repair	0.100	(0.8)
R)	Waterproof resorcinol glue	0.170	(1.4)

- 3) Adhesive primer application operations
- | | | | |
|----|--|-------|-------|
| A) | Motor vehicle glass bonding primer | 0.900 | (7.5) |
| B) | Plastic solvent welding adhesive primer | 0.650 | (5.4) |
| C) | Single-ply roof membrane adhesive primer | 0.250 | (2.1) |
| D) | Other adhesive primer | 0.250 | (2.1) |

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- c) No owner or operator of a source subject to this Subpart shall operate a miscellaneous industrial adhesive application operation unless the daily-weighted average VOM content of subject adhesives as applied each day by the operation, calculated in accordance with subsection (c)(1) of this Section, is less than or equal to the emissions limitation calculated in accordance with subsection (c)(2) of this Section.

- 1) Weighted Average of VOM Content of Adhesives Applied Each Day

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$$VOM_{WA} = \frac{\sum_{i=1}^n V_i VOM_i}{\sum_{i=1}^n V_i}$$

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where:

VOM_{WA} = The weighted average VOM content in units of kg (lbs) VOM per volume in l (gal) of all subject adhesives as applied each day;

i = Subscript denoting a specific adhesive as applied;

n = The number of different adhesives as applied each day by each miscellaneous industrial adhesive application operation;

V_i = The volume of each adhesive, as applied, in units of l (gal);

VOM_i = The VOM content in units of kg (lbs) VOM per volume in l (gal) of each adhesive as applied;

13615

13616 2) Allowable Weighted Average VOM Limit for an Averaging Operation
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$$Limit_{WA} = \frac{\sum_{i=1}^n V_i Limit_i}{\sum_{i=1}^n V_i}$$

13619 where:
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13621

Limit_{WA} = The allowable weighted average VOM limit in units of kg (lbs) VOM per volume in l (gal) of all subject adhesives as applied each day in a single operation;

i = Subscript denoting a specific adhesive as applied;

n = The number of different adhesives as applied each day by each miscellaneous industrial adhesive application operation;

V_i = The volume of each adhesive, as applied, in units ~~of left~~ (gal);

Limit_i = The VOM limit, taken from subsection (b) of this Section, in units of kg (lbs) VOM per volume in l (gal) of each adhesive as applied.

13622 d) No owner or operator of a source subject to this Subpart shall operate a
13623 miscellaneous industrial adhesive application operation employing a capture
13624 system and control device unless either:
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13627 1) An afterburner or carbon adsorption system is used that provides at least
13628 85 percent reduction in the overall emissions of VOM from the application
13629 operation;
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13631 2) An alternative capture and control system is used that provides at least 85
13632 percent reduction in the overall emissions of VOM from the application
13633 operation and is approved by the Agency and approved by USEPA as a
13634 SIP revision. The owner or operator shall submit a plan to the Agency
13635 detailing appropriate monitoring devices, test methods, recordkeeping
13636 requirements, and operating parameters for the control device; or
13637

13638 3) The owner or operator complies with the applicable limitation set forth in
13639 subsection (b) of this Section by utilizing a combination of low-VOM
13640 adhesives and an afterburner or carbon adsorption system. The owner or
13641 operator may use an alternative capture and control system if the owner or
13642 operator submits a plan to the Agency detailing appropriate monitoring

13643 devices, test methods, recordkeeping requirements, and operating
13644 parameters for the capture and control system and the system is approved
13645 by the Agency and approved by USEPA as a SIP revision.
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- 13647 e) The owner or operator of a source subject to this Subpart shall apply all
13648 miscellaneous industrial adhesives using one or more of the following methods:
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- 13650 1) Electrostatic spray;
 - 13651 2) High volume low pressure (HVLP) spray;
 - 13652 3) Flow coating. For the purposes of this Subpart, flow coating means a non-
13653 atomized technique of applying coating to a substrate with a fluid nozzle
13654 with no air supplied to the nozzle;
 - 13655 4) Roll coating or hand application, including non-spray application methods
13656 similar to hand or mechanically powered caulking gun, brush, or direct
13657 hand application;
 - 13658 5) Dip coating, including electrodeposition. For purposes of this Subpart,
13659 "electrodeposition" means a water-borne dip coating process in which
13660 opposite electrical charges are applied to the substrate and the coating.
13661 The coating is attracted to the substrate due to the electrochemical
13662 potential difference that is created;
 - 13663 6) Airless spray;
 - 13664 7) Air-assisted airless spray; or
 - 13665 8) Another adhesive application method capable of achieving a transfer
13666 efficiency equal to or better than that achieved by HVLP spraying, if the
13667 method is approved in writing by the Agency.
- 13668 f) The owner or operator of a source subject to this Subpart shall comply with the
13669 following work practices for each subject miscellaneous adhesive application
13670 operation at the source:
- 13671 1) Store all VOM-containing adhesives, adhesive primers, process-related
13672 waste materials, cleaning materials, and used shop towels in closed
13673 containers;
 - 13674 2) Ensure that mixing and storage containers used for VOM-containing
13675 adhesives, adhesive primers, process-related waste materials, and cleaning
13676 materials are kept closed at all times except when depositing or removing
13677 those materials;
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- 3) Minimize spills of VOM-containing adhesives, adhesive primers, process-related waste materials, and cleaning materials;
 - 4) Convey VOM-containing adhesives, adhesive primers, process-related waste materials, and cleaning materials from one location to another in closed containers or pipes; and
 - 5) Minimize VOM emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

13701 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)

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13703 **Section 218.902 Testing Requirements**

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- a) Testing to demonstrate compliance with the requirements of this Subpart shall be conducted by the owner or operator by May 1, 2012. Thereafter, testing shall be conducted within 90 days after a request by the Agency, or as otherwise provided in this Subpart. The testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Agency in writing 30 days in advance of conducting the testing to allow the Agency to be present during testing.
 - b) Testing to demonstrate compliance with the VOM content limitations in Section 218.901(b) of this Subpart shall be conducted as follows:
 - 1) Method 24, incorporated by reference in Section 218.112 of this Part, shall be used for non-reactive adhesives. If it is demonstrated to the satisfaction of the Agency and the USEPA that plant adhesive 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;
 - 2) Appendix A of 40 CFR 63, Subpart PPPP, incorporated by reference in Section 218.112 of this Part, shall be used for reactive adhesives.
 - 3) The manufacturer's specifications for VOM content for adhesives may be used if the specifications are based on results of tests of the VOM content conducted in accordance with methods specified in subsections (b)(1) and (b)(2) of this Section, as applicable.
 - c) For afterburners and carbon adsorbers, the methods and procedures of Section 218.105(d) through (f) of this Part shall be used for testing to demonstrate compliance with the requirements of Section 218.901(d) of this Subpart, as follows:
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- 1) To select the sampling sites, Method 1 or 1A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part;
 - 2) To determine the volumetric flow rate of the exhaust stream, Method 2, 2A, 2C, or 2D, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part;
 - 3) To determine the VOM concentration of the exhaust stream entering and exiting the emissions control system, Method 25 or 25A, as appropriate, 40 CFR 60, appendix A, incorporated by reference in Section 218.112 of this Part. For thermal and catalytic afterburners, Method 25 must be used, except under the following circumstances, in which case Method 25A must be used:
 - A) The allowable outlet concentration of VOM from the emissions control system is less than 50 ppmv, as carbon;
 - B) The VOM concentration at the inlet of the emissions control system and the required level of control result in exhaust concentrations of VOM of 50 ppmv, or less, as carbon;
 - C) Due to the high efficiency of the emissions control system, the anticipated VOM concentration at the emissions control system exhaust is 50 ppmv or less, as carbon, regardless of inlet concentration. If the source elects to use Method 25A under this option, the exhaust VOM concentration must be 50 ppmv or less, as carbon, and the required destruction efficiency must be met for the source to have demonstrated compliance. If the Method 25A test results show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, a retest is required. The retest shall be conducted using either Method 25 or 25A. If the retest is conducted using Method 25A and the test results again show that the required destruction efficiency apparently has been met, but the exhaust concentration is above 50 ppmv, as carbon, the source must retest using Method 25;
 - D) During testing, the cleaning equipment shall be operated at representative operating conditions and flow rates.
 - d) An owner or operator using an emissions control system other than an afterburner or carbon adsorber shall conduct testing to demonstrate compliance with the requirements of Section 218.901(d) as set forth in the owner's or operator's plan approved by the Agency and USEPA pursuant to Section 218.901(d)(3).

13781 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)

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13783 **Section 218.903 Monitoring Requirements**

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13785 a) If an afterburner is used to demonstrate compliance, the owner or operator of a
13786 source subject to Section 218.901(d) of this Subpart shall:

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13788 1) Install, calibrate, operate, and maintain temperature monitoring devices
13789 with an accuracy of 3 °C or 5 °F on the emissions control system in
13790 accordance with Section 218.105(d)(2) of this Part and in accordance with
13791 the manufacturer's specifications. Monitoring shall be performed at all
13792 times when the emissions control system is operating; and

13793

13794 2) Install, calibrate, operate and maintain, in accordance with manufacturer's
13795 specifications, a continuous recorder on the temperature monitoring
13796 devices, such as a strip chart, recorder or computer, with at least the same
13797 accuracy as the temperature monitor.

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13799 b) If a carbon adsorber is used to demonstrate compliance, the owner or operator of a
13800 source subject to Section 218.901(d) of this Subpart shall use Agency and USEPA
13801 approved continuous monitoring equipment that is installed, calibrated,
13802 maintained, and operated according to vendor specifications at all times the
13803 control device is in use. The continuous monitoring equipment shall monitor the
13804 VOM concentration of each carbon adsorption bed exhaust or the exhaust of the
13805 bed next in sequence to be desorbed.

13806

13807 c) If an emissions control system other than an afterburner or carbon adsorber is
13808 used to demonstrate compliance, the owner or operator of a source subject to
13809 Section 218.901(d) of this Subpart shall install, maintain, calibrate, and operate
13810 the monitoring equipment as set forth in the owner's or operator's plan approved
13811 by the Agency and USEPA pursuant to Section 218.901(d)(3).

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13813 (Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)

13814

13815 **Section 218.904 Recordkeeping and Reporting Requirements**

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13817 a) The owner or operator of a source exempt from the limitations of this Subpart
13818 because of the criteria in Section 218.900(a) of this Subpart shall comply with the
13819 following:

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13821 1) By May 1, 2012, or upon initial start-up of the source, whichever is later,
13822 submit a certification to the Agency that includes:

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13824 A) A declaration that the source is exempt from the requirements of
13825 this Section because of the criteria in Section 218.900(a);

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- B) Calculations that demonstrate that combined emissions of VOM from miscellaneous industrial adhesive application operations at the source, including related cleaning activities, never equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment. To calculate daily emissions of VOM, the owner or operator shall determine the monthly emissions of VOM from miscellaneous industrial adhesive application operations at the source (including related cleaning activities) and divide this amount by the number of days during that calendar month that miscellaneous industrial adhesive application operations at the source were in operation;
 - 2) Collect and record the following information each month for each miscellaneous industrial adhesive application operation, maintain the information at the source for a period of three years, and provide the information to the Agency upon request:
 - A) The name and identification number of each adhesive as applied by each miscellaneous industrial adhesive application operation; and
 - B) The weight of VOM per volume and the volume of each adhesive (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each month by each miscellaneous industrial adhesive application operation;
 - 3) Notify the Agency of any record that shows that the combined emissions of VOM from miscellaneous industrial adhesive application operations at the source, including related cleaning activities, ever equal or exceed 6.8 kg/day (15 lbs/day), in the absence of air pollution control equipment, within 30 days after the event occurs, and provide copies of those records upon request by the Agency.
- b) All sources subject to the requirements of this Subpart shall:
- 1) By May 1, 2012, or upon initial start-up of the source, whichever is later, submit a certification to the Agency that includes:
 - A) Identification of each subject adhesive application operation as of the date of certification;
 - B) A declaration that all subject adhesive application operations are in compliance with the requirements of this Subpart;
 - C) The limitation with which each subject adhesive application operation will comply (i.e., the VOM content limitation, the daily

- 13872 weighted averaging alternative, or the emissions control system
13873 alternative);
13874
13875 D) Initial documentation that each subject adhesive application
13876 operation will comply with the applicable limitation, including
13877 copies of manufacturer's specifications, test results (if any),
13878 formulation data, and calculations;
13879
13880 E) Identification of the methods that will be used to demonstrate
13881 continuing compliance with the applicable limitations;
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13883 F) A description of the practices and procedures that the source will
13884 follow to ensure compliance with the limitations in Section
13885 218.901(f) of this Subpart;
13886
13887 G) A description of each adhesive application operation exempt
13888 pursuant to Section 218.900(b)(2) of this Subpart, if any; and
13889
13890 H) The application methods used by each subject adhesive application
13891 operation;
13892
13893 2) At least 30 calendar days before changing the method of compliance in
13894 accordance with Section 218.901(b), (c), and (d), notify the Agency in
13895 writing of the change. The notification shall include a demonstration of
13896 compliance with the newly applicable subsection;
13897
13898 3) Notify the Agency in writing of any violation of the requirements of this
13899 Subpart within 30 days following the occurrence of the violation and
13900 provide records documenting the violation upon request by the Agency;
13901
13902 4) Retain all records required by this Section for at least three years and
13903 make those records available to the Agency upon request.
13904
13905 c) The owner or operator of an adhesive application operation subject to the
13906 limitations of Section 218.901 of this Subpart and complying by means of Section
13907 218.901(b) shall comply with the following:
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13909 1) By May 1, 2012, or upon the initial start-up date, whichever is later,
13910 submit a certification to the Agency that includes the name, identification
13911 number, and VOM content of each adhesive as applied by each subject
13912 adhesive application operation;
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13914 2) Collect and record the name, identification number, and VOM content of
13915 each adhesive as applied each day by each adhesive application operation
13916 complying with Section 218.901(b).
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- d) The owner or operator of an adhesive application operation subject to the limitations of Section 218.901 of this Subpart and complying by means of Section 218.901(c) shall comply with the following:
- 1) By May 1, 2012, or upon initial start-up, whichever is later, submit a certification to the Agency that includes the name, identification number, and VOM content of each adhesive as applied by each subject adhesive application operation;
 - 2) Collect and record the following information each day for each adhesive application operation complying by means of Section 218.901(c):
 - A) The name, identification number, VOM content, and volume of each adhesive as applied each day by each subject adhesive application operation;
 - B) The daily weighted average VOM content of all adhesives as applied by each subject adhesive application operation.
- e) The owner or operator of an adhesive application operation subject to the requirements of Section 218.901 of this Subpart and complying by means of Section 218.901(d) shall:
- 1) By May 1, 2012, or upon the initial start-up date, whichever is later, and upon initial start-up of a new control device, submit a certification to the Agency that includes the following:
 - A) The type of afterburner or other approved control device used to comply with the requirements of Section 218.901(d);
 - B) The results of all tests and calculations necessary to demonstrate compliance with the control requirements of Section 218.901(d); and
 - C) A declaration that the monitoring equipment required under Section 218.903 of this Subpart has been properly installed and calibrated according to manufacturer's specifications;
 - 2) Within 90 days after conducting testing pursuant to Section 218.902 of this Subpart, submit to the Agency a copy of all test results, as well as a certification that includes the following:
 - A) A declaration that all tests and calculations necessary to demonstrate whether the adhesive application operations are in compliance with Section 218.901(d) have been properly performed;

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- B) A statement whether the adhesive application operations are or are not in compliance with Section 218.901(d); and
 - C) The operating parameters of the afterburner or other approved control device during testing, as monitored in accordance with Section 218.903 of this Subpart;
- 3) Collect and record daily the following information for each adhesive application operation subject to the requirements of Section 218.901(d):
- A) Afterburner or other approved control device monitoring data in accordance with Section 218.903 of this Subpart;
 - B) A log of operating time for the afterburner or other approved control device, monitoring equipment, and the associated application unit; and
 - C) A maintenance log for the afterburner or other approved control device and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages.

(Source: Amended at 35 Ill. Reg. 13473, effective July 27, 2011)

SUBPART PP: MISCELLANEOUS FABRICATED PRODUCT MANUFACTURING PROCESSES

Section 218.920 Applicability

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- a) Maximum theoretical emissions:
 - 1) A source is subject to this Subpart if it contains process emission units not regulated by Subparts B, E, F (excluding Section 218.204(l)), H (excluding Section 218.405), Q, R, S, T, (excluding Section 218.486) V, X, Y, Z or BB of this Part, which as a group both:
 - A) Have maximum theoretical emissions of 90.7 Mg (100 tons) or more per calendar year of VOM, and
 - B) Are not limited to less than 90.7 Mg (100 tons) of VOM emissions per calendar year in the absence of air pollution control equipment, through production or capacity limitations contained in a federally enforceable permit or a SIP revision.
 - 2) If a source is subject to this Subpart as provided above, the requirements

of this Subpart shall apply to a source's miscellaneous fabricated product manufacturing process emission units which are not included within any of the categories specified in Subparts B, E, F, H, Q, R, S, T, V, X, Y, Z, AA, or BB of this Part.

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- b) Potential to emit:
 - 1) A source is subject to this Subpart if it has the potential to emit 22.7 Mg (25 tons) or more of VOM per year, in aggregate, from emission units that are:
 - A) Not regulated by Subparts B, E, F, H, Q, R, S, T (excluding Section 218.486), V, X, Y, Z, or BB of this Part, or
 - B) Not included in any of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, wood furniture, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch processing, volatile organic liquid storage tanks and clean-up solvents operations.
 - 2) If a source is subject to this Subpart as provided above, the requirements of this Subpart shall apply to a source's miscellaneous fabricated product manufacturing process emission units, which are:
 - A) Not included within any of the categories specified in Subparts B, E, F, H, Q, R, S, T, V, X, Y, Z, AA, BB, CC, or DD of this Part, or
 - B) Not included in any of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, wood furniture, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch processing, volatile organic liquid storage tanks and clean-up solvents operations.
 - c) If a source ceases to fulfill the criteria of subsections (a) and/or (b) above, the requirements of this Subpart shall continue to apply to a miscellaneous fabricated products manufacturing process emission unit which was subject to the control requirements of Section 218.926 of this Part.
 - d) No limits under this Subpart shall apply to emission units with emissions of VOM to the atmosphere less than or equal to 0.91 Mg (1.0 ton) per calendar year if the total emissions from such emission units not complying with Section 218.926 of this Part does not exceed 4.5 Mg (5.0 tons) per calendar year, provided that this

14056 provision shall not apply to an emission unit which is a leather coating line or
14057 operation at a source where the criteria of Section 218.920(a) above are not met.

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14059 e) For the purposes of this Subpart, an emission unit shall be considered regulated by
14060 a Subpart if it is subject to the limits of that Subpart. An emission unit is
14061 considered not regulated by a Subpart if it is not subject to the limits of that
14062 Subpart, e.g., the emission unit is covered by an exemption in the Subpart or the
14063 applicability criteria of the Subpart are not met.

14064
14065 f) For the purposes of this Subpart, VOM emissions in the absence of air pollution
14066 control equipment are the emissions of VOM which would result if no air
14067 pollution control equipment were used.

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14069 g) The control requirements in Subpart PP shall not apply to sewage treatment
14070 plants; vegetable oil extraction and processing; coke ovens (including by-product
14071 recovery plants); fuel combustion units; bakeries; barge loading facilities; jet
14072 engine test cells; production of polystyrene foam insulation board including
14073 storage and extrusion of scrap where blowing agent is added to the polystyrene
14074 resin at the source, but not including blending and preliminary expansion of resin
14075 prior to molding where blowing agent is incorporated into the polystyrene resin
14076 by the producer of the resin; production of polystyrene foam packaging not
14077 including blending and preliminary expansion of resin prior to molding where
14078 blowing agent is incorporated into the polystyrene resin by the producer of the
14079 resin and not including storage and extrusion of scrap where blowing agent is
14080 added to the polystyrene resin at the source; and iron and steel production.

14081
14082 (Source: Amended at 18 Ill. Reg. 16392, effective October 25, 1994)

14083
14084 **Section 218.923 Permit Conditions (Repealed)**

14085
14086 (Source: Repealed at 18 Ill. Reg. 1945, effective January 24, 1994)

14087
14088 **Section 218.926 Control Requirements**

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14090 Every owner or operator of miscellaneous fabricated product manufacturing process emission
14091 unit subject to this Subpart shall comply with the requirements of subsection (a), (b) or (c) of this
14092 Section:

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14094 a) Emission capture and control techniques which achieve an overall reduction in
14095 uncontrolled VOM emissions of at least 81 percent from each emission unit; or

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14097 (Board Note: For the purpose of this provision, an emission unit is any part or
14098 activity at a source of a type that by itself is subject to control requirements in
14099 other Subparts of this Part or 40 CFR 60, incorporated by reference in Section
14100 218.112, e.g., a coating line, a printing line, a process unit, a wastewater system,
14101 or other equipment, or is otherwise any part or activity at a source.)

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- b) For coating lines:
- 1) The daily-weighted average VOM content shall not exceed 0.42 kg VOM/1 (3.5 lbs VOM/gal) of coating as applied (minus water and any compounds which are specifically exempted from the definition of VOM) during any day. Owners and operators complying with this limitation are not required to comply with Section 218.301 of this Part; or
 - 2) For application of coatings to leather at a source where the criteria of Section 218.290(a) are not met:
 - A) For application of stain coating to leather, other than specialty leather, either
 - i) The VOM contained in stain coatings, other than stain coatings applied to specialty leather, as applied at the source in any consecutive 12-month period shall not exceed 10 tons; or
 - ii) The application of stain coatings shall comply with Section 218.926(b)(2)(C) below; or
 - B) For application of coatings to specialty leather, the total VOM content of all coatings, including stains, as applied to a category of specialty leather, shall not exceed 38 lbs per 1000 square feet of such specialty leather produced, determined on a monthly basis:
$$C = E / A$$

Where:

 - C = The VOM contained in all coatings applied to a category of specialty leather in units of lbs/square feet;
 - E = The total VOM content of all coatings applied to the category of specialty leather during each month in units of lbs determined as the sum of the VOM content of each coating applied during the month to such leather;
 - A = The total area of the category of specialty leather produced in the month in units of square feet, determined as the sum of the area of each type of leather item produced during the month based on the number of such items produced and the area of such item, measured or established in accordance with procedures set in a federally enforceable permit; or

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- C) For application of coatings to leather, except for such coatings as are complying by means of Section 218.926(b)(2)(A) or (B) above, either
 - i) The VOM content of each coating shall not exceed 0.42 kg VOM/l (3.5 lbs VOM/gal) of coating as applied (minus water and any compounds which are specifically exempted from the definition of VOM). Owners and operators complying with this limitation are not subject to Section 218.301 of this Part; or
 - ii) The daily-weighted average VOM content shall not exceed 0.42 Kg Vom/l (3.5 lbs Vom/gal) of coating as applied as provided in Section 218.916(b)(1) above; or
 - c) An equivalent alternative control plan which has been approved by the Agency and the USEPA in federally enforceable permit or as a SIP revision.

14153 (Source: Amended at 18 Ill. Reg. 1945, effective January 24, 1994)

14154
14155 **Section 218.927 Compliance Schedule**

14156
14157 Every owner or operator of an emission unit subject to the control requirements of this Subpart
14158 shall comply with the requirements thereof on and after a date consistent with Section 218.106 of
14159 this Part.

14160 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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14163 **Section 218.928 Testing**

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- a) When in the opinion of the Agency it is necessary to conduct testing to demonstrate compliance with Section 218.926, the owner or operator of a VOM emission unit subject to the requirements of this Subpart shall, at his own expense, conduct such tests in accordance with the applicable test methods and procedures specified in Section 218.105.
 - b) Nothing in this Section shall limit the authority of the USEPA pursuant to the Clean Air Act, as amended, to require testing.

14174 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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14176 **Section 218.929 Cementable and Dress or Performance Shoe Leather**

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- a) The rule requirements of this Section apply to a leather manufacturing facility at 2015 North Elston Avenue, Chicago, Illinois. The VOM emission limits set forth

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in this Section shall only apply to the following types of select grade of chrome tanned, bark/polymer retanned specialty leathers:

- 1) Cementable Shoe Leather is leather which is:
 - A) Hot stuffed without the presence of water, fat liquored or wet stuffed by direct contact with wax, grease, polymers and oils in liquefied form at elevated temperatures. The content of wax, grease, polymers and oils embedded into the leather shall be over 12 percent but less than 25 percent by weight, measured on a dry weight basis. Applicable leathers shall be determined using the equation below:
$$12\% < P < 25\%$$

Where:

P = WL x 100

P = percent content of wax, grease, polymer, and oils

W = weight of wax, grease, polymers and oils in pounds added to the leather

L = dry weight of the leather in pounds before addition of wax, greases, polymers and oils;
 - B) Finished with coating materials which adhere to the leather surface that feels oily; and
 - C) Used primarily for manufacture of shoes and cannot meet the definition for specialty leather pursuant to 35 Ill. Adm. Code Section 211.6170.
- 2) Dress or Performance Shoe Leather is leather which is:
 - A) Finished with coating materials containing water emulsified materials using water miscible solvent materials to protect the leather and pigmented coating; and
 - B) Used primarily for manufacture of sewn shoes where the leather must be capable of soaking with a fine, dressy finish that cannot meet the lbs. per gallon VOM limitations set forth in Section 218.926 of this Subpart and cannot meet the definition for specialty leather pursuant to 35 Ill. Adm. Code 211.6170.

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- 3) The requirements of this Section do not apply to the production of those specialty leathers that meet the definition of specialty leathers pursuant to 35 Ill. Adm. Code 211.6170 or to the production of leathers that can meet the control requirements of Section 218.926 of this Subpart.
- 4) The 10-ton exemption for stain pursuant to Section 218.926(b)(2)(i) of this Subpart does not apply to leathers produced pursuant to the requirements of this Section.
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- b) The production of specialty leather as defined in subsection (a) of this Section is subject to the following limitations:
- 1) For both water resistant and non-water resistant leathers, the leather will be designated as water resistant or non-water resistant in the shipping room by using ASTM D2099-00, as incorporated by reference in Section 218.112 of this Part.
- 2) For non-water resistant leathers, the total VOM emissions shall not exceed 14.0 lbs. VOM/1,000 square feet of leather produced on a 12-month rolling average basis.
- 3) For water resistant leathers, the total VOM emissions shall not exceed 24.0 lbs. VOM/1,000 square feet of leather produced on a 12-month rolling average basis.
- 4) The total emissions of VOM from leathers produced pursuant to the emission limits in this Section shall not exceed 20 tons per year.
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- c) The owner or operator shall comply with its approved standard operating and maintenance procedures (SOMP). The SOMP will contain the following elements:
- 1) A procedure to minimize the volatilization of solvents during the measuring of coating proportions and/or mixing of coatings.
- 2) A procedure to minimize VOM fugitive losses from the coating and solvent storage rooms. Procedures should include methods of securely sealing containers and methods to clean up accidental spills.
- 3) A procedure to minimize solvent usage or VOM losses during equipment cleanup and during transport (including the transferring of coatings from the mixing areas to the coating lines).
- d) The owner or operator shall perform the reporting and record keeping consistent with the requirements of Section 218.929 of this Subpart and Section 39.5 of the Act (415 ILCS 5/39.5), and shall include at a minimum the following:

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- 1) The VOM content and gallons of each coating and the total pounds of VOM of all coatings applied to each category of leather, e.g., cementable non-water resistant, dress water resistant, by batch during each month; and
 - 2) The total area of each category of leather produced during the month based on the number of items produced and the area of such items, measured or established in accordance with procedures set forth in a federally enforceable permit.

14282 Notwithstanding the requirements of subsections (d)(1) and (d)(2) of this Section,
14283 the owner or operator may comply with an equivalent alternative plan for
14284 reporting and recordkeeping that has been approved by the Agency and the
14285 USEPA in a federally enforceable permit or as a SIP revision.
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14287 (Source: Added at 27 Ill. Reg. 7283, effective April 08, 2003)
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14289 **SUBPART QQ: MISCELLANEOUS FORMULATION MANUFACTURING PROCESSES**
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14291 **Section 218.940 Applicability**
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- 14293 a) Maximum theoretical emissions:
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14295 1) A source is subject to this Subpart if it contains process emission units not
14296 regulated by Subparts B, E, F (excluding Section 218.204(l)), H
14297 (excluding Section 218.405), Q, R, S, T (excluding Section 218.486), V,
14298 X, Y, Z or BB of this Part, which as a group both:
14299
14300 A) Have maximum theoretical emissions of 90.7 Mg (100 tons) or
14301 more per calendar year of VOM, and
14302
14303 B) Are not limited to less than 90.7 Mg (100 tons) of VOM emissions
14304 per calendar year in the absence of air pollution control equipment
14305 through production or capacity limitations contained in a federally
14306 enforceable permit or a SIP or FIP revision.
14307
14308 2) If a source is subject to this Subpart as provided above, the requirements
14309 of this Subpart shall apply to a source's miscellaneous formulation
14310 manufacturing process emission units which are not included within any
14311 of the categories specified in Subparts B, E, F, H, Q, R, S, T, V, X, Y, Z,
14312 AA, or BB of this Part.
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14314 b) Potential to emit:
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14316 1) A source is subject to this Subpart if it has the potential to emit 22.7 Mg
14317 (25 tons) or more of VOM per year, in aggregate, from emission units that

- 14318 are:
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14320 A) Not regulated by Subparts B, E, F, H, Q, R, S, T (excluding
14321 Section 218.486), V, X, Y, Z, or BB of this Part, or
14322
14323 B) Not included in any of the following categories: synthetic organic
14324 chemical manufacturing industry (SOCMI) distillation, SOCMI
14325 reactors, wood furniture, plastic parts coating (business machines),
14326 plastic parts coating (other), offset lithography, industrial
14327 wastewater, autobody refinishing, SOCMI batch processing,
14328 volatile organic liquid storage tanks and clean-up solvents
14329 operations.
14330
- 14331 2) If a source is subject to this Subpart as provided above, the requirements
14332 of this Subpart shall apply to a source's miscellaneous formulation
14333 manufacturing process emission units which are:
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- 14335 A) Not included within any of the categories specified in Subparts B,
14336 E, F, H, Q, R, T, V, X, Y, Z, AA, BB, CC, or DD of this Part, or
14337
14338 B) Not included in any of the following categories: synthetic organic
14339 chemical manufacturing industry (SOCMI) distillation, SOCMI
14340 reactors, wood furniture, plastic parts coating (business machines),
14341 plastic parts coating (other), offset lithography, industrial
14342 wastewater, autobody refinishing, SOCMI batch processing,
14343 volatile organic liquid storage tanks and clean-up solvents
14344 operations.
14345
- 14346 c) If a source ceases to fulfill the criteria of subsections (a) and/or (b) above, the
14347 requirements of this Subpart shall continue to apply to a miscellaneous
14348 formulation manufacturing process emission unit which was subject to the control
14349 requirements of Section 218.946 of this Part.
14350
- 14351 d) No limits under this Subpart shall apply to emission units with emissions of VOM
14352 to the atmosphere less than or equal to 2.3 Mg (2.5 tons) per calendar year if the
14353 total emissions from such emission units not complying with this Section does not
14354 exceed 4.5 Mg (5.0 tons) per calendar year.
14355
- 14356 e) For the purposes of this Subpart, an emission unit shall be considered regulated by
14357 a Subpart if it is subject to the limits of that Subpart. An emission unit is
14358 considered not regulated by a Subpart if it is not subject to the limits of that
14359 Subpart, e.g., the emission unit is covered by an exemption in the Subpart or the
14360 applicability criteria of the Subpart are not met.
14361
- 14362 f) For the purposes of this Subpart, VOM emissions in the absence of air pollution
14363 control equipment are the emissions of VOM which would result if no air

14364 pollution control equipment were used.

14365

14366 g) The control requirements in Subpart QQ shall not apply to sewage treatment
14367 plants; vegetable oil extraction and processing; coke ovens (including by-product
14368 recovery plants); fuel combustion units; bakeries; barge loading facilities; jet
14369 engine test cells; production of polystyrene foam insulation board including
14370 storage and extrusion of scrap where blowing agent is added to the polystyrene
14371 resin at the source, but not including blending and preliminary expansion of resin
14372 prior to molding where blowing agent is incorporated into the polystyrene resin
14373 by the producer of the resin; production of polystyrene foam packaging not
14374 including blending and preliminary expansion of resin prior to molding where
14375 blowing agent is incorporated into the polystyrene resin by the producer of the
14376 resin and not including storage and extrusion of scrap where blowing agent is
14377 added to the polystyrene resin at the source; and iron and steel production.

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14379 h) The control requirements of this Subpart shall not apply to the solvation mixers at
14380 the container sealant manufacturing facility located at 6050 West 51st Street in
14381 Chicago, Illinois.

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14383 (Source: Amended in R98-16 at 22 Ill. Reg. 14282, effective July 16, 1998)

14384

14385 **Section 218.943 Permit Conditions (Repealed)**

14386

14387 (Source: Repealed at 18 Ill. Reg. 1945, effective January 24, 1994)

14388

14389 **Section 218.946 Control Requirements**

14390

14391 Every owner or operator of a miscellaneous formulation manufacturing process emission unit
14392 subject to this Subpart shall comply with the requirements of subsection (a) or (b) below.

14393

14394 a) Emission capture and control techniques which achieve an overall reduction in
14395 uncontrolled VOM emissions of at least 81 percent from each emission unit, or

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14397 (Board Note: For the purpose of this provision, an emission unit is any part or
14398 activity at a source of a type that by itself is subject to control requirements in
14399 other Subparts of this Part or 40 CFR 60, incorporated by reference in Section
14400 218.112, e.g., a coating line, a printing line, a process unit, a wastewater system,
14401 or other equipment, or is otherwise any part or activity at a source.)

14402

14403 b) An equivalent alternative control plan which has been approved by the Agency
14404 and the USEPA in a federally enforceable permit or as a SIP revision.

14405

14406 (Source: Amended at 18 Ill. Reg. 1945, effective January 24, 1994)

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14408 **Section 218.947 Compliance Schedule**

14409

14410 Every owner or operator of an emission unit subject to the control requirements of this Subpart
14411 shall comply with the requirements thereof on and after a date consistent with Section 218.106 of
14412 this Part.

14413
14414 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)
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14416 **Section 218.948 Testing**

14417
14418 a) When in the opinion of the Agency it is necessary to conduct testing to
14419 demonstrate compliance with Section 218.946 of this Part, the owner or operator
14420 of a VOM emission unit subject to the requirements of this Subpart shall, at his
14421 own expense, conduct such tests in accordance with the applicable test methods
14422 and procedures specified in Section 218.105 of this Part.

14423
14424 b) Nothing in this Section shall limit the authority of the USEPA pursuant to the
14425 Clean Air Act, as amended, to require testing.

14426
14427 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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14429 **SUBPART RR: MISCELLANEOUS ORGANIC CHEMICAL MANUFACTURING**
14430 **PROCESSES**

14431
14432 **Section 218.960 Applicability**

14433
14434 a) Maximum theoretical emissions:

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14436 1) A source is subject to this Subpart if it contains process emission units not
14437 regulated by Subparts B, E, F (excluding Section 218.204(I)), H
14438 (excluding Section 218.405), Q, R, S, T, (excluding Section 218.486) V,
14439 X, Y, Z or BB of this Part, which as a group both:

14440
14441 A) Have maximum theoretical emissions of 90.7 Mg (100 tons) or
14442 more per calendar year of VOM, and

14443
14444 B) Are not limited to less than 90.7 Mg (100 tons) of VOM emissions
14445 per calendar year in the absence of air pollution control equipment
14446 through production or capacity limitations contained in a federally
14447 enforceable permit or a SIP revision.

14448
14449 2) If a source is subject to this Subpart as provided above, the requirements
14450 of this Subpart shall apply to a source's miscellaneous organic chemical
14451 manufacturing process emission units which are not included within any
14452 of the categories specified in Subparts B, E, F, H, Q, R, S, T, V, X, Y, Z,
14453 AA, or BB of this Part.

14454
14455 b) Potential to emit:

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- 1) A source is subject to this Subpart if it has the potential to emit 22.7 Mg (25 tons) or more of VOM per year, in aggregate, from emission units other than VOM leaks from components that are:
 - A) Not regulated by Subparts B, E, F, H, Q, R, S, T (excluding Section 218.486), V, X, Y, Z, or BB of this Part, or
 - B) Not included in one of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, wood furniture, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch processing, volatile organic liquid storage tanks and clean-up solvents operations.
 - 2) If a source is subject to this Subpart as provided above, the requirements of this Subpart shall apply to a source's miscellaneous organic chemical manufacturing process emission units which are:
 - A) Not included within the categories specified in Subparts B, E, F, H, Q, R, S, T, V, X, Y, Z, AA, BB, CC, or DD of this Part, or
 - B) Not included in any of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, wood furniture, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch processing, volatile organic liquid storage tanks and clean-up solvents operations.
 - c) If a source ceases to fulfill the criteria of subsections (a) and/or (b) above, the requirements of this Subpart shall continue to apply to a miscellaneous organic chemical manufacturing process emission unit which was subject to the control requirements of Section 218.966 of this Part.
 - d) No limits under this Subpart shall apply to emission units with emissions of VOM to the atmosphere less than or equal to 0.91 Mg (1.0 ton) per calendar year if the total emissions from such emission units not complying with Section 218.966 of this Part does not exceed 4.5 Mg (5.0 tons) per calendar year.
 - e) For the purposes of this Subpart, an emission unit shall be considered regulated by a Subpart if it is subject to the limits of that Subpart. An emission unit is considered not regulated by a Subpart if it is not subject to the limits of that Subpart, e.g., the emission unit is covered by an exemption in the Subpart or the applicability criteria of the Subpart are not met.

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- f) For the purposes of this Subpart, VOM emissions in the absence of air pollution control equipment are the emissions of VOM which would result if no air pollution control equipment were used.

 - g) The control requirements in Subpart RR shall not apply to sewage treatment plants; vegetable oil extraction and processing; coke ovens (including by-product recovery plants); fuel combustion units; bakeries; barge loading facilities; jet engine test cells; production of polystyrene foam insulation board, including storage and extrusion of scrap where blowing agent is added to the polystyrene resin at the source, but not including blending and preliminary expansion of resin prior to molding where blowing agent is incorporated into the polystyrene resin by the producer of the resin; production of polystyrene foam packaging not including blending and preliminary expansion of resin prior to molding where blowing agent is incorporated into the polystyrene resin by the producer of the resin and not including storage and extrusion of scrap where blowing agent is added to the ~~polystyrene~~polystyrene resin at the source; and iron and steel production.

14521 (Source: Amended at 18 Ill. Reg. 16392, effective October 25, 1994)

14522
14523 **Section 218.963 Permit Conditions (Repealed)**

14524 (Source: Repealed at 18 Ill. Reg. 1945, effective January 24, 1994)

14525
14526 **Section 218.966 Control Requirements**

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14529 Every owner or operator of a miscellaneous organic chemical manufacturing process emission
14530 unit subject to this Subpart shall comply with the requirements of subsection (a), (b), or (c) of
14531 this Section.

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- a) Emission capture and control techniques which achieve an overall reduction in uncontrolled VOM emissions of at least 81 percent from each emission unit, or

(Board Note: For the purpose of this provision, an emission unit is any part or activity at a source of a type that by itself is subject to control requirements in other Subparts of this Part or 40 CFR 60, incorporated by reference in Section 218.112, e.g., a coating line, a printing line, a process unit, a wastewater system, or other equipment, or is otherwise any part or activity at a source.)

 - b) An equivalent alternative control plan which has been approved by the Agency and USEPA in a federally enforceable permit or as a SIP revision.

 - c) Any leaks from components subject to the control requirements of this Subpart shall be subject to the following control measures by March 15, 1995:

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- 1) Repair any component from which a leak of VOL can be observed. The repair shall be completed as soon as practicable but no later than 15 days after the leak is found, unless the leaking component cannot be repaired until the process unit is shut down, in which case the leaking component must be repaired before the unit is restarted.
 - 2) For any leak which cannot be readily repaired within one hour after detection, the following records, as set forth in this subsection, shall be kept. These records shall be maintained by the owner or operator for a minimum of two years after the date on which they are made. Copies of the records shall be made available to the Agency or USEPA upon verbal or written request.
 - A) The name and identification of the leaking component;
 - B) The date and time the leak is detected;
 - C) The action taken to repair the leak; and
 - D) The date and time the leak is repaired.

14569 (Source: Amended at 19 Ill. Reg. 6848, effective May 9, 1995)

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14571 **Section 218.967 Compliance Schedule**

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14573 Every owner or operator of an emission unit subject to the control requirements of this Subpart
14574 shall comply with the requirements of this Subpart on and after a date consistent with Section
14575 218.106 of this Part.

14576 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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14578
14579 **Section 218.968 Testing**

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- a) When in the opinion of the Agency it is necessary to conduct testing to demonstrate compliance with Section 218.966 of this Part, the owner or operator of a VOM emission unit subject to the requirements of this Subpart shall, at his own expense, conduct such tests in accordance with the applicable test methods and procedures specified in Section 218.105 of this Part.
 - b) Nothing in this Section shall limit the authority of the USEPA pursuant to the Clean Air Act, as amended, to require testing.

14590 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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SUBPART TT: OTHER EMISSION UNITS

14594 **Section 218.980 Applicability**

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a) Maximum theoretical emissions:

1) A source is subject to this Subpart if it contains process emission units not regulated by Subparts B, E, F (excluding Section 218.204(l) of this Part), H (excluding Section 218.405 of this Part), Q, R, S, T (excluding Section 218.486 of this Part), V, X, Y, Z or BB of this Part, which as a group both:

A) Have maximum theoretical emissions of 90.7 Mg (100 tons) or more per calendar year of VOM, and

B) Are not limited to less than 90.7 Mg (100 tons) of VOM emissions per calendar year in the absence of air pollution control equipment through production or capacity limitations contained in a federally enforceable permit or a SIP revision.

2) If a source is subject to this Subpart as provided in this Subpart, the requirements of this Subpart shall apply to a source's VOM emission units which are not included within any of the categories specified in Subparts B, E, F, H, Q, R, S, T, V, X, Y, Z, AA, BB, PP, QQ, or RR of this Part or which are not exempted from permitting requirements pursuant to 35 Ill. Adm. Code 201.146.

b) Potential to emit:

1) A source is subject to this Subpart if it has the potential to emit 22.7 Mg (25 tons) or more of VOM per year, in aggregate, from emission units, other than furnaces at glass container manufacturing sources and VOM leaks from components, that are:

A) Not regulated by Subparts B, E, F, H, Q, R, S, T, (excluding Section 218.486 of this Part), V, X, Y, Z, or BB of this Part, or

B) Not included in any of the following categories: synthetic organic chemical manufacturing industry (SOCMI) distillation, SOCMI reactors, wood furniture, plastic parts coating (business machines), plastic parts coating (other), offset lithography, industrial wastewater, autobody refinishing, SOCMI batch processing, volatile organic liquid storage tanks and clean-up solvents operations.

2) If a source is subject to this Subpart as provided above, the requirements of this Subpart shall apply to a source's VOM emission units, which are:

A) Not included within any of the categories specified in Subparts B,

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14640 E, F, H, Q, R, S, T, V, X, Y, Z, AA, BB, CC, DD, PP, QQ or RR
14641 of this Part, or which are not exempted from permitting
14642 requirements pursuant to 35 Ill. Adm. Code 201.146 (excluding
14643 Section 201.146(o) and (p)), or
14644

14645 B) Not included in any of the following categories: synthetic organic
14646 chemical manufacturing industry (SOCMI) distillation, SOCMI
14647 reactors, wood furniture, plastic parts coating (business machines),
14648 plastic parts coating (other), offset lithography, industrial
14649 wastewater, autobody refinishing, SOCMI batch processing,
14650 volatile organic liquid storage tanks and clean-up solvents
14651 operations.
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14653 c) If a source ceases to fulfill the criteria of subsections (a) and/or (b) of this Section,
14654 the requirements of this Subpart shall continue to apply to an emission unit which
14655 was ever subject to the control requirements of Section 218.986 of this Part.
14656

14657 d) No limits under this Subpart shall apply to emission units with emissions of VOM
14658 to the atmosphere less than or equal to 2.3 Mg (2.5 tons) per calendar year if the
14659 total emissions from such emission units not complying with Section 218.986 of
14660 this Part does not exceed 4.5 Mg (5.0 tons) per calendar year.
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14662 e) For the purposes of this Subpart, an emission unit shall be considered regulated by
14663 a Subpart, if it is subject to the limits of that Subpart. An emission unit is
14664 considered not regulated by a Subpart if it is not subject to the limits of that
14665 Subpart, e.g., the emission unit is covered by an exemption in the Subpart or the
14666 applicability criteria of the Subpart are not met.
14667

14668 f) The control requirements in Subpart TT shall not apply to sewage treatment
14669 plants; vegetable oil extraction and processing; coke ovens (including by-product
14670 recovery plants); fuel combustion units; bakeries; barge loading facilities; jet
14671 engine test cells; production of polystyrene foam insulation board including
14672 storage and extrusion of scrap where blowing agent is added to the polystyrene
14673 resin at the source, but not including blending and preliminary expansion of resin
14674 prior to molding where blowing agent is incorporated into the polystyrene resin
14675 by the producer of the resin; production of polystyrene or polyethylene foam
14676 packaging not including blending and preliminary expansion of resin prior to
14677 molding where blowing agent is incorporated into the polystyrene or polyethylene
14678 resin by the producer of the resin, and not including storage and extrusion of scrap
14679 where blowing agent is added to the polystyrene or polyethylene resin at the
14680 source; and iron and steel production; and furnaces at glass container
14681 manufacturing sources.
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14683 (Source: Amended at 20 Ill. Reg. 14428, effective October 17, 1996)
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14685 **Section 218.983 Permit Conditions (Repealed)**

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(Source: Repealed at 18 Ill. Reg. 1945, effective January 24, 1994)

Section 218.986 Control Requirements

Every owner or operator of an emission unit subject to this Subpart shall comply with the requirements of subsection (a), (b), (c), (d), or (e) below.

- a) Emission capture and control equipment which achieves an overall reduction in uncontrolled VOM emissions of at least 81 percent from each emission unit, or

(Board Note: For the purpose of this provision, an emission unit is any part or activity at a source of a type that by itself is subject to control requirements in other Subparts of this Part or 40 CFR 60, incorporated by reference in Section 218.112, e.g., a coating line, a printing line, a process unit, a wastewater system, or other equipment, or is otherwise any part or activity at a source.)
- b) For coating lines, the daily-weighted average VOM content shall not exceed 0.42 kg VOM/l (3.5 lbs VOM/gal) of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied during any day. Owners and operators complying with this Section are not required to comply with Section 218.301 of this Part, or
- c) An equivalent alternative control plan which has been approved by the Agency and the USEPA in federally enforceable permit or as a SIP revision.
- d) Non-contact process water cooling towers which are subject to the control requirements of this Subpart shall comply with the following control measures no later than March 15, 1995 or upon initial start-up:
 - 1) The owner or operator of a non-contact process water cooling tower shall perform the following actions to control emissions of volatile organic material (VOM) from such a tower:
 - A) Inspect and monitor such tower to identify leaks of VOM into the water, as further specified in subsection (d)(3) below;
 - B) When a leak is identified, initiate and carry out steps to identify the specific leaking component or components as soon as practicable, as further specified in subsection (d)(4) below.
 - C) When a leaking component is identified which:
 - i) Can be removed from service without disrupting production, remove the component from service;

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- ii) Cannot be removed from service without disrupting production, undertake repair of the component at the next reasonable opportunity to do so including any period when the component is out of service for scheduled maintenance, as further specified in subsection (d)(4) below;
 - D) Maintain records of inspection and monitoring activities, identification of leaks and leaking components, elimination and repair of leaks, and operation of equipment as related to these activities, as further specified in subsection (d)(5) below.
 - 2) A VOM leak shall be considered to exist in a non-contact process water cooling water system if the VOM emissions or VOM content exceed background levels as determined by monitoring conducted in accordance with subsection (d)(3)(A) below.
 - 3) The owner or operator of a non-contact process water cooling tower shall carry out an inspection and monitoring program to identify VOM leaks in the cooling water system.
 - A) The owner or operator of a non-contact process water cooling tower shall submit to the Agency a proposed monitoring program, accompanied by technical justification for the program, including justification for the sampling location(s), parameter(s) selected for measurement, monitoring and inspection frequency, and the criteria used relative to the monitored parameters to determine whether a leak exists as specified in subsection (d)(2) above.
 - B) This inspection and monitoring program for non-contact process water cooling towers shall include, but shall not be limited to:
 - i) Monitoring of each such tower with a water flow rate of 25,000 gallons per minute or more at a petroleum refinery at least weekly and monitoring of other towers at least monthly;
 - ii) Inspection of each such tower at least weekly if monitoring is not performed at least weekly.
 - C) This inspection and monitoring program shall be carried out in accordance with written procedures which the Agency shall specify as a condition in a federally enforceable operating permit. These procedures shall include the VOM background levels for the cooling tower as established by the owner or operator through monitoring; describe the locations at which samples will be taken; identify the parameter(s) to be measured, the frequency of

- 14778 measurements, and the procedures for monitoring each such tower,
14779 that is, taking of samples and other subsequent handling and
14780 analyzing of samples; provide the criteria used to determine that a
14781 leak exists as specified in subsection (d)(2) above; and describe the
14782 records which will be maintained.
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- 14784 D) A non-contact process water cooling tower is exempt from the
14785 requirements of subsections (d)(3)(B) and (d)(3)(C) above if all
14786 equipment where leaks of VOM into cooling water may occur is
14787 operated at a minimum pressure in the cooling water of at least 35
14788 kPa greater than the maximum pressure in the process fluid.
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- 14790 4) The repair of a leak in a non-contact process water cooling tower shall be
14791 considered to be completed in an acceptable manner as follows:
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- 14793 A) Efforts to identify and locate the leaking components are initiated
14794 as soon as practicable, but in no event later than three days after
14795 detection of the leak in the cooling water tower;
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- 14797 B) Leaking components shall be repaired or removed from service as
14798 soon as possible, but no later than 30 days after the leak in the
14799 cooling water tower is detected, unless the leaking components
14800 cannot be repaired until the next scheduled shutdown for
14801 maintenance.
14802
- 14803 5) The owner or operator of a non-contact process water cooling tower shall
14804 keep records as set forth below in this subsection. These records shall be
14805 retained at a readily accessible location at the source and shall be available
14806 for inspection and copying by the Agency for at least 3 years:
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- 14808 A) Records of inspection and monitoring activity;
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- 14810 B) Records of each leak identified in such tower, with date, time and
14811 nature of observation or measured level of parameter;
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- 14813 C) Records of activity to identify leaking components, with date
14814 initiated, summary of components inspected with dates, and
14815 method of inspection and observations;
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- 14817 D) Records of activity to remove a leaking component from service or
14818 repair a leaking component, with date initiated and completed,
14819 description of actions taken and the basis for determining the leak
14820 in such tower has been eliminated. If the leaking component is not
14821 identified, repaired or eliminated within 30 days of initial
14822 identification of a leak in such tower, this report shall include
14823 specific reasons why the leak could not be eliminated sooner

14824 including all other intervening periods when the process unit was
14825 out of service, actions taken to minimize VOM losses prior to
14826 elimination of the leak and any actions taken to prevent the
14827 recurrence of a leak of this type.
14828

14829 6) The owner or operator of a non-contact process water cooling tower shall
14830 submit an annual report to the Agency which provides:

- 14831 A) The number of leaks identified in each cooling tower;
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14833 B) A general description of activity to repair or eliminate leaks which
14834 were identified;
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14836 C) Identification of each leak which was not repaired in 30 days from
14837 the date of identification of a leak in such a tower, with description
14838 of the leaks, explanation why the leak was not repaired in 30 days;
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14840 D) Identification of any periods when required inspection and
14841 monitoring activities were not carried out.
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14844 e) Any leaks from components subject to the control requirements of this Subpart
14845 shall be subject to the following control measures by March 15, 1995:

- 14846 1) Repair any component from which a leak of VOL can be observed. The
14847 repair shall be completed as soon as practicable but no later than 15 days
14848 after the leak is found, unless the leaking component cannot be repaired
14849 until the next process unit shutdown, in which case the leaking component
14850 must be repaired before the unit is restarted.
14851
14852 2) For any leak which cannot be readily repaired within one hour after
14853 detection, the following records, as set forth below in this subsection, shall
14854 be kept. These records shall be maintained by the owner or operator for a
14855 minimum of two years after the date on which they are made. Copies of
14856 the records shall be made available to the Agency or USEPA upon verbal
14857 or written request.
14858
14859 A) The name and identification of the leaking component;
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14861 B) The date and time the leak is detected;
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14863 C) The action taken to repair the leak; and
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14865 D) The date and time the leak is repaired.
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14868 (Source: Amended at 18 Ill. Reg. 1945, effective January 24, 1994)
14869

14870 **Section 218.987 Compliance Schedule**

14871
14872 Every owner or operator of an emissions unit which is subject to this Subpart shall comply with
14873 the requirements of this Subpart on and after a date consistent with Section 218.106 of this Part.

14874
14875 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

14876
14877 **Section 218.988 Testing**

14878
14879 a) When in the opinion of the Agency it is necessary to conduct testing to
14880 demonstrate compliance with Section 218.986 of this Part, the owner or operator
14881 of a VOM emission unit subject to the requirements of this Subpart shall, at his
14882 own expense, conduct such tests in accordance with the applicable test methods
14883 and procedures specified in Section 218.105 of this Part.

14884
14885 b) Nothing in this Section shall limit the authority of the USEPA pursuant to the
14886 Clean Air Act, as amended, to require testing.

14887
14888 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

14889
14890 **SUBPART UU: RECORDKEEPING AND REPORTING**

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14892 **Section 218.990 Exempt Emission Units**

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14894 Upon request by the Agency, the owner or operator of an emission unit which is exempt from the
14895 requirements of Subparts PP, QQ, RR, TT or Section 218.208(b) of this Part shall submit records
14896 to the Agency within 30 calendar days from the date of the request that document that the
14897 emission unit is exempt from those requirements.

14898
14899 (Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

14900
14901 **Section 218.991 Subject Emission Units**

14902
14903 a) Any owner or operator of a VOM emission unit which is subject to the
14904 requirements of Subpart PP, QQ, RR or TT and complying by the use of emission
14905 capture and control equipment shall comply with the following:

14906
14907 1) By a date consistent with Section 218.106 of this Part, or upon initial start-
14908 up of a new emission unit, the owner or operator of the subject VOM
14909 emission unit shall demonstrate to the Agency that the subject emission
14910 unit will be in compliance on and after a date consistent with Section
14911 218.106 of this Part, or on and after the initial start-up date by submitting
14912 to the Agency all calculations and other supporting data, including
14913 descriptions and results of any tests the owner or operator may have
14914 performed.

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- 2) On and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject VOM source shall collect and record all of the following information each day and maintain the information at the source for a period of three years:
 - A) Control device monitoring data.
 - B) A log of operating time for the capture system, control device, monitoring equipment and the associated emission source.
 - C) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.
 - 3) On and after a date consistent with Section 218.106 of this Part, the owner or operator of a subject VOM emission source shall notify the Agency:
 - A) Of any violation of the requirements of Subpart PP, QQ, RR or TT by sending a copy of any record showing a violation to the Agency within 30 days following the occurrence of the violation;
 - B) At least 30 calendar days before changing the method of compliance with Subpart PP or TT from the use of capture systems and control devices to the use of complying coatings, the owner or operator shall comply with all requirements of subsection (b)(1) above. Upon changing the method of compliance with Subpart PP or TT from the use of capture systems and control devices to the use of complying coatings, the owner or operator shall comply with all requirements of subsection (b) above.
 - 4) Testing.
 - A) When in the opinion of the Agency it is necessary to conduct testing to demonstrate compliance with this Subpart, the owner or operator of a VOM emission source subject to the requirements of this Subpart shall, at his own expense, conduct such tests in accordance with the applicable test methods and procedures specified in Section 218.105 of this Part.
 - B) Nothing in this Section shall limit the authority of the USEPA pursuant to the Clean Air Act, as amended, to require testing.
- b) Any owner or operator of a coating line which is subject to the requirements of Subpart PP or TT and complying by means of the daily-weighted average VOM content limitation shall comply with the following:

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- 1) By a date consistent with Section 218.106 of this Part, or upon initial start-up of a coating line subject to Subpart PP or TT, the owner or operator of the subject coating line shall certify to the Agency that the coating line will be in compliance on and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date. Such certification shall include:
 - A) The name and identification number of each coating line which will comply by means of daily-weighted average VOM content limitation;
 - B) The name and identification number of each coating as applied on each coating line;
 - C) The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line;
 - D) The instrument or method by which the owner or operator will accurately measure or calculate the volume of each coating as applied each day on each coating line;
 - E) The method by which the owner or operator will create and maintain records each day as required in subsection (b)(2) above; and
 - F) An example of the format in which the records required in subsection (b)(2) above will be kept.
 - 2) On and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject coating line shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:
 - A) The name and identification number of each coating as applied on each coating line;
 - B) The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line; and
 - C) The daily-weighted average VOM content of all coatings as

- 15008 applied on each coating line as defined in Section 218.104 of this
15009 Part.
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- 15011 3) On and after a date consistent with Section 218.106 of this Part, the owner
15012 or operator of a subject coating line shall notify the Agency:
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- 15014 A) Of a violation of the requirements of Subpart PP or TT by sending
15015 a copy of any record showing a violation to the Agency within 30
15016 days following the occurrence of the violation;
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- 15018 B) At least 30 calendar days before changing the method of
15019 compliance with Subpart PP or TT from the use of complying
15020 coatings to the use capture systems and control devices, the owner
15021 or operator shall comply with all requirements of subsection (a)(1)
15022 above. Upon changing the method of compliance with Subpart PP
15023 or TT from the use of complying coatings to the use capture
15024 systems and control devices, the owner or operator shall comply
15025 with all requirements of subsection (a) above.
15026
- 15027 c) Any owner or operator of a VOM source which is subject to the requirements of
15028 Subpart PP, QQ, RR or TT and complying by means of an equivalent alternative
15029 control plan which has been approved by the Agency and the USEPA in a
15030 federally enforceable permit or as a SIP revision shall comply with the
15031 recordkeeping and reporting requirements specified in the alternative control plan.
15032
- 15033 d) Any owner or operator of a leather coating operation, i.e., the group of all coating
15034 lines at a source engaged in application of stain to leather other than specialty
15035 leather, or the group of all coating lines at a source engaged in applying coatings,
15036 including stain, to a category of specialty leather, or the group of all coating lines
15037 at a source engaged in application of coatings to leather complying by means of
15038 the VOM content of each gallon of coating as applied, which is subject to the
15039 requirements of Subpart PP which is complying by means of Section
15040 218.926(b)(2)(A), (B), or (C)(i), respectively, of this Part shall comply with the
15041 following:
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- 15043 1) By a date consistent with Section 218.106 of this Part, or upon initial start-
15044 up of a leather coating operation which is complying by means of Section
15045 218.926(b)(2)(A), (B) or (C)(i) of this Part, the owner or operator of the
15046 subject leather coating operation shall certify to the Agency that the
15047 leather coating operation will be in compliance on and after a date
15048 consistent with Section 218.106 of this Part, or on and after the initial
15049 start-up date. Such certification shall include:
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- 15051 A) A description of the leather coating operation, including
15052 identification of the applicable requirement with which it will
15053 comply, i.e., Section 218.926(b)(2)(A), (B), or (C)(i) of this Part;

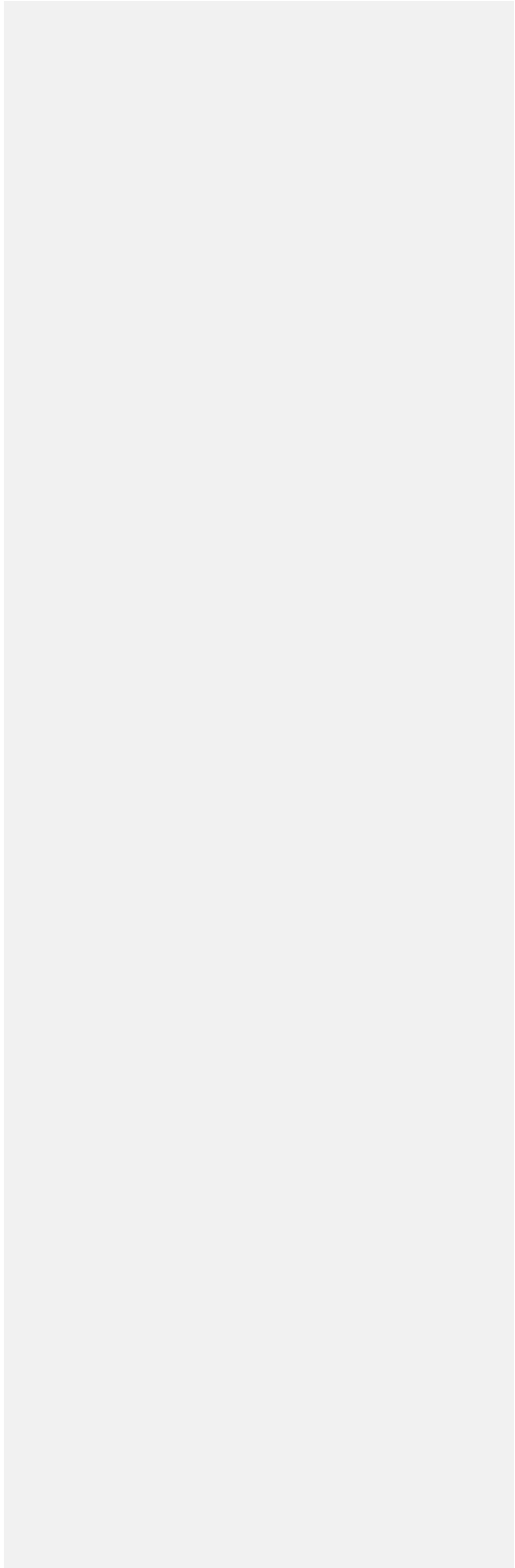
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- B) A description of the types of leather produced and a demonstration that all leather produced qualifies as specialty leather and is in a single category of specialty leather, if the leather coating operation is complying by means of Section 218.926(b)(2)(B) of this Part;
 - C) The name and identification number of each coating line in the leather coating operation;
 - D) The name, identification number, and type, i.e., stain or "other," of each coating as applied in the leather coating operation;
 - E) The weight of VOM per volume as applied and the volume of each coating as applied in the leather coating operation on a monthly basis if the leather coating operation is complying by means of Section 218.296(b)(2)(A) or (B) of this Part, or otherwise the weight of VOM per volume of coating as applied (minus water and any compounds which are specifically exempted from the definition of VOM);
 - F) The production of leather in square feet on a monthly basis, including the number of each leather item produced and the area of such item, if the leather coating operation is complying by means of Section 218.926(b)(2)(B);
 - G) A demonstration that the leather coating operation complies with the applicable requirement among Section 218.926(b)(2)(A) or (B) of this Part, if applicable, expressed in the terms of such requirement, i.e., total tons of VOM contained in stain coatings other than stain coating during a consecutive 12-month period or lb VOM/1000 square feet of specialty leather produced on a monthly basis, accompanied by the calculations by which it was determined;
 - H) The instrument or method by which the owner or operator will accurately measure or calculate the volume of each coating as applied in the leather coating operation on a monthly basis, if the leather coating operation is complying by means of Section 218.926(b)(2)(A) or (B);
 - I) The instrument or method by which the owner or operator will accurately measure or calculate the area of such category of leather produced on a monthly basis if the leather coating operation is complying by means of Section 218.926(b)(2)(B);
 - J) The method by which the owner or operator will create and

- 15100 maintain monthly records as required in subsection (d)(2) below;
15101 and
15102
- 15103 K) An example of the format in which the records required in
15104 subsection (d)(2) below will be kept.
15105
- 15106 2) On and after a date consistent with Section 218.106 of this Part, or on and
15107 after the initial start-up date, the owner or operator of a subject leather
15108 coating operation shall collect and record all of the following information
15109 for the leather coating operation on a monthly basis and maintain the
15110 information at the source for a period of three years:
- 15111 A) The name, identification number, and type of each coating as
15112 applied in the leather coating operation;
15113
- 15114 B) Records of the leather produced in the leather coating operation
15115 which identify all leather produced in the operation and confirm it
15116 qualifies as the specified category of specialty leather, if the leather
15117 coating operation is complying by means of Section
15118 218.926(b)(2)(B) of this Part;
15119
- 15120 C) The weight of VOM per volume and the volume of each coating as
15121 applied in the leather coating operation on a monthly basis
15122 determined in accordance with the procedures described pursuant
15123 to Section 218.991(d)(1)(H) above if the leather coating operation
15124 is complying by means of Section 218.926(b)(2)(A) or (B), or
15125 otherwise the greatest weight of VOM per volume of coating as
15126 applied (minus water and any compounds which are specifically
15127 exempted from the definition of VOM);
15128
- 15129 D) The production of leather in square feet on a monthly basis,
15130 including the number of each leather item produced and the area of
15131 such item determined in accordance with the procedures described
15132 pursuant to Section 218.991(d)(1)(I) above and as set forth as a
15133 federally enforceable permit condition, if the leather coating
15134 operation is complying by means of Section 218.926(b)(2)(B) of
15135 this Part;
15136
- 15137 E) A demonstration that the leather coating operation complies with
15138 the applicable requirement among Section 218.926(b)(2)(A) or (B)
15139 of this Part, if applicable, expressed in the terms of such
15140 requirement, i.e., total tons of VOM contained in stain coatings
15141 other than stain coating during a consecutive 12-month period or lb
15142 VOM/1000 square feet of specialty leather produced on a monthly
15143 basis, accompanied by the calculations by which it was
15144 determined;
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- 3) On and after a date consistent with Section 218.106 of this Part, the owner or operator of a subject leather coating operation shall notify the Agency:
- A) Of any violation of the requirements of Subpart PP by sending a copy of any record showing a violation to the Agency within 30 days following the occurrence of the violation;
 - B) At least 30 calendar days before changing the method of compliance with Subpart PP from the use of complying coatings to the use capture systems and control devices or daily-weighted average VOM content limitation, the owner or operator shall comply with all requirements of subsection (a)(1) or (b)(1) above, respectively. Upon changing the method of compliance with Subpart PP from the use of complying coatings to the use capture systems and control devices or daily-weighted average VOM content limitation, the owner or operator shall comply with all requirements of subsection (a) or (b) above, respectively.

(Source: Amended at 18 Ill. Reg. 1945, effective January 24, 1994)



15167 **Section 218.APPENDIX A List of Chemicals Defining Synthetic Organic Chemical and**
 15168 **Polymer Manufacturing**
 15169

<u>CAS No.^a</u>	<u>Chemical</u>
105-57-7	Acetal
75-07-0	Acetaldehyde
107-89-1	Acetaldol
60-35-5	Acetamide
103-84-4	Acetanilide
64-19-7	Acetic acid
108-24-7	Acetic anhydride
67-64-1	Acetone
75-86-5	Acetone cyanohydrin
75-05-8	Acetonitrile
98-86-2	Acetophenone
75-36-5	Acetyl chloride
74-86-2	Acetylene
107-02-8	Acrolein
79-06-1	Acrylamide
79-10-7	Acrylic acid & esters
107-13-1	Acrylonitrile
124-04-9	Adipic acid
111-69-3 ^(b)	Adiponitrile
	Alkyl naphthalenes
107-18-6	Allyl alcohol
107-05-1	Allyl chloride
1321-11-5	Aminobenzoic acid
111-41-1	Aminoethylethanolamine
123-30-8	p-aminophenol
628-63-7, 123-92-2	Amyl acetates
71-41-0 ^c	Amyl alcohols
110-58-7	Amyl amine
543-59-9	Amyl chloride
110-68-7 ^c	Amyl mercaptans
1322-06-1	Amyl phenol
62-53-3	Aniline
142-04-1	Aniline hydrochloride
29191-52-4	Anisidine
100-66-3	Anisole
118-92-3	Anthranilic acid
84-65-1	Anthraquinone
100-52-7	Benzaldehyde
55-21-0	Benzamide
71-43-2	Benzene
98-48-6	Benzenedisulfonic acid

15170

<u>CAS No.^a</u>	<u>Chemical</u>
98-11-3	Benzenesulfonic acid
134-81-6	Benzil
76-93-7	Benzilic acid
65-85-0	Benzoic acid
119-53-9	Benzoin
100-47-0	Benzonitrile
119-61-9	Benzophenone
98-07-7	Benzotrichloride
98-88-4	Benzyl chloride
100-51-6	Benzyl alcohol
100-46-9	Benzylamine
120-51-4	Benzyl benzoate
100-44-7	Benzyl chloride
98-87-3	Benzyl dichloride
92-52-4	Biphenyl
80-05-7	Bisphenol A
10-86-1	Bromobenzene
27497-51-4	Bromonaphthalene
106-99-0	Butadiene
106-98-9	1-butene
123-86-4	n-butyl acetate
141-32-2	n-butyl acrylate
71-36-3	n-butyl alcohol
78-92-2	s-butyl alcohol
75-65-0	t-butyl alcohol
109-73-9	n-butylamine
13952-84-6	s-butylamine
75-64-9	t-butylamine
98-73-7	p-tert-butyl benzoic acid
107-88-0	1,3-butylene glycol
123-72-8	n-butyraldehyde
107-92-6	Butyric acid
106-31-0	Butyric anhydride
109-74-0	Butyronitrile
105-60-2	Caprolactam
75-1-50	Carbon disulfide
558-13-4	Carbon tetrabromide
55-23-5	Carbon tetrachloride
9004-35-7	Cellulose acetate
79-11-8	Chloroacetic acid
108-42-9	m-chloroaniline
95-51-2	o-chloroaniline
106-47-8	p-chloroaniline
35913-09-8	Chlorobenzaldehyde

<u>CAS No.^a</u>	<u>Chemical</u>
108-90-7	Chlorobenzene
118-91-2, 535-80-8, 74-11-3 °	Chlorobenzoic acid
2136-81-4, 2136-89-2, 5216-25-1 °	Chlorobenzotrichloride
1321-03-5	Chlorobenzoyl chloride
75-45-6	Chlorodifluoroethane
25497-29-4	Chlorodifluoromethane
67-66-3	Chloroform
25586-43-0	Chloronaphthalene
88-73-3	o-chloronitrobenzene
100-00-5	p-chloronitrobenzene
25167-80-0	Chlorophenols
126-99-8	Chloroprene
7790-94-5	Chlorosulfonic acid
108-41-8	m-chlorotoluene
95-49-8	o-chlorotoluene
106-43-4	p-chlorotoluene
75-72-9	Chlorotrifluoromethane
108-39-4	m-cresol
95-48-7	o-cresol
106-44-5	p-cresol
1319-77-3	Mixed cresols
1319-77-3	Cresylic acid
4170-30-0	Crotonaldehyde
3724-65-0	Crontonic acid
98-82-8	Cumene
80-15-9	Cumene hydroperoxide
372-09-8	Cyanoacetic acid
506-77-4	Cyanogen chloride
108-80-5	Cyanuric acid
108-77-0	Cyanuric chloride
110-82-7	Cyclohexane
108-93-0	Cyclohexanol
108-94-1	Cyclohexanone
110-83-8	Cyclohexene
108-91-8	Cyclohexylamine
111-78-4	Cyclooctadiene
112-30-1	Decanol
123-42-2	Diacetone alcohol
27576-04-1	Diaminobenzoic acid
95-76-1, 95-82-9, 554-00-7, 608-27-5, 608-31-1, 626-43-7, 27134-27-6, 57311-92-9°	Dichloraniline
541-73-1	m-dichlorobenzene
95-50-1	o-dichlorobenzene
106-46-7	p-dichlorobenzene
75-71-8	Dichlorodifluoromethane

<u>CAS No.^a</u>	<u>Chemical</u>
111-44-4	Dichloroethyl ether
107-06-2	1,2-dichloroethane (EDC)
96-23-1	Dichlorohydrin
26952-23-8	Dichloropropene
101-83-7	Dicyclohexylamine
109-89-7	Diethylamine
111-46-6	Diethylene glycol
112-36-7	Diethylene glycol diethyl ether
111-96-6	Diethylene glycol dimethyl ether
112-34-5	Diethylene glycol monobutyl ether
124-17-7	Diethylene glycol mononbutyl ether acetate
111-90-0	Diethylene glycol monoethyl ether
112-15-2	Diethylene glycol monoethyl ether acetate
111-77-3	Diethylene glycol monomethyl ether
64-67-5	Diethyl sulfate
75-37-6	Difluoroethane
25167-70-8	Diisobutylene
26761-40-0	Diisodecyl phthalate
27554-26-3	Diisooctyl phthalate
674-82-8	Diketene
124-40-3	Dimethylamine
121-69-7	N,N-dimethylaniline
115-10-6	N,N-dimethyl ether
68-12-2	N,N-dimethylformamide
57-14-7	Dimethylhydrazine
77-78-1	Dimethyl sulfate
75-18-3	Dimethyl sulfide
67-68-5	Dimethyl sulfoxide
120-61-6	Dimethyl terephthalate
99-34-3	3,5-dinitrobenzoic acid
51-28-5	Dinitrophenol
	Dinitrotoluene
123-91-1	Dioxane
646-06-0	Dioxilane
122-39-4	Diphenylamine
101-84-4	Diphenyl oxide
102-08-9	Diphenyl thiourea
25265-71-8	Dipropylene glycol
25378-22-7	Dodecene
28675-17-4	Dodecylaniline
27193-86-8	Dodecylphenol
106-89-8	Epichlorohydrin
64-17-5	Ethanol
141-43-5 ^c	Ethanolamines
141-78-6	Ethyl acetate

CAS No.^a

141-97-9
140-88-5
75-04-7
100-41-4
74-96-4
9004-57-3
75-00-3
105-39-5
105-56-6
74-85-1
96-49-1
107-07-3
107-15-3
106-93-4
107-21-1
111-55-7
110-71-4
111-76-2
112-07-2
110-80-5
111-15-9
109-86-4
110-49-6
122-99-6
2807-30-9
75-21-8
60-29-7
104-76-7
122-51-0
95-92-1
41892-71-1
50-00-0
75-12-7
64-18-6
110-17-8
98-01-1
56-81-5
26545-73-7
25791-96-2
56-40-6
107-22-2
118-74-1
67-72-1
36653-82-4
124-09-4

Chemical

Ethyl acetoacetate
Ethyl acrylate
Ethylamine
Ethylbenzene
Ethyl bromide
Ethylcellulose
Ethyl chloride
Ethyl chloroacetate
Ethylcyanoacetate
Ethylene
Ethylene carbonate
Ethylene chlorohydrin
Ethylenediamine
Ethylene dibromide
Ethylene glycol
Ethylene glycol diacetate
Ethylene glycol dimethyl ether
Ethylene glycol monobutyl ether
Ethylene glycol monobutyl ether acetate
Ethylene glycol monoethyl ether
Ethylene glycol monoethyl ether acetate
Ethylene glycol monoethyl ether
Ethylene glycol monomethyl ether acetate
Ethylene glycol monophenyl ether
Ethylene glycol monopropyl ether
Ethylene oxide
Ethyl ether
2-ethylhexanol
Ethyl orthoformate
Ethyl oxalate
Ethyl sodium oxaloacetate
Formaldehyde
Formamide
Formic acid
Fumaric acid
Furfural
Glycerol (Synthetic)
Glycerol dichlorohydrin
Glycerol triether
Glycine
Glyoxal
Hexachlorobenzene
Hexachloroethane
Hexadecyl alcohol
Hexamethylenediamine

<u>CAS No.^a</u>	<u>Chemical</u>
629-11-8	Hexamethylene glycol
100-97-0	Hexamethylenetetramine
74-90-8	Hydrogen cyanide
123-31-9	Hydroquinone
99-96-7	p-hydroxybenzoic acid
26760-64-5	Isoamylene
78-83-1	Isobutanol
110-19-0	Isobutyl acetate
115-11-7	Isobutylene
78-84-2	Isobutyraldehyde
79-31-2	Isobutyric acid
25339-17-7	Isodecanol
26952-21-6	Isooctyl alcohol
78-78-4	Isopentane
78-59-1	Isophorone
121-91-5	Isophthalic acid
78-79-5	Isoprene
67-63-0	Isopropanol
108-21-4	Isopropyl acetate
75-31-0	Isopropylamine
75-29-6	Isopropyl chloride
25168-06-3	Isopropylphenol
463-51-4 (b)	Ketene
123-01-3	Linear alkyl sulfonate*
110-16-7	Linear alkylbenzene
108-31-6	Maleic acid
6915-15-7	Maleic anhydride
141-79-7	Malic acid
121-47-1	Mesityl oxide
79-41-4	Metanilic acid
563-47-3	Methacrylic acid
67-56-1	Methallyl chloride
79-20-9	Methanol
105-45-3	Methyl acetate
74-89-5	Methyl acetoacetate
100-61-8	Methylamine
74-83-9	n-methylaniline
37365-71-2	Methyl bromide
74-87-3	Methyl butynol
108-87-2	Methyl chloride
1331-22-2	Methyl cyclohexane
75-09-2	Methyl cyclohexanone
101-77-9	Methylene chloride
101-68-8	Methylene dianiline
	Methylene diphenyl diisocyanate

<u>CAS No.^a</u>	<u>Chemical</u>
78-93-3	Methyl ethyl ketone
107-31-3	Methyl formate
108-11-2	Methyl isobutyl carbinol
108-10-1	Methyl isobutyl ketone
80-62-6	Methyl methacrylate
77-75-8	Methylpentynol
98-83-9	B-methylstyrene
110-91-8	Morpholine
85-47-2	a-naphthalene sulfonic acid
120-18-3	B-naphthalene sulfonic acid
90-15-3	a-naphthol
135-19-3	B-naphthol
75-98-9	Neopentanoic acid
88-74-4	o-nitroaniline
100-01-6	p-nitroaniline
91-23-6	o-nitroanisole
100-17-4	p-nitroanisole
98-95-3	Nitrobenzene
27178-83-2 ^c	Nitrobenzoic acid (o, m & p)
79-24-3	Nitroethane
75-52-5	Nitromethane
88-75-5	Nitrophenol
25322-01-4	Nitropropane
1321-12-6	Nitrotoluene
27215-95-8	Nonene
25154-52-3	Nonylphenol
27193-28-8	Octylphenol
123-63-7	Paraldehyde
115-77-5	Pentaerythritol
109-66-0	n-pentane
109-67-1	l-pentene
127-18-4	Perchloroethylene
594-42-3	Perchloromethyl mercaptan
94-70-2	o-phenetidine
156-43-4	p-phenetidine
108-95-2	Phenol
98-67-9, 585-38-6, 609-46-1, 133-39-7 ^c	Phenosulfonic acids
91-40-7	Phenyl anthranilic acid
(b)	Phenylenediamine
75-44-5	Phosgene
85-44-9	Phthalic anhydride
85-41-6	Phthalimide
108-99-6	b-picoline
110-85-0	Piperazine
9003-29-6, 25036-29-7 ^c	Polybutenes

CAS No.^a

25322-68-3
 25322-69-4
 123-38-6
 79-09-4
 71-23-8
 107-10-8
 540-54-5
 115-07-1
 127-00-4
 78-87-5
 57-55-6
 75-56-9
 110-86-1
 106-51-4
 108-46-3
 27138-57-4
 69-72-7
 127-09-3
 532-32-1
 9004-32-4
 3926-62-3
 141-53-7
 139-02-6
 110-44-1
 100-42-5
 110-15-6
 110-61-2
 121-57-3
 126-33-0
 1401-55-4
 100-21-0
 79-34-5^c
 117-08-8
 78-00-2
 119-64-2
 85-43-8
 75-74-1
 110-60-1
 110-18-9
 108-88-3
 95-80-7
 584-84-9
 26471-62-5
 1333-07-9
 104-15-4^c

Chemical

Polyethylene glycol
 Polypropylene glycol
 Propionaldehyde
 Propionic acid
 n-propyl alcohol
 Propylamine
 Propyl chloride
 Propylene
 Propylene chlorohydrin
 Propylene dichloride
 Propylene glycol
 Propylene oxide
 Pyridine
 Quinone
 Resorcinol
 Resorcylic acid
 Salicylic acid
 Sodium acetate
 Sodium benzoate
 Sodium carboxymethyl cellulose
 Sodium chloroacetate
 Sodium formate
 Sodium phenate
 Sorbic acid
 Styrene
 Succinic acid
 Succinitrile
 Sulfanilic acid
 Sulfolane
 Tannic acid
 Terephthalic acid
 Tetrachloroethanes
 Tetrachlorophthalic anhydride
[Tetraethyl lead](#)
 Tetrahydronaphthalene
 Tetrahydrophthalic anhydride
[Tetramethyl lead](#)
 Tetramethylenediamine
 Tetramethylethylenediamine
 Toluene
 Toluene-2,4-diamine
 Toluene-2,4-diisocyanate
 Toluene diisocyanates (mixture)
 Toluene sulfonamide
 Toluenesulfonic acids

<u>CAS No.^a</u>	<u>Chemical</u>
98-59-9	Toluene sulfonyl chloride
26915-12-8	Toluidines
87-61-6, 108-70-3, 120-82-1 ^c	Trichlorobenzenes
71-55-6	1,1,1-trichloroethane
79-00-5	1,1,2-trichloroethane
79-01-6	Trichloroethylene
75-69-4	Trichlorofluoromethane
96-18-4	1,2,3-trichloropropane
76-13-1	1,1,2-trichloro-1,2,2-trifluoroethane
121-44-8	Triethylamine
112-27-6	Triethylene glycol
112-49-2	Triethylene glycol dimethyl ether
7756-94-7	Triisobutylene
75-50-3	Trimethylamine
57-13-6	Urea
108-05-4	Vinyl acetate
75-01-4	Vinyl chloride
75-35-4	Vinylidene chloride
25013-15-4	Vinyl toluene
1330-20-7	Xylenes (mixed)
95-47-6	o-xylene
106-42-3	p-xylene
1300-71-6	Xylenol
1300-73-8	Xylidine
^(b)	methyl tert-butyl ether
9002-88-4	Polyethylene
^(b)	Polypropylene
9009-53-6	Polystyrene

- 15171
- 15172 a) CAS numbers refer to the Chemical Abstracts Registry numbers assigned to
- 15173 specific chemicals, isomers or mixtures of chemicals. Some isomers or mixtures
- 15174 that are covered by the standards do [not](#) have CAS numbers assigned to them.
- 15175 The standards apply to all of the chemicals listed, whether CAS numbers have
- 15176 been assigned or not.
- 15177
- 15178 b) No CAS number(s) have been assigned to this chemical, to its isomers, or
- 15179 mixtures containing these chemicals.
- 15180
- 15181 c) CAS numbers for some of the isomers are listed; the standards apply to all of the
- 15182 isomers and mixtures, even if CAS numbers have not been assigned.
- 15183

(Source: Amended at 17 Ill. Reg. 16636, effective September 27, 1993)

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15185

15186 **Section 218.APPENDIX B VOM Measurement Techniques for Capture Efficiency**
15187 **(Repealed)**

15188
15189 (Source: Repealed at 30 Ill. Reg. 9684, effective May 15, 2006)

15190
15191 **Section 218.APPENDIX C Reference Methods and Procedures**

15192
15193 Introduction

15194
15195 This Appendix presents the reference methods and procedures required for implementing
15196 Reasonably Available Control Technology (RACT). Methods and procedures are identified for
15197 two types of RACT implementation:

- 15198
15199 a) Determination of VOM destruction efficiency for evaluating compliance with the
15200 98 weight percent VOM reduction or 20 ppmv emission limit specified in
15201 Sections 218.520 through 218.527 of this Part; and
15202
15203 b) Determination of offgas flowrate, hourly emissions and stream net heating value
15204 for calculating TRE.

15205
15206 All reference methods identified in this Appendix refer to the reference methods specified at 40
15207 CFR 60, Appendix A, incorporated by reference in Section 218.112 of this Part.

15208
15209 **VOM DESTRUCTION EFFICIENCY DETERMINATION**

15210
15211 The following reference methods and procedures are required for determining compliance with
15212 the percent destruction efficiency specified in Sections 218.520 through 218.527 of this Part.

- 15213
15214 a) Reference Method 1 or 1A for selection of the sampling site. The control device
15215 inlet sampling site for determination of vent stream molar composition or total
15216 organic compound destruction efficiency shall be prior to the inlet of any control
15217 device and after all recovery devices.
15218
15219 b) Reference Methods 2, 2A, 2C or 2D for determination of the volumetric flowrate.
15220
15221 c) Reference Method 3 to measure oxygen concentration of the air dilution
15222 correction. The emission sample shall be corrected to 3 percent oxygen.
15223
15224 d) Reference Method 18 to determine the concentration of total organic compounds
15225 (minus methane and ethane) in the control device outlet and total organic
15226 compound reduction efficiency of the control device.

15227
15228 **TRE DETERMINATION**

15229
15230 The following reference methods and procedures are required for determining the offgas
15231 flowrate, hourly emissions, and the net heating value of the gas combusted to calculate the vent

15232 stream TRE.

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a) Reference Method 1 or 1A for selection of the sampling site. The sampling site for the vent stream flowrate and molar composition determination prescribed in (b) and (c) shall be prior to the inlet of any combustion device, prior to any post-reactor dilution of the stream with air and prior to any post-reactor introduction of halogenated compounds into the vent stream. Subject to the preceding restrictions on the sampling site, it shall be after the final recovery device. If any gas stream other than the air oxidation vent stream is normally conducted through the recovery system of the affected facility, such stream shall be rerouted or turned off while the vent stream is sampled, but shall be routed normally prior to the measuring of the initial value of the monitored parameters for determining compliance with the recommended RACT. If the air oxidation vent stream is normally routed through any equipment which is not a part of the air oxidation process as defined in 35 Ill. Adm. Code 211.350, such equipment shall be bypassed by the vent stream while the vent stream is sampled, but shall not be bypassed during the measurement of the initial value of the monitored parameters for determining compliance with Subpart V.

b) The molar composition of the vent stream shall be determined using the following methods:

- 1) Reference Method 18 to measure the concentration of all organics, including those containing halogens, unless a significant portion of the compounds of interest are polymeric (high molecular weight), can polymerize before analysis or have low vapor pressures, in which case Reference Method 25(a) shall be used.
- 2) ASTM D1946-67 (reapproved 1977), incorporated by reference in Section 218.112 of this Part, to measure the concentration of carbon monoxide and hydrogen.
- 3) Reference Method 4 to measure the content of water vapor, if necessary.

c) The volumetric flowrate shall be determined using Reference Method 2, 2A, 2C or 2D, as appropriate.

d) The net heating value of the vent stream shall be calculated using the following equation:

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

Where:

H = Net heating value of the sample, MJ/ppm, where the net enthalpy per

mole of offgas is based on combustion at 25° C and 760 mmHg, but the standard temperature for determining the volume corresponding to one mole is 20° C, as in the definition of F (vent stream flowrate) below

K = Constant, 1.740×10^{-7} (1/ppm) (mole/scm) (MJ/kcal) where standard temperature for mole/scm is 20° C

C_i = Concentration of sample component i, reported on a wet basis, in ppm, as measured by Reference Method 18 or ASTM D1946-67 (reapproved 1977), incorporated by reference in Section 218.112 of this Part.

H_i = Net heat of combustion of sample component i, kcal/mole based on combustion at 25° C and 760 mmHg. If published values are not available or cannot be calculated, the heats of combustion of vent stream components are required to be determined using ASTM D2382-76, incorporated by reference in Section 218.112 of this Part.

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- e) The emission rate of total organic compounds in the process vent stream shall be calculated using the following equation:

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$$E = K F \sum_{i=1}^n C_i M_i$$

E = Emission rate of total organic compounds (minus methane and ethane) in the sample in kg/hr;

K = Constant, 2.494×10^{-6} (1/ppm) (mole/scm) (kg/g) (min/hr), where standard temperature for mole/scm is 20° C;

M_i = Molecular weight of sample component I (g/mole)

F = Vent stream flow rate (scm/min), at a standard temperature of 20° C.

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- f) The total vent stream concentration (by volume) of compounds containing halogens (ppmv, by compound) shall be summed from the individual concentrations of compounds containing halogens which were measured by Reference Method 18.

(Source: Amended at 18 Ill. Reg. 16950, effective November 15, 1994)

15290 **Section 218.APPENDIX D Coefficients for the Total Resource Effectiveness Index (TRE)**
 15291 **Equation**

15292
 15293 This Appendix contains values for the total resource effectiveness index (TRE) equation in
 15294 Subpart V.

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 15296 If a flow rate falls exactly on the boundary between the indicated ranges, the operator shall use
 15297 the row in which the flow rate is maximum.

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COEFFICIENTS FOR TRE EQUATION
 FOR CHLORINATED PROCESS VENT STREAMS WITH
 NET HEATING VALUE LESS THAN
 OR EQUAL TO 3.5 MJ/scm

FLOW RATE (scm/min)		a	b	c	d	e	f
Min.	Max.						
0.	13.5	48.73	0.	0.404	-0.1632	0.	0.
13.5	700.	42.35	0.624	0.404	-0.1632	0.	0.0245
700.	1400.	84.38	0.678	0.404	-0.1632	0.	0.0346
1400.	2100.	126.41	0.712	0.404	-0.1632	0.	0.0424
2100.	2800.	168.44	0.747	0.404	-0.1632	0.	0.0490
2800.	3500.	210.47	0.758	0.404	-0.1632	0.	0.0548

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COEFFICIENTS FOR TRE EQUATION FOR
 CHLORINATED PROCESS VENT STREAMS WITH
 NET HEATING VALUE GREATER THAN 3.5 MJ/scm

FLOW RATE (scm/min)		a	b	c	d	e	f
Min.	Max.						
0.	13.5	47.76	0.	-0.292	0.	0.	0.
13.5	700.	41.58	0.605	-0.292	0.	0.	0.0245
700.	1400.	82.84	0.658	-0.292	0.	0.	0.0346
1400.	2100.	123.10	0.691	-0.292	0.	0.	0.0424
2100.	2800.	165.36	0.715	-0.292	0.	0.	0.0490
2800.	3500.	206.62	0.734	-0.292	0.	0.	0.0548

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FOR TRE EQUATION
 FOR NON-CHLORINATED PROCESS VENT STREAMS WITH
 NET HEATING VALUE LESS THAN
 OR EQUAL TO 0.48 MJ/scm

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FLOW RATE (scm/min)							
Min.	Max.	a	b	c	d	e	f
0.	13.5	19.05	0.	0.113	-0.214	0.	0.
13.5	1350.	16.61	0.239	0.113	-0.214	0.	0.0245
1350.	2700.	32.91	0.260	0.113	-0.214	0.	0.0346
2700.	4050.	49.21	0.273	0.113	-0.214	0.	0.0424

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COEFFICIENTS FOR TRE EQUATION
FOR NONCHLORINATED PROCESS VENT STREAMS WITH
NET HEATING VALUE GREATER THAN
0.48 AND LESS THAN OR EQUAL TO 1.9 MJ/scm

FLOW RATE (scm/min)							
Min.	Max.	a	b	c	d	e	f
0.	13.5	19.74	0.	0.400	-0.202	0.	0.
13.5	1350.	18.30	0.138	0.400	-0.202	0.	0.0245
1350.	2700.	36.28	0.150	0.400	-0.202	0.	0.0346
2700.	4050.	54.26	0.158	0.400	-0.202	0.	0.0424

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COEFFICIENTS FOR TRE EQUATION
FOR NONCHLORINATED PROCESS VENT STREAMS WITH
NET HEATING VALUE GREATER THAN
1.98 AND LESS THAN OR EQUAL TO 3.6 MJ/scm

FLOW RATE (scm/min)							
Min.	Max.	a	b	c	d	e	f
.0	13.5	15.24	0.	0.033	0.	0.	0.
13.5	1190.	13.63	0.157	0.033	0.	0.	0.0245
1190.	2380.	26.95	0.171	0.033	0.	0.	0.0346
2380.	3570.	40.27	0.179	0.033	0.	0.	0.0424

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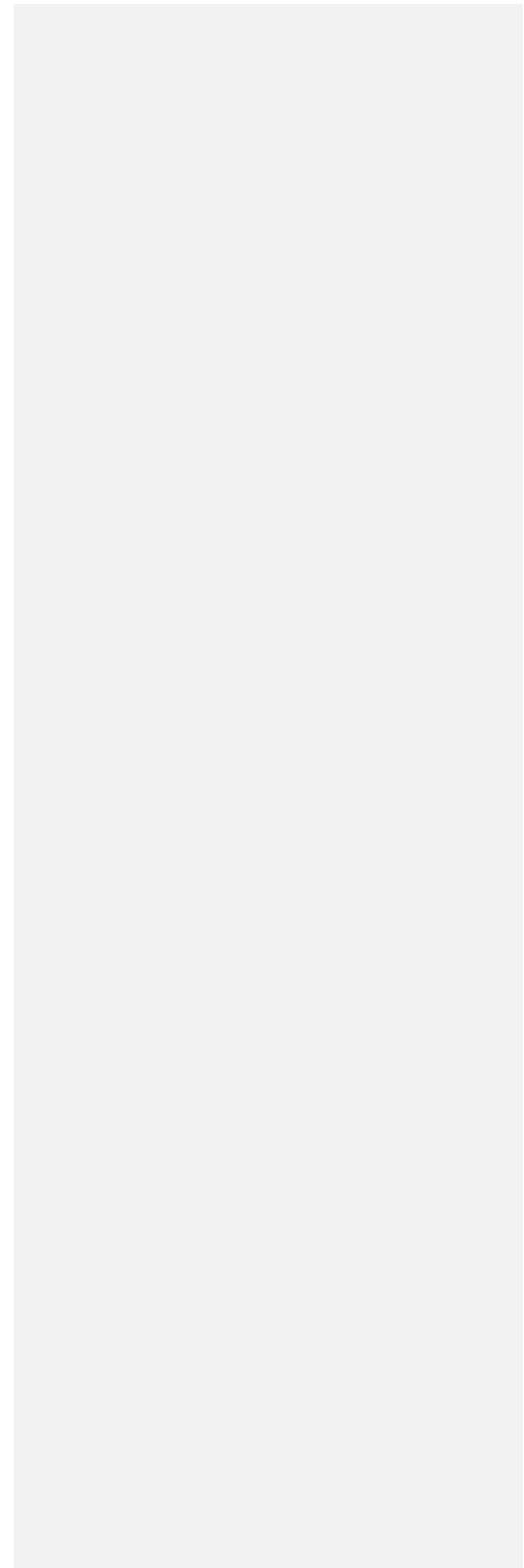
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FOR TRE EQUATION
FOR NONCHLORINATED PROCESS VENT STREAMS WITH
NET HEATING VALUE GREATER THAN 3.6 MJ/scm

FLOW RATE

(scm/min)		a	b	c	d	e	f
Min.	Max.						
0.	13.5	15.24	0.	0.	0.0090	0.	0.
13.5	1190.	13.63	0.	0.	0.0090	0.0503	0.0245
1190.	2380.	26.95	0.	0.	0.0090	0.0546	0.0346
2380.	3570.	40.27	0.	0.	0.0090	0.0573	0.0424

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15339 **Section 218.APPENDIX E List of Affected Marine Terminals**

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15341 The following table identifies the expected volatile organic material (VOM) emission reductions,
15342 in pounds per day in 1996, from the control of the marine vessel loading of gasoline and crude
15343 oil from the listed sources, their successors and assigns. Such reduction of VOM emissions must
15344 occur after November 1990 and may not include reductions resulting from compliance with any
15345 federally required controls or from any measures included in any State Implementation Plan
15346 adopted by the State of Illinois to satisfy any other Clean Air Act requirement.
15347

<u>Facility</u>	<u>Permit/Source</u>	<u>Reduction</u>
Mobil-Joliet Refining Corp. Facility ID# 197800AAA	88010021045	1,595
Texaco Refining Facility ID # 197810AAA	84050048007	541
UNO-VEN Company Facility ID # 197090AAI	88010019055	549

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15349 (Source: Added at 18 Ill. Reg. 16392, effective October 25, 1994)
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15351 **Section 218.APPENDIX G TRE Index Measurements for SOCMi Reactors and**
15352 **Distillation Units**

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15354 For purposes of Subpart Q, Sections 218.431 through 218.435, the following apply:

15355

15356 a) The following test methods shall be used to determine compliance with the total
15357 resource effectiveness ("TRE") index value:

15358

15359 1) Method 1 or 1A, incorporated by reference at Section 218.112 of this Part,
15360 as appropriate, for selection of the sampling site.

15361

15362 A) The sampling site for the vent stream molar composition
15363 determination and flow rate prescribed in subsections (a)(2) and
15364 (a)(3) of this Appendix shall be, except for the situations outlined
15365 in subsection (a)(1)(B), after the final recovery device, if a
15366 recovery system is present, prior to the inlet of any control device,
15367 and prior to any post-reactor or post-distillation unit introduction
15368 of halogenated compounds into the vent stream. No traverse site
15369 selection method is needed for vents smaller than 10 cm in
15370 diameter.

15371

15372 B) If any gas stream other than the reactor or distillation unit vent
15373 stream is normally conducted through the final recovery device:

15374

15375 i) The sampling site for vent stream flow rate and molar
15376 composition shall be prior to the final recovery device and
15377 prior to the point at which any nonreactor or nondistillation
15378 unit vent stream or stream from a nonaffected reactor or
15379 distillation unit is introduced. Method 18 incorporated by
15380 reference at Section 218.112 of this Part, shall be used to
15381 measure organic compound concentrations at this site.

15382

15383 ii) The efficiency of the final recovery device is determined by
15384 measuring the organic compound concentrations using
15385 Method 18, incorporated by reference at Section 218.112 of
15386 this Part, at the inlet to the final recovery device after the
15387 introduction of all vent streams and at the outlet of the final
15388 recovery device.

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15390 iii) The efficiency of the final recovery device determined
15391 according to subsection (a)(1)(B)(ii) of this Appendix shall
15392 be applied to the organic compound concentrations
15393 measured according to subsection (a)(1)(B)(i) of this
15394 Appendix to determine the concentrations of organic
15395 compounds from the final recovery device attributable to
15396 the reactor or distillation unit vent stream. The resulting

15397 organic compound concentrations are then used to perform
15398 the calculations outlined in subsection (a)(4) of this
15399 Appendix.
15400

- 15401 2) The molar composition of the vent stream shall be determined as follows:
15402
15403 A) Method 18, incorporated by reference at Section 218.112 of this
15404 Part, to measure the concentration of organic compounds including
15405 those containing halogens;
15406
15407 B) ASTM D1946-77, incorporated by reference at Section 218.112 of
15408 this Part, to measure the concentration of carbon monoxide and
15409 hydrogen; and
15410
15411 C) Method 4, incorporated by reference at Section 218.112 of this
15412 Part, to measure the content of water vapor.
15413
15414 3) The volumetric flow rate shall be determined using Method 2, 2A, 2C, or
15415 2D, incorporated by reference at Section 218.112 of this Part, as
15416 appropriate.
15417
15418 4) The emission rate of VOM (minus methane and ethane) (E[VOM]) in the
15419 vent stream shall be calculated using the following formula:
15420

$$E_{VOM} = K_2 \sum_{j=1}^n C_j M_j Q_s$$

15422 where:
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- E_{VOM} = Emission rate of VOM (minus methane and ethane) in the
sample, kg/hr.
= Constant, 2.494×10^{-6} (l/ppmv) (g-mole/scm) (kg/g)
 K_2 (min/hr), where standard temperature for (g-mole/scm) is
20° C.
 C_j = Concentration of compound j, on a dry basis, in ppmv as
measured by Method 18 incorporated by reference at
218.112 of this Part, as indicated in Section 218.433(c)(3)
of this Part.
 M_j = Molecular weight of sample j, g/g-mole.
 Q_s = Vent stream flow rate (scm) at a temperature of 20° C.

- 15425
15426 5) The total vent stream concentration (by volume) of compounds containing
15427 halogens (ppmv, by compound) shall be summed from the individual
15428 concentrations of compounds containing halogens which were measured
15429 by Method 18, incorporated by reference at Section 218.112 of this Part.
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- 6) The net heating value of the vent stream shall be calculated using the following:

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$$H_T = K_1 \sum_{j=1}^n C_j H_j (1 - B_{ws})$$

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where:

H_T = Net heating value of the sample (MJ/scm), where the net ~~enthalpy~~ enthalpy per mole of vent stream is based on combustion of 25°C and 760 mmHG, but the standard temperature for determining the volume corresponding to one mole is 20°C, as in the definition of Q_s (vent stream flow rate).

K_1 = Constant, 1.740×10^{-7} (ppmv)⁻¹ (g-mole/scm), (MJ/KCal), where standard temperature for (g-mole/scm) is 20°C.

B_{ws} = Water vapor content of the vent stream, proportion by volume; except that if the vent stream passes through a final stream jet and is not condensed, it shall be assumed that $B_{ws} = 0.023$ in order to correct to 2.3 percent moisture.

C_j = Concentration on a dry basis of compound j in ppmv, as measured for all organic compounds by Method 18, incorporated by reference at Section 218.112 of this Part, and measured for hydrogen and carbon monoxide by using ASTM D1946-77, incorporated by reference at Section 218.112 of this Part.

H_j = Concentration on a dry basis of compound j in ppmv, as measured for all organic compounds by Method 18, incorporated by reference at Section 218.112 of this Part, and measured for hydrogen and carbon monoxide by using ASTM D1946-77, incorporated by reference at Section 218.112 of this Part.

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- b) 1) The TRE index value of the vent shall be calculated using the following:

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$$TRE = \frac{1[a + b(Q_s) + c(H_T) + d(E_{VOM})]}{E_{VOM}}$$

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where:

- TRE = TRE index value.
 E_{VOM} = Hourly emission rate of VOM (kg/hr) as calculated in subsection (a)(4) of this Appendix.
 Q_s = Vent stream flow rate scm/min at a standard temperature of 20°C.
 H_T = Vent stream net heating value (MJ/scm), as calculated in subsection (a)(6) of this Appendix.
 E_{VOM} = Hourly emission rate of VOM (minus methane and ethane), (kg/hr) as calculated in subsection (a)(4) of this Appendix.
 a,b,c,d = Value of coefficients presented below are:

15446

Type of Stream	Control Device Basis	Value of Coefficients			
		a	b	c	d
Nonhalogenated	Flare	2.129	0.183	-0.005	0.359
Thermal incinerator zero (0) Percent heat Recovery		3.075	0.021	-0.037	0.018
Thermal incinerator 70 Percent heat Recovery		3.803	0.032	-0.042	0.007
Halogenated	Thermal incinerator and scrubber	5.470	0.181	-0.040	0.004

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- 2) Every owner or operator of a vent stream shall use the applicable coefficients identified for values a, b, c, and d in subsection (b)(1) of this Appendix to calculate the TRE index value based on a flare, a thermal incinerator with zero (0) percent heat recovery, and a thermal incinerator with 70 percent heat recovery, and shall select the lowest TRE index value.
- 3) Every owner or operator of a reactor or distillation unit with a halogenated vent stream, determined as any stream with a total concentration of halogen atoms contained in organic compounds of 200 ppmv or greater, shall use the applicable coefficients identified for values a, b, c and d in subsection (b)(1) of this Appendix to calculate the TRE index value based

15460 on a thermal incinerator and scrubber.

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- c) Every owner or operator of a source seeking to comply with Section 218.432(b) of this Part shall recalculate the flow rate and VOM concentration for each affected vent stream whenever process changes are made. Examples of process changes include, but are not limited to, changes in production capacity, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. The flow rate and VOM concentration shall be recalculated based on test data, or on best engineering estimates of the effects of the change to the recovery system.
- d) Whenever a process change, as defined in Section 218.435(c) of this Subpart, yields a TRE index value of 1.0 or less, the owner or operator shall notify and submit a report to the Agency according to the requirements specified in Section 218.435(c) of this Subpart, within 180 calendar days after the process change and shall conduct a performance test according to the methods and procedures required by Section 218.433 of this Part.
- e) For the purpose of demonstrating that a process vent stream has a VOM concentration below 500 ppmv, the following shall be used:
 - 1) The sampling site shall be selected as specified in Section 218.433(c)(1) of this Part.
 - 2) Method 18 or Method 25A of 40 CFR Part 60, Appendix A, incorporated by reference at Section 218.112 of this Part, shall be used to measure concentration; alternatively, any other method or data that has been validated according to the protocol in Method 301 of 40 CFR Part 63, Appendix A, incorporated by reference at Section 218.112 of this Part, may be used.
 - 3) Where Method 18 is used, the following procedures shall be used to calculate ppmv concentration:
 - i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.
 - ii) The concentration of VOM shall be calculated using Method 18 according to Section 218.433(c)(4) of this Part.
 - 4) Where Method 25A is used, the following procedures shall be used to calculate ppmv VOM concentration:

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- i) Method 25A shall be used only if a single VOM is greater than 50 percent of total VOM, by volume, in the process vent stream.
 - ii) The vent stream composition may be determined by either process knowledge, test data collected using an appropriate Reference Method or a method of data collection validated according to the protocol in Method 301 of 40 CFR Part 63, Appendix A, incorporated by reference at Section 218.112 of this Part. Examples of information that constitute process knowledge include calculations based on material balances, process stoichiometry, or previous test results provided the results are still relevant to the current process vent stream conditions.
 - iii) The VOM used as the calibration gas for Method 25A shall be the single VOM present at greater than 50 percent of the total VOM by volume.
 - iv) The span value for Method 25A shall be 50 ppmv.
 - v) Use of Method 25A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.
 - vi) The concentration of VOM shall be corrected to 3 percent oxygen using the procedures and equation in Section 218.433(c)(3) of this Part.
- 5) The owner or operator shall demonstrate that the concentration of VOM, including methane and ethane, measured by Method 25A is below 250 ppmv to qualify for the low concentration exclusion in Section 218.431 of this Part.

(Source: Amended at 20 Ill. Reg. 14428, effective October 17, 1996)

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15541 **Section 218.APPENDIX H Baseline VOM Content Limitations for Subpart F, Section**
 15542 **218.212 Cross-Line Averaging**

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 15544 This Appendix contains limitations for purposes of determining compliance with the
 15545 requirements in Section 218.212 of this Part. A source must establish that, at very least, each
 15546 participating coating line used for purposes of cross-line averaging meets the Federal
 15547 Implementation Plan level of VOM content, as listed below. The emission limitations for
 15548 participating coating lines that must not be exceeded are as follows:
 15549

a)	Automobile or Light-Duty Truck Coating	kg/l	lb/gal
1)	Prime coat	0.14	(1.2)
2)	Primer surface coat	1.81	(15.1)

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 15551 (Note: The primer surface coat limitation is in units of kg (lbs) of VOM per 1
 15552 (gal) of coating solids deposited. Compliance with the limitation shall be based
 15553 on the daily-weighted average from an entire primer surface operation.
 15554 Compliance shall be demonstrated in accordance with the topcoat protocol
 15555 referenced in Section 218.105(b) and the recordkeeping and reporting
 15556 requirements specified in Section 218.211(f). Testing to demonstrate compliance
 15557 shall be performed in accordance with the topcoat protocol and a detailed testing
 15558 proposal approved by the Agency and USEPA specifying the method of
 15559 demonstrating compliance with the protocol. Section 218.205 does not apply to
 15560 the primer surface limitation.)
 15561

		kg/l	lb/gal
3)	Topcoat	1.81	(15.1)

15562
 15563 (Note: The topcoat limitation is in units of kg (lbs) of VOM per 1 (gal) of coating
 15564 solids deposited. Compliance with the limitation shall be based on the daily-
 15565 weighted average from an entire topcoat operation. Compliance shall be
 15566 demonstrated in accordance with the topcoat protocol referenced in Section
 15567 218.105(b) of this Part and the recordkeeping and reporting requirements
 15568 specified in Section 218.211(f). Testing to demonstrate compliance shall be
 15569 performed in accordance with the topcoat protocol and a detailed testing proposal
 15570 approved by the Agency and USEPA specifying the method of demonstrating
 15571 compliance with the protocol. Section 218.205 of this Part does not apply to the
 15572 topcoat limitation.)
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		kg/l	lb/gal
4)	Final repair coat	0.58	(4.8)
b)	Can Coating	kg/l	lb/gal
1)	Sheet basecoat and overvarnish	0.34	(2.8)

	2)	Exterior basecoat and overvarnish	0.34	(2.8)
	3)	Interior body spray coat	0.51	(4.2)
	4)	Exterior end coat	0.51	(4.2)
	5)	Side seam spray coat	0.66	(5.5)
	6)	End sealing compound coat	0.44	(3.7)
c)		Paper Coating	kg/l	lb/gal
			0.35	(2.9)

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(Note: The paper coating limitation shall not apply to any owner or operator of any paper coating line on which flexographic or rotogravure printing is performed if the paper coating line complies with the emissions limitations in Section 218.401 of this Part. In addition, screen printing on paper is not regulated as paper coating, but is regulated under Subpart TT of this Part.)

			kg/l	lb/gal
d)		Coil Coating	0.31	(2.6)
e)		Fabric Coating	0.35	(2.9)
f)		Vinyl Coating	0.45	(3.8)
g)		Metal Furniture Coating		
	1)	Air Dried	0.36	(3.0)
	2)	Baked	0.36	(3.0)
h)		Large Appliance Coating		
	1)	Air Dried	0.34	(2.8)
	2)	Baked	0.34	(2.8)

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(Note: The limitation shall not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of coating does not exceed 0.95 l (1 quart) in any one rolling eight-hour period.)

			kg/l	lb/gal
i)		Magnet Wire Coating	0.20	(1.7)
j)		Miscellaneous Metal Parts and Products Coating		
	1)	Clear coating	0.52	(4.3)
	2)	Extreme performance coating		

	A)	Air Dried	0.42	(3.5)
	B)	Baked	0.42	(3.5)
	3)	Steel pail and drum interior coating	0.52	(4.3)
	4)	All other coatings		
	A)	Air Dried	0.42	(3.5)
	B)	Baked	0.36	(3.0)
k)		Heavy Off-Highway Vehicle Products Coating	kg/l	lb/gal
	1)	Extreme performance prime coat	0.42	(3.5)
	2)	Extreme performance topcoat (air dried)	0.42	(3.5)
	3)	Final repair coat (air dried)	0.42	(3.5)
	4)	All other coatings are subject to the emission limitations for miscellaneous metal parts and products coatings in subsection (j) above.		
l)		Wood Furniture Coating	kg/l	lb/gal
	1)	Clear topcoat	0.67	(5.6)
	2)	Opaque stain	0.56	(4.7)
	3)	Pigmented coat	0.60	(5.0)
	4)	Repair coat	0.67	(5.6)
	5)	Sealer	0.67	(5.6)
	6)	Semi-transparent stain	0.79	(6.6)
	7)	Wash coat	0.73	(6.1)

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(Note: An owner or operator of a wood furniture coating operation subject to this Section shall apply all coatings, with the exception of no more than 37.8 l (10 gal) of coating per day used for touch-up and repair operations, using one or more of the following application systems: airless spray application system, air-assisted airless spray application system, electrostatic spray application system, electrostatic bell or disc spray application system, heated airless spray application system, roller coating, brush or wipe coating application system, dip coating application system or high volume low pressure (HVLP) application system.)

m)		Existing Diesel-Electric Locomotive Coating Lines in Cook County	kg/l	lb/gal
	1)	Extreme performance prime coat	0.42	(3.5)
	2)	Extreme performance topcoat	0.42	(3.5)
	3)	Final repair coat (air dried)	0.42	(3.5)

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	4)	High temperature aluminum coating	0.72	(6.0)
	5)	All other coatings	0.36	(3.0)
n)		Plastic Parts Coating: Automotive/Transportation	kg/l	lb/gal
	1)	Interiors		
	A)	Baked		
		i) Color coat	0.49	(4.1)
		ii) Primer	0.46	(3.8)
	B)	Air Dried		
		i) Color coat	0.38	(3.2)
		ii) Primer	0.42	(3.5)
	2)	Exteriors (flexible and non-flexible)		
	A)	Baked		
		i) Primer	0.60	(5.0)
		ii) Primer nonflexible	0.54	(4.5)
		iii) Clear coat	0.52	(4.3)
		iv) Color coat	0.55	(4.6)
	B)	Air Dried		
		i) Primer	0.66	(5.5)
		ii) Clear coat	0.54	(4.5)
		iii) Color coat (red & black)	0.67	(5.6)
		iv) Color coat (others)	0.61	(5.1)
	3)	Specialty		
	A)	Vacuum metallizing basecoats, texture basecoats	0.66	(5.5)
	B)	Black coatings, reflective argent coatings, air bag cover coatings, and soft coatings	0.71	(5.9)
	C)	Gloss reducers, vacuum metallizing topcoats, and texture topcoats	0.77	(6.4)
	D)	Stencil coatings, adhesion primers, ink pad coatings, electrostatic prep coatings, and resist coatings	0.82	(6.8)

	E)	Head lamp lens coatings	0.89	(7.4)
o)		Plastic Parts Coating: Business Machine	kg/l	lb/gal
	1)	Primer	0.14	(1.2)
	2)	Color coat (non-texture coat)	0.28	(2.3)
	3)	Color (texture coat)	0.28	(2.3)
	4)	Electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings	0.48	(4.0)
	5)	Specialty coatings		
	A)	Soft coat	0.52	(4.3)
	B)	Plating resist	0.71	(5.9)
	C)	Plating sensitizer	0.85	(7.1)*

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(Source: Amended at 31 Ill. Reg. 7086, effective April 30, 2007)

