Title 7 DNREC
1100 Air Quality Management Section

1138 EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

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04/04/1998

1.0 Overview

1.1 Title III of the Clean Air Act Amendments of November 15, 1990 revised Section 112 of the 1970 Clean Air Act that addressed hazardous air pollutants (HAPs) and changed the way that these pollutants were to be regulated. Title III identified the specific HAPs and established the regulatory approach that the U.S. Environmental Protection Agency (EPA) would take to control their emissions from stationary sources.

1.2 The EPA is initially required to promulgate emission standards that are based on the maximum achievable control technology (MACT) for categories or subcategories of sources according to a Congress-mandated schedule. Within eight years of promulgating these MACT-based standards, the EPA is required to address

the remaining or residual risk by promulgating, if needed, standards necessary to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect. The initial MACT-based regulations are at 40 CFR Part 63.

1.3 The Department is adopting these regulations in response to 7 **Del. C.**, Ch 60.

2 DE Reg. 1798 (5/1/98)

2.0 [Reserved]

09/11/1999

3.0 General Provisions

3.1 Applicability.

3.1.1 General.

3.1.1.1 Terms used throughout this regulation are defined in 3.2 of this regulation or in the Clean Air Act Amendments of 1990 (the Act), except that individual subparts of 40 CFR Part 63 or individual sections of this regulation may include specific definitions in addition to or that supersede definitions in 3.2 of this regulation.

3.1.1.2 This regulation contains emission standards for hazardous air pollutants initially established pursuant to Section 112 of the Act as amended November 15, 1990. These standards regulate specific categories of stationary sources that emit (or have the potential to emit) one or more hazardous air pollutants listed in 40 CFR Part 63 pursuant to Section 112(b) of the Act. This section explains the applicability of such standards to sources affected by them. The standards in 40 CFR Part 63 or this regulation are independent of NESHAP contained in 40 CFR Part 61 or 7 **DE Admin Code** 1121 of the State of Delaware "Regulations Governing the Control of Air Pollution." The NESHAP in Part 61 promulgated by signature of the Administrator before November 15, 1990 (i.e., the date of enactment of the Clean Air Act Amendments of 1990) remain in effect until they are amended, if appropriate, and added to 40 CFR Part 63. The standards in 7 **DE Admin Code** 1121 remain in effect.

3.1.1.3 No emission standard or other requirement established under this regulation shall be interpreted, construed, or applied to diminish or replace the requirements of a more stringent emission limitation or other applicable requirement established by the Administrator pursuant to other authority of the Act (Section 111, Part C or D or any other authority of the Act), or a standard or other applicable requirement issued by the Department. The Department may specify in a specific standard under

this regulation that facilities subject to other provisions under the Act need only comply with the provisions of that standard.

3.1.1.4 General provisions applicability to relevant standards.

3.1.1.4.1 Each relevant standard in 40 CFR Part 63 or this regulation shall identify explicitly whether each provision in 3.0 of this regulation is or is not included in such relevant standard.

3.1.1.4.2 If a relevant standard in 40 CFR Part 63 or this regulation incorporates the requirements of 40 CFR Part 60, Part 61 or Part 63 standard, the relevant standard shall identify explicitly the applicable general provisions (i.e. Subpart A requirements) of each corresponding Part 60, Part 61, or Part 63 standard or the applicable requirements in 3.0 of this regulation.

3.1.1.4.3 The General Provisions in 3.0 of this regulation do not apply to regulations developed pursuant to Section 112(r) of the Act, unless otherwise specified in those regulations.

3.1.1.5 [Reserved]

3.1.1.6 To obtain the most current list of categories of sources to be regulated under Section 112 of the Act, or to obtain the most recent regulation promulgation schedule established pursuant to Section 112(e) of the Act, contact the Office of the Director, Emission Standards Division, Office of Air Quality Planning and Standards, U.S. EPA (MD-13), Research Triangle Park, North Carolina 27711.

3.1.1.7 [Reserved]

3.1.1.8 [Reserved]

3.1.1.9 [Reserved]

3.1.1.10 For the purposes of this regulation, time periods specified in days shall be measured in calendar days, even if the word “calendar” is absent, unless otherwise specified in an applicable requirement.

3.1.1.11 For the purposes of this regulation, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, test plan, report, or other written communication to the Administrator and the Department, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take

place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator and the Department, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery agreed to by the Department, is acceptable.

3.1.1.12 Notwithstanding time periods or postmark deadlines specified in 40 CFR Part 63 or this regulation for the submittal of information to the Administrator or the Department by an owner or operator, or the review of such information by the Administrator or the Department, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator or the Department. Procedures governing the implementation of this provision are specified in 3.9.9 of this regulation.

3.1.1.13 [Reserved]

3.1.1.14 [Reserved]

3.1.2 Initial applicability determination for this regulation.

3.1.2.1 The provisions of this regulation apply to the owner or operator of any stationary source that-

3.1.2.1.1 Emits or has the potential to emit any hazardous air pollutant listed in or pursuant to Section 112(b) of the Act and

3.1.2.1.2 Is subject to any standard, limitation, prohibition, or other federally enforceable requirement established pursuant to 40 CFR Part 63 or this regulation.

3.1.2.2 In addition to complying with the provisions of this regulation, the owner or operator of any such source may be required to obtain, revise or amend permits issued to stationary sources by the Department. For more information about obtaining permits, see 7 **DE Admin Codes** 1102, 1125 and 1130 of the State of Delaware “Regulations Governing the Control of Air Pollution.”

3.1.2.3 An owner or operator of a stationary source who is in the relevant source category and who determines that the source is not subject to a relevant standard or other requirement established under 40

CFR Part 63 or this regulation shall keep a record as specified in 3.10.2.3 of this regulation.

3.1.3 Applicability of this regulation after a relevant standard has been set under 40 CFR Part 63 or this regulation.

3.1.3.1 If a relevant standard has been established under 40 CFR Part 63 or this regulation, the owner or operator of an affected source shall comply with the provisions of that standard and of 3.0 of this regulation as provided in 3.1.1.4 of this regulation.

3.1.3.2 Except as provided in 3.10.2.3 of this regulation, if a relevant standard has been established under 40 CFR Part 63 or this regulation, the owner or operator of an affected source may be required to obtain a Title V permit from the Department. Emission standards promulgated in 40 CFR Part 63 for area sources pursuant to Section 112(c)(3) of the Act or in this regulation will specify what the permitting requirements will be for area sources affected by such a standard.

3.1.3.3 [Reserved]

3.1.3.4 [Reserved]

3.1.3.5 If an area source that otherwise would be subject to an emission standard or other requirement established under 40 CFR Part 63 or this regulation if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source that is subject to the emission standard or other requirement, such source also shall be subject to the notification requirements in 3.0 of this regulation.

3.1.4 [Reserved]

3.1.5 If the Administrator promulgates an emission standard under Section 112(d) or (h) of the Act that is applicable to a source subject to an emission limitation by permit established under Section 112(j) (of the Act) requirements in 4.12 though 4.18 of this regulation, and the requirements under that Section 112(j) emission limitation are substantially as effective as the promulgated emission standard, the owner or operator may request the Department to revise the source's Title V permit to reflect that the emission limitation in the permit satisfies the requirements of the promulgated emission standard. The process by which the Department determines whether the Section 112(j) emission limitation is substantially as effective as the promulgated emission standard shall include, consistent with 7 **DE Admin Code** 1130, the opportunity for full public, EPA, and affected State review (including the opportunity for EPA's objection) prior to the permit revision being finalized. A

negative determination by the Department constitutes final action for purposes of review and appeal under 7 **DE Admin Code** 1130.

2 DE Reg. 1798 (5/1/98)

3.2 Definitions.

The terms used in this regulation are defined in the Act or in 3.2 of this regulation as follows:

"Act" means the Clean Air Act (42 U.S.C. 7401 et seq.).

"Actual emissions", for the purpose of granting a compliance extension for an early reduction of hazardous air pollutants, mean the actual rate of emissions of a pollutant, but does not include excess emissions from a malfunction, or startups and shutdowns associated with a malfunction. Actual emissions shall be calculated using the source's actual operating rates, and types of materials processed, stored, or combusted during the selected time period.

"Administrator" means the Administrator of the United States Environmental Protection Agency.

"Affected source", for the purposes of this regulation, means the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a Section 112(c) (of the Act) source category or subcategory for which a Section 112(d) (of the Act) standard or other relevant standard is established pursuant to Section 112 of the Act. Each relevant standard will define the "affected source," as defined in 3.2 of this regulation unless a different definition is warranted based on a published justification as to why this definition would result in significant administrative, practical, or implementation problems and why the different definition would resolve those problems. The term "affected source," as used in this regulation, is separate and distinct from any other use of that term in EPA regulations such as those implementing Title IV of the Act. Affected source may be defined differently for 40 CFR Part 63 and this regulation than affected facility and stationary source in 40 CFR Parts 60 and 61 and 7 **DE Admin Codes** 1120 and 1121 of the State of Delaware "Regulation Governing the Control of Air Pollution", respectively. This definition of "affected source," and the procedures for adopting an alternative definition of "affected source," shall apply to each Section 112(d) standard for which the initial proposed rule is signed by the Administrator after June 30, 2002.

"Alternative emission limitation" means conditions established pursuant to Sections 112(i)(5) or 112(i)(6) of the Act by the Department.

"Alternative emission standard" means an alternative means of emission limitation that, after notice and opportunity for public comment, has been demonstrated by an owner or operator to the Administrator's satisfaction to achieve a

reduction in emissions of any air pollutant at least equivalent to the reduction in emissions of such pollutant achieved under a relevant design, equipment, work practice, or operational emission standard, or combination thereof, established under 40 CFR Part 63 pursuant to Section 112(h) of the Act.

"Alternative test method" means any method of sampling and analyzing for an air pollutant that is not a test method in Chapter I of Title 40 and that has been demonstrated to the Administrator's satisfaction, using Method 301 in Appendix A of 40 CFR Part 63, to produce results adequate for the Administrator's determination that it may be used in place of a test method specified in 40 CFR Part 63 or this regulation.

"Approved permit program" means the permit program established under 7 **DE Admin Code** 1130.

"Area source" means any stationary source of hazardous air pollutants that is not a major source as defined in this regulation.

"Commenced" means, with respect to construction or reconstruction of an affected source, that an owner or operator has undertaken a continuous program of construction or reconstruction or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or reconstruction.

"Compliance date" means the date by which an affected source is required to be in compliance with a relevant standard, limitation, prohibition, or any federally enforceable requirement established by the Administrator or the Department pursuant to Section 112 of the Act.

"Compliance schedule" means:

- In the case of an affected source that is in compliance with all applicable requirements established under 40 CFR Part 63 or this regulation, a statement that the source will continue to comply with such requirements;

- In the case of an affected source that is required to comply with applicable requirements by a future date, a statement that the source will meet such requirements on a timely basis and, if required by an applicable requirement, a detailed schedule of the dates by which each step toward compliance will be reached; or

- In the case of an affected source not in compliance with all applicable requirements established under 40 CFR Part 63 or this regulation, a schedule of remedial measures, including an enforceable sequence of actions or operations with milestones and a schedule for the submission of certified progress reports, where applicable, leading to compliance with a relevant

standard, limitation, prohibition, or any federally enforceable requirement established pursuant to Section 112 of the Act for which the affected source is not in compliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based.

"Construction" means the on-site fabrication, erection, or installation of an affected source. Construction does not include the removal of all equipment comprising an affected source from an existing location and reinstallation of such equipment at a new location. The owner or operator of an existing affected source that is relocated may elect not to reinstall minor ancillary equipment including, but not limited to, piping, ductwork, and valves. However, removal and reinstallation of an affected source will be construed as reconstruction if it satisfies the criteria for reconstruction as defined in 3.2 of this regulation. The costs of replacing minor ancillary equipment shall be considered in determining whether the existing affected source is reconstructed.

"Continuous emission monitoring system" (CEMS) means the total equipment that may be required to meet the data acquisition and availability requirements of 40 CFR Part 63 or this regulation, used to sample, condition (if applicable), analyze, and provide a record of emissions.

"Continuous monitoring system" (CMS) is a comprehensive term that may include, but is not limited to, continuous emission monitoring systems, continuous opacity monitoring systems, continuous parameter monitoring systems, or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation.

"Continuous opacity monitoring system" (COMS) means a continuous monitoring system that measures the opacity of emissions.

"Continuous parameter monitoring system" (CPMS) means the total equipment that may be required to meet the data acquisition and availability requirements of 40 CFR Part 63 or this regulation, used to sample, condition (if applicable), analyze, and provide a record of process or control system parameters.

"Department" means the Department of Natural Resources and Environmental Control as defined in 29 **Del. C**., Ch 80, as amended.

"Effective date" means:

- With regard to an emission standard established under 40 CFR Part 63, the date of promulgation in the Federal Register of such standard;

- With regard to an alternative emission limitation or equivalent emission limitation determined by the Department, the date that the alternative emission limitation or equivalent emission limitation becomes effective according to the provisions of this regulation; or

- With regard to an emission standard established under this regulation, the date specified in the emission standard.

"Emission standard" means a national standard, limitation, prohibition, or other regulation promulgated in a subpart of 40 CFR Part 63 pursuant to Sections 112(d), 112(h), or 112(f) of the Act or a standard, limitation, prohibition, or other regulation promulgated in a section of this regulation.

"Emissions averaging" is a way to comply with the emission limitations specified in a relevant standard, whereby an affected source, if allowed under a subpart of 40 CFR Part 63 or a section of this regulation, may create emission credits by reducing emissions from specific points to a level below that required by the relevant standard, and those credits are used to offset emissions from points that are not controlled to the level required by the relevant standard.

"EPA" means the United States Environmental Protection Agency.

"Equivalent emission limitation" means any maximum achievable control technology emission limitation or requirements which are applicable to a major source of hazardous air pollutants and are adopted by the Department on a case-by-case basis, pursuant to Section 112(g) or Section 112(j) (of the Act) requirements in 4.0 of this regulation.

"Excess emissions and continuous monitoring system performance report" is a report that must be submitted periodically by an affected source in order to provide data on its compliance with relevant emission limits, operating parameters, and the performance of its CPMS.

"Existing source" means any affected source that is not a new source.

"Federally enforceable" means all limitations and conditions that are enforceable by the Administrator and citizens under the Act or that are enforceable under other statutes administered by the Administrator. Examples of federally enforceable limitations and conditions include, but are not limited to:

- Emission standards, alternative emission standards, alternative emission limitations, and equivalent emission limitations established pursuant to Section 112 of the Act as amended in 1990;

- New source performance standards established pursuant to Section 111 of the Act and emission standards established pursuant to Section 112 of the Act before it was amended in 1990;

- All terms and conditions in a Title V permit, including any provisions that limit a source's potential to emit, unless expressly designated as not federally enforceable;

- Limitations and conditions that are part of an approved State Implementation Plan (SIP) or a Federal Implementation Plan (FIP);

- Limitations and conditions that are part of a Federal construction permit issued under 40 CFR 52.21 or any construction permit issued under regulations approved by the EPA in accordance with 40 CFR Part 51;

- Limitations and conditions that are part of an operating permit where the permit and the permitting program pursuant to which it was issued meet all of the following criteria:

    - The operating permit program has been submitted to and approved by EPA into a SIP under Section 110 of the CAA;

    - The SIP imposes a legal obligation that operating permit holders adhere to the terms and limitations of such permits and provides that permits which do not conform to the operating permit program requirements and the requirements of EPA's underlying regulations may be deemed not "federally enforceable" by EPA;

    - The operating permit program requires that all emission limitations, controls, and other requirements imposed by such permits will be at least as stringent as any other applicable limitations and requirements contained in the SIP or enforceable under the SIP, and that the program may not issue permits that waive, or make less stringent, any limitations or requirements contained in or issued pursuant to the SIP, or that are otherwise "federally enforceable";

    - The limitations, controls, and requirements in the permit in question are permanent, quantifiable, and otherwise enforceable as a practical matter; and

    - The permit in question was issued only after adequate and timely notice and opportunity for comment by EPA and the public.

- Limitations and conditions in a Department rule or program that has been approved by the EPA under Subpart E of 40 CFR Part 63 for the purposes of implementing and enforcing Section 112 of the Act; and

- Individual consent agreements that the EPA has legal authority to create.

"Fixed capital cost" means the capital needed to provide all the depreciable components of an existing source.

"Fugitive emissions" mean those emissions from a stationary source that could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening. Under Section 112 of the Act, all fugitive emissions are to be considered in determining whether a stationary source is a major source.

"Hazardous air pollutant" means any air pollutant listed in or pursuant to Section 112(b) of the Act.

"Intermediate change to monitoring" means a modification to federally required monitoring involving "proven technology" (generally accepted by the scientific community as equivalent or better) that is applied on a site-specific basis and that may have the potential to decrease the stringency of the associated emission limitation or standard. Though site-specific, an intermediate change may set a national precedent for a source category and may ultimately result in a revision to the federally required monitoring. Examples of intermediate changes to monitoring include, but are not limited to:

- Use of a CEMS in lieu of a parameter monitoring approach;

- Decreased frequency for non-continuous parameter monitoring or physical inspections;

- Changes to quality control requirements for parameter monitoring; and

- Use of an electronic data reduction system in lieu of manual data reduction.

"Intermediate change to test method" means a within-method modification to a federally enforceable test method involving "proven technology" (generally accepted by the scientific community as equivalent or better) that is applied on a site-specific basis and that may have the potential to decrease the stringency of the associated emission limitation or standard. Though site-specific, an intermediate change may set a national precedent for a source category and may ultimately result in a revision to the federally enforceable test method. In order to be approved, an intermediate change shall be validated according to Method 301 in Appendix A of 40 CFR Part 63, to demonstrate that it provides equal or improved accuracy and precision. Examples of intermediate changes to a test method include, but are not limited to:

- Modifications to a test method's sampling procedure including substitution of sampling equipment that has been demonstrated for a particular sample matrix and use of a different impinger absorbing solution;

- Changes in sample recovery procedures and analytical techniques, such as changes to sample holding times and use of a different analytical finish with proven capability for the analyte of interest; and

- "Combining" a federally required method with another proven method for application to processes emitting multiple pollutants.

"Issuance of a Title V permit" will occur in accordance with the requirements of 7 **DE Admin Code** 1130.

"Major change to monitoring" means a modification to federally required monitoring that uses "unproven technology or procedures" (not generally accepted by the scientific community) or is an entirely new method (sometimes necessary when the required monitoring is unsuitable). A major change to monitoring may be site-specific or may apply to one or more source categories and will almost always set a national precedent. Examples of major changes to monitoring include, but are not limited to:

- Use of a new monitoring approach developed to apply to a control technology not contemplated in the applicable regulation;

- Use of a predictive emission monitoring system (PEMS) in place of a required CEMS;

- Use of alternative calibration procedures that do not involve calibration gases or test cells;

- Use of an analytical technology that differs from that specified by a performance specification;

- Decreased monitoring frequency for a CEMS, COMS, PEMS, or CPMS;

- Decreased monitoring frequency for a leak detection and repair program; and

- Use of alternative averaging times for reporting purposes.

"Major change to test method" means a modification to a federally enforceable test method that uses "unproven technology or procedures" (not generally accepted by the scientific community) or is an entirely new method (sometimes necessary when the required test method is unsuitable). A major change to a test method may be site-specific, or may apply to one or more sources or source categories, and will

almost always set a national precedent. In order to be approved, a major change shall be validated according to Method 301 in Appendix A of 40 CFR Part 63. Examples of major changes to a test method include, but are not limited to:

- Use of an unproven analytical finish;
- Use of a method developed to fill a test method gap;
- Use of a new test method developed to apply to a control technology not contemplated in the applicable regulation; and
- Combining two or more sampling/analytical methods (at least one unproven) into one for application to processes emitting multiple pollutants.

"Major source" means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless the Administrator establishes a lesser quantity, or in the case of radionuclides, different criteria from those specified in this sentence.

"Malfunction" means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

"Minor change to monitoring" means:

- A modification to federally required monitoring that:
    - Does not decrease the stringency of the compliance and enforcement measures for the relevant standard;
    - Has no national significance (e.g., does not affect implementation of the applicable regulation for other affected sources, does not set a national precedent, and individually does not result in a revision to the monitoring requirements); and
    - Is site-specific, made to reflect or accommodate the operational characteristics, physical constraints, or safety concerns of an affected source.
- Examples of minor changes to monitoring include, but are not limited to:

- Modifications to a sampling procedure, such as use of an improved sample conditioning system to reduce maintenance requirements;

- Increased monitoring frequency; and

- Modification of the environmental shelter to moderate temperature fluctuation and thus protect the analytical instrumentation.

"Minor change to test method" means:

- A modification to a federally enforceable test method that:

  - Does not decrease the stringency of the emission limitation or standard;

  - Has no national significance (e.g., does not affect implementation of the applicable regulation for other affected sources, does not set a national precedent, and individually does not result in a revision to the test method); and

  - Is site-specific, made to reflect or accommodate the operational characteristics, physical constraints, or safety concerns of an affected source.

- Examples of minor changes to a test method include, but are not limited to:

  - Field adjustments in a test method's sampling procedure, such as a modified sampling traverse or location to avoid interference from an obstruction in the stack, increasing the sampling time or volume, use of additional impingers for a high moisture situation, accepting particulate emission results for a test run that was conducted with a lower than specified temperature, substitution of a material in the sampling train that has been demonstrated to be more inert for the sample matrix and

  - Changes in recovery and analytical techniques such as a change in quality control/quality assurance requirements needed to adjust for analysis of a certain sample matrix.

"Monitoring" means the collection and use of measurement data or other information to control the operation of a process or pollution control device or to verify a work practice standard relative to assuring compliance with applicable requirements. Monitoring is composed of four elements:

- Indicators of performance--the parameter or parameters you measure or observe for demonstrating proper operation of the pollution control measures or compliance with the applicable emissions limitation or standard. Indicators

of performance may include direct or predicted emissions measurements (including opacity), operational parametric values that correspond to process or control device (and capture system) efficiencies or emissions rates, and recorded findings of inspection of work practice activities, materials tracking, or design characteristics. Indicators may be expressed as a single maximum or minimum value, a function of process variables (for example, within a range of pressure drops), a particular operational or work practice status (for example, a damper position, completion of a waste recovery task, materials tracking), or an interdependency between two or among more than two variables.

- Measurement techniques--the means by which you gather and record information of or about the indicators of performance. The components of the measurement technique include the detector type, location and installation specifications, inspection procedures, and quality assurance and quality control measures. Examples of measurement techniques include CEMS, COMS, CPMS, and manual inspections that include making records of process conditions or work practices.

- Monitoring frequency--the number of times you obtain and record monitoring data over a specified time interval. Examples of monitoring frequencies include at least four points equally spaced for each hour for CEMS or CPMS, at least every 10 seconds for COMS, and at least once per operating day (or week, month, etc.) for work practice or design inspections.

- Averaging time--the period over which you average and use data to verify proper operation of the pollution control approach or compliance with the emissions limitation or standard. Examples of averaging time include a 3-hour average in units of the emissions limitation, a 30-day rolling average emissions value, a daily average of a control device operational parametric range, and an instantaneous alarm.

"New affected source" means the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a Section 112(c) (of the Act) source category or subcategory that is subject to a Section 112(d) (of the Act) or other relevant standard for new sources. This definition of "new affected source," and the criteria to be utilized in implementing it, shall apply to each Section 112(d) standard for which the initial proposed rule is signed by the Administrator after June 30, 2002. Each relevant standard will define the term "new affected source," which will be the same as the "affected source" unless a different collection is warranted based on consideration of factors including:

- Emission reduction impacts of controlling individual sources versus groups of sources;

- Cost effectiveness of controlling individual equipment;

- Flexibility to accommodate common control strategies;
- Cost/benefits of emissions averaging;
- Incentives for pollution prevention;
- Feasibility and cost of controlling processes that share common equipment (e.g., product recovery devices);
- Feasibility and cost of monitoring; and
- Other relevant factors.

"New source" means any affected source the construction or reconstruction of which is commenced after the Administrator first proposes a relevant emission standard under 40 CFR Part 63 establishing an emission standard applicable to such source.

"One-hour period", unless otherwise defined in an applicable subpart of 40 CFR Part 63 or a section of this regulation, means any 60-minute period commencing on the hour.

"Opacity" means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background. For COMS, opacity means the fraction of incident light that is attenuated by an optical medium.

"Owner or operator" means any person who owns, leases, operates, controls, or supervises a stationary source.

"Performance audit" means a procedure to analyze blind samples, the content of which is known by the Administrator or the Department, simultaneously with the analysis of performance test samples in order to provide a measure of test data quality.

"Performance evaluation" means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the CMS data.

"Performance test" means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

"Permit modification" means a change to a Title V permit as defined in 7 **DE Admin Code** 1130.

"Permit program" means the comprehensive State operating permit system established under 7 **DE Admin Code** 1130.

"Permit revision" means any permit modification or administrative permit amendment to a Title V permit as defined in 7 **DE Admin Code** 1130.

"Permitting authority" means the Department.

"Potential to emit" means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.

"Reconstruction", unless otherwise defined in a relevant standard, means the replacement of components of an affected or a previously nonaffected source to such an extent that:

- The fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable new source and

- It is technologically and economically feasible for the reconstructed source to meet the relevant standards established by the Administrator pursuant to Section 112 of the Act or the Department in this regulation. Upon reconstruction, an affected source or a stationary source that becomes an affected source, is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

"Regulation promulgation schedule" means the schedule for the promulgation of emission standards under 40 CFR Part 63, established by the Administrator pursuant to Section 112(e) of the Act and published in the Federal Register.

"Relevant standard" means:

- An emission standard;

- An alternative emission standard;

- An alternative emission limitation; or

- An equivalent emission limitation established pursuant to Section 112 of the Act that applies to the collection of equipment, activities, or both regulated by such standard or limitation. A relevant standard may include or consist of a

design, equipment, work practice, or operational requirement, or other measure, process, method, system, or technique (including prohibition of emissions) that the Administrator or the Department establishes for new or existing sources to which such standard or limitation applies. Every relevant standard established pursuant to Section 112 of the Act or in sections of this regulation includes 3.0 of this regulation, as provided by 3.1.1.4 of this regulation, and all applicable appendices of 40 CFR Part 63 or of other parts of Chapter I of Title 40 that are referenced in that standard or the sections of this regulation.

"Responsible official" means one of the following:

- For a corporation: A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities and either:

    - The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars) or

    - The delegation of authority to such representative is approved in advance by the Department.

- For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

- For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this regulation, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of the EPA).

- For affected sources (as defined in 3.2 of this regulation) applying for or subject to a Title V permit: "responsible official" shall have the same meaning as defined in 7 **DE Admin Code** 1130.

"Run" means one of a series of emission or other measurements needed to determine emissions for a representative operating period or cycle as specified in this regulation.

"Shutdown" means the cessation of operation of an affected source or portion of an affected source for any purpose.

"Six-minute period" means, with respect to opacity determinations, any one of the 10 equal parts of a one-hour period.

"Standard conditions" means a temperature of 293^{o}K (68^{o}F) and a pressure of 101.3 kilopascals (29.92 in. Hg).

"Startup" means the setting in operation of an affected source or portion of an affected source for any purpose.

"State" shall have its conventional meaning.

"Stationary source" means any building, structure, facility, or installation which emits or may emit any air pollutant.

"Test method" means the validated procedure for sampling, preparing, and analyzing for an air pollutant specified in a relevant standard as the performance test procedure. The test method may include methods described in an appendix of Chapter I of Title 40, test methods incorporated by reference in 40 CFR Part 63 or this regulation, or methods validated for an application through procedures in Method 301 in Appendix A of 40 CFR Part 63.

"Title V permit" means any permit issued, renewed, or revised pursuant to 7 **DE Admin Code** 1130.

"Visible emission" means the observation of an emission of opacity or optical density above the threshold of vision.

"Working day" means any day on which State government offices are open for normal business. Saturdays, Sundays, and official State holidays are not working days.

3.3 Units and abbreviations.

Used in 40 CFR Part 63 and this regulation are abbreviations and symbols of units of measure. These are defined as follows:

3.3.1 System International (SI) units of measure:

A = ampere
g = gram
Hz = hertz
J = joule
^{o}K = degree Kelvin
kg = kilogram
l = liter
m = meter

m^3 = cubic meter
mg = milligram = 10^{-3} gram
ml = milliliter = 10^{-3} liter
mm = millimeter = 10^{-3} meter
Mg = megagram = 10^6 gram = metric ton
MJ = megajoule
mol = mole
N = Newton
ng = nanogram = 10^{-9} gram
nm = nanometer = 10^{-9} meter
Pa = pascal
s = second
V = volt
W = watt
Ω = ohm
µg = microgram = 10^{-6} gram
µl = microliter = 10^{-6} liter

3.3.2 Other units of measure:

Btu = British thermal unit
^oC = degree Celsius (centigrade)
cal = calorie
cfm = cubic feet per minute
cc = cubic centimeter
cu ft = cubic feet
d = day
dcf = dry cubic feet
dcm = dry cubic meter
dscf = dry cubic feet at standard conditions
dscm = dry cubic meter at standard conditions
eq = equivalent
^oF = degree Fahrenheit
ft = feet
ft^2 = square feet
ft^3 = cubic feet
gal = gallon
gr = grain
g-eq = gram equivalent
g-mole = gram mole
hr = hour
in. = inch
in. H_2O = inches of water
K = 1,000
kcal = kilocalorie
lb = pound

lpm = liter per minute
meq = milliequivalent
min = minute
MW = molecular weight
oz = ounces
ppb = parts per billion
ppbw = parts per billion by weight
ppbv = parts per billion by volume
ppm = parts per million
ppmw = parts per million by weight
ppmv = parts per million by volume
psia = pounds per square inch absolute
psig = pounds per square inch gage
^{o}R = degree Rankine
scf = cubic feet at standard conditions
scfh = cubic feet at standard conditions per hour
scm = cubic meter at standard conditions
scmm = cubic meter at standard conditions per minute
sec = second
sq ft = square feet
std = at standard conditions
v/v = volume per volume
yd^2 = square yards
yr = year

3.3.3 Miscellaneous:

act = actual
avg = average
I.D. = inside diameter
M = molar
N = normal
O.D. = outside diameter
% = percent

2 DE Reg. 1798 (5/1/98)

3.4 Prohibited activities and circumvention.

3.4.1 Prohibited activities.

3.4.1.1 No owner or operator subject to the provisions of this regulation shall operate any affected source in violation of the requirements of 40 CFR Part 63 or this regulation. Affected sources subject to and in compliance with either an extension of compliance or an exemption from compliance are not in violation of the requirements of 40 CFR Part 63 or

this regulation. An extension of compliance can be granted by the Administrator under 40 CFR Part 63; by the Department under 3.6.9.1 of this regulation; or by the President under Section 112(i)(4) of the Act.

3.4.1.2 No owner or operator subject to the provisions of this regulation shall fail to keep records, notify, report, or revise reports as required under 40 CFR Part 63 or this regulation.

3.4.1.3 [Reserved]

3.4.1.4 [Reserved]

3.4.1.5 [Reserved]

3.4.2 Circumvention.

No owner or operator subject to the provisions of this regulation shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to-

3.4.2.1 The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere and

3.4.2.2 The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions.

3.4.2.3 [Reserved]

3.4.3 Fragmentation.

Fragmentation after November 15, 1990 which divides ownership of an operation, within the same facility among various owners where there is no real change in control, will not affect applicability. The owner and operator shall not use fragmentation or phasing of reconstruction activities (i.e., intentionally dividing reconstruction into multiple parts for purposes of avoiding new source requirements) to avoid becoming subject to new source requirements.

2 DE Reg. 1798 (5/1/98)

3.5 Preconstruction review and notification requirements.

3.5.1 Applicability.

3.5.1.1 The provisions of 3.5 of this regulation implement the preconstruction review requirements of Section 112(i)(1) of the Act. After the effective date of a relevant standard, promulgated pursuant to Section 112(d), (f), or (h) of the Act, under 40 CFR Part 63, the preconstruction review requirements in 3.5 apply to the owner or operator of new affected sources and reconstructed affected sources that are major-emitting as specified in 3.5 of this regulation. New and reconstructed affected sources that commence construction or reconstruction before the effective date of a relevant standard are not subject to the preconstruction review requirements specified in 3.5.2.3, 3.5.4, and 3.5.5 of this regulation.

3.5.1.2 The provisions of 3.5 of this regulation include notification requirements for new affected sources and reconstructed affected sources that are not major-emitting affected sources and that are or become subject to a relevant promulgated emission standard after the effective date of a relevant standard promulgated under 40 CFR Part 63.

3.5.2 Requirements for existing, newly constructed, and reconstructed sources.

3.5.2.1 A new affected source for which construction commences after proposal of a relevant standard is subject to relevant standards for new affected sources, including compliance dates. An affected source for which reconstruction commences after proposal of a relevant standard is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

3.5.2.2 [Reserved]

3.5.2.3 After the effective date of any relevant standard promulgated by the Administrator under 40 CFR Part 63, no person may, without obtaining written approval in advance from the Department in accordance with the procedures specified in 3.5.4 and 3.5.5 of this regulation, do any of the following:

3.5.2.3.1 Construct a new affected source that is major-emitting and subject to such standard;

3.5.2.3.2 Reconstruct an affected source that is major-emitting and subject to such standard; or

3.5.2.3.3 Reconstruct a source such that the source becomes an affected source that is major-emitting and subject to the standard.

3.5.2.4 After the effective date of any relevant standard promulgated by the Administrator under 40 CFR Part 63, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, shall notify the Department of the intended construction or reconstruction. The notification shall be submitted in accordance with the procedures in 3.9.2 of this regulation.

3.5.2.5 [Reserved]

3.5.2.6 After the effective date of any relevant standard promulgated by the Administrator under 40 CFR Part 63, equipment added (or a process change) to an affected source that is within the scope of the definition of affected source under the relevant standard shall be considered part of the affected source and subject to all provisions of the relevant standard established for that affected source.

3.5.3 [Reserved]

3.5.4 Application for approval of construction or reconstruction.

The provisions in 3.5.4 of this regulation implement Section 112(i)(1) of the Act.

3.5.4.1 General application requirements.

3.5.4.1.1 An owner or operator who is subject to the requirements in 3.5.2.3 of this regulation shall submit to the Department an application for approval of the construction or reconstruction. The application shall be submitted as soon as practicable before actual construction or reconstruction begins. The application for approval of construction or reconstruction may be used to fulfill the initial notification requirements in 3.9.2.5 of this regulation. The owner or operator may submit the application for approval well in advance of the date actual construction or reconstruction begins in order to ensure a timely review by the Department and that the planned date to begin will not be delayed.

3.5.4.1.2 A separate application shall be submitted for each construction or reconstruction. Each application for approval of construction or reconstruction shall include at a minimum:

3.5.4.1.2.1 The applicant’s name and address;

3.5.4.1.2.2 A notification of intention to construct a new major affected source or make any physical or operational change to a major affected source that may meet or has been determined to meet the criteria for a reconstruction, as defined in 3.2 of this regulation or in the relevant standard;

3.5.4.1.2.3 The address (i.e., physical location) or proposed address of the source;

3.5.4.1.2.4 An identification of the relevant standard that is the basis of the application;

3.5.4.1.2.5 The expected date of the beginning of actual construction or reconstruction;

3.5.4.1.2.6 The expected completion date of the construction or reconstruction;

3.5.4.1.2.7 The anticipated date of (initial) startup of the source;

3.5.4.1.2.8 The type and quantity of hazardous air pollutants emitted by the source, reported in units and averaging times and in accordance with the test methods specified in the relevant standard, or if actual emissions data are not yet available, an estimate of the type and quantity of hazardous air pollutants expected to be emitted by the source reported in units and averaging times specified in the relevant standard. The owner or operator may submit percent reduction information if a relevant standard is established in terms of percent reduction. However, operating parameters, such as flow rate, shall be included in the submission to the extent that they demonstrate performance and compliance; and

3.5.4.1.2.9 [Reserved]

3.5.4.1.2.10 Other information as specified in 3.5.4.2 and 3.5.4.3 of this regulation.

3.5.4.1.3 An owner or operator who submits estimates or preliminary information in place of the actual emissions data and analysis required in 3.5.4.1.2.8 and 3.5.4.2 of this regulation shall submit the actual, measured emissions data and other correct information as soon as available but no later than with the

notification of compliance status required in 3.9.8 of this regulation (see 3.9.8.5 of this regulation).

3.5.4.2 Application for approval of construction

Each application for approval of construction shall include, in addition to the information required in 3.5.4.1.2 of this regulation, technical information describing the proposed nature, size, design, operating design capacity, and method of operation of the source, including an identification of each type of emission point for each type of hazardous air pollutant that is emitted (or could reasonably be anticipated to be emitted) and a description of the planned air pollution control system (equipment or method) for each emission point. The description of the equipment to be used for the control of emissions shall include each control device for each hazardous air pollutant and the estimated control efficiency (percent) for each control device. The description of the method to be used for the control of emissions shall include an estimated control efficiency (percent) for that method. Such technical information shall include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations.

3.5.4.3 Application for approval of reconstruction.

Each application for approval of reconstruction shall include, in addition to the information required in 3.5.4.1.2 of this regulation --

3.5.4.3.1 A brief description of the affected source and the components that are to be replaced;

3.5.4.3.2 A description of present and proposed emission control systems (i.e., equipment or methods). The description of the equipment to be used for the control of emissions shall include each control device for each hazardous air pollutant and the estimated control efficiency (percent) for each control device. The description of the method to be used for the control of emissions shall include an estimated control efficiency (percent) for that method. Such technical information shall include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations;

3.5.4.3.3 An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new source;

3.5.4.3.4 The estimated life of the affected source after the replacements; and

3.5.4.3.5 A discussion of any economic or technical limitations the source may have in complying with relevant standards or other requirements after the proposed replacements. The discussion shall be sufficiently detailed to demonstrate to the Department's satisfaction that the technical or economic limitations affect the source's ability to comply with the relevant standard and how they do so.

3.5.4.3.6 If in the application for approval of reconstruction the owner or operator designates the affected source as a reconstructed source and declares that there are no economic or technical limitations to prevent the source from complying with all relevant standards or other requirements, the owner or operator need not submit the information required in 3.5.4.3.3 through 3.5.4.3.5 of this regulation.

3.5.4.4 Additional information

The Department may request additional relevant information after the submittal of an application for approval of construction or reconstruction.

3.5.5 Approval of construction or reconstruction.

3.5.5.1 Determination

3.5.5.1.1 If the Department determines that, if properly constructed, or reconstructed, and operated, a new or existing source for which an application under 3.5.4 of this regulation was submitted will not cause emissions in violation of the relevant standards and any other federally enforceable requirements, the Department will approve the construction or reconstruction.

3.5.5.1.2 In addition, in the case of reconstruction, the Department's determination under 3.5.5 of this regulation will be based on:

3.5.5.1.2.1 The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new source;

3.5.5.1.2.2 The estimated life of the source after the replacements compared to the life of a comparable entirely new source;

3.5.5.1.2.3 The extent to which the components being replaced cause or contribute to the emissions from the source; and

3.5.5.1.2.4 Any economic or technical limitations on compliance with relevant standards that are inherent in the proposed replacements.

3.5.5.2 Notification

3.5.5.2.1 The Department will notify the owner or operator in writing of approval or intention to deny approval of construction or reconstruction within 60 calendar days after receipt of sufficient information to evaluate an application submitted under 3.5.4 of this regulation. The 60-day approval or denial period will begin after the owner or operator has been notified in writing that the owner or operator's application is complete. The Department will notify the owner or operator in writing of the status of the owner or operator's application, that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted.

3.5.5.2.2 When notifying the owner or operator that the owner or operator's application is not complete, the Department will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 30 calendar days after the owner or operator is notified of the incomplete application, additional information or arguments to the Department to enable further action on the application.

3.5.5.3 Before denying any application for approval of construction or reconstruction, the Department will notify the applicant of the Department's intention to issue the denial together with-

3.5.5.3.1 Notice of the information and findings on which the intended denial is based and

3.5.5.3.2 Notice of opportunity for the applicant to present, in writing, within 30 calendar days after the owner or operator is notified of the intended denial, additional information or arguments to the Department to enable further action on the application.

3.5.5.4 A final determination to deny any application for approval will be in writing and will specify the grounds on which the denial is based. The final determination will be made within 60 calendar days of

presentation of additional information or arguments (if the application is complete), or within 60 calendar days after the final date specified for presentation if no presentation is made.

3.5.5.5 Neither the submission of an application for approval nor the Department's approval of construction or reconstruction shall--

3.5.5.5.1 Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of 40 CFR Part 63 or this regulation or with any other applicable Federal, State, or local requirement, including, but not limited to the requirement to obtain construction permits under 7 **DE Admin Code** 1102 or 1125, before commencing construction or reconstruction or

3.5.5.5.2 Prevent the Administrator from implementing or enforcing 40 CFR Part 63 or taking any other action under the Act or the Department from implementing or enforcing this regulation or taking any other action under 7 **Del. C.**, Ch 60.

3.5.6 Approval of construction or reconstruction based on prior State preconstruction review.

3.5.6.1 Preconstruction review procedures under 7 **DE Admin Code** 1102 or 1125, may be utilized for purposes of 3.0 of this regulation. The Department will approve an application for construction or reconstruction specified in 3.5.2.3 and 3.5.4 of this regulation if the owner or operator of a new affected source or reconstructed affected source, who is subject to such requirement meets the following condition:

3.5.6.1.1 The owner or operator of the new affected source or reconstructed affected source has undergone a preconstruction review and approval process and has received a federally enforceable construction permit that contains a finding that the source will meet the relevant promulgated emission standard, if the source is properly built and operated.

3.5.6.1.2 [Reserved]

3.5.6.1.3 [Reserved]

3.5.6.1.4 [Reserved]

3.5.6.2 The owner or operator shall submit to the Department the request for approval of construction or reconstruction under 3.5.6.2 of this regulation no later than the application deadline specified in 3.5.4.1 of this regulation (see also 3.9.2.2 of this regulation). The owner or operator

shall include in the request information sufficient for the Department's determination. The Department will evaluate the owner or operator's request in accordance with the procedures specified in 3.5.5 of this regulation. The Department may request additional relevant information after the submittal of a request for approval of construction or reconstruction under 3.5.6.2 of this regulation.

2 DE Reg. 1798 (5/1/98)

3.6 Compliance with standards and maintenance requirements

3.6.1 Applicability.

3.6.1.1 The requirements in 3.6 of this regulation apply to the owner or operator of affected sources for which any relevant standard has been established pursuant to Section 112 of the Act and the applicability of such requirements is set out in accordance with 3.1.1.4 of this regulation unless--

3.6.1.1.1 The Administrator, under 40 CFR Part 63, or the Department, under 3.6.9 of this regulation, has granted an extension of compliance or

3.6.1.1.2 The President has granted an exemption from compliance with any relevant standard in accordance with Section 112(i)(4) of the Act.

3.6.1.2 If an area source that otherwise would be subject to an emission standard or other requirement established under 40 CFR Part 63 or this regulation if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source, such source shall be subject to the relevant emission standard or other requirement.

3.6.2 Compliance dates for new and reconstructed sources

3.6.2.1 Except as specified in 3.6.2.3 and 3.6.2.4 of this regulation, the owner or operator of a new or reconstructed affected source for which construction or reconstruction commences after proposal of a relevant standard that has an initial startup before the effective date of a relevant standard established under 40 CFR Part 63 pursuant to Section 112(d), (f), or (h) of the Act shall comply with such standard not later than the standard's effective date.

3.6.2.2 Except as specified in 3.6.2.3 and 3.6.2.4 of this regulation, the owner or operator of a new or reconstructed affected source that has an

initial startup after the effective date of a relevant standard established under 40 CFR Part 63 pursuant to Section 112(d), (f), or (h) of the Act shall comply with such standard upon startup of the source.

3.6.2.3 The owner or operator of an affected source for which construction or reconstruction is commenced after the proposal date of a relevant standard established under 40 CFR Part 63 pursuant to Section 112(d), 112(f), or 112(h) of the Act but before the effective date (that is, promulgation) of such standard shall comply with the relevant emission standard not later than the date three years after the effective date if:

3.6.2.3.1 The promulgated standard (that is, the relevant standard) is more stringent than the proposed standard; for purposes of 3.6.2 of this regulation, a finding that controls or compliance methods are “more stringent” shall include control technologies or performance criteria and compliance or compliance assurance methods that are different but are substantially equivalent to those required by the promulgated rule, as determined by the Department and

3.6.2.3.2 The owner or operator complies with the standard as proposed during the three-year period immediately after the effective date.

3.6.2.4 The owner or operator of an affected source for which construction or reconstruction is commenced after the proposal date of a relevant standard established under 40 CFR Part 63 pursuant to Section 112(d) of the Act but before the proposal date of a relevant standard established pursuant to Section 112(f) of the Act shall not be required to comply with the Section 112(f) emission standard until the date 10 years after the date construction or reconstruction is commenced, except that, if the Section 112(f) standard is promulgated more than 10 years after construction or reconstruction is commenced, the owner or operator shall comply with the standard as provided in 3.6.2.1 and 3.6.2.2 of this regulation.

3.6.2.5 The owner or operator of a new source that is subject to the compliance requirements in 3.6.2.3 or 3.6.2.4 of this regulation shall notify the Department in accordance with 3.9.4 of this regulation.

3.6.2.6 [Reserved]

3.6.2.7 When an area source becomes a major source by the addition of equipment or operations that meet the definition of new affected source in the relevant standard, the portion of the existing facility that is a new affected source shall comply with all requirements of that standard

applicable to new sources. The source owner or operator shall comply with the relevant standard upon startup.

3.6.3 Compliance dates for existing sources.

3.6.3.1 After the effective date of a relevant standard established under 40 CFR Part 63 pursuant to Section 112(d) or 112(h) of the Act, the owner or operator of an existing source shall comply with such standard by the compliance date established by the Administrator in the applicable subparts of 40 CFR Part 63. Except as otherwise provided for in Section 112 of the Act, in no case will the compliance date established for an existing source in an applicable subpart of 40 CFR Part 63 exceed three years after the effective date of such standard.

3.6.3.2 If an existing source is subject to a standard established under 40 CFR Part 63 pursuant to Section 112(f) of the Act, the owner or operator shall comply with the standard by the date 90 days after the standard's effective date, or by the date specified in an extension granted to the source by the Administrator, under 40 CFR Part 63, or the Department, under 3.6.9.4.2 of this regulation, whichever is later.

3.6.3.3 [Reserved]

3.6.3.4 [Reserved]

3.6.3.5 Except as provided in 3.6.2.7 of this regulation, the owner or operator of an area source that increases its emissions of (or its potential to emit) hazardous air pollutants such that the source becomes a major source shall be subject to relevant standards for existing sources. Such sources shall comply by the date specified in the standards for existing area sources that become major sources. If no such compliance date is specified in the standards, the source shall have a period of time to comply with the relevant emission standard that is equivalent to the compliance period specified in the relevant standard for existing sources in existence at the time the standard becomes effective.

3.6.4 [Reserved]

3.6.5 Operation and maintenance requirements.

3.6.5.1 Operating and maintenance procedures.

3.6.5.1.1 At all times, including periods of startup, shutdown, or malfunction, the owner or operator shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with

safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in 3.6.5.3 of this regulation), review of operation and maintenance records, and inspection of the source.

3.6.5.1.2 Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required in 3.6.5.3 of this regulation. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator shall comply by minimizing emissions during such a startup, shutdown, or malfunction event consistent with safety and good air pollution control practices.

3.6.5.1.3 Operation and maintenance requirements established pursuant to Section 112 of the Act or this regulation are enforceable independent of emissions limitations or other requirements in relevant standards.

3.6.5.2 [Reserved]

3.6.5.3 Startup, shutdown, and malfunction plan.

3.6.5.3.1 The owner or operator of an affected source shall develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, or malfunction, and a program of corrective action for malfunctioning process and air pollution control and monitoring equipment used to comply with the relevant standard. This plan shall be developed by the owner or operator by the source’s compliance date for that

relevant standard. The purpose of the startup, shutdown, and malfunction plan is to-

3.6.5.3.1.1 Ensure that, at all times, the owner or operator operates and maintains each affected source, including associated air pollution control and monitoring equipment, in a manner which satisfies the general duty to minimize emissions established in 3.6.5.1.1 of this regulation;

3.6.5.3.1.2 Ensure that the owner or operator is prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

3.6.5.3.1.3 Reduce the reporting burden associated with periods of startup, shutdown, or malfunction (including corrective action taken to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation).

3.6.5.3.2 During periods of startup, shutdown, or malfunction, the owner or operator of an affected source shall operate and maintain such source (including associated air pollution control and monitoring equipment) in accordance with the procedures specified in the startup, shutdown, and malfunction plan developed under 3.6.5.3.1 of this regulation.

3.6.5.3.3 When actions taken by the owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator shall keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for that event. In addition, the owner or operator shall keep records of these events as specified in 3.10.2 of this regulation, including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, or malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup,

shutdown, and malfunction report required in 3.10.4.5 of this regulation.

3.6.5.3.4 If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the owner or operator shall record the actions taken for that event and shall report such actions within two working days after commencing actions inconsistent with the plan, followed by a letter within seven working days after the end of the event, in accordance with 3.10.4.5 of this regulation (unless the owner or operator makes alternative reporting arrangements, in advance, with the Department).

3.6.5.3.5 The owner or operator shall maintain at the affected source a current startup, shutdown, and malfunction plan and shall make the plan available upon request for inspection and copying by the Department. In addition, if the startup, shutdown, and malfunction plan is subsequently revised as provided in 3.6.5.3.8 of this regulation, the owner or operator shall maintain at the affected source each previous (i.e., superseded) version of the startup, shutdown, and malfunction plan, and shall make each such previous version available for inspection and copying by the Department for a period of five years after revision of the plan. If at any time after adoption of a startup, shutdown, and malfunction plan the affected source ceases operation or is otherwise no longer subject to the provisions of a relevant standard, the owner or operator shall retain a copy of the most recent plan for five years from the date the source ceases operation or is no longer subject to the relevant standard and shall make the plan available upon request for inspection and copying by the Department. The Department may at any time request in writing that the owner or operator submit a copy of any startup, shutdown, and malfunction plan (or a portion thereof) which is maintained at the affected source or in the possession of the owner or operator. Upon receipt of such a request, the owner or operator shall promptly submit a copy of the requested plan (or a portion thereof) to the Department. The Department shall request that the owner or operator submit a particular startup, shutdown, and malfunction plan (or a portion thereof) whenever a member of the public submits a specific and reasonable request to examine or to receive a copy of that plan or portion of a plan. The owner or operator may elect to submit the required copy of any startup,

shutdown, and malfunction plan to the Department in an electronic format. If the owner or operator claims that any portion of such a startup, shutdown, and malfunction plan is confidential business information entitled to protection from disclosure under Section 114(c) of the Act, 40 CFR 2.301, 7 **Del. C.**, Ch 60, §6014, or 29 **Del. C.**, Ch 100, §10002(d), the material which is claimed as confidential shall be clearly designated in the submission.

3.6.5.3.6 To satisfy the requirements in 3.6 of this regulation to develop a startup, shutdown, and malfunction plan, the owner or operator may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements in 3.6 of this regulation and are made available for inspection or submitted when requested by the Department.

3.6.5.3.7 Based on the results of a determination made under 3.6.5.1.1 of this regulation, the Department may require that an owner or operator of an affected source make changes to the startup, shutdown, and malfunction plan for that source. The Department shall require appropriate revisions to a startup, shutdown, and malfunction plan, if the Department finds that the plan:

3.6.5.3.7.1 Does not address a startup, shutdown, or malfunction event that has occurred;

3.6.5.3.7.2 Fails to provide for the operation of the source (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with the general duty to minimize emissions established 3.6.5.1.1 of this regulation;

3.6.5.3.7.3 Does not provide adequate procedures for correcting malfunctioning process, air pollution control equipment, or monitoring equipment as quickly as practicable; or

3.6.5.3.7.4 Includes an event that does not meet the definitions of startup, shutdown, or malfunction listed in 3.2 of this regulation.

3.6.5.3.8 The owner or operator may periodically revise the startup, shutdown, and malfunction plan for the affected source as

necessary to satisfy the requirements of a relevant standard or to reflect changes in equipment or procedures at the affected source. Unless the Department provides otherwise, the owner or operator may make such revisions to the startup, shutdown, and malfunction plan without prior approval by the Administrator or the Department. However, each such revision to a startup, shutdown, and malfunction plan shall be reported in the semiannual report required in 3.10.4.5 of this regulation. If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator shall revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the owner or operator makes any revision to the startup, shutdown, and malfunction plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under 40 CFR Part 63 or this regulation, the revised plan shall not take effect until after the owner or operator has provided a written notice describing the revision to the Department.

3.6.5.3.9 The Title V permit for an affected source shall require that the owner or operator adopt a startup, shutdown, and malfunction plan which conforms to the provisions of this regulation, and that the owner or operator operate and maintain the source in accordance with the procedures specified in the current startup, shutdown, and malfunction plan. However, any revisions made to the startup, shutdown, and malfunction plan in accordance with the procedures established by this regulation shall not be deemed to constitute permit revisions under 7 **DE Admin Code** 1130. Moreover, none of the procedures specified by the startup, shutdown, and malfunction plan for an affected source shall be deemed to fall within the permit shield provision in Section 504(f) of the Act.

3.6.6 Compliance with non-opacity emission standards--

3.6.6.1 Applicability.

The non-opacity emission standards set forth in 40 CFR Part 63 or this regulation shall apply at all times except during periods of startup, shutdown, or malfunction, and as otherwise specified in an applicable subpart of 40 CFR Part 63 or section in this regulation. If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the non-opacity emission standards set forth in 40 CFR Part 63 or this regulation, then that emission point shall still be required to comply with the non-opacity emission standards and other applicable requirements.

3.6.6.2 Methods for determining compliance.

3.6.6.2.1 The Department will determine compliance with non-opacity emission standards in 40 CFR Part 63 or this regulation based on the results of performance tests conducted according to the procedures in 3.7 of this regulation, unless otherwise specified in an applicable subpart of 40 CFR Part 63 or section in this regulation.

3.6.6.2.2 The Department will determine compliance with non-opacity emission standards in 40 CFR Part 63 or this regulation by evaluation of an owner or operator's conformance with operation and maintenance requirements, including the evaluation of monitoring data, as specified in 3.6.5 of this regulation and applicable subparts of 40 CFR Part 63 or sections in this regulation.

3.6.6.2.3 If an affected source conducts performance testing at startup to obtain an approved operating permit under 7 **DE Admin Codes** 1102, 1125 or 1130 , the results of such testing may be used to demonstrate compliance with a relevant standard if--

3.6.6.2.3.1 The performance test was conducted within a reasonable amount of time before an initial performance test is required to be conducted under the relevant standard;

3.6.6.2.3.2 The performance test was conducted under representative operating conditions for the source;

3.6.6.2.3.3 The performance test was conducted and the resulting data were reduced using EPA-approved test methods and procedures, as specified in 3.7.5 of this regulation; and

3.6.6.2.3.4 The performance test was appropriately quality-assured, as specified in 3.7.3 of this regulation.

3.6.6.2.4 The Department will determine compliance with design, equipment, work practice, or operational emission standards in 40 CFR Part 63 or this regulation by review of records, inspection of the source, and other procedures specified in applicable subparts of 40 CFR Part 63 or sections in this regulation.

3.6.6.2.5 The Department will determine compliance with design, equipment, work practice, or operational emission standards in 40 CFR Part 63 or this regulation by evaluation of an owner or operator's conformance with operation and maintenance requirements, as specified in 3.6.5 of this regulation and applicable subparts of 40 CFR Part 63 or sections in this regulation.

3.6.6.3 Finding of compliance.

The Department will make a finding concerning an affected source's compliance with a non-opacity emission standard, as specified in 3.6.6.1 and 3.6.6.2 of this regulation, upon obtaining all the compliance information required by the relevant standard (including the written reports of performance test results, monitoring results, and other information, if applicable), and information available to the Department pursuant to 3.6.5.1.1 of this regulation.

3.6.7 Use of an alternative non-opacity emission standard.

3.6.7.1 If, in the Administrator's judgment, an owner or operator of an affected source has established that an alternative means of emission limitation will achieve a reduction in emissions of a hazardous air pollutant from an affected source at least equivalent to the reduction in emissions of that pollutant from that source achieved under any design, equipment, work practice, or operational emission standard, or combination thereof, established under 40 CFR Part 63 pursuant to Section 112(h) of the Act, the Administrator will publish in the Federal Register a notice permitting the use of the alternative emission standard for purposes of compliance with the promulgated standard. That Federal Register notice shall be published only after the public is notified and given the opportunity to comment. Such notice will restrict the permission to the stationary sources or categories of sources from which the alternative emission standard will achieve equivalent emission reductions. The Administrator will condition permission in such notice on requirements to assure the proper operation and maintenance of

equipment and practices required for compliance with the alternative emission standard and other requirements, including appropriate quality assurance and quality control requirements, that are deemed necessary.

3.6.7.2 An owner or operator requesting permission under 3.6.7 of this regulation shall, unless otherwise specified in an applicable subpart, submit to the Administrator (with copy to the Department) a proposed test plan or the results of testing and monitoring in accordance with 3.7 and 3.8 of this regulation, a description of the procedures followed in testing or monitoring, and a description of pertinent conditions during testing or monitoring. Any testing or monitoring conducted to request permission to use an alternative non-opacity emission standard shall be appropriately quality assured and quality controlled, as specified in 3.7 and 3.8 of this regulation.

3.6.7.3 The Administrator may establish general procedures in an applicable subpart that accomplish the requirements 3.6.7.1 and 3.6.7.2 of this regulation.

3.6.8 Compliance with opacity and visible emission standards--

3.6.8.1 Applicability.

The opacity and visible emission standards set forth in this regulation shall apply at all times except during periods of startup, shutdown, or malfunction, and as otherwise specified in an applicable subpart of 40 CFR Part 63 or section in this regulation. If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the opacity and visible emission standards set forth in 40 CFR Part 63 or this regulation, then that emission point shall still be required to comply with the opacity and visible emission standards and other applicable requirements.

3.6.8.2 Methods for determining compliance.

3.6.8.2.1 The Department will determine compliance with opacity and visible emission standards in 40 CFR Part 63 or this regulation based on the results of the test method specified in an applicable subpart of 40 CFR Part 63 or section in this regulation. Whenever a COMS is required to be installed to determine compliance with numerical opacity emission standards in 40 CFR Part 63 or this regulation, compliance with opacity emission standards shall be determined by using the results from the COMS. Whenever an opacity emission test method is not specified, compliance with opacity emission standards shall be

determined by conducting observations in accordance with Method 9 in Appendix A of 40 CFR Part 60 or the method specified in 3.6.8.7.2 of this regulation. Whenever a visible emission test method is not specified, compliance with visible emission standards in 40 CFR Part 63 or this regulation shall be determined by conducting observations in accordance with Method 22 in Appendix A of 40 CFR Part 60.

3.6.8.2.2 [Reserved]

3.6.8.2.3 If an affected source undergoes opacity or visible emission testing at startup to obtain an operating permit, the results of such testing may be used to demonstrate compliance with a relevant standard if-

3.6.8.2.3.1 The opacity or visible emission test was conducted within a reasonable amount of time before a performance test is required to be conducted under the relevant standard;

3.6.8.2.3.2 The opacity or visible emission test was conducted under representative operating conditions for the source;

3.6.8.2.3.3 The opacity or visible emission test was conducted and the resulting data were reduced using EPA-approved test methods and procedures, as specified in 3.7.5 of this regulation; and

3.6.8.2.3.4 The opacity or visible emission test was appropriately quality-assured, as specified in 3.7.3 of this regulation.

3.6.8.3 [Reserved]

3.6.8.4 Notification of opacity or visible emission observations.

The owner or operator of an affected source shall notify the Department in writing of the anticipated date for conducting opacity or visible emission observations in accordance with 3.9.6 of this regulation, if such observations are required for the source by a relevant standard.

3.6.8.5 Conduct of opacity or visible emission observations.

When a relevant standard under 40 CFR Part 63 or this regulation includes an opacity or visible emission standard, the owner or operator of an affected source shall comply with the following:

3.6.8.5.1 For the purpose of demonstrating initial compliance, opacity or visible emission observations shall be conducted concurrently with the initial performance test required in 3.7 of this regulation unless one of the following conditions applies:

3.6.8.5.1.1 If no performance test under 3.7 of this regulation is required, opacity or visible emission observations shall be conducted within 60 days after achieving the maximum production rate at which a new or reconstructed source will be operated, but not later than 120 days after initial startup of the source, or within 120 days after the effective date of the relevant standard in the case of new sources that start up before the standard's effective date. If no performance test under 3.7 of this regulation is required, opacity or visible emission observations shall be conducted within 120 days after the compliance date for an existing or modified source or

3.6.8.5.1.2 If visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under 3.7 of this regulation, or within the time period specified in 3.6.8.5.1.1 of this regulation, the source's owner or operator shall reschedule the opacity or visible emission observations as soon after the initial performance test, or time period, as possible, but not later than 30 days thereafter, and shall advise the Department of the rescheduled date. The rescheduled opacity or visible emission observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under 3.7 of this regulation. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity or visible emission observations from being made concurrently with the initial performance test in accordance with procedures contained in Method 9 or Method 22 in Appendix A of 40 CFR Part 60.

3.6.8.5.2 For the purpose of demonstrating initial compliance, the minimum total time of opacity observations shall be three hours (30 six-minute averages) for the performance test or other

required set of observations (e.g., for fugitive-type emission sources subject only to an opacity emission standard).

3.6.8.5.3 The owner or operator of an affected source to which an opacity or visible emission standard in 40 CFR Part 63 or this regulation applies shall conduct opacity or visible emission observations in accordance with the provisions in 3.6 of this regulation, record the results of the evaluation of emissions, and report to the Department the opacity or visible emission results in accordance with the provisions in 3.10.4 of this regulation.

3.6.8.5.4 [Reserved]

3.6.8.5.5 Opacity readings of portions of plumes that contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity emission standards.

3.6.8.6 Availability of records

The owner or operator of an affected source shall make available, upon request by the Department, such records that the Department deems necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification.

3.6.8.7 Use of a COMS

3.6.8.7.1 The owner or operator of an affected source required to use a COMS shall record the monitoring data produced during a performance test required under 3.7 of this regulation and shall furnish the Department a written report of the monitoring results in accordance with the provisions in 3.10.5.4 of this regulation.

3.6.8.7.2 Whenever an opacity emission test method has not been specified in an applicable subpart of 40 CFR Part 63 or section in this regulation, or an owner or operator of an affected source is required to conduct Method 9 observations (see Appendix A of 40 CFR Part 60), the owner or operator may submit, for compliance purposes, COMS data results produced during any performance test required under 3.7 of this regulation in lieu of Method 9 data. If the owner or operator elects to submit COMS data for compliance with the opacity emission standard, the owner or operator shall notify the Department of that decision, in writing, simultaneously with the notification under 3.7.2 of this regulation of the date the performance test is scheduled to begin.

Once the owner or operator of an affected source has notified the Department to that effect, the COMS data results will be used to determine opacity compliance during subsequent performance tests required under 3.7 of this regulation, unless the owner or operator notifies the Department in writing to the contrary not later than with the notification under 3.7.2 of this regulation of the date the subsequent performance test is scheduled to begin.

3.6.8.7.3 For the purposes of determining compliance with the opacity emission standard during a performance test required under 3.7 of this regulation using COMS data, the COMS data shall be reduced to six-minute averages over the duration of the mass emission performance test.

3.6.8.7.4 The owner or operator of an affected source using a COMS for compliance purposes is responsible for demonstrating that the owner or operator has complied with the performance evaluation requirements 3.8.5 of this regulation that the COMS has been properly maintained, operated, and data quality-assured, as specified in 3.8.3 and 3.8.4 of this regulation, and that the resulting data have not been altered in any way.

3.6.8.7.5 Except as provided in 3.6.8.7.2 of this regulation, the results of continuous monitoring by a COMS that indicate that the opacity at the time visual observations were made was not in excess of the emission standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the affected source proves that, at the time of the alleged violation, the instrument used was properly maintained, as specified in 3.8.3 of this regulation, and met Performance Specification 1 in Appendix B of 40 CFR Part 60, and that the resulting data have not been altered in any way.

3.6.8.8 Finding of compliance

The Department will make a finding concerning an affected source's compliance with an opacity or visible emission standard upon obtaining all the compliance information required by the relevant standard (including the written reports of the results of the performance tests required in 3.7 of this regulation, the results of Method 9 or another required opacity or visible emission test method, the observer certification required in 3.6.8.6 of this regulation, and the COMS results, whichever is/are applicable) and any information available to the Department needed to determine whether proper operation and maintenance practices are being used.

3.6.8.9 Adjustment to an opacity emission standard.

3.6.8.9.1 If the Department finds under 3.6.8.8 of this regulation that an affected source is in compliance with all relevant standards for which initial performance tests were conducted under 3.7 of this regulation, but during the time such performance tests were conducted fails to meet any relevant opacity emission standard, the owner or operator of such source may petition the Administrator (with copy to the Department) to make appropriate adjustment to the opacity emission standard for the affected source. Until the Administrator notifies the owner or operator of the appropriate adjustment, the relevant opacity emission standard remains applicable.

3.6.8.9.2 The Administrator may grant such a petition upon a demonstration by the owner or operator that--

3.6.8.9.2.1 The affected source and its associated air pollution control equipment were operated and maintained in a manner to minimize the opacity of emissions during the performance tests;

3.6.8.9.2.2 The performance tests were performed under the conditions established by the Administrator or the Department; and

3.6.8.9.2.3 The affected source and its associated air pollution control equipment were incapable of being adjusted or operated to meet the relevant opacity emission standard.

3.6.8.9.3 The Administrator will establish an adjusted opacity emission standard for the affected source meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity emission standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity emission standard in the Federal Register.

3.6.8.9.4 After the Administrator promulgates an adjusted opacity emission standard for an affected source, the owner or operator of such source shall be subject to the new opacity emission standard, and the new opacity emission standard shall apply to such source during any subsequent performance tests.

3.6.9 Extension of compliance with emission standards

3.6.9.1 Until an extension of compliance has been granted by the Department under 3.6.9 of this regulation, the owner or operator of an affected source subject to the requirements in 3.6 of this regulation shall comply with all applicable requirements of 40 CFR Part 63 or this regulation.

3.6.9.2 Extension of compliance for early reductions and other reductions--

3.6.9.2.1 Early reductions

Pursuant to Section 112(i)(5) of the Act, if the owner or operator of an existing source demonstrates that the source has achieved a reduction in emissions of hazardous air pollutants in accordance with the provisions of Subpart D of 40 CFR Part 63, the Department will grant the owner or operator an extension of compliance with specific requirements of 40 CFR Part 63 or this regulation, as specified in Subpart D.

3.6.9.2.2 Other reductions.

Pursuant to Section 112(i)(6) of the Act, if the owner or operator of an existing source has installed best available control technology (BACT) (as defined in Section 169(3) of the Act) or technology required to meet a lowest achievable emission rate (LAER) (as defined in Section 171 of the Act) prior to the promulgation of an emission standard in 40 CFR Part 63 applicable to such source and the same pollutant (or stream of pollutants) controlled pursuant to the BACT or LAER installation, the Department will grant the owner or operator an extension of compliance with such emission standard that will apply until the date five years after the date on which such installation was achieved, as determined by the Department.

3.6.9.3 Request for extension of compliance.

The requirements for requests for an extension of compliance with a relevant standard under 40 CFR Part 63 or this regulation are provided in 3.6.9.4 through 3.6.9.7 of this regulation (except requests for an extension of compliance under 3.6.9.2.1 of this regulation will be handled through procedures specified in Subpart D of 40 CFR Part 63).

3.6.9.4 Request for extension procedures.

3.6.9.4.1 Request for standards established under Section 112(d).

3.6.9.4.1.1 The owner or operator of an existing source who is unable to comply with a relevant standard established under 40 CFR Part 63 pursuant to Section 112(d) of the Act may request that the Department grant an extension allowing the source up to one additional year to comply with the standard, if such additional period is necessary for the installation of controls. An additional extension of up to three years may be added for mining waste operations, if the one extension of compliance is insufficient to dry and cover mining waste in order to reduce emissions of any hazardous air pollutant. The owner or operator of an affected source who has requested an extension of compliance under 3.6.9.4 of this regulation and who is otherwise required to obtain a Title V permit shall apply for such permit or apply to have the source's Title V permit revised to incorporate the conditions of the extension of compliance. The conditions of an extension of compliance granted under 3.6.9.4 will be incorporated into the affected source's Title V permit according to the provisions of 7 **DE Admin Code** 1130.

3.6.9.4.1.2 Any request under 3.6.9.4 of this regulation for an extension of compliance with a relevant standard shall be submitted in writing to the Department no later than 120 days prior to the affected source's compliance date (as specified in 3.6.2 and 3.6.3 of this regulation), except as provided for in 3.6.9.4.1.3 of this regulation. Nonfrivolous requests submitted under 3.6.9.4 of this regulation will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the date of denial. Emission standards established under 40 CFR Part 63 or this regulation may specify alternative dates for the submittal of requests for an extension of compliance if alternatives are appropriate for the source categories affected by those standards.

3.6.9.4.1.3 An owner or operator may submit a compliance extension request after the date specified in 3.6.9.4.1.2 of this regulation provided the need for the compliance extension arose after that date, and before the otherwise applicable compliance date and the need arose due to circumstances beyond reasonable control of

the owner or operator. This request shall include, in addition to the information required in 3.6.9.6.1 of this regulation, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the problems. Nonfrivolous requests submitted under 3.6.9.4 of this regulation will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the original compliance date.

3.6.9.4.2 The owner or operator of an existing source unable to comply with a relevant standard established under 40 CFR Part 63 pursuant to Section 112(f) of the Act may request that the Department grant an extension allowing the source up to two years after the standard's effective date to comply with the standard. The Department may grant such an extension if it finds that such additional period is necessary for the installation of controls and that steps will be taken during the period of the extension to assure that the health of persons will be protected from imminent endangerment. Any request for an extension of compliance with a relevant standard under 3.6.9.4.2 of this regulation shall be submitted in writing to the Department not later than 90 calendar days after the effective date of the relevant standard.

3.6.9.5 The owner or operator of an existing source that has installed BACT or technology required to meet LAER (as specified in 3.6.9.2.2 of this regulation) prior to the promulgation of a relevant emission standard in 40 CFR Part 63 may request that the Department grant an extension allowing the source five years from the date on which such installation was achieved, as determined by the Department, to comply with the standard. Any request for an extension of compliance with a relevant standard under 3.6.9.5 of this regulation shall be submitted in writing to the Department not later than 120 days after the promulgation date of the standard. The Department may grant such an extension if it finds that the installation of BACT or technology to meet LAER controls the same pollutant (or stream of pollutants) that would be controlled at that source by the relevant emission standard.

3.6.9.6 Request information requirements.

3.6.9.6.1 The request for a compliance extension under 3.6.9.4 of this regulation shall include the following information:

3.6.9.6.1.1 A description of the controls to be installed to comply with the standard;

3.6.9.6.1.2 A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

3.6.9.6.1.2.1 The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated;

3.6.9.6.1.2.2 [Reserved]

3.6.9.6.1.2.3 The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

3.6.9.6.1.2.4 The date by which final compliance is to be achieved.

3.6.9.6.1.3 [Reserved]

3.6.9.6.1.4 [Reserved]

3.6.9.6.2 The request for a compliance extension under 3.6.9.5 of this regulation shall include all information needed to demonstrate to the Department's satisfaction that the installation of BACT or technology to meet LAER controls the same pollutant (or stream of pollutants) that would be controlled at that source by the relevant emission standard.

3.6.9.7 Advice on requesting an extension of compliance may be obtained from the Department.

3.6.9.8 Approval of request for extension of compliance.

The provisions for approval of an extension of compliance requested under 3.6.9.4 through 3.6.9.6 of this regulation are provided in 3.6.9.9 through 3.6.9.14 of this regulation.

3.6.9.9 Based on the information provided in any request made under 3.6.9.4 through 3.6.9.6 of this regulation, or other information, the Department may grant an extension of compliance with an emission standard, as specified in 3.6.9.4 and 3.6.9.5 of this regulation.

3.6.9.10 The extension will be in writing and will--

3.6.9.10.1 Identify each affected source covered by the extension;

3.6.9.10.2 Specify the termination date of the extension;

3.6.9.10.3 Specify the dates by which steps toward compliance are to be taken, if appropriate;

3.6.9.10.4 Specify other applicable requirements to which the compliance extension applies (e.g., performance tests); and

3.6.9.10.5 Other conditions.

3.6.9.10.5.1 Under 3.6.9.4 of this regulation, specify any additional conditions that the Department deems necessary to assure installation of the necessary controls and protection of the health of persons during the extension period or

3.6.9.10.5.2 Under 3.6.9.5 of this regulation, specify any additional conditions that the Department deems necessary to assure the proper operation and maintenance of the installed controls during the extension period.

3.6.9.11 The owner or operator of an existing source that has been granted an extension of compliance under 3.6.9.10 of this regulation may be required to submit to the Department progress reports indicating whether the steps toward compliance outlined in the compliance schedule have been reached. The contents of the progress reports and the dates by which they shall be submitted will be specified in the written extension of compliance granted under 3.6.9.10 of this regulation.

3.6.9.12 Notifications for requests under 3.6.9.4.1 or 3.6.9.5 of this regulation.

3.6.9.12.1 The Department will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under 3.6.9.4.1 or 3.6.9.5 of this regulation. The Department will notify the owner or operator in writing of the status of the owner or operator's application, that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30

calendar days after receipt of any supplementary information that is submitted. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that the owner or operator's application is complete.

3.6.9.12.2 When notifying the owner or operator that the owner or operator's application is not complete, the Department will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 30 calendar days after the owner or operator is notified of the incomplete application, additional information or arguments to the Department to enable further action on the application.

3.6.9.12.3 Before denying any request for an extension of compliance, the Department will notify the owner or operator in writing of the Department's intention to issue the denial, together with--

3.6.9.12.3.1 Notice of the information and findings on which the intended denial is based and

3.6.9.12.3.2 Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after the owner or operator is notified of the intended denial, additional information or arguments to the Department before further action on the request.

3.6.9.12.4 The Department's final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

3.6.9.13 Notifications for requests under 3.6.9.4.2 of this regulation

3.6.9.13.1 The Department will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under 3.6.9.4.2 of this regulation. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that the owner or operator's application is complete. The Department will notify the owner or operator in writing of the

status of the owner or operator's application, that is, whether the application contains sufficient information to make a determination, within 15 calendar days after receipt of the original application and within 15 calendar days after receipt of any supplementary information that is submitted.

3.6.9.13.2 When notifying the owner or operator that the owner or operator's application is not complete, the Department will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 15 calendar days after the owner or operator is notified of the incomplete application, additional information or arguments to the Department to enable further action on the application.

3.6.9.13.3 Before denying any request for an extension of compliance, the Department will notify the owner or operator in writing of the Department's intention to issue the denial, together with--

3.6.9.13.3.1 Notice of the information and findings on which the intended denial is based and

3.6.9.13.3.2 Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after the owner or operator is notified of the intended denial, additional information or arguments to the Department before further action on the request.

3.6.9.13.4 A final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

3.6.9.14 The Department may terminate an extension of compliance at an earlier date than specified if any specification under 3.6.9.10.3 or 3.6.9.10.4 of this regulation is not met. Upon a determination to terminate, the Department will notify, in writing, the owner or operator of the Department's determination to terminate, together with:

3.6.9.14.1 Notice of the reason for termination and

3.6.9.14.2 Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after the owner or operator is notified of the determination to terminate, additional information or arguments to the Department before further action on the termination.

3.6.9.14.3 A final determination to terminate an extension of compliance will be in writing and will set forth the specific grounds on which the termination is based. The final determination will be made within 30 calendar days after presentation of additional information or arguments, or within 30 calendar days after the final date specified for the presentation if no presentation is made.

3.6.9.15 [Reserved]

3.6.9.16 The granting of an extension under 3.6.9 of this regulation shall not abrogate the Administrator's authority under Section 114 of the Act or the Department's authority under 7 **Del. C.**, Ch 60.

3.6.10 Exemption from compliance with emission standards

The President may exempt any stationary source from compliance with any relevant standard established pursuant to Section 112 of the Act for a period of not more than two years if the President determines that the technology to implement such standard is not available and that it is in the national security interests of the United States to do so. An exemption under 3.6.10 of this regulation may be extended for one or more additional periods, each period not to exceed two years.

2 DE Reg. 1798 (5/1/98)

3.7 Performance testing requirements

3.7.1 Applicability and performance test dates.

3.7.1.1 The applicability of 3.7 of this regulation is set out in 3.1.1.4 of this regulation.

3.7.1.2 If required to do performance testing by a relevant standard, and unless a waiver of performance testing is obtained under 3.7 of this regulation or the conditions in 3.7.3.3.2.2 of this regulation apply, the owner or operator of the affected source shall perform such tests within 180 days of the compliance date for such source.

3.7.1.2.1 [Reserved]

3.7.1.2.2 [Reserved]

3.7.1.2.3 [Reserved]

3.7.1.2.4 [Reserved]

3.7.1.2.5 [Reserved]

3.7.1.2.6 [Reserved]

3.7.1.2.7 [Reserved]

3.7.1.2.8 When an emission standard promulgated under 40 CFR Part 63 is more stringent than the standard proposed (see 3.6.2.3 of this regulation), the owner or operator of a new or reconstructed source subject to that standard for which construction or reconstruction is commenced between the proposal and promulgation dates of the standard shall comply with performance testing requirements within 180 days after the standard's effective date, or within 180 days after startup of the source, whichever is later. If the promulgated standard is more stringent than the proposed standard, the owner or operator may choose to demonstrate compliance with either the proposed or the promulgated standard. If the owner or operator chooses to comply with the proposed standard initially, the owner or operator shall conduct a second performance test within three years and 180 days after the effective date of the standard, or after startup of the source, whichever is later, to demonstrate compliance with the promulgated standard.

3.7.1.3 The Administrator or the Department may require an owner or operator to conduct performance tests at the affected source at any other time when the action is authorized by Section 114 of the Act or by 7 **DE Admin Code** 1117 of the State of Delaware "Regulations Governing the Control of Air Pollutants", respectively.

3.7.2 Notification of performance test.

3.7.2.1 The owner or operator of an affected source shall notify the Department in writing of the owner or operator's intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin to allow the Department, upon request, to review and approve the site-specific test plan required under 3.7.3 of this regulation and to have an observer present during the test.

3.7.2.2 In the event the owner or operator is unable to conduct the performance test on the date specified in the notification requirement specified in 3.7.2.1 of this regulation due to unforeseeable circumstances beyond the owner or operator's control, the owner or operator shall notify the Department as soon as practicable and without delay prior to the scheduled performance test date and specify the date when the performance test is rescheduled. This notification of delay in conducting the performance test shall not relieve the owner or operator of legal responsibility for compliance with any other applicable provisions of 40 CFR Part 63 or this regulation or with any other applicable Federal, State, or local requirement, nor will it prevent the Administrator from implementing or enforcing 40 CFR Part 63 or taking any other action under the Act or the Department from implementing or enforcing this regulation or taking any other action under 7 **Del. C.**, Ch 60.

3.7.3 Quality assurance program.

3.7.3.1 The results of the quality assurance program required in 3.7.3 of this regulation will be considered by the Department when it determines the validity of a performance test.

3.7.3.2 Site-specific test plan.

3.7.3.2.1 Submission of site-specific test plan.

Before conducting a required performance test, the owner or operator of an affected source shall develop and, if requested by the Department, shall submit a site-specific test plan to the Department for approval. The test plan shall include a test program summary, the test schedule, data quality objectives, and both an internal and external quality assurance (QA) program. Data quality objectives are the pretest expectations of precision, accuracy, and completeness of data.

3.7.3.2.2 The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of test data precision; an example of internal QA is the sampling and analysis of replicate samples.

3.7.3.2.3 The external QA program shall include, at a minimum, application of plans for a test method performance audit (PA) during the performance test. The PA's consist of blind audit samples provided by the Administrator or the Department and analyzed during the performance test in order to provide a measure of test data bias. The external QA program may also include systems audits that include the opportunity for on-site

evaluation by the Department of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

3.7.3.2.4 The owner or operator of an affected source shall submit the site-specific test plan to the Department upon the Department's request at least 60 calendar days before the performance test is scheduled to take place, that is, simultaneously with the notification of intention to conduct a performance test required under 3.7.2 of this regulation, or on a mutually agreed upon date. Notwithstanding the requirements in the previous sentence, the owner or operator shall submit the site-specific test plan to the Department at least 60 calendar days before the performance test is scheduled to take place, if the owner or operator intends to demonstrate compliance using an alternative or changed test method in accordance with 3.7.6 of this regulation. The owner or operator may submit the information required in 3.7.3 of this regulation well in advance of the deadline specified in 3.7.2.1 of this regulation to ensure a timely review by the Department in order to meet the performance test date specified in 3.7 of this regulation or the relevant standard.

3.7.3.2.5 The Department may request additional relevant information after the submittal of a site-specific test plan.

3.7.3.3 Approval of site-specific test plan.

3.7.3.3.1 The Department will notify the owner or operator of approval or intention to deny approval of the site-specific test plan (if review of the site-specific test plan is requested) within 30 calendar days after receipt of the original plan and within 30 calendar days after receipt of any supplementary information that is submitted under 3.7.3.3.1.2 of this regulation. Before disapproving any site-specific test plan, the Department will notify the applicant of the Department's intention to disapprove the plan together with-

3.7.3.3.1.1 Notice of the information and findings on which the intended disapproval is based and

3.7.3.3.1.2 Notice of opportunity for the owner or operator to present, within 30 calendar days after the owner or operator is notified of the intended disapproval, additional information to the Department before final action on the plan.

3.7.3.3.2 In the event that the Department fails to approve or disapprove the site-specific test plan within the time period specified in 3.7.3.3.1 of this regulation, the following conditions shall apply:

3.7.3.3.2.1 If the owner or operator intends to demonstrate compliance using the test methods specified in the relevant standard, the owner or operator shall conduct the performance test within the time specified in 3.7 of this regulation using the specified methods;

3.7.3.3.2.2 If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard or with a major change to the test method specified in the relevant standard (see 3.7.5.2.2 of this regulation), the owner or operator is authorized to conduct the performance test using an alternative or changed test method after the Department approves the site-specific test plan (if review of the site-specific test plan is requested or required) following the Administrator's approval of the use of the alternative test method or use of the test method with major changes. The owner or operator is authorized to conduct the performance test within 60 calendar days after the Department approves the site-specific test plan. Notwithstanding the requirements in the preceding two sentences, the owner or operator may proceed to conduct the performance test as required in 3.7 of this regulation (without the Department's prior approval of the site-specific test plan) if the owner or operator subsequently chooses to use the testing and monitoring methods specified in the relevant standard.

3.7.3.3.2.3 If the owner or operator intends to demonstrate compliance with a minor or intermediate change to the test method specified in the relevant standard (see 3.7.5.2.1.1 and 3.7.5.2.1.2 of this regulation), the owner or operator is authorized to conduct the performance test within 60 calendar days using the changed test method after the Department approves the site-specific test plan (if review of the site-specific test plan is requested or required). Notwithstanding the requirements in the preceding sentence, the owner or operator may proceed to conduct the performance test as required in 3.0 of regulation (without the Department's prior approval of the site-specific test plan) if the owner or

operator subsequently chooses to use the testing and monitoring methods specified in the relevant standard.

3.7.3.3.3 Neither the submission of a site-specific test plan for approval, nor the Department's approval or disapproval of a plan, nor the Department's failure to approve or disapprove a plan in a timely manner shall--

3.7.3.3.3.1 Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of 40 CFR Part 63 or this regulation or with any other applicable Federal, State, or local requirement or

3.7.3.3.3.2 Prevent the Administrator from implementing or enforcing 40 CFR Part 63 or taking any other action under the Act or the Department from implementing or enforcing this regulation or taking any other action under 7 **Del. C.**, Ch 60.

3.7.3.4 Performance test method audit.

3.7.3.4.1 Performance test method audit program.

The owner or operator shall analyze performance audit (PA) samples during each performance test. The owner or operator shall request performance audit materials 45 days prior to the test date. Audit materials including cylinder audit gases may be obtained by contacting the appropriate EPA Regional Office or the Department.

3.7.3.4.2 The Department will have sole discretion to require any subsequent remedial actions of the owner or operator based on the PA results.

3.7.3.4.3 If the Administrator or the Department fails to provide required PA materials to an owner or operator of an affected source in time to analyze the PA samples during a performance test, the requirement to conduct a PA under 3.7.3 of this regulation shall be waived for such source for that performance test. Waiver under 3.7.3 requirement of this regulation to conduct a PA for a particular performance test does not constitute a waiver of the requirement to conduct a PA for future required performance tests.

3.7.4 Performance testing facilities.

If required to do performance testing, the owner or operator of each new source and, at the request of the Department, the owner or operator of each existing source, shall provide performance testing facilities as follows:

3.7.4.1 Sampling ports adequate for test methods applicable to such source. This includes:

3.7.4.1.1 Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and

3.7.4.1.2 Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

3.7.4.2 Safe sampling platforms;

3.7.4.3 Safe access to sampling platforms;

3.7.4.4 Utilities for sampling and testing equipment; and

3.7.4.5 Any other facilities that the Department deems necessary for safe and adequate testing of a source.

3.7.5 Conduct of performance tests.

3.7.5.1 Performance tests shall be conducted under such conditions as the Department specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions) of the affected source. Operations during periods of startup, shutdown, or malfunction shall not constitute representative conditions for the purpose of a performance test, nor shall emissions in excess of the level of the relevant standard during periods of startup, shutdown, or malfunction be considered a violation of the relevant standard unless otherwise specified in the relevant standard or a determination of noncompliance is made under 3.6.5 of this regulation. Upon request, the owner or operator shall make available to the Department such records as may be necessary to determine the conditions of performance tests.

3.7.5.2 Performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in 3.7 of this regulation, in each relevant standard, and, if required, in applicable appendices of 40 CFR Parts 51, 60, 61, and 63 unless-

3.7.5.2.1 Approval of changes.

3.7.5.2.1.1 The Department specifies or approves, in specific cases, the use of a test method with minor changes in methodology, as defined in 3.2 of this regulation. Such changes may be approved in conjunction with approval of the site-specific test plan (see 3.7.5 of this regulation) or

3.7.5.2.1.2 The Department approves the use of an intermediate change to a test method, as defined in 3.2 of this regulation, the results of which the Department has determined to be adequate for indicating whether a specific affected source is in compliance;

3.7.5.2.2 The Administrator approves the use of a major change or alternative to a test method, as defined in 3.2 of this regulation, the results of which the Administrator has determined to be adequate for indicating whether a specific affected source is in compliance;

3.7.5.2.3 The Department approves shorter sampling times or smaller sample volumes when necessitated by process variables or other factors; or

3.7.5.2.4 The Department waives the requirement for performance tests because the owner or operator of an affected source has demonstrated by other means to the Department's satisfaction that the affected source is in compliance with the relevant standard.

3.7.5.3 Unless otherwise specified in a relevant standard or test method, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the relevant standard. For the purpose of determining compliance with a relevant standard, the arithmetic mean of the results of the three runs shall apply. Upon receiving approval from the Department, results of a test run may be replaced with results of an additional test run in the event that-

3.7.5.3.1 A sample is accidentally lost after the testing team leaves the site;

3.7.5.3.2 Conditions occur in which one of the three runs must be discontinued because of forced shutdown;

3.7.5.3.3 Extreme meteorological conditions occur; or

3.7.5.3.4 Other circumstances occur that are beyond the owner or operator's control.

3.7.5.4 Nothing in 3.7.5.1 through 3.7.5.3 of this regulation shall be construed to abrogate the Administrator's authority to require testing under Section 114 of the Act or the Department's authority under 7 **DE Admin Code** 1117.

3.7.6 Use of an alternative test method-

3.7.6.1 General.

Until permission to use a major change or alternative to a test method has been granted by the Administrator or permission to use a minor or intermediate change to a test method has be granted by the Department under 3.7.6.1 of this regulation, the owner or operator of an affected source remains subject to the requirements in 3.7 of this regulation and the relevant standard.

3.7.6.2 The owner or operator of an affected source required to do performance testing by a relevant standard may use an alternative or changed test method from that specified in the standard provided that the owner or operator-

3.7.6.2.1 Notifications.

3.7.6.2.1.1 Notifies the Administrator and the Department of the owner or operator's intention to use an alternative test method or to make a major change to a test method and submits the site-specific test plan to the Department at least 60 days before the performance test is scheduled to begin;

3.7.6.2.1.2 Notifies the Department of the owner or operator's intention to make a minor or intermediate change to a test method and submits the site-specific test plan to the Department at least 60 days before the performance test is scheduled to begin;

3.7.6.2.2 Uses Method 301 in Appendix A of 40 CFR Part 63 to validate the alternative test method or the intermediate or major changes to the test method. This may include the use of specific procedures of Method 301 if use of such procedures are sufficient to validate the alternative test method; and

3.7.6.2.3 Submits the results of the Method 301 validation process to the Administrator (with copy to the Department) or to the Department, whichever is applicable (see 3.7.5.2 of this regulation), along with the notification of intention and the justification for not using the specified test method. The owner or operator may submit the information required in 3.7.6 of this regulation well in advance of the deadline specified in 3.7.6.2.1 of this regulation to ensure a timely review by the Administrator in order to meet the performance test date specified in 3.7 of this regulation or the relevant standard.

3.7.6.3 The Administrator or the Department, whichever is applicable, will determine whether the owner or operator's validation of the proposed alternative or changed test method is adequate and issue an approval or disapproval of the alternative or changed test method. If the owner or operator intends to demonstrate compliance by using an alternative or change to any test method specified in the relevant standard, the owner or operator is authorized to conduct the performance test using an alternative or changed test method after the Administrator or the Department approves the use of the alternative or changed test method and the Department approves the site-specific test plan. The owner or operator is authorized to conduct the performance test within 60 calendar days after the owner or operator is authorized to demonstrate compliance using an alternative or changed test method and the Department approves the site-specific test plan. Notwithstanding the requirements in the preceding two sentences, the owner or operator may proceed to conduct the performance test as required in 3.7 of this regulation (without the Department's prior approval of the site-specific test plan) if the owner or operator subsequently chooses to use the testing and monitoring methods specified in the relevant standard.

3.7.6.4 If the Administrator or the Department, whichever is applicable, finds reasonable grounds to dispute the results obtained by an alternative or changed test method for the purposes of demonstrating compliance with a relevant standard, the Administrator or the Department may require the use of a test method specified in a relevant standard.

3.7.6.5 If the owner or operator uses an alternative or changed test method for an affected source during a required performance test, the owner or operator of such source shall continue to use the alternative or changed test method for subsequent performance tests at that affected source until the owner or operator receives approval from the Administrator or the Department, whichever is applicable, to use another test method as allowed under 3.7.6 of this regulation.

3.7.6.6 Neither the validation and approval process nor the failure to validate an alternative or changed test method shall abrogate the owner or operator's responsibility to comply with the requirements of 40 CFR Part 63 or this regulation.

3.7.7 Data analysis, recordkeeping, and reporting.

3.7.7.1 Unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Department in writing, results of a performance test shall include the analysis of samples, determination of emissions, and raw data. A performance test is "completed" when field sample collection is terminated. The owner or operator of an affected source shall report the results of the performance test to the Department before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Department (see 3.9.9 of this regulation). The results of the performance test shall be submitted as part of the notification of compliance status required under 3.9.8 of this regulation. Before a Title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the Department. After a Title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the Department.

3.7.7.2 [Reserved]

3.7.7.3 For a minimum of five years after a performance test is conducted, the owner or operator shall retain and make available, upon request, for inspection by the Department the records or results of such performance test and other data needed to determine emissions from an affected source.

3.7.8 Waiver of performance tests.

3.7.8.1 Until a waiver of a performance testing requirement has been granted by the Department under 3.7.8 of this regulation, the owner or operator of an affected source remains subject to the requirements in 3.7 of this regulation.

3.7.8.2 Individual performance tests may be waived upon written application to the Department if, in the Department's judgment, the source is meeting the relevant standards on a continuous basis, or the source is being operated under an extension of compliance, or the owner or operator has requested an extension of compliance and the Department is still considering that request.

3.7.8.3 Request to waive a performance test.

3.7.8.3.1 If a request is made for an extension of compliance under 3.6.9 of this regulation, the application for a waiver of an initial performance test shall accompany the information required for the request for an extension of compliance. If no extension of compliance is requested or if the owner or operator has requested an extension of compliance and the Department is still considering that request, the application for a waiver of an initial performance test shall be submitted at least 60 days before the performance test if the site-specific test plan under 3.7.3 of this regulation is not submitted.

3.7.8.3.2 If an application for a waiver of a subsequent performance test is made, the application may accompany any required compliance progress report, compliance status report, or excess emissions and continuous monitoring system performance report (such as those required under 3.6.9, 3.9.8, and 3.10.5 of this regulation or specified in a relevant standard or in the source's Title V permit), but it shall be submitted at least 60 days before the performance test if the site-specific test plan required under 3.7.3 of this regulation is not submitted.

3.7.8.3.3 Any application for a waiver of a performance test shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the affected source performing the required test.

3.7.8.4 Approval of request to waive performance test.

The Department will approve or deny a request for a waiver of a performance test made under 3.7.8.3 of this regulation when it-

3.7.8.4.1 Approves or denies an extension of compliance under 3.6.9.8 of this regulation;

3.7.8.4.2 Approves or disapproves a site-specific test plan under 3.7.3.3 of this regulation;

3.7.8.4.3 Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

3.7.8.4.4 Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

3.7.8.5 Approval of any waiver granted under 3.0 of this regulation shall not abrogate the Administrator's authority under the Act, or the Department's authority under 7 **Del. C**., Ch 60, or in any way prohibit the Department from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

2 DE Reg. 1798 (5/1/98)

3.8 Monitoring requirements.

3.8.1 Applicability.

3.8.1.1 The applicability of 3.8 of this regulation is set out in 3.1.1.4 of this regulation.

3.8.1.2 For the purposes of this regulation, all CMS required under relevant standards shall be subject to the provisions of 3.8 of this regulation upon promulgation of performance specifications for CMS as specified in the relevant standard or otherwise by the Administrator.

3.8.1.3 [Reserved]

3.8.1.4 Additional monitoring requirements for control devices used to comply with provisions in relevant standards of 40 CFR Part 63 or this regulation are specified in 3.11 of this regulation.

3.8.2 Conduct of monitoring.

3.8.2.1 Monitoring shall be conducted as set forth in 3.8 of this regulation and the relevant standards unless--

3.8.2.1.1 Exceptions.

3.8.2.1.1.1 The Department specifies or approves the use of minor changes in methodology for the specified monitoring requirements, as defined in 3.2 of this regulation or

3.8.2.1.1.2 The Department approves the use of an intermediate change to any monitoring requirements, as defined in 3.2 of this regulation or

3.8.2.1.2 The Administrator approves the use of a major change or alternative to any monitoring requirements, as defined in 3.2 of this regulation.

3.8.2.1.3 Owners or operators with flares subject to 3.11.2 of this regulation are not subject to the requirements in 3.8 of this regulation unless otherwise specified in the relevant standard.

3.8.2.2 Multiple affected sources or emission points.

3.8.2.2.1 When the emissions from two or more affected sources are combined before being released to the atmosphere, the owner or operator may install an applicable CMS for each emission stream or for the combined emission streams, provided the monitoring is sufficient to demonstrate compliance with the relevant standard.

3.8.2.2.2 If the relevant standard is a mass emission standard and the emissions from one affected source are released to the atmosphere through more than one point, the owner or operator shall install an applicable CMS at each emission point unless the installation of fewer systems is-

3.8.2.2.2.1 Approved by the Department or

3.8.2.2.2.2 Provided for in a relevant standard (e.g., instead of requiring that a CMS be installed at each emission point before the effluents from those points are channeled to a common control device, the standard specifies that only one CMS is required to be installed at the vent of the control device).

3.8.2.3 When more than one CMS is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required for each CMS. However, when one CMS is used as a backup to another CMS, the owner or operator shall report the results from the CMS used to meet the monitoring requirements of 40 CFR Part 63 or this regulation. If both such CMS are used during a particular reporting period to meet the monitoring requirements of 40 CFR Part 63 or this regulation, then the owner or operator shall report the results from each CMS for the relevant compliance period.

3.8.3 Operation and maintenance of CMS.

3.8.3.1 The owner or operator of an affected source shall maintain and operate each CMS as specified in 3.8 of this regulation, or in a relevant standard, and in a manner consistent with good air pollution control practices.

3.8.3.1.1 The owner or operator of an affected source shall maintain and operate each CMS as specified in 3.6.5.1 of this regulation.

3.8.3.1.2 The owner or operator shall keep the necessary parts for routine repairs of the affected CMS equipment readily available.

3.8.3.1.3 The owner or operator of an affected source shall develop and implement a written startup, shutdown, and malfunction plan for CMS as specified in 3.6.5.3 of this regulation.

3.8.3.2 Installation of CMS.

3.8.3.2.1 All CMS shall be installed such that representative measures of emissions or process parameters from the affected source are obtained. In addition, CEMS shall be located according to procedures contained in the applicable performance specifications.

3.8.3.2.2 Unless the relevant standard states otherwise, the owner or operator shall ensure the read out (that portion of the CMS that provides a visual display or record), or other indication of operation, from any CMS required for compliance with the emission standard is readily accessible on site for operational control or inspection by the operator of the equipment.

3.8.3.3 All CMS shall be installed, operational, and the data verified as specified in the relevant standard either prior to or in conjunction with conducting performance tests under 3.7 of this regulation. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.

3.8.3.4 Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

3.8.3.4.1 All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive six-minute period.

3.8.3.4.2 All CEMS for measuring emissions other than opacity shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

3.8.3.5 Unless otherwise approved by the Department, minimum procedures for COMS shall include a method for producing a simulated zero opacity condition and an upscale (high-level) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of all the analyzer's internal optical surfaces and all electronic circuitry, including the lamp and photodetector assembly normally used in the measurement of opacity.

3.8.3.6 The owner or operator of a CMS that is not a CPMS, which is installed in accordance with the provisions of 40 CFR Part 63 or this regulation and the applicable CMS performance specifications, shall check the zero (low-level) and high-level calibration drifts at least once daily in accordance with the written procedure specified in the site-specific performance evaluation test plan developed under 3.8.5.3.1 and 3.8.5.3.2 of this regulation. The zero (low-level) and high-level calibration drifts shall be adjusted, at a minimum, whenever the 24-hour zero (low-level) drift exceeds two times the limits of the applicable performance specifications specified in the relevant standard. The system shall allow the amount of excess zero (low-level) and high-level drift measured at the 24-hour interval checks to be recorded and quantified whenever specified. For COMS, all optical and instrumental surfaces exposed to the effluent gases shall be cleaned prior to performing the zero (low-level) and high-level drift adjustments; the optical surfaces and instrumental surfaces shall be cleaned when the cumulative automatic zero compensation, if applicable, exceeds 4% opacity. The CPMS shall be calibrated prior to use for the purposes of complying with 3.0 of this regulation. The CPMS shall be checked daily for indication that the system is responding. If the CPMS system includes an internal system check, results shall be recorded and checked daily for proper operation.

3.8.3.7 Out-of-control.

3.8.3.7.1 A CMS is out-of-control if--

3.8.3.7.1.1 The zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds

two times the applicable CD specification in the applicable performance specification or in the relevant standard;

3.8.3.7.1.2 The CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; or

3.8.3.7.1.3 The COMS CD exceeds two times the limit in the applicable performance specification in the relevant standard.

3.8.3.7.2 When the CMS is out-of-control, the owner or operator of the affected source shall take the necessary corrective action and shall repeat all necessary tests which indicate that the system is out-of-control. The owner or operator shall take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour the owner or operator conducts a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established under 40 CFR Part 63 or this regulation. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. During the period the CMS is out-of-control, recorded data shall not be used in data averages and calculations, or to meet any data availability requirement established under 40 CFR Part 63 or this regulation.

3.8.3.8 The owner or operator of a CMS that is out-of-control as defined in 3.8.3.7 of this regulation shall submit all information concerning out-of-control periods, including start and end dates and hours and descriptions of corrective actions taken, in the excess emissions and continuous monitoring system performance report required in 3.10.5.3 of this regulation.

3.8.4 Quality control program.

3.8.4.1 The results of the quality control program required in 3.8.4 of this regulation will be considered by the Department when it determines the validity of monitoring data.

3.8.4.2 The owner or operator of an affected source that is required to use a CMS and is subject to the monitoring requirements of 3.8 this regulation and a relevant standard shall develop and implement a CMS quality control program. As part of the quality control program, the owner or operator shall develop and submit to the Department for approval upon

request a site-specific performance evaluation test plan for the CMS performance evaluation required in 3.8.5.3.1 of this regulation, according to the procedures specified in 3.8.5 of this regulation. In addition, each quality control program shall include, at a minimum, a written protocol that describes procedures for each of the following operations:

3.8.4.2.1 Initial and any subsequent calibration of the CMS;

3.8.4.2.2 Determination and adjustment of the calibration drift of the CMS;

3.8.4.2.3 Preventive maintenance of the CMS, including spare parts inventory;

3.8.4.2.4 Data recording, calculations, and reporting;

3.8.4.2.5 Accuracy audit procedures, including sampling and analysis methods; and

3.8.4.2.6 Program of corrective action for a malfunctioning CMS.

3.8.4.3 The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this regulation, to be made available for inspection, upon request, by the Department. If the site-specific performance evaluation test plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the site-specific performance evaluation test plan on record to be made available for inspection, upon request, by the Department, for a period of five years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts.

3.8.5 Performance evaluation of CMS--

3.8.5.1 General.

When required by a relevant standard, and at any other time the Administrator may require under Section 114 of the Act or the Department may require under 7 **DE Admin Code** 1117, the owner or operator of an affected source being monitored shall conduct a performance evaluation of the CMS. Such performance evaluation shall be conducted according to the applicable specifications and procedures described in 3.8 of this regulation or in the relevant standard.

3.8.5.2 Notification of performance evaluation.

The owner or operator shall notify the Department in writing of the date of the performance evaluation simultaneously with the notification of the performance test date required under 3.7.2 of this regulation or at least 60 days prior to the date the performance evaluation is scheduled to begin if no performance test is required.

3.8.5.3 Site-specific performance evaluation test plan.

3.8.5.3.1 Submission of site-specific performance evaluation test plan.

Before conducting a required CMS performance evaluation, the owner or operator of an affected source shall develop and submit a site-specific performance evaluation test plan to the Department for approval upon request. The performance evaluation test plan shall include the evaluation program objectives, an evaluation program summary, the performance evaluation schedule, data quality objectives, and both an internal and external QA program. Data quality objectives are the pre-evaluation expectations of precision, accuracy, and completeness of data.

3.8.5.3.2 The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of CMS performance. The external QA program shall include, at a minimum, systems audits that include the opportunity for on-site evaluation by the Department of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

3.8.5.3.3 The owner or operator of an affected source shall submit the site-specific performance evaluation test plan to the Department upon the Department's request at least 60 days before the performance test or performance evaluation is scheduled to begin, or on a mutually agreed upon date, and review and approval of the performance evaluation test plan by the Department will occur with the review and approval of the site-specific test plan (if review of the site-specific test plan is requested or required). Notwithstanding the requirements in the previous sentence, the owner or operator shall submit the site-specific performance evaluation test plan to the Department at least 60 calendar days before the performance test or performance evaluation is scheduled to take place, if the owner or operator intends to demonstrate compliance using an alternative or changes to the monitoring requirements. The owner or operator

may submit the information required in 3.8.5.3 of this regulation well in advance of the deadline specified in 3.8.5.2 of this regulation to ensure a timely review by the Department in order to meet the performance test or performance evaluation date specified in 3.8 this regulation or the relevant standard.

3.8.5.3.4 The Department may request additional relevant information after the submittal of a site-specific performance evaluation test plan.

3.8.5.3.5 In the event that the Department fails to approve or disapprove the site-specific performance evaluation test plan within the time period specified in 3.7.3.3 of this regulation, the following conditions shall apply:

3.8.5.3.5.1 If the owner or operator intends to demonstrate compliance using the monitoring requirements specified in the relevant standard, the owner or operator shall conduct the performance evaluation within the time specified in 3.0 of this regulation using the specified methods.

3.8.5.3.5.2 If the owner or operator intends to demonstrate compliance by using an alternative to the monitoring requirements specified in the relevant standard or with a major change to the monitoring requirements specified in the relevant standard (see 3.8.2.1.2 of this regulation), the owner or operator shall refrain from conducting the performance evaluation until the Department approves the site-specific performance evaluation test plan following the Administrator's approval of the use of the alternative requirements or use of the monitoring requirements with major change. If the Administrator does not approve the use of the alternative or changed requirements within 30 days before the performance evaluation is scheduled to take place, the performance evaluation deadlines specified in 3.8.5.4 of this regulation may be extended such that the owner or operator shall conduct the performance evaluation within 60 calendar days after the Department approves the site-specific performance evaluation test plan. Notwithstanding the requirements in the preceding two sentences, the owner or operator may proceed to conduct the performance evaluation as required in 3.0 of this regulation (without the Department's prior approval of the site-specific performance evaluation test plan) if the owner

or operator subsequently chooses to use the monitoring requirements specified in the relevant standard.

3.8.5.3.5.3 If the owner or operator intends to demonstrate compliance with a minor or intermediate change to the monitoring requirements specified in the relevant standard (see 3.8.2.1.1.1 and 3.8.2.1.1.2 of this regulation), the owner or operator shall conduct the performance evaluation within 60 calendar days using the changed monitoring requirements after the Department approves the site-specific performance evaluation test plan (if review of the site-specific performance evaluation test plan is requested or required). Notwithstanding the requirements in the preceding sentence, the owner or operator may proceed to conduct the performance evaluation as required in 3.8 of this regulation (without the Department's prior approval of the site-specific performance evaluation test plan) if the owner or operator subsequently chooses to use the monitoring requirements specified in the relevant standard.

3.8.5.3.6 Neither the submission of a site-specific performance evaluation test plan for approval, nor the Department's approval or disapproval of a plan, nor the Department's failure to approve or disapprove a plan in a timely manner shall--

3.8.5.3.6.1 Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of 40 CFR Part 63 or this regulation or with any other applicable Federal, State, or local requirement or

3.8.5.3.6.2 Prevent the Administrator from implementing or enforcing 40 CFR Part 63 or taking any other action under the Act or the Department from implementing or enforcing this regulation or taking any other action under 7 **Del. C.**, Ch 60.

3.8.5.4 Conduct of performance evaluation and performance evaluation dates.

The owner or operator of an affected source shall conduct a performance evaluation of a required CMS during any performance test required under 3.7 of this regulation in accordance with the applicable performance specification as specified in the relevant standard. Notwithstanding the requirement in the previous sentence, if the owner or operator of an affected source elects to submit COMS data for compliance with a

relevant opacity emission standard as provided under 3.6.8.7 of this regulation, the owner or operator shall conduct a performance evaluation of the COMS as specified in the relevant standard, before the performance test required under 3.7 of this regulation is conducted in time to submit the results of the performance evaluation as specified in 3.8.5.5.2 of this regulation. If a performance test is not required, or the requirement for a performance test has been waived under 3.7.8 of this regulation, the owner or operator of an affected source shall conduct the performance evaluation not later than 180 days after the appropriate compliance date for the affected source, as specified in 3.7.1 of this regulation, or as otherwise specified in the relevant standard.

3.8.5.5 Reporting performance evaluation results.

3.8.5.5.1 The owner or operator shall furnish the Department a copy of a written report of the results of the performance evaluation simultaneously with the results of the performance test required under 3.7 of this regulation or within 60 days of completion of the performance evaluation if no performance test is required, unless otherwise specified in a relevant standard. The Department may request that the owner or operator submit the raw data from a performance evaluation in the report of the performance evaluation results.

3.8.5.5.2 The owner or operator of an affected source using a COMS to determine opacity compliance during any performance test required under 3.7 of this regulation shall furnish the Department two or, upon request, three copies of a written report of the results of the COMS performance evaluation under 3.8.5 of this regulation. The copies shall be provided at least 15 calendar days before the performance test required under 3.7 of this regulation is conducted.

3.8.6 Use of an alternative monitoring requirement

3.8.6.1 General.

Until permission to use a major change or alternative to a monitoring requirement has been granted by the Administrator or permission to use a minor or intermediate change to a monitoring requirement has be granted by the Department under 3.8.6.1 of this regulation, the owner or operator of an affected source remains subject to the requirements in 3.8 of this regulation and the relevant standard.

3.8.6.2 After receipt and consideration of written application, the Department may approve minor or intermediate change or the

Administrator may approve major change or an alternative to any monitoring requirement of 40 CFR Part 63 or this regulation including, but not limited to, the following:

3.8.6.2.1 Alternative monitoring requirements when installation of a CMS specified by a relevant standard would not provide accurate measurements due to liquid water or other interferences caused by substances within the effluent gases;

3.8.6.2.2 Alternative monitoring requirements when the affected source is infrequently operated;

3.8.6.2.3 Alternative monitoring requirements to accommodate CEMS that require additional measurements to correct for stack moisture conditions;

3.8.6.2.4 Alternative locations for installing CMS when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements;

3.8.6.2.5 Alternate methods for converting pollutant concentration measurements to units of the relevant standard;

3.8.6.2.6 Alternate procedures for performing daily checks of zero (low-level) and high-level drift that do not involve use of high-level gases or test cells;

3.8.6.2.7 Alternatives to the American Society for Testing and Materials (ASTM) test methods or sampling procedures specified by any relevant standard;

3.8.6.2.8 Alternative CMS that do not meet the design or performance requirements in 40 CFR Part 63 or this regulation, but adequately demonstrate a definite and consistent relationship between their measurements and the measurements of opacity by a system complying with the requirements as specified in the relevant standard. The Administrator or the Department, whichever is applicable, may require that such demonstration be performed for each affected source; or

3.8.6.2.9 Alternative monitoring requirements when the effluent from a single affected source or the combined effluent from two or more affected sources is released to the atmosphere through more than one point.

3.8.6.3 If the Administrator or the Department, whichever is applicable, finds reasonable grounds to dispute the results obtained by an alternative or changed monitoring requirement, the Administrator or the Department may require the use of a requirement specified in 3.8 of this regulation or in the relevant standard. If the results of the specified and alternative or changed requirement do not agree, the results obtained by the specified requirement shall prevail.

3.8.6.4 Request process.

3.8.6.4.1 Request to use alternative monitoring requirement.

An owner or operator who wishes to use a change or alternative to a monitoring requirement shall submit an application to the Administrator (with copy to the Department) or to the Department, whichever is applicable, as described in 3.8.6.4.2 of this regulation. The application may be submitted at any time provided that the monitoring requirement is not the performance test method used to demonstrate compliance with a relevant standard or other requirement. If the changed or alternative monitoring requirement will serve as the performance test method that is to be used to demonstrate compliance with a relevant standard, the application shall be submitted at least 60 days before the performance evaluation is scheduled to take place and shall meet the requirements for an alternative test method under 3.7.6 of this regulation.

3.8.6.4.2 The application shall contain a description of the proposed changed or alternative monitoring system which addresses the four elements contained in the definition of monitoring in 3.2 of this regulation and a site-specific performance evaluation test plan, if required, as specified in 3.8.5.3 of this regulation. In addition, the application shall include information justifying the owner or operator's request for a changed or alternative monitoring requirement, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required requirement.

3.8.6.4.3 The owner or operator may submit the information required in 3.8.6.4 of this regulation well in advance of the submittal dates specified in 3.8.6.4.1 of this regulation above to ensure a timely review by the Administrator or the Department, whichever is applicable, in order to meet the compliance demonstration date specified in 3.0 of this regulation or the relevant standard.

3.8.6.4.4 Application to the Department for minor or intermediate changes to monitoring requirements, as specified in 3.8.2.1 of this regulation, may be made in the site-specific performance evaluation test plan.

3.8.6.5 Approval of request to use alternative monitoring requirement.

3.8.6.5.1 The Administrator or the Department will notify the owner or operator of approval or intention to deny approval of the request to use an alternative or changed monitoring requirement within 30 calendar days after receipt of the original request and within 30 calendar days after receipt of any supplementary information that is submitted. If a request for a minor or intermediate change is made in conjunction with site-specific performance evaluation test plan, then approval of the plan will constitute approval of the minor or intermediate change. Before disapproving any request to use an alternative or changed monitoring requirement, the Administrator or the Department will notify the applicant of the Administrator or the Department's intention to disapprove the request together with-

3.8.6.5.1.1 Notice of the information and findings on which the intended disapproval is based and

3.8.6.5.1.2 Notice of opportunity for the owner or operator to present additional information to the Administrator or the Department before final action on the request. At the time the Administrator or the Department notifies the applicant of its intention to disapprove the request, the Administrator or the Department will specify how much time the owner or operator will have after being notified of the intended disapproval to submit the additional information.

3.8.6.5.2 The Administrator may establish general procedures and criteria in a relevant standard to accomplish the requirements in 3.8.6.5.1 of this regulation.

3.8.6.5.3 If the Administrator or the Department approves the use of an alternative or changed monitoring requirement for an affected source under in 3.8.6.5.1 of this regulation, the owner or operator of such source shall continue to use the alternative or changed monitoring requirement until the owner or operator receives approval from the Administrator or the Department to use another monitoring requirement as allowed in 3.8.6 of this regulation.

3.8.6.6 Alternative to the relative accuracy test.

An alternative to the relative accuracy test for CEMS specified in a relevant standard may be requested as follows:

3.8.6.6.1 Criteria for approval of alternative procedures.

An alternative to the test method for determining relative accuracy is available for affected sources with emission rates demonstrated to be less than 50% of the relevant standard. The owner or operator of an affected source may petition the Department under 3.8.6.6.2 of this regulation to substitute the relative accuracy test in Section 7 of Performance Specification 2 in Appendix B of 40 CFR Part 60 with the procedures in Section 10 of Performance Specification 2 if the results of a performance test conducted according to the requirements in 3.7 of this regulation, or other tests performed following the criteria in 3.7 of this regulation, demonstrate that the emission rate of the pollutant of interest in the units of the relevant standard is less than 50% of the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the owner or operator may petition the Department to substitute the relative accuracy test with the procedures in Section 10 of Performance Specification 2 if the control device exhaust emission rate is less than 50% of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the CEMS is used continuously to determine compliance with the relevant standard.

3.8.6.6.2 Petition to use alternative to relative accuracy test.

The petition to use an alternative to the relative accuracy test shall include a detailed description of the procedures to be applied, the location and the procedure for conducting the alternative, the concentration or response levels of the alternative relative accuracy materials, and the other equipment checks included in the alternative procedures. The Department will review the petition for completeness and applicability. The Department's determination to approve an alternative will depend on the intended use of the CEMS data and may require specifications more stringent than in Performance Specification 2 in Appendix B of 40 CFR Part 60.

3.8.6.6.3 Rescission of approval to use alternative to relative accuracy test.

The Department will review the permission to use an alternative to the CEMS relative accuracy test and may rescind such permission if the CEMS data from a successful completion of the alternative relative accuracy procedure indicate that the affected source's emissions are approaching the level of the relevant standard. The criterion for reviewing the permission is that the collection of CEMS data shows that emissions have exceeded 70% of the relevant standard for any averaging period, as specified in the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the criterion for reviewing the permission is that the collection of CEMS data shows that exhaust emissions have exceeded 70% of the level needed to meet the control efficiency requirement for any averaging period, as specified in the relevant standard. The owner or operator of the affected source shall maintain records and determine the level of emissions relative to the criterion for permission to use an alternative for relative accuracy testing. If this criterion is exceeded, the owner or operator shall notify the Department within 10 days of such occurrence and include a description of the nature and cause of the increased emissions. The Department will review the notification and may rescind permission to use an alternative and require the owner or operator to conduct a relative accuracy test of the CEMS as specified in Section 7 of Performance Specification 2 in Appendix B of 40 CFR Part 60.

3.8.7 Reduction of monitoring data.

3.8.7.1 The owner or operator of each CMS shall reduce the monitoring data as specified in 3.8.7.1 through 3.8.7.5 of this regulation.

3.8.7.2 The owner or operator of each COMS shall reduce all data to six-minute averages calculated from 36 or more data points equally spaced over each six-minute period. Data from CEMS for measurement other than opacity, unless otherwise specified in the relevant standard, shall be reduced to one-hour averages computed from four or more data points equally spaced over each one-hour period, except during periods when calibration, quality assurance, or maintenance activities pursuant to provisions of 40 CFR Part 63 or this regulation are being performed. During these periods, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated one-hour average of CEMS data may be used. Time periods for averaging are defined in 3.2 of this regulation.

3.8.7.3 The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O_2 or ng/J of pollutant).

3.8.7.4 All emission data shall be converted into units of the relevant standard for reporting purposes using the conversion procedures specified in that standard. After conversion into units of the relevant standard, the data may be rounded to the same number of significant digits as used in that standard to specify the emission limit (e.g., rounded to the nearest 1% opacity).

3.8.7.5 Monitoring data recorded during periods of unavoidable CMS breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level adjustments shall not be included in any data average computed under 40 CFR Part 63 or this regulation. For the owner or operator complying with the requirements in 3.10.2.2.7.1 or 3.10.2.2.7.2 of this regulation, data averages shall include any data recorded during periods of monitor breakdown or malfunction.

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3.9 Notification requirements.

3.9.1 Applicability and general information.

3.9.1.1 The applicability of 3.9 of this regulation is set out in 3.1.1.4 of this regulation.

3.9.1.2 For affected sources that have been granted an extension of compliance under Subpart D of 40 CFR Part 63, the requirements in 3.9 of this regulation do not apply to those sources while they are operating under such compliance extensions.

3.9.1.3 The owner or operator may send the Administrator a copy of the notice sent to the Department to satisfy the requirements in 3.9 of this regulation for that notification.

3.9.1.4 Submittal of notifications.

3.9.1.4.1 [Reserved]

3.9.1.4.2 The owner or operator of an affected source subject to notification requirements established under 40 CFR Part 63 or this regulation shall submit notifications to the Department (to the attention of the Program Administrator of Air Quality Management at the address indicated in 3.13 of this regulation). In addition, the owner or operator shall send a copy of each notification submitted to the Department to the EPA Region III Office (to the attention of the Director of Air Protection at

the address indicated in 3.13 of this regulation). The Regional Office may waive this requirement for any notifications at its discretion.

3.9.2 Initial notifications.

3.9.2.1 Applicability.

3.9.2.1.1 The requirements in 3.9.2 of this regulation apply to the owner or operator of an affected source when such source becomes subject to a relevant standard.

3.9.2.1.2 If an area source that otherwise would be subject to an emission standard or other requirement established under 40 CFR Part 63 or this regulation if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source that is subject to the emission standard or other requirement, such source shall be subject to the notification requirements in 3.9 of this regulation.

3.9.2.1.3 Affected sources that are required in 3.9.2 of this regulation to submit an initial notification may use the application for approval of construction or reconstruction under 3.5.4 of this regulation, if relevant, to fulfill the initial notification requirements in 3.9.2 of this regulation.

3.9.2.2 The owner or operator of an affected source that has an initial startup before the effective date of a relevant standard under 40 CFR Part 63 shall notify the Department in writing that the source is subject to the relevant standard. The notification, which shall be submitted not later than 120 calendar days after the effective date of the relevant standard (or within 120 calendar days after the source becomes subject to the relevant standard), shall provide the following information:

3.9.2.2.1 The name and address of the owner or operator;

3.9.2.2.2 The address (i.e., physical location) of the affected source;

3.9.2.2.3 An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;

3.9.2.2.4 A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the

relevant standard and types of hazardous air pollutants emitted; and

3.9.2.2.5 A statement of whether the affected source is a major source or an area source.

3.9.2.3 [Reserved]

3.9.2.4 The owner or operator of a new or reconstructed major affected source, or of a source that has been reconstructed such that the source becomes a major affected source, for which an application for approval of construction or reconstruction is required under 3.5.4 of this regulation shall provide the following information in writing to the Department:

3.9.2.4.1 A notification of intention to construct a new major-emitting affected source, reconstruct a major-emitting affected source, or reconstruct a source such that the source becomes a major-emitting affected source with the application for approval of construction or reconstruction as specified in 3.5.4.1.1 of this regulation and

3.9.2.4.2 [Reserved]

3.9.2.4.3 [Reserved]

3.9.2.4.4 [Reserved]

3.9.2.4.5 A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

3.9.2.5 The owner or operator of a new or reconstructed affected source for which an application for approval of construction or reconstruction is not required under 3.5.4 of this regulation shall provide the following information in writing to the Department:

3.9.2.5.1 A notification of intention to construct a new affected source, reconstruct an affected source, or reconstruct a source such that the source becomes an affected source and

3.9.2.5.2 A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

3.9.2.5.3 Unless the owner or operator has requested and received prior permission from the Department to submit less than the information in 3.5.4 of this regulation, the notification shall include the information required on the application for approval of construction or reconstruction as specified in 3.5.4.1.1 of this regulation.

3.9.3 Request for extension of compliance.

If the owner or operator of an affected source cannot comply with a relevant standard by the applicable compliance date for that source, or if the owner or operator has installed BACT or technology to meet LAER consistent with 3.6.9.5 of this regulation, the owner or operator may submit to the Department a request for an extension of compliance as specified in 3.6.9.4 through 3.6.9.6 of this regulation.

3.9.4 Notification that source is subject to special compliance requirements.

An owner or operator of a new source that is subject to special compliance requirements as specified in 3.6.2.3 and 3.6.2.4 of this regulation shall notify the Department of the owner or operator's compliance obligations not later than the notification dates established in 3.9.2 of this regulation for new sources that are not subject to the special provisions.

3.9.5 Notification of performance test.

The owner or operator of an affected source shall notify the Department in writing of the owner or operator's intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin to allow the Department to review and approve the site-specific test plan required under 3.7.3 of this regulation, if requested by the Department, and to have an observer present during the test.

3.9.6 Notification of opacity and visible emission observations.

The owner or operator of an affected source shall notify the Department in writing of the anticipated date for conducting the opacity or visible emission observations specified in 3.6.8.5 of this regulation, if such observations are required for the source by a relevant standard. The notification shall be submitted with the notification of the performance test date, as specified in 3.9.5 of this regulation, or if no performance test is required or visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under 3.7 of this regulation, the owner or operator shall deliver or postmark the notification not less than 30 days before the opacity or visible emission observations are scheduled to take place.

3.9.7 Additional notification requirements for sources with CMS.

The owner or operator of an affected source required to use a CMS by a relevant standard shall furnish the Department written notification as follows:

3.9.7.1 A notification of the date the CMS performance evaluation under 3.8.5 of this regulation is scheduled to begin, submitted simultaneously with the notification of the performance test date required under 3.7.2 of this regulation. If no performance test is required, or if the requirement to conduct a performance test has been waived for an affected source under 3.7.8 of this regulation, the owner or operator shall notify the Department in writing of the date of the performance evaluation at least 60 calendar days before the evaluation is scheduled to begin;

3.9.7.2 A notification that COMS data results will be used to determine compliance with the applicable opacity emission standard during a performance test required in 3.7 of this regulation in lieu of Method 9 or other opacity emissions test method data, as allowed in 3.6.8.7.2 of this regulation, if compliance with an opacity emission standard is required for the source by a relevant standard. The notification shall be submitted at least 60 calendar days before the performance test is scheduled to begin; and

3.9.7.3 A notification that the criterion necessary to continue use of an alternative to relative accuracy testing, as provided in 3.8.6.6 of this regulation, has been exceeded. The notification shall be delivered or postmarked not later than 10 days after the occurrence of such exceedance, and it shall include a description of the nature and cause of the increased emissions.

3.9.8 Notification of compliance status.

3.9.8.1 The requirements in 3.8.2 through 3.8.4 of this regulation apply when an affected source becomes subject to a relevant standard.

3.9.8.2 Prior to issuance of a Title V permit.

3.9.8.2.1 Before a Title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under 40 CFR Part 63 or this regulation, the owner or operator of such source shall submit to the Department a notification of compliance status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The notification shall list-

3.9.8.2.1.1 The methods that were used to determine compliance;

3.9.8.2.1.2 The results of any performance tests, opacity or visible emission observations, CMS performance evaluations, or other monitoring procedures or methods that were conducted;

3.9.8.2.1.3 The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;

3.9.8.2.1.4 The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard;

3.9.8.2.1.5 If the relevant standard applies to both major and area sources, an analysis demonstrating whether the affected source is a major source (using the emissions data generated for this notification);

3.9.8.2.1.6 A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method); and

3.9.8.2.1.7 A statement by the owner or operator of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements.

3.9.8.2.2 The notification shall be sent before the close of business on the 60th day following the completion of the relevant compliance demonstration activity specified in the relevant standard (unless a different reporting period is specified in the standard, in which case the letter shall be sent before the close of business on the day the report of the relevant testing or monitoring results is required to be delivered or postmarked). For example, the notification shall be sent before close of business on the 60th (or other required) day following completion of the initial performance test and again before the close of business on the

60th (or other required) day following the completion of any subsequent required performance test. If no performance test is required but opacity or visible emission observations are required to demonstrate compliance with an opacity or visible emission standard under 40 CFR Part 63 or this regulation, the notification of compliance status shall be sent before close of business on the 30th day following the completion of opacity or visible emission observations. Notification may be combined as long as the due date requirement for each notification is met.

3.9.8.3 After a Title V permit has been issued to the owner or operator of an affected source, the owner or operator of such source shall comply with all requirements for compliance status reports contained in the source's Title V permit, including reports required under 40 CFR Part 63 or this regulation. After a Title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under 40 CFR Part 63 or this regulation, the owner or operator of such source shall submit the notification of compliance status to the Department following completion of the relevant compliance demonstration activity specified in the relevant standard.

3.9.8.4 [Reserved]

3.9.8.5 If an owner or operator of an affected source submits estimates or preliminary information in the application for approval of construction or reconstruction required in 3.5.4 of this regulation in place of the actual emissions data or control efficiencies required in 3.5.4.1.2.8 and 3.5.4.2 of this regulation, the owner or operator shall submit the actual emissions data and other correct information as soon as available but no later than with the initial notification of compliance status required in 3.9 of this regulation.

3.9.8.6 Advice on a notification of compliance status may be obtained from the Department.

3.9.9 Adjustment to time periods or postmark deadlines for submittal and review of required communications.

3.9.9.1 Applicable requirements.

3.9.9.1.1 Until an adjustment of a time period or postmark deadline has been approved by the Department under 3.9.9.2 and 3.9.9.3 of this regulation, the owner or operator of an affected source remains strictly subject to the requirements of 40 CFR Part 63 or this regulation.

3.9.9.1.2 An owner or operator shall request the adjustment provided for in 3.9.9.2 and 3.9.9.3 of this regulation each time the owner or operator wishes to change an applicable time period or postmark deadline specified in 40 CFR Part 63 or this regulation.

3.9.9.2 Notwithstanding time periods or postmark deadlines specified in 40 CFR Part 63 or this regulation for the submittal of information to the Department by an owner or operator, or the review of such information by the Department, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Department. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information the owner or operator considers useful to convince the Department that an adjustment is warranted.

3.9.9.3 If, in the Department's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Department will approve the adjustment. The Department will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

3.9.9.4 If the Department is unable to meet a specified deadline, the owner or operator will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

3.9.10 Change in information already provided.

Any change in the information already provided under 3.0 of this regulation shall be provided to the Department in writing within 15 calendar days after the change.

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3.10 Recordkeeping and reporting requirements.

3.10.1 Applicability and general information.

3.10.1.1 The applicability of 3.10 of this regulation is set out in 3.1.1.4 of this regulation.

3.10.1.2 For affected sources that have been granted an extension of compliance under Subpart D of 40 CFR Part 63, the requirements in

3.10 of this regulation do not apply to those sources while they are operating under such compliance extensions.

3.10.1.3 The owner or operator may send the Administrator a copy of the report sent to the Department to satisfy the requirements 3.10 of this regulation for that report.

3.10.1.4 Submittal of reports.

3.10.1.4.1 [Reserved]

3.10.1.4.2 The owner or operator of an affected source subject to recordkeeping and reporting requirements established under 40 CFR Part 63 or this regulation shall submit reports to the Department (to the attention of the Program Administrator of Air Quality Management at the address indicated in 3.13 of this regulation). In addition, the owner or operator shall send a copy of each report submitted to the Department to the EPA Region III Office (to the attention of the Director of Air Protection at the address indicated in 3.13 of this regulation). The Regional Office may waive this requirement for any reports at its discretion.

3.10.1.5 The owner or operator may change the dates by which periodic reports under 40 CFR Part 63 or this regulation shall be submitted (without changing the frequency of reporting) by mutual agreement between the owner or operator and the Department. For each relevant standard established pursuant to Section 112 of the Act, the allowance in the previous sentence applies beginning one year after the affected source's compliance date for that standard. Procedures governing the implementation of this provision are specified in 3.9.9 of this regulation.

3.10.1.6 If an owner or operator supervises one or more stationary sources affected by more than one standard established pursuant to Section 112 of the Act, the owner or operator may arrange by mutual agreement between the owner or operator and the Department a common schedule on which periodic reports required for each source shall be submitted throughout the year. The allowance in the previous sentence applies beginning one year after the latest compliance date for any relevant standard established pursuant to Section 112 of the Act for any such affected sources. Procedures governing the implementation of this provision are specified in 3.9.9 of this regulation.

3.10.1.7 If an owner or operator supervises one or more stationary sources affected by standards established pursuant to Section 112 of the Act (as amended November 15, 1990) and standards set under 40 CFR Part 60, 40 CFR Part 61, or both such parts, the owner or operator may arrange by mutual agreement between the owner or operator and the Department a common schedule on which periodic reports required by each relevant (i.e., applicable) standard shall be submitted throughout the year. The allowance in the previous sentence applies beginning one year after the stationary source is required to be in compliance with the relevant Section 112 standard of the Act, or one year after the stationary source is required to be in compliance with the applicable 40 CFR Part 60 or 40 CFR Part 61 standard, whichever is latest. Procedures governing the implementation of this provision are specified in 3.9.9 of this regulation.

3.10.2 General recordkeeping requirements.

3.10.2.1 The owner or operator of an affected source subject to the provisions of 40 CFR Part 63 or this regulation shall maintain files of all information (including all reports and notifications) required by 40 CFR Part 63 or this regulation recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

3.10.2.2 The owner or operator of an affected source subject to the provisions of 40 CFR Part 63 or this regulation shall maintain relevant records for such source of-

3.10.2.2.1 The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment);

3.10.2.2.2 The occurrence and duration of each malfunction of the required air pollution control and monitoring equipment;

3.10.2.2.3 All required maintenance performed on the air pollution control and monitoring equipment;

3.10.2.2.4 Actions taken during periods of startup, shutdown, or malfunction (including corrective actions to restore malfunctioning process and air pollution control and

monitoring equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan (see 3.6.5.3 of this regulation);

3.10.2.2.5 All information necessary to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan (see 3.6.5.3 of this regulation) when all actions taken during periods of startup, shutdown, or malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events);

3.10.2.2.6 Each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);

3.10.2.2.7 All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);

3.10.2.2.7.1 If the owner or operator is required to install a CEMS where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction, an automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under 3.10.2.2.7 of this regulation, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.

3.10.2.2.7.2 If the owner or operator is required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction, in lieu of maintaining a file of all CEMS subhourly measurements as required under 3.10.2.2.7 of this regulation, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Department.

3.10.2.2.7.3 The Department, upon notification to the source, may require the owner or operator to maintain all measurements as required by in 3.10.2.2.7 of this regulation, if the Department determines these records are required to more accurately assess the compliance status of the affected source.

3.10.2.2.8 All results of performance tests, CMS performance evaluations, and opacity and visible emission observations;

3.10.2.2.9 All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;

3.10.2.2.10 All CMS calibration checks;

3.10.2.2.11 All adjustments and maintenance performed on CMS;

3.10.2.2.12 Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements under this regulation, if the source has been granted a waiver under 3.10.6 of this regulation;

3.10.2.2.13 All emission levels relative to the criterion for obtaining permission to use an alternative to the relative accuracy test, if the source has been granted such permission under 3.8.6.6 of this regulation; and

3.10.2.2.14 All documentation supporting initial notifications and notifications of compliance status under 3.9 of this regulation.

3.10.2.3 Recordkeeping requirement for applicability determinations.

If an owner or operator determines that the owner or operator's stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to Section 112(d) or (f) of the Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63 or this regulation) because of limitations on the source's potential to emit or an exclusion, the owner or operator shall keep a record of the applicability determination on site at the source for the life of the source or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination shall be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) shall be sufficiently detailed to allow the Department to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis shall be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 or sections in this regulation for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with EPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Act, if any. The requirements to determine applicability of a standard under 3.1.2.3 of this regulation and to record the results of that determination under 3.10.2.3 of this regulation shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

3.10.3 Additional recordkeeping requirements for sources with CMS.

In addition to complying with the requirements specified in 3.10.2.1 and 3.10.2.2 of this regulation, the owner or operator of an affected source required to install a CMS by a relevant standard shall maintain records for such source of-

3.10.3.1 All required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods);

3.10.3.2 [Reserved]

3.10.3.3 [Reserved]

3.10.3.4 [Reserved]

3.10.3.5 The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;

3.10.3.6 The date and time identifying each period during which the CMS was out-of-control, as defined in 3.8.3.7 of this regulation;

3.10.3.7 The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standards, that occurs during startups, shutdowns, or malfunctions of the affected source;

3.10.3.8 The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standards, that occurs during periods other than startups, shutdowns, or malfunctions of the affected source;

3.10.3.9 [Reserved]

3.10.3.10 The nature and cause of any malfunction (if known);

3.10.3.11 The corrective action taken or preventive measures adopted;

3.10.3.12 The nature of the repairs or adjustments to the CMS that was inoperative or out-of-control;

3.10.3.13 The total process operating time during the reporting period; and

3.10.3.14 All procedures that are part of a quality control program developed and implemented for CMS under 3.8.4 of this regulation.

3.10.3.15 In order to satisfy the requirements in 3.10.3.10 through 3.10.3.12 of this regulation and to avoid duplicative recordkeeping efforts, the owner or operator may use the affected source's startup, shutdown, and malfunction plan or records kept to satisfy the recordkeeping requirements of the startup, shutdown, and malfunction plan specified in 3.6.5 of this regulation, provided that such plan and

records adequately address the requirements in 3.10.3.10 through 3.10.3.12 of this regulation.

3.10.4 General reporting requirements.

3.10.4.1 Notwithstanding the requirements in 3.10.4 or 3.10.5 of this regulation, the owner or operator of an affected source subject to reporting requirements under 40 CFR Part 63 or this regulation shall submit reports to the Department in accordance with the reporting requirements in the relevant standards.

3.10.4.2 Reporting results of performance tests.

Before a Title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of any performance test under 3.7 of this regulation to the Department. After a Title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of a required performance test to the Department. The owner or operator of an affected source shall report the results of the performance test to the Department before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Department. The results of the performance test shall be submitted as part of the notification of compliance status required under 3.9.8 of this regulation.

3.10.4.3 Reporting results of opacity or visible emission observations.

The owner or operator of an affected source required to conduct opacity or visible emission observations by a relevant standard shall report the opacity or visible emission results (produced using Method 9 or Method 22 in Appendix A of 40 CFR Part 60, or an approved alternative to these test methods) along with the results of the performance test required under 3.7 of this regulation. If no performance test is required, or if visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the performance test required under 3.7 of this regulation, the owner or operator shall report the opacity or visible emission results before the close of business on the 30th day following the completion of the opacity or visible emission observations.

3.10.4.4 Progress reports.

The owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance

under 3.6.9 of this regulation shall submit such reports to the Department by the dates specified in the written extension of compliance.

3.10.4.5 Startup, shutdown, and malfunction reports.

3.10.4.5.1 Periodic startup, shutdown, and malfunction reports.

If actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan (see 3.6.5.3 of this regulation), the owner or operator shall state such information in a startup, shutdown, and malfunction report. Such a report shall identify any instance where any action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the affected source's startup, shutdown, and malfunction plan, but the source does not exceed any applicable emission limitation in the relevant emission standard. Such a report shall also include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report shall consist of a letter, containing the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, that shall be submitted to the Department semiannually (or on a more frequent basis if specified otherwise in a relevant standard or as established otherwise by the Department in the source's Title V permit). The startup, shutdown, and malfunction report shall be delivered or postmarked by the 30th day following the end of each calendar half (or other calendar reporting period, as appropriate). If the owner or operator is required to submit excess emissions and continuous monitoring system performance (or other periodic) reports under 40 CFR Part 63 or this regulation, the startup, shutdown, and malfunction reports required under this paragraph may be submitted simultaneously with the excess emissions and continuous monitoring system performance (or other) reports. If startup, shutdown, and malfunction reports are submitted with excess emissions and continuous monitoring system performance (or

other periodic) reports, and the owner or operator receives approval to reduce the frequency of reporting for the latter under 3.10.5 of this regulation, the frequency of reporting for the startup, shutdown, and malfunction reports also may be reduced if the Department does not object to the intended change. The procedures to implement the allowance in the preceding sentence shall be the same as the procedures specified in 3.10.5.3 of this regulation.

3.10.4.5.2 Immediate startup, shutdown, and malfunction reports.

Notwithstanding the allowance to reduce the frequency of reporting for periodic startup, shutdown, and malfunction reports under 3.10.4.5.1 of this regulation, any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, the owner or operator shall report the actions taken for that event within two working days after commencing actions inconsistent with the plan followed by a letter within seven working days after the end of the event. The immediate report required in 3.10.4.5.2 of this regulation shall consist of a telephone call (or facsimile (FAX) transmission) to the Department within two working days after commencing actions inconsistent with the plan, and it shall be followed by a letter, delivered or postmarked within seven working days after the end of the event, that contains the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and describing all excess emissions, parameter monitoring exceedances, or both which are believed to have occurred. Notwithstanding the requirements of the previous sentence, the owner or operator may make alternative reporting arrangements, in advance, with the Department. Procedures governing the arrangement of alternative reporting requirements under 3.10.4.5.2 of this regulation are specified in 3.9.9 of this regulation.

3.10.5 Additional reporting requirements for sources with CMS.

3.10.5.1 General.

When more than one CEMS is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required for each CEMS.

3.10.5.2 Reporting results of CMS performance evaluations.

3.10.5.2.1 The owner or operator of an affected source required to install a CMS by a relevant standard shall furnish the Department a copy of a written report of the results of the CMS performance evaluation, as required under 3.8.5 of this regulation, simultaneously with the results of the performance test required under 3.7 of this regulation, unless otherwise specified in the relevant standard.

3.10.5.2.2 The owner or operator of an affected source using a COMS to determine opacity compliance during any performance test required under 3.7 of this regulation shall furnish the Department two or, upon request, three copies of a written report of the results of the COMS performance evaluation conducted under 3.8.5 of this regulation. The copies shall be furnished at least 15 calendar days before the performance test required under 3.7 of this regulation is conducted.

3.10.5.3 Excess emissions and continuous monitoring system performance report and summary report.

3.10.5.3.1 Excess emissions and parameter monitoring exceedances are defined in relevant standards. The owner or operator of an affected source required to install a CMS by a relevant standard shall submit an excess emissions and continuous monitoring system performance report, a summary report, or both to the Department semiannually, except when--

3.10.5.3.1.1 More frequent reporting is specifically required by a relevant standard or

3.10.5.3.1.2 The Department determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source.

3.10.5.3.1.3 [Reserved]

3.10.5.3.2 Request to reduce frequency of excess emissions and continuous monitoring system performance reports.

Notwithstanding the frequency of reporting requirements specified in 3.10.5.3.1 of this regulation, an owner or operator who is required by a relevant standard to submit excess emissions and continuous monitoring system performance (and summary) reports on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

3.10.5.3.2.1 For one full year (e.g., four quarterly or 12 monthly reporting periods) the affected source's excess emissions and continuous monitoring system performance reports continually demonstrate that the source is in compliance with the relevant standard;

3.10.5.3.2.2 The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in 3.0 of this regulation and the relevant standard; and

3.10.5.3.2.3 The Department does not object to a reduced frequency of reporting for the affected source, as provided in 3.10.5.3.3 of this regulation.

3.10.5.3.3 The frequency of reporting of excess emissions and continuous monitoring system performance (and summary) reports required to comply with a relevant standard may be reduced only after the owner or operator notifies the Department in writing of the owner or operator's intention to make such a change and the Department does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Department may review information concerning the source's entire previous performance history during the five-year recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Department to make a judgment about the source's potential for noncompliance in the future. If the Department disapproves the owner or operator's request to reduce the frequency of reporting, the Department will notify the owner or operator in writing within 45 days after receiving

notice of the owner or operator's intention. The notification from the Department to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

3.10.5.3.4 As soon as CMS data indicate that the source is not in compliance with any emission limitation or operating parameter specified in the relevant standard, the frequency of reporting shall revert to the frequency specified in the relevant standard, and the owner or operator shall submit an excess emissions and continuous monitoring system performance (and summary) report for the noncomplying emission points at the next appropriate reporting period following the noncomplying event. After demonstrating ongoing compliance with the relevant standard for another full year, the owner or operator may again request approval from the Department to reduce the frequency of reporting for that standard, as provided for in 3.10.5.3.2 and 3.10.5.3.3 of this regulation.

3.10.5.3.5 Content and submittal dates for excess emissions and monitoring system performance reports.

All excess emissions and monitoring system performance reports and all summary reports, if required, shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. Written reports of excess emissions or exceedances of process or control system parameters shall include all the information required in 3.10.3.5 through 3.10.3.13 of this regulation, in 3.8.3.7 and 3.8.3.8 of this regulation, and in the relevant standard, and they shall contain the name, title, and signature of the responsible official who is certifying the accuracy of the report. When no excess emissions or exceedances of a parameter have occurred, or a CMS has not been inoperative, out-of-control, repaired, or adjusted, such information shall be stated in the report.

3.10.5.3.6 Summary report.

As required under 3.10.5.3.7 and 3.10.5.3.8 of this regulation, one summary report shall be submitted for the hazardous air pollutants monitored at each affected source (unless the relevant standard specifies that more than one summary report is required, e.g., one summary report for each hazardous air pollutant monitored). The summary report shall be entitled "Summary Report--Gaseous and Opacity Excess Emission and

Continuous Monitoring System Performance" and shall contain the following information:

3.10.5.3.6.1 The company name and address of the affected source;

3.10.5.3.6.2 An identification of each hazardous air pollutant monitored at the affected source;

3.10.5.3.6.3 The beginning and ending dates of the reporting period;

3.10.5.3.6.4 A brief description of the process units;

3.10.5.3.6.5 The emission and operating parameter limitations specified in the relevant standards;

3.10.5.3.6.6 The monitoring equipment manufacturers and model numbers;

3.10.5.3.6.7 The date of the latest CMS certification or audit;

3.10.5.3.6.8 The total operating time of the affected source during the reporting period;

3.10.5.3.6.9 An emission data summary (or similar summary if the owner or operator monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes;

3.10.5.3.6.10 A CMS performance summary (or similar summary if the owner or operator monitors control system parameters), including the total CMS downtime during the reporting period (recorded in

minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes;

3.10.5.3.6.11 A description of any changes in CMS, processes, or controls since the last reporting period;

3.10.5.3.6.12 The name, title, and signature of the responsible official who is certifying the accuracy of the report; and

3.10.5.3.6.13 The date of the report.

3.10.5.3.7 If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is less than 1% of the total operating time for the reporting period, and CMS downtime for the reporting period is less than 5% of the total operating time for the reporting period, only the summary report shall be submitted, and the full excess emissions and continuous monitoring system performance report need not be submitted unless required by the Department.

3.10.5.3.8 If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is 1% or greater of the total operating time for the reporting period, or the total CMS downtime for the reporting period is 5% or greater of the total operating time for the reporting period, both the summary report and the excess emissions and continuous monitoring system performance report shall be submitted.

3.10.5.4 Reporting COMS data produced during a performance test.

The owner or operator of an affected source required to use a COMS shall record the monitoring data produced during a performance test required under 3.7 of this regulation and shall furnish the Department a written report of the monitoring results. The report of COMS data shall be submitted simultaneously with the report of the performance test results required in 3.10.4.2 of this regulation.

3.10.6 Waiver of recordkeeping or reporting requirements.

3.10.6.1 Until a waiver of a recordkeeping or reporting requirement has been granted by the Department under 3.10.6 of this regulation, the owner or operator of an affected source remains subject to the requirements in 3.10 of this regulation.

3.10.6.2 Recordkeeping or reporting requirements may be waived upon written application to the Department if, in the Department's judgment, the affected source is achieving the relevant standards, or the source is operating under an extension of compliance, or the owner or operator has requested an extension of compliance and the Department is still considering that request.

3.10.6.3 If an application for a waiver of recordkeeping or reporting is made, the application shall accompany the request for an extension of compliance under 3.6.9 of this regulation, any required compliance progress report or compliance status report required under 40 CFR Part 63 or this regulation (such as under 3.6.9 and 3.9.8 of this regulation) or in the source's Title V permit, or an excess emissions and continuous monitoring system performance report required under 3.10.5 of this regulation, whichever is applicable. The application shall include whatever information the owner or operator considers useful to convince the Department that a waiver of recordkeeping or reporting is warranted.

3.10.6.4 The Department will approve or deny a request for a waiver of recordkeeping or reporting requirements under 3.10.6 of this regulation when it--

3.10.6.4.1 Approves or denies an extension of compliance;

3.10.6.4.2 Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

3.10.6.4.3 Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

3.10.6.5 A waiver of any recordkeeping or reporting requirement granted under 3.10.6 of this regulation may be conditioned on other recordkeeping or reporting requirements deemed necessary by the Department.

3.10.6.6 Approval of any waiver granted under 3.10.6 of this regulation shall not abrogate the Administrator's authority under the Act or the Department's authority under 7 **Del. C.**, Ch 60 or in any way prohibit the Department from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

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3.11 Control device requirements.

3.11.1 Applicability.

The applicability of 3.11 of this regulation is set out in 3.1.1.4 of this regulation.

3.11.2 Flares.

3.11.2.1 Owners or operators using flares to comply with the provisions of 40 CFR Part 63 or this regulation shall monitor these control devices to assure that they are operated and maintained in conformance with their designs. Applicable emission standards will provide provisions stating how owners or operators using flares shall monitor these control devices.

3.11.2.2 Flares shall be steam-assisted, air-assisted, or non-assisted.

3.11.2.3 Flares shall be operated at all times when emissions may be vented to them.

3.11.2.4 Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours. Method 22 in Appendix A of 40 CFR Part 60 shall be used to determine the compliance of flares with the visible emission provisions of this regulation. The observation period is two hours and shall be used according to Method 22.

3.11.2.5 Flares shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

3.11.2.6 An owner or operator has the choice of adhering to the heat content specifications in 3.11.2.6.2 of this regulation, and the maximum

tip velocity specifications in 3.11.2.7 or 3.11.2.8 of this regulation, or adhering to the requirements in 3.11.2.6.1 of this regulation.

3.11.2.6.1 Alternative flare requirements.

3.11.2.6.1.1 Flares shall be used that have a diameter of three inches or greater, are nonassisted, have a hydrogen content of 8.0% (by volume) or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the maximum permitted velocity (Vmax) as determined by the following equation:

$$Vmax = (XH2 - K1) * K2 \qquad (3\text{-}1)$$

where:

Vmax = Maximum permitted velocity, m/sec.
K1 = Constant, 6.0 volume-percent hydrogen.
K2 = Constant, 3.9 (m/sec)/volume-percent hydrogen.
XH2 = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in 3.14 of this regulation).

3.11.2.6.1.2 The actual exit velocity of a flare shall be determined by the method specified in 3.11.2.7.1 of this regulation.

3.11.2.6.2 Flares shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted at 7.46 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$Ht = K * \sum_{n=1}^{n} (Ci * Hi) \qquad (3\text{-}2)$$

where:
Ht = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of off-gas is based on combustion at 25^{o}C and 760 mm Hg, but the standard temperature for

determining the volume corresponding to one mole is $20^{o}C$.

K = Constant = 1.740×10^{-7} (1/ppmv) (g-mole/scm) (MJ/kcal) where the standard temperature for (g-mole/scm) is $20^{o}C$.

Ci = Concentration of sample component i in ppmv on a wet basis, as measured for organics by Method 18 in Appendix A of 40 CFR Part 60 and measured for hydrogen and carbon monoxide by American Society for Testing and Materials (ASTM) D1946–77 or 90 (Reapproved 1994) (incorporated by reference as specified in 3.14 of this regulation).

Hi = Net heat of combustion of sample component i, kcal/g-mole at $25^{o}C$ and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in 3.14 of this regulation) if published values are not available or cannot be calculated.

n = Number of sample components.

3.11.2.7 Steam-assisted and nonassisted flare design.

3.11.2.7.1 Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec), except as provided in 3.11.2.7.2 and 3.11.2.7.3 of this regulation. The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Method 2, 2A, 2C, or 2D in Appendix A of 40 CFR Part 60, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

3.11.2.7.2 Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in 3.11.2.7.1 of this regulation, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec), are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

3.11.2.7.3 Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in 3.11.2.7.1 of this regulation, less than the maximum permitted velocity (Vmax), as determined by the method specified in 3.11.2.7.3 of this regulation, but less than 122 m/sec (400 ft/sec) are allowed. The maximum permitted velocity (Vmax) for flares complying with 3.11.2.7.3 of this regulation shall be determined by the following equation:

$$\text{Log}_{10}\ (\text{Vmax}) = (\text{Ht} + 28.8)/31.7 \qquad (3\text{-}3)$$

where:
Vmax = Maximum permitted velocity, m/sec.
28.8 = Constant.
31.7 = Constant.
Ht = The net heating value as determined in 3.11.2.6 of this regulation.

3.11.2.8 Air-assisted flares shall be designed and operated with an exit velocity less than the maximum permitted velocity (Vmax). The maximum permitted velocity (Vmax) for air-assisted flares shall be determined by the following equation:

$$\text{Vmax} = 8.71 + 0.708 * \text{Ht} \qquad (3\text{-}4)$$

where:
Vmax = Maximum permitted velocity, m/sec.
8.71 = Constant.
0.708 = Constant.
Ht = The net heating value as determined in 3.11.2.6.2 of this regulation.

2 DE Reg. 1798 (5/1/98); 3 DE Reg. 445 (9/9/99)

3.12 State authority and delegations.

3.12.1 The provisions of 40 CFR Part 63 shall not be construed in any manner to preclude the Department from-

3.12.1.1 Adopting and enforcing any standard, limitation, prohibition, or other regulation applicable to an affected source subject to the requirements of this regulation, provided that such standard, limitation, prohibition, or regulation is not less stringent than any requirement applicable to such source established under 40 CFR Part 63;

3.12.1.2 Requiring the owner or operator of an affected source to obtain permits, licenses, or approvals prior to initiating construction, reconstruction, modification, or operation of such source; or

3.12.1.3 Requiring emission reductions in excess of those specified in Subpart D of 40 CFR Part 63 as a condition for granting the extension of compliance authorized by Section 112(i)(5) of the Act.

3.12.2 Delegation.

3.12.2.1 Section 112(l) of the Act directs the Administrator to delegate to each State, when appropriate, the authority to implement and enforce standards and other requirements pursuant to Section 112 of the Act for stationary sources located in that State. Because of the unique nature of radioactive material, delegation of authority to implement and enforce standards that control radionuclides may require separate approval.

3.12.2.2 Subpart E of 40 CFR Part 63 establishes procedures consistent with Section 112(l) of the Act for the approval of State rules or programs to implement and enforce applicable Federal rules promulgated under the authority of Section 112 of the Act. Subpart E of 40 CFR Part 63 also establishes procedures for the review and withdrawal of Section 112 implementation and enforcement authorities granted through a Section 112(l) approval.

3.12.3 All information required to be submitted to the EPA under 40 CFR Part 63 also shall be submitted to the Department, provided that each specific delegation may exempt sources from a certain Federal or State reporting requirement. The Administrator may permit all or some of the information to be submitted to the Department only, instead of to the EPA and the Department.

2 DE Reg. 1798 (5/1/98)

3.13 Addresses of State air pollution control agencies and EPA Regional Offices.

3.13.1 All requests, reports, applications, submittals, and other communications to the Administrator pursuant to 40 CFR Part 63 or this regulation shall be submitted to the following address.

EPA Region III
Director, Air Protection Division
1650 Arch Street
Philadelphia, PA 19103

3.13.2 All information required to be submitted to the Department under 40 CFR Part 63 or this regulation shall be submitted to the Department at the following address.

Delaware Department of Natural Resources and Environmental Control
Program Administrator, Air Quality Management Section
Division of Air and Waste Management
156 S. State Street

Dover, DE 19901

3.13.3 An owner or operator may send the EPA Region III Office a copy of any application, notification, request, report, statement, or other communication required by the Department in this regulation to satisfy the requirements of 40 CFR Part 63 for that communication.

2 DE Reg. 1798 (5/1/98)

3.14 Incorporations by reference.

3.14.1 The materials listed in 3.14 of this regulation are incorporated by reference. These materials are incorporated as they exist on the date of the approval by the Director of the Federal Register, and notice of any change in these materials will be published in the Federal Register. The materials are available for purchase at the corresponding addresses noted below, and all are available for inspection at the National Archives and Records Administration (NARA), at the Air and Radiation Docket and Information Center, U.S. EPA, 401 M St., SW., Washington, DC, and at the EPA Library (MD-35), U.S. EPA, Research Triangle Park, North Carolina. For information on the availability of this material at NARA, call 202–741–6030, or go to:

http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

3.14.2 The following materials are available for purchase from at least one of the following addresses: American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, Post Office Box C700, West Conshohocken, PA 19428-2959; or ProQuest, 300 North Zeeb Road, Ann Arbor, MI 48106.

3.14.2.1 ASTM D523-89, Standard Test Method for Specular Gloss, IBR approved for Sec. 63.782.

3.14.2.2 ASTM D1193-77, 91, Standard Specification for Reagent Water, IBR approved for Appendix A: Method 306, Sections 7.1.1 and 7.4.2.

3.14.2.3 ASTM D1331-89, Standard Test Methods for Surface and Interfacial Tension of Solutions of Surface Active Agents, IBR approved for Appendix A: Method 306B, Sections 6.2, 11.1, and 12.2.2.

3.14.2.4 ASTM D1475-90, Standard Test Method for Density of Paint, Varnish Lacquer, and Related Products, IBR approved for Sec. 63.788, Appendix A.

3.14.2.5 ASTM D1946-77, 90, 94, Standard Method for Analysis of Reformed Gas by Gas Chromatography, IBR approved for 3.11.2.6 of this regulation.

3.14.2.6 ASTM D2369-93, 95, Standard Test Method for Volatile Content of Coatings, IBR approved for Sec. 63.788, Appendix A.

3.14.2.7 ASTM D2382-76, 88, Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method), IBR approved for 3.11.2.6 of this regulation.

3.14.2.8 ASTM D2879-83, 96, Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, IBR approved for Sec. 63.111 of Subpart G.

3.14.2.9 ASTM D3257-93, Standard Test Methods for Aromatics in Mineral Spirits by Gas Chromatography, IBR approved for Sec. 63.786(b).

3.14.2.10 ASTM 3695-88, Standard Test Method for Volatile Alcohols in Water by Direct Aqueous-Injection Gas Chromatography, IBR approved for Sec. 63.365(e)(1) of Subpart O.

3.14.2.11 ASTM D3792-91, Standard Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph, IBR approved for Sec. 63.788, Appendix A.

3.14.2.12 ASTM D3912-80, Standard Test Method for Chemical Resistance of Coatings Used in Light-Water Nuclear Power Plants, IBR approved for Sec. 63.782.

3.14.2.13 ASTM D4017-90, 96a, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for Sec. 63.788, Appendix A.

3.14.2.14 ASTM D4082-89, Standard Test Method for Effects of Gamma Radiation on Coatings for Use in Light-Water Nuclear Power Plants, IBR approved for Sec. 63.782.

3.14.2.15 ASTM D4256-89, 94, Standard Test Method for Determination of the Decontaminability of Coatings Used in Light-Water Nuclear Power Plants, IBR approved for Sec. 63.782.

3.14.2.16 ASTM D4809-95, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method), IBR approved for 3.11.2.6 of this regulation.

3.14.2.17 ASTM E180-93, Standard Practice for Determining the Precision of ASTM Methods for Analysis and Testing of Industrial Chemicals, IBR approved for Sec. 63.786(b).

3.14.2.18 ASTM E260-91, 96, General Practice for Packed Column Gas Chromatography, IBR approved for Sec. 63.750(b)(2) and Sec. 63.786(b)(5).

3.14.2.19 [Reserved]

3.14.2.20 [Reserved]

3.14.2.21 ASTM D2099-00, Standard Test Method for Dynamic Water Resistance of Shoe Upper Leather by the Maeser Water Penetration Tester, IBR approved for Sec. 63.5350.

3.14.2.22 [Reserved]

3.14.2.23 [Reserved]

3.14.2.24 ASTM D2697-86(1998) (Reapproved 1998), Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings, IBR approved for Sec. 63.5160(c).

3.14.2.25 ASTM D6093-97, Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer, IBR approved for Sec. 63.5160(c).

3.14.3 The materials listed below are available for purchase from the American Petroleum Institute (API), 1220 L Street, NW., Washington, DC 20005.

3.14.3.1 API Publication 2517, Evaporative Loss from External Floating-Roof Tanks, Third Edition, February 1989, IBR approved for Sec. 63.111 of Subpart G of 40 CFR Part 63.

3.14.3.2 API Publication 2518, Evaporative Loss from Fixed-roof Tanks, Second Edition, October 1991, IBR approved for Sec. 63.150(g)(3)(i)(C) of Subpart G of 40 CFR Part 63.

3.14.3.3 API Manual of Petroleum Measurement Specifications (MPMS) Chapter 19.2, Evaporative Loss From Floating-Roof Tanks (formerly API Publications 2517 and 2519), First Edition, April 1997, IBR approved for Sec. 63.1251 of Subpart GGG of 40 CFR Part 63.

3.14.4 State and Local Requirements.

The materials listed below are available at the Air and Radiation Docket and Information Center, U.S. EPA, 401 M St., SW., Washington, DC. Additionally, the California South Coast Air Quality Management District materials are available at http://www.aqmd.gov/permit/spraytransferefficiency.html.

3.14.4.1 California Regulatory Requirements Applicable to the Air Toxics Program, January 5, 1999, IBR approved for Sec. 63.99(a)(5)(ii) of Subpart E of 40 CFR Part 63.

3.14.4.2 New Jersey's Toxic Catastrophe Prevention Act Program, (July 20, 1998), Incorporation By Reference approved for Sec. 63.99 (a)(30)(i) of Subpart E of 40 CFR Part 63.

3.14.4.3 Delaware.

3.14.4.3.1 Letter of June 7, 1999 to the U.S. Environmental Protection Agency Region 3 from the Delaware Department of Natural Resources and Environmental Control requesting formal full delegation to take over primary responsibility for implementation and enforcement of the Chemical Accident Prevention Program under Section 112(r) of the Clean Air Act Amendments of 1990.

3.14.4.3.2 Delaware Department of Natural Resources and Environmental Control, Division of Air and Waste Management, Accidental Release Prevention Regulation, Sections 1 through 5 and Sections 7 through 14, effective January 11, 1999, IBR approved for Sec. 63.99(a)(8)(i) of Subpart E of 40 CFR Part 63.

3.14.4.3.3 State of Delaware Regulations Governing the Control of Air Pollution (October 2000), IBR approved for Sec. 63.99(a)(8)(ii)-(v) of Subpart E of 40 CFR Part 63.

3.14.5 The materials listed below are available for purchase from the National Institute of Standards and Technology, Springfield, VA 22161, (800) 553-6847.

3.14.5.1 Handbook 44, Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices 1998, IBR approved for Sec. 63.1303(e)(3).

3.14.5.2 [Reserved]

3.14.6 The following material is available from the National Council of the Paper Industry for Air and Stream Improvement, Inc. (NCASI), P. O. Box 133318, Research Triangle Park, NC 27709-3318 or at http://www.ncasi.org: NCASI Method DI/MEOH-94.02, Methanol in Process Liquids GC/FID (Gas Chromatography/Flame Ionization Detection), August 1998, Methods Manual, NCASI, Research Triangle Park, NC, IBR approved for Sec. 63.457(c)(3)(ii) of Subpart S of 40 CFR Part 63.

3.14.7 The materials listed below are available for purchase from AOAC International, Customer Services, Suite 400, 2200 Wilson Boulevard, Arlington, Virginia, 22201-3301, Telephone (703) 522-3032, Fax (703) 522-5468.

3.14.7.1 AOAC Official Method 978.01 Phosphorus (Total) in Fertilizers, Automated Method, Sixteenth edition, 1995, IBR approved for Sec. 63.626(d)(3)(vi).

3.14.7.2 AOAC Official Method 969.02 Phosphorus (Total) in Fertilizers, Alkalimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for Sec. 63.626(d)(3)(vi).

3.14.7.3 AOAC Official Method 962.02 Phosphorus (Total) in Fertilizers, Gravimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for Sec. 63.626(d)(3)(vi).

3.14.7.4 AOAC Official Method 957.02 Phosphorus (Total) in Fertilizers, Preparation of Sample Solution, Sixteenth edition, 1995, IBR approved for Sec. 63.626(d)(3)(vi).

3.14.7.5 AOAC Official Method 929.01 Sampling of Solid Fertilizers, Sixteenth edition, 1995, IBR approved for Sec. 63.626(d)(3)(vi).

3.14.7.6 AOAC Official Method 929.02 Preparation of Fertilizer Sample, Sixteenth edition, 1995, IBR approved for Sec. 63.626(d)(3)(vi).

3.14.7.7 AOAC Official Method 958.01 Phosphorus (Total) in Fertilizers, Spectrophotometric Molybdovanadophosphate Method, Sixteenth edition, 1995, IBR approved for Sec. 63.626(d)(3)(vi).

3.14.8 The materials listed below are available for purchase from The Association of Florida Phosphate Chemists, P.O. Box 1645, Bartow, Florida, 33830, Book of Methods Used and Adopted By The Association of Florida Phosphate Chemists, Seventh Edition 1991, IBR.

3.14.8.1 Section IX, Methods of Analysis for Phosphate Rock, No. 1 Preparation of Sample, IBR approved for Sec. 63.606(c)(3)(ii) and Sec. 63.626(c)(3)(ii).

3.14.8.2 Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus--P_2O_5 or $Ca_3(PO_4)_2$, Method A-Volumetric Method, IBR approved for Sec. 63.606(c)(3)(ii) and Sec. 63.626(c)(3)(ii).

3.14.8.3 Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus- P_2O_5 or $Ca_3(PO_4)_2$, Method B--Gravimetric Quimociac Method, IBR approved for Sec. 63.606(c)(3)(ii) and Sec. 63.626(c)(3)(ii).

3.14.8.4 Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus- P_2O_5 or $Ca_3(PO_4)_2$, Method C--Spectrophotometric Method, IBR approved for Sec. 63.606(c)(3)(ii) and Sec. 63.626(c)(3)(ii).

3.14.8.5 Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus- P_2O_5, Method A--Volumetric Method, IBR approved for Sec. 63.606(c)(3)(ii), Sec. 63.626(c)(3)(ii), and Sec. 63.626(d)(3)(v).

3.14.8.6 Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus- P_2O_5, Method B--Gravimetric Quimociac Method, IBR approved for Sec. 63.606(c)(3)(ii), Sec. 63.626(c)(3)(ii), and Sec. 63.626(d)(3)(v).

3.14.8.7 Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus- P_2O_5, Method C--Spectrophotometric Method, IBR approved for Sec. 63.606(c)(3)(ii), Sec. 63.626(c)(3)(ii), and Sec. 63.626(d)(3)(v).

3.14.9 ASME standard number QHO-1-1994 and QHO-1a-1996 Addenda. This standard is titled as “Standard for the Qualification and Certification of Hazardous Waste Incinerator Operators.” You may obtain a copy of this document from the American Society of Mechanical Engineers, 345 East 47th Street, New York, N.Y. 10017. You may inspect a copy at the RCRA Information Center, Crystal Gateway One, 1235 Jefferson Davis Highway, Arlington, VA 22202, or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

3.14.10 The following material is available for purchase from at least one of the following addresses: ASME International, Orders/Inquiries, P.O. Box 2300, Fairfield, NJ 07007-2300; or Global Engineering Documents, Sales Department, 15 Inverness Way East, Englewood, CO 80112: ANSI/ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses, IBR approved for Sec. 63.5160(d)(1)(iii).

2 DE Reg. 1798 (5/1/98)

3.15 Availability of information and confidentiality.

3.15.1 Availability of information.

3.15.1.1 With the exception of information protected through Part 2 of Chapter I of Title 40, all reports, records, and other information collected by the Administrator under 40 CFR Part 63 are available to the public. In addition, a copy of each permit application, compliance plan (including the schedule of compliance), notification of compliance status, excess emissions and continuous monitoring systems performance report, and Title V permit is available to the public, consistent with protections recognized in Section 503(e) of the Act.

3.15.1.2 The availability to the public of information provided to or otherwise obtained by the Administrator under 40 CFR Part 63 shall be governed by Part 2 of Chapter I of Title 40.

3.15.2 Confidentiality.

3.15.2.1 If an owner or operator is required to submit information entitled to protection from disclosure under Section 114(c) of the Act, the owner or operator may submit such information separately. The requirements of Section 114(c) of the Act shall apply to such information.

3.15.2.2 The contents of a Title V permit shall not be entitled to protection under Section 114(c) of the Act; however, information submitted as part of an application for a Title V permit may be entitled to protection from disclosure.

3.15.2.3 Any information provided to or otherwise obtained by the Department shall be made available to the public unless it is determined to be confidential under 7 **Del. C.**, Ch 60, §6014 or 29 **Del. C.**, Ch 100, §10002(d).

2 DE Reg. 1798 (5/1/98)

4.0 Requirements for Case-By-Case Control Technology Determinations for Major Sources

4.1 Overview of 4.0 of this regulation

The 4.0 of this regulation consists of two separate sets of requirements. One set of requirements, which are included in 4.2 through 4.6 of this regulation, implement the Section 112(g)(2)(B) provisions of the Act. These requirements apply to owners or operators who construct or reconstruct a major source of hazardous air pollutants after June 29, 1998. The Department adopted these requirements into this regulation in April 1998.

The other set of requirements, which are included in 4.12 through 4.18 of this regulation, implement the Section 112(j) provisions of the Act. These requirements apply to owners or operators of any collection of equipment defined in a Section 112(c) (of the Act) source category for which the Administrator has failed to promulgate an emission standard by the Section 112(j) deadline and the collection of equipment is located at a source that is subject to 7 **DE Admin Code** 1130.

The 4.7 through 4.11 of this regulation have been reserved.

5 DE Reg. 2131 (5/1/02)

4.2 Applicability of 4.2 through 4.6 of this regulation.

4.2.1 Applicability.

The requirements of 4.2 through 4.6 of this regulation carry out Section 112(g)(2)(B) of the Act.

4.2.2 Overall requirements.

The requirements of 4.2 through 4.6 of this regulation apply to any owner or operator who constructs or reconstructs a major source of hazardous air pollutants after June 29, 1998 unless the major source in question has been specifically regulated or exempted from regulation under a standard issued pursuant to Section 112(d), Section 112(h), or Section 112(j) of the Act and incorporated in another subpart of 40 CFR Part 63, or the owner or operator of such major source has received all necessary air quality permits for such construction or reconstruction project before June 29, 1998.

4.2.3 Exclusion for electric utility steam generating units.

The requirements in 4.0 of this regulation do not apply to electric utility steam generating units unless and until such time as these units are added to the

source category list pursuant to Section 112(c)(5) of the Act.

4.2.4 Relationship to State and local requirements.

Nothing in 4.0 of this regulation shall prevent a state or local agency from imposing more stringent requirements than those contained in this section.

4.2.5 Exclusion for stationary sources in deleted source categories.

The requirements in 4.0 of this regulation do not apply to stationary sources that are within a source category that has been deleted from the source category list pursuant to Section 112(c)(9) of the Act.

4.2.6 Exclusion for research and development activities.

The requirements in 4.2 through 4.6 of this regulation do not apply to research and development activities, as defined in 4.3 of this regulation.

1 DE Reg. 2003 (6/1/98)

4.3 Definitions.

Unless defined below, all terms in 4.2 through 4.6 of this regulation have the meaning given to them in the Act or in 3.0 of this regulation.

"Affected source" means the stationary source or group of stationary sources which, when fabricated (on site), erected, or installed meets the definition of "construct a major source" or the definition of "reconstruct a major source" contained in 4.3 of this regulation.

"Affected States" are all States:

- Whose air quality may be affected and that are contiguous to the State in which a MACT determination is made in accordance with 4.2 through 4.6 of this regulation or

- Whose air quality may be affected and that are within 50 miles of the major source for which a MACT determination is made in accordance with 4.2 through 4.6 of this regulation.

"Available information" means, for purposes of 4.2 through 4.6 of this regulation, information contained in the following information sources as of the date of issuance of the construction permit which incorporates the final and effective case-by-case MACT determination:

- A relevant proposed regulation, including all supporting information;

- Background information documents for a draft or proposed regulation;

- Data and information available from the Control Technology Center developed pursuant to Section 113 of the Act;

- Data and information contained in the Aerometric Informational Retrieval System including information in the MACT data base;

- Any additional information that can be expeditiously provided by the Administrator or Department; and

- For the purpose of determinations by the permitting authority, any additional information provided by the applicant or others, and any additional information considered available by the permitting authority.

"Construct a major source" means:

- To fabricate, erect, or install at any greenfield site a stationary source or group of stationary sources which is located within a contiguous area and under common control and which emits or has the potential to emit 10 tons per year of any hazardous air pollutant or 25 tons per year of any combination of hazardous air pollutants or

- To fabricate, erect, or install at any developed site a new process or production unit which in and of itself emits or has the potential to emit 10 tons per year of any hazardous air pollutant or 25 tons per year of any combination of hazardous air pollutants, unless the process or production unit satisfies the following criteria in this definition.

    - All hazardous air pollutants emitted by the process or production unit that would otherwise be controlled under the requirements of 4.2 through 4.6 of this regulation will be controlled by emission control equipment which was previously installed at the same site as the process or production unit;

    - Either of the following two criteria:

        - The permitting authority has determined within a period of five years prior to the fabrication, erection, or installation of the process or production unit that the existing emission control equipment represented best available control technology (BACT) or lowest achievable emission rate (LAER) under 7 **DE Admin Code** 1125 of the State of Delaware "Regulations Governing the Control of Air Pollution" for those hazardous air pollutants to be emitted by the process or production unit or

- The permitting authority determines that the control of hazardous air pollutant emissions provided by the existing equipment will be equivalent to that level of control currently achieved by other well-controlled similar sources (i.e., equivalent to the level of control that would be provided by a current BACT or LAER determination);

- The permitting authority determines that the percent control efficiency for emissions of hazardous air pollutants from all sources to be controlled by the existing control equipment will be equivalent to the percent control efficiency provided by the control equipment prior to the inclusion of the new process or production unit;

- The permitting authority has provided notice and an opportunity for public comment concerning its determination that above criteria in this definition apply and concerning the continued adequacy of any prior LAER or BACT determination;

- If any commenter has asserted that a prior LAER or BACT determination is no longer adequate, the permitting authority has determined that the level of control required by that prior determination remains adequate; and

- Any emission limitations, work practice requirements, or other terms and conditions upon which the above determinations are made by the permitting authority are applicable requirements under Section 504(a) of the Act and under 6.0 of 7 **DE Admin Code** 1130 of the State of Delaware "Regulations Governing the Control of Air Pollution" and either have been incorporated into any existing 7 **DE Admin Code** 1130 permit for the affected facility or will be incorporated into such permit upon issuance or revision.

"Construction permit" means a construction permit issued pursuant to 7 **DE Admin Code** 1102 or 1125 of the State of Delaware "Regulations Governing the Control of Air Pollution".

"Control technology" means measures, processes, methods, systems, or techniques to limit the emission of hazardous air pollutants in a way that would -

- Reduce the quantity of, or eliminate emissions of, such pollutants through process changes, substitution of materials or other modifications;

- Enclose systems or processes to eliminate emissions;

- Collect, capture or treat such pollutants when released from a process, stack, storage or fugitive emissions point;

- Are design, equipment, work practice, or operational standards (including requirements for operator training or certification) as provided in 42 U.S.C. 7412(h); or

- Are any combination of the above.

"Electric utility steam generating unit" means any fossil fuel fired combustion unit that serves a generator with a nameplate capacity of more than 25 megawatts that produces electricity for sale. A unit that co-generates steam and electricity and supplies more than one-third of its nameplate electric output capacity and more than 25 megawatts electric output to any utility power distribution system for sale shall be considered an electric utility steam generating unit.

"Greenfield site" means a contiguous area under common control that is an undeveloped site.

"List of Source Categories" means the Source Category List required by Section 112(c) of the Act.

"Maximum achievable control technology (MACT) emission limitation for new sources" means the emission limitation which is not less stringent that the emission limitation achieved in practice by the best controlled similar source, and which reflects the maximum degree of reduction in emissions that the permitting authority, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable by the constructed or reconstructed major source.

"Permitting authority" means the Department of Natural Resources and Environmental Control as defined in 29 **Del. C.**, Ch 80, as amended.

"Process or production unit" means any collection of structures or equipment, that processes, assembles, applies, or otherwise uses material inputs to produce or store an intermediate or final product. A single facility may contain more than one process or production unit.

"Reconstruct a major source" means the replacement of components at an existing process or production unit that in and of itself emits or has the potential to emit 10 tons per year of any hazardous air pollutant or 25 tons per year of any combination of hazardous air pollutants, whenever:

- The fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable process or production unit and

- It is technically and economically feasible for the reconstructed major

source to meet the applicable maximum achievable control technology emission limitation for new sources established under 4.2 through 4.6 of this regulation.

"Research and development activities" means activities conducted at a research or laboratory facility whose primary purpose is to conduct research and development into new processes and products, where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for sale or exchange for commercial profit, except in a de minimis manner.

"Similar source" means a stationary source or process that has comparable emissions and is structurally similar in design and capacity to a constructed or reconstructed major source such that the source could be controlled using the same control technology.

1 DE Reg. 2003 (6/1/98)

4.4 Program requirements governing construction or reconstruction of major sources.

4.4.1 [Reserved].

4.4.2 [Reserved].

4.4.3 Prohibition.

After June 29, 1998, no person may begin actual construction or reconstruction of a major source of hazardous air pollutants unless:

4.4.3.1 The major source in question has been specifically regulated or exempted from regulation under a standard in 40 CFR Part 63 issued pursuant to Section 112(d), Section 112(h) or Section 112(j) of the Act, and the owner or operator has fully complied with all procedures and requirements for preconstruction review established by that standard, including any applicable requirements set forth in 3.0 of this regulation or

4.4.3.2 The permitting authority has issued a construction permit which incorporates a final and effective case-by-case determination pursuant to the provisions of 4.5 of this regulation; requiring the emissions from the constructed or reconstructed major source to be controlled to a level no less stringent than the maximum achievable control technology emission limitation for new sources.

1 DE Reg. 2003 (6/1/98)

4.5 Maximum achievable control technology (MACT) determinations for constructed and reconstructed major sources.

4.5.1 Applicability.

The requirements in 4.5 of this regulation apply to an owner or operator who constructs or reconstructs a major source of hazardous air pollutants subject to a case-by-case determination of maximum achievable control technology pursuant to 4.4.3 of this regulation.

4.5.2 Requirements for constructed and reconstructed major sources.

When a case-by-case determination of MACT is required by 4.4.3 of this regulation, the owner or operator shall obtain from the permitting authority an approved MACT determination pursuant to 4.5.3 of this regulation.

4.5.3 Review options.

4.5.3.1 [Reserved].

4.5.3.2 The owner or operator shall follow all procedures in 7 **DE Admin Code** 1102 or 1125, as appropriate, except that --

4.5.3.2.1 The provisions of 2.2 of 7 **DE Admin Code** 1102 do not apply to any owner or operator that is subject to the requirements of 4.2 through 4.6 of this regulation and

4.5.3.2.2 In addition to the provisions of 11.10 of 7 **DE Admin Code** 1102, the final MACT determination and the construction permit shall expire if construction or reconstruction has not commenced within 18 months of permit issuance. The owner or operator may request and the permitting authority may grant an extension which shall not exceed an additional 12 months.

4.5.3.3 When desiring alternative operating scenarios, an owner or operator may request approval of case-by-case MACT determinations for each alternative operating scenario. Approval of such determinations satisfies the requirements of Section 112(g) of the Act for each such scenario.

4.5.3.4 The MACT emission limitation and requirements established in the approved construction permit shall be effective as required in 4.5.10 of this regulation, consistent with the principles established in 4.5.4 of this regulation, and supported by the information listed in 4.5.5 of this regulation. The owner or operator shall comply with the requirements in 4.5.11 and 4.5.12 of this regulation, and with all applicable requirements

in 3.0 of this regulation.

4.5.4 Principles of MACT determinations.

The following general principles shall govern preparation by the owner or operator of each construction permit application requesting a case-by-case MACT determination concerning construction or reconstruction of a major source, and all subsequent review of and actions taken concerning such an application by the permitting authority:

4.5.4.1 The MACT emission limitation or MACT requirements recommended by the applicant and approved by the permitting authority shall not be less stringent than the emission control which is achieved in practice by the best controlled similar source, as determined by the permitting authority.

4.5.4.2 Based upon available information, as defined in 4.3 of this regulation section, the MACT emission limitation and control technology (including any requirements in 4.5.4.3 of this regulation) recommended by the applicant and approved by the permitting authority shall achieve the maximum degree of reduction in emissions of hazardous air pollutants which can be achieved by utilizing those control technologies that can be identified from the available information, taking into consideration the costs of achieving such emission reduction and any non-air quality health and environmental impacts and energy requirements associated with the emission reduction.

4.5.4.3 The applicant may recommend a specific design, equipment, work practice, or operational standard, or a combination thereof, and the permitting authority may approve such a standard if the permitting authority specifically determines that it is not feasible to prescribe or enforce an emission limitation under the criteria set forth in Section 112(h)(2) of the Act.

4.5.4.4 If the Administrator has either proposed a relevant emission standard pursuant to Section 112(d) or Section 112(h) of the Act or adopted a presumptive MACT determination for the source category which includes the constructed or reconstructed major source, then the MACT requirements applied to the constructed or reconstructed major source shall have considered those MACT emission limitations and requirements of the proposed standard or presumptive MACT determination.

4.5.5 Application requirements for a case-by-case MACT determination.

4.5.5.1 An application for a MACT determination shall be submitted at

the same time as the construction permit application and shall specify a control technology selected by the owner or operator that, if properly operated and maintained, will meet the MACT emission limitation or standard as determined according to the principles set forth in 4.5.4 of this regulation. At the time of submittal, the owner or operator shall request that the permit application be processed pursuant to 11.2.9 or 11.2.10 of 7 **DE Admin Code** 1102, whichever is appropriate.

4.5.5.2 In each instance where a constructed or reconstructed major source would require additional control technology or a change in control technology, the application for a MACT determination shall contain, independent of the permit application, the following information:

4.5.5.2.1 The name and address (physical location) of the major source to be constructed or reconstructed;

4.5.5.2.2 A brief description of the major source to be constructed or reconstructed and identification of any listed source category or categories in which it is included;

4.5.5.2.3 The expected commencement date for the construction or reconstruction of the major source;

4.5.5.2.4 The expected completion date for construction or reconstruction of the major source;

4.5.5.2.5 The anticipated date of start-up for the constructed or reconstructed major source;

4.5.5.2.6 The hazardous air pollutants emitted by the constructed or reconstructed major source, and the estimated emission rate for each such hazardous air pollutant, to the extent this information is needed by the permitting authority to determine MACT;

4.5.5.2.7 Any federally enforceable emission limitations applicable to the constructed or reconstructed major source;

4.5.5.2.8 The maximum and expected utilization of capacity of the constructed or reconstructed major source, and the associated uncontrolled emission rates for that source, to the extent this information is needed by the permitting authority to determine MACT;

4.5.5.2.9 The controlled emissions for the constructed or reconstructed major source in tons/year at expected and

maximum utilization of capacity, to the extent this information is needed by the permitting authority to determine MACT;

4.5.5.2.10 A recommended emission limitation for the constructed or reconstructed major source consistent with the principles set forth in 4.5.4 of this regulation;

4.5.5.2.11 The selected control technology to meet the recommended MACT emission limitation, including technical information on the design, operation, size, estimated control efficiency of the control technology (and the manufacturer's name, address, telephone number, and relevant specifications and drawings, if requested by the permitting authority);

4.5.5.2.12 Supporting documentation including identification of alternative control technologies considered by the applicant to meet the emission limitation, and analysis of cost and non-air quality health and environmental impacts or energy requirements for the selected control technology; and

4.5.5.2.13 Any other relevant information required pursuant to 3.0 of this regulation.

4.5.5.3 In each instance where the owner or operator contends that a constructed or reconstructed major source will be in compliance, upon startup, with case-by-case MACT under 4.2 through 4.6 of this regulation without a change in control technology, the application for a MACT determination shall contain, independent of the permit application, the following information:

4.5.5.3.1 The information described in 4.5.5.2.1 through 4.5.5.2.10 of this regulation and

4.5.5.3.2 Documentation of the control technology in place.

4.5.6 [Reserved].

4.5.7 [Reserved].

4.5.8 [Reserved].

4.5.9 EPA notification.

The permitting authority shall send notice of any approvals pursuant to 4.5.3.2 of this regulation to the Administrator through the appropriate Regional Office, and to all other State and local air pollution control agencies having jurisdiction

in affected States.

4.5.10 Effective date.

The effective date of a MACT determination shall be the date the permitting authority issues the construction permit which incorporates the final and effective MACT determination.

4.5.11 Compliance date.

On and after the date of start-up, a constructed or reconstructed major source which is subject to the requirements in 4.2 through 4.6 of this regulation shall be in compliance with all applicable requirements specified in the MACT determination.

4.5.12 Compliance with MACT determinations.

4.5.12.1 An owner or operator of a constructed or reconstructed major source that is subject to a MACT determination shall comply with all requirements in the issued construction permit, including but not limited to any MACT emission limitation or MACT work practice standard, and any notification, operation and maintenance, performance testing, monitoring, reporting, and recordkeeping requirements.

4.5.12.2 An owner or operator of a constructed or reconstructed major source which has obtained a MACT determination shall be deemed to be in compliance with Section 112(g)(2)(B) of the Act only to the extent that the constructed or reconstructed major source is in compliance with all requirements set forth in the issued construction permit. Any violation of such requirements by the owner or operator shall be deemed by the permitting authority and by EPA to be a violation of the prohibition on construction or reconstruction in Section 112(g)(2)(B) for whatever period the owner or operator is determined to be in violation of such requirements, and shall subject the owner or operator to appropriate enforcement action under the Act.

4.5.13 Reporting to the Administrator.

Within 60 days of the issuance of a construction permit, the permitting authority shall provide a copy of such permit to the Administrator, and shall provide a summary in a compatible electronic format for inclusion in the MACT data base.

1 DE Reg. 2003 (6/1/98), 6 DE Reg. 1713 (6/1/03)

4.6 Requirements for constructed or reconstructed major sources subject to a

subsequently promulgated MACT standard or MACT requirement.

4.6.1 If the Administrator promulgates an emission standard under Section 112(d) or Section 112(h) of the Act or the permitting authority issues a determination under Section 112(j) of the Act that is applicable to a stationary source or group of sources which would be deemed to be a constructed or reconstructed major source under 4.2 through 4.6 of this regulation before the date that the owner or operator has obtained a final and legally effective MACT determination pursuant to 4.5 of this regulation, the owner or operator of the sources shall comply with the promulgated standard or determination rather than any MACT determination under Section 112(g) of the Act by the permitting authority, and the owner or operator shall comply with the promulgated standard by the compliance date in the promulgated standard.

4.6.2 If the Administrator promulgates an emission standard under Section 112(d) or Section 112(h) of the Act or the permitting authority makes a determination under Section 112(j) of the Act that is applicable to a stationary source or group of sources which was deemed to be a constructed or reconstructed major source under 4.2 through 4.6 of this regulation and has been subject to a prior case-by-case MACT determination pursuant to 4.5 of this regulation, and the owner and operator obtained a final and legally effective case-by-case MACT determination prior to the promulgation date of such emission standard, then the permitting authority shall (if the initial 7 **DE Admin Code** 1130 permit has not yet been issued) issue an initial operating permit which incorporates the emission standard or determination, or shall (if the initial 7 **DE Admin Code** 1130 permit has been issued) revise the operating permit according to the reopening procedures in 7 **DE Admin Code** 1130 to incorporate the emission standard or determination.

4.6.2.1 The EPA may include in the emission standard established under Section 112(d) or Section 112(h) of the Act a specific compliance date for those sources which have obtained a final and legally effective MACT determination under 4.2 through 4.6 of this regulation and which have submitted the information required in 4.5 of this regulation to the EPA before the close of the public comment period for the standard established under Section 112(d) of the Act. Such date shall assure that the owner or operator shall comply with the promulgated standard as expeditiously as practicable, but not longer than eight years after such standard is promulgated. In that event, the permitting authority shall incorporate the applicable compliance date in the 7 **DE Admin Code** 1130 operating permit.

4.6.2.2 If no compliance date has been established in the promulgated Section 112(d) or Section 112(h) standard or Section 112(j) determination of the Act, for those sources which have obtained a final and legally effective MACT determination under 4.2 through 4.6 of this

regulation, then the permitting authority shall establish a compliance date in the permit that assures that the owner or operator shall comply with the promulgated standard or determination as expeditiously as practicable, but not longer than eight years after such standard is promulgated or a Section 112(j) determination is made.

4.6.3 Notwithstanding the requirements in 4.6.1 and 4.6.2 of this regulation, if the Administrator promulgates an emission standard under Section 112(d) or Section 112(h) of the Act or the permitting authority issues a determination under Section 112(j) of the Act that is applicable to a stationary source or group of sources which was deemed to be a constructed or reconstructed major source under 4.2 through 4.6 of this regulation and which is the subject of a prior case-by-case MACT determination pursuant to 4.5 of this regulation, and the level of control required by the emission standard issued under Section 112(d) or Section 112(h) of the Act or the determination issued under Section 112(j) of the Act is less stringent than the level of control required by any emission limitation or standard in the prior MACT determination, the permitting authority is not required to incorporate any less stringent terms of the promulgated standard in the 7 **DE Admin Code** 1130 operating permit applicable to such sources and may in its discretion consider any more stringent provisions of the prior MACT determination to be applicable legal requirements when issuing or revising such an operating permit.

1 DE Reg. 2003 (6/1/98)

4.7 [Reserved].

5 DE Reg. 2130 (5/1/02)

4.8 [Reserved].

5 DE Reg. 2130 (5/1/02)

4.9 [Reserved].

5 DE Reg. 2130 (5/1/02)

4.10 [Reserved].

5 DE Reg. 2130 (5/1/02)

4.11 [Reserved].

5 DE Reg. 2130 (5/1/02)

4.12 Applicability.

4.12.1 General applicability.

4.12.1.1 The requirements of 4.12 through 4.18 of this regulation implement Section 112(j) of the Act.

4.12.1.2 The requirements of 4.12 through 4.18 of this regulation apply to owners or operators of affected 112(j) sources that are located at a major source that is subject to 7 **DE Admin Code** 1130 of the State of Delaware "Regulations Governing the Control of Air Pollution."

4.12.1.3 The requirements of 4.12 through 4.18 of this regulation do not apply to research or laboratory activities as defined in 4.13 of this regulation.

4.12.2 Relationship to other State and Federal requirements.

The requirements of 4.12 through 4.18 of this regulation are additional to all other applicable State and Federal requirements.

5 DE Reg. 2130 (5/1/02)

4.13 Definitions.

Unless defined below, all terms in 4.12 through 4.18 of Section 4.0 of this regulation have the meaning given to them in the Act or in 3.0 of this regulation.

"Affected 112(j) source" means the collection of equipment, activities or both within a single contiguous area and under common control that is in a Section 112(c) (of the Act) source category for which the Administrator has failed to promulgate an emission standard by the Section 112(j) (of the Act) deadline.

"Available information" means, for purposes of 4.12 through 4.18 of this regulation, any information contained in the following information sources as of issuance of a final and legally effective case-by-case MACT determination according to 4.17.1 of this regulation:

- A relevant proposed regulation, including all supporting information;
- Relevant background information documents for a draft or proposed regulation;
- Any relevant regulation, information or guidance collected by the Administrator establishing a MACT floor finding or MACT determination;

- Relevant data and information available from the Clean Air Technology Center developed according to Section 112(l)(3) of the Act;

- Relevant data and information contained in the Aerometric Information Retrieval System (AIRS) including information in the MACT database;

- Any additional information that can be expeditiously provided by the Administrator or Department;

- Any information provided by applicants in a Part 3 MACT application, an application for a permit, permit modification or administrative amendment according to the requirements 4.12 through 4.18 of this regulation; and

- Any additional relevant information provided by the applicant or others prior to or during the public comment period for a final and legally effective case-by-case MACT determination for an affected or a new affected 112(j) (of the Act) source.

"Control technology" means measures, processes, methods, systems or techniques to limit the emission of hazardous air pollutants in a way that would -

- Reduce the quantity of, or eliminate emissions of, such pollutants through process changes, substitution of materials or other modifications;

- Enclose systems or processes to eliminate emissions;

- Collect, capture or treat such pollutants when released from a process, stack, storage or fugitive emissions point;

- Are design, equipment, work practice or operational standards; or

- Are any combination of the above.

"Equivalent emission limitation" means an emission limitation, established under 4.12 through 4.18 of this regulation, which is equivalent to the MACT standard that the EPA would have promulgated under Section 112(d) or Section 112(h) of the Act, had they done so by the Section 112(j) (of the Act) deadline.

"Existing source maximum achievable control technology (MACT) requirements" means the requirements, which include, where feasible, an equivalent emission limitation, reflecting the maximum degree of reduction in emissions of hazardous air pollutants that the Department, taking into consideration the cost of achieving such emission reductions and any non-air quality health and environmental impacts and energy requirements, determines is achievable by sources in the category to which such MACT standard applies. These requirements

shall be based upon available information and shall not be less stringent than the MACT floor.

"Maximum achievable control technology (MACT) floor" means:

- For existing sources:
    - The average emission limitation achieved by the best performing 12% of the existing sources (for which the Department or Administrator has emissions information), excluding those sources that have, within 18 months before the Department issues a final and legally effective MACT determination under 4.12 through 4.18 of this regulation, within 18 months before the emission standard is proposed or within 30 months before such standard is promulgated, whichever is later, first achieved a level of emission rate or emission reduction which complies, or would comply if the source is not subject to such standard, with the lowest achievable emission rate (as defined in Section 171 of the Act) applicable to the source category and prevailing at the time, in the category, for categories of stationary sources with 30 or more sources or
    - The average emission limitation achieved by the best performing five sources (for which the Department or Administrator has emissions information) in the category, for categories with fewer than 30 sources.
- For new sources, the emission limitation achieved in practice by the best controlled source in the Section 112(c) (of the Act) source category, where such source is equipment or collection of equipment that, by virtue of its structure, operability, type of emissions and volume and concentration of emissions, is substantially equivalent to the new affected 112(j) (of the Act) source and employs control technology for control of emissions of hazardous air pollutants that is practical for use on the new affected 112(j) source.

"New affected 112(j) source" means the collection of equipment, activities or both, that if constructed after the issuance of a final and legally effective case-by-case MACT determination according to 4.17.1 of this regulation, is subject to the applicable new source MACT requirements. According to 4.14.6.3.1 of this regulation, each permit shall define the term "new affected 112(j) source", which will be the same as the "affected 112(j) source" unless a different collection is warranted based on consideration of factors including:

- Emission reduction impacts of controlling individual sources versus groups of sources;
- Cost effectiveness of controlling individual equipment;

- Flexibility to accommodate common control strategies;
- Cost/benefits of emissions averaging;
- Incentives for pollution prevention;
- Feasibility and cost of controlling processes that share common equipment (e.g., product recovery devices);
- Feasibility and cost of monitoring; and
- Other relevant factors.

"New source maximum achievable control technology (MACT) requirements" means the requirements, which include, where feasible, an equivalent emission limitation, which shall be based upon available information and shall not be less stringent than the MACT floor and which reflects the maximum degree of reduction in emissions of hazardous air pollutants that the Department, taking into consideration the cost of achieving such emission reduction and any non-air quality health and environmental impacts and energy requirements, determines is achievable by sources in the category to which such MACT standard applies.

"Research or laboratory activities" means activities whose primary purpose is to conduct research and development into new processes and products; where such activities are operated under the close supervision of technically trained personnel and are not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner and where the source is not in a source category, specifically addressing research or laboratory activities, that is listed according to Section 112(c)(7) of the Act.

"Section 112(j) deadline" means the date 18 months after the date for which a relevant standard is scheduled to be promulgated under 40 CFR Part 63, except that for all major sources listed in those source categories scheduled to be promulgated by November 15, 1994, the Section 112(j) (of the Act) deadline is November 15, 1996 and for all major sources listed in those source categories scheduled to be promulgated by November 15, 1997, the Section 112(j) deadline is December 15, 1999.

5 DE Reg. 2130 (5/1/02); 6 DE Reg. 1713 (6/1/03)

4.14 Approval process for new and existing affected 112(j) sources.

4.14.1 Sources that are affected 112(j) sources on the Section 112(j) deadline.

4.14.1.1 Except as provided for in 4.14.1.2 of this regulation, the owner or operator of any source that is an affected 112(j) source on the Section 112(j) deadline shall comply with the following.

4.14.1.1.1 Submit to the Department by the Section 112(j) deadline:

4.14.1.1.1.1 A Part 1 MACT application according to 4.15.1 of this regulation or

4.14.1.1.1.2 If desired, a request for an applicability determination by the Department of whether a source is an affected 112(j) source.

4.14.1.1.2 An owner or operator that submitted a timely request for an applicability determination in accordance with 4.14.1.1.1.2 of this regulation that did not receive a response from the Department by May 11, 2003 shall submit the following:

4.14.1.1.2.1 A Part 2 MACT application in accordance with 4.14.1.1.3 of this regulation or

4.14.1.1.2.2 If needed, a new request for an applicability determination not later than July 11, 2003. Any such new request shall include the following:

4.14.1.1.2.2.1 Identification of the affected 112(j) source category for which the request is being made;

4.14.1.1.2.2.2 Description of the specific emission sources of concern;

4.14.1.1.2.2.3 The specific language in the EPA proposed standard associated with each specified concern identified in 4.14.1.1.2.2.2 of this regulation; and

4.14.1.1.2.2.4 Any additional information, as appropriate, that illustrates why a determination of applicability is still required.

4.14.1.1.3 Submit to the Department a Part 2 MACT application according to 4.15.2 of this regulation not later than the applicable “Part 2 Due Date” listed in Table 4-1 of this

regulation, unless the Administrator has promulgated the final rule for the applicable source category or subcategory on or before the applicable "Part 2 Due Date".

4.14.1.1.4 If desired, include with the Part 2 MACT application submitted according to 4.14.1.1.3 of this regulation, a Part 3 MACT application according to 4.15.3 of this regulation.

4.14.1.2 The owner or operator of any source that has received a final and legally effective case-by-case MACT determination under Section 112(g) of the Act according to 4.5 of this regulation on or before the Section 112(j) deadline shall submit a Part 1 MACT application to the Department by the Section 112(j) deadline.

4.14.2 Sources that become affected 112(j) sources after the Section 112(j) deadline and that do not have a permit addressing the Section 112(j) requirements of the Act.

4.14.2.1 The owner or operator of any source shall comply with 4.14.2.2 and 4.14.2.3 of this regulation, when Section 112(g) requirements are not invoked and when that source would become an affected 112(j) source due to:

4.14.2.1.1 Construction, reconstruction or modification;

4.14.2.1.2 Relaxation of any state or federally enforceable permit limitation; or

4.14.2.1.3 The Department, under 3.0 of this regulation, or the Administrator, under Section 112(a)(1) of the Act, establishes a lesser quantity emission threshold that results in a source becoming an affected 112(j) source.

4.14.2.2 The owner or operator of any source identified in 4.14.2.1 or 4.14.3.2.1 of this regulation shall submit the following to the Department:

4.14.2.2.1 Part 1, Part 2 and Part 3 MACT applications according to 4.15.1 through 4.15.3 of this section.

4.14.2.2.2 One of the following requests, as appropriate.

4.14.2.2.2.1 A request that any associated 7 **DE Admin Code** 1102 construction permit be processed according to 11.2.10 of 7 **DE Admin Code** 1102.

4.14.2.2.2.2 A request that the relaxation of any existing permit limitation specified in a 7 **DE Admin Code** 1130 permit be processed as a significant permit modification.

4.14.2.2.2.3 A request that the relaxation of any existing permit limitation specified in a 7 **DE Admin Code** 1102 operating permit, where there is an associated pending initial 7 **DE Admin Code** 1130 permit, be processed according to 11.2.10 of 7 **DE Admin Code** 1102.

4.14.2.3 Where the relaxation of any existing permit limitation specified in a 7 **DE Admin Code** 1102 operating permit is requested, and there is not an associated 7 **DE Admin Code** 1130 or pending initial 7 **DE Admin Code** 1130 permit, operation as an affected 112(j) source shall not commence until a 7 **DE Admin Code** 1130 permit that addresses the Section 112(j) requirements of the Act is issued by the Department.

4.14.2.4 The owner or operator of any source that would become an affected 112(j) source due to construction or reconstruction and Section 112(g) requirements of the Act are invoked shall apply for and obtain a final and legally effective case-by-case MACT determination according to 4.5 of this regulation.

Table 4-1 - Part 2 MACT Application Due Date for Applicable 112(j) Source Categories

Affected 112(j) Source Category	Subpart	Part 2 Due Date
Flexible Polyurethane Foam Fabrication Operations	MMMMM	June 15, 2003
Coke Ovens: Pushing, Quenching, and Battery Stacks	CCCCC	June 15, 2003
Reinforced Plastic Composites Production	WWWW	June 15, 2003
Semiconductor Manufacturing	BBBBB	June 15, 2003
Refractory Products Manufacturing (1)	SSSSS	June 15, 2003
Brick and Structural Clay Products Manufacturing	JJJJJ	June 15, 2003
Clay Ceramics Manufacturing (2)	KKKKK	June 15, 2003
Asphalt Processing and Asphalt Roofing Manufacturing (3)	LLLLL	June 15, 2003
Integrated Iron and Steel Manufacturing	FFFFF	June 15, 2003
Hydrochloric Acid Production (Included Fume	NNNNN	June 15, 2003

Silica Facilities) (4)		
Engine Test Cells/Stands (3)	PPPPP	June 15, 2003
Surface Coating of Metal Furniture	RRRR	June 15, 2003
Printing, Coating, and Dyeing of Fabrics and Other Textiles	OOOO	June 15, 2003
Surface Coating of Wood Building Products	QQQQ	June 15, 2003
Stationary Combustion Turbines	YYYY	Oct. 30, 2003
Lime Manufacturing Plants	AAAAA	Oct. 30, 2003
Site Remediation	GGGGG	Oct. 30, 2003
Iron and Steel Foundries	EEEEE	Oct. 30, 2003
Taconite Iron Ore Processing	RRRRR	Oct. 30, 2003
Miscellaneous Organic Chemical Manufacturing & Miscellaneous Coating Manufacturing (5)	FFFF & HHHHH	Oct. 30, 2003
Organic Liquids Distribution (Non-Gasoline)	EEEE	Oct. 30, 2003
Primary Magnesium Refining	TTTTT	Oct. 30, 2003
Surface Coating of Metal Cans	KKKK	Oct. 30, 2003
Surface Coating of Plastic Parts and Products	PPPP	Oct. 30, 2003
Mercury Cell Chlor-Alkali Plants (Chlorine Production)	IIIII	Oct. 30, 2003
Surface Coating of Miscellaneous Metal Parts and Products (includes Asphalt/Coal Tar Coating of Metal Pipes) (3)	MMMM	Oct. 30, 2003
Industrial/Commercial/Institutional Boilers and Process Heaters (6)	DDDDD	Apr. 28, 2004
Plywood and Composite Wood Products	DDDD	Apr. 28, 2004
Stationary Reciprocating Internal Combustion Engines	ZZZZ	Apr. 28, 2004
Surface Coating of Automobiles and Light-Duty Trucks	IIII	Apr. 28, 2004
Industrial/Commercial/Institutional Boilers and Process Heaters (7)		Aug. 13, 2005
Hydrochloric Acid Production (8)		Aug. 13, 2005

Notes

(1) Includes Chromium Refractories Production.

(2) Two subcategories of Clay Products Manufacturing.

(3) Two source categories.

(4) Includes all sources within the Hydrochloric Acid Production standard that burn no hazardous waste and all acid production sources at fume silica facilities.

(5) Covers the 23 source categories listed in Table 4-2 of this regulation.

(6) Includes all sources in the Industrial/Commercial/Institutional Boilers and Process Heaters standard that burn no hazardous waste.

(7) Includes all sources in the Industrial/Commercial/Institutional Boilers and Process Heaters standard that burn hazardous waste.

(8) Includes furnaces that produce acid from hazardous waste at sources in the category Hydrochloric Acid Production.

Table 4-2 - Applicable 112(j) Subcategories under the Miscellaneous Organic Chemical Manufacturing & Miscellaneous Coating Manufacturing MACTs

Subcategories
Manufacture of Paints, Coatings, and Adhesives
Alkyd Resins Production
Maleic Anhydride Copolymers Production
Polyester Resins Production
Polymerized Vinylidene Chloride Production
Polymethyl Methacrylate Resins Production
Polyvinyl Acetate Emulsions Production
Polyvinyl Alcohol Production
Polyvinyl Butyral Production
Ammonium Sulfate Production--Caprolactam By-Product Plants
Quaternary Ammonium Compounds Production
Benzyltrimethylammonium Chloride Production
Carbonyl Sulfide Production
Chelating Agents Production
Chlorinated Paraffins Production
Ethylidene Norbornene Production
Explosives Production
Hydrazine Production
OBPA/1,3-Diisocyanate Production
Photographic Chemicals Production
Phthalate Plasticizers Production
Rubber Chemicals Manufacturing
Symmetrical Tetrachloropyridine Production

4.14.3 Sources that have a permit addressing the section 112(j) requirements of the Act.

The requirements of 4.14.3.1 and 4.14.3.2 of this regulation apply to affected 112(j) sources that have a permit addressing the Section 112(j) requirements according to 4.12 through 4.18 of this regulation, but where changes to equipment, activities or both, subsequently, occur at the source.

4.14.3.1 If the existing permit already provides the appropriate requirements that address the subsequent changes that are to occur in 4.14.3 of this regulation, then that source shall comply with the applicable new source MACT requirements, and the Section 112(j) requirements are thus satisfied.

4.14.3.2 If the existing permit does not provide the appropriate

requirements that address the subsequent changes that are to occur in 4.14.3 of this regulation, the owner or operator shall comply with 4.14.3.2.1 or 4.14.3.2.2 of this regulation, whichever appropriate.

4.14.3.2.1 If Section 112(g) requirements of the Act are not invoked, the owner or operator of that source shall comply with the provisions in 4.14.2.2 of this regulation.

4.14.3.2.2 If Section 112(g) requirements are invoked, the owner or operator of that source shall apply for and obtain a final and legally effective case-by-case MACT determination according to 4.5 of this regulation.

4.14.4 Applicability and equivalency determinations.

4.14.4.1 Applicability Determinations.

4.14.4.1.1 The Department shall review any request for an applicability determination when requested to do so according to 4.14.1.1.1.2 of this regulation. If the Department's applicability determination is positive, the owner or operator shall comply with 4.14.1.1.3 and 4.14.1.1.4 of this regulation. If the Department's applicability determination is negative, no further action by the owner or operator is necessary.

4.14.4.1.2 The Department shall review any request for an applicability determination resubmitted in accordance with 4.14.1.1.1.2 of this regulation not later than September 10, 2003. If the Department's applicability determination is negative, no further action by the owner or operator is necessary. If the Department's applicability determination is positive, the owner or operator shall comply with 4.14.1.1.3 and 4.14.1.1.4 of this regulation.

4.14.4.2 For any Part 1 application received pursuant to 4.14.1.2 of this regulation, the Department shall review the final and legally effective case-by-case MACT determination approved according to 4.5 of this regulation. If the Department determines that the emission limitations in that final and legally effective case-by-case MACT determination are substantially as effective as the emission limitations which the Department would otherwise adopt to effectuate Section 112(j) of the Act for that source, then the Department shall retain the existing emission limitations in the permit as the emission limitations to effectuate Section 112(j) of the Act by reopening the 7 **DE Admin Code** 1130 permit for cause or amending the Regulation 1102 permit following the procedures in 12.4 through 12.6 of 7 **DE Admin Code**

1102, as applicable. If the Department determines that the emission limitations in that final and legally effective case-by-case MACT determination are not substantially as effective as the emission limitations which the Department would otherwise adopt to effectuate Section 112(j) of the Act for that source, then the Department shall impose the requirements specified in 4.14.6.3 of this regulation by reopening the 7 **DE Admin Code** 1130 permit for cause or amending the 7 **DE Admin Code** 1102 permit following the procedures in 12.4 through 12.6 of 7 **DE Admin Code** 1102, as applicable.

4.14.4.3 In issuing any final and legally effective case-by-case MACT determination according to 4.5 of this regulation after the Section 112(j) deadline (i.e., according to 4.14.2.4 or 4.14.3.2.2 of this regulation), the Department shall specify in that determination that the associated emission limitations effectuate both Section 112(g) and Section 112(j) requirements of the Act.

4.14.5 Completion determination and application shield.

4.14.5.1 Within 60 days of the receipt of the Part 2 or Part 3 MACT application, the Department shall notify the owner or operator in writing whether the application is complete or incomplete. The Part 2 or Part 3 MACT application shall be deemed complete unless the Department notifies the owner or operator in writing within 60 days of the submittal that the application is incomplete.

4.14.5.2 Following submittal of any application, the Department may request additional information from the owner or operator. The owner or operator shall respond to such requests in a timely manner.

4.14.5.3 If the owner or operator has submitted timely and complete applications as required by this section, any failure to have a 7 **DE Admin Code** 1130 permit addressing the Section 112(j) requirements of the Act shall not be a violation of Section 112(j) of the Act, unless the delay in final action is due to the failure of the applicant to submit, in a timely manner, information required or requested to process the application. Once complete applications are submitted, the owner or operator shall not be in violation of the requirement to have a 7 **DE Admin Code** 1130 permit addressing the Section 112(j) requirements of the Act.

4.14.6 Permit issuance and content.

4.14.6.1 For each Part 2 application received according to 4.14.1 of this regulation, the Department shall reopen the source's 7 **DE Admin Code** 1130 permit for cause according to the requirements of 7 **DE**

Admin Code 1130 and shall impose the requirements in 4.14.6.3 of this regulation, as appropriate, through the 7 **DE Admin Code** 1130 permit. If the Department has not yet issued a 7 **DE Admin Code** 1130 permit, the Department shall revise the applicable 7 **DE Admin Code** 1102 operating permits using the procedures in 12.4 through 12.6 of 7 **DE Admin Code** 1102.

4.14.6.2 For each Part 2 application received according to 4.14.2 or 4.14.3 of this regulation, the Department shall issue a 7 **DE Admin Code** 1102 construction or operating permit using the procedures of 11.2.10 of 7 **DE Admin Code** 1102, shall reopen the source's 7 **DE Admin Code** 1130 permit for cause, shall revise the source's 7 **DE Admin Code** 1130 permit as a significant permit revision or shall issue a 7 **DE Admin Code** 1130 permit, as applicable, to impose the requirements in 4.14.6.3 of this regulation, as appropriate.

4.14.6.3 Permit requirements for affected 112(j) sources.

4.14.6.3.1 Identification of the affected 112(j) source and the new affected 112(j) source.

4.14.6.3.2 An equivalent emission limitation established by the Department that reflects existing source MACT requirements for the equipment and activities within the affected 112(j) source, based on the degree of emission reductions that can be achieved if the control technologies or work practices are installed, maintained and operated properly.

4.14.6.3.3 An equivalent emission limitation established by the Department that reflects new source MACT requirements for the equipment and activities within the affected 112(j) source, based on the degree of emission reductions that can be achieved if the control technologies or work practices are installed, maintained and operated properly.

4.14.6.3.4 In lieu of 4.14.6.3.2 and 4.14.6.3.3 of this regulation, any specific design, equipment, work practice or operational standard or combination thereof, when the Administrator or Department determines that hazardous air pollutants cannot be emitted through a conveyance designed and constructed to capture such pollutants, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State or local law, or the application of measurement methodology to a particular class

of sources is not practicable due to technological and economic limitations.

4.14.6.3.5 The appropriate provisions of 3.0 of this regulation and the information specified in 4.14.6.3.5.1 through 4.14.6.3.5.3 of this regulation.

4.14.6.3.5.1 Any additional emission limits, production limits, operational limits or other terms and conditions necessary to ensure practicable enforceability of the MACT emission limitation.

4.14.6.3.5.2 Compliance certifications, testing, monitoring, reporting and recordkeeping requirements that are consistent with requirements established according to 7 **DE Admin Code** 1130.

4.14.6.3.5.3 Compliance dates by which the owner or operator shall be in compliance with the MACT emission limitation and all other applicable terms and conditions of the permit.

4.14.6.3.5.3.1 The owner or operator of an affected 112(j) source subject to 4.14.1, 4.14.2 or 4.14.3.2 of this regulation shall comply with existing source MACT requirements by the date established in the source's 7 **DE Admin Code** 1130 or 7 **DE Admin Code** 1102 permit, as applicable. The compliance date shall not be later than three years after the issuance of the permit for that source, except where the Department issues a permit that grants an additional year to comply in accordance with Section 112(i)(3)(B) of the Act or unless otherwise specified in Section 112(i) of the Act.

4.14.6.3.5.3.2 The owner or operator of a new affected 112(j) source subject to 4.14.3.1 of this regulation shall comply with new source MACT requirements immediately upon startup of the new affected 112(j) source.

4.14.7 Permit issuance dates.

The Department shall issue all permits that address the requirements in 4.12 through 4.18 of this regulation in accordance with the requirements of 7 **DE**

Admin Code 1102, 1125, or 1130 of the State of Delaware "Regulations Governing the Control of Air Pollution", as is applicable.

4.14.8 MACT emission limitations.

4.14.8.1 Owners or operators of affected 112(j) sources subject to 4.14.1, 4.14.2 or 4.14.3.2 of this regulation shall comply with all requirements in 4.12 through 4.18 of this regulation that are applicable to affected 112(j) sources, including the compliance date for affected 112(j) sources established in 4.14.6.3.5.3.1 of this regulation.

4.14.8.2 Owners or operators of new affected 112(j) sources subject to 4.14.3.1 of this regulation shall comply with all requirements in 4.12 through 4.18 of this regulation that are applicable to new affected 112(j) sources, including the compliance date for new affected 112(j) sources established in 4.14.6.3.5.3.2 of this regulation.

5 DE Reg. 2130 (5/1/02); 6 DE Reg. 1713 (6/1/03)

4.15 Application content for case-by-case MACT determinations.

4.15.1 Part 1 MACT Application.

The Part 1 application for a MACT determination shall contain the information in 4.15.1.1 through 4.15.1.4 of this regulation.

4.15.1.1 The name and address (physical location) of the major source.

4.15.1.2 A brief description of the major source and an identification of the relevant source category.

4.15.1.3 An identification of the types of sources belonging to the relevant source category.

4.15.1.4 An identification of any affected 112(j) sources for which an application has been made for a final and legally effective case-by-case MACT determination under Section 112(g) of the Act according to 4.2 through 4.6 of this regulation.

4.15.2 Part 2 MACT Application.

The Part 2 application for a MACT determination shall contain the information in 14.15.2.1 through 14.15.2.6 of this regulation.

4.15.2.1 For an affected 112(j) source subject to construction, reconstruction or modification, the expected commencement date of installation, the expected completion date of installation and the anticipated date of startup of the affected 112(j) source.

4.15.2.2 The hazardous air pollutants emitted by each affected 112(j) source in the relevant source category and an estimated total uncontrolled and controlled emission rate for hazardous air pollutants from the affected 112(j) source.

4.15.2.3 Any existing Federal, State or local limitations or requirements applicable to the affected 112(j) source.

4.15.2.4 For each piece of equipment, activity or source, an identification of control technology in place.

4.15.2.5 Information relevant to establishing the MACT floors.

4.15.2.6 Certification by a responsible official of truth, accuracy, and completeness. This certification shall be signed by a responsible official and shall contain the following language: “I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.”

4.15.3 Part 3 MACT Application.

The Part 3 application for a MACT determination shall contain the information in 4.15.3.1 through 4.15.3.4 of this regulation.

4.15.3.1 Recommended MACT floors, an emission standard or emission limitation that is equivalent to existing source MACT requirements and an emission standard or emission limitation that is equivalent to new source MACT requirements for the affected 112(j) source, and supporting information consistent with 4.14.6 of this regulation. The owner or operator may recommend a specific design, equipment, work practice, operational standard or combination thereof, as an emission limitation.

4.15.3.2 Proposed control technology that, if properly operated and maintained, will meet, at minimum, the existing source and new source MACT requirements, including identification of the affected 112(j) sources to which the control technology shall be applied.

4.15.3.3 Relevant parameters to be monitored and frequency of monitoring to demonstrate continuous compliance with the MACT emission limitation over the applicable reporting period.

4.15.3.4 Certification by a responsible official of truth, accuracy, and completeness. This certification shall be signed by a responsible official and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

5 DE Reg. 2130 (5/1/02); 6 DE Reg. 1713 (6/1/03)

4.16 Pre-construction review procedures for affected 112(j) sources.

The owner or operator who constructs, reconstructs or modifies an affected 112(j) source after the Section 112(j) deadline shall follow the procedures established under 7 **DE Admin Codes** 1102, 1125 or 1130, as is applicable, before commencing construction, reconstruction, or modification of the affected 112(j) source.

5 DE Reg. 2130 (5/1/02)

4.17 Maximum achievable control technology (MACT) determinations for affected 112(j) sources subject to case-by-case determination of equivalent emission limitations.

4.17.1 Determination of case-by-case MACT requirements.

The Department shall issue final and legally effective case-by-case MACT determinations for affected 112(j) and new affected 112(j) sources that are consistent with the existing source MACT and the new source MACT requirements, as defined in 4.13 of this regulation.

4.17.2 Reporting to the Administrator.

The owner or operator shall submit copies of the Part 1, Part 2 and Part 3 MACT applications to the Administrator at the same time these applications are submitted to the Department.

5 DE Reg. 2130 (5/1/02)

4.18 Requirements for case-by-case determination of equivalent emission limitations after promulgation of subsequent MACT standard.

4.18.1 If the Administrator promulgates a relevant emission standard that is applicable to one or more affected 112(j) sources that are located at a major source before the date that the Department has issued a final and legally effective case-by-case MACT determinations according to 4.17.1 of this regulation, the 7 **DE Admin Code** 1130 permit shall contain the promulgated standard rather than the emission limitation determined under 4.14 of this

regulation, and the owner or operator shall comply with the promulgated standard by the compliance date in the promulgated standard.

4.18.2 If the Administrator promulgates a relevant emission standard that is applicable to one or more affected 112(j) sources that are located at a major source on or after the date that the Department has issued a final and legally effective case-by-case MACT determinations according to 4.17.1 of this regulation, the Department shall incorporate requirements of that standard in the 7 **DE Admin Code** 1130 permit upon its next renewal. The Department shall establish a compliance date in the revised permit that assures that the owner or operator shall comply with the promulgated standard within a reasonable time, but not longer than eight years after such standard is promulgated or eight years after the issuance of the final and legally effective case-by-case MACT determinations according to 4.17.1 of this regulation, whichever is earlier. However, in no event shall the period for compliance for existing sources be shorter than that provided for existing sources in the promulgated standard.

4.18.3 Notwithstanding the requirements of 4.18.1 or 4.18.2 of this regulation, the requirements of 4.18.3.1 and 4.18.3.2 of this regulation shall apply.

4.18.3.1 If the Administrator promulgates an emission standard under Section 112(d) or Section 112(h) of the Act that is applicable to an affected 112(j) source after the date a final and legally effective case-by-case MACT determination is issued according to 4.17.1 of this regulation, the Department is not required to change the emission limitation in the permit to reflect the promulgated standard if the Department determines that the level of control required in that prior case-by-case MACT determinations is substantially as effective as that required by the promulgated standard according to 3.1.5 of this regulation.

4.18.3.2 If the Administrator promulgates an emission standard under Section 112(d) or Section 112(h) of the Act that is applicable to an affected 112(j) source after the date a final and legally effective case-by-case MACT determination is issued according to 4.17.1 of this regulation and the level of control required by the promulgated emission standard is less stringent than the level of control required by that prior case-by-case MACT determination, the Department may, but is not required to incorporate any less stringent emission limitation of the promulgated standard in the 7 **DE Admin Code** 1130 permit applicable to such sources and shall consider any more stringent provisions of that prior case-by-case MACT determination to be applicable legal requirements when issuing or revising such a 7 **DE Admin Code** 1130 permit.

5 DE Reg. 2130 (5/1/02)

07/28/2008

5.0 Perchloroethylene Air Emission Standards for Dry Cleaning Facilities

5.1 Applicability

5.1.1 The provisions of 5.0 of this regulation apply to the owner or operator of each dry cleaning facility that uses perchloroethylene.

5.1.2 Each dry cleaning system shall be in compliance with all of the applicable provisions of 5.0 of this regulation beginning on July 28, 2008 or immediately upon startup, whichever is later.

5.1.3 [Reserved].

5.1.4 [Reserved].

5.1.5 [Reserved].

5.1.6 [Reserved].

5.1.7 A dry cleaning facility is a major source if the facility emits or has the potential to emit more than 9.1 megagrams per year (10 tons per year) of perchloroethylene to the atmosphere. In lieu of measuring a facility's potential to emit perchloroethylene emissions or determining a facility's potential to emit perchloroethylene emissions, a dry cleaning facility is a major source if:

5.1.7.1 It includes only dry-to-dry machines and has a total yearly perchloroethylene consumption greater than 8,000 liters (2,100 gallons) as determined according to 5.4.4 of this regulation or

5.1.7.2 It includes only transfer machine systems or both dry-to-dry machines and transfer machine systems and has a total yearly perchloroethylene consumption greater than 6,800 liters (1,800 gallons) as determined according to 5.4.4 of this regulation.

5.1.8 A dry cleaning facility is an area source if it does not meet the conditions of 5.1.7 of this regulation.

5.1.9 Change in facility status to major source.

5.1.9.1 If the total yearly perchloroethylene consumption of a dry cleaning facility determined according to 5.4.4 of this regulation is initially less than the amounts specified in 5.1.7 of this regulation, but then

exceeds those amounts, the dry cleaning facility becomes a major source and all dry cleaning systems located at that dry cleaning facility must comply with the appropriate requirements for major sources in 5.3, 5.4, and 5.5 of this regulation by 180 calendar days from the date that the facility determines it has exceeded the amounts specified, or by June 30, 1999, whichever is later.

5.1.9.2 Following review of notification submitted in accordance with 5.5.3.1 of this regulation, the Department may determine that the dry cleaning facility shall not be subject to the additional requirements imposed in 5.1.9.1 of this regulation, if there has been no exceedance during the prior 36 months and -

5.1.9.2.1 The total yearly perchloroethylene consumption falls below and remains below the amounts specified in 5.1.7 of this regulation before and after the next purchase of perchloroethylene or

5.1.9.2.2 The exceedance occurred due to the initial filling of a newly installed dry-to-dry machine and the total yearly perchloroethylene consumption, exclusive of the quantity of perchloroethylene purchased to initially fill the newly installed dry-to-dry machine, remains below the amounts specified in 5.1.7 of this regulation.

5.1.10 Coin-operated dry cleaning machines.

All coin-operated dry cleaning machines are subject to the provisions of 5.0 of this regulation.

5.1.11 The owner or operator of an area source subject to Section 5.0 of this regulation is exempt from the obligation to obtain a Title V operating permit under 7 **DE Admin Code** 1130 of State of Delaware "Regulations Governing the Control of Air Pollution", if the owner or operator is not required to obtain a Title V operating permit under 3.1 of 7 **DE Admin Code** 1130 for a reason other than the owner or operator's status as an area source under 5.0 of this regulation. Notwithstanding the previous sentence, the owner or operator shall continue to comply with the provisions of 5.0 of this regulation applicable to area sources.

2 DE Reg. 1390 (2/1/99); 4 DE Reg. 707 (10/1/00); 11 DE Reg. 1498 (5/1/08)

5.2 Definitions

"Administrator" means the Administrator of the United States Environmental Protection Agency.

“Ancillary equipment” means the equipment used with a dry cleaning machine in a dry cleaning system including, but not limited to, emission control devices, pumps, filters, muck cookers, stills, solvent tanks, solvent containers, water separators, exhaust dampers, diverter valves, interconnecting piping, hoses, and ducts.

“Area source” means any perchloroethylene dry cleaning facility that meets the conditions in 5.1.8 of this regulation.

“Articles” mean clothing, garments, textiles, fabrics, leather goods, and the like, that are dry cleaned.

“Carbon adsorber” means a bed of activated carbon into which an air-perchloroethylene gas-vapor stream is routed and which adsorbs the perchloroethylene on the carbon.

“Coin-operated dry cleaning machine” means a dry cleaning machine that is operated by the customer (that is, the customer places articles into the machine, turns the machine on, and removes articles from the machine).

“Colorimetric detector tube” means a glass tube (sealed prior to use), containing material impregnated with a chemical that is sensitive to perchloroethylene and is designed to measure the concentration of perchloroethylene in air.

“Construction”, for purposes of 5.0 of this regulation, means the fabrication (onsite), erection, or installation of a dry cleaning system subject to 5.0 of this regulation.

“Department” means the Department of Natural Resources and Environmental Control as defined in 29 **Del. C.**, Ch 80, as amended.

“Desorption” means regeneration of a carbon adsorber by removal of the perchloroethylene adsorbed on the carbon.

“Diverter valve” means a flow control device or flow control devices that prevents room air from passing through a refrigerated condenser when the door of the dry cleaning machine is open.

“Dry cleaning” means the process of cleaning articles using perchloroethylene.

“Dry cleaning cycle” means the washing and drying of articles in a dry-to-dry machine or transfer machine system.

“Dry cleaning facility” means an establishment with one or more dry cleaning systems.

“Dry cleaning machine” means a dry-to-dry machine or each machine of a transfer machine system.

“Dry cleaning machine drum” means the perforated container inside the dry cleaning machine that holds the articles during dry cleaning.

“Dry cleaning system” means a dry-to-dry machine and its ancillary equipment or a transfer machine system and its ancillary equipment.

“Dryer” means a machine used to remove perchloroethylene from articles by tumbling them in a heated air stream (see reclaimer).

“Dry-to-dry machine” means a one-machine dry cleaning operation in which washing and drying are performed in the same machine.

“Equivalent control device”, for purposes of 5.0 of this regulation, means an equivalent emission control technology approved under 5.6 of this regulation.

“Exhaust damper” means a flow control device that prevents the air-perchloroethylene gas-vapor stream from exiting the dry cleaning machine into a carbon adsorber before room air is drawn into the dry cleaning machine.

“Existing” means commenced construction or reconstruction before December 9, 1991.

“Filter” means a porous device through which perchloroethylene is passed to remove contaminants in suspension. Examples include, but are not limited to, lint filter, button trap, cartridge filter, tubular filter, regenerative filter, prefilter, polishing filter, and spin disc filter.

“Halogenated hydrocarbon detector” means a portable device capable of detecting vapor concentrations of perchloroethylene of 25 parts per million by volume and indicating a concentration of 25 parts per million by volume or greater by emitting an audible or visual signal that varies as the concentration changes.

“Heating coil” means the device used to heat the air stream circulated from the dry cleaning machine drum, after perchloroethylene has been condensed from the air stream and before the stream reenters the dry cleaning machine drum.

“Major source” means any dry cleaning facility that meets the conditions in 5.1.7 of this regulation.

“Muck cooker” means a device for heating perchloroethylene-laden waste material to volatilize and recover perchloroethylene.

“New” means commenced construction or reconstruction on or after December 9, 1991.

“Perchloroethylene consumption” means the total volume of perchloroethylene purchased based upon purchase receipts or other reliable measures.

“Perchloroethylene gas analyzer” means a flame ionization detector, photoionization detector, or infrared analyzer capable of detecting vapor concentrations of perchloroethylene of 25 parts per million by volume.

“Reclaimer” means a machine used to remove perchloroethylene from articles by tumbling them in a heated air stream (see dryer).

“Reconstruction”, for purposes of 5.0 of this regulation, means replacement of a washer, dryer, or reclaimer; or replacement of any components of a dry cleaning system to such an extent that the fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable new source.

“Refrigerated condenser” means a vapor recovery system into which an air-perchloroethylene gas-vapor stream is routed and the perchloroethylene is condensed by cooling the gas-vapor stream.

“Refrigerated condenser coil” means the coil containing the chilled liquid used to cool and condense the perchloroethylene.

“Residence” means any dwelling or housing in which people reside excluding short-term housing that is occupied by the same person for a period of less than 180 days (such as a hotel room).

“Responsible official” means one of the following:

- For a corporation: A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more dry cleaning facilities;

- For a partnership: A general partner;

- For a sole proprietorship: The owner; or

- For a municipality, State, Federal, or other public agency: Either a principal executive officer or ranking official.

“Room enclosure” means a stationary structure that encloses a transfer

machine system, and is vented to a carbon adsorber or an equivalent control device during operation of the transfer machine system.

"Source", for purposes of 5.0 of this regulation, means each dry cleaning system.

"Still" means any device used to volatilize and recover perchloroethylene from contaminated perchloroethylene.

"Temperature sensor" means a thermometer or thermocouple used to measure temperature.

"Transfer machine system" means a multiple-machine dry cleaning operation in which washing and drying are performed in different machines. Examples include, but are not limited to:

- A washer and dryer or dryers;
- A washer and reclaimer or reclaimers; or
- A dry-to-dry machine and reclaimer or reclaimers.

"Vapor barrier enclosure" means a room that encloses a dry cleaning system and is constructed of vapor barrier material that is impermeable to perchloroethylene. The enclosure shall be equipped with a ventilation system that exhausts outside the building and is completely separate from the ventilation system for any other area of the building. The exhaust system shall be designed and operated to maintain negative pressure and a ventilation rate of at least one air change per five minutes. The vapor barrier enclosure shall be constructed of glass, plexiglass, polyvinyl chloride, PVC sheet 22 mil thick (0.022 in.), sheet metal, metal foil face composite board, or other materials that are impermeable to perchloroethylene vapor. The enclosure shall be constructed so that all joints and seams are sealed except for inlet make-up air and exhaust openings and the entry door.

"Vapor leak" means a perchloroethylene vapor concentration exceeding 25 parts per million by volume (50 parts per million by volume as methane) as indicated by a halogenated hydrocarbon detector or perchloroethylene gas analyzer.

"Washer" means a machine used to clean articles by immersing them in perchloroethylene. This includes a dry-to-dry machine when used with a reclaimer.

"Water separator" means any device used to recover perchloroethylene from a water-perchloroethylene mixture.

"Year or Yearly" means any consecutive 12-month period of time.

2 DE Reg. 1390 (2/1/99); 11 DE Reg. 1498 (5/1/08)

5.3 Standards.

5.3.1 The owner or operator of each existing dry cleaning system and of each new transfer machine system and its ancillary equipment installed between December 9, 1991 and September 22, 1993 shall comply with either 5.3.1.1 or 5.3.1.2 of this regulation and shall comply with 5.3.1.3 of this regulation if applicable.

5.3.1.1 Route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser, a refrigerated condenser and carbon adsorber, or an equivalent control device.

5.3.1.2 Route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a carbon adsorber installed on the dry cleaning machine prior to September 22, 1993.

5.3.1.3 Contain the dry cleaning machine inside a room enclosure if the dry cleaning machine is a transfer machine system located at a major source. Each room enclosure shall be:

5.3.1.3.1 Constructed of materials impermeable to perchloroethylene and

5.3.1.3.2 Designed and operated to maintain a negative pressure at each opening at all times that the transfer machine system is operating.

5.3.2 The owner or operator of each new dry-to-dry machine and its ancillary equipment and of each new transfer machine system and its ancillary equipment installed on or after September 22, 1993 and before December 22, 2005:

5.3.2.1 Shall route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser, a refrigerated condenser and carbon adsorber, or an equivalent control device;

5.3.2.2 Shall eliminate any emission of perchloroethylene during the transfer of articles between the washer and the dryer or dryers; and

5.3.2.3 Shall pass the air-perchloroethylene gas-vapor stream from inside the dry cleaning machine drum through a carbon adsorber or equivalent control device immediately before or as the door of the dry cleaning machine is opened if the dry cleaning machine is located at a

major source.

5.3.3 The owner or operator shall close the door of each dry cleaning machine immediately after transferring articles to or from the machine, and shall keep the door closed at all other times.

5.3.4 The owner or operator of each dry cleaning system shall operate and maintain the system according to the manufacturers' specifications and recommendations.

5.3.5 Each refrigerated condenser used for the purposes of complying with 5.3.1, 5.3.2, 5.3.15.2, or 5.3.15.5.2.2 of this regulation and installed on a dry-to-dry machine, dryer, or reclaimer:

5.3.5.1 Shall be operated to not vent or release the air-perchloroethylene gas-vapor stream contained within the dry cleaning machine to the atmosphere while the dry cleaning machine drum is rotating;

5.3.5.2 Shall be monitored according to 5.4.1.1 of this regulation; and

5.3.5.3 Shall prevent air drawn into the dry cleaning machine when the door of the machine is open from passing through the refrigerated condenser.

5.3.6 Each refrigerated condenser used for the purpose of complying with 5.3.1 of this regulation and installed on a washer:

5.3.6.1 Shall be operated to not vent or release the air-perchloroethylene gas-vapor stream contained within the washer to the atmosphere until the washer door is opened;

5.3.6.2 Shall be monitored according to 5.4.1.2 of this regulation; and

5.3.6.3 Shall not use the same refrigerated condenser coil for the washer that is used by a dry-to-dry machine, dryer, or reclaimer.

5.3.7 Each carbon adsorber used for the purposes of complying with 5.3.1, 5.3.2, 5.3.15.2 or 5.3.15.5.2.2 of this regulation:

5.3.7.1 Shall not be bypassed to vent or release any air-perchloroethylene gas-vapor stream to the atmosphere at any time and

5.3.7.2 Shall be monitored according to the applicable requirements in 5.4.2 or 5.4.3 of this regulation.

5.3.8 Each room enclosure used for the purposes of complying with 5.3.1.3 of this regulation:

5.3.8.1 Shall be operated to vent all air from the room enclosure through a carbon adsorber or an equivalent control device and

5.3.8.2 Shall be equipped with a carbon adsorber that is not the same carbon adsorber used to comply with 5.3.1.2 or 5.3.2.3 of this regulation.

5.3.9 The owner or operator of an affected facility shall drain all cartridge filters in their housing, or other sealed container, for a minimum of 24 hours, or shall treat such filters in an equivalent manner, before removal from the dry cleaning facility.

5.3.10 The owner or operator of an affected facility shall store all perchloroethylene and wastes that contain perchloroethylene in solvent tanks or solvent containers with no vapor leaks. The exception to this requirement is that containers for separator water may be uncovered, as necessary, for proper operation of the machine and still.

5.3.11 [Reserved].

5.3.12 [Reserved].

5.3.13 The owner or operator of a dry cleaning system shall repair all vapor leaks detected in 5.3.15.1 of this regulation within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within two working days of detecting such a leak. Such repair parts shall be installed within five working days after receipt.

5.3.14 If parameter values monitored under 5.3.5, 5.3.6, or 5.3.7 of this regulation do not meet the values specified in 5.4.1, 5.4.2, or 5.4.3 of this regulation, adjustments or repairs shall be made to the dry cleaning system or control device to meet those values. If repair parts must be ordered, either a written or verbal order for such parts shall be initiated within two working days of detecting such a parameter value. Such repair parts shall be installed within five working days after receipt.

5.3.15 Additional requirements.

5.3.15.1 The owner or operator of a dry cleaning system shall inspect the components listed in 5.3.15.1.4 of this regulation for vapor leaks weekly while the component is in operation.

5.3.15.1.1 Area sources shall conduct the inspections using a halogenated hydrocarbon detector or perchloroethylene gas

analyzer that is operated according to the manufacturer's instructions. The operator shall place the probe inlet at the surface of each component interface where leakage could occur and move it slowly along the interface periphery.

5.3.15.1.2 Major sources shall conduct the inspections using a perchloroethylene gas analyzer operated according to Method 21 in Appendix A of 40 CFR Part 60.

5.3.15.1.3 [Reserved].

5.3.15.1.4 System components to be inspected weekly for vapor leaks.

5.3.15.1.4.1 Hose and pipe connections, fittings, couplings, and valves;

5.3.15.1.4.2 Door gaskets and seatings;

5.3.15.1.4.3 Filter gaskets and seatings;

5.3.15.1.4.4 Pumps;

5.3.15.1.4.5 Solvent tanks and containers;

5.3.15.1.4.6 Water separators;

5.3.15.1.4.7 Muck cookers;

5.3.15.1.4.8 Stills;

5.3.15.1.4.9 Exhaust dampers;

5.3.15.1.4.10 Diverter valves; and

5.3.15.1.4.11 All filter housings.

5.3.15.2 The owner or operator of each dry cleaning system installed after December 21, 2005, at an area source shall route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser and pass the air-perchloroethylene gas-vapor stream from inside the dry cleaning machine drum through a non-vented carbon adsorber or equivalent control device immediately before the door of the dry cleaning machine is opened. The carbon adsorber must be desorbed in accordance with manufacturer's instructions.

5.3.15.3 The owner or operator of any dry cleaning system shall eliminate any emission of perchloroethylene during the transfer of articles between the washer and the dryers or reclaimers.

5.3.15.4 Beginning on July 28, 2008, the owner or operator shall eliminate any emission of perchloroethylene from any dry cleaning system that is installed (including relocation of a used machine) on or after July 13, 2006, and that is located in a building with a residence.

5.3.15.5 Additional requirements for dry cleaning systems located in a building with a residence.

5.3.15.5.1 After December 21, 2020, the owner or operator shall eliminate any emission of perchloroethylene from any dry cleaning system that is located in a building with a residence.

5.3.15.5.2 Each owner or operator of a dry cleaning system installed on or after December 21, 2005, but before July 13, 2006, in a building with a residence, shall be in compliance with 5.3.15.5.2.1 through 5.3.15.5.2.2 of this regulation, in addition to the other applicable requirements in 5.0 of this regulation.

5.3.15.5.2.1 Operate the dry cleaning system inside a vapor barrier enclosure. The exhaust system for the enclosure shall be operated at all times that the dry cleaning system is in operation and during maintenance. The entry door to the enclosure may be open only when a person is entering or exiting the enclosure.

5.3.15.5.2.2 Route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser and pass the air-perchloroethylene gas-vapor stream from inside the dry cleaning drum through a non-vented carbon adsorber or equivalent control device immediately before the door of the dry cleaning machine is opened. The carbon adsorber must be desorbed in accordance with manufacturer's instructions.

5.3.15.5.2.3 [Reserved].

2 DE Reg. 1390 (2/1/99); 11 DE Reg. 1498 (5/1/08)

5.4 Test methods and monitoring.

5.4.1 When a refrigerated condenser is used to comply with 5.3.1.1, 5.3.2.1, 5.3.15.2, or 5.3.15.5.2.2 of this regulation:

5.4.1.1 The owner or operator shall monitor the following parameters, as applicable, on a weekly basis:

5.4.1.1.1 The refrigeration system high pressure and low pressure during the drying phase to determine if the pressures are in the range specified in the manufacturer's operating instructions.

5.4.1.1.2 If the dry cleaning machine is not equipped with refrigeration system pressure gauges, the temperature of the air-perchloroethylene gas-vapor stream on the outlet side of the refrigerated condenser on a dry-to-dry machine, dryer, or reclaimer with a temperature sensor to determine if it is equal to or less than of 7.2°C (45°F) before the end of the cool-down or drying cycle while the air-perchloroethylene gas-vapor stream is flowing through the condenser. The temperature sensor shall be used according to the manufacturer's instructions and shall be designed to measure a temperature of 7.2°C (45°F) to an accuracy of ±1.1°C (±2°F).

5.4.1.2 The owner or operator shall calculate the difference between the temperature of the air-perchloroethylene gas-vapor stream entering the refrigerated condenser on a washer and the temperature of the air-perchloroethylene gas-vapor stream exiting the refrigerated condenser on the washer weekly to determine that the difference is greater than or equal to 11.1°C (20°F).

5.4.1.2.1 Measurements of the inlet and outlet streams shall be made with a temperature sensor. Each temperature sensor shall be used according to the manufacturer's instructions, and designed to measure at least a temperature range from 0°C (32°F) to 48.9°C (120°F) to an accuracy of ±1.1°C (±2°F).

5.4.1.2.2 The difference between the inlet and outlet temperatures shall be calculated weekly from the measured values.

5.4.2 When a carbon adsorber is used to comply with 5.3.1.2 of this regulation, 5.3.8 of this regulation, or exhaust is passed through a carbon adsorber immediately upon the machine door opening to comply with 5.3.1.1, 5.3.2.1, 5.3.2.3, 5.3.15.2, or 5.3.15.5.2.2 of this regulation, the owner or operator shall measure the concentration of perchloroethylene in the exhaust of the carbon adsorber weekly with a colorimetric detector tube or

perchloroethylene gas analyzer. The measurement shall be taken while the dry cleaning machine is venting to that carbon adsorber at the end of the last dry cleaning cycle prior to desorption of that carbon adsorber or removal of the activated carbon to determine that the perchloroethylene concentration in the exhaust is equal to or less than 100 parts per million by volume. The owner or operator shall:

5.4.2.1 Use a colorimetric detector tube or perchloroethylene gas analyzer designed to measure a concentration of 100 parts per million by volume of perchloroethylene in air to an accuracy of ±25 parts per million by volume;

5.4.2.2 Use the colorimetric detector tube or perchloroethylene gas analyzer according to the manufacturer's instructions; and

5.4.2.3 Provide a sampling port for monitoring within the exhaust outlet of the carbon adsorber that is easily accessible and located at least eight stack or duct diameters downstream from any flow disturbance such as a bend, expansion, contraction, or outlet; downstream from no other inlet; and two stack or duct diameters upstream from any flow disturbance such as a bend, expansion, contraction, inlet, or outlet.

5.4.3 If the air-perchloroethylene gas-vapor stream is passed through a carbon adsorber immediately prior to machine door opening to comply with 5.3.1.1, 5.3.2.1, 5.3.2.3, 5.3.15.2, or 5.3.15.5.2.2 of this regulation, the owner or operator of an affected facility shall measure the concentration of perchloroethylene in the dry cleaning machine drum at the end of the dry cleaning cycle weekly with a colorimetric detector tube or perchloroethylene gas analyzer to determine that the perchloroethylene concentration is equal to or less than 300 parts per million by volume. The owner or operator shall:

5.4.3.1 Use a colorimetric detector tube or perchloroethylene gas analyzer designed to measure a concentration of 300 parts per million by volume of perchloroethylene in air to an accuracy ±75 parts per million by volume;

5.4.3.2 Use the colorimetric detector tube or perchloroethylene gas analyzer according to the manufacturer's instructions; and

5.4.3.3 Conduct the weekly monitoring by inserting the colorimetric detector tube or perchloroethylene gas analyzer into the open space above the articles at the rear of the dry cleaning machine drum immediately upon opening the dry cleaning machine door.

5.4.4 When calculating yearly perchloroethylene consumption for the purpose of demonstrating applicability according to 5.1 of this regulation, the

owner or operator shall perform the following calculation on the first day of every month:

5.4.4.1 Sum the volume of all perchloroethylene purchases made in each of the previous 12 months, as recorded in the log described in 5.5.4.1 of this regulation.

5.4.4.2 If no perchloroethylene purchases were made in a given month, then the perchloroethylene consumption for that month is zero gallons.

5.4.4.3 The total sum calculated in 5.4.4 of this regulation is the yearly perchloroethylene consumption at the facility.

2 DE Reg. 1390 (2/1/99); 11 DE Reg. 1498 (5/1/08)

5.5 Reporting and recordkeeping requirements.

5.5.1 Each owner or operator of a dry cleaning facility shall notify the Department in writing by June 30, 1999 or upon startup, whichever is later, and provide the following information:

5.5.1.1 The name and address of the owner or operator;

5.5.1.2 The address (that is, physical location) of the dry cleaning facility;

5.5.1.3 A brief description of the type of each dry cleaning machine at the dry cleaning facility;

5.5.1.4 Documentation as described in 5.4.4 of this regulation of the yearly perchloroethylene consumption at the dry cleaning facility for the previous year to demonstrate applicability according to 5.1 of this regulation; or an estimation of perchloroethylene consumption for the previous year to estimate applicability with 5.1 of this regulation;

5.5.1.5 A description of the type of control device or devices that will be used to achieve compliance with 5.3.1 or 5.3.2 of this regulation and whether the control device or devices are currently in use or will be purchased;

5.5.1.6 Documentation to demonstrate to the Department’s satisfaction that each room enclosure used to meet the requirements in 5.3.1.3 of this regulation meets the requirements in 5.3.1.3.1 and 5.3.1.3.2 of this regulation;

5.5.1.7 Documentation to demonstrate to the Department's satisfaction that each vapor barrier enclosure used to meet the requirements in 5.3.15.5.2.1 of this regulation meets the requirements in 5.2 of this regulation;

5.5.1.8 Whether or not the dry cleaning facility is located in a building with a residence, even if the residence is vacant at the time of this notification;

5.5.1.9 Whether or not the dry cleaning facility is located in a building with no other tenants, leased space, or owner occupants;

5.5.1.10 Whether or not the refrigeration system on each dry cleaning system located at the dry cleaning facility is equipped with high and low pressure gauges; and

5.5.1.11 Whether or not a dry cleaning system has been newly installed, constructed or added at the dry cleaning facility since December 21, 2005.

5.5.2 [Reserved].

5.5.3 Exceedance of solvent consumption amounts.

5.5.3.1 Each owner or operator of an area source dry cleaning facility that exceeds the solvent consumption amounts specified in 5.1.7 of this regulation shall notify the Department not later than 30 days after the exceedance occurred. The notification shall provide the following information and shall be signed by a responsible official who shall certify its accuracy:

5.5.3.1.1 The name and address of the dry cleaning facility;

5.5.3.1.2 A copy of the yearly perchloroethylene consumption records that indicate that there was an exceedance of the applicable amount specified in 5.1.7 of this regulation;

5.5.3.1.3 The circumstances that led to the exceedance; and

5.5.3.1.4 A statement that all information contained in the notification is true and accurate.

5.5.3.2 Each owner or operator of an area source dry cleaning facility that becomes subject to additional requirements in 5.1.9.1 of this regulation shall submit to the Department on or before the dates specified in 5.1.9.1, a notification of compliance status providing the information in

5.5.6.1 through 5.5.6.11 of this regulation and signed by a responsible official who shall certify its accuracy.

5.5.4 Each owner or operator of a dry cleaning facility shall keep receipts of perchloroethylene purchases and a log of the following information and maintain such information on site and show it upon request for a period of five years:

5.5.4.1 The volume of perchloroethylene purchased each month by the dry cleaning facility as recorded from perchloroethylene purchases; if no perchloroethylene is purchased during a given month then the owner or operator would enter zero gallons into the log;

5.5.4.2 The calculation and result of the yearly perchloroethylene consumption determined on the first day of each month as specified in 5.4.4 of this regulation;

5.5.4.3 The dates when the dry cleaning system components are inspected for vapor leaks, as specified in 5.3.15.1 of this regulation, and the name or location of dry cleaning system components where vapor leaks are detected;

5.5.4.4 The dates of repair and records of written or verbal orders for repair parts to demonstrate compliance with 5.3.13 and 5.3.14 of this regulation;

5.5.4.5 The dates and high and low pressure gauge monitoring results, as specified in 5.4 of this regulation, if a refrigerated condenser is used to comply with 5.3.1, 5.3.2, or 5.3.15 of this regulation;

5.5.4.6 If the dry cleaning machine is not equipped with refrigeration system pressure gauges, the dates and temperature sensor monitoring results, as specified in 5.4 of this regulation, if a refrigerated condenser is used to comply with 5.3.1, 5.3.2, or 5.3.15 of this regulation; and

5.5.4.7 The dates and monitoring results for carbon adsorbers, as specified in 5.4 of this regulation, if a carbon adsorber is used to comply with 5.3.1.1, 5.3.1.2, 5.3.2.1, 5.3.2.3, 5.3.8, or 5.3.15.5 of this regulation.

5.5.5 Each owner or operator of a dry cleaning facility shall retain onsite a copy of the design specifications and the operating manuals for each dry cleaning system and each emission control device located at the dry cleaning facility.

5.5.6 Each owner or operator of a dry cleaning facility shall submit to the Department by registered mail not later than July 28, 2008 or within 30 days of

startup, whichever is later, a notification of compliance status providing the following information and signed by a responsible official who shall certify its accuracy:

5.5.6.1 The name and address of the owner or operator;

5.5.6.2 The address (that is, physical location) of the dry cleaning facility;

5.5.6.3 Whether or not the dry cleaning facility is located in a building with a residence, even if the residence is vacant at the time of this notification;

5.5.6.4 Whether or not the dry cleaning facility is located in a building with no other tenants, leased space, or owner occupants;

5.5.6.5 Whether or not the refrigeration system on each dry cleaning system located at the dry cleaning facility is equipped with high and low pressure gauges;

5.5.6.6 Whether or not a dry cleaning system has been newly installed, constructed or added at the dry cleaning facility since December 21, 2005;

5.5.6.7 All information necessary to demonstrate to the Department's satisfaction that each vapor barrier enclosure used to meet the requirements in 5.3.15.5.2.1 of this regulation meets the requirements in 5.2 of this regulation;

5.5.6.8 Whether the dry cleaning facility is a major or area source;

5.5.6.9 The yearly perchloroethylene solvent consumption based upon the yearly solvent consumption calculated according to 5.4.4 of this regulation;

5.5.6.10 Whether or not the dry cleaning facility is in compliance with each applicable requirement in 5.3 of this regulation; and

5.5.6.11 All information contained in the statement is accurate and true.

2 DE Reg. 1390 (2/1/99); 11 DE Reg. 1498 (5/1/08)

5.6 Determination of equivalent emission control technology.

5.6.1 Any person requesting that the use of certain equipment or procedures be considered equivalent to the requirements in 5.3 of this regulation shall

collect, verify, and submit to the Administrator (with copy to the Department) the following information to show that the alternative achieves equivalent emission reductions:

5.6.1.1 Diagrams, as appropriate, illustrating the emission control technology, its operation, and integration into or function with dry-to-dry machines or transfer machine systems and their ancillary equipment during each portion of the normal dry cleaning cycle;

5.6.1.2 Information quantifying vented perchloroethylene emissions from the dry-to-dry machines or transfer machine systems during each portion of the dry cleaning cycle with and without the use of the candidate emission control technology;

5.6.1.3 Information on solvent mileage achieved with and without the candidate emission control technology. Solvent mileage is the average weight of articles cleaned per volume of perchloroethylene used. Solvent mileage data must be of continuous duration for at least one year under the conditions of a typical dry cleaning operation. This information on solvent mileage must be accompanied by information on the design, configuration, operation, and maintenance of the specific dry cleaning system from which the solvent mileage information was obtained;

5.6.1.4 Identification of maintenance requirements and parameters to monitor to ensure proper operation and maintenance of the candidate emission control technology;

5.6.1.5 Explanation of why this information is considered accurate and representative of both the short-term and the long-term performance of the candidate emission control technology on the specific dry cleaning system examined;

5.6.1.6 Explanation of why this information can or cannot be extrapolated to dry cleaning systems other than the specific systems examined; and

5.6.1.7 Information on the cross-media impacts (to water and solid waste) of the candidate emission control technology and demonstration that the cross-media impacts are less than or equal to the cross-media impacts of a refrigerated condenser.

5.6.2 For the purpose of determining equivalency to control equipment required in 5.3 of this regulation, the Administrator will evaluate the petition to determine whether equivalent control of perchloroethylene emissions has been adequately demonstrated.

5.6.3 Where the Administrator determines that certain equipment and procedures may be equivalent, the Administrator will publish a notice in the Federal Register proposing to consider this equipment or these procedures as equivalent. After notice and opportunity for public hearing, the Administrator will publish the final determination of equivalency in the Federal Register.

2 DE Reg. 1390 (2/1/99)

5.7 [Reserved]

11 DE Reg. 1498 (5/1/08)

11/11/2007

6.0 Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks

6.1 Applicability and designation of sources

6.1.1 The affected source to which the provisions of 6.0 of this regulation apply is each chromium electroplating or chromium anodizing tank at facilities performing hard chromium electroplating, decorative chromium electroplating, or chromium anodizing.

6.1.2 Owners or operators of affected sources subject to the provisions of Section 6.0 of this regulation must also comply with the requirements of 3.0 of this regulation, according to the applicability of 3.0 of this regulation to such sources, as identified in Table 6-2 of this regulation.

6.1.3 Process tanks associated with a chromium electroplating or chromium anodizing process, but in which neither chromium electroplating nor chromium anodizing is taking place, are not subject to the provisions of 6.0 of this regulation. Examples of such tanks include, but are not limited to, rinse tanks, etching tanks, and cleaning tanks. Likewise, tanks that contain a chromium solution, but in which no electrolytic process occurs, are not subject to 6.0 of this regulation. An example of such a tank is a chrome conversion coating tank where no electrical current is applied.

6.1.4 Affected sources in which research and laboratory operations are performed are exempt from the provisions of 6.0 of this regulation when such operations are taking place.

6.1.5 The owner or operator of an area source subject to 6.0 of this regulation is exempt from the obligation to obtain a Title V operating permit under 7 **DE Admin Code** 1130 of State of Delaware “Regulations Governing the Control of Air Pollution”, if the owner or operator is not required to obtain a Title V operating permit under 3.1 of 7 **DE Admin Code** 1130 for a reason

other than the owner or operator's status as an area source under 6.0 of this regulation. Notwithstanding the previous sentence, the owner or operator shall continue to comply with the provisions of 6.0 of this regulation applicable to area sources.

3 DE Reg. 445 (9/1/99); 4 DE Reg. 707 (10/1/00); 11 DE Reg. 683 (11/1/07)

6.2 Definitions and nomenclature.

6.2.1 Definitions.

Terms used in 6.0 of this regulation are defined in the Act, in 3.0 of this regulation, or in 6.2 of this regulation. For the purposes of 6.0 of this regulation, if the same term is defined in 3.0 and in 6.2 of this regulation, it shall have the meaning given in 6.2 of this regulation.

"Add-on air pollution control device" means equipment installed in the ventilation system of chromium electroplating and anodizing tanks for the purposes of collecting and containing chromium emissions from the tank or tanks.

"Air pollution control technique" means any method, such as an add-on air pollution control device or a chemical fume suppressant, used to reduce chromium emissions from chromium electroplating and chromium anodizing tanks.

"Base metal" means the metal or metal alloy that comprises the work piece.

"Bath component" means the trade or brand name of each component in trivalent chromium plating baths. For trivalent chromium baths, the bath composition is proprietary in most cases. Therefore, the trade or brand name for each component can be used; however, the chemical name of the wetting agent contained in that component must be identified.

"Chemical fume suppressant" means any chemical agent that reduces or suppresses fumes or mists at the surface of an electroplating or anodizing bath; another term for fume suppressant is mist suppressant.

"Chromic acid" means the common name for chromium anhydride (CrO_3).

"Chromium anodizing" means the electrolytic process by which an oxide layer is produced on the surface of a base metal for functional purposes (e.g., corrosion resistance or electrical insulation) using a chromic acid solution. In chromium anodizing, the part to be anodized acts as the anode in the

electrical circuit, and the chromic acid solution, with a concentration typically ranging from 50 to 100 grams per liter (g/L), serves as the electrolyte.

"Chromium anodizing tank" means the receptacle or container along with the following accompanying internal and external components needed for chromium anodizing: rectifiers fitted with controls to allow for voltage adjustments, heat exchanger equipment, circulation pumps, and air agitation systems.

"Chromium electroplating tank" means the receptacle or container along with the following internal and external components needed for chromium electroplating: rectifiers, anodes, heat exchanger equipment, circulation pumps, and air agitation systems.

"Composite mesh-pad system" means an add-on air pollution control device typically consisting of several mesh-pad stages. The purpose of the first stage is to remove large particles. Smaller particles are removed in the second stage, which consists of the composite mesh pad. A final stage may remove any re-entrained particles not collected by the composite mesh pad.

"Decorative chromium electroplating" means the process by which a thin layer of chromium (typically 0.003 to 2.5 microns) is electrodeposited on a base metal, plastic, or undercoating to provide a bright surface with wear and tarnish resistance. In this process, the part or parts serve as the cathode in the electrolytic cell and the solution serves as the electrolyte. Typical current density applied during this process ranges from 540 to 2,400 Amperes per square meter (amp/m^2) for total plating times ranging between 0.5 to five minutes.

"Electroplating or anodizing bath" means the electrolytic solution used as the conducting medium in which the flow of current is accompanied by movement of metal ions for the purposes of electroplating metal out of the solution onto a work piece or for oxidizing the base material.

"Emission limitation" means, for the purposes of 6.0 of this regulation, the concentration of total chromium allowed to be emitted expressed in milligrams per dry standard cubic meter (mg/dscm), or the allowable surface tension expressed in dynes per centimeter (dynes/cm).

"Enclosed hard chromium electroplating tank" means a chromium electroplating tank that is equipped with an enclosing hood and ventilated at half the rate or less that of an open surface tank of the same surface area.

"Facility" means the major or area source at which chromium electroplating or chromium anodizing is performed.

“Fiber-bed mist eliminator” means an add-on air pollution control device that removes contaminants from a gas stream through the mechanisms of inertial impaction and Brownian diffusion. These devices are typically installed downstream of another control device, which serves to prevent plugging, and consist of one or more fiber beds. Each bed consists of a hollow cylinder formed from two concentric screens; the fiber between the screens may be fabricated from glass, ceramic, plastic, or metal.

“Foam blanket” means the type of chemical fume suppressant that generates a layer of foam across the surface of a solution when current is applied to that solution.

“Fresh water” means water, such as tap water, that has not been previously used in a process operation or, if the water has been recycled from a process operation, it has been treated and meets the effluent guidelines for chromium wastewater.

“Hard chromium electroplating or industrial chromium electroplating” means a process by which a thick layer of chromium (typically 1.3 to 760 microns) is electrodeposited on a base material to provide a surface with functional properties such as wear resistance, a low coefficient of friction, hardness, and corrosion resistance. In this process, the part serves as the cathode in the electrolytic cell and the solution serves as the electrolyte. Hard chromium electroplating process is performed at current densities typically ranging from 1,600 to 6,500 amp/m^2 for total plating times ranging from 20 minutes to 36 hours depending upon the desired plate thickness.

“Hexavalent chromium” means the form of chromium in a valence state of +6.

“Large, hard chromium electroplating facility” means a facility that performs hard chromium electroplating and has a maximum cumulative potential rectifier capacity greater than or equal to 60 million ampere-hours per year (amp-hr/yr).

“Maximum cumulative potential rectifier capacity” means the summation of the total installed rectifier capacity associated with the hard chromium electroplating tanks at a facility, expressed in amperes, multiplied by the maximum potential operating schedule of 8,400 hours per year and 0.7, which assumes that electrodes are energized 70% of the total operating time. The maximum potential operating schedule is based on operating 24 hours per day, seven days per week, 50 weeks per year.

“Open surface hard chromium electroplating tank” means a chromium electroplating tank that is ventilated at a rate consistent with good ventilation practices for open tanks.

“Operating parameter value” means a minimum or maximum value established for a control device or process parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator is in continual compliance with the applicable emission limitation or standard.

“Packed-bed scrubber” means an add-on air pollution control device consisting of a single or double packed bed that contains packing media on which the chromic acid droplets impinge. The packed-bed section of the scrubber is followed by a mist eliminator to remove any water entrained from the packed-bed section.

“Research or laboratory operation” means an operation whose primary purpose is for research and development of new processes and products, that is conducted under the close supervision of technically trained personnel, and that is not involved in the manufacture of products for commercial sale in commerce, except in a de minimus manner.

“Small, hard chromium electroplating facility” means a facility that performs hard chromium electroplating and has a maximum cumulative potential rectifier capacity less than 60 million amp-hr/yr.

“Stalagmometer” means an instrument used to measure the surface tension of a solution by determining the mass of a drop of liquid by weighing a known number of drops or by counting the number of drops obtained from a given volume of liquid.

“Surface tension” means the property, due to molecular forces, that exists in the surface film of all liquids and tends to prevent liquid from spreading.

“Tank operation” means the time in which current or voltage is being applied to a chromium electroplating tank or a chromium anodizing tank.

“Tensiometer” means an instrument used to measure the surface tension of a solution by determining the amount of force needed to pull a ring from the liquid surface. The amount of force is proportional to the surface tension.

“Trivalent chromium” means the form of chromium in a valence state of +3.

“Trivalent chromium process” means the process used for electrodeposition of a thin layer of chromium onto a base material using a trivalent chromium solution instead of a chromic acid solution.

"Wetting agent" means the type of chemical fume suppressant that reduces the surface tension of a liquid.

6.2.2 Nomenclature.

The nomenclature used in 6.0 of this regulation has the following meaning:

6.2.2.1 AMR = the allowable mass emission rate from each type of affected source subject to the same emission limitation in milligrams per hour (mg/hr).

6.2.2.2 AMR_{sys} = the allowable mass emission rate from affected sources controlled by an add-on air pollution control device controlling emissions from multiple sources in mg/hr.

6.2.2.3 EL = the applicable emission limitation in 6.3 of this regulation in milligrams per dry standard cubic meter (mg/dscm).

6.2.2.4 IA_{total} = the sum of all inlet duct areas from both affected and nonaffected sources in meters squared.

6.2.2.5 IDA_i = the total inlet area for all ducts associated with affected sources in meters squared.

6.2.2.6 $IDA_{i,a}$ = the total inlet duct area for all ducts conveying chromic acid from each type of affected source performing the same operation, or each type of affected source subject to the same emission limitation in meters squared.

6.2.2.7 VR = the total of ventilation rates for each type of affected source subject to the same emission limitation in dry standard cubic meters per minute (dscm/min).

6.2.2.8 VR_{inlet} = the total ventilation rate from all inlet ducts associated with affected sources in dscm/min.

6.2.2.9 $VR_{inlet,a}$ = the total ventilation rate from all inlet ducts conveying chromic acid from each type of affected source performing the same operation, or each type of affected source subject to the same emission limitation in dscm/min.

6.2.2.10 VR_{tot} = the average total ventilation rate for the three test runs as determined at the outlet by means of the Method 306 in Appendix A of 40 CFR Part 63 in dscm/min.

3 DE Reg. 445 (9/1/99); 11 DE Reg. 683 (11/1/07)

6.3 Standards.

6.3.1 Each owner or operator of an affected source subject to the provisions of 6.0 of this regulation shall comply with these requirements on and after the compliance dates specified in 6.4.1 of this regulation. All affected sources are regulated by applying maximum achievable control technology.

6.3.2 Applicability of emission limits.

6.3.2.1 The emission limitations in 6.3 of this regulation apply during tank operation as defined in 6.2 of this regulation, and during periods of startup and shutdown as these are routine occurrences for affected sources subject to 6.0 of this regulation. The emission limitations do not apply during periods of malfunction, but the operation and maintenance practices that are required in 6.3.6 of this regulation must be followed during malfunctions.

6.3.2.2 If an owner or operator is controlling a group of tanks with a common add-on air pollution control device, the emission limitations in 6.3.3 through 6.3.5 of this regulation apply whenever any one affected source is operated. The emission limitation that applies to the group of affected sources is:

6.3.2.2.1 The emission limitation identified in 6.3.3 though 6.3.5 of this regulation if the affected sources are performing the same type of operation (e.g., hard chromium electroplating), are subject to the same emission limitation, and are not controlled by an add-on air pollution control device also controlling nonaffected sources;

6.3.2.2.2 The emission limitation calculated according to 6.5.5.3 of this regulation if affected sources are performing the same type of operation, are subject to the same emission limitation, and are controlled with an add-on air pollution control device that is also controlling nonaffected sources; and

6.3.2.2.3 The emission limitation calculated according to 6.5.5.4 of this regulation if affected sources are performing different types of operations, or affected sources are performing the same operations but subject to different emission limitations, and are controlled with an add-on air pollution control device that may also be controlling emissions from nonaffected sources.

6.3.3 Standards for hard chromium electroplating tanks.

6.3.3.1 Standards for open surface hard chromium electroplating tanks. During tank operation, each owner or operator of an existing, new, or reconstructed affected source shall control chromium emissions discharged to the atmosphere from that affected source by either of the following:

6.3.3.1.1 Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.015 milligrams of total chromium per dry standard cubic meter (mg/dscm) of ventilation air ($6.6x10^{-6}$ grains per dry standard cubic foot [gr/dscf]) for all open surface hard chromium electroplating tanks that are affected sources other than those that are existing affected sources located at small hard chromium electroplating facilities;

6.3.3.1.2 Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.03 mg/dscm ($1.3x10^{-5}$ gr/dscf) if the open surface hard chromium electroplating tank is an existing affected source and is located at a small, hard chromium electroplating facility; or

6.3.3.1.3 If a chemical fume suppressant containing a wetting agent is used, by not allowing the surface tension of the electroplating or anodizing bath contained within the affected tank to exceed 45 dynes per centimeter (dynes/cm) (3.1×10^{-3} pound-force per foot (lb_f/ft)) as measured by a stalagmometer or 35 dynes/cm (2.4×10^{-3} lb_f/ft) as measured by a tensiometer at any time during tank operation.

6.3.3.2 Standards for enclosed hard chromium electroplating tanks. During tank operation, each owner or operator of an existing, new, or reconstructed affected source shall control chromium emissions discharged to the atmosphere from that affected source by either of the following:

6.3.3.2.1 Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.015 mg/dscm (6.6×10^{-6} gr/dscf) for all enclosed hard chromium electroplating tanks that are affected sources other than those that are existing affected sources located at small, hard chromium electroplating facilities;

6.3.3.2.2 Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.03 mg/dscm (1.3×10^{-5} gr/dscf) if the enclosed hard chromium

electroplating tank is an existing affected source and is located at a small, hard chromium electroplating facility;

6.3.3.2.3 If a chemical fume suppressant containing a wetting agent is used, by not allowing the surface tension of the electroplating or anodizing bath contained within the affected tank to exceed 45 dynes/cm (3.1×10^{-3} lbf/ft) as measured by a stalagmometer or 35 dynes/cm (2.4×10^{-3} lbf/ft) as measured by a tensiometer at any time during tank operation;

6.3.3.2.4 Not allowing the mass rate of total chromium in the exhaust gas stream discharged to the atmosphere to exceed the maximum allowable mass emission rate determined by using the calculation procedure in 6.5.6.1.1 of this regulation for all enclosed hard chromium electroplating tanks that are affected sources other than those that are existing affected sources located at small, hard chromium electroplating facilities; or

6.3.3.2.5 Not allowing the mass rate of total chromium in the exhaust gas stream discharged to the atmosphere to exceed the maximum allowable mass emission rate determined by using the calculation procedure in 6.5.6.1.2 of this regulation if the enclosed hard chromium electroplating tank is an existing affected source and is located at a small, hard chromium electroplating facility.

6.3.3.3 Size demonstration of a hard chromium electroplating facility.

6.3.3.3.1 An owner or operator may demonstrate the size of a hard chromium electroplating facility through the definitions in 6.2.1 of this regulation. Alternatively, an owner or operator of a facility with a maximum cumulative potential rectifier capacity of 60 million amp-hr/yr or more may be considered small if the actual cumulative rectifier capacity is less than 60 million amp-hr/yr as demonstrated using the following procedures:

6.3.3.3.1.1 If records show that the facility's previous annual actual rectifier capacity was less than 60 million amp-hr/yr, by using nonresettable ampere-hr meters and keeping monthly records of actual ampere-hr usage for each 12-month rolling period following the compliance date in accordance with 6.7.2.12 of this regulation. The actual cumulative rectifier capacity for the previous 12-month rolling period shall be tabulated monthly by adding the capacity for the current month to the capacities for the previous 11 months or

6.3.3.3.1.2 By accepting a Federally-enforceable limit on the maximum cumulative potential rectifier capacity of a hard chromium electroplating facility and by maintaining monthly records in accordance with 6.7.2.12 of this regulation to demonstrate that the limit has not been exceeded. The actual cumulative rectifier capacity for the previous 12-month rolling period shall be tabulated monthly by adding the capacity for the current month to the capacities for the previous 11 months.

6.3.3.3.2 Once the monthly records required to be kept in 6.3.3.3.2 and 6.7.2.12 of this regulation show that the actual cumulative rectifier capacity over the previous 12-month rolling period corresponds to the large designation, the owner or operator is subject to the emission limitation identified in 6.3.3.1.1, 6.3.3.1.3, 6.3.3.2.1, 6.3.3.2.3; or 6.3.3.2.4 of this regulation, in accordance with the compliance schedule in 6.4.1.5 of this regulation.

6.3.4 Standards for decorative chromium electroplating tanks using a chromic acid bath and chromium anodizing tanks. During tank operation, each owner or operator of an existing, new, or reconstructed affected source shall control chromium emissions discharged to the atmosphere from that affected source by either:

6.3.4.1 Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.01 mg/dscm ($4.4x10^{-6}$ gr/dscf) or

6.3.4.2 If a chemical fume suppressant containing a wetting agent is used, by not allowing the surface tension of the electroplating or anodizing bath contained within the affected source to exceed 45 dynes/cm ($3.1x10^{-3}$ lb_f/ft) as measured by a stalagmometer or 35 dynes/cm ($2.4x10^{-3}$ lb_f/ft) as measured by a tensiometer at any time during operation of the tank.

6.3.5 Standards for decorative chromium electroplating tanks using a trivalent chromium bath.

6.3.5.1 Each owner or operator of an existing, new, or reconstructed decorative chromium electroplating tank that uses a trivalent chromium bath that incorporates a wetting agent as a bath ingredient is subject to the recordkeeping and reporting requirements in 6.7.2.14 and 6.8.9 of this regulation, but are not subject to the operation and maintenance practice requirements in 6.3.6 of this regulation, or the continuous compliance monitoring requirements in 6.4.3 of this regulation. The

wetting agent must be an ingredient in the trivalent chromium bath components purchased from vendors.

6.3.5.2 Each owner or operator of an existing, new, or reconstructed decorative chromium electroplating tank that uses a trivalent chromium bath that does not incorporate a wetting agent as a bath ingredient is subject to the standards in 6.3.4 of this regulation.

6.3.5.3 Each owner or operator of existing, new, or reconstructed decorative chromium electroplating tank that had been using a trivalent chromium bath that incorporates a wetting agent and ceases using this type of bath must fulfill the reporting requirements in 6.8.9.3 of this regulation and comply with the applicable emission limitation within the timeframe specified in 6.4.1.7 of this regulation.

6.3.6 Operation and maintenance practices. All owners or operators subject to the standards in 6.3.3 and 6.3.4 of this regulation are subject to these operation and maintenance practices.

6.3.6.1 Requirements. The owner or operator of an existing, new, or reconstructed affected source shall:

6.3.6.1.1 At all times, including periods of startup, shutdown, and malfunction, owners or operators shall operate and maintain any affected source, including associated air pollution control devices and monitoring equipment, in a manner consistent with good air pollution control practices, consistent with the operation and maintenance plan required in 6.3.6.3 of this regulation.

6.3.6.1.2 Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the operation and maintenance plan required in 6.3.6.3 of this regulation.

6.3.6.1.3 Operation and maintenance requirements established pursuant to Section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.

6.3.6.2 Review and revision of operating and maintenance procedures.

6.3.6.2.1 Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the Department, which may include, but is not limited to, monitoring results; review of the operation and

maintenance plan, procedures, and records; and inspection of the source.

6.3.6.2.2 Based on the results of a determination made under 6.3.6.2.1 of this regulation, the Department may require that an owner or operator of an affected source make changes to the operation and maintenance plan required in 6.3.6.3 of this regulation for that source. Revisions may be required if the Department finds that the plan:

6.3.6.2.2.1 Does not address a malfunction that has occurred;

6.3.6.2.2.2 Fails to provide for the proper operation of the affected source, the air pollution control techniques, or the control system and process monitoring equipment during a malfunction in a manner consistent with good air pollution control practices; or

6.3.6.2.2.3 Does not provide adequate procedures for correcting malfunctioning process equipment, air pollution control techniques, or monitoring equipment as quickly as practicable.

6.3.6.3 Operation and maintenance plan.

6.3.6.3.1 The owner or operator of an affected source subject to the operation and maintenance practices in 6.3.6 of this regulation shall prepare an operation and maintenance plan to be implemented no later than the applicable compliance date. The plan shall be incorporated by reference into the source's Title V operating permit, if and when a Title V operating permit is required. The plan shall include the following elements:

6.3.6.3.1.1 The plan shall specify the operation and maintenance criteria for the affected source, the add-on air pollution control device (if such a device is used to comply with the emission limits), and the process and control system monitoring equipment, and shall include a standardized checklist to document the operation and maintenance of this equipment;

6.3.6.3.1.2 For sources using an add-on air pollution control device or monitoring equipment to comply with 6.0 of this regulation, the plan shall incorporate the operation and maintenance practices for that device or

monitoring equipment, as identified in Table 6-1 of this regulation, if the specific equipment used is identified in Table 6-1 of this regulation;

6.3.6.3.1.3 If the specific equipment used is not identified in Table 6-1 of this regulation, the plan shall incorporate proposed operation and maintenance practices. These proposed operation and maintenance practices shall be submitted to the Administrator (with copy to the Department) for approval as part of the submittal required in 6.4.4 of this regulation;

6.3.6.3.1.4 The plan shall specify procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur; and

6.3.6.3.1.5 The plan shall include a systematic procedure for identifying malfunctions of process equipment, add-on air pollution control devices, and process and control system monitoring equipment and for implementing corrective actions to address such malfunctions.

6.3.6.3.2 If the operation and maintenance plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the operation and maintenance plan within 45 days after such an event occurs. The revised plan shall include procedures for operating and maintaining the process equipment, add-on air pollution control device, or monitoring equipment during similar malfunction events, and a program for corrective action for such events.

6.3.6.3.3 Recordkeeping associated with the operation and maintenance plan is identified in 6.3.6.3.5 and 6.7.2 of this regulation. Reporting associated with the operation and maintenance plan is identified in 6.3.6.3.4, 6.8.7, and 6.8.8 of this regulation.

6.3.6.3.4 If actions taken by the owner or operator during periods of malfunction are inconsistent with the procedures specified in the operation and maintenance plan required in 6.3.6.3.1 of this regulation, the owner or operator shall record the actions taken for that event and shall report by phone such actions within two working days after commencing actions

inconsistent with the plan. This report shall be followed by a letter within seven working days after the end of the event, unless the owner or operator makes alternative reporting arrangements, in advance, with the Department.

6.3.6.3.5 The owner or operator shall keep the written operation and maintenance plan on record after it is developed to be made available for inspection, upon request, by the Department for the life of the affected source or until the source is no longer subject to the provisions of 6.0 of this regulation. In addition, if the operation and maintenance plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the operation and maintenance plan on record to be made available for inspection, upon request, by the Department for a period of five years after each revision to the plan.

6.3.6.3.6 To satisfy the requirements in 6.3.6.3 of this regulation, the owner or operator may use applicable standard operating procedure (SOP) manuals, Occupational Safety and Health Administration (OSHA) plans, or other existing plans, provided the alternative plans meet the requirements in 6.3 of this regulation.

6.3.7 The standards in this section that apply to chromic acid baths shall not be met by using a reducing agent to change the form of chromium from hexavalent to trivalent.

Table 6-1 -- Summary of Operation and Maintenance Practices

Control technique	Operation and maintenance practices	Frequency
Composite mesh-pad (CMP) system.	1. Visually inspect device to ensure there is proper drainage, no chromic acid buildup on the pads, and no evidence of chemical attack on the structural integrity of the device.	1. 1/quarter.
	2. Visually inspect back portion of the mesh pad closest to the fan to ensure there is no breakthrough of chromic acid mist.	2. 1/quarter.
	3. Visually inspect ductwork from tank to the control device to ensure there are no leaks.	3. 1/quarter.

	4. Perform washdown of the composite mesh-pads in accordance with manufacturer's recommendations.	4. Per manufacturer.
Packed-bed scrubber (PBS)	1. Visually inspect device to ensure there is proper drainage, no chromic acid buildup on the packed beds, and no evidence of chemical attack on the structural integrity of the device.	1. 1/quarter.
	2. Visually inspect back portion of the chevron blade mist eliminator to ensure that it is dry and there is no breakthrough of chromic acid mist.	2. 1/quarter.
	3. Same as number 3 above.	3. 1/quarter.
	4. Add fresh makeup water to the top of the packed bed [a, b].	4. Whenever makeup is added.
PBS/CMP system.	1. Same as for CMP system.	1. 1/quarter.
	2. Same as for CMP system.	2. 1/quarter.
	3. Same as for CMP system.	3. 1/quarter.
	4. Same as for CMP system.	4. Per manufacturer.
Fiber-bed mist eliminator [c].	1. Visually inspect fiber-bed unit and prefiltering device to ensure there is proper drainage, no chromic acid buildup in the units, and no evidence of chemical attack on the structural integrity of the devices.	1. 1/quarter.
	2. Visually inspect ductwork from tank or tanks to the control device to ensure there are no leaks.	2. 1/quarter.
	3. Perform washdown of fiber elements in accordance with manufacturer's recommendations.	3. Per manufacturer.
Air pollution control device (APCD) not listed in rule.	To be proposed by the source for approval by the Administrator.	To be proposed by the source for approval by the Administrator.

Monitoring Equipment		
Pitot tube.	Backflush with water, or remove from the duct and rinse with fresh water. Replace in the duct and rotate 180 degrees to ensure that the same zero reading is obtained. Check pitot tube ends for damage. Replace pitot tube if cracked or fatigued.	1/quarter.
Stalagmometer.	Follow manufacturer's recommendations.	

[a] If greater than 50% of the scrubber water is drained (e.g., for maintenance purposes), makeup water may be added to the scrubber basin.

[b] For horizontal-flow scrubbers, top is defined as the section of the unit directly above the packing media such that the makeup water would flow perpendicular to the air flow through the packing. For vertical-flow units, the top is defined as the area downstream of the packing material such that the makeup water would flow countercurrent to the air flow through the unit.

[c] Operating and maintenance practices for the control device installed upstream of the fiber-bed mist eliminator to prevent plugging do not apply as long as the operating and maintenance practices for the fiber-bed unit are followed.

3 DE Reg. 445 (9/1/99); 11 DE Reg. 683 (11/1/07)

6.4 Compliance provisions.

6.4.1 Compliance dates.

6.4.1.1 The owner or operator of an existing affected source shall comply by September 11, 1999 with the emission limitations in 6.3 of this regulation.

6.4.1.1.1 [Reserved]

6.4.1.1.2 [Reserved]

6.4.1.2 The owner or operator of a new or reconstructed affected source that has an initial startup after January 25, 1995, shall comply by September 11, 1999 or immediately upon startup of the source, whichever is later. The owner or operator of a new or reconstructed

affected source that has an initial startup after December 16, 1993 but before January 25, 1995, shall comply by September 11, 1999.

6.4.1.3 The owner or operator of an existing area source that increases actual or potential emissions of hazardous air pollutants such that the area source becomes a major source must comply with the provisions for existing major sources, including the reporting provisions in 6.8.7 of this regulation, immediately upon becoming a major source.

6.4.1.4 The owner or operator of a new area source (i.e., an area source for which construction or reconstruction was commenced after December 16, 1993) that increases actual or potential emissions of hazardous air pollutants such that the area source becomes a major source must comply with the provisions for new major sources, immediately upon becoming a major source.

6.4.1.5 An owner or operator of an existing hard chromium electroplating tank or tanks located at a small, hard chromium electroplating facility that increases its maximum cumulative potential rectifier capacity, or its actual cumulative rectifier capacity, such that the facility becomes a large, hard chromium electroplating facility must comply with the requirements in 6.3.3.1.1 of this regulation for all hard chromium electroplating tanks at the facility no later than one year after the month in which monthly records required by 6.3.3.2 and 6.7.2.12 of this regulation show that the large designation is met.

6.4.1.6 Request for an extension of compliance. An owner or operator of an affected source or sources that requests an extension of compliance shall do so in accordance with 6.4.1.6 of this regulation and the applicable provisions of 3.6.9 of this regulation. When the owner or operator is requesting the extension for more than one affected source located at the facility, then only one request may be submitted for all affected sources at the facility.

6.4.1.6.1 [Reserved]

6.4.1.6.2 [Reserved]

6.4.1.7 An owner or operator of a decorative chromium electroplating tank that uses a trivalent chromium bath that incorporates a wetting agent, and that ceases using the trivalent chromium process, must comply with the emission limitation now applicable to the tank within one year of switching bath operation.

6.4.2 Methods to demonstrate initial compliance.

6.4.2.1 Except as provided in 6.4.2.2 and 6.4.2.3 of this regulation, an owner or operator of an affected source subject to the requirements of 6.0 of this regulation is required to conduct an initial performance test as required under 3.7 of this regulation using the procedures and test methods listed in 3.7 of this regulation and 6.5 of this regulation.

6.4.2.2 If the owner or operator of an affected source meets all of the following criteria, an initial performance test is not required to be conducted under 6.0 of this regulation:

6.4.2.2.1 The affected source is a hard chromium electroplating tank, a decorative chromium electroplating tank or a chromium anodizing tank;

6.4.2.2.2 A wetting agent is used in the plating or anodizing bath to inhibit chromium emissions from the affected source; and

6.4.2.2.3 The owner or operator complies with the applicable surface tension limit in 6.3.3.1.3, 6.3.3.2.3, or 6.3.4.2 of this regulation as demonstrated through the continuous compliance monitoring required in 6.4.3.5.2 of this regulation.

6.4.2.3 If the affected source is a decorative chromium electroplating tank using a trivalent chromium bath, and the owner or operator is subject to the provisions of 6.3.5 of this regulation, an initial performance test is not required to be conducted under 6.0 of this regulation.

6.4.3 Monitoring to demonstrate continuous compliance. The owner or operator of an affected source subject to the emission limitations of 6.0 of this regulation shall conduct monitoring according to the type of air pollution control technique that is used to comply with the emission limitation. The monitoring required to demonstrate continuous compliance with the emission limitations is identified in this section for the air pollution control techniques expected to be used by the owners or operators of affected sources.

6.4.3.1 Composite mesh-pad systems.

6.4.3.1.1 During the initial performance test, the owner or operator of an affected source, or a group of affected sources under common control, complying with the emission limitations in 6.3 of this regulation through the use of a composite mesh-pad system shall determine the outlet chromium concentration using the test methods and procedures in 6.5.3 of this regulation, and shall establish as a site-specific operating parameter the pressure drop across the system, setting the value that corresponds to compliance with the applicable emission limitation, using the

procedures in 6.5.4.5 of this regulation. An owner or operator may conduct multiple performance tests to establish a range of compliant pressure drop values, or may set as the compliant value the average pressure drop measured over the three test runs of one performance test and accept ±1 inch of water column from this value as the compliant range.

6.4.3.1.2 On and after the date on which the initial performance test is required to be completed under 3.7 of this regulation, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the pressure drop across the composite mesh-pad system once each day that any affected source is operating. To be in compliance with the standards, the composite mesh-pad system shall be operated within ±1 inch of water column of the pressure drop value established during the initial performance test, or shall be operated within the range of compliant values for pressure drop established during multiple performance tests.

6.4.3.1.3 The owner or operator of an affected source complying with the emission limitations in 6.4 of this regulation through the use of a composite mesh-pad system may repeat the performance test and establish as a new site-specific operating parameter the pressure drop across the composite mesh-pad system according to the requirements in 6.4.3.1.1 or 6.4.3.1.2 of this regulation. To establish a new site-specific operating parameter for pressure drop, the owner or operator shall satisfy the requirements specified in 6.4.3.1.3.1 through 6.4.3.1.3.4 of this regulation.

6.4.3.1.3.1 Determine the outlet chromium concentration using the test methods and procedures in 6.5.3 of this regulation;

6.4.3.1.3.2 Establish the site-specific operating parameter value using the procedures in 6.5.4.5 of this regulation;

6.4.3.1.3.3 Satisfy the recordkeeping requirements in 6.7.2.6 through 6.7.2.8 of this regulation; and

6.4.3.1.3.4 Satisfy the reporting requirements in 6.8.4 and 6.8.6 of this regulation.

6.4.3.1.4 The requirement to operate a composite mesh-pad system within the range of pressure drop values established in

6.4.3.1.1 through 6.4.3.1.3 of this regulation does not apply during automatic washdown cycles of the composite mesh-pad system.

6.4.3.2 Packed-bed scrubber systems.

6.4.3.2.1 During the initial performance test, the owner or operator of an affected source, or group of affected sources under common control, complying with the emission limitations in 6.3 of this regulation through the use of a packed-bed scrubber system shall determine the outlet chromium concentration using the procedures in 6.5.3 of this regulation, and shall establish as site-specific operating parameters the pressure drop across the system and the velocity pressure at the common inlet of the control device, setting the value that corresponds to compliance with the applicable emission limitation using the procedures in 6.5.4.4 and 6.5.4.5 of this regulation. An owner or operator may conduct multiple performance tests to establish a range of compliant operating parameter values. Alternatively, the owner or operator may set as the compliant value the average pressure drop and inlet velocity pressure measured over the three test runs of one performance test, and accept ±1 inch of water column from the pressure drop value and ±10% from the velocity pressure value as the compliant range.

6.4.3.2.2 On and after the date on which the initial performance test is required to be completed under 3.7 of this regulation, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the velocity pressure at the inlet to the packed-bed system and the pressure drop across the scrubber system once each day that any affected source is operating. To be in compliance with the standards, the scrubber system shall be operated within ±10% of the velocity pressure value established during the initial performance test, and within ± 1 inch of water column of the pressure drop value established during the initial performance test, or within the range of compliant operating parameter values established during multiple performance tests.

6.4.3.3 Packed-bed scrubber/composite mesh-pad system. The owner or operator of an affected source, or group of affected sources under common control, that uses a packed-bed scrubber in conjunction with a composite mesh-pad system to meet the emission limitations in 6.3 of this regulation shall comply with the monitoring requirements for composite mesh-pad systems as identified in 6.4.3.1 of this regulation.

6.4.3.4 Fiber-bed mist eliminator.

6.4.3.4.1 During the initial performance test, the owner or operator of an affected source, or group of affected sources under common control, complying with the emission limitations in 6.3 of this regulation through the use of a fiber-bed mist eliminator shall determine the outlet chromium concentration using the procedures in 6.5.3 of this regulation, and shall establish as a site-specific operating parameter the pressure drop across the fiber-bed mist eliminator and the pressure drop across the control device installed upstream of the fiber bed to prevent plugging, setting the value that corresponds to compliance with the applicable emission limitation using the procedures in 6.5.4.5 of this regulation. An owner or operator may conduct multiple performance tests to establish a range of compliant pressure drop values, or may set as the compliant value the average pressure drop measured over the three test runs of one performance test and accept ±1 inch of water column from this value as the compliant range.

6.4.3.4.2 On and after the date on which the initial performance test is required to be completed under 3.7 of this regulation, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the pressure drop across the fiber-bed mist eliminator, and the control device installed upstream of the fiber bed to prevent plugging, once each day that any affected source is operating. To be in compliance with the standards, the fiber-bed mist eliminator and the upstream control device shall be operated within ±1 inch of water column of the pressure drop value established during the initial performance test, or shall be operated within the range of compliant values for pressure drop established during multiple performance tests.

6.4.3.5 Wetting agent-type or combination wetting agent-type/foam blanket fume suppressants.

6.4.3.5.1 During the initial performance test, the owner or operator of an affected source complying with the emission limitations in 6.3 of this regulation through the use of a wetting agent in the electroplating or anodizing bath shall determine the outlet chromium concentration using the procedures in 6.5.3 of this regulation. The owner or operator shall establish as the site-specific operating parameter the surface tension of the bath using Method 306B in Appendix A of 40 CFR Part 63, setting the maximum value that corresponds to compliance with the applicable emission limitation. In lieu of establishing the maximum surface tension during the performance test, the owner or operator

may accept 45 dynes/cm as measured by a stalagmometer or 35 dynes/cm as measured by a tensiometer as the maximum surface tension value that corresponds to compliance with the applicable emission limitation. However, the owner or operator is exempt from conducting a performance test only if the criteria in 6.4.2.2 of this regulation are met.

6.4.3.5.2 On and after the date on which the initial performance test is required to be completed under 3.7 of this regulation, the owner or operator of an affected source shall monitor the surface tension of the electroplating or anodizing bath. Operation of the affected source at a surface tension greater than the value established during the performance test, or greater than 45 dynes/cm as measured by a stalagmometer or 35 dynes/cm as measured by a tensiometer if the owner or operator is using this value in accordance with 6.4.3.5.1 of this regulation, shall constitute noncompliance with the standards. The surface tension shall be monitored according to the following schedule:

6.4.3.5.2.1 The surface tension shall be measured once every four hours during operation of the tank with a stalagmometer or a tensiometer as specified in Method 306B in Appendix A of 40 CFR Part 63.

6.4.3.5.2.2 The time between monitoring can be increased if there have been no exceedances. The surface tension shall be measured once every four hours of tank operation for the first 40 hours of tank operation after the compliance date. Once there are no exceedances during 40 hours of tank operation, surface tension measurement may be conducted once every eight hours of tank operation. Once there are no exceedances during 40 hours of tank operation, surface tension measurement may be conducted once every 40 hours of tank operation on an ongoing basis, until an exceedance occurs. The minimum frequency of monitoring allowed by 6.0 of this regulation is once every 40 hours of tank operation.

6.4.3.5.2.3 Once an exceedance occurs as indicated through surface tension monitoring, the original monitoring schedule of once every four hours must be resumed. A subsequent decrease in frequency shall follow the schedule laid out in 6.4.3.5.2.2 of this regulation. For example, if an owner or operator had been monitoring an affected source once every 40 hours and an exceedance

occurs, subsequent monitoring would take place once every four hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation, monitoring can occur once every eight hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation on this schedule, monitoring can occur once every 40 hours of tank operation.

6.4.3.5.3 Once a bath solution is drained from the affected tank and a new solution added, the original monitoring schedule of once every four hours must be resumed, with a decrease in monitoring frequency allowed following the procedures in 6.4.3.5.2.2 and 6.4.3.5.2.3 of this regulation.

6.4.3.6 Foam blanket-type fume suppressants.

6.4.3.6.1 During the initial performance test, the owner or operator of an affected source complying with the emission limitations in 6.3 of this regulation through the use of a foam blanket in the electroplating or anodizing bath shall determine the outlet chromium concentration using the procedures in 6.5.3 of this regulation, and shall establish as the site-specific operating parameter the thickness of the foam blanket, setting the minimum thickness that corresponds to compliance with the applicable emission limitation. In lieu of establishing the minimum foam blanket thickness during the performance test, the owner or operator may accept 2.54 centimeters (one inch) as the minimum foam blanket thickness that corresponds to compliance with the applicable emission limitation. All foam blanket measurements must be taken in close proximity to the work piece or cathode area in the plating tank or tanks.

6.4.3.6.2 On and after the date on which the initial performance test is required to be completed under 3.7 of this regulation, the owner or operator of an affected source shall monitor the foam blanket thickness of the electroplating or anodizing bath. Operation of the affected source at a foam blanket thickness less than the value established during the performance test, or less than 2.54 cm (one inch) if the owner or operator is using this value in accordance with 6.4.3.6.1 of this regulation, shall constitute noncompliance with the standards. The foam blanket thickness shall be measured according to the following schedule:

6.4.3.6.2.1 The foam blanket thickness shall be measured once every hour of tank operation.

6.4.3.6.2.2 The time between monitoring can be increased if there have been no exceedances. The foam blanket thickness shall be measured once every hour of tank operation for the first 40 hours of tank operation after the compliance date. Once there are no exceedances for 40 hours of tank operation, foam blanket thickness measurement may be conducted once every four hours of tank operation. Once there are no exceedances during 40 hours of tank operation, foam blanket thickness measurement may be conducted once every eight hours of tank operation on an ongoing basis, until an exceedance occurs. The minimum frequency of monitoring allowed by 6.0 of this regulation is once per eight hours of tank operation.

6.4.3.6.2.3 Once an exceedance occurs as indicated through foam blanket thickness monitoring, the original monitoring schedule of once every hour must be resumed. A subsequent decrease in frequency shall follow the schedule laid out in 6.4.3.6.2.2 of this regulation. For example, if an owner or operator had been monitoring an affected source once every 8 hours and an exceedance occurs, subsequent monitoring would take place once every hour of tank operation. Once an exceedance does not occur for 40 hours of tank operation, monitoring can occur once every four hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation on this schedule, monitoring can occur once every eight hours of tank operation.

6.4.3.6.3 Once a bath solution is drained from the affected tank and a new solution added, the original monitoring schedule of once every hour must be resumed, with a decrease in monitoring frequency allowed following the procedures in 6.4.3.6.2.2 and 6.4.3.6.2.3 of this regulation.

6.4.3.7 Fume suppressant/add-on control device.

6.4.3.7.1 If the owner or operator of an affected source uses both a fume suppressant and add-on control device and both are needed to comply with the applicable emission limit, monitoring requirements as identified 6.4.3.1 through 6.4.3.6 of this regulation, and the operation and maintenance practices of Table 6-1 of this regulation, apply for each of the control techniques used.

6.4.3.7.2 If the owner or operator of an affected source uses both a fume suppressant and add-on control device, but only one of these techniques is needed to comply with the applicable emission limit, monitoring requirements as identified in 6.4.3.1 through 6.4.3.6 of this regulation, and the operation and maintenance practices of Table 6-1 of this regulation, apply only for the control technique used to achieve compliance.

6.4.3.8 Use of an alternative monitoring method.

6.4.3.8.1 Requests and approvals of alternative monitoring methods shall be considered in accordance with 3.8.6.1, 3.8.6.3, 3.8.6.4, and 3.8.6.5 of this regulation.

6.4.3.8.2 After receipt and consideration of an application for an alternative monitoring method, the Administrator may approve alternatives to any monitoring methods or procedures of 6.0 of this regulation including, but not limited to, the following:

6.4.3.8.2.1 Alternative monitoring requirements when installation or use of monitoring devices specified in 6.0 of this regulation would not provide accurate measurements due to interferences caused by substances within the effluent gases or

6.4.3.8.2.2 Alternative locations for installing monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.

6.4.4 An owner or operator who uses an air pollution control device not listed in this section shall submit to the Administrator (with copy to the Department) a description of the device, test results collected in accordance with 6.5.3 of this regulation verifying the performance of the device for reducing chromium emissions to the atmosphere to the level required by 6.0 of this regulation, a copy of the operation and maintenance plan referenced in 6.3.6 of this regulation including operation and maintenance practices, and appropriate operating parameters that will be monitored to establish continuous compliance with the standards. The monitoring plan submitted identifying the continuous compliance monitoring is subject to the Administrator's approval.

3 DE Reg. 445 (9/1/99); 11 DE Reg. 683 (11/1/07)

6.5 Performance test requirements and test methods.

6.5.1 Performance test requirements. Performance tests shall be conducted using the test methods and procedures in 6.5 of this regulation and 3.7 of this regulation. Performance test results shall be documented in complete test reports that contain the information required in 6.5.1.1 through 6.5.1.9 of this regulation. The test plan to be followed shall be made available to the Department prior to the testing, if requested.

6.5.1.1 A brief process description;

6.5.1.2 Sampling location description or descriptions;

6.5.1.3 A description of sampling and analytical procedures and any modifications to standard procedures;

6.5.1.4 Test results;

6.5.1.5 Quality assurance procedures and results;

6.5.1.6 Records of operating conditions during the test, preparation of standards, and calibration procedures;

6.5.1.7 Raw data sheets for field sampling and field and laboratory analyses;

6.5.1.8 Documentation of calculations; and

6.5.1.9 Any other information required by the test method.

6.5.2 Other performance testing options and limitations.

6.5.2.1 If the owner or operator of an affected source conducts performance testing at startup to obtain an operating permit, the results of such testing may be used to demonstrate compliance with 6.0 of this regulation if:

6.5.2.1.1 The test methods and procedures identified in 6.5.3 of this regulation were used during the performance test;

6.5.2.1.2 The performance test was conducted under representative operating conditions for the source;

6.5.2.1.3 The performance test report contains the elements required in 6.5.1 of this regulation; and

6.5.2.1.4 The owner or operator of the affected source for which the performance test was conducted has sufficient data to

establish the operating parameter value or values that correspond to compliance with the standards, as required for continuous compliance monitoring in 6.4.3 of this regulation.

6.5.2.2 The results of tests conducted prior to December 1991 in which Method 306A in Appendix A of 40 CFR Part 63, was used to demonstrate the performance of a control technique are not acceptable.

6.5.3 Test methods. Each owner or operator subject to the provisions of 6.0 of this regulation and required in 6.4.2 of this regulation to conduct an initial performance test shall use the test methods identified in 6.0 of this regulation to demonstrate compliance with the standards in 6.3 of this regulation.

6.5.3.1 Method 306 or Method 306A, "Determination of Chromium Emissions From Decorative and Hard Chromium Electroplating and Anodizing Operations," in Appendix A of 40 CFR Part 63 shall be used to determine the chromium concentration from hard or decorative chromium electroplating tanks or chromium anodizing tanks. The sampling time and sample volume for each run of Methods 306 and 306A in Appendix of 40 CFR Part 63 shall be at least 120 minutes and 1.70 dscm (60 dscf), respectively. Methods 306 and 306A in Appendix A of 40 CFR Part 63 allow the measurement of either total chromium or hexavalent chromium emissions. For the purposes of 6.0 of this regulation, sources using chromic acid baths can demonstrate compliance with the emission limits of 6.3 of this regulation by measuring either total chromium or hexavalent chromium. Hence, the hexavalent chromium concentration measured by these methods is equal to the total chromium concentration for the affected operations.

6.5.3.2 The California Air Resources Board (CARB) Method 425 (which is available by contacting the California Air Resources Board, 1102 Q Street, Sacramento, California 95814) may be used to determine the chromium concentration from hard and decorative chromium electroplating tanks and chromium anodizing tanks if the following conditions are met:

6.5.3.2.1 If a colorimetric analysis method is used, the sampling time and volume shall be sufficient to result in 33 to 66 micrograms of catch in the sampling train.

6.5.3.2.2 If Atomic Absorption Graphite Furnace (AAGF) or Ion Chromatography with a Post-column Reactor (ICPCR) analyses were used, the sampling time and volume should be sufficient to result in a sample catch that is 5 to 10 times the minimum detection limit of the analytical method (i.e., 1.0 microgram per liter

of sample for AAGF and 0.5 microgram per liter of sample for ICPCR).

6.5.3.2.3 In the case of either 6.5.3.2.1 or 6.5.3.2.2 of this regulation, a minimum of three separate runs must be conducted. The other requirements of 3.7 of this regulation that apply to affected sources, as indicated in Table 6-2 of this regulation, must also be met.

6.5.3.3 Method 306B, "Surface Tension Measurement and Recordkeeping for Tanks Used at Decorative Chromium Electroplating and Anodizing Facilities" in Appendix A of 40 CFR Part 63 shall be used to measure the surface tension of electroplating and anodizing baths.

6.5.3.4 Alternate test methods may also be used if the method has been validated using Method 301 in Appendix A of 40 CFR Part 63 and if approved by the Administrator. Procedures for requesting and obtaining approval are contained in 3.7.5 of this regulation.

6.5.4 Establishing site-specific operating parameter values.

6.5.4.1 Each owner or operator required to establish site-specific operating parameters shall follow the procedures in 6.5 of this regulation.

6.5.4.2 All monitoring equipment shall be installed such that representative measurements of emissions or process parameters from the affected source are obtained. For monitoring equipment purchased from a vendor, verification of the operational status of the monitoring equipment shall include execution of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.

6.5.4.2.1 Specifications for differential pressure measurement devices used to measure velocity pressure shall be in accordance with Section 2.2 of Method 2 in Appendix A of 40 CFR Part 60.

6.5.4.2.2 Specification for differential pressure measurement devices used to measure pressure drop across a control system shall be in accordance with manufacturer's accuracy specifications.

6.5.4.3 The surface tension of electroplating and anodizing baths shall be measured using Method 306B, "Surface Tension Measurement and Recordkeeping for Tanks used at Decorative Chromium Electroplating and Anodizing Facilities" in Appendix A of 40 CFR Part 63. This method should also be followed when wetting agent type or combination wetting

agent/foam blanket type fume suppressants are used to control chromium emissions from a hard chromium electroplating tank and surface tension measurement is conducted to demonstrate continuous compliance.

6.5.4.4 The owner or operator of a source required to measure the velocity pressure at the inlet to an add-on air pollution control device in accordance with 6.4.3.2 of this regulation, shall establish the site-specific velocity pressure as follows:

6.5.4.4.1 Locate a velocity traverse port in a section of straight duct that connects the hooding on the plating tank or tanks with the control device. The port shall be located as close to the control system as possible, and shall be placed a minimum of two duct diameters downstream and 0.5 duct diameter upstream of any flow disturbance such as a bend, expansion, or contraction (see Method 1 in Appendix A of 40 CFR Part 60). If 2.5 diameters of straight duct work do not exist, locate the port 0.8 of the duct diameter downstream and 0.2 of the duct diameter upstream from any flow disturbance.

6.5.4.4.2 A 12-point velocity traverse of the duct to the control device shall be conducted along a single axis according to Method 2 in Appendix A of 40 CFR Part 60 using an S-type pitot tube; measurement of the barometric pressure and duct temperature at each traverse point is not required, but is suggested. Mark the S-type pitot tube as specified in Method 1 in Appendix A of 40 CFR Part 60 with 12 points. Measure the velocity pressure (Δp) values for the velocity points and record. Determine the square root of the individual velocity point Δp values and average. The point with the square root value that comes closest to the average square root value is the point of average velocity. The Δp value measured for this point during the performance test will be used as the reference for future monitoring.

6.5.4.5 The owner or operator of a source required to measure the pressure drop across the add-on air pollution control device in accordance with 6.4.3.1 through 6.4.3.4 of this regulation may establish the pressure drop in accordance with the following guidelines:

6.5.4.5.1 Pressure taps shall be installed at any of the following locations:

6.5.4.5.1.1 At the inlet and outlet of the control system. The inlet tap should be installed in the ductwork just prior to the control device and the corresponding outlet

pressure tap should be installed on the outlet side of the control device prior to the blower or on the downstream side of the blower;

6.5.4.5.1.2 On each side of the packed bed within the control system or on each side of each mesh pad within the control system; or

6.5.4.5.1.3 On the front side of the first mesh pad and back side of the last mesh pad within the control system.

6.5.4.5.2 Pressure taps shall be sited at locations that are:

6.5.4.5.2.1 Free from pluggage as possible and away from any flow disturbances such as cyclonic demisters.

6.5.4.5.2.2 Situated such that no air infiltration at measurement site will occur that could bias the measurement.

6.5.4.5.3 Pressure taps shall be constructed of either polyethylene, polybutylene, or other nonreactive materials.

6.5.4.5.4 Nonreactive plastic tubing shall be used to connect the pressure taps to the device used to measure pressure drop.

6.5.4.5.5 Any of the following pressure gauges can be used to monitor pressure drop: a magnehelic gauge, an inclined manometer, or a “U” tube manometer.

6.5.4.5.6 Prior to connecting any pressure lines to the pressure gauge or gauges, each gauge should be zeroed. No calibration of the pressure gauges is required.

6.5.5 Special compliance provisions for multiple sources controlled by a common add-on air pollution control device.

6.5.5.1 This section identifies procedures for measuring the outlet chromium concentration from an add-on air pollution control device that is used to control multiple sources that may or may not include sources not affected by 6.0 of this regulation.

6.5.5.2 When multiple affected sources performing the same type of operation (e.g., all are performing hard chromium electroplating) and subject to the same emission limitation are controlled with an add-on air pollution control device that is not controlling emissions from any other

type of affected operation or from any nonaffected sources, the applicable emission limitation identified in 6.3 of this regulation must be met at the outlet of the add-on air pollution control device.

6.5.5.3 When multiple affected sources performing the same type of operation and subject to the same emission limitation are controlled with a common add-on air pollution control device that is also controlling emissions from sources not affected by these standards, the following procedures should be followed to determine compliance with the applicable emission limitation in 6.3 of this regulation:

6.5.5.3.1 Calculate the cross-sectional area of each inlet duct (i.e., uptakes from each hood) including those not affected by the standard.

6.5.5.3.2 Determine the total sample time per test run by dividing the total inlet area from all tanks connected to the control system by the total inlet area for all ducts associated with affected sources, and then multiply this number by two hours. The calculated time is the minimum sample time required per test run.

6.5.5.3.3 Perform Method 306 testing and calculate an outlet mass emission rate.

6.5.5.3.4 Determine the total ventilation rate from the affected sources (VR_{inlet}) by using equation 6-1:

$$VR_{inlet} = VR_{tot} * IDA_i / IA_{total} \quad (6\text{-}1)$$

where:

VR_{inlet} = the total ventilation rate from all inlet ducts associated with affected sources;

VR_{tot} = the average total ventilation rate in dscm/min for the three test runs as determined at the outlet by means of the Method 306 testing;

IDA_i = the total inlet area for all ducts associated with affected sources; and

IA_{total} = the sum of all inlet duct areas from both affected and nonaffected sources.

6.5.5.3.5 Establish the allowable mass emission rate of the system (AMR_{sys}) in milligrams of total chromium per hour (mg/hr) using equation 6-2:

$$AMR_{sys} = VR_{inlet} * EL * 60 \text{ minutes/hour} \quad (6\text{-}2)$$

where:
AMR_{sys} = the allowable mass emission rate of the system in mg/hr;
VR_{inlet} = the average total ventilation rate in dscm/min for the three test runs from the affected sources; and
EL = the applicable emission limitation in 6.3 of this regulation in mg/dscm.

The allowable mass emission rate (AMR_{sys}) calculated from equation 6-2 of this regulation should be equal to or more than the outlet three-run average mass emission rate determined from Method 306 testing in order for the source to be in compliance with the standard.

6.5.5.4 When multiple affected sources performing different types of operations (e.g., hard chromium electroplating, decorative chromium electroplating, or chromium anodizing) are controlled by a common add-on air pollution control device that may or may not also be controlling emissions from sources not affected by these standards, or if the affected sources controlled by the common add-on air pollution control device perform the same operation but are subject to different emission limitations (e.g., because one is a new hard chromium plating tank and one is an existing small, hard chromium plating tank), the following procedures should be followed to determine compliance with the applicable emission limitation in 6.3 of this regulation:

6.5.5.4.1 Follow the steps outlined in 6.5.5.3.1 through 6.5.5.3.3 of this regulation.

6.5.5.4.2 Determine the total ventilation rate for each type of affected source ($Vr_{inlet,a}$) using equation 6-3:

$$VR_{inlet,a} = VR_{tot} * IDA_{i,a} / IA_{total} \quad (6\text{-}3)$$

where:
$VR_{inlet,a}$ = the total ventilation rate from all inlet ducts conveying chromic acid from each type of affected source performing the same operation, or each type of affected source subject to the same emission limitation;
VR_{tot} = the average total ventilation rate in dscm/min for the three test runs as determined at the outlet by means of the Method 306 testing;
$IDA_{i,a}$ = the total inlet duct area for all ducts conveying chromic acid from each type of affected source performing the same operation, or each type of affected source subject to the same emission limitation; and

A_{total} = the sum of all duct areas from both affected and nonaffected sources.

6.5.5.4.3 Establish the allowable mass emission rate in mg/hr for each type of affected source (AMR) that is controlled by the add-on air pollution control device using equations 6-4, 6-5, 6-6 or 6-7 as appropriate:

$$AMR_{hc1} = VR_{hc1} * EL_{hc1} * 60 \text{ minutes/hour} \quad (6\text{-}4)$$

$$AMR_{hc2} = VR_{hc2} * EL_{hc2} * 60 \text{ minutes/hour} \quad (6\text{-}5)$$

$$AMR_{dc} = VR_{dc} * EL_{dc} * 60 \text{ minutes/hour} \quad (6\text{-}6)$$

$$AMR_{ca} = VR_{ca} * EL_{ca} * 60 \text{ minutes/hour} \quad (6\text{-}7)$$

where:

AMR = the allowable mass emission rate in mg/hr for each type of affected source;

VR = the total ventilation rate from all inlet ducts conveying chromic acid;

EL = the applicable emission limitation in 6.3 of this regulation in mg/dscm. There are two equations for hard chromium electroplating tanks because different emission limitations may apply (e.g., a new tank versus an existing, small tank); and

“hc” applies to the total of ventilation rates for all hard chromium electroplating tanks subject to the same emission limitation;

“dc” applies to the total of ventilation rates for the decorative chromium electroplating tanks; and

“ca” applies to the total of ventilation rates for the chromium anodizing tanks.

6.5.5.4.4 Establish the allowable mass emission rate (AMR_{sys}) in mg/hr for the system using equation 6-8, including each type of affected source as appropriate:

$$AMR_{sys} = AMR_{hc1} + AMR_{hc2} + AMR_{dc} + AMR_{ca} \quad (6\text{-}8)$$

The allowable mass emission rate calculated from equation (6-8) of this regulation should be equal to or more than the outlet three-run average mass emission rate determined from Method 306 testing in order for the source to be in compliance with the standards.

6.5.5.5 Each owner or operator that uses the special compliance provisions in 6.5.5 of this regulation to demonstrate compliance with the emission limitations in 6.3 of this regulation shall submit the measurements and calculations to support these compliance methods with the notification of compliance status required in 6.8.5 of this regulation.

6.5.5.6 Each owner or operator that uses the special compliance provisions in 6.5 of this regulation to demonstrate compliance with the emission limitations in 6.3 of this regulation shall repeat these procedures if a tank is added or removed from the control system regardless of whether that tank is a nonaffected source. If the new nonaffected tank replaces an existing nonaffected tank of the same size and is connected to the control system through the same size inlet duct then this procedure does not have to be repeated.

6.5.6 Compliance provisions for the mass rate emission standard for enclosed hard chromium electroplating tanks.

6.5.6.1 Procedures for calculating the maximum allowable mass emission rate for owners or operators who choose to meet the mass emission rate standard in 6.3.3.2.4 of this regulation.

6.5.6.1.1 The owner or operator of an enclosed hard chromium electroplating tank that is an affected source other than an existing affected source located at a small hard chromium electroplating facility who chooses to meet the mass emission rate standard in 6.3.3.2.4 of this regulation shall determine compliance by not allowing the mass rate of total chromium in the exhaust gas stream discharged to the atmosphere to exceed the maximum allowable mass emission rate (MAMER) calculated using equation 6-9:

$$MAMER = ETSA * K * 0.015 \text{ mg/dscm} \qquad (6\text{-}9)$$

where:
MAMER = the alternative emission rate for enclosed hard chromium electroplating tanks in mg/hr;
ETSA = the hard chromium electroplating tank surface area in square feet (ft^2); and
K = the conversion factor, 425 dscm/(ft^2-hr).

6.5.6.1.2 Compliance with the alternative mass emission limit is demonstrated if the three-run average mass emission rate determined from testing using Method 306 in Appendix A of 40 CFR Part 63 is less than or equal to the maximum allowable mass

emission rate (MAMER) calculated from equation 6-9 of this regulation.

6.5.6.2 Procedures for calculating the maximum allowable mass emission rate for owners or operators of small hard chromium electroplating tanks who choose to meet the mass emission rate standard in 6.3.3.2.5 of this regulation.

6.5.6.2.1 The owner or operator of an enclosed hard chromium electroplating tank that is an existing affected source located at a small hard chromium electroplating facility who chooses to meet the mass emission rate standard in 6.3.3.2.5 of this regulation shall determine compliance by not allowing the mass rate of total chromium in the exhaust gas stream discharged to the atmosphere to exceed the maximum allowable mass emission rate (MAMER) calculated using equation 6-10:

$$MAMER = ETSA * K * 0.03 \text{ mg/dscm} \qquad (6\text{-}10)$$

where:
MAMER = the alternative emission rate for enclosed hard chromium electroplating tanks in mg/hr;
ETSA = the hard chromium electroplating tank surface area in square feet (ft^2); and
K = the conversion factor, 425 dscm/(ft^2-hr).

6.5.6.2.2 Compliance with the alternative mass emission limit is demonstrated if the three-run average mass emission rate determined from testing using Method 306 in Appendix A of 40 CFR Part 63 is less than or equal to the maximum allowable mass emission rate (MAMER) calculated from equation (6-10) of this regulation.

3 DE Reg. 445 (9/1/99); 11 DE Reg. 683 (11/1/07)

6.6 Provisions for new and reconstructed sources.

6.6.1 The preconstruction review requirements for new and reconstructed affected sources that are subject to, or become subject to, 6.0 of this regulation are identified in 6.6 of this regulation.

6.6.2 New or reconstructed affected sources. The owner or operator of a new or reconstructed affected source is subject to applicable requirements of 3.5 of this regulation, as noted in Table 6-2 of this regulation, as well as the provisions of 6.6.2 of this regulation.

6.6.2.1 After September 11, 1999, no person may construct a new affected source or reconstruct an affected source subject to Section 6.0 of this regulation, or reconstruct a source such that it becomes an affected source subject to 6.0 of this regulation, without submitting a notification of construction or reconstruction to the Department. The notification shall contain the information identified in 6.6.2.2 and 6.6.2.3 of this regulation, as appropriate.

6.6.2.2 The notification of construction or reconstruction required in 6.6.2.1 of this regulation shall include:

6.6.2.2.1 The owner or operator's name, title, and address;

6.6.2.2.2 The address (i.e., physical location) or proposed address of the affected source if different from the owner or operator's address;

6.6.2.2.3 A notification of intention to construct a new affected source or make any physical or operational changes to an affected source that may meet or has been determined to meet the criteria for a reconstruction as defined in 3.2 of this regulation;

6.6.2.2.4 An identification of 6.0 of this regulation as the basis for the notification;

6.6.2.2.5 The expected commencement and completion dates of the construction or reconstruction;

6.6.2.2.6 The anticipated date of (initial) startup of the affected source;

6.6.2.2.7 The type of process operation to be performed (hard or decorative chromium electroplating or chromium anodizing);

6.6.2.2.8 A description of the air pollution control technique to be used to control emissions from the affected source, such as preliminary design drawings and design capacity if an add-on air pollution control device is used; and

6.6.2.2.9 An estimate of emissions from the source based on engineering calculations and vendor information on control device efficiency, expressed in units consistent with the emission limits of 6.0 of this regulation. Calculations of emission estimates should be in sufficient detail to permit assessment of the validity of the calculations.

6.6.2.3 If a reconstruction is to occur, the notification required in 6.6.2.1 of this regulation shall include the following in addition to the information required in 6.6.2.2 of this regulation:

6.6.2.3.1 A brief description of the affected source and the components to be replaced;

6.6.2.3.2 A brief description of the present and proposed emission control technique, including the information required in 6.6.2.2.8 and 6.6.2.2.9 of this regulation;

6.6.2.3.3 An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new source;

6.6.2.3.4 The estimated life of the affected source after the replacements; and

6.6.2.3.5 A discussion of any economic or technical limitations the source may have in complying with relevant standards or other requirements after the proposed replacements. The discussion shall be sufficiently detailed to demonstrate to the Department's satisfaction that the technical or economic limitations affect the source's ability to comply with the relevant standard and how they do so.

6.6.2.3.6 If in the notification of reconstruction, the owner or operator designates the affected source as a reconstructed source and declares that there are no economic or technical limitations to prevent the source from complying with all relevant standards or requirements, the owner or operator need not submit the information required in 6.6.2.3.3 through 6.6.2.3.5 of this regulation.

6.6.2.4 Departmental approvals.

6.6.2.4.1 The owner or operator of a new or reconstructed affected area source that submits a notification in accordance with 6.6.2.1 through 6.6.2.3 of this regulation is not subject to approval by the Department. Construction or reconstruction is subject only to notification and can begin upon submission of a complete notification.

6.6.2.4.2 The owner or operator of a new or reconstructed affected major source that submits a notification in accordance with 6.6.2.1 through 6.6.2.3 of this regulation and an application

for approval of construction or reconstruction in accordance with requirements of 3.5 of this regulation is subject to approval by the Department. Construction or reconstruction can not commence prior to receipt of the Department's approval of the application for approval of construction or reconstruction or approval of the 7 **DE Admin Code** 1102 permit to construct application.

6.6.2.4.3 Additionally, the owner or operator of a new or reconstructed affected source may be required to obtain an approved construction permit under 7 **DE Admin Code** 1102 of the State of Delaware "Regulations Governing the Control of Air Pollution", before commencing construction or reconstruction.

6.6.2.5 Submittal timeframes. After September 11, 1999, an owner or operator of a new or reconstructed affected source shall submit the notification of construction or reconstruction required in 6.6.2.1 of this regulation or the application for approval of construction or reconstruction required by 3.5 of this regulation according to the following schedule:

6.6.2.5.1 If construction or reconstruction commences after September 11, 1999, the notification or application shall be submitted as soon as practicable before the construction or reconstruction is planned to commence.

6.6.2.5.2 If the construction or reconstruction had commenced and initial startup had not occurred before September 11, 1999, the notification or application shall be submitted as soon as practicable after September 11, 1999.

3 DE Reg. 445 (9/1/99); 11 DE Reg. 683 (11/1/07)

6.7 Recordkeeping requirements.

6.7.1 The owner or operator of each affected source subject to these standards shall fulfill all recordkeeping requirements outlined in 6.7 of this regulation and in 3.0 of this regulation as identified in Table 6-2 of this regulation.

6.7.2 The owner or operator of an affected source subject to the provisions of Section 6.0 of this regulation shall maintain the following records for such source:

6.7.2.1 Inspection records for the add-on air pollution control device, if such a device is used, and monitoring equipment, to document that the inspection and maintenance required by the operation and maintenance practices in 6.3.6 of this regulation and Table 6-1 of this regulation have

taken place. The record can take the form of a checklist and should identify the device inspected, the date of inspection, a brief description of the working condition of the device during the inspection, and any actions taken to correct deficiencies found during the inspection.

6.7.2.2 Records of all maintenance performed on the affected source, the add-on air pollution control device, and monitoring equipment;

6.7.2.3 Records of the occurrence, duration, and cause (if known) of each malfunction of process, add-on air pollution control, and monitoring equipment;

6.7.2.4 Records of actions taken during periods of malfunction when such actions are inconsistent with the operation and maintenance plan;

6.7.2.5 Other records, which may take the form of checklists, necessary to demonstrate consistency with the provisions of the operation and maintenance plan required in 6.3.6.3 of this regulation;

6.7.2.6 Test reports documenting results of all performance tests;

6.7.2.7 All measurements as may be necessary to determine the conditions of performance tests, including measurements necessary to determine compliance with the special compliance procedures in 6.5.5 of this regulation;

6.7.2.8 Records of monitoring data required in 6.4.3 of this regulation that are used to demonstrate compliance with the standard including the date and time the data are collected;

6.7.2.9 The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions, as indicated by monitoring data, that occurs during malfunction of the process, add-on air pollution control, or monitoring equipment;

6.7.2.10 The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions, as indicated by monitoring data, that occurs during periods other than malfunction of the process, add-on air pollution control, or monitoring equipment;

6.7.2.11 The total process operating time of the affected source during the reporting period;

6.7.2.12 Records of the actual cumulative rectifier capacity of hard chromium electroplating tanks at a facility expended during each month

of the reporting period, and the total capacity expended to date for a reporting period, if the owner or operator is using the actual cumulative rectifier capacity to determine facility size in accordance with 6.3.3.2 of this regulation;

6.7.2.13 For sources using fume suppressants to comply with the standards, records of the date and time that fume suppressants are added to the electroplating or anodizing bath;

6.7.2.14 For sources complying with 6.3.5 of this regulation, records of the bath components purchased, with the wetting agent clearly identified as a bath constituent contained in one of the components;

6.7.2.15 Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements, if the source has been granted a waiver under 3.10.6 of this regulation; and

6.7.2.16 All documentation supporting the notifications and reports required by 3.9 and 3.10 of this regulation and by 6.8 of this regulation.

6.7.3 All records shall be maintained for a period of five years in accordance with 3.10.2.1 of this regulation.

3 DE Reg. 445 (9/1/99); 11 DE Reg. 683 (11/1/07)

6.8 Reporting requirements.

6.8.1 The owner or operator of each affected source subject to these standards shall fulfill all reporting requirements outlined in 6.8 of this regulation and in 3.0 of this regulation as identified in Table 6-2 of this regulation. These reports shall be made to the Administrator and to the Department, in accordance with 3.10.1.4 of this regulation.

6.8.1.1 Reports required by 3.0 of this regulation and 6.8 of this regulation may be sent by U.S. mail, fax, or by another courier.

6.8.1.1.1 Submittals sent by U.S. mail shall be postmarked on or before the specified date.

6.8.1.1.2 Submittals sent by other methods shall be received by the Administrator and Department on or before the specified date.

6.8.1.2 If acceptable to both the Department and the owner or operator of an affected source, reports may be submitted on electronic media.

6.8.2 The reporting requirements in 6.8 of this regulation apply to the owner or operator of an affected source when such source becomes subject to the provisions of 6.0 of this regulation.

6.8.3 Initial notifications.

6.8.3.1 The owner or operator of an affected source that has an initial startup before September 11, 1999, shall notify the Department in writing that the source is subject to 6.0 of this regulation. The notification shall be submitted no later than September 11, 1999, and shall contain the following information:

6.8.3.1.1 The name, title, and address of the owner or operator;

6.8.3.1.2 The address (i.e., physical location) of each affected source;

6.8.3.1.3 A statement that 6.0 of this regulation is the basis for this notification;

6.8.3.1.4 Identification of the applicable emission limitation and compliance date for each affected source;

6.8.3.1.5 A brief description of each affected source, including the type of process operation performed;

6.8.3.1.6 For sources performing hard chromium electroplating, the maximum cumulative potential rectifier capacity;

6.8.3.1.7 For sources performing hard chromium electroplating, a statement of whether the affected source or sources is located at a small or a large, hard chromium electroplating facility and whether this will be demonstrated through actual or maximum cumulative potential rectifier capacity;

6.8.3.1.8 For sources performing hard chromium electroplating, a statement of whether the owner or operator of an affected source or sources will limit the maximum cumulative potential rectifier capacity in accordance with 6.3.3.2 of this regulation such that the hard chromium electroplating facility is considered small; and

6.8.3.1.9 A statement of whether the affected source is located at a major source or an area source as defined in 3.2 of this regulation.

6.8.3.2 The owner or operator of a new or reconstructed affected source that has an initial startup after January 25, 1995 shall submit an initial notification, in addition to the notification of construction or reconstruction required in 6.6.2 of this regulation, as follows:

6.8.3.2.1 A notification of the date when construction or reconstruction was commenced, shall be submitted simultaneously with the notification of construction or reconstruction, if construction or reconstruction was commenced before September 11, 1999;

6.8.3.2.2 A notification of the date when construction or reconstruction was commenced, shall be submitted no later than 30 calendar days after such date, if construction or reconstruction was commenced after September 11, 1999; and

6.8.3.2.3 A notification of the actual date of startup of the source shall be submitted by September 11, 1999 or within 30 calendar days after startup, whichever is later.

6.8.4 Notification of performance test.

6.8.4.1 The owner or operator of an affected source shall notify the Department in writing of his or her intention to conduct a performance test at least 60 calendar days before the test is scheduled to begin to allow the Department to have an observer present during the test. Observation of the performance test by the Department is optional.

6.8.4.2 In the event the owner or operator is unable to conduct the performance test as scheduled, the provisions of 3.7.2.2 of this regulation apply.

6.8.5 Notification of compliance status.

6.8.5.1 A notification of compliance status is required each time that an affected source becomes subject to the requirements of 6.0 of this regulation.

6.8.5.2 If the State in which the source is located has not been delegated the authority to implement the rule, each time a notification of compliance status is required under this regulation, the owner or operator of an affected source shall submit to the Administrator (with copy to the Department) a notification of compliance status, signed by the responsible official (as defined in 3.2 of this regulation) who shall certify its accuracy, attesting to whether the affected source has complied with 6.0 of this regulation. If the State has been delegated the authority, the

notification of compliance status shall be submitted to the Department. The notification shall list for each affected source:

6.8.5.2.1 The applicable emission limitation and the methods that were used to determine compliance with this limitation;

6.8.5.2.2 If a performance test is required by 6.0 of this regulation, the test report documenting the results of the performance test, which contains the elements required in 6.5.1 of this regulation, including measurements and calculations to support the special compliance provisions in 6.5.5 of this regulation if these are being followed;

6.8.5.2.3 The type and quantity of hazardous air pollutants emitted by the source reported in mg/dscm or mg/hr if the source is using the special provisions in 6.5.5 of this regulation to comply with the standards. (If the owner or operator is subject to the construction and reconstruction provisions in 6.6 of this regulation and had previously submitted emission estimates, the owner or operator shall state that this report corrects or verifies the previous estimate.) For sources not required to conduct a performance test in accordance with 6.4.2 of this regulation, the surface tension measurement may fulfill this requirement;

6.8.5.2.4 For each monitored parameter for which a compliant value is to be established in 6.4.3 of this regulation, the specific operating parameter value, or range of values, that corresponds to compliance with the applicable emission limit;

6.8.5.2.5 The methods that will be used to determine continuous compliance, including a description of monitoring and reporting requirements, if methods differ from those identified in 6.0 of this regulation;

6.8.5.2.6 A description of the air pollution control technique for each emission point;

6.8.5.2.7 A statement that the owner or operator has completed and has on file the operation and maintenance plan as required by the operation and maintenance practices in 6.3.6 of this regulation;

6.8.5.2.8 If the owner or operator is determining facility size based on actual cumulative rectifier capacity in accordance with 6.3.3.2 of this regulation, records to support that the facility is small. For existing sources, records from any 12-month period preceding the compliance date shall be used or a description of

how operations will change to meet a small designation shall be provided. For new sources, records of projected rectifier capacity for the first 12-month period of tank operation shall be used;

6.8.5.2.9 A statement by the owner or operator of the affected source as to whether the source has complied with the provisions of Section 6.0 of this regulation.

6.8.5.3 For sources required to conduct a performance test in 6.4.2 of this regulation, the notification of compliance status shall be submitted to the Department no later than 90 calendar days following completion of the compliance demonstration required by 3.7 of this regulation and 6.4.2 of this regulation.

6.8.5.4 For sources that are not required to complete a performance test in accordance with 6.4.2 of this regulation, the notification of compliance status shall be submitted to the Department no later than 30 days after the compliance date specified in 6.4.1 of this regulation.

6.8.6 Reports of performance test results.

6.8.6.1 If the State in which the source is located has not been delegated the authority to implement the rule, the owner or operator of an affected source shall report to the Administrator (with copy to the Department) the results of any performance test conducted as required by 3.7 of this regulation or 6.4.2 of this regulation. If the State has been delegated the authority, the owner or operator of an affected source should report performance test results to the Department.

6.8.6.2 Reports of performance test results shall be submitted no later than 90 days following the completion of the performance test, and shall be submitted as part of the notification of compliance status required in 6.8.5 of this regulation.

6.8.7 Ongoing compliance status reports for major sources.

6.8.7.1 The owner or operator of an affected source that is located at a major source shall submit a summary report to the Department to document the ongoing compliance status of the affected source. The report shall contain the information identified in 6.8.7.3 of this regulation, and shall be submitted semiannually except when:

6.8.7.1.1 The Department determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source or

6.8.7.1.2 The monitoring data collected by the owner or operator of the affected source in accordance with 6.4.3 of this regulation show that the emission limit has been exceeded, in which case quarterly reports shall be submitted. Once an owner or operator of an affected source reports an exceedance, ongoing compliance status reports shall be submitted quarterly until a request to reduce reporting frequency under 6.8.7.2 of this regulation is approved.

6.8.7.2 Request to reduce frequency of ongoing compliance status reports.

6.8.7.2.1 An owner or operator who is required to submit ongoing compliance status reports on a quarterly (or more frequent basis) may reduce the frequency of reporting to semiannual if all of the following conditions are met:

6.8.7.2.1.1 For one full year (e.g., four quarterly or 12 monthly reporting periods), the ongoing compliance status reports demonstrate that the affected source is in compliance with the relevant emission limit;

6.8.7.2.1.2 The owner or operator continues to comply with all applicable recordkeeping and monitoring requirements of 3.0 and 6.0 of this regulation; and

6.8.7.2.1.3 The Department does not object to a reduced reporting frequency for the affected source, as provided in 6.8.7.2.2 and 6.8.7.2.3 of this regulation.

6.8.7.2.2 The frequency of submitting ongoing compliance status reports may be reduced only after the owner or operator notifies the Department in writing of his or her intention to make such a change, and the Department does not object to the intended change. In deciding whether to approve a reduced reporting frequency, the Department may review information concerning the source's entire previous performance history during the five-year recordkeeping period prior to the intended change, or the recordkeeping period since the source's compliance date, whichever is shorter. Records subject to review may include performance test results, monitoring data, and evaluations of an owner or operator's conformance with emission limitations and operation and maintenance practices. Such information may be used by the Department to make a judgment about the source's potential for noncompliance in the future. If the Department disapproves the owner or operator's request to reduce

reporting frequency, the Department will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Department to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

6.8.7.2.3 As soon as the monitoring data required in 6.4.3 of this regulation show that the source is not in compliance with the relevant emission limit, the frequency of reporting shall revert to quarterly, and the owner shall state this exceedance in the ongoing compliance status report for the next reporting period. After demonstrating ongoing compliance with the relevant emission limit for another full year, the owner or operator may again request approval from the Department to reduce the reporting frequency as allowed in 6.8.7.2 of this regulation.

6.8.7.3 Contents of ongoing compliance status reports. The owner or operator of an affected source for which compliance monitoring is required in accordance with 6.4.3 of this regulation shall prepare a summary report to document the ongoing compliance status of the source. The report must contain the following information:

6.8.7.3.1 The company name and address of the affected source;

6.8.7.3.2 An identification of the operating parameter that is monitored for compliance determination, as required in 6.4.3 of this regulation;

6.8.7.3.3 The relevant emission limitation for the affected source, and the operating parameter value, or range of values, that correspond to compliance with this emission limitation as specified in the notification of compliance status required in 6.8.5 of this regulation;

6.8.7.3.4 The beginning and ending dates of the reporting period;

6.8.7.3.5 A description of the type of process performed in the affected source;

6.8.7.3.6 The total operating time of the affected source during the reporting period;

6.8.7.3.7 If the affected source is a hard chromium electroplating tank and the owner or operator is limiting the maximum cumulative rectifier capacity in accordance with 6.3.3.2 of this regulation, the actual cumulative rectifier capacity expended during the reporting period, on a month-by-month basis;

6.8.7.3.8 A summary of operating parameter values, including the total duration of excess emissions during the reporting period as indicated by those values, the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to process upsets, control equipment malfunctions, other known causes, and unknown causes;

6.8.7.3.9 A certification by a responsible official, as defined in 3.2 of this regulation, that the operation and maintenance practices in 6.3.6 of this regulation were followed in accordance with the operation and maintenance plan for the source;

6.8.7.3.10 If the operation and maintenance plan required in 6.3.6.3 of this regulation was not followed, an explanation of the reasons for not following the provisions, an assessment of whether any excess emission or parameter monitoring exceedances are believed to have occurred, and a copy of the report or reports required in 6.3.6.3.4 of this regulation documenting that the operation and maintenance plan was not followed;

6.8.7.3.11 A description of any changes in monitoring, processes, or controls since the last reporting period;

6.8.7.3.12 The name, title, and signature of the responsible official who is certifying the accuracy of the report; and

6.8.7.3.13 The date of the report.

6.8.7.4 When more than one monitoring device is used to comply with the continuous compliance monitoring required in 6.4.3 of this regulation, the owner or operator shall report the results as required for each monitoring device. However, when one monitoring device is used as a backup for the primary monitoring device, the owner or operator shall only report the results from the monitoring device used to meet the monitoring requirements of 6.0 of this regulation. If both devices are used to meet these requirements, then the owner or operator shall report the results from each monitoring device for the relevant compliance period.

6.8.8 Ongoing compliance status reports for area sources. The requirements in 6.8.8 of this regulation do not alleviate affected area sources from complying with the requirements of 7 **DE Admin Codes** 1102 and 1130 of the State of Delaware "Regulations Governing the Control of Air Pollution".

6.8.8.1 The owner or operator of an affected source that is located at an area source shall prepare a summary report to document the ongoing compliance status of the affected source. The report shall contain the information identified in 6.8.7.3 of this regulation, shall be completed annually and retained on site, and made available to the Department upon request. The report shall be completed annually except as provided in 6.8.8.2 of this regulation.

6.8.8.2 Reports of exceedances.

6.8.8.2.1 If both of the following conditions are met, semiannual reports shall be prepared and submitted to the Department:

6.8.8.2.1.1 The total duration of excess emissions (as indicated by the monitoring data collected by the owner or operator of the affected source in accordance with 6.4.3 of this regulation) is 1% or greater of the total operating time for the reporting period and

6.8.8.2.1.2 The total duration of malfunctions of the add-on air pollution control device and monitoring equipment is 5% or greater of the total operating time.

6.8.8.2.2 Once an owner or operator of an affected source reports an exceedance as defined in 6.8.8.2.1 of this regulation, ongoing compliance status reports shall be submitted semiannually until a request to reduce reporting frequency under 6.8.8.3 of this regulation is approved.

6.8.8.2.3 The Department may determine on a case-by-case basis that the summary report shall be completed more frequently and submitted, or that the annual report shall be submitted instead of being retained on site, if these measures are necessary to accurately assess the compliance status of the source.

6.8.8.3 Request to reduce frequency of ongoing compliance status reports.

6.8.8.3.1 An owner or operator who is required to submit ongoing compliance status reports on a semiannual (or more frequent) basis, or is required to submit its annual report instead of

retaining it on site, may reduce the frequency of reporting to annual or be allowed to maintain the annual report onsite if all of the following conditions are met:

6.8.8.3.1.1 For one full year (e.g., two semiannual or four quarterly reporting periods), the ongoing compliance status reports demonstrate that the affected source is in compliance with the relevant emission limit;

6.8.8.3.1.2 The owner or operator continues to comply with all applicable recordkeeping and monitoring requirements of 3.0 and 6.0 of this regulation; and

6.8.8.3.1.3 The Department does not object to a reduced reporting frequency for the affected source, as provided in 6.8.8.3.2 and 6.8.8.3.3 of this regulation.

6.8.8.3.2 The frequency of submitting ongoing compliance status reports may be reduced only after the owner or operator notifies the Department in writing of his or her intention to make such a change, and the Department does not object to the intended change. In deciding whether to approve a reduced reporting frequency, the Department may review information concerning the source's previous performance history during the five-year recordkeeping period prior to the intended change, or the recordkeeping period since the source's compliance date, whichever is shorter. Records subject to review may include performance test results, monitoring data, and evaluations of an owner or operator's conformance with emission limitations and operation and maintenance practices. Such information may be used by the Department to make a judgment about the source's potential for noncompliance in the future. If the Department disapproves the owner or operator's request to reduce reporting frequency, the Department will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Department to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

6.8.8.3.3 As soon as the monitoring data required in 6.4.3 of this regulation show that the source is not in compliance with the relevant emission limit, the frequency of reporting shall revert to semiannual, and the owner shall state this exceedance in the ongoing compliance status report for the next reporting period. After demonstrating ongoing compliance with the relevant

emission limit for another full year, the owner or operator may again request approval from the Department to reduce the reporting frequency as allowed in 6.8.8.3 of this regulation.

6.8.9 Reports associated with trivalent chromium baths. The requirements in 6.8.9 of this regulation do not alleviate affected sources from complying with the requirements of 7 **DE Admin Codes** 1102 and 1130 of the State of Delaware "Regulations Governing the Control of Air Pollution". Owners or operators complying with the provisions in 6.3.5 of this regulation are not subject to 6.8.1 through 6.8.8 of this regulation, but must instead submit the following reports:

6.8.9.1 Not later than September 11, 1999, submit an initial notification that includes:

6.8.9.1.1 The same information as is required in 6.8.3.1.1 through 6.8.3.1.5 of this regulation;

6.8.9.1.2 A statement that a trivalent chromium process that incorporates a wetting agent will be used to comply with 6.3.5 of this regulation; and

6.8.9.1.3 The list of bath components that comprise the trivalent chromium bath, with the wetting agent clearly identified.

6.8.9.2 Within 30 days of the compliance date specified in 6.4.1 of this regulation or by September 11, 1999, whichever is later, a notification of compliance status that contains an update of the information submitted in accordance with 6.8.9.1 of this regulation or a statement that the information is still accurate.

6.8.9.3 Within 30 days of a change to the trivalent chromium electroplating process, a report that includes:

6.8.9.3.1 A description of the manner in which the process has been changed and the emission limitation, if any, now applicable to the affected source;

6.8.9.3.2 If a different emission limitation applies, the applicable information required in 9.8.3.1 of this regulation; and

6.8.9.3.3 The notification and reporting requirements in 6.8.4 through 6.8.8 of this regulation, which shall be submitted in accordance with the schedules identified in those requirements.

3 DE Reg. 445 (9/1/99); 11 DE Reg. 683 (11/1/07)

6.9 [Reserved]

11 DE Reg. 683 (11/1/07)

Table 6-2 - Applicability of 3.0 to 6.0 of This Regulation

General Provisions Reference	Applies to 6.0	Comments
3.1.1.1	Yes	Additional terms defined in 6.2 of this regulation; when overlap between 3.0 and 6.0 occurs, 6.0 takes precedence.
3.1.1.2	Yes	
3.1.1.3	Yes	
3.1.1.4	Yes	6.0 clarifies the applicability of each provision in 3.0 to sources subject to 6.0.
3.1.1.5	No	
3.1.1.6	Yes	
3.1.1.7	No	
3.1.1.8	No	
3.1.1.9	No	
3.1.1.10	Yes	
3.1.1.11	Yes	6.8.1 also allows report submissions via fax and on electronic media.
3.1.1.12	Yes	
3.1.2.1	No	6.1 specifies applicability.
3.1.2.2	Yes	
3.1.2.3	No	This provision in 3.0 is being deleted. Also, all affected area and major sources are subject to 6.0; there are no exemptions.
3.1.3.1	Yes	6.0 clarifies the applicability of each provision in 3.0 to sources subject to 6.0.
3.1.3.2	Yes	6.1.5 exempts area sources from the obligation to obtain Title V operating permits.
3.1.3.3-3.1.3.4	No	
3.1.3.5	No	6.0 clarifies that an area source that becomes a major source is subject to the requirements for major sources.
3.1.4	No	
3.1.5	Yes	

Table 6-2 - Continued

General Provisions Reference	Applies to 6.0	Comments
3.2	Yes	Additional terms defined in 6.2; when overlap between 3.0 and 6.0 occurs, 6.0 takes precedence.
3.3	Yes	Other units used in 6.0 are defined in 6.0.
3.4.1.1-3.4.1.2	Yes	
3.4.1.3-3.4.1.5	No	
3.4.2-3.4.3	Yes	
3.5.1	Yes	Except replace the term “source” and “stationary source” in 3.5.1.1 and 3.5.1.2 with “affected sources.”
3.5.2.1	Yes	
3.5.2.2	No	
3.5.2.3	Yes	Applies only to major affected sources.
3.5.2.4	No	6.6 specifies requirements for the notification of construction or reconstruction for affected sources that are not major.
3.5.2.5	No	
3.5.2.6	Yes	
3.5.3	No	
3.5.4.1.1	No	6.6.2.5 specifies when the application or notification shall be submitted.
3.5.4.1.2-3.5.4.1.2.6	Yes	Applies to major affected sources that are new or reconstructed.
3.5.4.1.2.7	No	
3.5.4.1.2.8	Yes	
3.5.4.1.2.9	No	
3.5.4.1.2.10	Yes	
3.5.4.1.3	Yes	Except information should be submitted with the notification of compliance status required in 6.8.5.
3.5.4.2	Yes	Applies to major affected sources that are new or reconstructed except: (1) replace “source” in 3.5.4.2 with “affected source”; and (2) actual control efficiencies are submitted with the notification of compliance status required in 6.8.5.
3.5.4.3-3.5.4.4	Yes	Applies to major affected sources that are new or reconstructed.
3.5.5	Yes	Applies to major affected sources that are new or reconstructed.

Table 6-2 - Continued

General Provisions Reference	Applies to 6.0	Comments
3.5.6.1	Yes	Except replace “source” in 3.5.6.1 with “affected source.”
3.5.6.2	No	New or reconstructed affected sources shall submit the request for approval of construction or reconstruction under 3.5.6 by the deadline specified in 6.6.2.5.
3.6.1	Yes	
3.6.2.1-3.6.2.2	Yes	Except replace “source” in 3.6.2.1 to 3.6.2.2 with “affected source.”
3.6.2.3-3.6.2.4	Yes	
3.6.2.5	Yes	Except replace “source” in 3.6.2.5 with “affected source.”
3.6.2.6	No	
3.6.2.7	No	Provisions for new area sources that become major sources are contained in 6.4.1.4.
3.6.3.1-3.6.3.2	Yes	Except replace “source” in 3.6.3.1 to 3.6.3.2 with “affected source.”
3.6.3.3-3.6.3.4	No	
3.6.3.5	No	Compliance provisions for existing area sources that become major sources are contained in 6.4.1.3.
3.6.4	No	
3.6.5	No	6.3.6 contains operation and maintenance practice requirements that override these provisions.
3.6.6.1	No	6.3.2 specifies when the standards apply.
3.6.6.2.1-3.6.6.2.2	Yes	
3.6.6.2.3	No	6.5.2 specifies instances in which previous performance test results for existing sources are acceptable.
3.6.6.2.4	Yes	
3.6.6.2.5	Yes	
3.6.6.3	Yes	
3.6.7	Yes	
3.6.8	No	6.0 does not contain any opacity or visible emission standards.
3.6.9.1	Yes	
3.6.9.2	No	
3.6.9.3	Yes	
3.6.9.4.1	No	

Table 6-2 - Continued

General Provisions Reference	Applies to 6.0	Comments
3.6.9.4.2	Yes	
3.6.9.5	No	
3.6.9.6.1	Yes	This paragraph only references 3.6.9.4 of this regulation for compliance extension provisions.
3.6.9.6.2	No	
3.6.9.7	Yes	
3.6.9.8	Yes	This paragraph only references 3.6.9.4 of this regulation for compliance extension provisions.
3.6.9.9	Yes	This paragraph only references 3.6.9.4 of this regulation for compliance extension provisions.
3.6.9.10.1-3.6.9.10.4	Yes	
3.6.9.10.5.1	Yes	This paragraph only references 3.6.9.4 of this regulation for compliance extension provisions.
3.6.9.10.5.2	No	
3.6.9.11	Yes	
3.6.9.12.1	No	
3.6.9.12.2-3.6.9.12.4	No	
3.6.9.13	Yes	
3.6.9.14	Yes	
3.6.9.15	No	
3.6.9.16	Yes	
3.6.10	Yes	
3.7.1.1	Yes	
3.7.1.2.1-3.7.1.2.8	No	
3.7.1.2.9	Yes	
3.7.1.3	Yes	
3.7.2.1	No	6.8.4 requires notification prior to the performance test. 6.5.1 requires submission of a site-specific test plan upon request.
3.7.2.2	Yes	
3.7.3	No	6.5.1 specifies what the test plan should contain, but does not require test plan approval or performance audit samples.

Table 6-2 - Continued

General Provisions Reference	Applies to 6.0	Comments
3.7.4	Yes	Except replace “source” in the first sentence of 3.7.4 with “affected source.”
3.7.5	Yes	6.0 also contains test methods specific to affected sources covered by 6.0.
3.7.6	Yes	6.5.3.2 identifies CARB Method 425 as acceptable under certain conditions.
3.7.7.1	No	6.0 identifies the items to be reported in the compliance test [6.5.1] and the timeframe for submitting the results [6.8.6].
3.7.7.2	No	
3.7.7.3	Yes	
3.7.8.1-3.7.8.2	Yes	
3.7.8.3.1	Yes	This paragraph only references 3.6.9 for compliance extension provisions. But, 6.4.1.6 also contains provisions for requesting a compliance extension.
3.7.8.3.2-3.7.8.3.3	Yes	
3.7.8.4-3.7.8.5	Yes	
3.8.1.1	Yes	
3.8.1.2	No	Operation and maintenance practices are contained in 6.3.6.
3.8.1.3	No	
3.8.1.4	No	
3.8.2.1	Yes	
3.8.2.2	No	6.5.4 specifies the monitoring location when there are multiple sources.
3.8.2.3	No	6.8.7.4 identifies reporting requirements when multiple monitors are used.
3.8.3.1.1	No	6.0 requires proper maintenance of monitoring devices expected to be used by sources subject to 6.0.
3.8.3.1.2	No	6.3.6.3.4 specifies reporting when the O&M plan is not followed.
3.8.3.1.3	No	6.3.6.2 identifies the criteria for whether O&M procedures are acceptable.
3.8.3.2-3.8.3.3	No	6.5.4.2 requires appropriate use of monitoring devices.
3.8.3.4-3.8.3.8	No	
3.8.4	No	Maintenance of monitoring devices is required in 6.3.6 and 6.5.4.2.

Table 6-2 - Continued

General Provisions Reference	Applies to 6.0	Comments
3.8.5	No	There are no performance evaluation procedures for the monitoring devices expected to be used to comply with 6.0.
3.8.6.1	Yes	
3.8.6.2	No	Instances in which the Administrator may approve alternatives to the monitoring methods and procedures of 6.0 are contained in 6.4.3.8.
3.8.6.3	Yes	
3.8.6.4	Yes	
3.8.6.5	Yes	
3.8.6.6	No	6.0 does not require the use of CEM's.
3.8.7	No	Monitoring data does not need to be reduced for reporting purposes because 6.0 requires measurement once/day.
3.9.1	Yes	
3.9.2.1.1-3.9.2.1.2	No	6.4.1.3 requires area sources to comply with major source provisions if an increase in HAP emissions causes them to become major sources.
3.9.2.1.3	No	6.8.3.2 of specifies initial notification requirements for new or reconstructed affected sources.
3.9.2.2	No	6.8.3.1 specifies the information to be contained in the initial notification.
3.9.2.3	No	6.8.3.2 specifies notification requirements for new or reconstructed sources that are not major affected sources.
3.9.2.4	No	
3.9.2.5	No	
3.9.3	Yes	This paragraph only references 3.6.9.4 through 3.6.9.6 for compliance extension provisions. But, 6.4.1.6 also contains provisions for requesting a compliance extension. 6.0 provides a different timeframe for submitting the request than 3.6.9.4.
3.9.4	Yes	This paragraph only references the notification dates established 6.9.7 of this regulation. But, 6.8 also contains notification dates.

Table 6-2 - Continued

General Provisions Reference	Applies to 6.0	Comments
3.9.5	No	Notification of performance test is required in 6.8.4.
3.9.6	No	
3.9.7	No	6.0 does not require a performance evaluation or relative accuracy test for monitoring devices.
3.9.8.1-3.9.8.3	No	6.8.5 specifies information to be contained in the notification of compliance status and the timeframe for submitting this information.
3.9.8.4	No	
3.9.8.5	No	Similar language has been incorporated into 6.8.5.2.3.
3.9.8.6	Yes	
3.9.9	Yes	
3.9.10	Yes	
3.10.1	Yes	
3.10.2.1	Yes	
3.10.2.2	No	6.7.2 specifies the records that must be maintained.
3.10.2.3	No	6.0 applies to major and area sources.
3.10.3	No	Applicable requirements of 3.10.3 have been incorporated into 6.7.2.
3.10.4.1	Yes	
3.10.4.2	No	6.8.6 specifies the timeframe for reporting performance test results.
3.10.4.3	No	6.0 does not contain opacity or visible emissions standards.
3.10.4.4	Yes	
3.10.4.5	No	6.3.6.3.4 and 6.8.7.3 specify reporting associated with malfunctions.
3.10.5	No	6.8.7 and 6.8.8 specify the frequency of periodic reports of monitoring data used to establish compliance. Applicable requirements of 3.10.5 have been incorporated into 6.8.7 and 6.8.8.
3.10.6	Yes	
3.11	No	Flares will not be used to comply with the emission limits.
3.12-3.15	Yes	

3 DE Reg. 445 (9/1/99); 11 DE Reg. 683 (11/1/07)

05/11/1998

7.0 Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers

7.1 Applicability.

7.1.1 The provisions of 7.0 of this regulation apply to all new and existing industrial process cooling towers (IPCTs) that are operated with chromium-based water treatment chemicals on or after September 8, 1994, and are either major sources or are integral parts of facilities that are major sources as defined in 7.2 of this regulation.

7.1.2 Owners or operators of affected sources subject to the provisions of 7.0 of this regulation must also comply with the requirements of 3.0 of this regulation, according to the applicability of 3.0 to such sources, as identified in Table 7-1 of this regulation.

1 DE Reg. 1788 (5/1/98)

7.2 Definitions.

Unless defined below, all terms in 7.0 of this regulation have the meanings given them in the Act, or in 3.0 of this regulation.

"Chromium-based water treatment chemicals" means any combination of chemical substances containing chromium used to treat water.

"Commenced" means, with respect to construction or reconstruction of an IPCT, that an owner or operator has undertaken a continuous program of construction or reconstruction or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or reconstruction.

"Compliance date" means the date by which an affected IPCT is required to be in compliance with 7.0 of this regulation.

"Construction" means the on-site fabrication, erection, or installation of an IPCT.

"Cooling tower" means an open water recirculating device that uses fans or natural draft to draw or force ambient air through the device to cool warm water by direct contact.

"Existing IPCT" means any affected IPCT that is not a new IPCT.

“Industrial process cooling tower”, also written as **“IPCT”**, means any cooling tower that is used to remove heat that is produced as an input or output of a chemical or industrial process, as well as any cooling tower that cools industrial processes in combination with any heating, ventilation, or air conditioning system.

“Initial startup” means the initiation of recirculation water flow within the cooling tower.

“Major source” means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants.

“New IPCT” means any affected IPCT the construction or reconstruction of which commenced after August 12, 1993.

“Owner or operator” means any person who owns, leases, operates, controls, or supervises an IPCT.

“Potential to emit” means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.

“Reconstruction” means the replacement of components of an affected or a previously unaffected IPCT to such an extent that the fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable new IPCT.

“Responsible official” means one of the following:

- For a corporation: a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities and either:

    - The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars) or

- The delegation of authority to such representative is approved in advance by the Department.

- For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

- For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this regulation, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of the EPA).

- For affected sources (as defined in this regulation) applying for or subject to a Title V permit: "responsible official" shall have the same meaning as defined in 7 **DE Admin Code** 1130 of the State of Delaware "Regulations Governing the Control of Air Pollution."

"Water treatment chemicals" means any combination of chemical substances used to treat water in cooling towers, including corrosion inhibitors, antiscalants, dispersants, and any other chemical substances used to treat water.

1 DE Reg. 1788 (5/1/98)

7.3 Standard.

No owner or operator of an IPCT shall use chromium-based water treatment chemicals in any affected IPCT.

1 DE Reg. 1788 (5/1/98)

7.4 Compliance dates.

The requirements of 7.3 of this regulation shall be applied on the following schedule:

7.4.1 For existing IPCTs, the compliance date shall be May 11, 1998.

7.4.2 For new IPCTs that have an initial startup before September 8, 1994, the compliance date shall be May 11, 1998.

7.4.3 For new IPCTs that have an initial startup on or after September 8, 1994, the compliance date shall be May 11, 1998 or the date of the initial startup, whichever is later.

1 DE Reg. 1788 (5/1/98)

7.5 Compliance demonstrations.

No routine monitoring, sampling, or analysis is required. In accordance with Section 114 of the Act, the Administrator can require cooling water sample analysis of an IPCT if there is information to indicate that the IPCT is not in compliance with the requirements of 7.3 of this regulation. In accordance with 7 **DE Admin Code** 1117 of the State of Delaware "Regulations Governing the Control of Air Pollution", the Department can require cooling water sample analysis of an IPCT to indicate that the IPCT is not in compliance with the requirements of 7.3 of this regulation. If cooling water sample analysis is required:

7.5.1 The water sample analysis shall be conducted in accordance with Method 7196, Chromium, Hexavalent (Colorimetric), contained in the Third Edition of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, (November 1986) and its Revision I, (December 1987), which are available for the cost of $110.00 from the Government Printing Office, Superintendent of Documents, Washington, DC 20402, (202) 783-3238 (document number 955-001-00000-1; or Method 3500-Cr D, Colorimetric Method, contained in the 18th Edition of "Standard Methods for the Examination of Water and Wastewater" (1992), which is available from the American Public Health Association, 1015 15th Street, NW., Washington, DC 20005. These methods were approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be inspected as a part of Docket A-91-65, located at the Air and Radiation Docket and Information Center, Room M1500, EPA Central Docket Section, 401 M Street, SW., Washington, DC. Copies may be inspected at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

7.5.2 On or after three months after the compliance date, a cooling water sample residual hexavalent chromium concentration in excess of 0.5 parts per million by weight shall indicate a violation of 7.3 of this regulation.

1 DE Reg. 1788 (5/1/98)

7.6 Notification requirements.

7.6.1 Initial notification.

7.6.1.1 In accordance with 3.9.2 of this regulation, owners or operators of all affected IPCTs that have an initial startup before September 8, 1994, shall notify the Department in writing. The notification, which shall be submitted not later than May 11, 1998, shall provide the following information:

7.6.1.1.1 The name and address of the IPCT owner or operator;

7.6.1.1.2 The address (i.e., physical location) of the affected IPCT;

7.6.1.1.3 A statement that the notification is being submitted as required by 7.0 of this regulation; and

7.6.1.1.4 A description of the type of water treatment program used in the affected IPCT, including the chemical name of each corrosion inhibitor ingredient used; the average concentration of those corrosion inhibitor ingredients maintained in the cooling water; and the material safety data sheet for each water treatment chemical or chemical compound used in the IPCT.

7.6.1.2 In accordance with 3.9.2 of this regulation, owners or operators of all affected IPCTs that have an initial startup on or after September 8, 1994, shall notify the Department in writing that the source is subject to the relevant standard no later than May 11, 1998 or 12 months after initial startup, whichever is later. The notification shall provide all the information required in 7.6.1.1.1 through 7.6.1.1.4 of this regulation.

7.6.2 Notification of compliance status.

7.6.2.1 In accordance with 3.9.8 of this regulation, owners or operators of affected IPCTs shall submit to the Department a notification of compliance status by May 11, 1998.

7.6.2.2 The notification of compliance status must:

7.6.2.2.1 Be signed by a responsible official who also certifies the accuracy of the report;

7.6.2.2.2 Certify that source has complied with 7.3 of this regulation; and

7.6.2.2.3 Include the information required in 7.6.1.1.4 of this regulation.

7.6.2.2.4 Include the following statement:

I certify that no chromium-based water treatment chemicals have been introduced since (insert the initial compliance date) into any IPCT located within the facility for any purpose.

1 DE Reg. 1788 (5/1/98)

7.7 Recordkeeping and reporting requirements.

To demonstrate continuing compliance with 7.3 of this regulation, the owner or operator of each affected IPCT shall maintain copies of the initial notification and the notification of compliance status as required by 7.6 of this regulation for a period of at least five years onsite.

1 DE Reg. 1788 (5/1/98)

Table 7-1 - Applicability of 3.0 to 7.0 of This Regulation

General Provision Reference	Applies to 7.0	Comment
3.1	Yes	
3.2	Yes	
3.3	No	
3.4	Yes	
3.5	No	
3.6.1-3.6.3	Yes	
3.6.4-3.6.9	No	
3.6.10	Yes	
3.7	No	
3.8	No	
3.9.1-3.9.2.1	Yes	
3.9.2.2	No	Requirements for initial notifications and notifications of compliance status are specified in 7.6.1 and 7.6.2, respectively, of 7.0; other provisions of 3.0 are not relevant to IPCTs.
3.9.2.3	Yes	
3.9.2.4-3.9.2.5	No	Requirements for initial notifications and notifications of compliance status are specified in 7.6.1 and 7.6.2, respectively, of 7.0; other provisions of 3.0 are not relevant to IPCTs.
3.9.3	Yes	
3.9.4-3.9.7	No	Requirements for initial notifications and notifications of compliance status are specified in 7.6.1 and 7.6.2, respectively, of 7.0; other provisions of 3.0 are not relevant to IPCTs.
3.9.8.1	Yes	
3.9.8.2	No	Requirements for initial notifications and notifications of compliance status are specified in 7.6.1 and 7.6.2, respectively, of 7.0; other provisions of 3.0 are not relevant to IPCTs.

Table 7-1 - Continued

General Provision Reference	Applies to 7.0	Comment
3.9.8.3	Yes	
3.9.8.4-3.9.8.5	No	Requirements for initial notifications and notifications of compliance status are specified in 7.6.1 and 7.6.2, respectively, of 7.0; other provisions of 3.0 are not relevant to IPCTs.
3.9.8.6-3.9.10	Yes	
3.10.1-3.10.2.1	Yes	7.7 requires an onsite record retention of five years.
3.10.2.2.1-3.10.2.2.11	No	
3.10.2.2.12	Yes	7.7 requires an onsite record retention of five years.
3.10.2.2.13	No	
3.10.2.2.14-3.10.2.3	Yes	7.7 requires an onsite record retention of five years.
3.10.3	No	
3.10.4	Yes	
3.10.5	No	
3.10.6	Yes	
3.11	No	
3.12-3.15	Yes	

1 DE Reg. 1788 (5/1/98)

08/11/2007

8.0 Emission Standards for Halogenated Solvent Cleaning

8.1 Applicability and designation of source.

8.1.1 The provisions of 8.0 of this regulation apply to each individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride (CAS No. 75- 09-2), perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1-trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5) or chloroform (CAS No. 67-66-3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5% by weight, as a cleaning or drying agent. The concentration of these solvents may be determined using Method 18 in Appendix A of 40 CFR Part 60, material safety data sheets, or engineering calculations. Wipe cleaning activities, such as using a rag containing halogenated solvent or a spray cleaner containing halogenated solvent are not covered under the provisions of 8.0 of this regulation.

8.1.2 Owners or operators of affected sources subject to the provisions of 8.0 of this regulation must also comply with the requirements of 3.0 of this regulation, according to the applicability of 3.0 of this regulation to such sources, as identified in Table 8-7 of this regulation.

8.1.3 Each solvent cleaning machine subject to 8.0 of this regulation that commences construction or reconstruction after November 29, 1993 shall achieve compliance with the provisions of 8.0 of this regulation immediately upon start-up or by November 11, 2001, whichever is later.

8.1.4 Each solvent cleaning machine subject to 8.0 of this regulation that commenced construction or reconstruction on or before November 29, 1993 shall achieve compliance with the provisions of 8.0 of this regulation no later than November 11, 2001.

8.1.5 [Reserved]

8.1.6 [Reserved]

8.1.7 [Reserved]

8.1.8 The owner or operator of an area source subject to 8.0 of this regulation is exempt from the obligation to obtain a Title V operating permit under 7 **DE Admin Code** 1130 of State of Delaware "Regulations Governing the Control of Air Pollution", if the owner or operator is not required to obtain a Title V operating permit under 3.1 of 7 **DE Admin Code** 1130 for a reason other than the owner or operator's status as an area source under 8.0 of this regulation. Notwithstanding the previous sentence, the owner or operator shall continue to comply with the provisions of 8.0 of this regulation applicable to area sources.

5 DE Reg. 1118 (11/1/01); 11 DE Reg. 221 (08/01/07)

8.2 Definitions.

Unless defined below, all terms in 8.0 of this regulation have the meanings given them in the Act or in 3.0 of this regulation.

"Administrator" means the Administrator of the United States Environmental Protection Agency.

"Air blanket" means the layer of air inside the solvent cleaning machine freeboard located above the solvent/air interface. The centerline of the air blanket is equidistant between the sides of the machine.

“Air knife system” means a device that directs forced air at high pressure, high volume, or a combination of high pressure and high volume, through a small opening directly at the surface of a continuous web part. The purpose of this system is to remove the solvent film from the surfaces of the continuous web part.

“Automated parts handling system” means a mechanical device that carries all parts and parts baskets at a controlled speed from the initial loading of soiled or wet parts through the removal of the cleaned or dried parts. Automated parts handling systems include, but are not limited to, hoists and conveyors.

“Batch cleaning machine” means a solvent cleaning machine in which individual parts or a set of parts move through the entire cleaning cycle before new parts are introduced into the solvent cleaning machine. An open-top vapor cleaning machine is a type of batch cleaning machine. A solvent cleaning machine, such as a ferris wheel or a cross-rod degreaser, that clean multiple batch loads simultaneously and are manually loaded are batch cleaning machines.

“Carbon adsorber” means a bed of activated carbon into which an air-solvent gas-vapor stream is routed and which adsorbs the solvent on the carbon.

“Clean liquid solvent” means fresh unused solvent, recycled solvent, or used solvent that has been cleaned of soils (e.g., skimmed of oils or sludge and strained of metal chips).

“Cleaning capacity” means, for a cleaning machine without a solvent/air interface, the maximum volume of parts that can be cleaned at one time. In most cases, the cleaning capacity is equal to the volume (length times width times height) of the cleaning chamber.

“Cold cleaning machine” means any device or piece of equipment that contains or uses liquid solvent, into which parts are placed to remove soils from the surfaces of the parts or to dry the parts. Cleaning machines that contain and use heated, nonboiling solvent to clean the parts are classified as cold cleaning machines.

“Combined squeegee and air-knife system” means a system consisting of a combination of a squeegee system and an air-knife system within a single enclosure.

“Consumption” means the amount of halogenated hazardous air pollutant solvent added to the solvent cleaning machine.

“Continuous web cleaning machine” means a solvent cleaning machine in which parts such as film, coils, wire, and metal strips are cleaned at speeds typically in excess of 11 feet per minute. Parts are generally uncoiled, cleaned such that the same part is simultaneously entering and exiting the solvent application area of the solvent cleaning machine, and then recoiled or cut. For the purposes of Section 8.0

of this regulation, all continuous web cleaning machines are considered to be a subset of in-line solvent cleaning machines.

"Cover" means a lid, top, or portal cover that shields the solvent cleaning machine openings from air disturbances when in place and is designed to be easily opened and closed without disturbing the vapor zone. Air disturbances include, but are not limited to, lip exhausts, ventilation fans, and general room drafts. Types of covers include, but are not limited to, sliding, biparting, and roll top covers.

"Cross-rod solvent cleaning machine" means a batch solvent cleaning machine in which parts baskets are suspended from "cross-rods" as they are moved through the machine. In a cross-rod cleaning machine, parts are loaded semi-continuously, and enter and exit the machine from a single portal.

"Downtime mode" means the time period when a solvent cleaning machine is not cleaning parts and the sump heating coils, if present, are turned off.

"Dwell" means the technique of holding parts within the freeboard area but above the vapor zone of the solvent cleaning machine. Dwell occurs after cleaning to allow solvent to drain from the parts or parts baskets back into the solvent cleaning machine.

"Dwell time" means the required minimum length of time that a part must dwell, as determined in 8.6.4 of this regulation.

"Emissions" means halogenated hazardous air pollutant solvent consumed (i.e., halogenated hazardous air pollutant solvent added to the machine) minus the liquid halogenated hazardous air pollutant solvent removed from the machine and the halogenated hazardous air pollutant solvent removed from the machine in the solid waste.

"Existing" means any solvent cleaning machine the construction or reconstruction of which was commenced on or before November 29, 1993. An existing solvent cleaning machine moved within a contiguous facility or to another facility under the same ownership remains an existing machine.

"Freeboard area" means; for a batch cleaning machine, the area within the solvent cleaning machine that extends from the solvent/air interface to the top of the solvent cleaning machine; for an in-line cleaning machine, it is the area within the solvent cleaning machine that extends from the solvent/air interface to the bottom of the entrance or exit opening, whichever is lower.

"Freeboard height" means; for a batch cleaning machine, the distance from the solvent/air interface, as measured during the idling mode, to the top of the cleaning machine; for an in-line cleaning machine, it is the distance from the solvent/air

interface to the bottom of the entrance or exit opening, whichever is lower, as measured during the idling mode.

"Freeboard ratio" means the ratio of the solvent cleaning machine freeboard height to the smaller interior dimension (length, width, or diameter) of the solvent cleaning machine.

"Freeboard refrigeration device" (also called a chiller) means a set of secondary coils mounted in the freeboard area that carries a refrigerant or other chilled substance to provide a chilled air blanket above the solvent vapor. A primary condenser capable of meeting the requirements of 8.4.5.2.1 of this regulation is defined as both a freeboard refrigeration device and a primary condenser for the purposes of these standards.

"Halogenated hazardous air pollutant solvent" or **"halogenated HAP solvent"** means methylene chloride (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1-trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5), and chloroform (CAS No. 67-66-3).

"Hoist" means a mechanical device that carries the parts basket and the parts to be cleaned from the loading area into the solvent cleaning machine and to the unloading area at a controlled speed. A hoist may be operated by controls or may be programmed to cycle parts through the cleaning cycle automatically.

"Idling mode" means the time period when a solvent cleaning machine is not actively cleaning parts and the sump heating coils, if present, are turned on.

"Idling-mode cover" means any cover or solvent cleaning machine design that allows the cover to shield the cleaning machine openings during the idling mode. A cover that meets this definition can also be used as a working-mode cover if that definition is also met.

"Immersion cold cleaning machine" means a cold cleaning machine in which the parts are immersed in the solvent when being cleaned. A remote reservoir cold cleaning machine that is also an immersion cold cleaning machine is considered an immersion cold cleaning machine for purposes of 8.0 of this regulation.

"In-line cleaning machine" or **"continuous cleaning machine"** means a solvent cleaning machine that uses an automated parts handling system, typically a conveyor, to automatically provide a continuous supply of parts to be cleaned. These solvent cleaning machines are fully enclosed except for the conveyor inlet and exit portals. In-line cleaning machines can be either cold or vapor cleaning machines.

"Leak-proof coupling" means a threaded or other type of coupling that prevents solvents from leaking while filling or draining solvent to and from the solvent cleaning machine.

“Lip exhaust” means a device installed at the top of the opening of a solvent cleaning machine that draws in air and solvent vapor from the freeboard area and ducts the air and vapor away from the solvent cleaning area.

“Monthly reporting period” means any calendar month in which the owner or operator of a solvent cleaning machine is required to calculate and report the solvent emissions from each solvent cleaning machine.

“New” means any solvent cleaning machine the construction or reconstruction of which is commenced after November 29, 1993.

“Open-top vapor cleaning machine” means a batch solvent cleaning machine that has its upper surface open to the air and boils solvent to create solvent vapor used to clean or dry parts.

“Part” means any object that is cleaned or dried in a solvent cleaning machine. Parts include, but are not limited to, discrete parts, assemblies, sets of parts, and parts cleaned or dried in a continuous web cleaning machine (i.e., continuous sheets of metal or film).

“Primary condenser” means a series of circumferential cooling coils on a vapor cleaning machine through which a chilled substance is circulated or recirculated to provide continuous condensation of rising solvent vapors and, thereby, create a concentrated solvent vapor zone.

“Reduced room draft” means decreasing the flow or movement of air across the top of the freeboard area of the solvent cleaning machine to meet the specifications of 8.4.5.2.2 of this regulation. Methods of achieving a reduced room draft include, but are not limited to, redirecting fans or air vents to not blow across the cleaning machine, moving the cleaning machine to a corner where there is less room draft, and constructing a partial or complete enclosure around the cleaning machine.

“Remote reservoir cold cleaning machine” means any device in which liquid solvent is pumped to a sink-like work area that drains solvent back into an enclosed container while parts are being cleaned, allowing no solvent to pool in the work area.

“Remote reservoir continuous web cleaning machine” means a continuous web cleaning machine in which there is no exposed solvent sump. In these solvent cleaning machines, the solvent is pumped from an enclosed chamber and is typically applied to the continuous web part through a nozzle or series of nozzles. The solvent then drains from the part and is collected and recycled through the machine, allowing no solvent to pool in the work or cleaning area.

“Soils” mean contaminants that are removed from the parts being cleaned. Soils include, but are not limited to, greases, oils, waxes, metal chips, carbon deposits, fluxes, and tars.

“Solvent/air interface” means, for a vapor cleaning machine, the location of contact between the concentrated solvent vapor layer and the air. This location of contact is defined as the mid-line height of the primary condenser coils. For a cold cleaning machine, it is the location of contact between the liquid solvent and the air.

“Solvent/air interface area” means; for a vapor cleaning machine, the surface area of the solvent vapor zone that is exposed to the air; for an in-line cleaning machine, it is the total surface area of all the sumps; for a cold cleaning machine, it is the surface area of the liquid solvent that is exposed to the air.

“Solvent cleaning machine” means any device or piece of equipment that uses halogenated HAP solvent liquid or vapor to remove soils from the surfaces of materials. Types of solvent cleaning machines include, but are not limited to, batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machines. Buckets, pails, and beakers with capacities of one liter (34 ounces) or less are not considered solvent cleaning machines.

“Solvent vapor zone” means; for a vapor cleaning machine, the area that extends from the liquid solvent surface to the level that solvent vapor is condensed. This condensation level is defined as the midline height of the primary condenser coils.

“Squeegee system” means a system that uses a series of pliable surfaces to remove the solvent film from the surfaces of the continuous web part. These pliable surfaces, called squeegees, are typically made of rubber or plastic media, and need to be periodically replaced to ensure continued proper function.

“Sump” means the part of a solvent cleaning machine where the liquid solvent is located.

“Sump heater coils” means the heating system on a cleaning machine that uses steam, electricity, or hot water to heat or boil the liquid solvent.

“Superheated part technology” means a system that is part of the continuous web process that heats the continuous web part either directly or indirectly to a temperature above the boiling point of the cleaning solvent. This could include a process step, such as a tooling die that heats the part as it is processed, as long as the part remains superheated through the cleaning machine.

“Superheated vapor system” means a system that heats the solvent vapor, either passively or actively, to a temperature above the solvent's boiling point. Parts

are held in the superheated vapor before exiting the machine to evaporate the liquid solvent on them. Hot vapor recycle is an example of a superheated vapor system.

"Vapor cleaning machine" means a batch or in-line solvent cleaning machine that boils liquid solvent generating solvent vapor that is used as a part of the cleaning or drying cycle.

"Water layer" means a layer of water that floats above the denser solvent and provides control of solvent emissions. In many cases, the solvent used in batch cold cleaning machines is sold containing the appropriate amount of water to create a water cover.

"Working mode" means the time period when the solvent cleaning machine is actively cleaning or drying parts.

"Working-mode cover" means any cover or solvent cleaning machine design that allows the cover to shield the cleaning machine openings from outside air disturbances while parts are being cleaned in the cleaning machine. A cover that is used during the working mode is opened only during parts entry and removal. A cover that meets this definition can also be used as an idling-mode cover if that definition is also met.

5 DE Reg. 1118 (11/1/01); 11 DE Reg. 221 (08/01/07)

8.3 Batch cold cleaning machine standards.

8.3.1 Each owner or operator of an immersion batch cold solvent cleaning machine shall comply with the requirements specified in 8.3.1.1 or 8.3.1.2 of this regulation.

8.3.1.1 Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal, and a water layer at a minimum thickness of 2.5 centimeters (1.0 inch) on the surface of the solvent within the cleaning machine or

8.3.1.2 Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal and a freeboard ratio of 0.75 or greater.

8.3.2 Each owner or operator of a remote-reservoir batch cold solvent cleaning machine shall employ a tightly fitting cover over the sink-like work area that shall be closed at all times except during the cleaning of parts.

8.3.3 Each owner or operator of a batch cold solvent cleaning machine complying with 8.3.1 or 8.3.2 of this regulation shall comply with the work and

operational practice requirements specified in 8.3.3.1 through 8.3.3.11 of this regulation as applicable.

8.3.3.1 All waste solvents shall be collected and stored in closed containers. The closed container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container.

8.3.3.2 If a flexible hose or flushing device is used, flushing shall be performed only within the freeboard area of the solvent cleaning machine. The solvent spray shall be a solid fluid stream, not an atomized or shower spray, at a pressure that does not exceed 10 pounds per square inch gauge.

8.3.3.3 The owner or operator shall drain solvent cleaned parts for 15 seconds or until dripping has stopped, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while draining. During the draining, tipping or rotating, the parts shall be positioned so the solvent drains directly into the solvent cleaning machine.

8.3.3.4 The owner or operator shall ensure that the solvent level does not exceed the fill line.

8.3.3.5 Spills during solvent transfer or use of the solvent cleaning machine shall be wiped up immediately. The wipe rags or other sorbent material shall be stored in closed containers meeting the requirements of 8.3.3.1 of this regulation.

8.3.3.6 When a pump-agitated solvent bath is used, the owner or operator shall ensure that the agitator is operated to produce a rolling motion of the solvent with no observable splashing against tank walls or parts being cleaned. Air-agitated solvent baths shall not be used.

8.3.3.7 The owner or operator shall ensure that, when the cover is open, the cold cleaning machine is not exposed to drafts greater than 40 meters per minute (132 feet per minute), as measured between one and two meters (3.3 and 6.6 feet) upwind and at the same elevation as the tank lip. In addition, work area fans shall be located and positioned so that they do not blow across the opening of the solvent cleaning machine.

8.3.3.8 Except as provided in 8.3.3.9 of this regulation, sponges, fabric, wood, and paper products shall not be cleaned.

8.3.3.9 The prohibition in 8.3.3.8 of this regulation does not apply to the cleaning of porous materials that are part of polychlorinated biphenyl (PCB) laden transformers if those transformers are handled throughout

the cleaning process and disposed of in compliance with an approved PCB disposal permit issued in accordance with the Toxic Substances Control Act.

8.3.3.10 Each operator of a solvent cleaning machine shall complete and pass the applicable sections of the test of solvent cleaning procedures in **Appendix A** of 8.0 of this regulation if requested during an inspection by the Department.

8.3.3.11 The owner or operator shall provide a permanent, legible, conspicuous label summarizing the operating requirements in 8.3.3 of this regulation.

8.3.4 Each owner or operator of a batch cold cleaning machine shall submit an initial notification report as described in 8.9.1 and 8.9.2 of this regulation and a compliance report as described in 8.9.3 of this regulation.

8.3.5 Each owner or operator subject to the requirements of 8.3.3.1 through 8.3.3.11 of this regulation may request to use measures other than those described in 8.3.3.1 through 8.3.3.11 of this regulation. The owner or operator must demonstrate to the Department that the alternative measures will result in equivalent or better emissions control compared to the measures described in 8.3.3.1 through 8.3.3.11 of this regulation. For example, storing solvent and solvent-laden materials in an enclosed area that is ventilated to a solvent recovery or destruction device may be considered an acceptable alternative.

5 DE Reg. 1118 (11/1/01); 11 DE Reg. 221 (08/01/07)

8.4 Batch vapor and in-line cleaning machine standards.

8.4.1 Except as provided in 8.5 of this regulation for all cleaning machines, each owner or operator of a solvent cleaning machine subject to the provisions of Section 8.0 of this regulation shall ensure that each existing or new batch vapor or in-line solvent cleaning machine subject to the provisions of Section 8.0 conforms to the design requirements specified in 8.4.1.1 through 8.4.1.7 of this regulation. The owner or operator of a continuous web cleaning machine shall comply with the requirements of 8.4.7 or 8.4.8 of this regulation, as appropriate, in lieu of complying with 8.4.1 of this regulation.

8.4.1.1 Each cleaning machine shall be designed or operated to meet the control equipment or technique requirements in 8.4.1.1.1 or 8.4.1.1.2 of this regulation.

8.4.1.1.1 An idling and downtime mode cover, as described in 8.4.4.1.1 of this regulation, that may be readily opened or closed,

that completely covers the cleaning machine openings when in place, and is free of cracks, holes, and other defects.

8.4.1.1.2 A reduced room draft as described in 8.4.5.2.2 of this regulation.

8.4.1.2 Each cleaning machine shall have a freeboard ratio of 0.75 or greater.

8.4.1.3 Each cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts.

8.4.1.4 Each vapor cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils. This requirement does not apply to a vapor cleaning machine that uses steam to heat the solvent.

8.4.1.5 Each vapor cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.

8.4.1.6 Each vapor cleaning machine shall have a primary condenser.

8.4.1.7 Each cleaning machine that uses a lip exhaust shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the requirements of 8.4.5.2.7 of this regulation.

8.4.2 Except as provided in 8.5 of this regulation, each owner or operator of an existing or new batch vapor cleaning machine shall comply with either 8.4.2.1 or 8.4.2.2 of this regulation.

8.4.2.1 Each owner or operator of a batch vapor cleaning machine with a solvent/air interface area of 1.21 square meters (13 square feet) or less shall comply with the requirements specified in either 8.4.2.1.1 or 8.4.2.1.2 of this regulation.

8.4.2.1.1 Employ one of the control combinations listed in Table 8-1 of this regulation. Alternatively, equivalent methods of control can be submitted to and approved by the Administrator, using the procedure in 8.10 of this regulation.

Table 8-1 - Control Combinations for Batch Vapor Solvent Cleaning

Machines With a Solvent/Air Interface Area of 1.21 Square Meters (13 Square Feet) or Less

Option	Control combinations
1	Working-mode cover, freeboard ratio of 1.0, superheated vapor.
2	Freeboard refrigeration device, superheated vapor.
3	Working-mode cover, freeboard refrigeration device.
4	Reduced room draft, freeboard ratio of 1.0, superheated vapor.
5	Freeboard refrigeration device, reduced room draft.
6	Freeboard refrigeration device, freeboard ratio of 1.0.
7	Freeboard refrigeration device, dwell.
8	Reduced room draft, dwell, freeboard ratio of 1.0.
9	Freeboard refrigeration device, carbon adsorber.
10	Freeboard ratio of 1.0, superheated vapor, carbon adsorber.

Note: Unlike most of the control techniques available for complying with 8.0 of this regulation, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of 8.0 of this regulation, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

8.4.2.1.2 Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.22 kilograms per hour per square meter (0.045 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in 8.6.1 of this regulation and Method 307 in Appendix A of 40 CFR Part 63.

8.4.2.2 Each owner or operator of a batch vapor cleaning machine with a solvent/air interface area greater than 1.21 square meters (13 square feet) shall comply with the requirements specified in either 8.4.2.2.1 or 8.4.2.2.2 of this regulation.

8.4.2.2.1 Employ one of the control combinations listed in Table 8-2 of this regulation. Alternatively, equivalent methods of control can be submitted to and approved by the Administrator, using the procedure in 8.10 of this regulation.

Table 8-2 - Control Combinations for Batch Vapor Solvent Cleaning Machines With a Solvent/Air Interface Area Greater than 1.21 Square Meters (13 Square Feet)

Option	Control combinations
1	Freeboard refrigeration device, freeboard ratio of 1.0, superheated vapor.
2	Dwell, freeboard refrigeration device, reduced room draft.
3	Working-mode cover, freeboard refrigeration device, superheated vapor.
4	Freeboard ratio of 1.0, reduced room draft, superheated vapor.
5	Freeboard refrigeration device, reduced room draft, superheated vapor.
6	Freeboard refrigeration device, reduced room draft, freeboard ratio of 1.0.
7	Freeboard refrigeration device, superheated vapor, carbon adsorber.

Note: Unlike most of the control techniques available for complying with 8.0 of this regulation, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of 8.0 of this regulation, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

8.4.2.2.2 Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.22 kilograms per hour per square meter (0.045 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in 8.6.1 of this regulation and Method 307 in Appendix A of 40 CFR Part 63.

8.4.3 Except as provided in 8.5 of this regulation for all cleaning machines, each owner or operator of an in-line cleaning machine shall comply with 8.4.3.1 or 8.4.3.2 of this regulation as appropriate. The owner or operator of a continuous web cleaning machine shall comply with the requirements of 8.4.7 or 8.4.8 of this regulation, as appropriate, in lieu of complying with 8.4.3 of this regulation.

8.4.3.1 Each owner or operator of an existing in-line cleaning machine shall comply with the requirements specified in either 8.4.3.1.1 or 8.4.3.1.2 of this regulation.

8.4.3.1.1 Employ one of the control combinations listed in Table 8-3 of this regulation. Alternatively, equivalent methods of control can be submitted to and approved by the Administrator, using the procedure in 8.10 of this regulation.

Table 8-3 - Control Combinations for Existing In-Line Solvent Cleaning Machines

Option	Control combinations
1	Superheated vapor, freeboard ratio of 1.0.
2	Freeboard refrigeration device, freeboard ratio of 1.0.
3	Dwell, freeboard refrigeration device.
4	Dwell, carbon adsorber.

Note: Unlike most of the control techniques available for complying with 8.0 of this regulation, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to

install on halogenated solvent cleaning machines to meet the requirements of 8.0 of this regulation, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

8.4.3.1.2 Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.10 kilograms per hour per square meter (0.021 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in 8.6.1 of this regulation and Method 307 in Appendix A of 40 CFR Part 63.

8.4.3.2 Each owner or operator of a new in-line cleaning machine shall comply with the requirements specified in either 8.4.3.2.1 or 8.4.3.2.2 of this regulation.

8.4.3.2.1 Employ one of the control combinations listed in Table 8-4 of this regulation. Alternatively, equivalent methods of control can be submitted to and approved by the Administrator, using the procedure in 8.10 of this regulation.

Table 8-4 - Control Combinations for New In-Line Solvent Cleaning Machines

Option	Control combinations
1	Superheated vapor, freeboard refrigeration device.
2	Freeboard refrigeration device, carbon adsorber.
3	Superheated vapor, carbon adsorber.

Note: Unlike most of the control techniques available for complying with 8.0 of this regulation, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of 8.0 of this

regulation, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

8.4.3.2.2 Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.10 kilograms per hour per square meter (0.021 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in 8.6.1 of this regulation and Method 307 in Appendix A of 40 CFR Part 63.

8.4.4 Except as provided in 8.5 of this regulation for all cleaning machines, each owner or operator of an existing or new batch vapor or in-line solvent cleaning machine shall meet all of the following required work and operational practices specified in 8.4.4.1 through 8.4.4.15 of this regulation as applicable. The owner or operator of a continuous web cleaning machine shall comply with the requirements of 8.4.7 or 8.4.8 of this regulation, as appropriate, in lieu of complying with 8.4.4 of this regulation.

8.4.4.1 Control air disturbances across the cleaning machine opening or openings by incorporating the control equipment or techniques in 8.4.4.1.1 or 8.4.4.1.2 of this regulation.

8.4.4.1.1 Cover or covers to each solvent cleaning machine shall be in place during the idling mode, and during the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover or covers to not be in place.

8.4.4.1.2 A reduced room draft as described in 8.4.5.2.2 of this regulation.

8.4.4.2 The parts baskets or the parts being cleaned in an open-top batch vapor cleaning machine shall not occupy more than 50% of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of 0.9 meters per minute (three feet per minute) or less.

8.4.4.3 Any spraying operations shall be done within the vapor zone or within a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine). The solvent spray shall be a solid fluid stream, not an atomized or shower spray.

8.4.4.4 Parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes shall be tipped or rotated

before being removed from any solvent cleaning machine unless an equally effective approach has been approved by the Administrator.

8.4.4.5 Parts baskets or parts shall not be removed from any solvent cleaning machine until dripping has stopped.

8.4.4.6 During startup of each vapor cleaning machine, the primary condenser shall be turned on before the sump heater.

8.4.4.7 During shutdown of each vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.

8.4.4.8 When solvent is added to or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leak-proof couplings, and the discharge end of the pipe shall be located beneath the liquid solvent surface.

8.4.4.9 Each solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Administrator's satisfaction to achieve the same or better results as those recommended by the manufacturer.

8.4.4.10 Each operator of a solvent cleaning machine shall complete and pass the applicable sections of the test of solvent cleaning procedures in **Appendix A** of 8.0 of this regulation if requested during an inspection by the Department.

8.4.4.11 Waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.

8.4.4.12 Sponges, fabric, wood, and paper products shall not be cleaned.

8.4.4.13 Spills during solvent transfer or use of the solvent cleaning machine shall be wiped up immediately. The wipe rags or other sorbent material shall be stored in closed containers meeting the requirements of 8.4.4.11 of this regulation.

8.4.4.14 Work area fans shall be located and positioned so that they do not blow across the opening of the solvent cleaning machine.

8.4.4.15 The owner or operator shall provide a permanent, legible, conspicuous label summarizing the operating requirements in 8.4.4 of this regulation.

8.4.5 Each owner or operator of a solvent cleaning machine complying with 8.4.2, 8.4.3, 8.4.7, or 8.4.8 of this regulation shall comply with the requirements specified in 8.4.5.1 through 8.4.5.4 of this regulation.

8.4.5.1 Conduct monitoring of each control device used to comply with 8.4 of this regulation as provided in 8.7 of this regulation.

8.4.5.2 Determine during each monitoring period whether each control device used to comply with these standards meets the requirements specified in 8.4.5.2.1 through 8.4.5.2.11 of this regulation.

8.4.5.2.1 If a freeboard refrigeration device is used to comply with these standards, the owner or operator shall ensure that the chilled air blanket temperature (in ^{o}F), measured at the center of the air blanket, is no greater than 30% of the solvent's boiling point.

8.4.5.2.2 If a reduced room draft is used to comply with these standards, the owner or operator shall comply with the requirements specified in 8.4.5.2.2.1 and 8.4.5.2.2.2 of this regulation.

8.4.5.2.2.1 Ensure that the flow or movement of air across the top of the freeboard area of the solvent cleaning machine or within the solvent cleaning machine enclosure does not exceed 15.2 meters per minute (50 feet per minute) at any time as measured using the procedures in 8.7.4 of this regulation.

8.4.5.2.2.2 Establish and maintain the operating conditions under which the wind speed was demonstrated to be 15.2 meters per minute (50 feet per minute) or less as described in 8.7.4 of this regulation.

8.4.5.2.3 If a working-mode cover is used to comply with these standards, the owner or operator shall comply with the requirements specified in 8.4.5.2.3.1 and 8.4.5.2.3.2 of this regulation.

8.4.5.2.3.1 Ensure that the cover opens only for part entrance and removal and completely covers the cleaning machine openings when closed.

8.4.5.2.3.2 Ensure that the working-mode cover is maintained free of cracks, holes, and other defects.

8.4.5.2.4 If an idling-mode cover is used to comply with these standards, the owner or operator shall comply with the requirements specified in 8.4.5.2.4.1 and 8.4.5.2.4.2 of this regulation.

8.4.5.2.4.1 Ensure that the cover is in place whenever parts are not in the solvent cleaning machine and completely covers the cleaning machine openings when in place.

8.4.5.2.4.2 Ensure that the idling-mode cover is maintained free of cracks, holes, and other defects.

8.4.5.2.5 If a dwell is used to comply with these standards, the owner or operator shall comply with the requirements specified in 8.4.5.2.5.1 and 8.4.5.2.5.2 of this regulation.

8.4.5.2.5.1 Determine the appropriate dwell time for each type of part or parts basket, or determine the minimum dwell time using the most complex part type or parts basket, as described in 8.6.4 of this regulation.

8.4.5.2.5.2 Ensure that, after cleaning, each part is held in the solvent cleaning machine freeboard area above the vapor zone for the dwell time determined for that particular part or parts basket, or for the minimum dwell time determined using the most complex part type or parts basket.

8.4.5.2.6 If a superheated vapor system is used to comply with these standards, the owner or operator shall comply with the requirements specified in 8.4.5.2.6.1 through 8.4.5.2.6.3 of this regulation.

8.4.5.2.6.1 Ensure that the temperature of the solvent vapor at the center of the superheated vapor zone is at least 10^{o}F above the solvent's boiling point.

8.4.5.2.6.2 Ensure that the manufacturer's specifications for determining the minimum proper dwell time within the superheated vapor system is followed.

8.4.5.2.6.3 Ensure that parts remain within the superheated vapor for, at least, the minimum proper dwell time.

8.4.5.2.7 If a carbon adsorber in conjunction with a lip exhaust or other exhaust internal to the cleaning machine is used to comply with these standards, the owner or operator shall comply with the following requirements:

8.4.5.2.7.1 Ensure that the concentration of halogenated HAP solvents in the exhaust from this device does not exceed 25 parts per million of halogenated HAP solvents as measured using the procedure in 8.7.5 of this regulation. If the halogenated HAP solvent concentration in the carbon adsorber exhaust exceeds 25 parts per million, the owner or operator shall adjust the desorption schedule or replace the disposable canister, if not a regenerative system, so that the exhaust concentration of halogenated HAP solvent is brought below 25 parts per million.

8.4.5.2.7.2 Ensure that the carbon adsorber bed is not bypassed during desorption.

8.4.5.2.7.3 Ensure that the lip exhaust is located above the solvent cleaning machine cover so that the cover closes below the lip exhaust level.

8.4.5.2.8 If a superheated part system is used to comply with the standards for continuous web cleaning machines in 8.4.7 of this regulation, the owner or operator shall ensure that the temperature of the continuous web part is at least 10 degrees Fahrenheit above the solvent boiling point while the part is traveling through the cleaning machine.

8.4.5.2.9 If a squeegee system is used to comply with the continuous web cleaning requirements of 8.4.7.3.3 or 8.4.8.2.1 of this regulation, the owner or operator shall comply with the following requirements.

8.4.5.2.9.1 Determine the appropriate maximum product throughput for the squeegees used in the squeegee system, as described in 8.6.6 of this regulation.

8.4.5.2.9.2 Conduct the weekly monitoring required in 8.7.1.3 of this regulation. Record the results required in 8.8.1.6 of this regulation.

8.4.5.2.9.3 Calculate the total amount of continuous web product processed since the squeegees were replaced and compare to the maximum product throughput for the squeegees.

8.4.5.2.9.4 Ensure squeegees are replaced at or before the maximum product throughput is attained.

8.4.5.2.9.5 Redetermine the maximum product throughput for the squeegees if any solvent film is visible on the continuous web part immediately after it exits the cleaning machine.

8.4.5.2.10 If an air knife system is used to comply with the continuous web cleaning requirements of 8.4.7.3.3 or 8.4.8.2.1 of this regulation, the owner or operator shall comply with the following requirements.

8.4.5.2.10.1 Determine the air knife parameter and parameter value that demonstrate to the Department=s satisfaction that the air knife is properly operating. An air knife is properly operating if no visible solvent film remains on the continuous web part after it exits the cleaning machine.

8.4.5.2.10.2 Maintain the selected air knife parameter value at the level determined in 8.4.5.2.10.1 of this regulation.

8.4.5.2.10.3 Conduct the weekly monitoring required in 8.7.1.3 of this regulation.

8.4.5.2.10.4 Redetermine the proper air knife parameter value if any solvent film is visible on the continuous web part immediately after it exits the cleaning machine.

8.4.5.2.11 If a combination squeegee and air knife system is used to comply with the continuous web cleaning requirements of 8.4.7.3.3 or 8.4.8.2.1 of this regulation, the owner or operator shall comply with the following requirements.

8.4.5.2.11.1 Determine the system parameter and value that demonstrate to the Department=s satisfaction that the system is properly operating.

8.4.5.2.11.2 Maintain the selected parameter value at the level determined in 8.4.5.2.11.1 of this regulation.

8.4.5.2.11.3 Conduct the weekly monitoring required in 8.7.1.3 of this regulation.

8.4.5.2.11.4 Redetermine the proper parameter value if any solvent film is visible on the continuous web part immediately after it exits the cleaning machine.

8.4.5.3 If any of the requirements of 8.4.5.2 of this regulation are not met, determine whether an exceedance has occurred using the criteria in 8.4.5.3.1 and 8.4.5.3.2 of this regulation.

8.4.5.3.1 An exceedance has occurred if the requirements of 8.4.5.2.2.2, 8.4.5.2.3.1, 8.4.5.2.4.1, 8.4.5.2.5, 8.4.5.2.6.2, 8.4.5.2.6.3, 8.4.5.2.7.2, 8.4.5.2.7.3, 8.4.5.2.8, 8.4.5.2.9.1 through 8.4.5.2.9.4, 8.4.5.2.10.1 through 8.4.5.2.10.3, or 8.4.5.2.11.1 through 8.4.5.2.11.3 of this regulation have not been met.

8.4.5.3.2 An exceedance has occurred if the requirements of 8.4.5.2.1, 8.4.5.2.2.1, 8.4.5.2.3.2, 8.4.5.2.4.2, 8.4.5.2.6.1, 8.4.5.2.7.1, 8.4.5.2.9.5, 8.4.5.2.10.4, or 8.4.5.2.11.4 of this regulation have not been met and are not corrected within 15 days of detection. Adjustments or repairs shall be made to the solvent cleaning system or control device to reestablish required levels. The parameter must be remeasured immediately upon adjustment or repair and demonstrated to be within required limits.

8.4.5.4 The owner or operator shall report all exceedances and all corrections and adjustments made to avoid an exceedance as specified in 8.9.8 of this regulation.

8.4.6 Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards in 8.4.2.1.2, 8.4.2.2.2, 8.4.3.1.2, or 8.4.3.2.2 of this regulation shall comply with the requirements specified in 8.4.6.1 through 8.4.6.5 of this regulation.

8.4.6.1 Conduct an initial performance test to comply with the requirements specified in 8.4.6.1.1 and 8.4.6.1.2 of this regulation.

8.4.6.1.1 Demonstrate compliance with the applicable idling emission limit.

8.4.6.1.2 Establish parameters that will be monitored to demonstrate compliance. If a control device is used that is listed in 8.4.5.2 of this regulation, then the requirements for that control device as listed in 8.4.5.2 shall be used unless the owner or operator can demonstrate to the Administrator's satisfaction that an alternative strategy is equally effective.

8.4.6.2 Conduct the periodic monitoring of the parameters used to demonstrate compliance as described in 8.7.6 of this regulation.

8.4.6.3 Operate the solvent cleaning machine within parameters identified in the initial performance test.

8.4.6.4 If any of the requirements in 8.4.6.1 through 8.4.6.3 of this regulation are not met, determine whether an exceedance has occurred using the criteria in 8.4.6.4.1 and 8.4.6.4.2 of this regulation.

8.4.6.4.1 If using a control listed in 8.4.5 of this regulation, the owner or operator shall comply with the appropriate parameter values in 8.4.5.2 of this regulation and the exceedance delineations in 8.4.5.3.1 and 8.4.5.3.2 of this regulation.

8.4.6.4.2 If using a control not listed in 8.4.5 of this regulation, the owner or operator shall indicate whether the exceedance of the parameters that are monitored to determine the proper functioning of this control would be classified as an immediate exceedance or whether a 15 day repair period would be allowed. This information must be submitted to the Administrator for approval.

8.4.6.5 The owner or operator shall report all exceedances and all corrections and adjustments made to avoid an exceedance as specified in 8.9.8 of this regulation.

8.4.7 Except as provided in 8.4.8 and 8.5 of this regulation for remote reservoir continuous web cleaning machines, each owner or operator of a continuous web cleaning machine shall comply with 8.4.7.1 through 8.4.7.4 of this regulation for each continuous web cleaning machine.

8.4.7.1 Except as provided in 8.4.7.2 of this regulation, install, maintain, and operate one of the following control combinations on each continuous web cleaning machine.

8.4.7.1.1 For each existing continuous web cleaning machine, the following control combinations are allowed:

8.4.7.1.1.1 Superheated vapor or superheated part technology, and a freeboard ratio of 1.0 or greater.

8.4.7.1.1.2 Freeboard refrigeration device and a freeboard ratio of 1.0 or greater.

8.4.7.1.1.3 Carbon adsorption system meeting the requirements of 8.4.5.2.7 of this regulation.

8.4.7.1.2 For each new continuous web cleaning machine, the following control combinations are allowed:

8.4.7.1.2.1 Superheated vapor or superheated part technology, and a freeboard refrigeration device.

8.4.7.1.2.2 A freeboard refrigeration device and a carbon adsorber meeting the requirements of 8.4.5.2.7 of this regulation.

8.4.7.1.2.3 Superheated vapor or superheated part technology, and a carbon adsorber meeting the requirements of 8.4.5.2.7 of this regulation.

8.4.7.2 If a carbon adsorber system can be demonstrated to the Department=s satisfaction to have an overall solvent control efficiency (i.e., capture efficiency times removal efficiency) of 70% or greater, this system is equivalent to the options in 8.4.7 of this regulation.

8.4.7.3 In lieu of complying with the provisions of 8.4.1 of this regulation, the owner or operator of a continuous web cleaning machine shall comply with the following provisions:

8.4.7.3.1 Each cleaning machine shall meet one of the following control equipment or technique requirements:

8.4.7.3.1.1 An idling and downtime mode cover, as described in 8.4.4.1.1 of this regulation, that may be readily opened or closed; that completely covers the cleaning machine openings when in place; and is free of cracks, holes, and other defects. A continuous web part that completely occupies an entry or exit port when the machine is idle is considered to meet this requirement.

8.4.7.3.1.2 A reduced room draft as described in 8.4.5.2.2 of this regulation.

8.4.7.3.1.3 Gasketed or leak-proof doors that separate both the continuous web part feed reel and take-up reel from the room atmosphere if the doors are checked according to the requirements of 8.4.5.2.3 of this regulation.

8.4.7.3.1.4 A cleaning machine that is demonstrated to the Department=s satisfaction to be under negative pressure during idling and downtime and is vented to a carbon adsorption system that meets the requirements of either 8.4.5.2.7 or 8.4.7.2 of this regulation.

8.4.7.3.2 Each continuous web cleaning machine shall have a freeboard ratio of 0.75 or greater unless that cleaning machine is a remote reservoir continuous web cleaning machine.

8.4.7.3.3 Each cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts, unless the cleaning machine is a continuous web cleaning machine that has a squeegee system or air knife system installed, maintained, and operated on the continuous web cleaning machine meeting the requirements of 8.4.5 of this regulation.

8.4.7.3.4 Each vapor cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils. This requirement does not apply to a vapor cleaning machine that uses steam to heat the solvent.

8.4.7.3.5 Each vapor cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.

8.4.7.3.6 Each vapor cleaning machine shall have a primary condenser.

8.4.7.3.7 Each cleaning machine that uses a lip exhaust or any other exhaust within the solvent cleaning machine shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that

meets the requirements of either 8.4.5.2.7 or 8.4.7.2 of this regulation.

8.4.7.4 In lieu of complying with the provisions of 8.4.4 of this regulation, the owner or operator of a continuous web cleaning machine shall comply with the following provisions:

8.4.7.4.1 Control air disturbances across the cleaning machine opening or openings by incorporating one of the following control equipment or techniques:

8.4.7.4.1.1 Cover or covers to each solvent cleaning machine shall be in place during the idling mode and during the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover or covers to not be in place. A continuous web part that completely occupies an entry or exit port when the machine is idle is considered to meet this requirement.

8.4.7.4.1.2 A reduced room draft as described in 8.4.5.2.2 of this regulation.

8.4.7.4.1.3 Gasketed or leak-proof doors or covers that separate both the continuous web part feed reel and take-up reel from the room atmosphere if the doors are checked according to the requirements of 8.4.5.2.3 of this regulation.

8.4.7.4.1.4 A cleaning machine that is demonstrated to the Department=s satisfaction to be under negative pressure during idling and downtime and is vented to a carbon adsorption system that meets either the requirements of 8.4.5.2.7 or 8.4.7.2 of this regulation.

8.4.7.4.2 Any spraying operations shall be conducted in a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine) or within a machine having a door or cover that meets the requirements of 8.4.7.4.1.3 of this regulation. The solvent spray shall be a solid fluid stream, not an atomized or shower spray.

8.4.7.4.3 During startup of each vapor cleaning machine, the primary condenser shall be turned on before the sump heater.

8.4.7.4.4 During shutdown of each vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.

8.4.7.4.5 When solvent is added to or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leak-proof couplings, and the discharge end of the pipe shall be located beneath the liquid solvent surface.

8.4.7.4.6 Each solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Administrator's satisfaction to achieve the same or better results as those recommended by the manufacturers.

8.4.7.4.7 Waste solvent, still bottoms, sump bottoms, and waste absorbent materials used in the cleaning process for continuous web cleaning machines shall be collected and stored in waste containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.

8.4.7.4.8 Except as provided in 8.4.7.4.9 of this regulation, sponges, fabric, wood, and paper products shall not be cleaned.

8.4.7.4.9 The prohibition 8.4.7.4.8 of this regulation does not apply to absorbent materials that are used as part of the cleaning process of continuous web cleaning machines, including rollers and roller covers.

8.4.7.4.10 Each operator of a solvent cleaning machine shall complete and pass the applicable sections of the test of solvent cleaning procedures in **Appendix A** of 8.0 of this regulation if requested during an inspection by the Department.

8.4.7.4.11 Spills during solvent transfer or use of the solvent cleaning machine shall be wiped up immediately. The wipe rags or other sorbent material shall be stored in closed containers meeting the requirements of 8.4.7.4.7 of this regulation.

8.4.7.4.12 Work area fans shall be located and positioned so that they do not blow across the opening of the solvent cleaning machine.

8.4.7.4.13 The owner or operator shall provide a permanent, legible, conspicuous label summarizing the operating requirements in 8.4.7.4 of this regulation.

8.4.8 Except as provided in 8.5 of this regulation, each owner or operator of a remote reservoir continuous web cleaning machine shall comply with 8.4.8.1 through 8.4.8.3 of this regulation.

8.4.8.1 Except as provided in 8.4.8.2 of this regulation, install, maintain, and operate one of the following controls on each new remote reservoir continuous web cleaning machine.

8.4.8.1.1 Superheated vapor or superheated part technology.

8.4.8.1.2 A carbon adsorber meeting the requirements of 8.4.5.2.7 of this regulation.

8.4.8.1.3 If a carbon adsorber system can be demonstrated to the Department's satisfaction to have an overall solvent control efficiency (i.e., capture efficiency times removal efficiency) of 70% or greater, this system is equivalent to the options in 8.4.8.1.1 and 8.4.8.1.2 of this regulation.

8.4.8.2 In lieu of complying with the provisions of 8.4.1 of this regulation, the owner or operator of a remote reservoir continuous web cleaning machine shall comply with the following provisions:

8.4.8.2.1 Each cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts, unless the cleaning machine is a continuous web cleaning machine that has a squeegee system or air knife system installed, maintained, and operated on the continuous web cleaning machine meeting the requirements of 8.4.5 of this regulation.

8.4.8.2.2 Each vapor cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils.

8.4.8.2.3 Each vapor cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.

8.4.8.2.4 Each vapor cleaning machine shall have a primary condenser.

8.4.8.2.5 Each cleaning machine that uses a lip exhaust or any other exhaust within the solvent cleaning machine shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the requirements of either 8.4.5.2.7 or 8.4.7.2 of this regulation.

8.4.8.3 In lieu of complying with the provisions of 8.4.4 of this regulation, the owner or operator of a remote reservoir continuous web cleaning machine shall comply with the following provisions:

8.4.8.3.1 Any spraying operations shall be conducted in a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine) or within a machine having a door or cover that meets the requirements of 8.4.7.4.1.3 of this regulation. The solvent spray shall be a solid fluid stream, not an atomized or shower spray.

8.4.8.3.2 During startup of each vapor cleaning machine, the primary condenser shall be turned on before the sump heater.

8.4.8.3.3 During shutdown of each vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.

8.4.8.3.4 When solvent is added to or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leak-proof couplings, and the discharge end of the pipe shall be located beneath the liquid solvent surface.

8.4.8.3.5 Each solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Administrator's satisfaction to achieve the same or better results as those recommended by the manufacturers.

8.4.8.3.6 Waste solvent, still bottoms, sump bottoms, and waste absorbent materials used in the cleaning process for continuous web cleaning machines shall be collected and stored in closed containers. The closed containers may contain a device that would

allow pressure relief, but would not allow liquid solvent to drain from the container.

8.4.8.3.7 Except as provided in 8.4.8.3.8 of this regulation, sponges, fabric, wood, and paper products shall not be cleaned.

8.4.8.3.8 The prohibition in 8.4.8.3.7 of this regulation does not apply to absorbent materials that are used as part of the cleaning process of continuous web cleaning machines, including rollers and roller covers.

8.4.8.3.9 Each operator of a solvent cleaning machine shall complete and pass the applicable sections of the test of solvent cleaning procedures in **Appendix A** of 8.0 of this regulation if requested during an inspection by the Department.

8.4.8.3.10 Spills during solvent transfer or use of the solvent cleaning machine shall be wiped up immediately. The wipe rags or other sorbent material shall be stored in closed containers meeting the requirements of 8.4.8.3.6 of this regulation.

8.4.8.3.11 Work area fans shall be located and positioned so that they do not blow across the opening of the solvent cleaning machine.

8.4.8.3.12 The owner or operator shall provide a permanent, legible, conspicuous label summarizing the operating requirements in 8.4.8.3 of this regulation.

5 DE Reg. 1118 (11/1/01); 11 DE Reg. 221 (08/01/07)

8.5 Alternative standards.

8.5.1 As an alternative to meeting the requirements in 8.4 of this regulation, each owner or operator of a batch vapor or in-line solvent cleaning machine can elect to comply with the requirements of 8.5 of this regulation. An owner or operator of a solvent cleaning machine who elects to comply with 8.5 of this regulation shall comply with the requirements specified in either 8.5.1.1 or 8.5.1.2 of this regulation.

8.5.1.1 If the cleaning machine has a solvent/air interface, as defined in 8.2 of this regulation, the owner or operator shall comply with the requirements specified in 8.5.1.1.1 and 8.5.1.1.2 of this regulation.

8.5.1.1.1 Maintain a log of solvent additions and deletions for each solvent cleaning machine.

8.5.1.1.2 Ensure that the emissions from each solvent cleaning machine are equal to or less than the applicable emission limit presented in Table 8-5 of this regulation as determined using the procedures in 8.6.2 and 8.6.3 of this regulation.

Table8-5 - Emission Limits for Batch Vapor and In-Line Solvent Cleaning Machines With a Solvent/Air Interface

Solvent cleaning machine	Three -month rolling average monthly emission limit (kilograms/square meters/month)
Batch vapor solvent cleaning machines	150
Existing in-line solvent cleaning machines	153
New in-line solvent cleaning machines	99

8.5.1.2 If the cleaning machine is a batch vapor cleaning machine and does not have a solvent/air interface, the owner or operator shall comply with the requirements specified in 8.5.1.2.1 and 8.5.1.2.2 of this regulation.

8.5.1.2.1 Maintain a log of solvent additions and deletions for each solvent cleaning machine.

8.5.1.2.2 Ensure that the emissions from each solvent cleaning machine are equal to or less than the appropriate limits as described in 8.5.1.2.2.1 or 8.5.1.2.2.2 of this regulation, as applicable.

8.5.1.2.2.1 For cleaning machines with a cleaning capacity, as reported in 8.9.4 of this regulation, that is less than or equal to 2.95 cubic meters (104 cubic feet), the emission limit shall be determined using Table 8-6 of this regulation. If the cleaning capacity of the cleaning machine falls between two cleaning capacity sizes, then the lower of the two emission limits applies.

Table 8-6 - Emission Limits for Cleaning Machines Without a Solvent/Air Interface

Cleaning capacity (cubic meters)	Three-month rolling average monthly emission limit (kilograms/month)	Cleaning capacity (cubic meters)	Three-month rolling average monthly emission limit kilograms/month)
0.00	0	1.50	421
0.05	55	1.55	429
0.10	83	1.60	438
0.15	106	1.65	446
0.20	126	1.70	454
0.25	144	1.75	462
0.30	160	1.80	470
0.35	176	1.85	477
0.40	190	1.90	485
0.45	204	1.95	493
0.50	218	2.00	500
0.55	231	2.05	508
0.60	243	2.10	515
0.65	255	2.15	522
0.70	266	2.20	530
0.75	278	2.25	537
0.80	289	2.30	544
0.85	299	2.35	551
0.90	310	2.40	558
0.95	320	2.45	565
1.00	330	2.50	572
1.05	340	2.55	579
1.10	349	2.60	585
1.15	359	2.65	592
1.20	368	2.70	599
1.25	377	2.75	605
1.30	386	2.80	612
1.35	395	2.85	619
1.40	404	2.90	625
1.45	412	2.95	632

8.5.1.2.2.2 For cleaning machines with a cleaning capacity as reported in 8.9.4 of this regulation, that is greater than 2.95 cubic meters, the emission limit shall be determined using equation 8-1.

$$EL = 330 * (Vol)^{0.6} \qquad (8\text{-}1)$$

where:
EL = the three-month rolling average monthly emission limit (kilograms/month).
Vol = the cleaning capacity of the solvent cleaning machine (cubic meters).

8.5.2 Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with 8.5.1 of this regulation shall demonstrate compliance with the applicable three-month rolling average monthly emission limit on a monthly basis as described in 8.6.2 and 8.6.3 of this regulation.

8.5.3 If the applicable three-month rolling average emission limit is not met, an exceedance has occurred. All exceedances shall be reported as required in 8.9.8 of this regulation.

8.5.4 As an alternative to meeting the requirements in 8.4 of this regulation, each owner or operator of a continuous web cleaning machine can demonstrate an overall cleaning system control efficiency of 70% or greater using the procedures in 8.6.7 of this regulation. This demonstration can be made for either a single cleaning machine or for a solvent cleaning system that contains one or more cleaning machines and ancillary equipment, such as storage tanks and distillation units. If the demonstration is made for a cleaning system, the facility must identify any modifications required to the procedures in 8.6.7 of this regulation and they must be approved by the Administrator.

5 DE Reg. 1118 (11/1/01); 11 DE Reg. 221 (08/01/07)

8.6 Test methods.

8.6.1 Except as provided in 8.6.6 and 8.6.7 of this regulation for continuous web cleaning machines, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with an idling emission limit standard in 8.4.2.1.2, 8.4.2.2.2, 8.4.3.1.2, or 8.4.3.2.2 of this regulation shall determine the idling emission rate of the solvent cleaning machine using Method 307 in Appendix A of 40 CFR Part 63.

8.6.2 Except as provided in 8.6.7 of this regulation for continuous web cleaning machines, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with 8.5 of this regulation shall, on the first operating day of every month ensure that the solvent cleaning machine system contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent, and used solvent that have been cleaned of soils. A fill line must be indicated during the first month the measurements are made. The solvent level within the machine must be returned to the same fill-line each month, immediately prior to calculating

monthly emissions as specified in 8.6.3 of this regulation. The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations.

8.6.3 Except as provided in 8.6.6 and 8.6.7 of this regulation for continuous web cleaning machines, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with 8.5 of this regulation shall, on the first operating day of the month, comply with the requirements specified in 8.6.3.1 through 8.6.3.3 of this regulation.

8.6.3.1 Using the records of all solvent additions and deletions for the previous monthly reporting period required in 8.5.1 of this regulation, determine solvent emissions (Ei and En) using equation 8-2 for cleaning machines with a solvent/air interface and using equation 8-3 for cleaning machines without a solvent/air interface:

$$Ei = (SAi - LSRi - SSRi) / AREAi \quad (8\text{-}2)$$

$$En = (SAi - LSRi - SSRi) \quad (8\text{-}3)$$

where:

Ei = the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent monthly reporting period i, (kilograms of solvent per square meter of solvent/air interface area per month).

En = the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent monthly reporting period i, (kilograms of solvent per month).

SAi = the total amount of halogenated HAP liquid solvent added to the solvent cleaning machine during the most recent monthly reporting period i, (kilograms of solvent per month).

LSRi = the total amount of halogenated HAP liquid solvent removed from the solvent cleaning machine during the most recent monthly reporting period i, (kilograms of solvent per month).

SSRi = the total amount of halogenated HAP solvent removed from the solvent cleaning machine in solid waste, obtained as described in 8.6.3.2 of this regulation, during the most recent monthly reporting period i, (kilograms of solvent per month).

AREAi = the solvent/air interface area of the solvent cleaning machine (square meters).

8.6.3.2 Determine SSRi using the method specified in 8.6.3.2.1 or 8.6.3.2.2 of this regulation.

8.6.3.2.1 From tests conducted using Method 25d in Appendix A of 40 CFR Part 60.

8.6.3.2.2 By engineering calculations included in the compliance report.

8.6.3.3 Determine the monthly rolling average (EAi and EAn) for the three-month period ending with the most recent reporting period using equation 8-4 for cleaning machines with a solvent/air interface or equation 8-5 for cleaning machines without a solvent/air interface:

$$EAi = \frac{\sum_{j=1}^{3} Ei}{3} \qquad (8\text{-}4)$$

$$EAn = \frac{\sum_{j=1}^{3} En}{3} \qquad (8\text{-}5)$$

where:

EAi = the average halogenated HAP solvent emissions over the preceding three monthly reporting periods, (kilograms of solvent per square meter of solvent/air interface area per month).

EAn = the average halogenated HAP solvent emissions over the preceding three monthly reporting periods, (kilograms of solvent per month).

Ei = halogenated HAP solvent emissions for each month (j) for the most recent three monthly reporting periods, (kilograms of solvent per square meter of solvent/air interface area per month).

En = halogenated HAP solvent emissions for each month (j) for the most recent three monthly reporting periods, (kilograms of solvent per month).

j = 1 = the most recent monthly reporting period.

j = 2 = the monthly reporting period immediately prior to j = 1.

j = 3 = the monthly reporting period immediately prior to j = 2.

8.6.4 Each owner or operator of a batch vapor or in-line solvent cleaning machine using a dwell to comply with 8.4 of this regulation shall determine the appropriate dwell time for each part or parts basket using the procedure specified in 8.6.4.1 and 8.6.4.2 of this regulation.

8.6.4.1 Determine the amount of time for the part or parts basket to cease dripping once placed in the vapor zone. The part or parts basket used for this determination must be at room temperature before being placed in the vapor zone.

8.6.4.2 The proper dwell time for parts to remain in the freeboard area above the vapor zone is no less than 35% of the time determined in 8.6.4.1 of this regulation.

8.6.5 An owner or operator of a source shall determine their potential to emit from all solvent cleaning operations, using the procedures described in 8.6.5.1 through 8.6.5.3 of this regulation. A facility's total potential to emit is the sum of the HAP emissions from all solvent cleaning operations, plus all HAP emissions from other sources within the facility.

8.6.5.1 Determine the potential to emit (PTEi) for each individual solvent cleaning machine using equation 8-6.

$$PTEi = Hi * Wi * SAIi \quad (8\text{-}6)$$

where:
PTEi = the potential to emit for solvent cleaning machine i, (kilograms of solvent per year).
Hi = hours of operation for solvent cleaning machine i, (hours per year).
= 8760 hours per year, unless otherwise restricted by a Federally enforceable requirement.
Wi = the working mode uncontrolled emission rate, (kilograms per square meter per hour).
= 1.95 kilograms per square meter per hour for batch vapor and cold cleaning machines.
= 1.12 kilograms per square meter per hour for in-line cleaning machines.
SAIi =solvent/air interface area of each solvent cleaning machine i, (square meters). The solvent/air interface area for those machines that have a solvent/air interface is defined in 15.2 of this regulation. Cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area using the procedure in 8.6.5.2 of this regulation.

8.6.5.2 Cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area (SAI) using equation 8-7.

$$SAI = 2.20 * (Vol)^{0.6} \quad (8\text{-}7)$$

where:
SAI = the solvent/air interface area, (square meters).
Vol = the cleaning capacity of the solvent cleaning machine, (cubic meters).

8.6.5.3 Sum the PTEi for all solvent cleaning operations to obtain the total potential to emit for solvent cleaning operations at the facility.

8.6.6 Each owner or operator of a continuous web cleaning machine using a squeegee system to comply with 8.4.7.3 of this regulation shall determine the maximum product throughput using the method described in 8.6.6.1 through 8.6.6.4 of this regulation. The maximum product throughput for each squeegee type used at a facility must be determined prior to November 11, 2001, the compliance date for these solvent cleaning machines.

8.6.6.1 Conduct daily visual inspections of the continuous web part. This monitoring shall be conducted at the point where the continuous web part exits the squeegee system. It is not necessary for the squeegees to be new at the time monitoring is begun if the following two conditions are met:

8.6.6.1.1 The continuous web part leaving the squeegee system has no visible solvent film.

8.6.6.1.2 The amount of continuous web that has been processed through the squeegees since the last replacement is known.

8.6.6.2 Continue daily monitoring until a visible solvent film is noted on the continuous web part.

8.6.6.3 Determine the length of continuous web product that has been cleaned using the squeegee since it was installed.

8.6.6.4 The maximum product throughput for the purposes of 8.0 of this regulation is equal to the time it takes to clean 95% of the length of product determined in 8.6.6.3 of this regulation. This time period, in days, may vary depending on the amount of continuous web product cleaned each day.

8.6.7 Each owner or operator of a continuous web cleaning machine demonstrating compliance with the alternative standard of 8.5.4 of this regulation shall, on the first day of every month, ensure that the solvent cleaning machine contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent, and used solvent that have been cleaned of soils. A fill-line must be indicated during the first month the measurements are made. The solvent level with the machine must be returned to the same fill-line each month, immediately prior to calculating overall cleaning system control efficiency emissions as specified in 8.6.8 of this regulation. The solvent cleaning machine does not need to be emptied and filled with fresh unused solvent prior to the calculation.

8.6.8 Each owner or operator of a continuous web cleaning machines complying with 8.5.4 of this regulation shall, on the first operating day of the month, comply with the following requirements.

8.6.8.1 Using the records of all solvent additions, solvent deletions, and solvent recovered from the carbon adsorption system for the previous monthly reporting period required in 8.8.5 of this regulation, determine the overall cleaning system control efficiency (Eo) using equation 8-8 as follows:

$$Eo = (Ri * 100) / (Ri + Sai - SSRi) \qquad (8\text{-}8)$$

where:
Eo = overall cleaning system control efficiency.
Ri = the total amount of halogenated HAP liquid solvent recovered from the carbon adsorption system and recycled to the solvent cleaning system during the most recent monthly reporting period, i, (kilograms of solvent per month).
Sai = the total amount of halogenated HAP liquid solvent added to the solvent cleaning system during the most recent monthly reporting period, i, (kilograms of solvent per month).
SSRi = the total amount of halogenated HAP solvent removed from the solvent cleaning system in solid waste, obtained as described in 8.6.3.2 of this regulation, during the most recent monthly reporting period, i, (kilograms of solvent per month).

5 DE Reg. 1118 (11/1/01); 11 DE Reg. 221 (08/01/07)

8.7 Monitoring procedures.

8.7.1 Except as provided in 8.7.7 of this regulation, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards in 8.4.2.1.1, 8.4.2.2.1, 8.4.3.1.1, 8.4.3.2.1, 8.4.7.1, or 8.4.7.2 of this regulation shall conduct monitoring and record the results on a weekly basis for the control devices, as appropriate, specified in 8.7.1.1 through 8.7.1.5 of this regulation.

8.7.1.1 If a freeboard refrigeration device is used to comply with these standards, the owner or operator shall use a thermometer or thermocouple to measure the temperature at the center of the air blanket during the idling mode.

8.7.1.2 If a superheated vapor system is used to comply with these standards, the owner or operator shall use a thermometer or thermocouple to measure the temperature at the center of the

superheated solvent vapor zone while the solvent cleaning machine is in the idling mode.

8.7.1.3 If a squeegee system, air knife system, or combination squeegee and air knife system is used to comply with the requirements of 8.4.7 or 8.4.8 of this regulation, the owner or operator shall visually inspect the continuous web part exiting the solvent cleaning machine to ensure that no solvent film is visible on the part.

8.7.1.4 Except as provided in 8.7.1.5 of this regulation, if a superheated part system is used to comply with the requirements of 8.4.7 or 8.4.8 of this regulation, the owner or operator shall use a thermometer, thermocouple, or other temperature measurement device to measure the temperature of the continuous web part while it is in the solvent cleaning machine. This measurement can also be taken at the exit of the solvent cleaning machine.

8.7.1.5 As an alternative to complying with 8.7.1.4 of this regulation, the owner or operator can provide data, sufficient to satisfy the Department, that demonstrate that the part temperature remains above the boiling point of the solvent at all times that the part is within the continuous web solvent cleaning machine. This data could include design and operating conditions such as information supporting any exothermic reaction inherent in the processing.

8.7.2 Except as provided in 8.7.7 of this regulation, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards of 8.4.2.1.1, 8.4.2.2.1, 8.4.3.1.1, or 8.4.3.2.1 of this regulation shall conduct monitoring and record the results on a monthly basis for the control devices, as appropriate, specified in 8.7.2.1 and 8.7.2.2 of this regulation.

8.7.2.1 If a cover (working-mode, downtime-mode, or idling-mode cover) is used to comply with these standards, the owner or operator shall conduct a visual inspection to determine if the cover is opening and closing properly, completely covers the cleaning machine openings when closed, and is free of cracks, holes, and other defects.

8.7.2.2 If a dwell is used, the owner or operator shall determine the actual dwell time by measuring the period of time that parts are held within the freeboard area of the solvent cleaning machine after cleaning.

8.7.3 Except as provided in 8.7.7 of this regulation, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment or idling standards in 8.4 of this regulation shall monitor the hoist

speed and record the results as described in 8.7.3.1 through 8.7.3.4 of this regulation.

8.7.3.1 The owner or operator shall determine the hoist speed by measuring the time it takes for the hoist to travel a measured distance. The speed is equal to the distance in meters divided by the time in minutes (meters per minute).

8.7.3.2 The monitoring shall be conducted monthly. If after the first year, no exceedances of the hoist speed are measured, the owner or operator may begin monitoring the hoist speed quarterly.

8.7.3.3 If an exceedance of the hoist speed occurs during quarterly monitoring, the monitoring frequency returns to monthly until another year of compliance without an exceedance is demonstrated.

8.7.3.4 If an owner or operator can demonstrate to the Department's satisfaction in the initial compliance report that the hoist cannot exceed a speed of 3.4 meters per minute (11 feet per minute), the required monitoring frequency is quarterly, including during the first year of compliance.

8.7.4 Except as provided in 8.7.7 of this regulation, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards in 8.4.2.1.1, 8.4.2.2.1, 8.4.3.1.1, or 8.4.3.2.1 of this regulation using a reduced room draft shall conduct monitoring and record the results as specified in 8.7.4.1 or 8.7.4.2 of this regulation.

8.7.4.1 If the reduced room draft is maintained by controlling room parameters (i.e., redirecting fans, closing doors and windows, etc.), the owner or operator shall conduct an initial monitoring test of the wind speed and of room parameters, quarterly monitoring of wind speed, and weekly monitoring of room parameters as specified in 8.7.4.1.1 and 8.7.4.1.2 of this regulation.

8.7.4.1.1 Measure the wind speed within 6 inches above the top of the freeboard area of the solvent cleaning machine using the procedure specified in 8.7.4.1.1.1 through 8.7.4.1.1.4 of this regulation.

8.7.4.1.1.1 Determine the direction of the wind current by slowly rotating a velometer or similar device until the maximum speed is located.

8.7.4.1.1.2 Orient a velometer in the direction of the wind current at each of the four corners of the machine.

8.7.4.1.1.3 Record the reading for each corner.

8.7.4.1.1.4 Average the values obtained at each corner and record the average wind speed.

8.7.4.1.2 Monitor on a weekly basis the room parameters established during the initial compliance test that are used to achieve the reduced room draft.

8.7.4.2 If an enclosure (full or partial) is used to achieve a reduced room draft, the owner or operator shall conduct an initial monitoring test and, thereafter, monthly monitoring tests of the wind speed within the enclosure using the procedure specified in 8.7.4.2.1 and 8.7.4.2.2 of this regulation and a monthly visual inspection of the enclosure to determine if it is free of cracks, holes and other defects.

8.7.4.2.1 Determine the direction of the wind current in the enclosure by slowly rotating a velometer inside the entrance to the enclosure until the maximum speed is located.

8.7.4.2.2 Record the maximum wind speed.

8.7.5 Except as provided in 8.7.7 of this regulation, each owner or operator using a carbon adsorber to comply with 8.0 of this regulation shall measure and record the concentration of halogenated HAP solvents in the exhaust of the carbon adsorber daily. This test shall be conducted while the solvent cleaning machine is in the working mode and is venting to the carbon adsorber. The exhaust concentration shall be determined as specified in 8.7.5.1 and 8.7.5.2 of this regulation.

8.7.5.1 Measure the solvent concentration in the exhaust using one of the following analytical techniques:

8.7.5.1.1 A colorimetric detector tube designed to measure a concentration of 25 parts per million by volume of the halogenated HAP solvent in air to an accuracy of ±25% and used in accordance with the manufacturer's instructions.

8.7.5.1.2 A flame ionization analyzer used in accordance with Method 25A in Appendix A of 40 CFR Part 60.

8.7.5.1.3 A nondispersive infrared analyzer used in accordance with Method 25B in Appendix A of 40 CFR Part 60.

8.7.5.2 Provide a sampling port for monitoring within the exhaust outlet of the carbon adsorber that is easily accessible and located at least eight stack or duct diameters downstream from any flow disturbance such as a bend, expansion, contraction, or outlet; downstream from no other inlet; and two stack or duct diameters upstream from any flow disturbance such as a bend, expansion, contraction, inlet or outlet.

8.7.6 Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards of 8.4.2.1.2, 8.4.2.2.2, 8.4.3.1.2, or 8.4.3.2.2 of this regulation shall comply with the requirements specified in 8.7.6.1 and 8.7.6.2 of this regulation.

8.7.6.1 If using controls listed in 8.7.1 through 8.7.5 of this regulation, the owner or operator shall comply with the monitoring frequency requirements in 8.7.1 through 8.7.5 of this regulation.

8.7.6.2 If using controls not listed in 8.7.1 through 8.7.5 of this regulation, the owner or operator shall establish the monitoring frequency for each control and submit it to the Administrator for approval in the initial test report.

8.7.7 Each owner or operator using a control device listed in 8.7.1 through 8.7.5 of this regulation can use alternative monitoring procedures approved by the Administrator.

5 DE Reg. 1118 (11/1/01); 11 DE Reg. 221 (08/01/07)

8.8 Recordkeeping requirements.

8.8.1 Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of 8.4 of this regulation shall maintain records in written or electronic form specified in 8.8.1.1 through 8.8.1.7 of this regulation for the lifetime of the machine.

8.8.1.1 Owner's manuals, or if not available, written maintenance and operating procedures, for the solvent cleaning machine and control equipment.

8.8.1.2 The date of installation for the solvent cleaning machine and all of its control devices. If the exact date for installation is not known, a letter certifying that the cleaning machine and its control devices were installed prior to, or on, November 29, 1993, or after November 29, 1993, may be substituted.

8.8.1.3 If a dwell is used to comply with these standards, records of the tests required in 8.6.4 of this regulation to determine an appropriate dwell time for each part or parts basket.

8.8.1.4 Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards of 8.4.2.1.2, 8.4.2.2.2, 8.4.3.1.2, or 8.4.3.2.2 of this regulation shall maintain records of the initial performance test, including the idling emission rate and values of the monitoring parameters measured during the test.

8.8.1.5 Records of the halogenated HAP solvent content for each solvent used in a solvent cleaning machine subject to the provisions of Section 8.0 of this regulation.

8.8.1.6 If a squeegee system is used to comply with these standards, records of the test required in 8.7.6 of this regulation to determine the maximum product throughput for the squeegees and records of both the weekly monitoring required in 8.7.1.3 of this regulation for visual inspection and the length of continuous web product cleaned during the previous week.

8.8.1.7 If an air knife system or a combination squeegee and air knife system is used to comply with these standards, records of the determination of the proper operating parameter and parameter value for the air knife system.

8.8.2 Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with 8.4 of this regulation shall maintain records specified in 8.8.2.1 through 8.8.2.4 of this regulation either in electronic or written form for a period of five years.

8.8.2.1 The results of control device monitoring required in 8.7 of this regulation.

8.8.2.2 Information on the actions taken to comply with 8.4.5 and 8.4.6 of this regulation. This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.

8.8.2.3 Estimates of annual solvent consumption for each solvent cleaning machine.

8.8.2.4 If a carbon adsorber is used to comply with these standards, records of the date and results of the daily measurement of the

halogenated HAP solvent concentration in the carbon adsorber exhaust required in 8.7.5 of this regulation.

8.8.3 Except as provided in 8.8.5 of this regulation for continuous web cleaning machines, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of 8.5 of this regulation shall maintain records specified 8.8.3.1 through 8.8.3.3 of this regulation either in electronic or written form for a period of five years.

8.8.3.1 The dates and amounts of solvent that are added to the solvent cleaning machine.

8.8.3.2 The solvent composition of wastes removed from cleaning machines as determined using the procedure described in 8.6.3.2 of this regulation.

8.8.3.3 Calculation sheets showing how monthly emissions and the rolling three-month average emissions from the solvent cleaning machine were determined, and the results of all calculations.

8.8.4 Each owner or operator of a solvent cleaning machine without a solvent/air interface complying with the provisions of 8.5 of this regulation shall maintain records on the method used to determine the cleaning capacity of the cleaning machine.

8.8.5 Each owner or operator of a continuous web cleaning machine complying with the provisions of 8.5.4 of this regulation shall maintain the following records in either electronic or written form for a period of five years.

8.8.5.1 The dates and amounts of solvent that are added to the solvent cleaning machine.

8.8.5.2 The dates and amounts of solvent that are recovered from the desorption of the carbon adsorber system.

8.8.5.3 The solvent composition of wastes removed from each cleaning machine as determined using the procedures in 8.6.3.2 of this regulation.

8.8.5.4 Calculation sheets showing the calculation and results of determining the overall cleaning system control efficiency, as required in 8.6 of this regulation.

5 DE Reg. 1118 (11/1/01); 11 DE Reg. 221 (08/01/07)

8.9 Reporting requirements.

8.9.1 Each owner or operator of an existing solvent cleaning machine subject to the provisions of 8.0 of this regulation shall submit an initial notification report to the Department no later than November 11, 2001. This report shall include the information specified in 8.9.1.1 through 8.9.1.6 of this regulation.

8.9.1.1 The name and address of the owner or operator.

8.9.1.2 The address (i.e., physical location) of the solvent cleaning machine or machines.

8.9.1.3 A brief description of each solvent cleaning machine including machine type (batch vapor, batch cold, vapor in-line or cold in-line), solvent/air interface area, and existing controls.

8.9.1.4 The date of installation for each solvent cleaning machine or a letter certifying that the solvent cleaning machine was installed prior to, or on, November 29, 1993.

8.9.1.5 The anticipated compliance approach for each solvent cleaning machine.

8.9.1.6 An estimate of annual halogenated HAP solvent consumption for each solvent cleaning machine.

8.9.2 Each owner or operator of a new solvent cleaning machine subject to the provisions of 8.0 of this regulation shall submit an initial notification report to the Department. New sources shall submit this report as soon as practicable before the construction or reconstruction is planned to commence or November 11, 2001, whichever is later. This report shall include all of the information required in 3.5.4.1 of this regulation, with the revisions and additions in 8.9.2.1 through 8.9.2.3 of this regulation.

8.9.2.1 The report shall include a brief description of each solvent cleaning machine including machine type (batch vapor, batch cold, vapor in-line or cold in-line), solvent/air interface area, and existing controls.

8.9.2.2 The report shall include the anticipated compliance approach for each solvent cleaning machine.

8.9.2.3 In lieu of 3.5.4.1.2.8 of this regulation, the owner or operator must report an estimate of annual halogenated HAP solvent consumption for each solvent cleaning machine.

8.9.3 Each owner or operator of a batch cold solvent cleaning machine subject to the provisions of 8.0 of this regulation shall submit a compliance report to the Department. For existing sources, this report shall be submitted to the Department no later than November 11, 2001. For new sources, this report shall be submitted to the Department no later than 150 days after startup or November 11, 2001, whichever is later. This report shall include the requirements specified in 8.9.3.1 through 8.9.3.4 of this regulation.

8.9.3.1 The name and address of the owner or operator.

8.9.3.2 The address (i.e., physical location) of the solvent cleaning machine or machines.

8.9.3.3 A statement, signed by the owner or operator of the solvent cleaning machine, stating that the solvent cleaning machine for which the report is being submitted is in compliance with the provisions of 8.0 of this regulation.

8.9.3.4 The compliance approach for each solvent cleaning machine.

8.9.4 Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of 8.4 of this regulation shall submit to the Department an initial statement of compliance for each solvent cleaning machine. For existing sources, this report shall be submitted to the Department no later than November 11, 2001. For new sources, this report shall be submitted to the Department no later than 150 days after startup or November 11, 2001, whichever is later. This statement shall include the requirements specified in 8.9.4.1 through 8.9.4.7 of this regulation.

8.9.4.1 The name and address of the owner or operator.

8.9.4.2 The address (i.e., physical location) of the solvent cleaning machine or machines.

8.9.4.3 A list of the control equipment used to achieve compliance for each solvent cleaning machine.

8.9.4.4 For each piece of control equipment required to be monitored, a list of the parameters that are monitored and the values of these parameters measured on or during the first month after the compliance date.

8.9.4.5 Conditions to maintain the wind speed requirements of 8.4.5.2.2 of this regulation, if applicable.

8.9.4.6 Each owner or operator of a solvent cleaning machine complying with the idling emission limit standards of 8.4.2.1.2, 8.4.2.2.2, 8.4.3.1.2, and 8.4.3.2.2 of this regulation shall submit a test report for tests of idling emissions meeting the specifications in Method 307 in Appendix A of 40 CFR Part 63. This report shall comply with the requirements specified in 8.9.4.6.1 through 8.9.4.6.4 of this regulation.

8.9.4.6.1 This test must be on the same specific model cleaner used at the source. The test can be done by the owner or operator of the affected machine or can be supplied by the vendor of that solvent cleaning machine or a third party.

8.9.4.6.2 This report must clearly state the monitoring parameters, monitoring frequency and the delineation of exceedances for each parameter.

8.9.4.6.3 If a solvent cleaning machine vendor or third party test report is used to demonstrate compliance, it shall include the following for the solvent cleaning machine tested: Name of person or persons or company that performed the test, model name, the date the solvent cleaning machine was tested, serial number, and a diagram of the solvent cleaning machine tested.

8.9.4.6.4 If a solvent cleaning machine vendor or third party test report is used, the owner or operator of the solvent cleaning machine shall comply with the requirements specified in 8.9.4.6.4.1 and 8.9.4.6.4.2 of this regulation.

8.9.4.6.4.1 Submit a statement by the solvent cleaning machine vendor that the solvent cleaning machine tested is the same as the solvent cleaning machine the report is being submitted for.

8.9.4.6.4.2 Demonstrate to the Department's satisfaction that the solvent emissions from the solvent cleaning machine for which the test report is being submitted are equal to or less than the solvent emissions from the solvent cleaning machine in the vendor test report.

8.9.4.7 If a carbon adsorber is used to comply with these standards, the date and results of the daily measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in 8.7.5 of this regulation.

8.9.5 Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of 8.5 of this regulation shall submit to the Department an initial statement of compliance for each solvent cleaning machine. For existing sources, this report shall be submitted to the Department no later than November 11, 2001. For new sources, this report shall be submitted to the Department no later than 150 days after startup or November 11, 2001, whichever is later. The statement shall include the information specified in 8.9.5.1 through 8.9.5.4 of this regulation.

8.9.5.1 The name and address of the owner or operator.

8.9.5.2 The address (i.e., physical location) of the solvent cleaning machine or machines.

8.9.5.3 The solvent/air interface area for each solvent cleaning machine or, for cleaning machines without a solvent/air interface, a description of the method used to determine the cleaning capacity and the results.

8.9.5.4 The results of the first three-month average emissions calculation.

8.9.6 Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of 8.4 of this regulation shall submit an annual report by February 1 of the year following the one for which the reporting is being made. This report shall include the requirements specified in 8.9.6.1 through 8.9.6.3 of this regulation.

8.9.6.1 A signed statement from the facility owner or his designee stating that, “All operators of solvent cleaning machines have received training on the proper operation of solvent cleaning machines and their control devices sufficient to pass the test required in 8.4.4.10 of this regulation.”

8.9.6.2 An estimate of solvent consumption for each solvent cleaning machine during the reporting period.

8.9.6.3 The reports required in 8.9.6 and 8.9.7 of this regulation can be combined into a single report for each facility.

8.9.7 Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of 8.5 of this regulation shall submit a solvent emission report every year. This solvent emission report shall contain the requirements specified in 8.9.7.1 through 8.9.7.4 of this regulation.

8.9.7.1 The size and type of each solvent cleaning machine subject to 8.0 of this regulation (solvent/air interface area or cleaning capacity).

8.9.7.2 The average monthly solvent consumption for the solvent cleaning machine in kilograms per month.

8.9.7.3 The three-month monthly rolling average solvent emission estimates calculated each month using the method as described in 8.6.3 of this regulation.

8.9.7.4 The reports required in 8.9.6 and 8.9.7 of this regulation can be combined into a single report for each facility.

8.9.8 Each owner or operator of a batch vapor or in-line solvent cleaning machine shall submit an exceedance report to the Department semiannually except when, the Department determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source or, an exceedance occurs. Once an exceedance has occurred, the owner or operator shall follow a quarterly reporting format until a request to reduce reporting frequency under 8.9.9 of this regulation is approved. Exceedance reports shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. The exceedance report shall include the applicable information in 8.9.8.1 through 8.9.8.3 of this regulation.

8.9.8.1 Information on the actions taken to comply with 8.4.5 and 8.4.6 of this regulation. This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.

8.9.8.2 If an exceedance has occurred, the reason for the exceedance and a description of the actions taken.

8.9.8.3 If no exceedances of a parameter have occurred, or a piece of equipment has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.

8.9.9 An owner or operator who is required to submit an exceedance report on a quarterly (or more frequent) basis may reduce the frequency of reporting to semiannual if the conditions in 8.9.9.1 through 8.9.9.3 of this regulation are met.

8.9.9.1 The source has demonstrated a full year of compliance without an exceedance.

8.9.9.2 The owner or operator continues to comply with all relevant recordkeeping and monitoring requirements specified in 8.7 and 8.8 of this regulation and in 3.0 of this regulation.

8.9.9.3 The Department does not object to a reduced frequency of reporting for the affected source as provided in 3.10.5.3.3 of this regulation.

8.9.10 [Reserved]

8.9.11 Each owner or operator of a solvent cleaning machine requesting an equivalency determination, as described in 8.10 of this regulation shall submit an equivalency request report to the Administrator (with copy to the Department). For existing sources, this report must be submitted to and approved by the Administrator no later than November 11, 2001. For new sources, this report must be submitted to and approved by the Administrator prior to startup or November 11, 2001, whichever is later.

5 DE Reg. 1118 (11/1/01); 11 DE Reg. 221 (08/01/07)

8.10 Equivalent methods of control.

Upon written application to the Administrator (with copy to the Department), the Administrator may approve the use of equipment or procedures after they have been satisfactorily demonstrated to be equivalent, in terms of reducing emissions of methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride or chloroform to the atmosphere, to those prescribed for compliance within a specified provision of 8.0 of this regulation. The application must contain a complete description of the equipment or procedure and the proposed equivalency testing procedure and the date, time, and location scheduled for the equivalency demonstration.

5 DE Reg. 1118 (11/1/01); 11 DE Reg. 221 (08/01/07)

8.11 [Reserved]

5 DE Reg. 1118 (11/1/01); 11 DE Reg. 221 (08/01/07)

Table 8-7 - Applicability of 3.0 to 8.0 of This Regulation

General Provisions Reference	Applies to 8.0		Comments
	BCC	BVI	
3.1.1.1-3.1.1.3	Yes	Yes	
3.1.1.4	Yes	Yes	Table 8-7 specifies applicability of each provision in 3.0 to 8.0.
3.1.1.5	No	No	
3.1.1.6	Yes	Yes	
3.1.1.7-3.1.1.9	No	No	
3.1.1.10	Yes	Yes	
3.1.1.11	No	No	8.0 allows submittal of notifications and reports through the U.S. mail, fax, and courier. 8.0 requires that the postmark for notifications and reports submitted through the U.S. mail or other non-Governmental mail carriers be on or before deadline specified in an applicable requirement.
3.1.1.12-3.1.1.14	Yes	Yes	
3.1.2.1	No	No	8.0 specifies applicability.
3.1.2.2	No	No	
3.1.2.3	Yes	Yes	
3.1.3.1	Yes	Yes	
3.1.3.2	Yes	Yes	8.1.8 exempts area sources subject to Section 8.0 from the obligation to obtain a Title V operating permit.
3.1.3.3	No	No	
3.1.3.4	No	No	
3.1.3.5	Yes	Yes	8.0 does not require continuous monitoring systems (CMS) or continuous opacity monitoring systems (COMS). Therefore, notifications and requirements for CMS and COMS specified in 3.0 do not apply to 8.0.
3.1.4	No	No	
3.1.5	Yes	Yes	
3.2	Yes	Yes	8.0 definitions (8.2) for existing and new overlap with the definitions for existing source and new source in 3.2. Both 3.0 and 8.0 also define Administrator.
3.3.1-3.3.3	Yes	Yes	
3.4.1.1-3.4.1.2	Yes	Yes	

Table 8-7 - Continued

General Provisions Reference	Applies to 8.0 BCC	Applies to 8.0 BVI	Comments
3.4.1.3-3.4.1.5	No	No	
3.4.2-3.4.3	Yes	Yes	
3.5.1.1	Yes	Yes	
3.5.1.2	Yes	Yes	
3.5.2.1	Yes	Yes	
3.5.2.2	No	No	
3.5.2.3-3.5.2.4	Yes	Yes	
3.5.2.5	No	No	
3.5.2.6	Yes	Yes	
6.5.3	No	No	
3.5.4-3.5.4.1.2.6	Yes	Yes	
3.5.4.1.2.7	No	No	
3.5.4.1.2.8	Yes	Yes	
3.5.4.1.2.9	No	No	
3.5.4.1.2.10-3.5.6	Yes	Yes	
3.6.1	Yes	Yes	
3.6.2.1-3.6.2.5	Yes	Yes	8.1 specifies compliance dates.
3.6.2.6	No	No	
3.6.2.7	No	No	8.0 has the same requirements for affected halogenated HAP solvent cleaning machine subcategories that are located at area sources as it does for those located at major sources
3.6.3.1-3.6.3.2	Yes	Yes	
3.6.3.3-3.6.3.4	No	No	
3.6.3.5	Yes	Yes	8.0 has the same requirements for affected halogenated HAP solvent cleaning machine subcategories that are located at area sources as it does for those located at major sources.
3.6.4	No	No	
3.6.5.1	Yes	Yes	
3.6.5.2	No	No	
3.6.5.3	No	No	8.0 overrides the requirement of a startup, shutdown, and malfunction plan. 8.0 specifies startup and shutdown procedures to be followed by an owner or operator for batch vapor and in-line cleaning machines.

Table 8-7 - Continued

General Provisions Reference	Applies to 8.0		Comments
	BCC	BVI	
3.6.6-3.6.7	Yes	Yes	
3.6.8	No	No	8.0 does not require compliance with an opacity or visible emission standard.
3.6.9.1-3.6.9.14	Yes	Yes	
3.6.9.15	No	No	
3.6.9.16	Yes	Yes	
3.6.10	Yes	Yes	
3.7.1-3.7.1.2	No	Yes	8.0 gives owners or operators the option to perform an idling emission performance test as a way of demonstrating compliance. Other options are also available that do not require a performance test.
3.7.1.2.1-3.7.1.2.8	No	No	
3.7.1.2.9-3.7.1.3	No	Yes	
3.7.2	No	Yes	This is only required for those owners or operators that choose the idling emission standard as their compliance option.
3.7.3.1	No	Yes	This is only required for those owners or operators that choose the idling emission standard as their compliance option.
3.7.3.2-3.7.3.3	No	No	8.0 does not require a site-specific test plan for the idling emission performance test.
3.7.3.4	No	No	8.0 does not require a performance test that involves the retrieval of gas samples, and therefore this does not apply.
3.7.4	No	No	Requirements do not apply to the idling emission performance test option.
3.7.5	No	Yes	
3.7.6	No	Yes	

Table 8-7 - Continued

General Provisions Reference	Applies to 8.0		Comments
	BCC	BVI	
3.7.7-3.7.7.1	No	Yes	8.0 specifies what is required to demonstrate idling emission standard compliance through the use of Method 307 in Appendix A of 40 CFR Part 63 and control device monitoring. Reports and records of testing and monitoring are required for compliance verification. Three runs of the test are required for compliance, as specified in 3.7.5.
3.7.7.2	No	No	
3.7.7.3	No	Yes	
3.7.8	No	No	8.0 does not require the use of a performance test to comply with the standard. The idling emission standard option (which requires an idling emission performance test) is an alternative option offered to owners or operators of batch vapor and in-line cleaning machines for compliance flexibility.
3.8.1.1-3.8.1.2	Yes	Yes	
3.8.1.3	No	No	
3.8.1.4-3.8.2	Yes	Yes	
3.8.3-3.8.5	No	No	8.0 does not require the use of continuous monitoring systems to demonstrate compliance.
3.8.6	Yes	Yes	
3.8.7	No	No	8.0 does not require continuous opacity monitoring systems and continuous monitoring systems data.
3.9.1.1-3.9.1.4	Yes	Yes	
3.9.2.1	Yes	Yes	

Table 8-7 - Continued

General Provisions Reference	Applies to 8.0 BCC	Applies to 8.0 BVI	Comments
3.9.2.2	Yes	Yes	8.0 includes all of those requirements stated in 3.0, except that 3.0 also requires a statement as to whether the affected source is a major or an area source, and an identification of the relevant standard (including the source=s compliance date). 8.0 also has some more specific information requirements specific to the affected source (see 8.9.1 and 8.9.2).
3.9.2.3	No	No	
3.9.2.4-3.9.2.4.1	Yes	Yes	
3.9.2.4.2-3.9.2.4.4	No	No	
3.9.2.4.5	Yes	Yes	
3.9.2.5	Yes	Yes	
3.9.3	Yes	Yes	
3.9.4	Yes	Yes	
3.9.5	Yes	Yes	Under 8.0, this requirement only applies to owners or operators choosing to comply with the idling emissions standard.
3.9.6	No	No	8.0 does not require opacity or visible emission observations.
3.9.7	No	No	8.0 does not require the use of continuous monitoring systems or continuous opacity monitoring systems.
3.9.8	No	No	8.9 requires an initial statement of compliance for existing sources to be submitted to the Department no later than November 11, 2001. For new sources, this report is to be submitted to the Department no later than 150 days after startup or November 11, 2001, whichever is later.
3.9.9	Yes	Yes	
3.9.10	Yes	Yes	
3.10.1	Yes	Yes	
3.10.2.1-3.10.2.2	No	No	Recordkeeping requirements are specified in 8.0.

Table 8-7 - Continued

General Provisions Reference	Applies to 8.0 BCC	BVI	Comments
3.10.2.3	Yes	Yes	
3.10.3.1-3.10.3.15	No	No	8.0 does not require continuous monitoring systems.
3.10.4.1	Yes	Yes	
3.10.4.2-3.10.4.5	No	No	Reporting requirements are specified in 8.0.
3.10.5.1-3.10.5.2	No	No	8.0 does not require continuous emissions monitoring systems.
3.10.5.3	No	No	8.0 does not require continuous monitoring systems.
3.10.5.4	No	No	8.0 does not require continuous opacity monitoring systems.
3.10.6	Yes	Yes	
3.11.1	Yes	Yes	
3.11.2	No	No	Flares are not a control option under 8.0
3.12.1-3.12.3	Yes	Yes	
3.13.1-3.13.3	Yes	Yes	
3.14	No	No	8.0 requirements do not require the use of the test methods incorporated by reference in 3.0.
3.15.1-3.15.2	Yes	Yes	

BCC = Batch Cold Cleaning Machines.
BVI = Batch Vapor and In-line Cleaning Machines.

5 DE Reg. 1118 (11/1/01); 11 DE Reg. 221 (08/01/07)

Appendix A to 8.0 of This Regulation –
Test of Solvent Cleaning Procedures

GENERAL QUESTIONS

1. What is the maximum allowable speed for parts entry and removal?
   A. 8.5 meters per minute (28 feet per minute)
   B. 3.4 meters per minute (11 feet per minute)
   C. 11 meters per minute (36 feet per minute)
   D. No limit

2. How do you ensure that parts enter and exit the solvent cleaning machine at the speed required in the regulation?
   A. Program on computerized hoist monitors speed
   B. Can judge the speed by looking at it
   C. Measure the time it takes the parts to travel a measured distance

3. Identify the sources of air disturbances.
   A. Fans
   B. Open doors
   C. Open windows
   D. Ventilation vents
   E. All of the above

4. What are the three operating modes?
   A. Idling, working and downtime
   B. Precleaning, cleaning, and drying
   C. Startup, shutdown, off
   D. None of the above

5. When can parts or parts baskets be removed from the solvent cleaning machine?
   A. When they are clean
   B. At any time
   C. When dripping stops
   D. Either A or C is correct

6. How must parts be oriented during cleaning?
   A. It does not matter as long as they fit in the parts basket
   B. So that the solvent pools in the cavities where the dirt is concentrated
   C. So that solvent drains from them freely

7. During startup, what must be turned on first, the primary condenser or the sump heater?
   A. Primary condenser
   B. Sump heater

C. Turn both on at same time
D. Either A or B is correct

8. During shutdown, what must be turned off first, the primary condenser or the sump heater?
   A. Primary condenser
   B. Sump heater
   C. Turn both off at same time
   D. Either A or B is correct

9. In what manner must solvent be added to and removed from the solvent cleaning machine? A. With leak proof couplings
   B. With the discharge end of the pipe below the liquid solvent surface
   C. So long as the solvent does not spill, the method does not matter
   D. A and B

10. What must be done with waste solvent and still and sump bottoms?
   A. Pour down the drain
   B. Store in closed container
   C. Store in a bucket
   D. A or B

11. What types of materials are prohibited from being cleaned in solvent cleaning machines using halogenated hazardous air pollutant solvents?
   A. Sponges
   B. Fabrics
   C. Paper
   D. All of the above

CONTROL DEVICE SPECIFIC QUESTIONS

Freeboard Refrigeration Device (FRD)

1. What temperature must the FRD achieve?
   A. Below room temperature
   B. 50^{o}F
   C. Below the solvent boiling point
   D. 30% below the solvent boiling point

Working-Mode Cover

2. When can a cover be open?
   A. While parts are in the cleaning machine
   B. During parts entry and removal
   C. During maintenance
   D. During measurements for compliance purposes

E. A and C
F. B, C, and D

3. Covers must be maintained in what condition?
   A. Free of holes
   B. Free of cracks
   C. So that they completely seal cleaner opening
   D. All of the above

Dwell

4. Where must the parts be held for the appropriate dwell time?
   A. In the vapor zone
   B. In the freeboard area above the vapor zone
   C. Above the cleaning machine
   D. In the immersion sump

ANSWERS

General Questions

1. B
2. A or C
3. E
4. A
5. C
6. C
7. A
8. B
9. D
10. B
11. D

Control Device Specific Questions

1. D
2. F
3. D
4. B

5 DE Reg. 1118 (11/1/01); 11 DE Reg. 221 (08/01/07)

9.0 [Reserved]

11 DE Reg. 221 (08/01/07)

10.0 [Reserved]

11 DE Reg. 221 (08/01/07)

11.0 [Reserved]

11 DE Reg. 221 (08/01/07)

08/11/2007

12.0 Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production

12.1 Applicability.

12.1.1 The requirements of 12.0 of this regulation apply to the owner or operator of each secondary aluminum production facility as defined in 12.4 of this regulation.

12.1.2 The requirements of 12.0 of this regulation apply to the following affected sources, located at a secondary aluminum production facility that is a major source of hazardous air pollutants (HAPs) as defined in 3.2 of this regulation:

12.1.2.1 Each new and existing aluminum scrap shredder;

12.1.2.2 Each new and existing thermal chip dryer;

12.1.2.3 Each new and existing scrap dryer/delacquering kiln/decoating kiln;

12.1.2.4 Each new and existing group 2 furnace;

12.1.2.5 Each new and existing sweat furnace;

12.1.2.6 Each new and existing dross-only furnace;

12.1.2.7 Each new and existing rotary dross cooler; and

12.1.2.8 Each new and existing secondary aluminum processing unit.

12.1.3 The requirements of 12.0 of this regulation pertaining to dioxin and furan (D/F) emissions and associated operating, monitoring, reporting and recordkeeping requirements apply to the following affected sources, located at a secondary aluminum production facility that is an area source of HAPs as defined in 3.2 of this regulation:

12.1.3.1 Each new and existing thermal chip dryer;

12.1.3.2 Each new and existing scrap dryer/delacquering kiln/decoating kiln;

12.1.3.3 Each new and existing sweat furnace; and

12.1.3.4 Each new and existing secondary aluminum processing unit, containing one or more group 1 furnace emission units processing other than clean charge.

12.1.4 The requirements of 12.0 of this regulation do not apply to facilities and equipment used for research and development that are not used to produce a saleable product.

12.1.5 The owner or operator of an area source subject to 12.0 of this regulation is exempt from the obligation to obtain a Title V operating permit under 7 **DE Admin Code** 1130 of State of Delaware "Regulations Governing the Control of Air Pollution", if the owner or operator is not required to obtain a Title V operating permit under 3.1 of 7 **DE Admin Code** 1130 for a reason other than the owner or operator's status as an area source under 12.0. Notwithstanding the previous sentence, the owner or operator shall continue to comply with the provisions of 12.0 applicable to area sources.

12.1.6 An aluminum die casting, aluminum foundry, or aluminum extrusion facility shall be considered to be an area source if it does not emit, or have the potential to emit considering controls, 10 tons per year or more of any single listed HAP or 25 tons per year of any combination of listed HAP from all emission sources which are located in a contiguous area and under common control, without regard to whether or not such sources are regulated under 12.0 of this regulation or any other standard of this regulation. In the case of an aluminum die casting facility, aluminum foundry, or aluminum extrusion facility which is an area source and is subject to provisions under 12.0 of this regulation only because it operates a thermal chip dryer, no furnace operated by such a facility shall be deemed to be subject to the requirements of 12.0 of this regulation if it melts only clean charge, internal scrap, or customer returns.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.2 Dates.

12.2.1 The owner or operator of an existing affected source must comply with the requirements of 12.0 of this regulation by June 11, 2003.

12.2.2 Except as provided in 12.2.3 of this regulation, the owner or operator of a new affected source that commences construction or reconstruction after February 11, 1999 must comply with the requirements of 12.0 of this regulation by June 11, 2003 or upon startup, whichever is later.

12.2.3 The owner or operator of any affected source which is constructed or reconstructed at any existing aluminum die casting facility, aluminum foundry, or aluminum extrusion facility which otherwise meets the applicability criteria set forth in 12.1 of this regulation must comply with the requirements of 12.0 of this regulation by June 11, 2003 or upon startup, whichever is later.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.3 Incorporation by reference.

12.3.1 The following material is incorporated by reference, as noted. This material is incorporated as it exists on March 23, 2000:

12.3.1.1 Chapters 3 and 5 of “Industrial Ventilation: A Manual of Recommended Practice” American Conference of Governmental Industrial Hygienists, (23rd edition, 1998), IBR approved for 12.7.3 of this regulation;

12.3.1.2 “Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update” (EPA/625/3-89/016); and

12.3.1.3 “Fabric Filter Bag Leak Detection Guidance” (September 1997).

12.3.2 The material incorporated by reference is available for inspection at the Office of the Air Quality Management Section, 156 S. State Street, Dover, DE; the Office of the Federal Register, 800 North Capitol Street NW, Suite 700, Washington, DC; and at the Air and Radiation Docket and Information Center, U.S. EPA, 401 M Street SW, Washington, DC. The material is also available for purchase from the following addresses:

12.3.2.1 Customer Service Department, American Conference of Governmental Industrial Hygienists (ACGIH), 1330 Kemper Meadow Drive, Cincinnati, OH 45240-1634, telephone number (513) 742-2020;

12.3.2.2 The National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA, NTIS no. PB 90-145756; and

12.3.2.3 U.S. Environmental Protection Agency; Office of Air Quality Planning and Standards; Emissions, Monitoring and Analysis Division; Emission Measurement Center (MD-19), Research Triangle Park, NC 27711.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.4 Definitions.

Unless defined below, all terms in 12.0 of this regulation have the meanings given them in the Act, or in 3.0 of this regulation.

"Add-on air pollution control device" means equipment installed on a process vent that reduces the quantity of a pollutant that is emitted to the air.

"Afterburner" means an air pollution control device that uses controlled flame combustion to convert combustible materials to noncombustible gases; also known as an incinerator or a thermal oxidizer.

"Aluminum scrap" means fragments of aluminum stock removed during manufacturing (i.e., machining), manufactured aluminum articles or parts rejected or discarded and useful only as material for reprocessing, and waste and discarded material made of aluminum.

"Aluminum scrap shredder" means a unit that crushes, grinds, or breaks aluminum scrap into a more uniform size prior to processing or charging to a scrap dryer/delacquering kiln/decoating kiln, or furnace. A bale breaker is not an aluminum scrap shredder.

"Bag leak" detection system means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other effect to monitor relative particulate matter loadings.

"Chips" means small, uniformly-sized, unpainted pieces of aluminum scrap, typically below 1¼ inches in any dimension, primarily generated by turning, milling, boring, and machining of aluminum parts.

“Clean charge” means furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; alloying elements; aluminum scrap known by the owner or operator to be entirely free of paints, coatings, and lubricants; uncoated/unpainted aluminum chips that have been thermally dried or treated by a centrifugal cleaner; aluminum scrap dried at 343^{o}C (650^{o}F) or higher; aluminum scrap delacquered/decoated at 482^{o}C (900^{o}F) or higher, and runaround scrap.

“Cover flux” means salt or salts added to the surface of molten aluminum in a group 1 or group 2 furnace, without agitation of the molten aluminum, for the purpose of preventing oxidation.

“Customer returns” means any aluminum product which is returned by a customer to the aluminum company that originally manufactured the product prior to resale of the product or further distribution in commerce, and which contains no paint or other solid coatings (i.e., lacquers).

“D/F” means dioxins and furans.

“Dioxins and furans” mean tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans.

“Dross” means the slags and skimmings from aluminum melting and refining operations consisting of fluxing agent or agents, impurities, or oxidized and non-oxidized aluminum, from scrap aluminum charged into the furnace.

“Dross-only furnace” means a furnace, typically of rotary barrel design, dedicated to the reclamation of aluminum from dross formed during melting, holding, fluxing, or alloying operations carried out in other process units. Dross and salt flux are the sole feedstocks to this type of furnace.

“Emission unit” means a group 1 furnace or in-line fluxer at a secondary aluminum production facility.

“Fabric filter” means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media; also known as a baghouse.

“Feed/charge” means, for a furnace or other process unit that operates in batch mode, the total weight of material (including molten aluminum, T-bar, sow, ingot, etc.) and alloying agents that enter the furnace during an operating cycle. For a furnace or other process unit that operates continuously, feed/charge means the weight of material (including molten aluminum, T-bar, sow, ingot, etc.) and alloying agents that enter the process unit within a specified time period (e.g., a time period equal to the performance test period). The feed/charge for a dross only furnace includes the total weight of dross and solid flux.

“Fluxing” means refining of molten aluminum to improve product quality, achieve product specifications, or reduce material loss, including the addition of solvents to remove impurities (solvent flux); and the injection of gases such as chlorine or chlorine mixtures, to remove magnesium (demagging) or hydrogen bubbles (degassing). Fluxing may be performed in the furnace or outside the furnace by an in-line fluxer.

“Furnace hearth” means the combustion zone of a furnace in which the molten metal is contained.

“Group 1 furnace” means a furnace of any design that melts, holds, or processes aluminum that contains paint, lubricants, coatings, or other foreign materials with or without reactive fluxing, or processes clean charge with reactive fluxing.

“Group 2 furnace” means a furnace of any design that melts, holds, or processes only clean charge and that performs no fluxing or performs fluxing using only nonreactive, non-HAP-containing/non-HAP-generating gases or agents.

“Hazardous air pollutant” or **“HAP”** means any air pollutant listed in or pursuant to section 112(b) of the Act.

“HCl” means, for the purposes of 12.0 of this regulation, emissions of hydrogen chloride that serve as a surrogate measure of the total emissions of hydrogen chloride, hydrogen fluoride, and chlorine.

“In-line fluxer” means a device exterior to a furnace, located in a transfer line from a furnace, used to refine (flux) molten aluminum; also known as a flux box, degassing box, or demagging box.

“Internal scrap” means all aluminum scrap regardless of the level of contamination which originates from castings or extrusions produced by an aluminum die casting facility, aluminum foundry, or aluminum extrusion facility, and which remains at all times within the control of the company that produced the castings or extrusions.

“Lime” means calcium oxide or other alkaline reagent.

“Lime-injection” means the continuous addition of lime upstream of a fabric filter.

“Melting/holding furnace” means a group 1 furnace that processes only clean charge, performs melting, holding, and fluxing functions, and does not transfer molten aluminum to or from another furnace except for purposes of alloy changes, off-specification product drains, or maintenance activities.

“Operating cycle” means for a batch process, the period beginning when the feed material is first charged to the operation and ending when all feed material charged to the operation has been processed. For a batch melting or holding furnace process, operating cycle means the period including the charging and melting of scrap aluminum and the fluxing, refining, alloying, and tapping of molten aluminum (the period from tap-to-tap).

“PM” means, for the purposes of 12.0 of this regulation, emissions of particulate matter that serve as a measure of total particulate emissions and as a surrogate for metal HAPs contained in the particulates, including but not limited to, antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium.

“Pollution prevention” means source reduction as defined under the Pollution Prevention Act of 1990 (e.g., equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control), and other practices that reduce or eliminate the creation of pollutants through increased efficiency in the use of raw materials, energy, water, or other resources, or protection of natural resources by conservation.

“Reactive fluxing” means the use of any gas, liquid, or solid flux (other than cover flux) that results in a HAP emission. Argon and nitrogen are not reactive and do not produce HAP.

“Reconstruction” means the replacement of components of an affected source or emission unit such that the fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable new affected source, and it is technologically and economically feasible for the reconstructed source to meet relevant standard or standards established in 12.0 of this regulation. Replacement of the refractory in a furnace is routine maintenance and is not a reconstruction. The repair and replacement of in-line fluxer components (e.g., rotors/shafts, burner tubes, refractory, warped steel) is considered to be routine maintenance and is not considered a reconstruction. In-line fluxers are typically removed to a maintenance/repair area and are replaced with repaired units. The replacement of an existing in-line fluxer with a repaired unit is not considered a reconstruction.

“Residence time” means, for an afterburner, the duration of time required for gases to pass through the afterburner combustion zone. Residence time is calculated by dividing the afterburner combustion zone volume in cubic feet by the volumetric flow rate of the gas stream in actual cubic feet per second.

“Rotary dross cooler” means a water-cooled rotary barrel device that accelerates cooling of dross.

“Runaround scrap” means scrap materials generated on-site by aluminum casting, extruding, rolling, scalping, forging, forming/stamping, cutting, and trimming operations and that do not contain paint or solid coatings. Uncoated/unpainted aluminum chips generated by turning, boring, milling, and similar machining operations may be clean charge if they have been thermally dried or treated by a centrifugal cleaner, but are not considered to be runaround scrap.

“Scrap dryer/delacquering kiln/decoating kiln” means a unit used primarily to remove various organic contaminants such as oil, paint, lacquer, ink, plastic, or rubber from aluminum scrap (including used beverage containers) prior to melting.

“Secondary aluminum processing unit” or **“SAPU”**. An existing SAPU means all existing group 1 furnaces and all existing in-line fluxers within a secondary aluminum production facility. Each existing group 1 furnace or existing in-line fluxer is considered an emission unit within a secondary aluminum processing unit. A new SAPU means any combination of individual group 1 furnaces and in-line fluxers within a secondary aluminum processing facility which either were constructed or reconstructed after February 11, 1999, or have been permanently redesignated as new emission units pursuant to 12.6.11.6 of this regulation. Each of the group 1 furnaces or in-line fluxers within a new SAPU is considered an emission unit within that secondary aluminum processing unit.

“Secondary aluminum production facility” means any establishment using clean charge, aluminum scrap, or dross from aluminum production, as the raw material and performing one or more of the following processes: scrap shredding, scrap drying/delacquering/decoating, thermal chip drying, furnace operations (i.e., melting, holding, sweating, refining, fluxing, or alloying), recovery of aluminum from dross, inline fluxing, or dross cooling. A secondary aluminum production facility may be independent or part of a primary aluminum production facility. For purposes of 12.0 of this regulation, aluminum die casting facilities, aluminum foundries, and aluminum extrusion facilities are not considered to be secondary aluminum production facilities if the only materials they melt are clean charge, customer returns, or internal scrap, and if they do not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns. The determination of whether a facility is a secondary aluminum production facility is only for purposes of 12.0 of this regulation and any regulatory requirements which are derived from the applicability of 12.0 of this regulation, and is separate from any determination which may be made under other environmental laws and regulations, including whether the same facility is a “secondary metal production facility” as that term is used in the Act and in 3.1 of 7 **DE Admin Code** 1125 of State of Delaware “Regulations Governing the Control of Air Pollution”.

“Sidewell” means an open well adjacent to the hearth of a furnace with connecting arches between the hearth and the open well through which molten aluminum is circulated between the hearth, where heat is applied by burners, and the

open well, which is used for charging scrap and solid flux or salt to the furnace, injecting fluxing agents, and skimming dross.

"Sweat furnace" means a furnace used exclusively to reclaim aluminum from scrap that contains substantial quantities of metal by using heat to separate the low-melting point aluminum from the scrap while the higher melting-point metal remains in solid form. These units are also commonly known as dry hearth furnaces.

"TEQ" means the international method of expressing toxicity equivalents for dioxins and furans as defined in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA-625/3-89/016).

"THC" means, for the purposes of 12.0 of this regulation, total hydrocarbon emissions that also serve as a surrogate for the emissions of organic HAP compounds.

"Thermal chip dryer" means a device that uses heat to evaporate oil or oil/water mixtures from unpainted/uncoated aluminum chips. Pre-heating boxes or other dryers which are used solely to remove water from aluminum scrap are not considered to be thermal chip dryers for purposes of 12.0 of this regulation.

"Three-day, 24-hour rolling average" means daily calculations of the average 24-hour emission rate (lbs/ton of feed/charge), over the three most recent consecutive 24-hour periods, for a secondary aluminum processing unit.

"Total reactive chlorine flux injection rate" means the sum of the total weight of chlorine in the gaseous or liquid reactive flux and the total weight of chlorine in the solid reactive chloride flux, divided by the total weight of feed/charge, as determined by the procedure in 12.13.15 of this regulation.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.5 [Reserved]

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.6 Emission standards for affected sources and emission units.

12.6.1 Summary. The owner or operator of a new or existing affected source must comply with each applicable limit in 12.6 of this regulation. Table 12-2 of this regulation summarizes the emission standards for each type of source.

12.6.2 Aluminum scrap shredder. On and after the compliance date established in 12.2 of this regulation, the owner or operator of an aluminum

scrap shredder at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere:

12.6.2.1 Emissions in excess of 0.023 grams (g) of PM per dry standard cubic meter (dscm) (0.010 grain (gr) of PM per dry standard cubic foot (dscf)) and

12.6.2.2 Visible emissions in excess of 10% opacity from any PM add-on air pollution control device if a Continuous Opacity Monitor (COM) or visible emissions monitoring is chosen as the monitoring option.

12.6.3 Thermal chip dryer. On and after the compliance date established in 12.2 of this regulation, the owner or operator of a thermal chip dryer must not discharge or cause to be discharged to the atmosphere emissions in excess of:

12.6.3.1 0.40 kilogram (kg) of THC, as propane, per megagram (Mg) (0.80 lb of THC, as propane, per ton) of feed/charge from a thermal chip dryer at a secondary aluminum production facility that is a major source and

12.6.3.2 2.50 micrograms (μg) of D/F TEQ per Mg ($3.5x10^{-5}$ gr per ton) of feed/charge from a thermal chip dryer at a secondary aluminum production facility that is a major or area source.

12.6.4 Scrap dryer/delacquering kiln/decoating kiln. On and after the compliance date established in 12.2 of this regulation:

12.6.4.1 The owner or operator of a scrap dryer/delacquering kiln/decoating kiln must not discharge or cause to be discharged to the atmosphere emissions in excess of:

12.6.4.1.1 0.03 kg of THC, as propane, per Mg (0.06 lb of THC, as propane, per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source;

12.6.4.1.2 0.04 kg of PM per Mg (0.08 lb per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source;

12.6.4.1.3 0.25 μg of D/F TEQ per Mg (3.5×10^{-6} gr of D/F TEQ per ton) of feed/charge from a scrap dryer/delacquering

kiln/decoating kiln at a secondary aluminum production facility that is a major or area source; and

12.6.4.1.4 0.40 kg of HCl per Mg (0.80 lb per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source.

12.6.4.2 The owner or operator of a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10% opacity from any PM add-on air pollution control device, if a COM is chosen as the monitoring option.

12.6.5 Scrap dryer/delacquering kiln/decoating kiln: alternative limits. The owner or operator of a scrap dryer/delacquering kiln/decoating kiln may choose to comply with the emission limits in 12.6.5.1 and 12.6.5.2 of this regulation as an alternative to the limits in 12.6.4 of this regulation if the scrap dryer/delacquering kiln/decoating kiln is equipped with an afterburner having a design residence time of at least 1 second and the afterburner is operated at a temperature of at least 760^{o}C (1400^{o}F) at all times. On and after the compliance date established in 12.2 of this regulation:

12.6.5.1 The owner or operator of a scrap dryer/delacquering kiln/decoating kiln must not discharge or cause to be discharged to the atmosphere emissions in excess of:

12.6.5.1.1 0.10 kg of THC, as propane, per Mg (0.20 lb of THC, as propane, per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source;

12.6.5.1.2 0.15 kg of PM per Mg (0.30 lb per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source;

12.6.5.1.3 5.0 µg of D/F TEQ per Mg (7.0x10^{-5} gr of D/F TEQ per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major or area source; and

12.6.5.1.4 0.75 kg of HCl per Mg (1.50 lb per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating

kiln at a secondary aluminum production facility that is a major source.

12.6.5.2 The owner or operator of a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10% opacity from any PM add-on air pollution control device, if a COM is chosen as the monitoring option.

12.6.6 Sweat furnace. The owner or operator of a sweat furnace shall comply with the emission standard in 12.6.6.2 of this regulation.

12.6.6.1 The owner or operator is not required to conduct a performance test to demonstrate compliance with the emission standard in 12.6.6.2 of this regulation, provided that, on and after the compliance date of this rule, the owner or operator operates and maintains an afterburner with a design residence time of 0.8 seconds or greater and an operating temperature of 872^{o}C (1600^{o}F) or greater.

12.6.6.2 On and after the compliance date established in 12.2 of this regulation, the owner or operator of a sweat furnace at a secondary aluminum production facility that is a major or area source must not discharge or cause to be discharged to the atmosphere emissions in excess of 0.80 nanogram (ng) of D/F TEQ per dscm ($3.5x10^{-10}$ gr per dscf) at 11% oxygen (O_2).

12.6.7 Dross-only furnace. On and after the compliance date established in 12.2 of this regulation, the owner or operator of a dross-only furnace at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere:

12.6.7.1 Emissions in excess of 0.15 kg of PM per Mg (0.30 lb of PM per ton) of feed/charge and

12.6.7.2 Visible emissions in excess of 10% opacity from any PM add-on air pollution control device, if a COM is chosen as the monitoring option.

12.6.8 Rotary dross cooler. On and after the compliance date established in 12.2 of this regulation, the owner or operator of a rotary dross cooler at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere:

12.6.8.1 Emissions in excess of 0.09 g of PM per dscm (0.04 gr per dscf) and

12.6.8.2 Visible emissions in excess of 10% opacity from any PM add-on air pollution control device, if a COM is chosen as the monitoring option.

12.6.9 Group 1 furnace. The owner or operator of a group 1 furnace must use the limits in 12.6.9.1 through 12.6.9.7 of this regulation to determine the emission standards for a SAPU.

12.6.9.1 0.20 kg of PM per Mg (0.40 lb of PM per ton) of feed/charge from a group 1 furnace, that is not a melting/holding furnace processing only clean charge, at a secondary aluminum production facility that is a major source;

12.6.9.2 0.40 kg of PM per Mg (0.80 lb of PM per ton) of feed/charge from a group 1 melting/holding furnace processing only clean charge at a secondary aluminum production facility that is a major source;

12.6.9.3 15 µg of D/F TEQ per Mg ($2.1x10^{-4}$ gr of D/F TEQ per ton) of feed/charge from a group 1 furnace at a secondary aluminum production facility that is a major or area source. This limit does not apply if the furnace processes only clean charge; and

12.6.9.4 0.20 kg of HCl per Mg (0.40 lb of HCl per ton) of feed/charge or, if the furnace is equipped with an add-on air pollution control device, 10% of the uncontrolled HCl emissions, by weight, for a group 1 furnace at a secondary aluminum production facility that is a major source.

12.6.9.5 The owner or operator of a group 1 furnace at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10% opacity from any PM add-on air pollution control device, if a COM is chosen as the monitoring option.

12.6.9.6 The owner or operator may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge.

12.6.9.7 The owner or operator of a sidewell group 1 furnace that conducts reactive fluxing (except for cover flux) in the hearth, or that conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, must comply with the emission limits in 12.6.9.1

through 12.6.9.4 of this regulation on the basis of the combined emissions from the sidewell and the hearth.

12.6.10 In-line fluxer. Except as provided in 12.6.10.3 of this regulation for an in-line fluxer using no reactive flux material, the owner or operator of an in-line fluxer must use the limits in 12.6.10.1 through 12.6.10.5 of this regulation to determine the emission standards for a SAPU.

12.6.10.1 0.02 kg of HCl per Mg (0.04 lb of HCl per ton) of feed/charge and

12.6.10.2 0.005 kg of PM per Mg (0.01 lb of PM per ton) of feed/charge.

12.6.10.3 The emission limits in 12.6.10.1 and 12.6.10.2 of this regulation do not apply to an in-line fluxer that uses no reactive flux materials.

12.6.10.4 The owner or operator of an in-line fluxer at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10% opacity from any PM add-on air pollution control device used to control emissions from the in-line fluxer, if a COM is chosen as the monitoring option.

12.6.10.5 The owner or operator may determine the emission standards for a SAPU by applying the in-line fluxer limits on the basis of the aluminum production weight in each in-line fluxer, rather than on the basis of feed/charge.

12.6.11 Secondary aluminum processing unit. On and after the compliance date established in 12.2 of this regulation, the owner or operator must comply with the emission limits calculated using the equations for PM and HCl in 12.6.11.1 and 12.6.11.2 of this regulation for each secondary aluminum processing unit at a secondary aluminum production facility that is a major source. The owner or operator must comply with the emission limit calculated using the equation for D/F in 12.6.11.3 of this regulation for each secondary aluminum processing unit at a secondary aluminum production facility that is a major or area source.

12.6.11.1 The owner or operator must not discharge or allow to be discharged to the atmosphere any three-day, 24-hour rolling average emissions of PM in excess of:

$$Lc_{PM} = \sum_{i=1}^{n} Lti_{PM} * Tti \Big/ \sum_{i=1}^{n} Tti \qquad (12\text{-}1)$$

where,
Lti_{PM} = The PM emission limit for individual emission unit i in 12.6.9.1 and 12.6.9.2 of this regulation for a group 1 furnace or in 12.6.10.2 of this regulation for an in-line fluxer;
Tti = The feed/charge rate, for an operating cycle, for individual emission unit i;
Lc_{PM} = The PM emission limit for the secondary aluminum processing unit; and
n = The total number of emission units.

Note: In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the PM limit.

12.6.11.2 The owner or operator must not discharge or allow to be discharged to the atmosphere any three-day, 24-hour rolling average emissions of HCl in excess of:

$$Lc_{HCl} = \sum_{i=1}^{n} Lti_{HCl} * Tti \Big/ \sum_{i=1}^{n} Tti \qquad (12\text{-}2)$$

where,
Lti_{HCl} = The HCl emission limit for individual emission unit i in 12.6.9.4 of this regulation for a group 1 furnace or in 12.6.10.1 of this regulation for an in-line fluxer;
Tti = The feed/charge rate, for an operating cycle, for individual emission unit i;
Lc_{HCl} = The HCl emission limit for the secondary aluminum processing unit; and
n = The total number of emission units.

Note: In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the HCl limit.

12.6.11.3 The owner or operator must not discharge or allow to be discharged to the atmosphere any three-day, 24-hour rolling average emissions of D/F in excess of:

$$Lc_{D/F} = \sum_{i=1}^{n} Lti_{D/F} * Tti \Big/ \sum_{i=1}^{n} Tti \qquad (12\text{-}3)$$

where,
$Lti_{D/F}$ = The D/F emission limit for individual emission unit i in 12.6.9.3 of this regulation for a group 1 furnace;
Tti = The feed/charge rate, for an operating cycle, for individual emission unit i;

$Lc_{D/F}$ = The D/F emission limit for the secondary aluminum processing unit; and
n = The total number of emission units.

Note: Clean charge furnaces cannot be included in this calculation since they are not subject to the D/F limit.

12.6.11.4 The owner or operator of a SAPU at a secondary aluminum production facility that is a major source may demonstrate compliance with the emission limits in 12.6.11.1 through 12.6.11.3 of this regulation by demonstrating that each emission unit within the SAPU is in compliance with the applicable emission limits in 12.6.9 and 12.6.10 of this regulation.

12.6.11.5 The owner or operator of a SAPU at a secondary aluminum production facility that is an area source may demonstrate compliance with the emission limits in 12.6.11.3 of this regulation by demonstrating that each emission unit within the SAPU is in compliance with the emission limit in 12.6.9.3 of this regulation.

12.6.11.6 With the prior approval of the Department, an owner or operator may redesignate any existing group 1 furnace or in-line fluxer at a secondary aluminum production facility as a new emission unit. Any emission unit so redesignated may thereafter be included in a new SAPU at that facility. Any such redesignation will be solely for the purpose of 12.0 of this regulation and will be irreversible.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.7 Operating requirements.

12.7.1 Summary.

12.7.1.1 On and after the compliance date established in 12.2 of this regulation, the owner or operator must operate all new and existing affected sources and control equipment according to the requirements in 12.7 of this regulation.

12.7.1.2 The owner or operator of an existing sweat furnace that meets the specifications in 12.6.6.1 of this regulation must operate the sweat furnace and control equipment according to the requirements in 12.7 of this regulation on and after the compliance date established in 12.2 of this regulation.

12.7.1.3 The owner or operator of a new sweat furnace that meets the specifications in 12.6.6.1 of this regulation must operate the sweat

furnace and control equipment according to the requirements in 12.7 of this regulation by June 11, 2003 or upon startup, whichever is later.

12.7.1.4 Operating requirements are summarized in Table 12-3 of this regulation.

12.7.2 Labeling. The owner or operator must provide and maintain easily visible labels posted at each sweat furnace, group 1 furnace, group 2 furnace, in-line fluxer and scrap dryer/delacquering kiln/decoating kiln that identifies the applicable emission limits and means of compliance, including:

12.7.2.1 The type of affected source or emission unit (e.g., scrap dryer/delacquering kiln/decoating kiln, sweat furnace, group 1 furnace, group 2 furnace, in-line fluxer).

12.7.2.2 The applicable operational standard or standards and control method or methods (e.g., work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the Operating, Maintenance and Monitoring (OM&M) plan.

12.7.2.3 The afterburner operating temperature and design residence time for a scrap dryer/delacquering kiln/decoating kiln or sweat furnace.

12.7.3 Capture/collection systems. For each affected source or emission unit equipped with an add-on air pollution control device, the owner or operator must:

12.7.3.1 Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in Chapters 3 and 5 of “Industrial Ventilation: A Manual of Recommended Practice” (incorporated by reference in 12.3 of this regulation);

12.7.3.2 Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and

12.7.3.3 Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

12.7.4 Feed/charge weight. The owner or operator of each affected source or emission unit subject to an emission limit in kg/Mg (lb/ton) or µg /Mg (gr/ton) of feed/charge must:

12.7.4.1 Except as provided in 12.7.4.3 of this regulation, install and operate a device that measures and records or otherwise determines the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test and

12.7.4.2 Operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan.

12.7.4.3 The owner or operator may chose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that:

12.7.4.3.1 The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units within a SAPU and

12.7.4.3.2 All calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed/charge weight.

12.7.5 Aluminum scrap shredder. The owner or operator of a scrap shredder with emissions controlled by a fabric filter must operate a bag leak detection system, a continuous opacity monitor, or conduct visible emissions observations.

12.7.5.1 If a bag leak detection system is used to meet the monitoring requirements in 12.11 of this regulation, the owner or operator must:

12.7.5.1.1 Initiate corrective action within 1-hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan and

12.7.5.1.2 Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5% of the operating time during a six-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the owner or operator takes longer than 1 hour to

initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

12.7.5.2 If a continuous opacity monitoring system is used to meet the monitoring requirements in 12.11 of this regulation, the owner or operator must initiate corrective action within 1-hour of any six-minute average reading of 5% or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

12.7.5.3 If visible emission observations are used to meet the monitoring requirements in 12.11 of this regulation, the owner or operator must initiate corrective action within 1-hour of any observation of visible emissions in excess of 10% opacity during a daily visible emissions test and complete the corrective action procedures in accordance with the OM&M plan.

12.7.6 Thermal chip dryer. The owner or operator of a thermal chip dryer with emissions controlled by an afterburner must:

12.7.6.1 Maintain the three-hour block average operating temperature of each afterburner at or above the average temperature established during the performance test;

12.7.6.2 Operate each afterburner in accordance with the OM&M plan; and

12.7.6.3 Operate each thermal chip dryer using only unpainted aluminum chips as the feedstock.

12.7.7 Scrap dryer/delacquering kiln/decoating kiln. The owner or operator of a scrap dryer/delacquering kiln/decoating kiln with emissions controlled by an afterburner and a lime-injected fabric filter must:

12.7.7.1 For each afterburner,

12.7.7.1.1 Maintain the three-hour block average operating temperature of each afterburner at or above the average temperature established during the performance test and

12.7.7.1.2 Operate each afterburner in accordance with the OM&M plan.

12.7.7.2 If a bag leak detection system is used to meet the fabric filter monitoring requirements in 12.11 of this regulation,

12.7.7.2.1 Initiate corrective action within one-hour of a bag leak detection system alarm and complete any necessary corrective action procedures in accordance with the OM&M plan and

12.7.7.2.2 Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5% of the operating time during a six-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of one hour. If the owner or operator takes longer than one hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

12.7.7.3 If a continuous opacity monitoring system is used to meet the monitoring requirements in 12.11 of this regulation, initiate corrective action within one-hour of any six-minute average reading of 5% or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

12.7.7.4 Maintain the three-hour block average inlet temperature for each fabric filter at or below the average temperature established during the performance test, plus 14^{o}C (plus 25^{o}F).

12.7.7.5 For a continuous injection device, maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at the same level established during the performance test.

12.7.8 Sweat furnace. The owner or operator of a sweat furnace with emissions controlled by an afterburner must:

12.7.8.1 Maintain the three-hour block average operating temperature of each afterburner at or above:

12.7.8.1.1 The average temperature established during the performance test or

12.7.8.1.2 872^{o}C (1600^{o}F) if a performance test was not conducted, and the afterburner meets the specifications in 12.6.6.1 of this regulation.

12.7.8.2 Operate each afterburner in accordance with the OM&M plan.

12.7.9 Dross-only furnace. The owner or operator of a dross-only furnace with emissions controlled by a fabric filter must:

12.7.9.1 If a bag leak detection system is used to meet the monitoring requirements in 12.11 of this regulation,

12.7.9.1.1 Initiate corrective action within one-hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan and

12.7.9.1.2 Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5% of the operating time during a six-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of one hour. If the owner or operator takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

12.7.9.2 If a continuous opacity monitoring system is used to meet the monitoring requirements in 12.11 of this regulation, initiate corrective action within one-hour of any six-minute average reading of 5% or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

12.7.9.3 Operate each furnace using dross and salt flux as the sole feedstock.

12.7.10 Rotary dross cooler. The owner or operator of a rotary dross cooler with emissions controlled by a fabric filter must:

12.7.10.1 If a bag leak detection system is used to meet the monitoring requirements in 12.11 of this regulation,

12.7.10.1.1 Initiate corrective action within one-hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan and

12.7.10.1.2 Operate each fabric filter system such that the bag leak detection system alarm does not sound more than

5% of the operating time during a six-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of one hour. If the owner or operator takes longer than one hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

12.7.10.2 If a continuous opacity monitoring system is used to meet the monitoring requirements in 12.11 of this regulation, initiate corrective action within one hour of any six-minute average reading of 5% or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

12.7.11 In-line fluxer. The owner or operator of an in-line fluxer with emissions controlled by a lime-injected fabric filter must:

12.7.11.1 If a bag leak detection system is used to meet the monitoring requirements in 12.11 of this regulation,

12.7.11.1.1 Initiate corrective action within one-hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan and

12.7.11.1.2 Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5% of the operating time during a six-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of one hour. If the owner or operator takes longer than one hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

12.7.11.2 If a continuous opacity monitoring system is used to meet the monitoring requirements in 12.11 of this regulation, initiate corrective action within one hour of any six-minute average reading of 5% or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

12.7.11.3 For a continuous injection system, maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime

feeder setting at the same level established during the performance test.

12.7.11.4 Maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.

12.7.12 In-line fluxer using no reactive flux material. The owner or operator of a new or existing in-line fluxer using no reactive flux materials must operate each in-line fluxer using no reactive flux materials.

12.7.13 Group 1 furnace with add-on air pollution control devices. The owner or operator of a group 1 furnace with emissions controlled by a lime-injected fabric filter must:

12.7.13.1 If a bag leak detection system is used to meet the monitoring requirements in 12.11 of this regulation, the owner or operator must:

12.7.13.1.1 Initiate corrective action within 1 hour of a bag leak detection system alarm;

12.7.13.1.2 Complete the corrective action procedures in accordance with the OM&M plan; and

12.7.13.1.3 Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5% of the operating time during a six-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of one hour. If the owner or operator takes longer than one hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

12.7.13.2 If a continuous opacity monitoring system is used to meet the monitoring requirements in 12.11 of this regulation, the owner or operator must:

12.7.13.2.1 Initiate corrective action within 1 hour of any six-minute average reading of 5% or more opacity and

12.7.13.2.2 Complete the corrective action procedures in accordance with the OM&M plan.

12.7.13.3 Maintain the three-hour block average inlet temperature for each fabric filter at or below the average temperature established during the performance test, plus 14^{o}C (plus 25^{o}F).

12.7.13.4 For a continuous lime injection system, maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at the same level established during the performance test.

12.7.13.5 Maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.

12.7.13.6 Operate each sidewell furnace such that:

12.7.13.6.1 The level of molten metal remains above the top of the passage between the sidewell and hearth during reactive flux injection, unless emissions from both the sidewell and the hearth are included in demonstrating compliance with all applicable emission limits and

12.7.13.6.2 Reactive flux is added only in the sidewell, unless emissions from both the sidewell and the hearth are included in demonstrating compliance with all applicable emission limits.

12.7.14 Group 1 furnace without add-on air pollution control devices. The owner or operator of a group 1 furnace (including a group 1 furnace that is part of a secondary aluminum processing unit) without add-on air pollution control devices must:

12.7.14.1 Maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test;

12.7.14.2 Operate each furnace in accordance with the work practice/pollution prevention measures documented in the OM&M plan and within the parameter values or ranges established in the OM&M plan; and

12.7.14.3 Operate each group 1 melting/holding furnace subject to the emission standards in 12.6.9.2 of this regulation using only clean charge as the feedstock.

12.7.15 Group 2 furnace. The owner or operator of a new or existing group 2 furnace must:

12.7.15.1 Operate each furnace using only clean charge as the feedstock and

12.7.15.2 Operate each furnace using no reactive flux.

12.7.16 Corrective action. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the performance test and incorporated in the OM&M plan, the owner or operator must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level or levels to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.8 [Reserved]

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.9 [Reserved]

12.10 [Reserved]

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.11 Monitoring requirements.

12.11.1 Summary. On and after the compliance date established in 12.2 of this regulation, the owner or operator of a new or existing affected source or emission unit must monitor all control equipment and processes according to the requirements in 12.11 of this regulation. Monitoring requirements for each type of affected source and emission unit are summarized in Table 12-4 of this regulation.

12.11.2 Operation, maintenance, and monitoring (OM&M) plan. The owner or operator must prepare and implement for each new or existing affected source and emission unit, a written OM&M plan. The owner or operator of an existing affected source must submit the OM&M plan to the Department no

later than the compliance date established in 12.2.1 of this regulation. The owner or operator of any new affected source must submit the OM&M plan to the Department within 90 days after a successful initial performance test required in 12.12.2 of this regulation, or within 90 days after the compliance date established in 12.2.2 of this regulation if no initial performance test is required. The plan must be accompanied by a written certification by the owner or operator that the OM&M plan satisfies all requirements in 12.11 of this regulation and is otherwise consistent with the requirements of 12.0 of this regulation. The owner or operator must comply with all of the provisions of the OM&M plan as submitted to the Department, unless and until the plan is revised in accordance with the following procedures. If the Department determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of 12.0 of this regulation, the owner or operator must promptly make all necessary revisions and resubmit the revised plan. If the owner or operator determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the owner or operator submits a description of the changes and a revised plan incorporating them to the Department. Each plan must contain the following information:

12.11.2.1 Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.

12.11.2.2 A monitoring schedule for each affected source and emission unit.

12.11.2.3 Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 12.6 of this regulation.

12.11.2.4 Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:

12.11.2.4.1 Calibration and certification of accuracy of each monitoring device, at least once every six months, according to the manufacturer's instructions and

12.11.2.4.2 Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required in 3.0 of this regulation.

12.11.2.5 Procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, the procedure to be used for

determining charge/feed (or throughput) weight if a measurement device is not used.

12.11.2.6 Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in 12.11.2.1 of this regulation, including:

12.11.2.6.1 Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended and

12.11.2.6.2 Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.

12.11.2.7 A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

12.11.2.8 Documentation of the work practice and pollution prevention measures used to achieve compliance with the applicable emission limits and a site-specific monitoring plan as required in 12.11.15 of this regulation for each group 1 furnace not equipped with an add-on air pollution control device.

12.11.3 Labeling. The owner or operator must inspect the labels for each group 1 furnace, group 2 furnace, in-line fluxer, sweat furnace, and scrap dryer/delacquering kiln/decoating kiln at least once per calendar month to confirm that posted labels as required by the operational standard in 12.7.2 of this regulation are intact and legible.

12.11.4 Capture/collection system. The owner or operator must:

12.11.4.1 Install, operate, and maintain a capture/collection system for each affected source and emission unit equipped with an add-on air pollution control device and

12.11.4.2 Inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in 12.7.3 of this regulation and record the results of each inspection.

12.11.5 Feed/charge weight. The owner or operator of an affected source or emission unit subject to an emission limit in kg/Mg (lb/ton) or µg/Mg (gr/ton) of feed/charge must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum

production from, the affected source or emission unit over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. As an alternative to a measurement device, the owner or operator may use a procedure acceptable to the Department to determine the total weight of feed/charge or aluminum production to the affected source or emission unit.

12.11.5.1 The accuracy of the weight measurement device or procedure must be ±1% of the weight being measured. The owner or operator may apply to the Department for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standard.

12.11.5.2 The owner or operator must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, which shall not exceed six months, or if no calibration schedule is specified, at least once every six months.

12.11.6 Fabric filters and lime-injected fabric filters. The owner or operator of an affected source or emission unit using a fabric filter or lime-injected fabric filter to comply with the requirements of 12.0 of this regulation must install, calibrate, maintain, and continuously operate a bag leak detection system as required in 12.11.6.1 of this regulation or a continuous opacity monitoring system as required in 12.11.6.2 of this regulation. The owner or operator of an aluminum scrap shredder must install and operate a bag leak detection system as required in 12.11.6.1 of this regulation, install and operate a continuous opacity monitoring system as required in 12.11.6.2 of this regulation, or conduct visible emission observations as required in 12.11.6.3 of this regulation.

12.11.6.1 These requirements apply to the owner or operator of a new or existing affected source or existing emission unit using a bag leak detection system.

12.11.6.1.1 The owner or operator must install and operate a bag leak detection system for each exhaust stack of a fabric filter.

12.11.6.1.2 Each triboelectric bag leak detection system must be installed, calibrated, operated, and maintained according to the “Fabric Filter Bag Leak Detection Guidance” (September 1997). Other bag leak detection systems must

be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

12.11.6.1.3 The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

12.11.6.1.4 The bag leak detection system sensor must provide output of relative or absolute PM loadings.

12.11.6.1.5 The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

12.11.6.1.6 The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.

12.11.6.1.7 For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.

12.11.6.1.8 Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

12.11.6.1.9 The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

12.11.6.1.10 Following initial adjustment of the system, the owner or operator must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time except as detailed in the OM&M plan. In no case may the sensitivity be increased by more than 100% or decreased more than 50% over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition.

12.11.6.2 These requirements apply to the owner or operator of a new or existing affected source or an existing emission unit using a continuous opacity monitoring system.

12.11.6.2.1 The owner or operator must install, calibrate, maintain, and operate a continuous opacity monitoring system to measure and record the opacity of emissions exiting each exhaust stack.

12.11.6.2.2 Each continuous opacity monitoring system must meet the design and installation requirements of Performance Specification 1 in Appendix B to 40 CFR Part 60.

12.11.6.3 These requirements apply to the owner or operator of a new or existing aluminum scrap shredder who conducts visible emission observations. The owner or operator must:

12.11.6.3.1 Perform a visible emissions test for each aluminum scrap shredder using a certified observer at least once a day according to the requirements of Method 9 in Appendix A to 40 CFR Part 60. Each Method 9 test must consist of five six-minute observations in a 30-minute period and

12.11.6.3.2 Record the results of each test.

12.11.7 Afterburner. These requirements apply to the owner or operator of an affected source using an afterburner to comply with the requirements of 12.0 of this regulation.

12.11.7.1 The owner or operator must install, calibrate, maintain, and operate a device to continuously monitor and record the operating temperature of the afterburner consistent with the requirements for continuous monitoring systems in 3.0 of this regulation.

12.11.7.2 The temperature monitoring device must meet each of these performance and equipment specifications:

12.11.7.2.1 The temperature monitoring device must be installed at the exit of the combustion zone of each afterburner.

12.11.7.2.2 The monitoring system must record the temperature in 15-minute block averages and determine and record the average temperature for each three-hour block period.

12.11.7.2.3 The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 12.13.13 of this regulation.

12.11.7.2.4 The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

12.11.7.3 The owner or operator must conduct an inspection of each afterburner at least once a year and record the results. At a minimum, an inspection must include:

12.11.7.3.1 Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor;

12.11.7.3.2 Inspection for proper adjustment of combustion air;

12.11.7.3.3 Inspection of internal structures (e.g., baffles) to ensure structural integrity;

12.11.7.3.4 Inspection of dampers, fans, and blowers for proper operation;

12.11.7.3.5 Inspection for proper sealing;

12.11.7.3.6 Inspection of motors for proper operation;

12.11.7.3.7 Inspection of combustion chamber refractory lining and clean and replace lining as necessary;

12.11.7.3.8 Inspection of afterburner shell for corrosion or hot spots;

12.11.7.3.9 Documentation, for the burn cycle that follows the inspection, that the afterburner is operating properly and any necessary adjustments have been made; and

12.11.7.3.10 Verification that the equipment is maintained in good operating condition.

12.11.7.3.11 Following an equipment inspection, all necessary repairs must be completed in accordance with the requirements of the OM&M plan.

12.11.8 Fabric filter inlet temperature. These requirements apply to the owner or operator of a scrap dryer/delacquering kiln/decoating kiln or a group 1 furnace using a lime-injected fabric filter to comply with the requirements of 12.0 of this regulation.

12.11.8.1 The owner or operator must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases consistent with the requirements for continuous monitoring systems in 3.0 of this regulation.

12.11.8.2 The temperature monitoring device must meet each of these performance and equipment specifications:

12.11.8.2.1 The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each three-hour block period.

12.11.8.2.2 The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 12.13.14 of this regulation.

12.11.8.2.3 The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

12.11.9 Lime injection. These requirements apply to the owner or operator of an affected source or emission unit using a lime-injected fabric filter to comply with the requirements of 12.0 of this regulation.

12.11.9.1 The owner or operator of a continuous lime injection system must verify that lime is always free-flowing by either:

12.11.9.1.1 Inspecting each feed hopper or silo at least once each eight-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the eight-hour periods, the owner or operator must

increase the frequency of inspections to at least once every four-hour period for the next three days. The owner or operator may return to inspections at least once every eight hour period if corrective action results in no further blockages of lime during the three-day period; or

12.11.9.1.2 Subject to the approval of the Department, installing, operating and maintaining a load cell, carrier gas/lime flow indicator, carrier gas pressure drop measurement system or other system to confirm that lime is free-flowing. If lime is found not to be free-flowing, the owner or operator must promptly initiate and complete corrective action; or

12.11.9.1.3 Subject to the approval of the Department, installing, operating and maintaining a device to monitor the concentration of HCl at the outlet of the fabric filter. If an increase in the concentration of HCl indicates that the lime is not free-flowing, the owner or operator must promptly initiate and complete corrective action.

12.11.9.2 The owner or operator of a continuous lime injection system must record the lime feeder setting once each day of operation.

12.11.9.3 An owner or operator who intermittently adds lime to a lime coated fabric filter must obtain approval from the Department for a lime addition monitoring procedure. The Department will not approve a monitoring procedure unless data and information are submitted establishing that the procedure is adequate to ensure that relevant emission standards will be met on a continuous basis.

12.11.10 Total reactive flux injection rate. These requirements apply to the owner or operator of a group 1 furnace (with or without add-on air pollution control devices) or in-line fluxer. The owner or operator must:

12.11.10.1 Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to each affected source or emission unit.

12.11.10.1.1 The monitoring system must record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test.

12.11.10.1.2 The accuracy of the weight measurement device must be ±1% of the weight of the reactive component of the flux being measured. The owner or operator may apply to the Department for permission to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of ±1% impracticable. A device of alternative accuracy will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards.

12.11.10.1.3 The owner or operator must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, which shall not exceed six months, or if no calibration schedule is specified, at least once every six months.

12.11.10.2 Calculate and record the gaseous or liquid reactive flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test using the procedure in 12.13.15 of this regulation.

12.11.10.3 Record, for each 15-minute block period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of:

12.11.10.3.1 Gaseous or liquid reactive flux other than chlorine and

12.11.10.3.2 Solid reactive flux.

12.11.10.4 Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test using the procedure in 12.13.15 of this regulation.

12.11.10.5 The owner or operator of a group 1 furnace or in-line fluxer performing reactive fluxing may apply to the Administrator for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the performance test in accordance with 40 CFR 63.1510(j)(5).

12.11.11 Thermal chip dryer. These requirements apply to the owner or operator of a thermal chip dryer with emissions controlled by an afterburner. The owner or operator must:

12.11.11.1 Record the type of materials charged to the unit for each operating cycle or time period used in the performance test.

12.11.11.2 Submit a certification of compliance with the applicable operational standard for charge materials in 12.7.6.3 of this regulation for each six-month reporting period. Each certification must contain the information in 12.17.2.2.1 of this regulation.

12.11.12 Dross-only furnace. These requirements apply to the owner or operator of a dross-only furnace. The owner or operator must:

12.11.12.1 Record the materials charged to each unit for each operating cycle or time period used in the performance test.

12.11.12.2 Submit a certification of compliance with the applicable operational standard for charge materials in 12.7.9.3 of this regulation for each six-month reporting period. Each certification must contain the information in 12.17.2.2.2 of this regulation.

12.11.13 In-line fluxers using no reactive flux. The owner or operator of an in-line fluxer that uses no reactive flux materials must submit a certification of compliance with the operational standard for no reactive flux materials in 12.7.12 of this regulation for each six-month reporting period. Each certification must contain the information in 12.17.2.2.6 of this regulation.

12.11.14 Sidewell group 1 furnace with add-on air pollution control devices. These requirements apply to the owner or operator of a sidewell group 1 furnace using add-on air pollution control devices. The owner or operator must:

12.11.14.1 Record in an operating log for each charge of a sidewell furnace that the level of molten metal was above the top of the passage between the sidewell and hearth during reactive flux injection, unless the furnace hearth was also equipped with an add-on control device.

12.11.14.2 Submit a certification of compliance with the operational standards in 12.7.13.6 of this regulation for each six-month reporting period. Each certification must contain the information in 12.17.2.2.3 of this regulation.

12.11.15 Group 1 furnace without add-on air pollution control devices. These requirements apply to the owner or operator of a group 1 furnace that is not equipped with an add-on air pollution control device.

12.11.15.1 The owner or operator must develop, in consultation with the Department, a written site-specific monitoring plan. The site-specific monitoring plan must be submitted to the Department as part of the OM&M plan. The site-specific monitoring plan must contain sufficient procedures to ensure continuing compliance with all applicable emission limits and must demonstrate, based on documented test results, the relationship between emissions of PM, HCl, and D/F and the proposed monitoring parameters for each pollutant. Test data must establish the highest level of PM, HCl, and D/F that will be emitted from the furnace. This may be determined by conducting performance tests and monitoring operating parameters while charging the furnace with feed/charge materials containing the highest anticipated levels of oils and coatings and fluxing at the highest anticipated rate. If the Department determines that any revisions of the site-specific monitoring plan are necessary to meet the requirements of 12.0 of this regulation, the owner or operator must promptly make all necessary revisions and resubmit the revised plan to the Department.

12.11.15.1.1 The owner or operator of an existing affected source must submit the site-specific monitoring plan to the Department for review at least six months prior to the compliance date, but no earlier than May 11, 2003.

12.11.15.1.2 The Department will review and approve or disapprove a proposed plan, or request changes to a plan, based on whether the plan contains sufficient provisions to ensure continuing compliance with applicable emission limits and demonstrates, based on documented test results, the relationship between emissions of PM, HCl, and D/F and the proposed monitoring parameters for each pollutant. Test data must establish the highest level of PM, HCl, and D/F that will be emitted from the furnace. Subject to Department approval of the OM&M plan, this may be determined by conducting performance tests and monitoring operating parameters while charging the furnace with feed/charge materials containing the highest anticipated levels of oils and coatings and fluxing at the highest anticipated rate.

12.11.15.2 Each site-specific monitoring plan must document each work practice, equipment/design practice, pollution prevention

practice, or other measure used to meet the applicable emission standards.

12.11.15.3 Each site-specific monitoring plan must include provisions for unit labeling as required in 12.11.3 of this regulation, feed/charge weight measurement (or production weight measurement) as required in 12.11.5 of this regulation and flux weight measurement as required in 12.11.10 of this regulation.

12.11.15.4 Each site-specific monitoring plan for a melting/holding furnace subject to the clean charge emission standard in 12.6.9.3 of this regulation must include these requirements:

12.11.15.4.1 The owner or operator must record the type of feed/charge (e.g., ingot, thermally dried chips, dried scrap, etc.) for each operating cycle or time period used in the performance test and

12.11.15.4.2 The owner or operator must submit a certification of compliance with the applicable operational standard for clean charge materials in 12.7.14.3 of this regulation for each six-month reporting period. Each certification must contain the information in 12.17.2.2.4 of this regulation.

12.11.15.5 If a continuous emission monitoring system is included in a site-specific monitoring plan, the plan must include provisions for the installation, operation, and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of 3.0 of this regulation.

12.11.15.6 If a continuous opacity monitoring system is included in a site-specific monitoring plan, the plan must include provisions for the installation, operation, and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of 12.0 of this regulation.

12.11.15.7 If a site-specific monitoring plan includes a scrap inspection program for monitoring the scrap contaminant level of furnace feed/charge materials, the plan must include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in 12.11.16 of this regulation.

12.11.15.8 If a site-specific monitoring plan includes a calculation method for monitoring the scrap contaminant level of furnace feed/charge materials, the plan must include provisions for the

demonstration and implementation of the program in accordance with all applicable requirements in 12.11.17 of this regulation.

12.11.16 Scrap inspection program for group 1 furnace without add-on air pollution control devices. A scrap inspection program must include:

12.11.16.1 A proven method for collecting representative samples and measuring the oil and coatings content of scrap samples;

12.11.16.2 A scrap inspector training program;

12.11.16.3 An established correlation between visual inspection and physical measurement of oil and coatings content of scrap samples;

12.11.16.4 Periodic physical measurements of oil and coatings content of randomly-selected scrap samples and comparison with visual inspection results;

12.11.16.5 A system for assuring that only acceptable scrap is charged to an affected group 1 furnace; and

12.11.16.6 Recordkeeping requirements to document conformance with plan requirements.

12.11.17 Monitoring of scrap contamination level by calculation method for group 1 furnace without add-on air pollution control devices. The owner or operator of a group 1 furnace dedicated to processing a distinct type of furnace feed/charge composed of scrap with a uniform composition (such as rejected product from a manufacturing process for which the coating-to-scrap ratio can be documented) may include a program in the site-specific monitoring plan for determining, monitoring, and certifying the scrap contaminant level using a calculation method rather than a scrap inspection program. A scrap contaminant monitoring program using a calculation method must include:

12.11.17.1 Procedures for the characterization and documentation of the contaminant level of the scrap prior to the performance test.

12.11.17.2 Limitations on the furnace feed/charge to scrap of the same composition as that used in the performance test. If the performance test was conducted with a mixture of scrap and clean charge, limitations on the proportion of scrap in the furnace feed/charge to no greater than the proportion used during the performance test.

12.11.17.3 Operating, monitoring, recordkeeping, and reporting requirements to ensure that no scrap with a contaminant level higher than that used in the performance test is charged to the furnace.

12.11.18 Group 2 furnace. These requirements apply to the owner or operator of a new or existing group 2 furnace. The owner or operator must:

12.11.18.1 Record a description of the materials charged to each furnace, including any nonreactive, non-HAP-containing/non-HAP-generating fluxing materials or agents.

12.11.18.2 Submit a certification of compliance with the applicable operational standard for charge materials in 12.7.15 of this regulation for each six-month reporting period. Each certification must contain the information in 12.17.2.2.5 of this regulation.

12.11.19 Site-specific requirements for secondary aluminum processing units.

12.11.19.1 An owner or operator of a secondary aluminum processing unit at a facility must include within the OM&M plan prepared in accordance with the requirements in 12.11.2 of this regulation, the following information:

12.11.19.1.1 The identification of each emission unit in the secondary aluminum processing unit;

12.11.19.1.2 The specific control technology or pollution prevention measure to be used for each emission unit in the secondary aluminum processing unit and the date of its installation or application;

12.11.19.1.3 The emission limit calculated for each secondary aluminum processing unit and performance test results with supporting calculations demonstrating initial compliance with each applicable emission limit;

12.11.19.1.4 Information and data demonstrating compliance for each emission unit with all applicable design, equipment, work practice, or operational standards of 12.0 of this regulation; and

12.11.19.1.5 The monitoring requirements applicable to each emission unit in a secondary aluminum processing unit and the monitoring procedures for daily calculation of

the three-day, 24-hour rolling average using the procedure in 12.11.20 of this regulation.

12.11.19.2 The SAPU compliance procedures within the OM&M plan may not contain any of the following provisions:

12.11.19.2.1 Any averaging among emissions of differing pollutants;

12.11.19.2.2 The inclusion of any affected sources other than emission units in a secondary aluminum processing unit;

12.11.19.2.3 The inclusion of any emission unit while it is shutdown; or

12.11.19.2.4 The inclusion of any periods of startup, shutdown, or malfunction in emission calculations.

12.11.19.3 To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the owner or operator must submit a request to the Department containing the information required in 12.11.19.1 of this regulation and obtain approval of the Department prior to implementing any revisions.

12.11.20 Secondary aluminum processing unit. Except as provided in 12.11.21 of this regulation, the owner or operator must calculate and record the three-day, 24-hour rolling average emissions of PM, HCl, and D/F for each secondary aluminum processing unit on a daily basis. To calculate the three-day, 24-hour rolling average, the owner or operator must:

12.11.20.1 Calculate and record the total weight of material charged to each emission unit in the secondary aluminum processing unit for each 24-hour day of operation using the feed/charge weight information required in 12.11.5 of this regulation. If the owner or operator chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations must be conducted on the aluminum production weight basis.

12.11.20.2 Multiply the total feed/charge weight to the emission unit, or the weight of aluminum produced by the emission unit, for each emission unit for the 24-hour period by the emission rate (in lb/ton of feed/charge) for that emission unit (as determined during the

performance test) to provide emissions for each emission unit for the 24-hour period, in pounds.

12.11.20.3 Divide the total emissions for each SAPU for the 24-hour period by the total material charged to the SAPU, or the weight of aluminum produced by the SAPU over the 24-hour period to provide the daily emission rate for the SAPU.

12.11.20.4 Compute the 24-hour daily emission rate using equation 12-4:

$$Eday = \sum_{i=1}^{n} Ti * ERi \Big/ \sum_{i=1}^{n} Ti \qquad (12\text{-}4)$$

where,

Eday = The daily PM, HCl, or D/F emission rate for the secondary aluminum processing unit for the 24-hour period;

Ti = The total amount of feed, or aluminum produced, for emission unit i for the 24-hour period (tons or Mg);

ERi = The measured emission rate for emission unit i as determined in the performance test (lb/ton or µg/Mg of feed/charge); and

n = The number of emission units in the secondary aluminum processing unit.

12.11.20.5 Calculate and record the three-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by three.

12.11.21 Secondary aluminum processing unit compliance by individual emission unit demonstration. As an alternative to the procedures in 12.11.20 of this regulation, an owner or operator may demonstrate, through performance tests, that each individual emission unit within the secondary aluminum production unit is in compliance with the applicable emission limits for the emission unit.

12.11.22 Alternative monitoring method for lime addition. The owner or operator of a lime-coated fabric filter that employs intermittent or noncontinuous lime addition may apply to the Administrator for approval of an alternative method for monitoring the lime addition schedule and rate based on monitoring the weight of lime added per ton of feed/charge for each operating cycle or time period used in the performance test in accordance with 40 CFR 63.1510(v).

12.11.23 Alternative monitoring methods. If an owner or operator wishes to use an alternative monitoring method to demonstrate compliance with any

emission standard in 12.0 of this regulation, other than those alternative monitoring methods which may be authorized in 12.11.10.5 and 12.11.22 of this regulation, the owner or operator may submit an application to the Administrator (with a copy sent to the Department), in accordance with 40 CFR 63.1510(w). The owner or operator must continue to use the original monitoring requirement until approval is received from the Administrator to use another monitoring procedure, and the Department has been provided a copy of such approval by the owner or operator.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.12 Performance test/compliance demonstration general requirements.

12.12.1 Site-specific test plan. Prior to conducting any performance test required in 12.0 of this regulation, the owner or operator must prepare and submit a site-specific test plan which satisfies all of the requirements, and must obtain approval of the plan pursuant to the procedures set forth in 3.7.3 of this regulation.

12.12.2 Initial performance test. Following approval of the site-specific test plan, the owner or operator must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected source and emission unit, and report the results in the notification of compliance status report as described in 12.16.2 of this regulation. The owner or operator of any existing affected source for which an initial performance test is required to demonstrate compliance must conduct this initial performance test no later than the date for compliance established in 12.2.1 of this regulation. The owner or operator of any new affected source for which an initial performance test is required must conduct this initial performance test within 90 days after the date for compliance established in 12.2.2 of this regulation. Except for the date by which the performance test must be conducted, the owner or operator must conduct each performance test in accordance with the requirements and procedures set forth in 3.7.5 of this regulation. Owners or operators of affected sources located at facilities which are area sources are subject only to those performance testing requirements pertaining to D/ F. Owners or operators of sweat furnaces meeting the specifications in 12.6.6.1 of this regulation are not required to conduct a performance test.

12.12.2.1 The owner or operator must conduct each test while the affected source or emission unit is operating at the highest production level with charge materials representative of the range of materials processed by the unit and, if applicable, at the highest reactive fluxing rate.

12.12.2.2 Each performance test for a continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of three hours.

12.12.2.3 Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle.

12.12.2.4 Where multiple affected sources or emission units are exhausted through a common stack, pollutant sampling for each run must be conducted over a period of time during which all affected sources or emission units complete at least 1 entire process operating cycle or for 24 hours, whichever is shorter.

12.12.2.5 Initial compliance with an applicable emission limit or standard is demonstrated if the average of three runs conducted during the performance test is less than or equal to the applicable emission limit or standard.

12.12.3 Test methods. The owner or operator must use the following methods in Appendix A to 40 CFR Part 60 to determine compliance with the applicable emission limits or standards:

12.12.3.1 Method 1 for sample and velocity traverses.

12.12.3.2 Method 2 for velocity and volumetric flow rate.

12.12.3.3 Method 3 for gas analysis.

12.12.3.4 Method 4 for moisture content of the stack gas.

12.12.3.5 Method 5 for the concentration of PM.

12.12.3.6 Method 9 for visible emission observations.

12.12.3.7 Method 23 for the concentration of D/F.

12.12.3.8 Method 25A for the concentration of THC, as propane.

12.12.3.9 Method 26A for the concentration of HCl. Where a lime-injected fabric filter is used as the control device to comply with the 90% reduction standard, the owner or operator must measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system.

12.12.4 Alternative methods. The owner or operator may use an alternative test method, subject to approval by the Administrator.

12.12.5 Repeat tests. The owner or operator of new or existing affected sources and emission units located at secondary aluminum production facilities that are major sources must conduct a performance test every five years following the initial performance test.

12.12.6 Testing of representative emission units. With the prior approval of the Department, an owner or operator may utilize emission rates obtained by testing a particular type of group 1 furnace which is not controlled by any add-on control device, or by testing an in-line flux box which is not controlled by any add-on control device, to determine the emission rate for other units of the same type at the same facility. Such emission test results may only be considered to be representative of other units if all of the following criteria are satisfied:

12.12.6.1 The tested emission unit must use feed materials and charge rates which are comparable to the emission units that it represents;

12.12.6.2 The tested emission unit must use the same type of flux materials in the same proportions as the emission units it represents;

12.12.6.3 The tested emission unit must be operated utilizing the same work practices as the emission units that it represents;

12.12.6.4 The tested emission unit must be of the same design as the emission units that it represents; and

12.12.6.5 The tested emission unit must be tested under the highest load or capacity reasonably expected to occur for any of the emission units that it represents.

12.12.7 Establishment of monitoring and operating parameter values. The owner or operator of new or existing affected sources and emission units must establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required in 12.11 of this regulation that ensures compliance with the applicable emission limit or standard. To establish the minimum or maximum value or range, the owner or operator must use the appropriate procedures in this section and submit the information required in 12.16.2.4 of this regulation in the notification of compliance status report. The owner or operator may use existing data in addition to the results of performance tests to establish

operating parameter values for compliance monitoring provided each of the following conditions are met to the satisfaction of the Department:

12.12.7.1 The complete emission test report or reports used as the basis of the parameter or parameters is submitted.

12.12.7.2 The same test methods and procedures as required in Section 12.0 of this regulation were used in the test.

12.12.7.3 The owner or operator certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report.

12.12.7.4 All process and control equipment operating parameters required to be monitored were monitored as required in 12.0 of this regulation and documented in the test report.

12.12.8 Testing of commonly-ducted units within a secondary aluminum processing unit. When group 1 furnaces or in-line fluxers are included in a single existing SAPU or new SAPU, and the emissions from more than one emission unit within that existing SAPU or new SAPU are manifolded to a single control device, compliance for all units within the SAPU is demonstrated if the total measured emissions from all controlled and uncontrolled units in the SAPU do not exceed the emission limits calculated for that SAPU based on the applicable equation in 12.6.11 of this regulation.

12.12.9 Testing of commonly-ducted units not within a secondary aluminum processing unit. With the prior approval of the Department, an owner or operator may do combined performance testing of two or more individual affected sources or emission units which are not included in a single existing SAPU or new SAPU, but whose emissions are manifolded to a single control device. Any such performance testing of commonly-ducted units must satisfy the following basic requirements:

12.12.9.1 All testing must be designed to verify that each affected source or emission unit individually satisfies all emission requirements applicable to that affected source or emission unit;

12.12.9.2 All emissions of pollutants subject to a standard must be tested at the outlet from each individual affected source or emission unit while operating under the highest load or capacity reasonably expected to occur, and prior to the point that the emissions are manifolded together with emissions from other affected sources or emission units;

12.12.9.3 The combined emissions from all affected sources and emission units which are manifolded to a single emission control device must be tested at the outlet of the emission control device;

12.12.9.4 All tests at the outlet of the emission control device must be conducted with all affected sources and emission units whose emissions are manifolded to the control device operating simultaneously under the highest load or capacity reasonably expected to occur; and

12.12.9.5 For purposes of demonstrating compliance of a commonly-ducted unit with any emission limit for a particular type of pollutant, the emissions of that pollutant by the individual unit shall be presumed to be controlled by the same percentage as total emissions of that pollutant from all commonly-ducted units are controlled at the outlet of the emission control device.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.13 Performance test/compliance demonstration requirements and procedures.

12.13.1 Aluminum scrap shredder. The owner or operator must conduct performance tests to measure PM emissions at the outlet of the control system. If visible emission observations is the selected monitoring option, the owner or operator must record visible emission observations from each exhaust stack for all consecutive six-minute periods during the PM emission test according to the requirements of Method 9 in Appendix A to 40 CFR Part 60.

12.13.2 Thermal chip dryer. The owner or operator must conduct a performance test to measure THC and D/F emissions at the outlet of the control device while the unit processes only unpainted aluminum chips.

12.13.3 Scrap dryer/delacquering kiln/decoating kiln. The owner or operator must conduct performance tests to measure emissions of THC, D/F, HCl, and PM at the outlet of the control device.

12.13.3.1 If the scrap dryer/delacquering kiln/decoating kiln is subject to the alternative emission limits in 12.6.5 of this regulation, the average afterburner operating temperature in each 3-hour block period must be maintained at or above 760^{o}C (1400^{o}F) for the test.

12.13.3.2 The owner or operator of a scrap dryer/delacquering kiln/decoating kiln subject to the alternative limits in 12.6.5 of this regulation must submit a written certification in the notification of

compliance status report containing the information required in 12.16.2.7 of this regulation.

12.13.4 Group 1 furnace with add-on air pollution control devices.

12.13.4.1 The owner or operator of a group 1 furnace that processes scrap other than clean charge materials with emissions controlled by a lime-injected fabric filter must conduct performance tests to measure emissions of PM and D/F at the outlet of the control device and emissions of HCl at the outlet (for the emission limit) or the inlet and the outlet (for the percent reduction standard).

12.13.4.2 The owner or operator of a group 1 furnace that processes only clean charge materials with emissions controlled by a lime-injected fabric filter must conduct performance tests to measure emissions of PM at the outlet of the control device and emissions of HCl at the outlet (for the emission limit) or the inlet and the outlet (for the percent reduction standard).

12.13.4.3 The owner or operator may choose to determine the rate of reactive flux addition to the group 1 furnace and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all reactive flux added to the group 1 furnace is emitted. Under these circumstances, the owner or operator is not required to conduct an emission test for HCl.

12.13.4.4 The owner or operator of a sidewell group 1 furnace that conducts reactive fluxing (except for cover flux) in the hearth, or that conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, must conduct the performance tests required in 12.13.4.1 or 12.13.4.2 of this regulation, to measure emissions from both the sidewell and the hearth.

12.13.5 Group 1 furnace (including melting/holding furnaces) without add-on air pollution control devices. In the site-specific monitoring plan required in 12.11.15 of this regulation, the owner or operator of a group 1 furnace (including melting/holding furnaces) without add-on air pollution control devices must include data and information demonstrating compliance with the applicable emission limits.

12.13.5.1 If the group 1 furnace processes other than clean charge material, the owner or operator must conduct emission tests to measure emissions of PM, HCl, and D/F at the furnace exhaust outlet.

12.13.5.2 If the group 1 furnace processes only clean charge, the owner or operator must conduct emission tests to simultaneously measure emissions of PM and HCl at the furnace exhaust outlet. A D/F test is not required. Each test must be conducted while the group 1 furnace (including a melting/holding furnace) processes only clean charge.

12.13.5.3 The owner or operator may choose to determine the rate of reactive flux addition to the group 1 furnace and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all reactive flux added to the group 1 furnace is emitted. Under these circumstances, the owner or operator is not required to conduct an emission test for HCl.

12.13.6 Sweat furnace. Except as provided in 12.6.6.1 of this regulation, the owner or operator must measure emissions of D/F from each sweat furnace at the outlet of the control device.

12.13.7 Dross-only furnace. The owner or operator must conduct a performance test to measure emissions of PM from each dross-only furnace at the outlet of each control device while the unit processes only dross and salt flux as the sole feedstock.

12.13.8 In-line fluxer.

12.13.8.1 The owner or operator of an in-line fluxer that uses reactive flux materials must conduct a performance test to measure emissions of HCl and PM or otherwise demonstrate compliance in accordance with 12.13.8.2 of this regulation. If the in-line fluxer is equipped with an add-on control device, the emissions must be measured at the outlet of the control device.

12.13.8.2 The owner or operator may choose to limit the rate at which reactive chlorine flux is added to an in-line fluxer and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all chlorine in the reactive flux added to the in-line fluxer is emitted as HCl. Under these circumstances, the owner or operator is not required to conduct an emission test for HCl. If the owner or operator of any in-line flux box which has no ventilation ductwork manifolded to any outlet or emission control device chooses to demonstrate compliance with the emission limit for HCl by limiting use of reactive chlorine flux and assuming that all chlorine in the flux is emitted as HCl, compliance with the HCl limit shall also constitute compliance with the emission limit for PM, and no separate emission test for PM is required. In this case, the owner or operator of the unvented in-line flux box must utilize the maximum permissible PM

emission rate for the inline flux boxes when determining the total emissions for any SAPU; which includes the flux box.

12.13.9 Rotary dross cooler. The owner or operator must conduct a performance test to measure PM emissions at the outlet of the control device.

12.13.10 Secondary aluminum processing unit. The owner or operator must conduct performance tests as described in 12.13.10.1 through 12.13.10.3 of this regulation. The results of the performance tests are used to establish emission rates in lb/ton of feed/charge for PM and HCl and µg TEQ/Mg of feed/charge for D/F emissions from each emission unit. These emission rates are used for compliance monitoring in the calculation of the three-day, 24-hour rolling average emission rates using equation 12-4 in 12.11.20 of this regulation. A performance test is required for:

12.13.10.1 Each group 1 furnace processing only clean charge to measure emissions of PM and either:

12.13.10.1.1 Emissions of HCl (for the emission limit) or

12.13.10.1.2 The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard).

12.13.10.2 Each group 1 furnace that processes scrap other than clean charge to measure emissions of PM and D/F and either:

12.13.10.2.1 Emissions of HCl (for the emission limit) or

12.13.10.2.2 The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard).

12.13.10.3 Each in-line fluxer to measure emissions of PM and HCl.

12.13.11 Feed/charge weight measurement. During the emission test or tests conducted to determine compliance with emission limits in a kg/Mg (lb/ton) format, the owner or operator of an affected source or emission unit, subject to an emission limit in a kg/Mg (lb/ton) of feed/charge format, must measure (or otherwise determine) and record the total weight of feed/charge to the affected source or emission unit for each of the three test runs and calculate and record the total weight. An owner or operator that chooses to demonstrate compliance on the basis of the aluminum production weight must measure the weight of aluminum produced by the emission unit or affected source instead of the feed/charge weight.

12.13.12 Continuous opacity monitoring system. The owner or operator of an affected source or emission unit using a continuous opacity monitoring system must conduct a performance evaluation to demonstrate compliance with Performance Specification 1 in Appendix B to 40 CFR Part 60. Following the performance evaluation, the owner or operator must measure and record the opacity of emissions from each exhaust stack for all consecutive six-minute periods during the PM emission test.

12.13.13 Afterburner. These requirements apply to the owner or operator of an affected source using an afterburner to comply with the requirements of 12.0 of this regulation.

12.13.13.1 Prior to the initial performance test, the owner or operator must conduct a performance evaluation for the temperature monitoring device according to the requirements in 3.8 of this regulation.

12.13.13.2 The owner or operator must use these procedures to establish an operating parameter value or range for the afterburner operating temperature.

12.13.13.2.1 Continuously measure and record the operating temperature of each afterburner every 15 minutes during the THC and D/F performance tests;

12.13.13.2.2 Determine and record the 15-minute block average temperatures for the three test runs; and

12.13.13.2.3 Determine and record the three-hour block average temperature measurements for the three test runs.

12.13.14 Inlet gas temperature. The owner or operator of a scrap dryer/delacquering kiln/decoating kiln or a group 1 furnace using a lime-injected fabric filter must use these procedures to establish an operating parameter value or range for the inlet gas temperature.

12.13.14.1 Continuously measure and record the temperature at the inlet to the lime-injected fabric filter every 15 minutes during the HCl and D/F performance tests;

12.13.14.2 Determine and record the 15-minute block average temperatures for the three test runs; and

12.13.14.3 Determine and record the three-hour block average of the recorded temperature measurements for the three test runs.

12.13.15 Flux injection rate. The owner or operator must use these procedures to establish an operating parameter value or range for the total reactive chlorine flux injection rate.

12.13.15.1 Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15 minute period during the HCl and D/F tests, determine and record the 15-minute block average weights, and calculate and record the total weight of the gaseous or liquid reactive flux for the three test runs;

12.13.15.2 Record the identity, composition, and total weight of each addition of solid reactive flux for the three test runs;

12.13.15.3 Determine the total reactive chlorine flux injection rate by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine in the solid reactive flux using equation 12-5:

$$W_t = F_1 * W_1 + F_2 * W_2 \qquad (12\text{-}5)$$

where,
W_t = Total chlorine usage, by weight;
F_1 = Fraction of gaseous or liquid flux that is chlorine;
W_1 = Weight of reactive flux gas or liquid injected;
F_2 = Fraction of solid reactive chloride flux that is chlorine (e.g., F = 0.75 for magnesium chloride); and
W_2 = Weight of solid reactive flux;

12.13.15.4 Divide the weight of total chlorine usage (W_t) for the three test runs by the recorded measurement of the total weight of feed for the three test runs; and

12.13.15.5 If a solid reactive flux other than magnesium chloride is used, the owner or operator must derive the appropriate proportion factor (F_2) subject to approval by the Department.

12.13.16 Lime injection. The owner or operator of an affected source or emission unit using a lime-injected fabric filter system must use these procedures during the HCl and D/F tests to establish an operating parameter value for the feeder setting for each operating cycle or time period used in the performance test.

12.13.16.1 For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times and

12.13.16.2 Record the feeder setting for the three test runs. If the feed rate setting varies during the runs, determine and record the average feed rate from the three runs.

12.13.17 Bag leak detection system. The owner or operator of an affected source or emission unit using a bag leak detection system must submit the information described in 12.16.2.6 of this regulation as part of the notification of compliance status report to document conformance with the specifications and requirements in 12.11.6 of this regulation.

12.13.18 Labeling. The owner or operator of each scrap dryer/delacquering kiln/decoating kiln, group 1 furnace, group 2 furnace, sweat furnace, and in-line fluxer must submit the information described in 12.16.2.3 of this regulation as part of the notification of compliance status report to document conformance with the operational standard in 12.7.2 of this regulation.

12.13.19 Capture/collection system. The owner or operator of a new or existing affected source or emission unit with an add-on control device must submit the information described in 12.16.2.5 of this regulation as part of the notification of compliance status report to document conformance with the operational standard in 12.7.3 of this regulation.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.14 Equations for determining compliance.

12.14.1 THC emission limit. Use equation 12-6 to determine compliance with an emission limit for THC:

$$E = (C * MW * Q * K_1 * K_2) / (M_V * P * 10^6) \qquad (12\text{-}6)$$

where,

E = Emission rate of measured pollutant, kg/Mg (lb/ton) of feed;
C = Measured volume fraction of pollutant, ppmv;
MW = Molecular weight of measured pollutant, g/g-mole (lb/lb-mole): THC (as propane) = 44.11;
Q = Volumetric flow rate of exhaust gases, dscm/hr (dscf/hr);
K_1 = Conversion factor, 1 kg/1,000 g (1 lb/lb);
K_2 = Conversion factor, 1,000 L/m^3 (1 ft^3/ft^3);
M_V = Molar volume, 24.45 L/g-mole (385.3 ft^3/lb-mole); and
P = Production rate, Mg/hr (ton/hr).

12.14.2 PM, HCl and D/F emission limits.

12.14.2.1 Use equation 12-7 to determine compliance with an emission limit for PM or HCl:

$$E = (C * Q * K_1) / P \quad (12\text{-}7)$$

where,
E = Emission rate of PM or HCl, kg/Mg (lb/ton) of feed;
C = Concentration of PM or HCl, g/dscm (gr/dscf);
Q = Volumetric flow rate of exhaust gases, dscm/hr (dscf/hr);
K_1 = Conversion factor, 1 kg/1,000 g (1 lb/7,000 gr); and
P = Production rate, Mg/hr (ton/hr).

12.14.2.2 Use equation 12-8 to determine compliance with an emission limit for D/F:

$$E = (C * Q) / P \quad (12\text{-}8)$$

where,
E = Emission rate of D/F, µg/Mg (gr/ton) of feed;
C = Concentration of D/F, µg /dscm (gr/dscf);
Q = Volumetric flow rate of exhaust gases, dscm/hr (dscf/hr); and
P = Production rate, Mg/hr (ton/hr).

12.14.3 HCl percent reduction standard. Use equation 12-9 to determine compliance with an HCl percent reduction standard:

$$\%R = [(Li – Lo) / (Li)] * 100 \quad (12\text{-}9)$$

where,
%R = Percent reduction of the control device;
Li = Inlet loading of pollutant, kg/Mg (lb/ton); and
Lo = Outlet loading of pollutant, kg/Mg (lb/ton).

12.14.4 Conversion of D/F measurements to TEQ units. To convert D/F measurements to TEQ units, the owner or operator must use the procedures and equations in “Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update” (EPA/625/3-89/016).

12.14.5 Secondary aluminum processing unit. Use the procedures in 12.14.5.1, 12.14.5.2, and 12.14.5.3 or the procedure in 12.14.5.4 of this regulation to determine compliance with emission limits for a secondary aluminum processing unit.

12.14.5.1 Use equation 12-10 to compute the mass-weighted PM emissions for a secondary aluminum processing unit. Compliance is achieved if the mass-weighted emissions for the secondary aluminum processing unit (Ec_{PM}) is less than or equal to the emission limit for

the secondary aluminum processing unit (Lc_{PM}) calculated using equation 12-1 in 12.6.11 of this regulation.

$$Ec_{PM} = \sum_{i=1}^{n} Eti_{PM} * Tti \Big/ \sum_{i=1}^{n} Tti \qquad (12\text{-}10)$$

where,
Ec_{PM} = The mass-weighted PM emissions for the secondary aluminum processing unit;
Eti_{PM} = Measured PM emissions for individual emission unit i;
Tti = The average feed rate for individual emission unit i during the operating cycle or performance test period; and
n = The number of emission units in the secondary aluminum processing unit.

12.14.5.2 Use equation 12-11 to compute the mass-weighted HCl emissions for the secondary aluminum processing unit. Compliance is achieved if the mass-weighted emissions for the secondary aluminum processing unit (Ec_{HCl}) is less than or equal to the emission limit for the secondary aluminum processing unit (Lc_{HCl}) calculated using equation 12-2 in 12.6.11 of this regulation.

$$Ec_{HCl} = \sum_{i=1}^{n} Eti_{HCl} * Tti \Big/ \sum_{i=1}^{n} Tti \qquad (12\text{-}11)$$

where,
Ec_{HCl} = The mass-weighted HCl emissions for the secondary aluminum processing unit;
Eti_{HCl} = Measured HCl emissions for individual emission unit i;
Tti = The average feed rate for individual emission unit i during the operating cycle or performance test period; and
n = The number of emission units in the secondary aluminum processing unit.

12.14.5.3 Use equation 12-12 to compute the mass-weighted D/F emissions for the secondary aluminum processing unit. Compliance is achieved if the mass-weighted emissions for the secondary aluminum processing unit ($Ec_{D/F}$) is less than or equal to the emission limit for the secondary aluminum processing unit ($Lc_{D/F}$) calculated using equation 12-3 in 12.6.11 of this regulation.

$$Ec_{D/F} = \sum_{i=1}^{n} Eti_{D/F} * Tti \Big/ \sum_{i=1}^{n} Tti \qquad (12\text{-}12)$$

where,

$Ec_{D/F}$ = The mass-weighted D/F emissions for the secondary aluminum processing unit;
$Eti_{D/F}$ = Measured D/F emissions for individual emission unit i;
Tti = The average feed rate for individual emission unit i during the operating cycle or performance test period; and
n = The number of emission units in the secondary aluminum processing unit.

12.14.5.4 As an alternative to using the equations in 12.14.5.1, 12.14.5.2, and 12.14.5.3 of this regulation, the owner or operator may demonstrate compliance for a secondary aluminum processing unit by demonstrating that each existing group 1 furnace is in compliance with the emission limits for a new group 1 furnace in 12.6.9 of this regulation and that each existing in-line fluxer is in compliance with the emission limits for a new in-line fluxer in 12.6.10 of this regulation.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.15 [Reserved]

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.16 Notifications.

12.16.1 Initial notifications. The owner or operator must submit initial notifications to the Department as described in 12.16.1.1 through 12.16.1.7 of this regulation.

12.16.1.1 As required in 3.9.2.1 of this regulation, the owner or operator must provide notification for an area source that subsequently increases its emissions such that the source is a major source subject to 12.0 of this regulation.

12.16.1.2 As required in 3.9.2.3 of this regulation, the owner or operator of a new or reconstructed affected source, or a source that has been reconstructed such that it is an affected source, that has an initial startup after June 11, 2003 and for which an application for approval of construction or reconstruction is not required in 3.5.4 of this regulation, must provide notification that the source is subject to 12.0 of this regulation.

12.16.1.3 As required in 3.9.2.4 of this regulation, the owner or operator of a new or reconstructed major affected source or of a source that has been reconstructed such that the source becomes a major affected source, that has an initial startup after June 11, 2003 and for which an application for approval of construction or

reconstruction is required in 3.5.4 of this regulation must provide the following notifications:

12.16.1.3.1 Intention to construct a new major affected source, reconstruct a major source, or reconstruct a source such that the source becomes a major affected source;

12.16.1.3.2 Date when construction or reconstruction was commenced (submitted simultaneously with the application for approval of construction or reconstruction if construction or reconstruction was commenced before June 11, 2003 or no later than 30 days after the date construction or reconstruction commenced if construction or reconstruction commenced after June 11, 2003);

12.16.1.3.3 Anticipated date of startup; and

12.16.1.3.4 Actual date of startup.

12.16.1.4 As required in 3.9.2.5 of this regulation, after June 11, 2003 an owner or operator who intends to construct a new affected source or reconstruct an affected source subject to 12.0 of this regulation, or reconstruct a source such that it becomes an affected source subject to 12.0 of this regulation, must provide notification of the intended construction or reconstruction. The notification must include all the information required for an application for approval of construction or reconstruction as required in 3.5.4 of this regulation. For major sources, the application for approval of construction or reconstruction may be used to fulfill these requirements.

12.16.1.4.1 [Reserved]

12.16.1.4.2 [Reserved]

12.16.1.5 As required in 3.9.4 of this regulation, the owner or operator must provide notification of any special compliance obligations for a new source.

12.16.1.6 As required in 3.9.5 and 3.9.6 of this regulation, the owner or operator must provide notification of the anticipated date for conducting performance tests and visible emission observations. The owner or operator must notify the Department of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission

observations for a performance test must be provided at least 30 days before the observations are scheduled to take place.

12.16.1.7 As required in 3.9.7 of this regulation, the owner or operator must provide additional notifications for sources with continuous emission monitoring systems or continuous opacity monitoring systems.

12.16.2 Notification of compliance status report. Each owner or operator of an existing affected source must submit a notification of compliance status report within 60 days after the compliance dates specified in 12.2.1 of this regulation. Each owner or operator of a new affected source must submit a notification of compliance status report within 90 days after conducting the initial performance test required in 12.12.2 of this regulation, or within 90 days after the compliance date established in 12.2.2 of this regulation if no initial performance test is required. The notification must be signed by the responsible official, who must certify its accuracy. A complete notification of compliance status report must include the information specified in 12.16.2.1 through 12.16.2.10 of this regulation and shall be submitted to the Department (with a copy sent to the Administrator). The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination. If an owner or operator submits the information specified in this section at different times or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the information previously submitted. A complete notification of compliance status report must include:

12.16.2.1 All information required in 3.9.10 of this regulation. The owner or operator must provide a complete performance test report for each affected source and emission unit for which a performance test is required. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests).

12.16.2.2 The approved site-specific test plan and performance evaluation test results for each continuous monitoring system (including a continuous emission or opacity monitoring system).

12.16.2.3 Unit labeling as described in 12.7.2 of this regulation, including process type or furnace classification and operating requirements.

12.16.2.4 The compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used

to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.

12.16.2.5 Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 12.7.3 of this regulation.

12.16.2.6 If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 12.11.6 of this regulation.

12.16.2.7 Manufacturer's specification or analysis documenting the design residence time of no less than one second for each afterburner used to control emissions from a scrap dryer/delacquering kiln/decoating kiln subject to alternative emission standards in 12.6.5 of this regulation.

12.16.2.8 Manufacturer's specification or analysis documenting the design residence time of no less than 0.8 seconds and design operating temperature of no less than 872^{o}C (1600^{o}F) for each afterburner used to control emissions from a sweat furnace that is not subject to a performance test.

12.16.2.9 The OM&M plan (including site-specific monitoring plan for each group 1 furnace with no add-on air pollution control device).

12.16.2.10 Startup, shutdown, and malfunction (SSM) plan, with revisions.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.17 Reports.

12.17.1 Startup, shutdown, and malfunction plan/reports. The owner or operator must develop and implement a written plan as described in 3.6.5.3 of this regulation that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with 12.0 of this regulation. The owner or operator shall also keep records of each event as required in 3.10.2 of this regulation and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 3.6.5.3 and 3.10.4.5 of this

regulation. In addition to the information required in 3.6.5.3 of this regulation, the plan must include:

12.17.1.1 Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended and

12.17.1.2 Corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.

12.17.2 Excess emissions/summary report. The owner or operator must submit semiannual reports according to the requirements in 3.10.5.3 of this regulation. Except, the owner or operator must submit the semiannual reports within 60 days after the end of each six-month period instead of within 30 days after the calendar half as specified in 3.10.5.3.5 of this regulation. When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period.

12.17.2.1 A report must be submitted if any of these conditions occur during a six-month reporting period:

12.17.2.1.1 The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within one hour.

12.17.2.1.2 The corrective action specified in the OM&M plan for a continuous opacity monitoring deviation was not initiated within one hour.

12.17.2.1.3 The corrective action specified in the OM&M plan for visible emissions from an aluminum scrap shredder was not initiated within one hour.

12.17.2.1.4 An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter).

12.17.2.1.5 An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the startup, shutdown and malfunction (SSM) plan as described in 6.5.3 of this regulation.

12.17.2.1.6 An affected source (including an emission unit in a secondary aluminum processing unit) was not operated according to the requirements of 12.0 of this regulation.

12.17.2.1.7 A deviation from the three-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.

12.17.2.2 Each report must include each of these certifications, as applicable:

12.17.2.2.1 For each thermal chip dryer: “Only unpainted aluminum chips were used as feedstock in any thermal chip dryer during this reporting period.”

12.17.2.2.2 For each dross-only furnace: “Only dross and salt flux were used as the charge material in any dross-only furnace during this reporting period.”

12.17.2.2.3 For each sidewell group 1 furnace with add-on air pollution control devices: “Each furnace was operated such that the level of molten metal remained above the top of the passage between the sidewell and hearth during reactive fluxing, and reactive flux, except for cover flux, was added only to the sidewell or to a furnace hearth equipped with an add-on air pollution control device for PM, HCl, and D/F emissions during this reporting period.”

12.17.2.2.4 For each group 1 melting/holding furnace without add-on air pollution control devices and using pollution prevention measures that processes only clean charge material: “Each group 1 furnace without add-on air pollution control devices subject to emission limits in 12.6.9.2 of this regulation processed only clean charge during this reporting period.”

12.17.2.2.5 For each group 2 furnace: “Only clean charge materials were processed in any group 2 furnace during this reporting period, and no fluxing was performed or all fluxing performed was conducted using only nonreactive, non-HAP-containing/non-HAP-generating fluxing gases or agents, except for cover fluxes, during this reporting period.”

12.17.2.2.6 For each in-line fluxer using no reactive flux: "Only nonreactive, non-HAP-containing /non-HAP-generating flux gases, agents, or materials were used at any time during this reporting period."

12.17.2.3 The owner or operator must submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.

12.17.3 Annual compliance certifications. For the purpose of annual certifications of compliance required in 7 **DE Admin Code** 1130, the owner or operator must certify continuing compliance based upon, but not limited to, the following conditions:

12.17.3.1 Any period of excess emissions, as defined in 12.17.2.1 of this regulation, that occurred during the year were reported as required in 12.0 of this regulation and

12.17.3.2 All monitoring, recordkeeping, and reporting requirements were met during the year.

12.17.4 Submittals. The owner or operator shall submit all reports, notifications, or certifications required in 12.0 of this regulation to the Department, with a copy sent to the Director of the Air Protection Division at the EPA Region 3 office.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.18 Records.

12.18.1 As required in 3.10.2 of this regulation, the owner or operator shall maintain files of all information (including all reports and notifications) required in 3.10 and 12.0 of this regulation.

12.18.1.1 The owner or operator must retain each record for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent two years of records must be retained at the facility. The remaining three years of records may be retained off site.

12.18.1.2 The owner or operator may retain records on microfilm, computer disks, magnetic tape, or microfiche.

12.18.1.3 The owner or operator may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

12.18.2 In addition to the general records required in 3.10.2 of this regulation, the owner or operator of a new or existing affected source (including an emission unit in a secondary aluminum processing unit) must maintain records of:

12.18.2.1 For each affected source and emission unit with emissions controlled by a fabric filter or a lime-injected fabric filter:

12.18.2.1.1 If a bag leak detection system is used, the number of total operating hours for the affected source or emission unit during each six-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action or actions taken.

12.18.2.1.2 If a continuous opacity monitoring system is used, records of opacity measurement data, including records where the average opacity of any six-minute period exceeds 5%, with a brief explanation of the cause of the emissions, the time the emissions occurred, the time corrective action was initiated and completed, and the corrective action taken.

12.18.2.1.3 If an aluminum scrap shredder is subject to visible emission observation requirements, records of all Method 9 observations, including records of any visible emissions during a 30-minute daily test, with a brief explanation of the cause of the emissions, the time the emissions occurred, the time corrective action was initiated and completed, and the corrective action taken.

12.18.2.2 For each affected source with emissions controlled by an afterburner:

12.18.2.2.1 Records of 15-minute block average afterburner operating temperature, including any period when the average temperature in any 3-hour block period falls below the compliant operating parameter value with a brief explanation of the cause of the excursion and the corrective action taken.

12.18.2.2.2 Records of annual afterburner inspections.

12.18.2.3 For each scrap dryer/delacquering kiln/decoating kiln and group 1 furnace, subject to D/F and HCl emission standards with emissions controlled by a lime-injected fabric filter, records of 15-minute block average inlet temperatures for each lime-injected fabric filter, including any period when the three-hour block average temperature exceeds the compliant operating parameter value plus 14°C (plus 25°F), with a brief explanation of the cause of the excursion and the corrective action taken.

12.18.2.4 For each affected source and emission unit with emissions controlled by a lime-injected fabric filter:

12.18.2.4.1 Records of inspections at least once every eight-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every four-hour period for the subsequent three days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken.

12.18.2.4.2 If lime feeder setting is monitored, records of daily inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken.

12.18.2.4.3 If lime addition rate for a noncontinuous lime injection system is monitored pursuant to the approved alternative monitoring requirements in 12.11.22 of this regulation, records of the time and mass of each lime addition during each operating cycle or time period used in the performance test and calculations of the average lime addition rate (lb/ton of feed/charge).

12.18.2.5 For each group 1 furnace (with or without add-on air pollution control devices) or in-line fluxer, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid

or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.

12.18.2.6 For each continuous monitoring system, records required in 3.10.3 of this regulation.

12.18.2.7 For each affected source and emission unit subject to an emission standard in kg/Mg (lb/ton) of feed/charge, records of feed/charge (or throughput) weights for each operating cycle or time period used in the performance test.

12.18.2.8 Approved site-specific monitoring plan for a group 1 furnace without add-on air pollution control devices with records documenting conformance with the plan.

12.18.2.9 Records of all charge materials for each thermal chip dryer, dross-only furnace, and group 1 melting/holding furnaces without air pollution control devices processing only clean charge.

12.18.2.10 Operating logs for each group 1 sidewell furnace with add-on air pollution control devices documenting conformance with operating standards for maintaining the level of molten metal above the top of the passage between the sidewell and hearth during reactive flux injection and for adding reactive flux only to the sidewell or a furnace hearth equipped with a control device for PM, HCl, and D/F emissions.

12.18.2.11 For each in-line fluxer for which the owner or operator has certified that no reactive flux was used:

12.18.2.11.1 Operating logs which establish that no source of reactive flux was present at the in-line fluxer;

12.18.2.11.2 Labels required in 12.7.2 of this regulation which establish that no reactive flux may be used at the in-line fluxer; or

12.18.2.11.3 Operating logs which document each flux gas, agent, or material used during each operating cycle.

12.18.2.12 Records of all charge materials and fluxing materials or agents for a group 2 furnace.

12.18.2.13 Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.

12.18.2.14 Records of annual inspections of emission capture/collection and closed vent systems.

12.18.2.15 Records for any approved alternative monitoring or test procedure.

12.18.2.16 Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:

12.18.2.16.1 Startup, shutdown, and malfunction plan;

12.18.2.16.2 OM&M plan; and

12.18.2.16.3 Site-specific secondary aluminum processing unit emission plan (if applicable).

12.18.2.17 For each secondary aluminum processing unit, records of total charge weight, or if the owner or operator chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of three-day, 24-hour rolling average emissions.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.19 Applicability of general provisions.

Owners or operators of affected sources subject to the provisions of Section 12.0 of this regulation must also comply with the requirements in 3.0 of this regulation, according to the applicability of 3.0 of this regulation to such sources as identified in Table 12-1 of this regulation.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.20 [Reserved]

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

12.21 [Reserved]

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

Table 12-1 - Applicability of 3.0 to 12.0 of This Regulation

General Provisions Reference	Applies to 12.0	Comment
3.1.1.1-3.1.1.4	Yes	
3.1.1.5	No	
3.1.1.6	Yes	
3.1.1.7-3.1.1.9	No	
3.1.1.10-3.1.1.14	Yes	
3.1.2.1	Yes	EPA retains approval authority.
3.1.2.2	No	
3.1.2.3	Yes	
3.1.3.1	Yes	
3.1.3.2	Yes	12.1.5 exempts area sources subject to this section from the obligation to obtain a Title V operating permit.
3.1.3.3-3.1.3.4	No	
3.1.3.5	Yes	
3.1.4	No	
3.1.5	Yes	
3.2	Yes	Additional definitions in 12.4.
3.3	Yes	
3.4.1.1-3.4.1.2	Yes	
3.4.1.3-3.4.1.5	No	
3.4.2-3.4.3	Yes	
3.5.1	Yes	
3.5.2.1	Yes	
3.5.2.2	No	
3.5.2.3-3.5.2.4	Yes	
3.5.2.5	No	
3.5.2.6	Yes	
3.5.3	No	
3.5.4-3.5.4.1.2.6	Yes	
3.5.4.1.2.7	No	
3.5.4.1.2.8	Yes	
3.5.4.1.2.9	No	
3.5.4.1.2.10	Yes	
3.6.1	Yes	
3.6.2.1-3.6.2.5	Yes	
3.6.2.6	No	
3.6.2.7	Yes	
3.6.3.1	Yes	12.2 specifies dates.
3.6.3.2	Yes	
3.6.3.3-3.6.3.5	No	

Table 12-1 - Continued

General Provisions Reference	Applies to 12.0	Comment
3.6.3.5	Yes	
3.6.4	No	
3.6.5.1	Yes	12.11 requires plan.
3.6.5.2	No	
3.6.5.3-3.6.5.3.1	Yes	
3.6.5.3.2-3.6.5.3.9	Yes	
3.6.6	Yes	
3.6.7	No	
3.6.8-3.6.8.2.1	Yes	
3.6.8.2.2	No	
3.6.8.2.3	Yes	
3.6.8.3	No	
3.6.8.4-3.6.8.5.3	Yes	
3.6.8.5.4	No	
3.6.8.5.5-3.6.8.9	Yes	
3.6.9.1-3.6.9.14	Yes	
3.6.9.15	No	
3.6.9.16	Yes	
3.6.10	Yes	
3.7.1-3.7.1.2	Yes	Except 12.12 establishes dates for initial performance tests.
3.7.1.2.1-3.7.1.2.7	No	
3.7.1.2.8-3.7.1.3	Yes	
3.7.2	Yes	
3.7.3	Yes	
3.7.4	Yes	
3.7.5	Yes	
3.7.6	Yes	
3.7.7-3.7.7.1	Yes	
3.7.7.2	No	
3.7.7.3	Yes	
3.7.8	Yes	
3.8.1.1	Yes	
3.8.1.2	Yes	
3.8.1.3	No	
3.8.1.4	Yes	
3.8.2	Yes	
3.8.3.1-3.8.3.3	Yes	
3.8.3.4-3.8.3.8	Yes	
3.8.4	Yes	

Table 12-1 - Continued

General Provisions Reference	Applies to 12.0	Comment
3.8.5	Yes	
3.8.6.1-3.8.6.5	No	12.11.23 includes provisions for monitoring alternatives.
3.8.6.6	Yes	
3.8.7.1	Yes	
3.8.7.2	No	12.13 requires five six-minute averages for an aluminum scrap shredder.
3.8.7.3-3.8.7.5	Yes	
3.9.1	Yes	
3.9.2-3.9.2.2	Yes	
3.9.2.3	No	
3.9.2.4-3.9.2.4.1	Yes	
3.9.2.4.2-3.9.2.4.4	No	
3.9.2.4.5-3.9.2.5	Yes	
3.9.3	Yes	
3.9.4	Yes	
3.9.5	Yes	
3.9.6	Yes	
3.9.7	Yes	
3.9.8.1-3.9.8.3	Yes	Except 12.16 establishes dates for notification of compliance status reports.
3.9.8.4	No	
3.9.8.5-3.9.8.6	Yes	
3.9.9	Yes	
3.9.10	Yes	
3.10.1	Yes	
3.10.2	Yes	12.18 includes additional requirements.
3.10.3.1	Yes	
3.10.3.2-3.10.3.4	No	
3.10.3.5	Yes	
3.10.3.6	Yes	
3.10.3.7-3.10.3.8	Yes	
3.10.3.9	No	
3.10.3.10-3.10.3.13	Yes	
3.10.3.14	Yes	
3.10.3.15	Yes	
3.10.4.1	Yes	
3.10.4.2	Yes	

Table 12-1 - Continued

General Provisions Reference	Applies to 12.0	Comment
3.10.4.3	Yes	
3.10.4.4-3.10.4.5	Yes	
3.10.5.1-3.10.5.2	Yes	
3.10.5.3-3.10.5.3.1.2	Yes	
3.10.5.3.1.3	No	
3.10.5.3.1.4-3.10.5.3.8	Yes	Reporting deadline given in 12.17
3.10.5.4	Yes	
3.10.6	Yes	
3.11.1-3.11.2	No	Flares not applicable.
3.12.1-3.12.3	Yes	EPA retains authority for applicability determinations.
3.13	Yes	
3.14	Yes	Chapters 3 and 5 of ACGIH Industrial Ventilation Manual for capture/collection systems; and Interim Procedures for Estimating Risk Associated with Exposure to Mixtures of Chlorinated Dibenzofurans (CDDs and CDFs) and 1989 Update (incorporated by reference in 12.3).
3.15	Yes	

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

Table 12-2 Emission Standards for New and Existing Affected Sources

Affected source/Emission unit	Pollutant	Limit	Units
All new and existing affected sources and emission units that are controlled with a PM add-on control device and that choose to monitor with a continuous opacity monitor (COM) and all new and existing aluminum scrap shredders that choose to monitor with a COM or to monitor visible emissions	Opacity	10	%
New and existing aluminum scrap shredder	PM	0.01	gr/dscf
New and existing thermal chip dryer	THC D/F[a]	0.80 2.50	1b/ton of feed µg TEQ/Mg of feed
New and existing scrap/dryer delacquering kiln/decoating kiln Or Alternative limits if afterburner has a design residence time of at least 1 second and operates at a temperature of at least 760°C (1400°F)	PM HCl THC D/F[a] PM HCl THC D/F[a]	0.08 0.80 0.06 0.25 0.30 1.50 0.20 5.0	1b/ton of feed 1b/ton of feed 1b/ton of feed µg TEQ/Mg of feed 1b/ton of feed 1b/ton of feed 1b/ton of feed µg TEQ/Mg of feed
New and existing sweat furnace	D/F[a]	0.80	ng TEQ/dscm@ 11% O_2 [b]
New and existing dross-only furnace	PM	0.30	1b/ton of feed
New and existing in-line fluxer[c]	HCl PM	0.04 0.01	1b/ton of feed 1b/ton of feed
New and existing in-line fluxer with no reactive fluxing		No Limit	Work practice: no reactive fluxing

Table 12-2 – Continued

Affected source/Emission unit	Pollutant	Limit	Units
New and existing rotary dross cooler	PM	0.04	gr/dscf
New and existing clean furnace (Group 2)		No Limit	Work practice: clean charge only and no reactive fluxing
New and existing group 1 melting/holding furnace (processing only clean charge)[c]	PM HCL 10	0.80 0.40 or	1b/ton of feed 1b/ton of feed percent of the HCl upstream of an add-on control device
New and existing group 1 furnace[c]	PM HCL D/F[a]	0.40 0.40 or 10 15.0	1b/ton of feed 1b/ton of feed percent of the HCl upstream of an add-on control device µg TEQ/Mg of feed
New and existing group 1 furnace[c] with clean charge only	PM HCL D/F[a]	0.40 0.40 or 10 No Limit	1b/ton of feed 1b/ton of feed percent of the HCl upstream of an add-on control device Work practice: clean charge only

Table 12-2 – Continued

Affected source/Emission Unit	Pollutant	Limit
New and existing secondary aluminum processing unit[a,d] (consists of all group 1 furnaces and existing in-line flux boxes at the facility, or all simultaneously constructed new group 1 furnaces and new in-line fluxers	PM [e]	$Lc_{PM} = \frac{\sum_{i=1}^{n} (Lti_{PM} \times Tti)}{\sum_{i=1}^{n} (Tti)}$
	HCl [f]	$Lc_{HCl} = \frac{\sum_{i=1}^{n} (Lti_{HCl} \times Tti)}{\sum_{i=1}^{n} (Tti)}$
	D/F [g]	$Lc_{D/F} = \frac{\sum_{i=1}^{n} (Lti_{D/F} \times Tti)}{\sum_{i=1}^{n} (Tti)}$

[a] D/F limit applies to a unit at a major or area source.

[b] Sweat furnaces equipped with afterburners meeting the specifications in 12.6.6.1 of this regulation are not required to conduct a performance test.

[c] These limits are also used to calculate the limits applicable to secondary aluminum processing units.

[d] Equation definitions:

Lti_{PM} = the PM emission limit for individual emission unit i in the secondary aluminum processing unit [kg/Mg (lb/ton) of feed];

Tti = the feed rate for individual emission unit i in the secondary aluminum processing unit [tons of feed per operating cycle];

Lc_{PM} = the overall PM emission limit for the secondary aluminum processing unit [kg/Mg (lb/ton) of feed];

Lti_{HCl} = the HCl emission limit for individual emission unit i in the secondary aluminum processing unit [kg/Mg (lb/ton) of feed];

Lc_{HCl} = the overall HC1 emission limit for the secondary aluminum processing unit [kg/Mg (lb/ton) of feed];

$Lti_{D/F}$ = the D/F emission limit for individual emission unit i in the secondary aluminum processing unit [µg TEQ/Mg (gr TEQ/ton) of feed];

$Lc_{D/F}$ = the overall D/F emission limit for the secondary aluminum processing unit [µg TEQ/Mg (gr TEQ/ton) of feed]; and

n = the number of emission units in the secondary aluminum processing unit.

[e] In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the PM limit.

[f] In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the HC1 limit.

[g] Clean charge furnaces cannot be included in this calculation since they are not subject to the D/F limit.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

Table 12-3 Summary Of Operating Requirements For New And Existing Affected Sources And Emission Units

Affected source/Emission unit	Monitor type/ Operation/Process	Operating requirements
All affected sources and emission units with an add-on air pollution control device	Emission capture and collection system	Design and install in accordance with "Industrial Ventilation: A Handbook of Recommended Practice"; operate in accordance with OM&M plan.[b]
All affected sources and emission units subject to production-based (lb/ton of feed) emission limits [a]	Charge/feed weight or Production weight	Operate a device that records the weight of each charge; operate in accordance with OM&M plan.[b]
Group 1 furnace, group 2 furnace, in-line fluxer, sweat furnace, and scrap dryer/ delacquering kiln/decoating kiln	Labeling	Identification, operating parameter ranges and operating requirements posted at affected sources and emission units; control device temperature and residence time requirements posted at scrap dryer/delacquering kiln/decoating kiln or sweat furnace.
Aluminum scrap shredder with fabric filter	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with OM&M plan [b]; operate such that alarm does not sound more than 5% of operating time in six-month period.
	Continuous opacity monitor (COM) or	Initiate corrective action within 1-hr of a six-minute average opacity reading of 5% or more and complete in accordance with OM&M plan.[b]
	Visible emissions	Initiate corrective action within 1-hr of any observed visible emissions and complete in accordance with the OM&M plan.[b]

Table 12-3 - Continued

Affected source/Emission unit	Monitor type/ Operation/Process	Operating requirements
Thermal chip dryer with afterburner	Afterburner operating temperature	Maintain average temperature for each three-hr period at or above average operating temperature during the performance test.
	Afterburner operation	Operate in accordance with OM&M plan.[b]
	Feed material	Operate using only unpainted aluminum chips.
Scrap dryer/delacquering kiln/ decoating kiln with afterburner and lime-injected fabric filter	Afterburner operating temperature	Maintain average temperature for each three-hr period at or above average operating temperature during the performance test.
	Afterburner operation	Operate in accordance with OM&M plan.[b]
	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with the OM&M plan;[b] operate such that alarm does not sound more than 5% of operating time in six-month period.
	COM	Initiate corrective action within one-hr of a six-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan.[b]
	Fabric filter inlet temperature	Maintain average fabric filter inlet temperature for each three-hr period at or below average temperature during the performance test plus 14^{o}C (plus 25^{o}F).

Table 12-3 - Continued

Affected source/Emission unit	Monitor type/ Operation/	Operating requirements
Scrap dryer/delacquering kiln/ decoating kiln with afterburner and lime-injected fabric filter	Lime injection rate	Maintain free-flowing lime in the feed hopper or silo at all times for continuous injection systems; maintain feeder setting at level established during the performance test for continuous injection systems.
Sweat furnace with afterburner	Afterburner operating temperature	If a performance test was conducted, maintain average temperature for each three-hr period at or above average operating temperature during the performance test; if a performance test was not conducted and afterburner meets specifications in 12.6.6.1 of this regulation, maintain average temperature for each three-hr period at or above 872^{o}C (1600^{o}F).
	Afterburner operation	Operate in accordance with OM&M plan.[b]
Dross-only furnace with fabric filter	Bag leak detector or	Initiate corrective action within one-hr of alarm and complete in accordance with the OM&M plan; [b] operate such that alarm does not sound more than 5% of operating time in six-month period.
	COM	Initiate corrective action within 1-hr of a six-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan.[b]
	Feed/charge material	Operate using only dross and salt flux as the feed/charge material.

Table 12-3 - Continued

Affected source/Emission unit	Monitor type/ Operation/	Operating requirements
Rotary dross cooler with fabric filter	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with the OM&M plan; [b] operate such that alarm does not sound more than 5% of operating time in six-month period.
	COM	Initiate corrective action within 1-hr of a six-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan.[b]
In-line fluxer with lime-injected fabric filter (including those that are part of a secondary aluminum processing unit)	Bag leak detector or	Initiate corrective action within one-hr of alarm and complete in accordance with the OM&M plan; [b] operate such that alarm does not sound more than 5% of operating time in six-month period.
	COM	Initiate corrective action within 1-hr of a six-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan.[b]
	Lime injection rate	Maintain free-flowing lime in the feed hopper or silo at all times for continuous injection systems; maintain feeder setting at level established during the performance test for continuous injection systems.
	Reactive flux injection rate	Maintain reactive flux injection rate at or below rate used during the performance test for each operating cycle or time period used in the performance test.
In-line fluxer (using no reactive flux materials	Flux materials	Use no reactive flux.

Table 12-3 - Continued

Affected source/Emission unit	Monitor type/ Operation/	Operating requirements
Group 1 furnace with lime-injected fabric filter (including those that are part of a secondary aluminum processing unit)	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with the OM&M plan; [b] operate such that alarm does not sound more than 5% of operating time in six-month period.
	COM	Initiate corrective action within one-hr of a six-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan.[b]
	Fabric filter inlet temperature	Maintain average fabric filter inlet temperature for each 3-hr period at or below average temperature during the performance test plus 14°C (plus 25°F).
	Reactive flux injection rate	Maintain reactive flux injection rate (kg/Mg or lb/hr) at or below rate used during the performance test for each operating cycle or time period used in the performance test.
	Lime injection rate	Maintain free-flowing lime in the feed hopper or silo at all times for continuous injection systems; maintain feeder setting at level established during the performance test for continuous injection systems.
	Maintain molten aluminum level	Operate sidewell furnaces such that the level of molten metal is above the top of the passage between sidewell and hearth during reactive flux injection, unless the hearth is also controlled.
	Fluxing in sidewell furnace hearth	Add reactive flux only to the sidewell of the furnace unless the hearth is also controlled.

Table 12-3 - Continued

Affected source/Emission unit	Monitor type/ Operation/	Operating requirements
Group 1 furnace without add-on controls (including those that are part of a secondary aluminum processing unit)	Reactive flux injection rate	Maintain reactive flux injection rate (kg/Mg or lb/hr) at or below rate used during the performance test for each operating cycle or time period used in the performance test.
	Site-specific monitoring plan [c]	Operate furnace within the range of charge materials, contaminant levels, and parameter values established in the site-specific monitoring plan.
	Feed material (melting/holding furnace)	Use only clean charge.
Clean (group 2) furnace	Charge and flux materials	Use only clean charge. Use no reactive flux.

[a] Thermal chip dryers, scrap dryers/delacquering kilns/decoating kilns, dross-only furnaces, in-line fluxers and group 1 furnaces including melting/holding furnaces.

[b] OM&M plan—Operation, maintenance, and monitoring plan.

[c] Site-specific monitoring plan. Owner/operators of group 1 furnaces without control devices must include a section in their OM&M plan that documents work practice and pollution prevention measures, including procedures for scrap inspection, by which compliance is achieved with emission limits and process or feed parameter-based operating requirements. This plan and the testing to demonstrate adequacy of the monitoring plan must be developed in coordination with and approved by the Department.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)

Table 12-4 Summary Of Monitoring Requirements For New And Existing Affected Sources And Emission Units

Affected source/Emission unit	Monitor type/ Operation/	Monitoring requirements
All affected sources and emission units with an add-on air pollution control device	Emission capture and collection system	Annual inspection of all emission capture, collection, and transport systems to ensure that systems continue to operate in accordance with ACGIH standards.
All affected sources and emission units subject to production-based (lb/ton of feed/charge) emission limits[a]	Feed/charge weight	Record weight of each feed/charge, weight measurement device or other procedure accuracy of ±1% [b]; calibrate according to manufacturer's specifications, or at least once every six months.
Group 1 furnace, group 2 furnace, in-line fluxer, sweat furnace, and scrap dryer/ delacquering kiln/decoating kiln	Labeling	Check monthly to confirm that labels are intact and legible.
Aluminum scrap shredder with fabric filter	Bag leak detector or	Install and operate in accordance with "Fabric Filter Bag Leak Detection Guidance" [c]; record voltage output from bag leak detector.
	Continuous opacity monitor (COM) or	Design and install in accordance with PS–1; collect data in accordance with 3.0 of this regulation; determine and record six-minute block averages.
	Visible emissions	Conduct and record results of 30-minute daily test in accordance with Method 9.
Thermal chip dryer with afterburner	Afterburner operating temperature	Continuous measurement device to meet specifications in 12.11.7.1 of this regulation; record temperature in 15-minute block averages; determine and record three-hr block averages.

Table 12-4 - Continued

Affected source/Emission unit	Monitor type/ Operation/	Monitoring requirements
Thermal chip dryer with afterburner	Afterburner operation	Annual inspection of afterburner internal parts; complete repairs in accordance with the OM&M plan.
	Feed/charge material	Record identity of each feed/charge; certify feed/charge materials every six months.
Scrap dryer/delacquering kiln/ decoating kiln with afterburner and lime injected fabric filter	Afterburner operating temperature	Continuous measurement device to meet specifications in 11.7.1 of this regulation; record temperature in 15-minute block averages; determine and record three-hr block averages.
	Afterburner operation	Annual inspection of afterburner internal parts; complete repairs in accordance with the OM&M plan.
	Bag leak detector or	Install and operate in accordance with “Fabric Filter Bag Leak Detection Guidance” [c]; record voltage output from bag leak detector.
	COM	Design and install in accordance with PS–1; collect data in accordance with 3.0 of this regulation; determine and record six-minute block averages.
	Lime injection rate	For continuous injection systems, record feeder setting daily and inspect each feed hopper or silo every eight hrs to verify that lime is free-flowing; record results of each inspection. If blockage occurs, inspect every four hrs for three days; return to eight-hr inspections if corrective action results in no further blockage during three-day period.

Table 12-4 - Continued

Affected source/Emission unit	Monitor type/ Operation/	Monitoring requirements
Scrap dryer/delacquering kiln/ decoating kiln with afterburner and lime injected fabric filter	Fabric filter inlet temperature	Continuous measurement device to meet specifications in 12.11.8.2 of this regulation; record temperatures in 15-minute block averages; determine and record three-hr block averages.
Sweat furnace with afterburner	Afterburner operating temperature	Continuous measurement device to meet specifications in 12.11.7.1 of this regulation; record temperature in 15-minute block averages; determine and record three-hr block averages.
	Afterburner operation	Annual inspection of afterburner internal parts; complete repairs in accordance with the OM&M plan.
Dross-only furnace with fabric filter	Bag leak detector or	Install and operate in accordance with “Fabric Filter Bag Leak Detection Guidance” [c]; record voltage output from bag leak detector.
	COM	Design and install in accordance with PS–1; collect data in accordance with 3.0 of this regulation; determine and record six-minute block averages.
	Feed/charge material	Record identity of each feed/charge; certify feed/charge materials every six months.
Rotary dross cooler with fabric filter	Bag leak detector or	Install and operate in accordance with “Fabric Filter Bag Leak Detection Guidance” [c]; record voltage output from bag leak detector.
	COM	Design and install in accordance with PS–1; collect data in accordance with 3.0 of this regulation; determine and record six-minute block averages.

Table 12-4 - Continued

Affected source/Emission unit	Monitor type/ Operation/	Monitoring requirements
In-line fluxer using no reactive flux	Flux materials	Record flux materials; certify every six months for no reactive flux.
In-line fluxer with lime-injected fabric filter	Bag leak detector or	Install and operate in accordance with “Fabric Filter Bag Leak Detection Guidance” [c]; record voltage output from bag leak detector.
	COM	Design and install in accordance with PS–1; collect data in accordance with 3.0 of this regulation; determine and record six-minute block averages.
	Reactive flux injection rate	Weight measurement device accuracy of ±1% [b]; calibrate according to manufacturer’s specifications or at least once every six months; record time, weight and type of reactive flux added or injected for each 15-minute block period while reactive fluxing occurs; calculate and record total reactive flux injection rate for each operating cycle or time period used in performance test; or alternative flux injection rate determination procedure in 12.11.10.5 of this regulation.
	Lime injection rate	For continuous injection systems, record feeder setting daily and inspect each feed hopper or silo every eight hrs to verify that lime is free-flowing; record results of each inspection. If blockage occurs, inspect every 4 hrs for three days; return to eight-hr inspections if corrective action results in no further blockage during three-day period.

Table 12-4 - Continued

Affected source/Emission unit	Monitor type/ Operation/	Monitoring requirements
Group 1 furnace with lime-injected fabric filter	Bag leak detector or	Install and operate in accordance with “Fabric Filter Bag Leak Detection Guidance” [c]; record voltage output from bag leak detector.
	COM	Design and install in accordance with PS–1; collect data in accordance with 3.0 of this regulation; determine and record six-minute block averages.
	Lime injection rate	For continuous injection systems, record feeder setting daily and inspect each feed hopper or silo every eight hrs to verify that lime is free-flowing; record results of each inspection. If blockage occurs, inspect every four hrs for three days; return to 8-hr inspections if corrective action results in no further blockage during three-day period.
	Reactive flux injection rate	Weight measurement device accuracy of ±1% [b]; calibrate every three months; record time, weight and type of reactive flux added or injected for each 15-minute block period while reactive fluxing occurs; calculate and record total reactive flux injection rate for each operating cycle or time period used in performance test; or alternative flux injection rate determination procedure in 12.11.10.5 of this regulation.

Table 12-4 - Continued

Affected source/Emission unit	Monitor type/ Operation/	Monitoring requirements
Group 1 furnace with lime-injected fabric filter	Fabric filter inlet temperature	Continuous measurement device to meet specifications in 12.11.8.2 of this regulation; record temperatures in 15-minute block averages; determine and record three-hr block averages.
	Maintain molten aluminum level in sidewell furnace	Maintain aluminum level operating log; certify every six months.
Group 1 furnace without add-on controls	Fluxing in sidewell furnace hearth	Maintain flux addition operating log; certify every six months.
	Reactive flux injection rate	Weight measurement device accuracy of ±1% [b]; calibrate according to manufacturer's specifications or at least once every six months; record time, weight and type of reactive flux added or injected for each 15-minute block period while reactive fluxing occurs; calculate and record total reactive flux injection rate for each operating cycle or time period used in performance test; or alternative flux injection rate determination procedure in 12.11.10.5 of this regulation.
	OM&M plan (approved by Department)	Demonstration of site-specific monitoring procedures to provide data and show correlation of emissions across the range of charge and flux materials and furnace operating parameters.
	Feed material (melting/holding furnace)	Record type of permissible feed/charge material; certify feed/charge materials every six months.
Clean (group 2) furnace	Charge and flux materials	Record charge and flux materials; certify every six months for clean charge and no reactive flux.

[a] Thermal chip dryers, scrap dryers/delacquering kilns/decoating kilns, dross-only furnaces, in-line fluxers and group 1 furnaces or melting/holding furnaces.

[b] Department may approve measurement devices of alternative accuracy, for example in cases where flux rates are very low and costs of meters of specified accuracy are prohibitive; or where feed/charge weighing devices of specified accuracy are not practicable due to equipment layout or charging practices.

[c] Non-triboelectric bag leak detectors must be installed and operated in accordance with manufacturers' specifications.

[d] Department may approve other alternatives including load cells for lime hopper weight, sensors for carrier gas pressure, or HCl monitoring devices at fabric filter outlet.

6 DE Reg. 1724 (6/1/03); 11 DE Reg. 221 (08/01/07)