



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

100 N. Senate Avenue • Indianapolis, IN 46204  
(800) 451-6027 • (317) 232-8603 • [www.idem.IN.gov](http://www.idem.IN.gov)

**Michael R. Pence**  
*Governor*

**Thomas W. Easterly**  
*Commissioner*

TO: Interested Parties / Applicant

DATE: March 5, 2014

RE: Re Magnet Wire Company, Inc. / 003-33903-00013

FROM: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

## Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impracticable to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency  
401 M Street  
Washington, D.C. 20406

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.



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Mr. Brett Kauser  
Rea Magnet Wire Company, Inc.  
4300 New Haven Avenue  
Fort Wayne, IN 46803

March 5, 2014

Re: 003-33903-00013  
Significant Permit Modification to  
Part 70 Renewal No.: T003-31617-00013

Dear Mr. Kauser:

Rea Magnet Wire Company, Inc. was issued a Part 70 Operating Permit Renewal No. T003-31617-00013 on January 29, 2013 for a stationary magnet wire coating operation located at 4300 New Haven Avenue, Fort Wayne, IN 46803. An application requesting changes to this permit was received on October 15, 2013. Pursuant to the provisions of 326 IAC 2-7-12, a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

For your convenience, the entire Part 70 Operating Permit Renewal as modified is attached.

A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Curtis Taylor, of my staff, at 317-234-5176 or 1-800-451-6027, and ask for extension 4-5176.

Sincerely,

Jason R. Krawczyk, Section Chief  
Permits Branch  
Office of Air Quality

Attachment(s): Updated Permit, Technical Support Document and Appendix A

JRK/DK/crt

cc: File - Allen County  
Allen County Health Department  
U.S. EPA, Region V  
Compliance and Enforcement Branch



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Thomas W. Easterly
Commissioner

Part 70 Operating Permit Renewal

OFFICE OF AIR QUALITY

Rea Magnet Wire Company, Inc.
4300 New Haven Avenue
Fort Wayne, Indiana 46803

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Table with 2 columns: Issued by (Chrystal A. Wagner, Section Chief, Permits Branch, Office of Air Quality) and Issuance/Expiration Dates (Issuance Date: January 29, 2013; Expiration Date: January 29, 2018). Header: Operation Permit No.: T003-31617-00013

Table with 2 columns: Issued by (Jason R. Krawczyk, Section Chief, Permits Branch, Office of Air Quality) and Issuance/Expiration Dates (Issuance Date: March 5, 2014; Expiration Date: January 29, 2018). Header: 1st Significant Permit Modification No.: T003-33903-00013

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**Attachment A**            **40 CFR 63 - National Emission Standards for Hazardous Air Pollutants, Subpart MMMM—National Emission Standards for Hazardous Air Pollutants for Miscellaneous Metal Parts and Products Coating.**

**Attachment B**            **40 CFR 63 - National Emission Standards for Hazardous Air Pollutants, Subpart ZZZZ—National Emission Standards for Hazardous Air Pollutants for Stationary Spark Ignition Internal Combustion Engines.**

**SECTION A SOURCE SUMMARY**

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

**A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]**

The Permittee owns and operates a stationary Magnet Wire Coating Operation.

Source Address:	4300 New Haven Avenue, Fort Wayne, Indiana 46803
General Source Phone Number:	260-421-5463
SIC Code:	3357
County Location:	Allen
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

**A.2 Emission Units and Pollution Control Equipment Summary  
 [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]**

This stationary source consists of the following emission units and pollution control devices:

- (a) Under the Miscellaneous Metal Parts and Products Coating NESHAP (40 CFR 63, Subpart Mmmm), the following emission units are considered to be part of an existing magnet wire coating affected source.

Model	Oven ID	Construction Date	Max. Rating (lbs wire/hr)	Oxidizer type	Thermal oxidizer Heat Input Capacity (MMBtu/hr)	Stack ID #
Quartz Fabric	701-702	1994	68.8	Two external TOs for four ovens	0.3	0431 and 0432
Quartz Fabric	703-704	1994	68.8			
Quartz Fabric	705-706	1994	68.8			
Quartz Fabric	707-708	1994	68.8			
Quartz Fabric	709-710	1994	68.8	One external TO for one oven	0.3	0433
Quartz Fabric	804	1978	111.7	Three external TOs for six ovens	0.3	0435, 0437 and 438
Quartz Fabric	805	1978	111.7			
Quartz Fabric	808	1977	111.7			
Quartz Fabric	809	1968	111.7			
Quartz Fabric	810	1979	111.7			
Quartz Fabric	811	1992	111.7			
Lepel Fabric	802	1978	233	Two external TOs for four ovens	0.3	0434 and 0436
Lepel Fabric	803	1978	233			
Lepel Fabric	806	1977	233			
Lepel Fabric	807	1977	233			

Quartz Fabric	812 and 813	2008	224.6 (Total)	One External TO for two ovens	0.3	0430
SICME ES	600	1991	425.1	one internal TO for one oven	0.9	0071
SICME ES	605	1991	425.1	one internal TO for one oven	0.9	0069
SICME ES	690	1991	425.1	one internal TO for one oven	0.9	0068
SICME ES	695	1991	425.1	one internal TO for one oven	0.9	0066
MOCO	640	1974	637.7	One external TO for one oven	1.1	0177
MOCO	650	1974	637.7	One external TO for one oven	1.1	0176
MOCO	530	1974	327.5	One external TO for one oven	1.1	0172
MOCO	540	1974	327.5	One external TO for one oven	1.1	0173
MOCO	355-356	1974	327.5	One external TO for one oven	1.1	0174
MOCO	357-358	1974	327.5	One external TO for one oven	1.1	0199
MOCO	359-360	1974	327.5	One external TO for one oven	1.1	0200
MOCO	361-362	1974	327.5	One external TO for one oven	1.1	0201
MOCO	660	1974	327.5	One external TO for one oven	1.1	0175
MOCO	500	1974	327.5	One external TO for one oven	1.1	0198
MOCO	510	1974	327.5	One external TO for one oven	1.1	0197
MOCO	520	1974	327.5	One external TO for one oven	1.1	0196
GE-M	615	2006	332.4	One external TO and one internal Catalytic TO for one oven	0.7	418
GE-M	635	2006	332.4	One external TO and one internal Catalytic TO for one oven	0.7	420

NOTE: TO is Thermal Oxidizer

- (b) Under the Miscellaneous Metal Parts and Products Coating NESHAP (40 CFR 63, Subpart M), the following emission units are considered to be part of an existing magnet wire coating affected source.

Model	Oven ID	Construction Date	Max. Rating (lbs wire/hr)	Oxidizer type	Thermal oxidizer Heat Input Capacity (MMBtu/hr)	Stack ID #
Weather Rite V26 with 0.2 MMBtu/hr Annealer	550	2012	1082	One internal TO for one oven	0.90	0439
Weather Rite V26 with 0.2 MMBtu/hr Annealer	560	2013	650	One internal TO for one oven	1.0	0443

Note: TO is Thermal Oxidizer

- (c) Under the Miscellaneous Metal Parts and Products Coating NESHAP (40 CFR 63, Subpart Mmmm), the following emission units are considered to be storage and mixing operations that are considered to be part of an existing magnet wire coating affected source. The tank information (unit description) and process throughput has been updated during this renewal. There is no increase in the process throughput.

Stack	Year of Construction	Tank	Capacity (gallons)	Cleaning Materials
117	2010	1	900	Cresylic Acid
		2	400	Ethyl Alcohol
	1991	3	400	n-Methyl-2-Pyrrolidone
4		350	Water Rinse	
5		180	Power Strip 720/ Water	
No Stack				
299				

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment.
- (b) Emergency generator as follows: natural gas turbines or reciprocating engines not exceeding 16,000 horsepower:
- (1) One (1) Cummins 395 HP natural gas emergency generator exhausting to stack 415.
  - (2) One (1) 103 HP natural gas emergency generator exhausting to stack 214.
  - (3) One (1) 69 HP natural gas emergency generator exhausting to stack 295.

Under the NESHAP, 40 CFR 63, Subpart (ZZZZ), the natural gas fired emergency generators; 395 HP, 103 HP, and 69 HP are considered affected facilities at a major source of HAP emissions.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

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This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## **SECTION B GENERAL CONDITIONS**

### **B.1 Definitions [326 IAC 2-7-1]**

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

### **B.2 Permit Term [326 IAC 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]**

- (a) This permit, T003-31617-00013, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

### **B.3 Term of Conditions [326 IAC 2-1.1-9.5]**

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Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

### **B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]**

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Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

### **B.5 Severability [326 IAC 2-7-5(5)]**

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The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

### **B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]**

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This permit does not convey any property rights of any sort or any exclusive privilege.

### **B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]**

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

### **B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]**

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- (a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

- (1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(34), and
  - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
  - (c) A "responsible official" is defined at 326 IAC 2-7-1(34).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
  - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)][326 IAC 2-7-6(1) and (6)][326 IAC 1-6-3]

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- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

The Permittee shall implement the PMPs.

- (c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
  - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or  
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)  
Facsimile Number: 317-233-6865

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.

- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.  
  
This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.
- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

- (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
  - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
  - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
  - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
  - (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
  - (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

**B.13** Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]

- (a) All terms and conditions of permits established prior to T003-31617-00013 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised under 326 IAC 2-7-10.5, or
  - (3) deleted under 326 IAC 2-7-10.5.
- (b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

**B.14** Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

**B.15** Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
  - (1) That this permit contains a material mistake.

- (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
- (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
  - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
  - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs  
[326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]

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- (a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

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- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b),(c), or (e) without a prior permit revision, if each of the following conditions is met:
- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
  - (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
  - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
  - (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:
- (1) A brief description of the change within the source;
  - (2) The date on which the change will occur;
  - (3) Any change in emissions; and
  - (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]  
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

**B.20 Source Modification Requirement [326 IAC 2-7-10.5]**

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A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

**B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]**

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:  
  
Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

## SECTION C

## SOURCE OPERATION CONDITIONS

Entire Source

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

#### C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

#### C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

#### C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

#### C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

#### C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

### Testing Requirements [326 IAC 2-7-6(1)]

#### C.8 Performance Testing [326 IAC 3-6]

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- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

### Compliance Requirements [326 IAC 2-1.1-11]

#### C.9 Compliance Requirements [326 IAC 2-1.1-11]

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

### Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

#### C.10 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]

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- (a) For new units:  
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.
- (b) For existing units:  
Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
- (d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

**C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

**Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]**

**C.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

**C.13 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]**

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If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

**C.14 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]**

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- (l) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
  - (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
    - (1) initial inspection and evaluation;
    - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
    - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
  - (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
    - (1) monitoring results;
    - (2) review of operation and maintenance procedures and records; and/or
    - (3) inspection of the control device, associated capture system, and the process.
  - (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
  - (e) The Permittee shall maintain the following records:
    - (1) monitoring data;
    - (2) monitor performance data, if applicable; and
    - (3) corrective actions taken.
- (II)
- (a) *CAM Response to excursions or exceedances.*
    - (1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial

inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

- (2) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.
- (b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
- (c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.
- (d) Elements of a QIP:  
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).
- (e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.
- (f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:
  - (1) Failed to address the cause of the control device performance problems;  
or
  - (2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.
- (h) *CAM recordkeeping requirements.*

- (1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.
- (2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

**C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]**  
Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(33) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-50 IGCN 1003  
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2][326 IAC 2-3]

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(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

- (AA) All calibration and maintenance records.
- (BB) All original strip chart recordings for continuous monitoring instrumentation.
- (CC) Copies of all reports required by the Part 70 Operating Permit.

Records of required monitoring information include the following, where applicable:

- (AA) The date, place, as defined in this permit, and time of sampling or measurements.
- (BB) The dates analyses were performed.
- (CC) The company or entity that performed the analyses.
- (DD) The analytical techniques or methods used.
- (EE) The results of such analyses.
- (FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11][326 IAC 2-2] [40 CFR 64][326 IAC 3-8]

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(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a

"responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

- (b) The address for report submittal is:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

### **Stratospheric Ozone Protection**

#### **C.19 Compliance with 40 CFR 82 and 326 IAC 22-1**

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Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

**SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

Under the Miscellaneous Metal Parts and Products Coating NESHAP (40 CFR 63, Subpart M), the following emission units are considered to be part of an existing magnet wire coating affected source.

Model	Oven ID	Construction Date	Max. Rating (lbs wire/hr)	Thermal Oxidizer type	Thermal oxidizer Heat Input Capacity (MMBtu/hr)	Stack ID #
Quartz Fabric	701-702	1994	68.8	Two external TOs for four ovens	0.3	0431 and 0432
Quartz Fabric	703-704	1994	68.8			
Quartz Fabric	705-706	1994	68.8			
Quartz Fabric	707-708	1994	68.8			
Quartz Fabric	709-710	1994	68.8	One external TO for one oven	0.3	0433
Quartz Fabric	804	1978	111.7	Three external TOs for six ovens	0.3	0435, 0437 and 438
Quartz Fabric	805	1978	111.7			
Quartz Fabric	808	1977	111.7			
Quartz Fabric	809	1968	111.7			
Quartz Fabric	810	1979	111.7			
Quartz Fabric	811	1992	111.7			
Quartz Fabric	812 and 813	2008	224.6 (Total)	One External TO for two ovens	0.3	0430

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.1.1 PSD Minor Limit [326 IAC 2-2]**

Pursuant to T003-24307-00013, issued on December 14, 2007, the VOC emissions from the Quartz Fabric oven, identified as 811, the SICME ES ovens in Section D.3 and the applicator cleaning area in Section D.6 shall be less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limit shall render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

**D.1.2 Volatile Organic Compound (VOC) [326 IAC 8-6]**

Pursuant to 326 IAC 8-6-2(a) (Organic Solvent Emission Limitations), the VOC emissions from the four (4) Quartz Fabric wire enamel ovens, identified as 804, 805, 808 and 810 shall be reduced by at least eighty-five percent (85%).

**D.1.3 Volatile Organic Compound (VOC) [326 IAC 8-2-8]**

Pursuant to 326 IAC 8-2-8(b), the owner or operator of ovens #812 and 813 shall not allow or permit the discharge into the atmosphere of any volatile organic compounds in excess of 0.20 kilograms per liter of coating (1.7 pounds per gallon) excluding water, delivered to the coating applicator from each of these two (2) ovens.

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D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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A Preventive Maintenance Plan is required for this facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements**

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D.1.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

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In order to comply with Conditions D.1.1, D.1.2 and D.1.3, the thermal oxidizer shall be in operation whenever the associated quartz fabric oven is in operation.

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D.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-2(b)]

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Compliance with the VOC content and emission limitation in Condition D.1.3 shall be determined pursuant to 326 IAC 8-1-2(b), using formulation data supplied by the coating manufacturer.

The equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$
$$= 1.7 / (1 - (1.7 / 7.36)) = 2.21 \text{ lb VOC/gal coating solids}$$

Where:

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating less water = 1.7 lb/gal;

D= Baseline solvent density of VOC in the coating and shall be equal to seven and thirty-six hundredths (7.36) pounds of VOC per gallon of solvent;

E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the add-on thermal oxidizer shall be no less than the equivalent overall efficiency calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$
$$= \frac{23.9 - 2.21}{23.9} \times 100$$
$$= 90.75\%$$

Where:

V = The actual VOC content of the coating, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied = 23.9 lb VOC/gal solids

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied = 2.21 lb VOC per gal coating solids

O = Equivalent overall efficiency of the capture system and control device as a percentage.

The overall efficiency of the thermal oxidizer for ovens #812 and 813 shall be equal to or greater than 90.75% or the efficiency required to comply with the limit of 1.7 lb/gal.

#### D.1.7 Thermal oxidizer Operation

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- (a) The thermal oxidizers controlling ovens 804, 805, 808, 809, 810, 811, 701-702, 703-704, 705-706, 707-708, and 709-710 shall operate at all times that the ovens are in operation. When operating, the thermal oxidizers shall maintain a minimum 3 hour average temperature of 1160°F until 3 hour block average minimum temperature determined in the latest compliance testing to maintain an overall control efficiency of not less than eighty-five percent (85%) of volatile organic compound (VOC) in order to determine compliance with Conditions D.1.1 and D.1.2.
- (b) The thermal oxidizer controlling ovens #812 and 813 shall operate at all times that any one of the two ovens is in operation. When operating, the thermal oxidizer shall maintain a minimum 3 hour average temperature of 1160°F until 3 hour block average minimum temperature determined in the latest compliance testing to maintain an overall control efficiency of not less than 90.75% or the efficiency required to demonstrate compliance with Condition D.1.3.

#### D.1.8 Testing requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11][40 CFR 63, Subpart M] ~~MMMMM~~

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- (a) In order determine compliance with Conditions D.1.1, D.1.2 and D.1.3, the Permittee shall repeat performance test at least once every five (5) years from the last valid stack test to determine the overall control efficiency (capture and destruction efficiency) testing of the thermal oxidizer for VOC, and to determine the 3-hour average temperature using methods approved by the Commissioner. The Permittee shall conduct performance tests to verify VOC control efficiency as listed below. If the representative oven that is required to be tested has not been in operation for at least six (6) months prior to the test deadline, another similar oven in the same group of ovens shall be tested. If none of the ovens in a particular test group has been in operation for at least six (6) months prior to the test deadline, then the Permittee is not required to conduct testing for that group. However, upon startup of any oven in a test group that has not been in operation for at least six (6) months prior to the test deadline, the Permittee shall conduct performance test to verify VOC and/or HAP control efficiency within ninety (90) days of startup of that oven. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) One (1) representative thermal oxidizers from the seven (7) oxidizers controlling the thirteen (13) Quartz Fabric enamel ovens shall be tested for VOC emissions. Testing shall be performed such that no single thermal oxidizer is tested twice in a ten (10) year cycle. This test shall be repeated at least once every five (5) years from the date of this valid compliance determination.
- (c) For a higher VOC content coating than that used during the stack test in (a) above, the following procedure shall be followed:
- (1) Calculate the new maximum VOC loading ( $L_{new}$ ) for the higher VOC content enamel;
  - (2) Calculate the current maximum VOC loading ( $L_{current}$ ); and
  - (3) If  $L_{new}$  is lower than  $L_{current}$ , Permittee shall be allowed to use the higher VOC content enamel.
- (d) Before using a coating that would lead to a higher VOC loading in pounds per hour than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Conditions D.1.1, D.1.2 and D.1.3 for the thermal oxidizer using methods approved by the commissioner.

#### D.1.9 Volatile Organic Compounds (VOC) Calculations

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In order to determine compliance with the VOC emission limitation in Condition D.1.1, the Permittee shall determine the VOC emissions for each month for the Quartz Fabric oven, identified as 811, using the following methodology:

$$\text{VOC emissions} = [(\text{VOC usage}) \times (1.0 - \text{CE}/100)]$$

CE = The control efficiency determined by most recent IDEM approved stack test.

### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### **D.1.10 Parametric Monitoring**

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- (a) A continuous monitoring system shall be calibrated, maintained, and operated on three thermal oxidizers for measuring operating temperature of the thermal oxidizers. For the purposes of this condition, continuous monitoring shall mean no less often than once per fifteen (15) minutes. The output from this monitoring system and the three hour average temperatures shall be recorded whenever the oxidizers are in operation.
- (b) If the primary continuous monitoring system is not in operation, the oxidizer temperatures will be recorded using some manner of secondary system, such as with back-up electro-mechanical hardware or manually if necessary. Nothing in this permit shall excuse the Permittee from complying with the requirement to continuously monitor the temperature of the oxidizers. Continuous monitoring shall mean no less often than once per fifteen (15) minutes.
- (c) The oxidizers shall operate such that if the three-hour average temperature falls below the 3 hour block average minimum required as in Condition D.1.7 until determined from the most recent stack test, corrective actions shall be taken within 15 minutes to return oxidizer temperature to at least the required minimum temperature. Corrective action must return oxidizer temperature to or above the required minimum temperature within thirty (30) minutes of the corrective action, or the enamel flow to the oven shall be shut off. A reading that is below the required minimum temperature as established in the most recent compliant stack test is not a deviation from this permit. Section C – Response to Excursions and Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### **D.1.11 Record Keeping Requirements**

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- (a) To document the compliance status with Conditions D.1.1, D.1.2 and D.1.3, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Conditions D.1.1, D.1.2 and D.1.3.
  - (1) The VOC content of each coating material and solvent used less water;
  - (2) Records shall include material balance calculations, purchase orders, invoices, supplier data sheets and material safety data sheets (MSDS) necessary to verify the type and amount used;
  - (3) The cleanup solvent usage for each month;
  - (4) The total VOC usage for each month;
- (b) To document the compliance status with Condition D.1.10, the Permittee shall maintain:
  - (1) Continuous temperature records and 3 hour average temperature records of the thermal oxidizer.
- (c) Section C - General Record Keeping Requirements, contains the Permittee's obligations

with regard to the records required by this condition.

#### D.1.12 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.1.1, D.1.2 and D.1.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

**SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS**

<b>Emissions Unit Description:</b>						
Model	Oven ID	Construction Date	Max. Rating (lbs wire/hr)	Thermal Oxidizer type	Thermal oxidizer Heat Input Capacity (MMBtu/hr)	Stack ID #
Lepel Fabric	802	1978	233	Two external TOs for four ovens	0.3	0434 and 0436
Lepel Fabric	803	1978	233			
Lepel Fabric	806	1977	233			
Lepel Fabric	807	1977	233			

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.2.1 Volatile Organic Compound (VOC) [326 IAC 8-6]**

Pursuant to 326 IAC 8-6-2(a) (Organic Solvent Emission Limitations), the VOC emissions from the four (4) Lepel Fabric wire enameling ovens, identified as 802, 803, 806, and 807 shall be reduced by at least eighty-five percent (85%).

**D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

A Preventive Maintenance Plan is required for this facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements**

**D.2.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]**

In order to comply with Condition D.2.1, the thermal oxidizers shall be in operation whenever the associated Lepel Fabric oven is in operation.

**D.2.4 Thermal oxidizer Operation**

The thermal oxidizers controlling Lepel fabric ovens 802, 803, 806 and 807 shall operate at all times that the ovens are in operation. When operating, the thermal oxidizer shall maintain a minimum 3 hour average temperature of 1240°F until 3 hour block average minimum temperature determined in the latest compliance testing to maintain an overall control efficiency of not less than eighty-five percent (85%) of volatile organic compound (VOC) in order to determine compliance with Condition D.2.1.

**D.2.5 Testing requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11]**

- (a) In order to determine the compliance with Condition D.2.1, the Permittee shall repeat performance test at least once every five (5) years from the last valid stack test to determine the overall control efficiency (capture and destruction efficiency) testing of the thermal oxidizer for VOC, and to determine the 3-hour average temperature using methods approved by the Commissioner. The Permittee shall conduct performance tests to verify VOC control efficiency as listed below. If the representative oven that is required to be tested has not been in

operation for at least six (6) months prior to the test deadline, another similar oven in the same group of ovens shall be tested. If none of the ovens in a particular test group has been in operation for at least six (6) months prior to the test deadline, then the Permittee is not required to conduct testing for that group. However, upon startup of any oven in a test group that has not been in operation for at least six (6) months prior to the test deadline, the Permittee shall conduct performance test to verify VOC and/or HAP control efficiency within ninety (90) days of startup of that oven. Testing shall be conducted in accordance with Section C - Performance Testing.

- (b) One (1) representative thermal oxidizer from the two (2) oxidizers controlling the four (4) Lepel Fabric ovens shall be tested for VOC emissions. Testing shall be performed such that no single oven is tested twice in a ten (10) year cycle. This test shall be repeated at least once every five (5) years from the date of last valid compliance determination.
- (c) For a higher VOC content coating than that used during the stack test in (a) above, the following procedure shall be followed:
  - (1) Calculate the new maximum VOC loading ( $L_{new}$ ) for the higher VOC content enamel;
  - (2) Calculate the current maximum VOC loading ( $L_{current}$ ); and
  - (3) If  $L_{new}$  is lower than  $L_{current}$ , Permittee shall be allowed to use the higher VOC content enamel.
- (d) Before using a coating that would lead to a higher VOC loading in pounds per hour than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.2.1 for the thermal oxidizer using methods approved by the commissioner.

### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### **D.2.6 Parametric Monitoring**

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- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature of the thermal oxidizer. For the purposes of this condition, continuous monitoring shall mean no less often than once per fifteen (15) minutes. The output from this monitoring system and the three hour average temperatures shall be recorded whenever the oxidizers are in operation.
- (b) If the primary continuous monitoring system is not in operation, the oxidizer temperature will be recorded using some manner of secondary system, such as with back-up electro-mechanical hardware or manually if necessary. Nothing in this permit shall excuse the Permittee from complying with the requirement to continuously monitor the temperature of the oxidizer. Continuous monitoring shall mean no less often than once per fifteen (15) minutes.
- (c) The oxidizer shall operate such that if the three-hour average temperature falls below the 3 hour block average minimum required in Condition D.2.4 until determined from the most recent stack test, corrective actions shall be taken within 15 minutes to return oxidizer temperature to at least the required minimum temperature. Corrective action must return oxidizer temperature to or above the required minimum temperature within thirty (30) minutes of the corrective action, or the enamel flow to the oven shall be shut off. A reading that is below the temperature established in the most recent compliant stack test is not a deviation from this permit. Section C – Response to Excursions and Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

## **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

### **D.2.7 Record Keeping Requirements**

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- (a) To document the compliance status with Condition D.2.6, the Permittee shall maintain:
  - (1) Continuous temperature records and 3 hour average temperature records of the thermal oxidizer.
- (b) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

**SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

Model	Oven ID	Construction Date	Max. Rating (lbs wire/hr)	Thermal Oxidizer type	Thermal oxidizer Heat Input Capacity (MMBtu/hr)	Stack ID #
SICME ES	600	1991	425.1	One internal TO for one oven	0.9	0071
SICME ES	605	1991	425.1	One internal TO for one oven	0.9	0069
SICME ES	690	1991	425.1	One internal TO for one oven	0.9	0068
SICME ES	695	1991	425.1	One internal TO for one oven	0.9	0066

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.3.1 PSD Minor Limit [326 IAC 2-2]**

Pursuant to the Operating permit 003-24307-00013, the VOC emissions from the SICME ES ovens, identified as 600, 605, 690 and 695, the Quartz fabric oven, identified as 811 in Section D.1 and the applicator cleaning area in Section D.7 shall be less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limit shall render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable for ovens listed in (a) and (b)

**D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-8]**

Pursuant to 326 IAC 8-2-8(b) (Magnet Wire Coating Operation), the owner or operator of four (4) SICME ES enamel ovens shall not allow or permit the discharge into the atmosphere of any volatile organic compounds in excess of 0.20 kilograms per liter of coating (1.7 pounds per gallon) excluding water, delivered to the coating applicator from each of the listed ovens.

**D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

A Preventive Maintenance Plan is required for this facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements**

**D.3.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]**

In order to comply with Conditions D.3.1 and D.3.2, the thermal oxidizers shall be in operation whenever any one enamel oven is in operation.

#### D.3.5 Volatile Organic Compounds (VOC) Calculations

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In order to demonstrate compliance with the VOC emission limitation in Condition D.3.1, the Permittee shall determine the VOC emissions for each month for the SICME ES ovens, identified as 600, 605, 690, and 695 using the following methodology:

$$\text{VOC emissions} = [(\text{VOC usage}) \times (1.0 - \text{CE}/100)]$$

CE = The control efficiency determined by most recent IDEM approved stack test.

#### D.3.6 Thermal oxidizer Operation

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The thermal oxidizer for SICME ES ovens, identified as 600, 605, 690 and 695, shall operate at all times that the ovens are in operation. When operating, the thermal oxidizer shall maintain a minimum 3 hour average temperature of 1365°F until 3 hour block average minimum temperature determined in the latest compliance testing to maintain an overall control efficiency of not less than 94.24% of volatile organic compound (VOC) in order to determine compliance with Conditions D.3.1, and D.3.2.

#### D.3.7 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

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Compliance with the VOC usage and content limitations contained in Conditions D.3.1 and D.3.2 shall be determined pursuant to 326 IAC 8-1-4(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ reserve the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4

#### D.3.8 Volatile Organic Compounds (VOC) [326 IAC 8-1-2(b)]

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Compliance with the VOC content and emission limitation shall be determined pursuant to 326 IAC 8-1-2(b), using formulation data supplied by the coating manufacturer.

The equivalency was determined by the following equation:

$$\begin{aligned} E &= L / (1 - (L/D)) \\ &= 1.7 / (1 - (1.7 / 7.36)) = 2.21 \text{ lbs VOC/gal coating solids} \end{aligned}$$

Where:

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating less water = 1.7 lb/gal;

D= Baseline solvent density of VOC in the coating and shall be equal to seven and thirty-six hundredths (7.36) pounds of VOC per gallon of solvent;

E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the internal thermal oxidizer shall be no less than the equivalent overall efficiency calculated by the following equation:

$$\begin{aligned} O &= \frac{V - E}{V} \times 100 \\ &= \frac{38.4 - 2.21}{38.4} \times 100 \\ &= 94.24\% \end{aligned}$$

Where:

- V = The actual VOC content of the coating, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied = 38.4 lbs VOC/gal solids
- E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied = 2.21 lbs VOC/gal coating solids
- O = Equivalent overall efficiency of the capture system and control device.

The overall efficiency of the thermal oxidizer for ovens 600, 605, 690, and 695, shall be equal to or greater than 94.24% or the efficiency required to comply with the limit of 1.7 lb/gal.

D.3.9 Testing requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11][40 CFR 63, Subpart M]

- (a) In order to determine compliance with Conditions D.3.1 and D.3.2, the Permittee shall repeat performance test at least once every five (5) years from the last valid stack test to determine the overall control efficiency (capture and destruction efficiency) testing of the thermal oxidizer for VOC, and to determine the 3-hour average temperature using methods approved by the Commissioner. The Permittee shall conduct performance tests to verify VOC control efficiency as listed below. If the representative oven that is required to be tested has not been in operation for at least six (6) months prior to the test deadline, another similar oven in the same group of ovens shall be tested. If none of the ovens in a particular test group has been in operation for at least six (6) months prior to the test deadline, then the Permittee is not required to conduct testing for that group. However, upon startup of any oven in a test group that has not been in operation for at least six (6) months prior to the test deadline, the Permittee shall conduct performance test to verify VOC and/or HAP control efficiency within ninety (90) days of startup of that oven. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) One (1) representative oven shall be tested for VOC emissions. Testing shall be performed such that no single oven is tested twice in a ten (10) year cycle. This test shall be repeated at least once every five (5) years from the date of this valid compliance determination.
- (c) For a higher VOC content coating than that used during the stack test in (a) above, the following procedure shall be followed:
- (1) Calculate the new minimum required control efficiency for the new coating ( $E_{new}$ )
  - (2) Calculate the new maximum VOC loading ( $L_{new}$ ) for the higher VOC content enamel;
  - (3) Calculate the current maximum VOC loading ( $L_{current}$ ); and
  - (4) If  $E_{new}$  is lower than the stack test control efficiency, and  $L_{new}$  is lower than  $L_{current}$ , Permittee shall be allowed to use the higher VOC content enamel.
- (d) Before using a coating that would lead to a higher VOC loading in pounds per hour than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Conditions D.3.1 and D.3.2 for the thermal oxidizer using methods approved by the commissioner.

## **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

### **D.3.10 Parametric Monitoring**

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- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperature of the thermal oxidizers. For the purposes of this condition, continuous monitoring shall mean no less often than once per fifteen (15) minutes. The output from this monitoring system and the three hour average temperatures shall be recorded whenever the oxidizers are in operation.
- (b) If the primary continuous monitoring system is not in operation, the oxidizer temperature will be recorded using some manner of secondary system, such as with back-up electro-mechanical hardware or manually if necessary. Nothing in this permit shall excuse the Permittee from complying with the requirement to continuously monitor the temperature of the oxidizers. Continuous monitoring shall mean no less often than once per fifteen (15) minutes.
- (c) For the SICME ES ovens, identified as 600, 605, 690 and 695, the oxidizers shall operate such that if the three-hour average temperature falls below the 3 hour block average minimum required in Condition D.3.6 until determined from the most recent stack test, corrective actions shall be taken within 15 minutes to return oxidizer temperature to at least the required minimum temperature. Corrective action must return oxidizer temperature to or above the required minimum temperature within thirty (30) minutes of the corrective action, or the enamel flow to the oven shall be shut off. A reading that is below the required minimum temperature as established in the most recent compliant stack test is not a deviation from this permit. Section C – Response to Excursions and Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

## **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

### **D.3.11 Record Keeping Requirements**

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- (a) To document the compliance status with Conditions D.3.1 and D.3.2, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Conditions D.3.1. and D.3.2.
  - (1) The VOC content of each coating material and solvent used less water.
  - (2) Records shall include material balance calculations, purchase orders, invoices, supplier data sheets and material safety data sheets (MSDS) necessary to verify the type and amount used.
  - (3) The cleanup solvent usage for each month;
  - (4) The total VOC usage for each month;
- (b) To document the compliance status with Condition D.3.10, the Permittee shall maintain:
  - (1) Continuous temperature records and 3 hour average temperature records.
- (c) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

#### D.3.12 Reporting Requirements

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A quarterly summary of the information to document the compliance status with Conditions D.3.1 and D.3.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

**SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS**

<b>Emissions Unit Description:</b>						
Model	Oven ID	Construction Date	Max. Rating (lbs wire/hr)	Thermal Oxidizer type	Thermal oxidizer Heat Input Capacity (MMBtu/hr)	Stack ID #
MOCO	640	1974	327.5	One external TO for one oven	1.1	0177
MOCO	650	1974	327.5	One external TO for one oven	1.1	0176
MOCO	530	1974	327.5	One external TO for one oven	1.1	0172
MOCO	540	1974	327.5	One external TO for one oven	1.1	0173
MOCO	355-356	1974	327.5	One external TO for one oven	1.1	0174
MOCO	357-358	1974	327.5	One external TO for one oven	1.1	0199
MOCO	359-360	1974	327.5	One external TO for one oven	1.1	0200
MOCO	361-362	1974	327.5	One external TO for one oven	1.1	0201
MOCO	660	1974	327.5	One external TO for one oven	1.1	0175
MOCO	500	1974	327.5	One external TO for one oven	1.1	0198
MOCO	510	1974	327.5	One external TO for one oven	1.1	0197
MOCO	520	1974	327.5	One external TO for one oven	1.1	0196

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.4.1 Volatile Organic Compound (VOC) [326 IAC 8-6]**

Pursuant to 326 IAC 8-6-2(a) (Organic Solvent Emission Limitations), the VOC emissions from the twelve (12) MOCO wire enamel ovens, identified as 640, 650, 530, 540, 355-356, 357-358, 359-360, 361-362, 660, 500, 510 and 520 shall be reduced by at least eighty-five percent (85%).

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D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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A Preventive Maintenance Plan is required for this facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements**

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D.4.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

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In order to comply with Condition D.4.1, the thermal oxidizer shall be in operation whenever any one enamel oven is in operation.

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D.4.4 Thermal Oxidizer Operation

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The thermal oxidizer shall operate at all times that the ovens are in operation. When operating, the thermal oxidizer shall maintain a minimum 3 hour average temperature of 1270°F until 3 hour block average minimum temperature determined in the latest compliance testing to maintain an overall control efficiency of not less than eighty-five percent (85%) of volatile organic compound (VOC) in order to determine compliance with Condition D.4.1.

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D.4.5 Testing requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11]

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- (a) In order determine compliance with Condition D.4.1, the Permittee shall repeat performance test at least once every five (5) years from the last valid stack test to determine the overall control efficiency (capture and destruction efficiency) testing of the thermal oxidizer for VOC, and to determine the 3-hour average temperature using methods approved by the Commissioner. The Permittee shall conduct performance tests to verify VOC control efficiency as listed below. If the representative oven that is required to be tested has not been in operation for at least six (6) months prior to the test deadline, another similar oven in the same group of ovens shall be tested. If none of the ovens in a particular test group has been in operation for at least six (6) months prior to the test deadline, then the Permittee is not required to conduct testing for that group. However, upon startup of any oven in a test group that has not been in operation for at least six (6) months prior to the test deadline, the Permittee shall conduct performance test to verify VOC and/or HAP control efficiency within ninety (90) days of startup of that oven. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) Two (2) representative ovens shall be tested for VOC emissions. Testing shall be performed such that no single oven is tested twice in a ten (10) year cycle. This test shall be repeated at least once every five (5) years from the date of this valid compliance determination.
- (c) For a higher VOC content coating than that used during the stack test in (a) above, the following procedure shall be followed:
- (1) Calculate the new minimum required control efficiency for the new coating ( $E_{new}$ )
  - (2) Calculate the new maximum VOC loading ( $L_{new}$ ) for the higher VOC content enamel;
  - (3) Calculate the current maximum VOC loading ( $L_{current}$ ); and
  - (4) If  $E_{new}$  is lower than the stack test control efficiency, and  $L_{new}$  is lower than  $L_{current}$ , Permittee shall be allowed to use the higher VOC content enamel.
- (d) Before using a coating that would lead to a higher VOC loading in pounds per hour than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.4.1 for the thermal oxidizer using methods approved by the commissioner.

## **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

### **D.4.6 Parametric Monitoring**

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- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperature of the thermal oxidizer. For the purposes of this condition, continuous monitoring shall mean no less often than once per fifteen (15) minutes. The output from this monitoring system and the three hour average temperatures shall be recorded whenever the oxidizers are in operation.
- (b) If the primary continuous monitoring system is not in operation, the oxidizer temperature will be recorded using some manner of secondary system, such as with back-up electro-mechanical hardware or manually if necessary. Nothing in this permit shall excuse the Permittee from complying with the requirement to continuously monitor the temperature of the oxidizers. Continuous monitoring shall mean no less often than once per fifteen (15) minutes.
- (c) The oxidizers shall operate such that if the three-hour average temperature falls below the 3 hour block average minimum required temperature in Condition D.4.4 until determined from the most recent stack test, corrective actions shall be taken within 15 minutes to return oxidizer temperature to at least the required minimum temperature. Corrective action must return oxidizer temperature to or above the required minimum temperature within thirty (30) minutes of the corrective action, or the enamel flow to the oven shall be shut off. A reading that is below the required minimum temperature as established in the most recent compliant stack test is not a deviation from this permit. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

## **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

### **D.4.7 Record Keeping Requirements**

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- (a) To document the compliance status with Condition D.4.6, the Permittee shall maintain:
  - (1) Continuous temperature records and 3 hour average temperature records of the thermal oxidizer.
- (b) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

**SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

Model	Oven ID	Construction Date	Max. Rating (lbs wire/hr)	Thermal Oxidizer type	Thermal oxidizer Heat Input Capacity (MMBtu/hr)	Stack ID #
GE-M	615	2006	332.4	One external TO and one Internal Catalytic TO for one oven	0.7	418
GE-M	635	2006	332.4	One external TO and one Internal Catalytic TO for one oven	0.7	420

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.5.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-8]**

Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operation), the VOC emissions from the two (2) enamel ovens shall be limited to 1.7 pounds VOC per gallon of coating, less water, as specifically listed in 326 IAC 8-2-8.

**D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

A Preventive Maintenance Plan is required for this facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements**

**D.5.3 Thermal oxidizer Operation**

In order to comply with Condition D.5.1 the catalytic thermal oxidizer and thermal oxidizers shall be in operation whenever any one enamel oven is in operation. When operating, the internal catalytic oxidizer and the thermal oxidizers shall maintain a 3 hour average temperature of 1155°F until the 3 hour block average minimum temperature determined in the latest compliance testing to maintain a volatile organic compound (VOC) overall control efficiency equal to or greater than 94.76% to demonstrate compliance with Condition D.5.1.

D.5.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

VOC usage and content limitations contained in Condition D.5.1 shall be determined pursuant to 326 IAC 8-1-4(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ reserve the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.5.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-2(b)]

Compliance with the VOC content and emission limitation shall be determined pursuant to 326 IAC 8-1-2(b), using formulation data supplied by the coating manufacturer.

The equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$
$$= 1.7 / (1 - (1.7 / 7.36)) = 2.21 \text{ lbs VOC/gal coating solids}$$

Where:

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating less water;

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied = 2.21 lbs VOC/gal coating solids.

E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the thermal oxidizer shall be no less than the equivalent overall efficiency calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$
$$= \frac{42.2 - 2.21}{42.2} \times 100$$
$$= 94.76\%$$

Where:

V = The actual VOC content of the coating, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied = 42.2 lbs VOC/gal solids

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied = 2.21 lbs VOC/ gal coating solids

O = Equivalent overall efficiency of the capture system and control device.

The overall efficiency of the thermal oxidizer for ovens 615 and 635, shall be equal to or greater than 94.76%.

D.5.6 Testing requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11]

(a) In order to determine compliance with Condition D.5.1, the Permittee shall repeat performance test at least once every five (5) years from the last valid stack test to determine the overall control efficiency (capture and destruction efficiency) testing of the

thermal oxidizer for VOC, and to determine the 3-hour average temperature using methods approved by the Commissioner. The Permittee shall conduct performance tests to verify VOC control efficiency as listed below. If the representative oven that is required to be tested has not been in operation for at least six (6) months prior to the test deadline, another similar oven in the same group of ovens shall be tested. If none of the ovens in a particular test group has been in operation for at least six (6) months prior to the test deadline, then the Permittee is not required to conduct testing for that group. However, upon startup of any oven in a test group that has not been in operation for at least six (6) months prior to the test deadline, the Permittee shall conduct performance test to verify VOC and/or HAP control efficiency within ninety (90) days of startup of that oven. Testing shall be conducted in accordance with Section C - Performance Testing.

- (b) One (1) representative oven shall be tested for VOC emissions. Testing shall be performed such that no single oven is tested twice in a ten (10) year cycle. This test shall be repeated at least once every five (5) years from the date of this valid compliance determination.
- (c) Before using a coating that would lead to a higher VOC loading in pounds per hour than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.5.1 for the thermal oxidizer using methods approved by the commissioner.
- (d) For a higher VOC content coating than that used during the stack test in (a) above, the following procedure shall be followed:
  - (1) Calculate the new maximum VOC loading ( $L_{new}$ ) for the higher VOC content enamel;
  - (2) Calculate the current maximum VOC loading ( $L_{current}$ ); and
  - (3) If  $L_{new}$  is lower than  $L_{current}$ , Permittee shall be allowed to use the higher VOC content enamel.
  - (4) If  $E_{new}$  is lower than the stack test control efficiency, and  $L_{new}$  is lower than  $L_{current}$ , Permittee shall be allowed to use the higher VOC content enamel.

### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### **D.5.7 Parametric Monitoring**

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- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the oxidizers for measuring operating temperature of the internal catalytic oxidizers and the external thermal oxidizers. For the purposes of this condition, continuous monitoring shall mean no less often than once per fifteen (15) minutes. The output from this monitoring system and the three hour average temperatures shall be recorded whenever the oxidizers are in operation.
  - (b) If the primary continuous monitoring system is not in operation, the oxidizer temperature will be recorded using some manner of secondary system, such as with back-up electro-mechanical hardware or manually if necessary. Nothing in this permit shall excuse the Permittee from complying with the requirement to continuously monitor the temperature of the oxidizers. Continuous monitoring shall mean no less often than once per fifteen (15) minutes.
  - (c) The oxidizers shall operate such that if the three-hour average temperature falls below the 3 hour block average minimum required in Condition D.5.4 until determined from the latest stack test, corrective actions shall be taken within 15 minutes to return oxidizer temperature to at least the required minimum temperature. Corrective action must return

oxidizer temperature to or above the required minimum temperature within thirty (30) minutes of the corrective action, or the enamel flow to the oven shall be shut off. A reading that is below the required minimum temperature as established in the most recent compliant stack test is not a deviation from this permit. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

## **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

### **D.5.8 Record Keeping Requirements**

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- (a) To document the compliance status with Condition D.5.1, the Permittee shall maintain records in accordance with (1) below. Records maintained for (1) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Condition D.5.1.
  - (1) The VOC content of each coating material and solvent used less water.
- (b) To document the compliance status with Condition D.5.7, the Permittee shall maintain:
  - (1) Continuous temperature records and 3 hour average temperature records.
- (c) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

**SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

(b)

Model	Oven ID	Construction Date	Max. Rating (lbs wire/hr)	Thermal Oxidizer type	Thermal oxidizer Heat Input Capacity (MMBtu/hr)	Stack ID #
Weather Rite V26 with 0.2 MMBtu/hr Annealer	550	2012	1082	One internal TO for one oven	0.90	0439
Weather Rite V26 with 0.2 MMBtu/hr Annealer	560	2013	650	One internal TO for one oven	1.0	0443

Note: TO is Thermal Oxidizer

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.6.1 PSD Minor Limit [326 IAC 2-2]**

- (a) Pursuant to Significant Source Modification 003-32139-00013, the VOC emissions from the Weather Rite V26, identified as Oven #550, permitted in 2012, shall be less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limit, shall limit the VOC emissions from Oven #550 to less than 40 tons per twelve (12) consecutive month period and shall render the requirement of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to this modification (SSM # 003-32139-00013).

- (b) Pursuant to Significant Source Modification 003-33777-00013, the VOC emissions from the Weather Rite V26, identified as Oven #560, permitted in 2013, shall be less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limit, shall limit the VOC emissions from Oven #560 to less than 40 tons per twelve (12) consecutive month period and shall render the requirement of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to this modification (SSM # 003-33777-00013).

**D.6.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-8]**

- (a) Pursuant to 326 IAC 8-2-8(b) (Magnet Wire Coating Operation), the owner or operator of oven #550 shall not allow or permit the discharge into the atmosphere of any volatile organic compounds in excess of 0.20 kilograms per liter of coating (1.7 pounds per gallon) excluding water, delivered to the coating applicator.

- (b) Pursuant to 326 IAC 8-2-8(b) (Magnet Wire Coating Operation), the owner or operator of oven #560 shall not allow or permit the discharge into the atmosphere of any volatile organic compounds in excess of 0.20 kilograms per liter of coating (1.7 pounds per gallon) excluding water, delivered to the coating applicator.

#### D.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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A Preventive Maintenance Plan is required for these facilities and its control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

### Compliance Determination Requirements

#### D.6.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

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- (a) Pursuant to 326 IAC 8-1-2(a) and in order to ensure compliance with Conditions D.6.1(a), and D.6.2(a), the internal thermal oxidizer shall be in operation whenever Magnet Wire Oven #550 is in operation.
- (b) Pursuant to 326 IAC 8-1-2(a) and in order to ensure compliance with Conditions D.6.1(b), and D.6.2(b), the internal thermal oxidizer shall be in operation whenever Magnet Wire Oven #560 is in operation.

#### D.6.5 Volatile Organic Compounds (VOC) Calculations

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- (a) In order to demonstrate compliance with the VOC emission limitations in Condition D.6.1(a), the Permittee shall determine the VOC emissions for each month for oven #550 using the following equation:

$$\text{VOC Emissions (tons/month)} = \sum (\text{VOC Content } i \text{ (\%)} \times \text{Coating Amount } i \text{ (tons/month)} \times (1 - \text{Control Efficiency \%} / 100))$$

Control Efficiency % = control efficiency as demonstrated in most recent valid compliance test.

VOC Content *i* = Percent VOC content of coating *i* used.

Amount *i* = Usage, in tons of the coating *i* per month.

- (b) In order to demonstrate compliance with the VOC emission limitations in Condition D.6.1(b), the Permittee shall determine the VOC emissions for each month for oven #560 using the following equation:

$$\text{VOC Emissions (tons/month)} = \sum (\text{VOC Content } i \text{ (\%)} \times \text{Coating Amount } i \text{ (tons/month)} \times (1 - \text{Control Efficiency \%} / 100))$$

Control Efficiency % = control efficiency as demonstrated in most recent valid compliance test.

VOC Content *i* = Percent VOC content of coating *i* used.

Amount *i* = Usage, in tons of the coating *i* per month.

#### D.6.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

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Compliance with the VOC usage and content limitations contained in Conditions D.6.1(a), D.6.1(b), D.6.2(a) and D.6.2(b) shall be determined pursuant to 326 IAC 8-1-4(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ reserve the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4

D.6.7 Volatile Organic Compounds (VOC) [326 IAC 8-1-2(b)]

(a) Compliance with the VOC content and emission limitation contained in Condition D.6.1(a) shall be determined as follows for Magnet Wire Oven #550, using formulation data supplied by the coating manufacturer.

(1) Pursuant to 326 IAC 8-1-2(b)(1), VOC emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, as allowed in Condition D.6.1(a).

The equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where:

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating less water = 1.7 lb/gal;

D= Baseline solvent density of VOC in the coating and shall be equal to seven and thirty-six hundredths (7.36) pounds of VOC per gallon of solvent;

E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

Actual solvent density shall be used to determine compliance of the surface coating operation using the compliance methods in 326 IAC 8-1-2(a).

$$= 1.7 / (1 - (1.7 / 7.36))$$

$$= 2.21 \text{ lbs VOC/gal coating solids}$$

The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21.

(2) Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the thermal oxidizer shall be no less than the equivalent overall efficiency necessary to comply with the equivalent emission limitation in (1).

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied = 52.86 lb VOC/gal solids

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied = 2.21 lb VOC per gal coating solids

O = Equivalent overall efficiency of the capture system and control device as a percentage.

$$O = \frac{52.86 - 2.21}{52.86} \times 100$$

$$= 95.8\%$$

The overall efficiency of the thermal oxidizer for oven #550 shall be equal to or greater than 95.8% or the efficiency required to comply with the limit of 1.7 lb/gal.

(b) Compliance with the VOC content and emission limitation contained in Condition D.6.1(b) shall be determined as follows for Magnet Wire Oven #560, using formulation data supplied by the coating manufacturer.

(1) Pursuant to 326 IAC 8-1-2(b)(1), VOC emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, as allowed in Condition D.6.1(b).

The equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where:

L = Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating less water = 1.7 lb/gal;

D = Baseline solvent density of VOC in the coating and shall be equal to seven and thirty-six hundredths (7.36) pounds of VOC per gallon of solvent;

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

Actual solvent density shall be used to determine compliance of the surface coating operation using the compliance methods in 326 IAC 8-1-2(a).

$$= 1.7 / (1 - (1.7 / 7.36))$$

$$= 2.21 \text{ lbs VOC/gal coating solids}$$

The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21.

(2) Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the thermal oxidizer shall be no less than the equivalent overall efficiency necessary to comply with the equivalent emission limitation in (1).

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied = 39.90 lb VOC/gal solids

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied = 2.21 lb VOC per gal coating solids

O = Equivalent overall efficiency of the capture system and control device as a percentage.

$$O = \frac{39.90 - 2.21}{39.90} \times 100$$

$$= 94.6\%$$

The overall efficiency of the thermal oxidizer for oven #560 shall be equal to or greater than 94.6% or the efficiency required to comply with the limit of 1.7 lb/gal.

**D.6.8 Testing requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11][40 CFR 63, Subpart M]**

- (a) In order to determine compliance with Conditions D.6.1 and D.6.2, the Permittee shall repeat performance testing at least once every five (5) years from the last valid stack test to determine the overall control efficiency (capture and destruction efficiency) testing of the thermal oxidizer for VOC, and to determine the 3-hour average temperature using methods approved by the Commissioner. The Permittee shall conduct performance tests to verify VOC control efficiency as listed below. If the representative oven that is required to be tested has not been in operation for at least six (6) months prior to the test deadline, another similar oven in the same group of ovens shall be tested. If none of the ovens in a particular test group has been in operation for at least six (6) months prior to the test deadline, then the Permittee is not required to conduct testing for that group. However, upon startup of any oven in a test group that has not been in operation for at least six (6) months prior to the test deadline, the Permittee shall conduct performance test to verify VOC and/or HAP control efficiency within ninety (90) days of startup of that oven. Section C - Performance Testing contains the Permittee's obligation with regards to the performance testing required by this condition.
- (b) One (1) representative oven shall be tested for VOC emissions. Testing shall be performed such that no single oven is tested twice in a ten (10) year cycle. This test shall be repeated at least once every five (5) years from the date of this valid compliance determination.
- (c) Before using a coating that would lead to a higher VOC loading in pounds per hour than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify the VOC control efficiency as per Condition D.6.8(a) and D.6.8(b) for the thermal oxidizer associated with oven #550 and 560 respectively using methods approved by the commissioner.
- (d) For a higher VOC content coating than that used during the stack test in (a) above, the following procedure shall be followed:
  - (1) Calculate the new minimum required control efficiency for the new coating ( $O_{new}$ ), using the equation in Conditions D.6.7(a)(2) and D.6.7(b)(2).
  - (2) If  $O_{new}$  is lower than the stack test control efficiency, the Permittee shall be allowed to use the higher VOC content enamel.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.6.9 Parametric Monitoring- Thermal Oxidizer Temperature for Oven #550 and Oven #560**

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on each of the thermal oxidizers for oven #550 and oven #560 for measuring operating temperature of the thermal oxidizers. For the purposes of this condition, continuous monitoring shall mean no less often than once per fifteen (15) minutes. The output from this monitoring system shall be recorded as three hour average temperatures whenever the oxidizers are

in operation.

- (b) The Permittee shall determine the three-hour average temperatures from the latest valid stack test that demonstrates compliance with Conditions D.6.1(a), D.6.1(b), D.6.2(a) and D.6.2(b).
- (c) On and after the date the stack test results are available, the Permittee shall operate the thermal oxidizers at or above the respective three-hour average temperatures observed during the latest compliant stack test.
- (d) If the primary continuous monitoring system is not in operation, the oxidizer temperature will be recorded using some manner of secondary system, such as with back-up electro-mechanical hardware or manually if necessary. Nothing in this permit shall excuse the Permittee from complying with the requirement to continuously monitor the temperature of the oxidizers. Continuous monitoring shall mean no less often than once per fifteen (15) minutes.
- (e) If the three-hour average temperature falls below the above mentioned three-hour average temperature, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

#### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

##### D.6.10 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.6.1(a) and D.6.1(b), the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Conditions D.6.1(a) and D.6.1(b).
  - (1) The VOC content of each coating material and solvent used less water.
  - (2) The actual VOC content of the coating, in units of pounds of VOC per gallon of coating solids as applied.
  - (3) Records shall include material balance calculations, purchase orders, invoices, supplier data sheets and material safety data sheets (MSDS) necessary to verify the type and amount used.
- (b) To document the compliance status with Condition D.6.2(a) and D.6.2(b), the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limit established in Condition D.6.2(a) and D.6.2(b).
  - (1) The VOC content of each coating material and solvent used.
  - (2) The amount of coating material and solvent used on a monthly basis. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
  - (3) The total weight of VOCs emitted each month.
- (c) To document the compliance status with Condition D.6.9, the Permittee shall maintain continuous temperature records (on a three-hour average basis) for the thermal oxidizer and the three-hour average temperature used to demonstrate compliance during the

most recent compliant stack test.

- (d) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

#### D.6.11 Reporting Requirements

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A quarterly summary of the information to document the compliance status with Conditions D.6.1(a), D.6.1(b), D.6.2(a) and D.6.2(b) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

**SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:** Applicator Cleaning Area

Under the Miscellaneous Metal Parts and Products Coating NESHAP (40 CFR 63, Subpart Mmmm), the following emission units (Applicator Cleaning Area) are considered to be a storage and mixing operation that are considered to be part of an existing magnet wire coating affected source.

Stack	Year of Construction	Tank	Capacity (gallons)	Cleaning Materials
117	2010	1	900	Cresylic Acid
		2	400	Ethyl Alcohol
		3	400	n-Methyl-2-Pyrrolidone
No Stack	1991	4	350	Water Rinse
299		5	180	Power Strip 720/ Water

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.7.1 PSD Minor Limit [326 IAC 2-2]**

Pursuant Operating permit 003-24307-00013, issued on December 14, 2007, the VOC emissions from the applicator cleaning area, SICME ES ovens in Section D.3 and the Quartz fabric oven, identified as 811 in Section D.1 shall be less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limit shall render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

**D.7.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]**

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements), for any cold cleaning degreasing operations that contains one (1) or more volatile organic compounds (VOC), the Permittee shall:

- (a) The owner or operator of a cold cleaner degreaser shall ensure the following control equipment and operating requirements are met:
  - (1) Equip the degreaser with a cover.
  - (2) Equip the degreaser with a device for draining cleaned parts.
  - (3) Close the degreaser cover whenever parts are not being handled in the degreaser.
  - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases.
  - (5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).
  - (6) Store waste solvent only in closed containers.

- (7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.
- (b) The owner or operator of a cold cleaner degreaser subject to this subsection shall ensure the following additional control equipment and operating requirements are met:
  - (1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
    - (B) A water cover when solvent used is insoluble in, and heavier than, water.
    - (C) A refrigerated chiller.
    - (D) Carbon adsorption.
    - (E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.
  - (2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.
  - (3) If used, solvent spray:
    - (A) must be a solid, fluid stream; and
    - (B) shall be applied at a pressure that does not cause excessive splashing.

#### D.7.3 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), on and after January 1, 2015, the Permittee shall not operate a cold cleaner degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

#### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

##### D.7.4 Record Keeping Requirements

- (a) To document the compliance status with Condition D.7.1, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.7.1.
  - (1) The VOC content of each cleanup solvent used less water.

- (2) The amount of cleanup solvent used on a monthly basis. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
  - (3) The cleanup solvent usage for each month;
  - (4) The total VOC usage for each month;
- (b) Pursuant to 326 IAC 8-3-8(c)(2) and to document the compliance status with Condition D.7.3, on and after January 1, 2015, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.
- (1) The name and address of the solvent supplier.
  - (2) The date of purchase (or invoice/bill dates of contract servicer indicating service date).
  - (3) The type of solvent purchased.
  - (4) The total volume of the solvent purchased.
  - (5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).
- (c) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

#### D.7.5 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.7.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

## SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description: Insignificant Activities

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.8.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e), (Particulate Emission Limitations for Manufacturing Processes), the particulate matter (PM) emissions from the insignificant activities, brazing equipment, cutting torches, soldering equipment, and welding equipment shall not exceed the pounds per hour emission rate established by the equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 \times P^{0.67}$$

Where:

P = process weight in tons/hr and

E = rate of emission in pounds per hour.

**SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description: [326 IAC 2-7-5(15)]**

Under the Miscellaneous Metal Parts and Products Coating NESHAP (40 CFR 63, Subpart Mmmm), the following emission units are considered to be part of an existing magnet wire coating affected source.

Model	Oven ID	Construction Date	Max. Rating (lbs wire/hr)	Thermal Oxidizer type	Thermal oxidizer Heat Input Capacity (MMBtu/hr)	Stack ID #
Quartz Fabric	701-702	1994	68.8	Two external TOs for four ovens	0.3	0431 and 0432
Quartz Fabric	703-704	1994	68.8			
Quartz Fabric	705-706	1994	68.8			
Quartz Fabric	707-708	1994	68.8			
Quartz Fabric	709-710	1994	68.8	One external TO for one oven	0.3	0433
Quartz Fabric	804	1978	111.7	Three external TOs for six ovens	0.3	0435, 0437 and 438
Quartz Fabric	805	1978	111.7			
Quartz Fabric	808	1977	111.7			
Quartz Fabric	809	1968	111.7			
Quartz Fabric	810	1979	111.7			
Quartz Fabric	811	1992	111.7			
Lepel Fabric	802	1978	233	Two external TOs for four ovens	0.3	0434 and 0436
Lepel Fabric	803	1978	233			
Lepel Fabric	806	1977	233			
Lepel Fabric	807	1977	233			
Quartz Fabric	812 and 813	2008	224.6 (total)	One external TO for two ovens	0.3	0430
Weather Rite V26 with 0.2 MMBtu/hr Annealer	550	2012	1082	One internal TO for one oven	0.9	0439
Weather Rite V26 with 0.2 MMBtu/hr Annealer	560	2013	650	One internal TO for one oven	1.0	0443

Note : TO is Thermal Oxidizer

Under the Miscellaneous Metal Parts and Products Coating NESHAP (40 CFR 63, Subpart Mmmm), the following emission units (Applicator Cleaning Area) are considered to be a storage and mixing operation that are considered to be part of an existing magnet wire coating affected source.

Stack	Year of Construction	Tank	Capacity (gallons)	Cleaning Materials
117	2010	1	900	Cresylic Acid
		2	400	Ethyl Alcohol
	1991	3	400	n-Methyl-2-Pyrrolidone
No Stack		4	350	Water Rinse
		299	5	180

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

### **Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**E.1.1 General Provisions Relating to NESHAP Subpart MMMM (National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products [326 IAC 20-1] [40 CFR Part 63, Subpart A])**

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Pursuant to 40 CFR 63.3901, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 as specified in Table 2 of 40 CFR Part 63, Subpart MMMM in accordance with schedule in 40 CFR 63 Subpart MMMM.

**E.1.2 NESHAP Subpart MMMM Requirements [40 CFR 63, Subpart MMMM]**

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Pursuant to 40 CFR 63, Subpart MMMM, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart MMMM, (included as Attachment B of this permit) for the entire source as follows:

- 40 CFR 63.3880
- 40 CFR 63.3881(a)(1), (2), (4) and (b)
- 40 CFR 63.3882
- 40 CFR 63.3883(b) and (d)
- 40 CFR 63.3890(b)(3), (c)(1), and (c)(2)(i – ii)
- 40 CFR 63.3891(c)
- 40 CFR 63.3892(b) and (c)
- 40 CFR 63.3893(b) and (c)
- 40 CFR 63.3900(a)(2), (b), and (c)
- 40 CFR 63.3901
- 40 CFR 63.3910
- 40 CFR 63.3920
- 40 CFR 63.3930
- 40 CFR 63.3931
- 40 CFR 63.3960(b) and (c)
- 40 CFR 63.3961(a)-(h)
- 40 CFR 63.3963 (a)-(f) and (j)-(l)
- 40 CFR 63.3964
- 40 CFR 63.3965
- 40 CFR 63.3966
- 40 CFR 63.3967(a), (b), and (f)
- 40 CFR 63.3968(a), (b), (c), and (g)
- 40 CFR 63.3980
- 40 CFR 63.3981

Applicable portions of Tables 1, 2, 3, and 4 of 40 CFR 63, Subpart MMMM

## SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description: Insignificant Activities

- (1) One (1) Cummins 395 HP natural gas fired emergency generator exhausting to stack 415.
- (2) One (1) 103 HP natural gas fired emergency generator exhausting to stack 214.
- (3) one (1) 69 HP natural gas fired emergency generator exhausting to stack 295.

Under the NESHAP, 40 CFR 63, Subpart (ZZZZ), the natural gas fired emergency generators; 395 HP, 103 HP, and 69 HP are considered affected facilities at a major source of HAP emissions.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### E.2.1 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the affected source, as designated by 40 CFR 63.6590(a)(1), except when otherwise specified in 40 CFR Part 63, Subpart ZZZZ.

#### E.2.2 National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

Pursuant to CFR Part 63, Subpart ZZZZ, the Permittee shall comply with the provision of National Emission Standards for Hazardous Air Pollutants for Stationary Spark Ignition Internal Combustion Engines which are incorporated by reference as 326 IAC 20-82 (included as Attachment B of this permit):

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585(a), (b)
- (3) 40 CFR 63.6590(a)(1)(ii)
- (4) 40 CFR 63.6595(a)(1), (c)
- (5) 40 CFR 63.6602
- (6) 40 CFR 63.6605
- (7) 40 CFR 63.6612
- (8) 40 CFR 63.6625(e)(2), (f), (h), (j)
- (9) 40 CFR 63.6635
- (10) 40 CFR 6640(a), (b), (f)
- (11) 40 CFR 63.6645(a)(5)
- (12) 40 CFR 63.6650(f)
- (13) 40 CFR 63.6655(a), (d), (e)(2)
- (14) 40 CFR 63.6660
- (15) 40 CFR 63.6665
- (16) 40 CFR 63.6670
- (17) 40 CFR 63.6675
- (18) Table 2c to 40 CFR 63 Subpart ZZZZ
- (19) Table 6 to 40 CFR 63 Subpart ZZZZ
- (20) Table 8 to 40 CFR 63 Subpart ZZZZ

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  
PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: Rea magnet Wire Company, Inc.  
Source Address: 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
Part 70 Permit No.: T003-31617-00013

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)
- Report (specify)
- Notification (specify)
- Affidavit (specify)
- Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
**OFFICE OF AIR QUALITY**  
**COMPLIANCE AND ENFORCEMENT BRANCH**  
**100 North Senate Avenue**  
**MC 61-53 IGCN 1003**  
**Indianapolis, Indiana 46204-2251**  
**Phone: (317) 233-0178**  
**Fax: (317) 233-6865**

**PART 70 OPERATING PERMIT**  
**EMERGENCY OCCURRENCE REPORT**

Source Name: Rea magnet Wire Company, Inc.  
Source Address: 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
Part 70 Permit No.: T003-31617-00013

**This form consists of 2 pages**

**Page 1 of 2**

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
  - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

**Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH**

**Part 70 Quarterly Report**

Source Name: Rea magnet Wire Company, Inc.  
Source Address: 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
Part 70 Permit No.: T003-31617-00013  
Facility: Quartz fabric Oven 811, SICME ES ovens 600, 605, 690, and 695 and the applicator cleaning area  
Parameter: VOC Emissions  
Limit: Less than 40 tons per twelve (12) consecutive month period  
VOC emissions = [(VOC usage) x (1.0-% overall control efficiency /100)]

QUARTER :

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

### Part 70 Quarterly Report

Source Name: Rea Magnet Wire Company, Inc  
Source Address: 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
Part 70 Permit No.: T003-31617-00013  
Facility: Oven #550  
Parameter: VOC Emissions  
Limit: Less than 40 tons per twelve (12) consecutive month period

$$\text{VOC Emissions (tons/month)} = \sum (\text{VOC Content } i \text{ (\%)} \times \text{Coating Amount } i \text{ (tons/month)} \times (1 - \text{Control Efficiency \%} / 100))$$

QUARTER:

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

### Part 70 Quarterly Report

Source Name: Rea Magnet Wire Company, Inc  
Source Address: 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
Part 70 Permit No.: T003-31617-00013  
Facility: Oven #560  
Parameter: VOC Emissions  
Limit: Less than 39.96 tons per twelve (12) consecutive month period

$$\text{VOC Emissions (tons/month)} = \sum (\text{VOC Content } i \text{ (\%)} \times \text{Coating Amount } i \text{ (tons/month)} \times (1 - \text{Control Efficiency \%} / 100))$$

QUARTER:

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE AND ENFORCEMENT BRANCH  
 PART 70 OPERATING PERMIT  
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Rea magnet Wire Company, Inc.  
 Source Address: 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
 Part 70 Permit No.: T003-31617-00013

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C- General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

<b>Permit Requirement (specify permit condition #)</b>	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement (specify permit condition #)</b>	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement (specify permit condition #)</b>	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

## Attachment A

Rea Magnet Wire Co. Inc.  
4300 New Haven Avenue, Fort Wayne, Indiana 46803

### **40 CFR 63, Subpart M—National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products**

**Source:** 69 FR 157, Jan. 2, 2004, unless otherwise noted.

#### **What This Subpart Covers**

#### **§ 63.3880 What is the purpose of this subpart?**

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for miscellaneous metal parts and products surface coating facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

#### **§ 63.3881 Am I subject to this subpart?**

(a) Miscellaneous metal parts and products include, but are not limited to, metal components of the following types of products as well as the products themselves: motor vehicle parts and accessories, bicycles and sporting goods, recreational vehicles, extruded aluminum structural components, railroad cars, heavy duty trucks, medical equipment, lawn and garden equipment, electronic equipment, magnet wire, steel drums, industrial machinery, metal pipes, and numerous other industrial, household, and consumer products. Except as provided in paragraph (c) of this section, the source category to which this subpart applies is the surface coating of any miscellaneous metal parts or products, as described in paragraph (a)(1) of this section, and it includes the subcategories listed in paragraphs (a)(2) through (6) of this section.

(1) Surface coating is the application of coating to a substrate using, for example, spray guns or dip tanks. When application of coating to a substrate occurs, then surface coating also includes associated activities, such as surface preparation, cleaning, mixing, and storage. However, these activities do not comprise surface coating if they are not directly related to the application of the coating. Coating application with handheld, non-refillable aerosol containers, touch-up markers, marking pens, or the application of paper film or plastic film which may be pre-coated with an adhesive by the manufacturer are not coating operations for the purposes of this subpart.

(2) The general use coating subcategory includes all surface coating operations that are not high performance, magnet wire, rubber-to-metal, or extreme performance fluoropolymer coating operations.

(3) The high performance coating subcategory includes surface coating operations that are performed using coatings that meet the definition of high performance architectural coating or high temperature coating in §63.3981.

(4) The magnet wire coating subcategory includes surface coating operations that are performed using coatings that meet the definition of magnet wire coatings in §63.3981.

(5) The rubber-to-metal coatings subcategory includes surface coating operations that are performed using coatings that meet the definition of rubber-to-metal coatings in §63.3981.

(6) The extreme performance fluoropolymer coatings subcategory includes surface coating operations that are performed using coatings that meet the definition of extreme performance fluoropolymer coatings in §63.3981.

(b) You are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in §63.3882, that uses 946 liters (250 gallons (gal)) per year, or more, of coatings that contain hazardous air pollutants (HAP) in the surface coating of miscellaneous metal parts and products defined in paragraph (a) of this section; and that is a major source, is located at a major source, or is part of a major source of emissions of HAP. A major source of HAP emissions is 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 any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year. You do not need to include coatings that meet the definition of non-HAP coating contained in §63.3981 in determining whether you use 946 liters (250 gal) per year, or more, of coatings in the surface coating of miscellaneous metal parts and products.

(c) This subpart does not apply to surface coating or a coating operation that meets any of the criteria of paragraphs (c)(1) through (17) of this section.

(1) A coating operation conducted at a facility where the facility uses only coatings, thinners and other additives, and cleaning materials that contain no organic HAP, as determined according to §63.3941(a).

(2) Surface coating operations that occur at research or laboratory facilities, or is part of janitorial, building, and facility maintenance operations, or that occur at hobby shops that are operated for noncommercial purposes.

(3) Coatings used in volumes of less than 189 liters (50 gal) per year, provided that the total volume of coatings exempt under this paragraph does not exceed 946 liters (250 gal) per year at the facility.

(4) The surface coating of metal parts and products performed on-site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or the National Aeronautics and Space Administration, or the surface coating of military munitions manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State).

(5) Surface coating where plastic is extruded onto metal wire or cable or metal parts or products to form a coating.

(6) Surface coating of metal components of wood furniture that meet the applicability criteria for wood furniture manufacturing (subpart JJ of this part).

(7) Surface coating of metal components of large appliances that meet the applicability criteria for large appliance surface coating (subpart NNNN of this part).

(8) Surface coating of metal components of metal furniture that meet the applicability criteria for metal furniture surface coating (subpart RRRR of this part).

(9) Surface coating of metal components of wood building products that meet the applicability criteria for wood building products surface coating (subpart QQQQ of this part).

(10) Surface coating of metal components of aerospace vehicles that meet the applicability criteria for aerospace manufacturing and rework (40 CFR part 63, subpart GG).

(11) Surface coating of metal parts intended for use in an aerospace vehicle or component using specialty coatings as defined in appendix A to subpart GG of this part.

(12) Surface coating of metal components of ships that meet the applicability criteria for shipbuilding and ship repair (subpart II of this part).

(13) Surface coating of metal using a web coating process that meets the applicability criteria for paper and other web coating (subpart JJJJ of this part).

(14) Surface coating of metal using a coil coating process that meets the applicability criteria for metal coil coating (subpart SSSS of this part).

(15) Surface coating of boats or metal parts of boats (including, but not limited to, the use of assembly adhesives) where the facility meets the applicability criteria for boat manufacturing facilities (subpart VVVV of this part), except where the surface coating of the boat is a metal coating operation performed on personal watercraft or parts of

personal watercraft. This subpart does apply to metal coating operations performed on personal watercraft and parts of personal watercraft.

(16) Surface coating of assembled on-road vehicles that meet the applicability criteria for the assembled on-road vehicle subcategory in plastic parts and products surface coating (40 CFR part 63, subpart Pppp).

(17) Surface coating of metal components of automobiles and light-duty trucks that meets the applicability criteria in §63.3082(b) for the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) at a facility that meets the applicability criteria in §63.3081(b).

(d) If your facility meets the applicability criteria in §63.3081(b) of the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII), and you perform surface coating of metal parts or products that meets both the applicability criteria in §63.3082(c) and the applicability criteria of the Surface Coating of Miscellaneous Metal Parts and Products (40 CFR part 63, subpart Mmmm), then for the surface coating of any or all of your metal parts or products that meets the applicability criteria in §63.3082(c), you may choose to comply with the requirements of subpart IIII of this part in lieu of complying with the Surface Coating of Miscellaneous Metal Parts and Products NESHAP. Surface coating operations on metal parts or products (e.g., parts for motorcycles or lawnmowers) not intended for use in automobiles, light-duty trucks, or other motor vehicles as defined in §63.3176 cannot be made part of your affected source under subpart IIII of this part.

(e) If you own or operate an affected source that meets the applicability criteria of this subpart and at the same facility you also perform surface coating that meets the applicability criteria of any other final surface coating NESHAP in this part you may choose to comply as specified in paragraph (e)(1), (2), or (3) of this section.

(1) You may have each surface coating operation that meets the applicability criteria of a separate NESHAP comply with that NESHAP separately.

(2) You may comply with the emission limitation representing the predominant surface coating activity at your facility, as determined according to paragraphs (e)(2)(i) and (ii) of this section. However, you may not establish high performance, rubber-to-metal, or extreme performance fluoropolymer coating operations as the predominant activity. You must not consider any surface coating activity that is subject to the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) in determining the predominant surface coating activity at your facility.

(i) If a surface coating operation accounts for 90 percent or more of the surface coating activity at your facility (that is, the predominant activity), then compliance with the emission limitations of the predominant activity for all surface coating operations constitutes compliance with these and other applicable surface coating NESHAP. In determining predominant activity, you must include coating activities that meet the applicability criteria of other surface coating NESHAP and constitute more than 1 percent of total coating activities at your facility. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of coating activities need not be included in the determination of predominant activity but must be included in the compliance calculation.

(ii) You must use liters (gal) of solids used as a measure of relative surface coating activity over a representative period of operation. You may estimate the relative volume of coating solids used from parameters other than coating consumption and volume solids content ( e.g., design specifications for the parts or products coated and the number of items produced). The determination of predominant activity must accurately reflect current and projected coating operations and must be verifiable through appropriate documentation. The use of parameters other than coating consumption and volume solids content must be approved by the Administrator. You may use data for any reasonable time period of at least 1 year in determining the relative amount of coating activity, as long as they represent the way the source will continue to operate in the future and are approved by the Administrator. You must determine the predominant activity at your facility and submit the results of that determination with the initial notification required by §63.3910(b). You must also determine predominant activity annually and include the determination in the next semi-annual compliance report required by §63.3920(a).

(3) You may comply with a facility-specific emission limit calculated from the relative amount of coating activity that is subject to each emission limit. If you elect to comply using the facility-specific emission limit alternative, then compliance with the facility-specific emission limit and the emission limitations in this subpart for all surface coating operations constitutes compliance with this and other applicable surface coating NESHAP. The procedures for

calculating the facility-specific emission limit are specified in §63.3890. In calculating a facility-specific emission limit, you must include coating activities that meet the applicability criteria of other surface coating NESHAP and constitute more than 1 percent of total coating activities at your facility. You must not consider any surface coating activity that is subject to the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) in determining a facility-specific emission limit for your facility. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of total coating activities need not be included in the calculation of the facility-specific emission limit but must be included in the compliance calculations.

[69 FR 157, Jan. 2, 2004, as amended at 69 FR 22660, Apr. 26, 2004; 71 FR 76927, Dec. 22, 2006]

### **§ 63.3882 What parts of my plant does this subpart cover?**

(a) This subpart applies to each new, reconstructed, and existing affected source within each of the four subcategories listed in §63.3881(a).

(b) The affected source is the collection of all of the items listed in paragraphs (b)(1) through (4) of this section that are used for surface coating of miscellaneous metal parts and products within each subcategory.

(1) All coating operations as defined in §63.3981;

(2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;

(3) All manual and automated equipment and containers used for conveying coatings, thinners and/or other additives, and cleaning materials; and

(4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

(c) An affected source is a new affected source if you commenced its construction after August 13, 2002 and the construction is of a completely new miscellaneous metal parts and products surface coating facility where previously no miscellaneous metal parts and products surface coating facility had existed.

(d) An affected source is reconstructed if it meets the criteria as defined in §63.2.

(e) An affected source is existing if it is not new or reconstructed.

### **§ 63.3883 When do I have to comply with this subpart?**

The date by which you must comply with this subpart is called the compliance date. The compliance date for each type of affected source is specified in paragraphs (a) through (c) of this section. The compliance date begins the initial compliance period during which you conduct the initial compliance demonstration described in §§63.3940, 63.3950, and 63.3960.

(a) For a new or reconstructed affected source, the compliance date is the applicable date in paragraph (a)(1) or (2) of this section:

(1) If the initial startup of your new or reconstructed affected source is before January 2, 2004, the compliance date is January 2, 2004.

(2) If the initial startup of your new or reconstructed affected source occurs after January 2, 2004, the compliance date is the date of initial startup of your affected source.

(b) For an existing affected source, the compliance date is the date 3 years after January 2, 2004.

(c) For an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP emissions, the compliance date is specified in paragraphs (c)(1) and (2) of this section.

(1) For any portion of the source that becomes a new or reconstructed affected source subject to this subpart, the compliance date is the date of initial startup of the affected source or January 2, 2004, whichever is later.

(2) For any portion of the source that becomes an existing affected source subject to this subpart, the compliance date is the date 1 year after the area source becomes a major source or 3 years after January 2, 2004, whichever is later.

(d) You must meet the notification requirements in §63.3910 according to the dates specified in that section and in subpart A of this part. Some of the notifications must be submitted before the compliance dates described in paragraphs (a) through (c) of this section.

## Emission Limitations

### § 63.3890 What emission limits must I meet?

(a) For a new or reconstructed affected source, you must limit organic HAP emissions to the atmosphere from the affected source to the applicable limit specified in paragraphs (a)(1) through (5) of this section, except as specified in paragraph (c) of this section, determined according to the requirements in §63.3941, §63.3951, or §63.3961.

(1) For each new general use coating affected source, limit organic HAP emissions to no more than 0.23 kilograms (kg) (1.9 pound (lb)) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(2) For each new high performance coating affected source, limit organic HAP emissions to no more than 3.3 kg (27.5 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(3) For each new magnet wire coating affected source, limit organic HAP emissions to no more than 0.050 kg (0.44 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(4) For each new rubber-to-metal coating affected source, limit organic HAP emissions to no more than 0.81 kg (6.8 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(5) For each new extreme performance fluoropolymer coating affected source, limit organic HAP emissions to no more than 1.5 kg (12.4 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(b) For an existing affected source, you must limit organic HAP emissions to the atmosphere from the affected source to the applicable limit specified in paragraphs (b)(1) through (5) of this section, except as specified in paragraph (c) of this section, determined according to the requirements in §63.3941, §63.3951, or §63.3961.

(1) For each existing general use coating affected source, limit organic HAP emissions to no more than 0.31 kg (2.6 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(2) For each existing high performance coating affected source, limit organic HAP emissions to no more than 3.3 kg (27.5 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(3) For each existing magnet wire coating affected source, limit organic HAP emissions to no more than 0.12 kg (1.0 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(4) For each existing rubber-to-metal coating affected source, limit organic HAP emissions to no more than 4.5 kg (37.7 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(5) For each existing extreme performance fluoropolymer coating affected source, limit organic HAP emissions to no more than 1.5 kg (12.4 lbs) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(c) If your facility's surface coating operations meet the applicability criteria of more than one of the subcategory emission limits specified in paragraphs (a) or (b) of this section, you may comply separately with each subcategory emission limit or comply using one of the alternatives in paragraph (c)(1) or (2) of this section.

(1) If the general use or magnet wire surface coating operations subject to only one of the emission limits specified in paragraphs (a)(1), (3), (b)(1), or (3) of this section account for 90 percent or more of the surface coating activity at your facility ( *i.e.*, it is the predominant activity at your facility), then compliance with that one emission limitations in this subpart for all surface coating operations constitutes compliance with the other applicable emission limits. You must use liters (gal) of solids used as a measure of relative surface coating activity over a representative period of operation. You may estimate the relative volume of coating solids used from parameters other than coating consumption and volume solids content ( *e.g.*, design specifications for the parts or products coated and the number of items produced). The determination of predominant activity must accurately reflect current and projected coating operations and must be verifiable through appropriate documentation. The use of parameters other than coating consumption and volume solids content must be approved by the Administrator. You may use data for any reasonable time period of at least 1 year in determining the relative amount of coating activity, as long as they represent the way the source will continue to operate in the future and are approved by the Administrator. You must determine the predominant activity at your facility and submit the results of that determination with the initial notification required by §63.3910(b). Additionally, you must determine the facility's predominant activity annually and include the determination in the next semi-annual compliance report required by §63.3920(a).

(2) You may calculate and comply with a facility-specific emission limit as described in paragraphs (c)(2)(i) through (iii) of this section. If you elect to comply using the facility-specific emission limit alternative, then compliance with the facility-specific emission limit and the emission limitations in this subpart for all surface coating operations constitutes compliance with this and other applicable surface coating NESHAP. In calculating a facility-specific emission limit, you must include coating activities that meet the applicability criteria of the other subcategories and constitute more than 1 percent of total coating activities. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of coating activities need not be included in the determination of predominant activity but must be included in the compliance calculation.

(i) You are required to calculate the facility-specific emission limit for your facility when you submit the notification of compliance status required in §63.3910(c), and on a monthly basis afterward using the coating data for the relevant 12-month compliance period.

(ii) Use Equation 1 of this section to calculate the facility-specific emission limit for your surface coating operations for each 12-month compliance period.

$$\text{Facility-Specific Emission Limit} = \frac{\sum_{i=1}^n (\text{Limit}_i)(\text{Solids}_i)}{\sum_{i=1}^n (\text{Solids}_i)} \quad (\text{Eq. 1})$$

Where:

Facility-specific emission limit = Facility-specific emission limit for each 12-month compliance period, kg (lb) organic HAP per kg (lb) coating solids used.

Limit<sub>i</sub>= The new source or existing source emission limit applicable to coating operation, *i*, included in the facility-specific emission limit, converted to kg (lb) organic HAP per kg (lb) coating solids used, if the emission limit is not already in those units. All emission limits included in the facility-specific emission limit must be in the same units.

Solids<sub>i</sub> = The liters (gal) of solids used in coating operation, i, in the 12-month compliance period that is subject to emission limit, i. You may estimate the volume of coating solids used from parameters other than coating consumption and volume solids content ( e.g., design specifications for the parts or products coated and the number of items produced). The use of parameters other than coating consumption and volume solids content must be approved by the Administrator.

n = The number of different coating operations included in the facility-specific emission limit.

(iii) If you need to convert an emission limit in another surface coating NESHAP from kg (lb) organic HAP per kg (lb) coating solids used to kg (lb) organic HAP per liter (gal) coating solids used, you must use the default solids density of 1.26 kg solids per liter coating solids (10.5 lb solids per gal solids).

### **§ 63.3891 What are my options for meeting the emission limits?**

You must include all coatings (as defined in §63.3981), thinners and/or other additives, and cleaning materials used in the affected source when determining whether the organic HAP emission rate is equal to or less than the applicable emission limit in §63.3890. To make this determination, you must use at least one of the three compliance options listed in paragraphs (a) through (c) of this section. You may apply any of the compliance options to an individual coating operation, or to multiple coating operations as a group, or to the entire affected source. You may use different compliance options for different coating operations, or at different times on the same coating operation. You may employ different compliance options when different coatings are applied to the same part, or when the same coating is applied to different parts. However, you may not use different compliance options at the same time on the same coating operation. If you switch between compliance options for any coating operation or group of coating operations, you must document this switch as required by §63.3930(c), and you must report it in the next semiannual compliance report required in §63.3920.

(a) *Compliant material option.* Demonstrate that the organic HAP content of each coating used in the coating operation(s) is less than or equal to the applicable emission limit in §63.3890, and that each thinner and/or other additive, and cleaning material used contains no organic HAP. You must meet all the requirements of §§63.3940, 63.3941, and 63.3942 to demonstrate compliance with the applicable emission limit using this option.

(b) *Emission rate without add-on controls option.* Demonstrate that, based on the coatings, thinners and/or other additives, and cleaning materials used in the coating operation(s), the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in §63.3890, calculated as a rolling 12-month emission rate and determined on a monthly basis. You must meet all the requirements of §§63.3950, 63.3951, and 63.3952 to demonstrate compliance with the emission limit using this option.

(c) *Emission rate with add-on controls option.* Demonstrate that, based on the coatings, thinners and/or other additives, and cleaning materials used in the coating operation(s), and the emissions reductions achieved by emission capture systems and add-on controls, the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in §63.3890, calculated as a rolling 12-month emission rate and determined on a monthly basis. If you use this compliance option, you must also demonstrate that all emission capture systems and add-on control devices for the coating operation(s) meet the operating limits required in §63.3892, except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3961(j), and that you meet the work practice standards required in §63.3893. You must meet all the requirements of §§63.3960 through 63.3968 to demonstrate compliance with the emission limits, operating limits, and work practice standards using this option.

### **§ 63.3892 What operating limits must I meet?**

(a) For any coating operation(s) on which you use the compliant material option or the emission rate without add-on controls option, you are not required to meet any operating limits.

(b) For any controlled coating operation(s) on which you use the emission rate with add-on controls option, except those for which you use a solvent recovery system and conduct a liquid-liquid material balance according to §63.3961(j), you must meet the operating limits specified in Table 1 to this subpart. These operating limits apply to

the emission capture and control systems on the coating operation(s) for which you use this option, and you must establish the operating limits during the performance test according to the requirements in §63.3967. You must meet the operating limits at all times after you establish them.

(c) If you use an add-on control device other than those listed in Table 1 to this subpart, or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under §63.8(f).

### **§ 63.3893 What work practice standards must I meet?**

(a) For any coating operation(s) on which you use the compliant material option or the emission rate without add-on controls option, you are not required to meet any work practice standards.

(b) If you use the emission rate with add-on controls option, you must develop and implement a work practice plan to minimize organic HAP emissions from the storage, mixing, and conveying of coatings, thinners and/or other additives, and cleaning materials used in, and waste materials generated by the controlled coating operation(s) for which you use this option; or you must meet an alternative standard as provided in paragraph (c) of this section. The plan must specify practices and procedures to ensure that, at a minimum, the elements specified in paragraphs (b)(1) through (5) of this section are implemented.

(1) All organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be stored in closed containers.

(2) Spills of organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be minimized.

(3) Organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be conveyed from one location to another in closed containers or pipes.

(4) Mixing vessels which contain organic-HAP-containing coatings and other materials must be closed except when adding to, removing, or mixing the contents.

(5) Emissions of organic HAP must be minimized during cleaning of storage, mixing, and conveying equipment.

(c) As provided in §63.6(g), we, the U.S. Environmental Protection Agency, may choose to grant you permission to use an alternative to the work practice standards in this section.

## **General Compliance Requirements**

### **§ 63.3900 What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limitations in this subpart as specified in paragraphs (a)(1) and (2) of this section.

(1) Any coating operation(s) for which you use the compliant material option or the emission rate without add-on controls option, as specified in §63.3891(a) and (b), must be in compliance with the applicable emission limit in §63.3890 at all times.

(2) Any coating operation(s) for which you use the emission rate with add-on controls option, as specified in §63.3891(c), must be in compliance with the emission limitations as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) The coating operation(s) must be in compliance with the applicable emission limit in §63.3890 at all times except during periods of startup, shutdown, and malfunction.

(ii) The coating operation(s) must be in compliance with the operating limits for emission capture systems and add-on control devices required by §63.3892 at all times except during periods of startup, shutdown, and malfunction, and except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3961(j).

(iii) The coating operation(s) must be in compliance with the work practice standards in §63.3893 at all times.

(b) You must always operate and maintain your affected source, including all air pollution control and monitoring equipment you use for purposes of complying with this subpart, according to the provisions in §63.6(e)(1)(i).

(c) If your affected source uses an emission capture system and add-on control device, you must develop a written startup, shutdown, and malfunction plan according to the provisions in §63.6(e)(3). The plan must address the startup, shutdown, and corrective actions in the event of a malfunction of the emission capture system or the add-on control device. The plan must also address any coating operation equipment that may cause increased emissions or that would affect capture efficiency if the process equipment malfunctions, such as conveyors that move parts among enclosures.

[69 FR 157, Jan. 2, 2004, as amended at 71 FR 20465, Apr. 20, 2006]

### **§ 63.3901 What parts of the General Provisions apply to me?**

Table 2 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

### **Notifications, Reports, and Records**

#### **§ 63.3910 What notifications must I submit?**

(a) *General.* You must submit the notifications in §§63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (e) and (h) that apply to you by the dates specified in those sections, except as provided in paragraphs (b) and (c) of this section.

(b) *Initial Notification.* You must submit the initial notification required by §63.9(b) for a new or reconstructed affected source no later than 120 days after initial startup or 120 days after January 2, 2004, whichever is later. For an existing affected source, you must submit the initial notification no later than 1 year after January 2, 2004. If you are using compliance with the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (subpart IIII of this part) as provided for under §63.3881(d) to constitute compliance with this subpart for any or all of your metal parts coating operations, then you must include a statement to this effect in your initial notification, and no other notifications are required under this subpart in regard to those metal parts coating operations. If you are complying with another NESHAP that constitutes the predominant activity at your facility under §63.3881(e)(2) to constitute compliance with this subpart for your metal parts coating operations, then you must include a statement to this effect in your initial notification, and no other notifications are required under this subpart in regard to those metal parts coating operations.

(c) *Notification of compliance status.* You must submit the notification of compliance status required by §63.9(h) no later than 30 calendar days following the end of the initial compliance period described in §§63.3940, 63.3950, or 63.3960 that applies to your affected source. The notification of compliance status must contain the information specified in paragraphs (c)(1) through (11) of this section and in §63.9(h).

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of the report and beginning and ending dates of the reporting period. The reporting period is the initial compliance period described in §§63.3940, 63.3950, or 63.3960 that applies to your affected source.

(4) Identification of the compliance option or options specified in §63.3891 that you used on each coating operation in the affected source during the initial compliance period.

(5) Statement of whether or not the affected source achieved the emission limitations for the initial compliance period.

(6) If you had a deviation, include the information in paragraphs (c)(6)(i) and (ii) of this section.

(i) A description and statement of the cause of the deviation.

(ii) If you failed to meet the applicable emission limit in §63.3890, include all the calculations you used to determine the kg (lb) of organic HAP emitted per liter (gal) coating solids used. You do not need to submit information provided by the materials' suppliers or manufacturers, or test reports.

(7) For each of the data items listed in paragraphs (c)(7)(i) through (iv) of this section that is required by the compliance option(s) you used to demonstrate compliance with the emission limit, include an example of how you determined the value, including calculations and supporting data. Supporting data may include a copy of the information provided by the supplier or manufacturer of the example coating or material, or a summary of the results of testing conducted according to §63.3941(a), (b), or (c). You do not need to submit copies of any test reports.

(i) Mass fraction of organic HAP for one coating, for one thinner and/or other additive, and for one cleaning material.

(ii) Volume fraction of coating solids for one coating.

(iii) Density for one coating, one thinner and/or other additive, and one leaning material, except that if you use the compliant material option, only the example coating density is required.

(iv) The amount of waste materials and the mass of organic HAP contained in the waste materials for which you are claiming an allowance in Equation 1 of §63.3951.

(8) The calculation of kg (lb) of organic HAP emitted per liter (gal) coating solids used for the compliance option(s) you used, as specified in paragraphs (c)(8)(i) through (iii) of this section.

(i) For the compliant material option, provide an example calculation of the organic HAP content for one coating, using Equation 2 of §63.3941.

(ii) For the emission rate without add-on controls option, provide the calculation of the total mass of organic HAP emissions for each month; the calculation of the total volume of coating solids used each month; and the calculation of the 12-month organic HAP emission rate using Equations 1 and 1A through 1C, 2, and 3, respectively, of §63.3951.

(iii) For the emission rate with add-on controls option, provide the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month, using Equations 1 and 1A through 1C of §63.3951; the calculation of the total volume of coating solids used each month using Equation 2 of §63.3951; the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices using Equations 1 and 1A through 1D of §63.3961 and Equations 2, 3, and 3A through 3C of §63.3961 as applicable; the calculation of the total mass of organic HAP emissions each month using Equation 4 of §63.3961; and the calculation of the 12-month organic HAP emission rate using Equation 5 of §63.3961.

(9) For the emission rate with add-on controls option, you must include the information specified in paragraphs (c)(9)(i) through (iv) of this section, except that the requirements in paragraphs (c)(9)(i) through (iii) of this section do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3961(j).

(i) For each emission capture system, a summary of the data and copies of the calculations supporting the determination that the emission capture system is a permanent total enclosure (PTE) or a measurement of the emission capture system efficiency. Include a description of the protocol followed for measuring capture efficiency,

summaries of any capture efficiency tests conducted, and any calculations supporting the capture efficiency determination. If you use the data quality objective (DQO) or lower confidence limit (LCL) approach, you must also include the statistical calculations to show you meet the DQO or LCL criteria in appendix A to subpart KK of this part. You do not need to submit complete test reports.

(ii) A summary of the results of each add-on control device performance test. You do not need to submit complete test reports.

(iii) A list of each emission capture system's and add-on control device's operating limits and a summary of the data used to calculate those limits.

(iv) A statement of whether or not you developed and implemented the work practice plan required by §63.3893.

(10) If you are complying with a single emission limit representing the predominant activity under §63.3890(c)(1), include the calculations and supporting information used to demonstrate that this emission limit represents the predominant activity as specified in §63.3890(c)(1).

(11) If you are complying with a facility-specific emission limit under §63.3890(c)(2), include the calculation of the facility-specific emission limit and any supporting information as specified in §63.3890(c)(2).

[69 FR 157, Jan. 2, 2004, as amended at 69 FR 22660, Apr. 26, 2004]

### **§ 63.3920 What reports must I submit?**

(a) *Semiannual compliance reports.* You must submit semiannual compliance reports for each affected source according to the requirements of paragraphs (a)(1) through (7) of this section. The semiannual compliance reporting requirements may be satisfied by reports required under other parts of the Clean Air Act (CAA), as specified in paragraph (a)(2) of this section.

(1) *Dates.* Unless the Administrator has approved or agreed to a different schedule for submission of reports under §63.10(a), you must prepare and submit each semiannual compliance report according to the dates specified in paragraphs (a)(1)(i) through (iv) of this section. Note that the information reported for each of the months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(i) The first semiannual compliance report must cover the first semiannual reporting period which begins the day after the end of the initial compliance period described in §63.3940, §63.3950, or §63.3960 that applies to your affected source and ends on June 30 or December 31, whichever date is the first date following the end of the initial compliance period.

(ii) Each subsequent semiannual compliance report must cover the subsequent semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(iii) Each semiannual compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(iv) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the date specified in paragraph (a)(1)(iii) of this section.

(2) *Inclusion with title V report.* Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a semiannual compliance report pursuant to this section along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the semiannual compliance report includes all required

information concerning deviations from any emission limitation in this subpart, its submission will be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a semiannual compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

(3) *General requirements.* The semiannual compliance report must contain the information specified in paragraphs (a)(3)(i) through (vii) of this section, and the information specified in paragraphs (a)(4) through (7) and (c)(1) of this section that is applicable to your affected source.

(i) Company name and address.

(ii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(iii) Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31. Note that the information reported for each of the 6 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(iv) Identification of the compliance option or options specified in §63.3891 that you used on each coating operation during the reporting period. If you switched between compliance options during the reporting period, you must report the beginning and ending dates for each option you used.

(v) If you used the emission rate without add-on controls or the emission rate with add-on controls compliance option (§63.3891(b) or (c)), the calculation results for each rolling 12-month organic HAP emission rate during the 6-month reporting period.

(vi) If you used the predominant activity alternative (§63.3890(c)(1)), include the annual determination of predominant activity if it was not included in the previous semi-annual compliance report.

(vii) If you used the facility-specific emission limit alternative (§63.3890(c)(2)), include the calculation of the facility-specific emission limit for each 12-month compliance period during the 6-month reporting period.

(4) *No deviations.* If there were no deviations from the emission limitations in §§63.3890, 63.3892, and 63.3893 that apply to you, the semiannual compliance report must include a statement that there were no deviations from the emission limitations during the reporting period. If you used the emission rate with add-on controls option and there were no periods during which the continuous parameter monitoring systems (CPMS) were out-of-control as specified in §63.8(c)(7), the semiannual compliance report must include a statement that there were no periods during which the CPMS were out-of-control during the reporting period.

(5) *Deviations: Compliant material option.* If you used the compliant material option and there was a deviation from the applicable organic HAP content requirements in §63.3890, the semiannual compliance report must contain the information in paragraphs (a)(5)(i) through (iv) of this section.

(i) Identification of each coating used that deviated from the applicable emission limit, and each thinner and/or other additive, and cleaning material used that contained organic HAP, and the dates and time periods each was used.

(ii) The calculation of the organic HAP content (using Equation 2 of §63.3941) for each coating identified in paragraph (a)(5)(i) of this section. You do not need to submit background data supporting this calculation ( e.g., information provided by coating suppliers or manufacturers, or test reports).

(iii) The determination of mass fraction of organic HAP for each thinner and/or other additive, and cleaning material identified in paragraph (a)(5)(i) of this section. You do not need to submit background data supporting this calculation ( e.g., information provided by material suppliers or manufacturers, or test reports).

(iv) A statement of the cause of each deviation.

(6) *Deviations: Emission rate without add-on controls option.* If you used the emission rate without add-on controls option and there was a deviation from the applicable emission limit in §63.3890, the semiannual compliance report must contain the information in paragraphs (a)(6)(i) through (iii) of this section.

(i) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in §63.3890.

(ii) The calculations used to determine the 12-month organic HAP emission rate for the compliance period in which the deviation occurred. You must submit the calculations for Equations 1, 1A through 1C, 2, and 3 of §63.3951; and if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3951(e)(4). You do not need to submit background data supporting these calculations ( e.g., information provided by materials suppliers or manufacturers, or test reports).

(iii) A statement of the cause of each deviation.

(7) *Deviations: Emission rate with add-on controls option.* If you used the emission rate with add-on controls option and there was a deviation from an emission limitation (including any periods when emissions bypassed the add-on control device and were diverted to the atmosphere), the semiannual compliance report must contain the information in paragraphs (a)(7)(i) through (xiv) of this section. This includes periods of startup, shutdown, and malfunction during which deviations occurred.

(i) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in §63.3890.

(ii) The calculations used to determine the 12-month organic HAP emission rate for each compliance period in which a deviation occurred. You must provide the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1 and 1A through 1C of §63.3951; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3951(e)(4); the calculation of the total volume of coating solids used each month using Equation 2 of §63.3951; the calculation of the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices using Equations 1 and 1A through 1D of §63.3961, and Equations 2, 3, and 3A through 3C of §63.3961, as applicable; the calculation of the total mass of organic HAP emissions each month using Equation 4 of §63.3961; and the calculation of the 12-month organic HAP emission rate using Equation 5 of §63.3961. You do not need to submit the background data supporting these calculations ( e.g., information provided by materials suppliers or manufacturers, or test reports).

(iii) The date and time that each malfunction started and stopped.

(iv) A brief description of the CPMS.

(v) The date of the latest CPMS certification or audit.

(vi) The date and time that each CPMS was inoperative, except for zero (low-level) and high-level checks.

(vii) The date, time, and duration that each CPMS was out-of-control, including the information in §63.8(c)(8).

(viii) The date and time period of each deviation from an operating limit in Table 1 to this subpart; date and time period of any bypass of the add-on control device; and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(ix) A summary of the total duration of each deviation from an operating limit in Table 1 to this subpart and each bypass of the add-on control device during the semiannual reporting period, and the total duration as a percent of the total source operating time during that semiannual reporting period.

(x) A breakdown of the total duration of the deviations from the operating limits in Table 1 of this subpart and bypasses of the add-on control device during the semiannual reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(xi) A summary of the total duration of CPMS downtime during the semiannual reporting period and the total duration of CPMS downtime as a percent of the total source operating time during that semiannual reporting period.

(xii) A description of any changes in the CPMS, coating operation, emission capture system, or add-on control device since the last semiannual reporting period.

(xiii) For each deviation from the work practice standards, a description of the deviation, the date and time period of the deviation, and the actions you took to correct the deviation.

(xiv) A statement of the cause of each deviation.

(b) *Performance test reports.* If you use the emission rate with add-on controls option, you must submit reports of performance test results for emission capture systems and add-on control devices no later than 60 days after completing the tests as specified in §63.10(d)(2).

(c) *Startup, shutdown, malfunction reports.* If you used the emission rate with add-on controls option and you had a startup, shutdown, or malfunction during the semiannual reporting period, you must submit the reports specified in paragraphs (c)(1) and (2) of this section.

(1) If your actions were consistent with your startup, shutdown, and malfunction plan, you must include the information specified in §63.10(d) in the semiannual compliance report required by paragraph (a) of this section.

(2) If your actions were not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report as described in paragraphs (c)(2)(i) and (ii) of this section.

(i) You must describe the actions taken during the event in a report delivered by facsimile, telephone, or other means to the Administrator within 2 working days after starting actions that are inconsistent with the plan.

(ii) You must submit a letter to the Administrator within 7 working days after the end of the event, unless you have made alternative arrangements with the Administrator as specified in §63.10(d)(5)(ii). The letter must contain the information specified in §63.10(d)(5)(ii).

### **§ 63.3930 What records must I keep?**

You must collect and keep records of the data and information specified in this section. Failure to collect and keep these records is a deviation from the applicable standard.

(a) A copy of each notification and report that you submitted to comply with this subpart, and the documentation supporting each notification and report. If you are using the predominant activity alternative under §63.3890(c), you must keep records of the data and calculations used to determine the predominant activity. If you are using the facility-specific emission limit alternative under §63.3890(c), you must keep records of the data used to calculate the facility-specific emission limit for the initial compliance demonstration. You must also keep records of any data used in each annual predominant activity determination and in the calculation of the facility-specific emission limit for each 12-month compliance period included in the semi-annual compliance reports.

(b) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data, or test data used to determine the mass fraction of organic HAP and density for each coating, thinner and/or other additive, and cleaning material, and the volume fraction of coating solids for each coating. If you conducted testing to determine mass fraction of organic HAP, density, or volume fraction of coating solids, you must keep a copy of the complete test report. If you use information provided to you by the manufacturer or supplier of the material that was based on testing, you must keep the summary sheet of results provided to you by the manufacturer

or supplier. You are not required to obtain the test report or other supporting documentation from the manufacturer or supplier.

(c) For each compliance period, the records specified in paragraphs (c)(1) through (4) of this section.

(1) A record of the coating operations on which you used each compliance option and the time periods (beginning and ending dates and times) for each option you used.

(2) For the compliant material option, a record of the calculation of the organic HAP content for each coating, using Equation 2 of §63.3941.

(3) For the emission rate without add-on controls option, a record of the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1, 1A through 1C, and 2 of §63.3951; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3951(e)(4); the calculation of the total volume of coating solids used each month using Equation 2 of §63.3951; and the calculation of each 12-month organic HAP emission rate using Equation 3 of §63.3951.

(4) For the emission rate with add-on controls option, records of the calculations specified in paragraphs (c)(4)(i) through (v) of this section.

(i) The calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1 and 1A through 1C of §63.3951 and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3951(e)(4);

(ii) The calculation of the total volume of coating solids used each month using Equation 2 of §63.3951;

(iii) The calculation of the mass of organic HAP emission reduction by emission capture systems and add-on control devices using Equations 1 and 1A through 1D of §63.3961 and Equations 2, 3, and 3A through 3C of §63.3961, as applicable;

(iv) The calculation of each month's organic HAP emission rate using Equation 4 of §63.3961; and

(v) The calculation of each 12-month organic HAP emission rate using Equation 5 of §63.3961.

(d) A record of the name and volume of each coating, thinner and/or other additive, and cleaning material used during each compliance period. If you are using the compliant material option for all coatings at the source, you may maintain purchase records for each material used rather than a record of the volume used.

(e) A record of the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each compliance period unless the material is tracked by weight.

(f) A record of the volume fraction of coating solids for each coating used during each compliance period.

(g) If you use either the emission rate without add-on controls or the emission rate with add-on controls compliance option, the density for each coating, thinner and/or other additive, and cleaning material used during each compliance period.

(h) If you use an allowance in Equation 1 of §63.3951 for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to §63.3951(e)(4), you must keep records of the information specified in paragraphs (h)(1) through (3) of this section.

(1) The name and address of each TSDF to which you sent waste materials for which you use an allowance in Equation 1 of §63.3951; a statement of which subparts under 40 CFR parts 262, 264, 265, and 266 apply to the facility; and the date of each shipment.

(2) Identification of the coating operations producing waste materials included in each shipment and the month or months in which you used the allowance for these materials in Equation 1 of §63.3951.

(3) The methodology used in accordance with §63.3951(e)(4) to determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF each month; and the methodology to determine the mass of organic HAP contained in these waste materials. This must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.

(i) [Reserved]

(j) You must keep records of the date, time, and duration of each deviation.

(k) If you use the emission rate with add-on controls option, you must keep the records specified in paragraphs (k)(1) through (8) of this section.

(1) For each deviation, a record of whether the deviation occurred during a period of startup, shutdown, or malfunction.

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) The records required to show continuous compliance with each operating limit specified in Table 1 to this subpart that applies to you.

(4) For each capture system that is a PTE, the data and documentation you used to support a determination that the capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and has a capture efficiency of 100 percent, as specified in §63.3965(a).

(5) For each capture system that is not a PTE, the data and documentation you used to determine capture efficiency according to the requirements specified in §§63.3964 and 63.3965(b) through (e), including the records specified in paragraphs (k)(5)(i) through (iii) of this section that apply to you.

(i) *Records for a liquid-to-uncaptured gas protocol using a temporary total enclosure or building enclosure.* Records of the mass of total volatile hydrocarbon (TVH) as measured by Method 204A or 204F of appendix M to 40 CFR part 51 for each material used in the coating operation, and the total TVH for all materials used during each capture efficiency test run, including a copy of the test report. Records of the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run, as measured by Method 204D or 204E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure.

(ii) *Records for a gas-to-gas protocol using a temporary total enclosure or a building enclosure.* Records of the mass of TVH emissions captured by the emission capture system as measured by Method 204B or 204C of appendix M to 40 CFR part 51 at the inlet to the add-on control device, including a copy of the test report. Records of the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run as measured by Method 204D or 204E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure.

(iii) *Records for an alternative protocol.* Records needed to document a capture efficiency determination using an alternative method or protocol as specified in §63.3965(e), if applicable.

(6) The records specified in paragraphs (k)(6)(i) and (ii) of this section for each add-on control device organic HAP destruction or removal efficiency determination as specified in §63.3966.

- (i) Records of each add-on control device performance test conducted according to §§63.3964 and 63.3966.
- (ii) Records of the coating operation conditions during the add-on control device performance test showing that the performance test was conducted under representative operating conditions.
- (7) Records of the data and calculations you used to establish the emission capture and add-on control device operating limits as specified in §63.3967 and to document compliance with the operating limits as specified in Table 1 to this subpart.
- (8) A record of the work practice plan required by §63.3893 and documentation that you are implementing the plan on a continuous basis.

### **§ 63.3931 In what form and for how long must I keep my records?**

- (a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1). Where appropriate, the records may be maintained as electronic spreadsheets or as a database.
- (b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- (c) You must keep each record on-site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to §63.10(b)(1). You may keep the records off-site for the remaining 3 years.

### **Compliance Requirements for the Compliant Material Option**

#### **§ 63.3940 By what date must I conduct the initial compliance demonstration?**

You must complete the initial compliance demonstration for the initial compliance period according to the requirements in §63.3941. The initial compliance period begins on the applicable compliance date specified in §63.3883 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through that month plus the next 12 months. The initial compliance demonstration includes the calculations according to §63.3941 and supporting documentation showing that during the initial compliance period, you used no coating with an organic HAP content that exceeded the applicable emission limit in §63.3890, and that you used no thinners and/or other additives, or cleaning materials that contained organic HAP as determined according to §63.3941(a).

#### **§ 63.3941 How do I demonstrate initial compliance with the emission limitations?**

You may use the compliant material option for any individual coating operation, for any group of coating operations in the affected source, or for all the coating operations in the affected source. You must use either the emission rate without add-on controls option or the emission rate with add-on controls option for any coating operation in the affected source for which you do not use this option. To demonstrate initial compliance using the compliant material option, the coating operation or group of coating operations must use no coating with an organic HAP content that exceeds the applicable emission limits in §63.3890 and must use no thinner and/or other additive, or cleaning material that contains organic HAP as determined according to this section. Any coating operation for which you use the compliant material option is not required to meet the operating limits or work practice standards required in §§63.3892 and 63.3893, respectively. You must conduct a separate initial compliance demonstration for each general use, high performance, magnet wire, rubber-to-metal, and extreme performance fluoropolymer coating operation unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.3890(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.3890(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. Use the procedures in this section on each coating, thinner and/or other additive, and cleaning material in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration. You do not need to redetermine the organic HAP content of coatings, thinners and/or other additives, and

cleaning materials that are reclaimed on-site (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coating operation for which you use the compliant material option, provided these materials in their condition as received were demonstrated to comply with the compliant material option.

(a) *Determine the mass fraction of organic HAP for each material used.* You must determine the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during the compliance period by using one of the options in paragraphs (a)(1) through (5) of this section.

(1) *Method 311 (appendix A to 40 CFR part 63).* You may use Method 311 for determining the mass fraction of organic HAP. Use the procedures specified in paragraphs (a)(1)(i) and (ii) of this section when performing a Method 311 test.

(i) Count each organic HAP that is measured to be present at 0.1 percent by mass or more for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is measured to be 0.5 percent of the material by mass, you do not have to count it. Express the mass fraction of each organic HAP you count as a value truncated to four places after the decimal point ( e.g., 0.3791).

(ii) Calculate the total mass fraction of organic HAP in the test material by adding up the individual organic HAP mass fractions and truncating the result to three places after the decimal point ( e.g., 0.763).

(2) *Method 24 (appendix A to 40 CFR part 60).* For coatings, you may use Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, you may use the alternative method contained in appendix A to subpart P of this part, rather than Method 24. You may use the volatile fraction that is emitted, as measured by the alternative method in appendix A to subpart P of this part, as a substitute for the mass fraction of organic HAP.

(3) *Alternative method.* You may use an alternative test method for determining the mass fraction of organic HAP once the Administrator has approved it. You must follow the procedure in §63.7(f) to submit an alternative test method for approval.

(4) *Information from the supplier or manufacturer of the material.* You may rely on information other than that generated by the test methods specified in paragraphs (a)(1) through (3) of this section, such as manufacturer's formulation data, if it represents each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is 0.5 percent of the material by mass, you do not have to count it. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, you may rely on manufacturer's data that expressly states the organic HAP or volatile matter mass fraction emitted. If there is a disagreement between such information and results of a test conducted according to paragraphs (a)(1) through (3) of this section, then the test method results will take precedence unless, after consultation, you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(5) *Solvent blends.* Solvent blends may be listed as single components for some materials in data provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP mass fraction of the materials. When test data and manufacturer's data for solvent blends are not available, you may use the default values for the mass fraction of organic HAP in these solvent blends listed in Table 3 or 4 to this subpart. If you use the tables, you must use the values in Table 3 for all solvent blends that match Table 3 entries according to the instructions for Table 3, and you may use Table 4 only if the solvent blends in the materials you use do not match any of the solvent blends in Table 3 and you know only whether the blend is aliphatic or aromatic. However, if the results of a Method 311 (appendix A to 40 CFR part 63) test indicate higher values than those listed on Table 3 or 4 to this subpart, the Method 311 results will take precedence unless, after consultation, you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(b) *Determine the volume fraction of coating solids for each coating.* You must determine the volume fraction of coating solids (liters (gal) of coating solids per liter (gal) of coating) for each coating used during the compliance period by a test, by information provided by the supplier or the manufacturer of the material, or by calculation, as

specified in paragraphs (b)(1) through (4) of this section. If test results obtained according to paragraph (b)(1) of this section do not agree with the information obtained under paragraph (b)(3) or (4) of this section, the test results will take precedence unless, after consultation, you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(1) *ASTM Method D2697–86 (Reapproved 1998) or ASTM Method D6093–97 (Reapproved 2003)*. You may use ASTM Method D2697–86 (Reapproved 1998), “Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings” (incorporated by reference, see §63.14), or ASTM Method D6093–97 (Reapproved 2003), “Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer” (incorporated by reference, see §63.14), to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids.

(2) *Alternative method*. You may use an alternative test method for determining the solids content of each coating once the Administrator has approved it. You must follow the procedure in §63.7(f) to submit an alternative test method for approval.

(3) *Information from the supplier or manufacturer of the material*. You may obtain the volume fraction of coating solids for each coating from the supplier or manufacturer.

(4) *Calculation of volume fraction of coating solids*. You may determine the volume fraction of coating solids using Equation 1 of this section:

$$V_s = 1 - \frac{m_{\text{volatiles}}}{D_{\text{avg}}} \quad (\text{Eq. 1})$$

Where:

$V_s$  = Volume fraction of coating solids, liters (gal) coating solids per liter (gal) coating.

$m_{\text{volatiles}}$  = Total volatile matter content of the coating, including HAP, volatile organic compounds (VOC), water, and exempt compounds, determined according to Method 24 in appendix A of 40 CFR part 60, grams volatile matter per liter coating.

$D_{\text{avg}}$  = Average density of volatile matter in the coating, grams volatile matter per liter volatile matter, determined from test results using ASTM Method D1475–98, “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” (incorporated by reference, see §63.14), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475–98 test results and other information sources, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(c) *Determine the density of each coating*. Determine the density of each coating used during the compliance period from test results using ASTM Method D1475–98, “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” (incorporated by reference, see §63.14), information from the supplier or manufacturer of the material, or specific gravity data for pure chemicals. If there is disagreement between ASTM Method D1475–98 test results and the supplier's or manufacturer's information, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(d) *Determine the organic HAP content of each coating*. Calculate the organic HAP content, kg (lb) of organic HAP emitted per liter (gal) coating solids used, of each coating used during the compliance period using Equation 2 of this section:

$$H_c = \frac{(D_c)(W_c)}{V_s} \quad (\text{Eq. 2})$$

Where:

$H_c$  = Organic HAP content of the coating, kg organic HAP emitted per liter (gal) coating solids used.

$D_c$  = Density of coating, kg coating per liter (gal) coating, determined according to paragraph (c) of this section.

$W_c$  = Mass fraction of organic HAP in the coating, kg organic HAP per kg coating, determined according to paragraph (a) of this section.

$V_s$  = Volume fraction of coating solids, liter (gal) coating solids per liter (gal) coating, determined according to paragraph (b) of this section.

(e) *Compliance demonstration.* The calculated organic HAP content for each coating used during the initial compliance period must be less than or equal to the applicable emission limit in §63.3890; and each thinner and/or other additive, and cleaning material used during the initial compliance period must contain no organic HAP, determined according to paragraph (a) of this section. You must keep all records required by §§63.3930 and 63.3931. As part of the notification of compliance status required in §63.3910, you must identify the coating operation(s) for which you used the compliant material option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because you used no coatings for which the organic HAP content exceeded the applicable emission limit in §63.3890, and you used no thinners and/or other additives, or cleaning materials that contained organic HAP, determined according to the procedures in paragraph (a) of this section.

#### **§ 63.3942 How do I demonstrate continuous compliance with the emission limitations?**

(a) For each compliance period to demonstrate continuous compliance, you must use no coating for which the organic HAP content (determined using Equation 2 of §63.3941) exceeds the applicable emission limit in §63.3890, and use no thinner and/or other additive, or cleaning material that contains organic HAP, determined according to §63.3941(a). A compliance period consists of 12 months. Each month, after the end of the initial compliance period described in §63.3940, is the end of a compliance period consisting of that month and the preceding 11 months. If you are complying with a facility-specific emission limit under §63.3890(c), you must also perform the calculation using Equation 1 in §63.3890(c)(2) on a monthly basis using the data from the previous 12 months of operation.

(b) If you choose to comply with the emission limitations by using the compliant material option, the use of any coating, thinner and/or other additive, or cleaning material that does not meet the criteria specified in paragraph (a) of this section is a deviation from the emission limitations that must be reported as specified in §§63.3910(c)(6) and 63.3920(a)(5).

(c) As part of each semiannual compliance report required by §63.3920, you must identify the coating operation(s) for which you used the compliant material option. If there were no deviations from the applicable emission limit in §63.3890, submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because you used no coatings for which the organic HAP content exceeded the applicable emission limit in §63.3890, and you used no thinner and/or other additive, or cleaning material that contained organic HAP, determined according to §63.3941(a).

(d) You must maintain records as specified in §§63.3930 and 63.3931.

#### **Compliance Requirements for the Emission Rate Without Add-On Controls Option**

### **§ 63.3950 By what date must I conduct the initial compliance demonstration?**

You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.3951. The initial compliance period begins on the applicable compliance date specified in §63.3883 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coating solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the calculations according to §63.3951 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in §63.3890.

### **§ 63.3951 How do I demonstrate initial compliance with the emission limitations?**

You may use the emission rate without add-on controls option for any individual coating operation, for any group of coating operations in the affected source, or for all the coating operations in the affected source. You must use either the compliant material option or the emission rate with add-on controls option for any coating operation in the affected source for which you do not use this option. To demonstrate initial compliance using the emission rate without add-on controls option, the coating operation or group of coating operations must meet the applicable emission limit in §63.3890, but is not required to meet the operating limits or work practice standards in §§63.3892 and 63.3893, respectively. You must conduct a separate initial compliance demonstration for each general use, magnet wire, rubber-to-metal, and extreme performance fluoropolymer coating operation unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.3890(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.3890(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners and/or other additives, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate with add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coating operation for which you use the emission rate without add-on controls option. If you use coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site, the amount of each used in a month may be reduced by the amount of each that is reclaimed. That is, the amount used may be calculated as the amount consumed to account for materials that are reclaimed.

(a) *Determine the mass fraction of organic HAP for each material.* Determine the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each month according to the requirements in §63.3941(a).

(b) *Determine the volume fraction of coating solids.* Determine the volume fraction of coating solids (liter (gal) of coating solids per liter (gal) of coating) for each coating used during each month according to the requirements in §63.3941(b).

(c) *Determine the density of each material.* Determine the density of each liquid coating, thinner and/or other additive, and cleaning material used during each month from test results using ASTM Method D1475–98, “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” (incorporated by reference, see §63.14), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If you are including powder coatings in the compliance determination, determine the density of powder coatings, using ASTM Method D5965–02, “Standard Test Methods for Specific Gravity of Coating Powders” (incorporated by reference, see §63.14), or information from the supplier. If there is disagreement between ASTM Method D1475–98 or ASTM Method D5965–02 test results and other such information sources, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct. If you purchase materials or monitor consumption by weight instead of volume, you do not need to determine material density. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, 1C, and 2 of this section.

(d) *Determine the volume of each material used.* Determine the volume (liters) of each coating, thinner and/or other additive, and cleaning material used during each month by measurement or usage records. If you purchase materials or monitor consumption by weight instead of volume, you do not need to determine the volume of each material used. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, and 1C of this section.

(e) *Calculate the mass of organic HAP emissions.* The mass of organic HAP emissions is the combined mass of organic HAP contained in all coatings, thinners and/or other additives, and cleaning materials used during each month minus the organic HAP in certain waste materials. Calculate the mass of organic HAP emissions using Equation 1 of this section.

$$H_e = A + B + C - R_w \quad (\text{Eq. 1})$$

Where:

$H_e$  = Total mass of organic HAP emissions during the month, kg.

A = Total mass of organic HAP in the coatings used during the month, kg, as calculated in Equation 1A of this section.

B = Total mass of organic HAP in the thinners and/or other additives used during the month, kg, as calculated in Equation 1B of this section.

C = Total mass of organic HAP in the cleaning materials used during the month, kg, as calculated in Equation 1C of this section.

$R_w$  = Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the month, kg, determined according to paragraph (e)(4) of this section. (You may assign a value of zero to  $R_w$  if you do not wish to use this allowance.)

(1) Calculate the kg organic HAP in the coatings used during the month using Equation 1A of this section:

$$A = \sum_{i=1}^m (Vol_{c,i})(D_{c,i})(W_{c,i}) \quad (\text{Eq. 1A})$$

Where:

A = Total mass of organic HAP in the coatings used during the month, kg.

$Vol_{c,i}$  = Total volume of coating, i, used during the month, liters.

$D_{c,i}$  = Density of coating, i, kg coating per liter coating.

$W_{c,i}$  = Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart Pppp of this part.

m = Number of different coatings used during the month.

(2) Calculate the kg of organic HAP in the thinners and/or other additives used during the month using Equation 1B of this section:

$$B = \sum_{j=1}^n (Vol_{t,j}) (D_{t,j}) (W_{t,j}) \quad (Eq. 1B)$$

Where:

B = Total mass of organic HAP in the thinners and/or other additives used during the month, kg.

Vol<sub>t,j</sub> = Total volume of thinner and/or other additive, j, used during the month, liters.

D<sub>t,j</sub> = Density of thinner and/or other additive, j, kg per liter.

W<sub>t,j</sub> = Mass fraction of organic HAP in thinner and/or other additive, j, kg organic HAP per kg thinner and/or other additive. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart P of this part.

n = Number of different thinners and/or other additives used during the month.

(3) Calculate the kg organic HAP in the cleaning materials used during the month using Equation 1C of this section:

$$C = \sum_{k=1}^p (Vol_{s,k}) (D_{s,k}) (W_{s,k}) \quad (Eq. 1C)$$

Where:

C = Total mass of organic HAP in the cleaning materials used during the month, kg.

Vol<sub>s,k</sub> = Total volume of cleaning material, k, used during the month, liters.

D<sub>s,k</sub> = Density of cleaning material, k, kg per liter.

W<sub>s,k</sub> = Mass fraction of organic HAP in cleaning material, k, kg organic HAP per kg material.

p = Number of different cleaning materials used during the month.

(4) If you choose to account for the mass of organic HAP contained in waste materials sent or designated for shipment to a hazardous waste TSD in Equation 1 of this section, then you must determine the mass according to paragraphs (e)(4)(i) through (iv) of this section.

(i) You may only include waste materials in the determination that are generated by coating operations in the affected source for which you use Equation 1 of this section and that will be treated or disposed of by a facility that is regulated as a TSD under 40 CFR part 262, 264, 265, or 266. The TSD may be either off-site or on-site. You may not include organic HAP contained in wastewater.

(ii) You must determine either the amount of the waste materials sent to a TSD during the month or the amount collected and stored during the month and designated for future transport to a TSD. Do not include in your determination any waste materials sent to a TSD during a month if you have already included them in the amount collected and stored during that month or a previous month.

(iii) Determine the total mass of organic HAP contained in the waste materials specified in paragraph (e)(4)(ii) of this section.

(iv) You must document the methodology you use to determine the amount of waste materials and the total mass of organic HAP they contain, as required in §63.3930(h). If waste manifests include this information, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.

(f) Calculate the total volume of coating solids used. Determine the total volume of coating solids used, liters, which is the combined volume of coating solids for all the coatings used during each month, using Equation 2 of this section:

$$V_{st} = \sum_{i=1}^m (Vol_{c,i}) (V_{s,i}) \quad (Eq. 2)$$

Where:

$V_{st}$  = Total volume of coating solids used during the month, liters.

$Vol_{c,i}$  = Total volume of coating, i, used during the month, liters.

$V_{s,i}$  = Volume fraction of coating solids for coating, i, liter solids per liter coating, determined according to §63.3941(b).

$m$  = Number of coatings used during the month.

(g) Calculate the organic HAP emission rate. Calculate the organic HAP emission rate for the compliance period, kg (lb) organic HAP emitted per liter (gal) coating solids used, using Equation 3 of this section:

$$H_{yr} = \frac{\sum_{y=1}^n H_e}{\sum_{y=1}^n V_{st}} \quad (Eq. 3)$$

Where:

$H_{yr}$  = Average organic HAP emission rate for the compliance period, kg organic HAP emitted per liter coating solids used.

$H_e$  = Total mass of organic HAP emissions from all materials used during month, y, kg, as calculated by Equation 1 of this section.

$V_{st}$  = Total volume of coating solids used during month, y, liters, as calculated by Equation 2 of this section.

$y$  = Identifier for months.

$n$  = Number of full or partial months in the compliance period (for the initial compliance period,  $n$  equals 12 if the compliance date falls on the first day of a month; otherwise  $n$  equals 13; for all following compliance periods,  $n$  equals 12).

(h) Compliance demonstration. The organic HAP emission rate for the initial compliance period calculated using Equation 3 of this section must be less than or equal to the applicable emission limit for each subcategory in §63.3890 or the predominant activity or facility-specific emission limit allowed in §63.3890(c). You must keep all

records as required by §§63.3930 and 63.3931. As part of the notification of compliance status required by §63.3910, you must identify the coating operation(s) for which you used the emission rate without add-on controls option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in §63.3890, determined according to the procedures in this section.

### **§ 63.3952 How do I demonstrate continuous compliance with the emission limitations?**

(a) To demonstrate continuous compliance, the organic HAP emission rate for each compliance period, determined according to §63.3951(a) through (g), must be less than or equal to the applicable emission limit in §63.3890. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in §63.3950 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in §63.3951(a) through (g) on a monthly basis using data from the previous 12 months of operation. If you are complying with a facility-specific emission limit under §63.3890(c), you must also perform the calculation using Equation 1 in §63.3890(c)(2) on a monthly basis using the data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in §63.3890, this is a deviation from the emission limitation for that compliance period and must be reported as specified in §§63.3910(c)(6) and 63.3920(a)(6).

(c) As part of each semiannual compliance report required by §63.3920, you must identify the coating operation(s) for which you used the emission rate without add-on controls option. If there were no deviations from the emission limitations, you must submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in §63.3890, determined according to §63.3951(a) through (g).

(d) You must maintain records as specified in §§63.3930 and 63.3931.

### **Compliance Requirements for the Emission Rate With Add-On Controls Option**

#### **§ 63.3960 By what date must I conduct performance tests and other initial compliance demonstrations?**

(a) *New and reconstructed affected sources.* For a new or reconstructed affected source, you must meet the requirements of paragraphs (a)(1) through (4) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in §63.3883. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3961(j), you must conduct a performance test of each capture system and add-on control device according to §§63.3964, 63.3965, and 63.3966 and establish the operating limits required by §63.3892 no later than 180 days after the applicable compliance date specified in §63.3883. For a solvent recovery system for which you conduct liquid-liquid material balances according to §63.3961(j), you must initiate the first material balance no later than the applicable compliance date specified in §63.3883. For magnet wire coating operations you may, with approval, conduct a performance test of one representative magnet wire coating machine for each group of identical or very similar magnet wire coating machines.

(2) You must develop and begin implementing the work practice plan required by §63.3893 no later than the compliance date specified in §63.3883.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.3961. The initial compliance period begins on the applicable compliance date specified in §63.3883 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coatings solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device

performance tests conducted according to §§63.3964, 63.3965, and 63.3966; results of liquid-liquid material balances conducted according to §63.3961(j); calculations according to §63.3961 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in §63.3890; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by §63.3968; and documentation of whether you developed and implemented the work practice plan required by §63.3893.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by §63.3892 until after you have completed the performance tests specified in paragraph (a)(1) of this section. Instead, you must maintain a log detailing the operation and maintenance of the emission capture system, add-on control device, and continuous parameter monitors during the period between the compliance date and the performance test. You must begin complying with the operating limits for your affected source on the date you complete the performance tests specified in paragraph (a)(1) of this section. For magnet wire coating operations, you must begin complying with the operating limits for all identical or very similar magnet wire coating machines on the date you complete the performance test of a representative magnet wire coating machine. The requirements in this paragraph (a)(4) do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements in §63.3961(j).

(b) *Existing affected sources.* For an existing affected source, you must meet the requirements of paragraphs (b)(1) through (3) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in §63.3883. Except for magnet wire coating operations and solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3961(j), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§63.3964, 63.3965, and 63.3966 and establish the operating limits required by §63.3892 no later than the compliance date specified in §63.3883. For magnet wire coating operations, you may, with approval, conduct a performance test of a single magnet wire coating machine that represents identical or very similar magnet wire coating machines. For a solvent recovery system for which you conduct liquid-liquid material balances according to §63.3961(j), you must initiate the first material balance no later than the compliance date specified in §63.3883.

(2) You must develop and begin implementing the work practice plan required by §63.3893 no later than the compliance date specified in §63.3883.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.3961. The initial compliance period begins on the applicable compliance date specified in §63.3883 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coatings solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§63.3964, 63.3965, and 63.3966; results of liquid-liquid material balances conducted according to §63.3961(j); calculations according to §63.3961 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in §63.3890; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by §63.3968; and documentation of whether you developed and implemented the work practice plan required by §63.3893.

(c) You are not required to conduct an initial performance test to determine capture efficiency or destruction efficiency of a capture system or control device if you receive approval to use the results of a performance test that has been previously conducted on that capture system or control device. Any such previous tests must meet the conditions described in paragraphs (c)(1) through (3) of this section.

(1) The previous test must have been conducted using the methods and conditions specified in this subpart.

(2) Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test, reliably demonstrate compliance despite process or equipment changes.

(3) Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the required operating parameters.

### § 63.3961 How do I demonstrate initial compliance?

(a) You may use the emission rate with add-on controls option for any coating operation, for any group of coating operations in the affected source, or for all of the coating operations in the affected source. You may include both controlled and uncontrolled coating operations in a group for which you use this option. You must use either the compliant material option or the emission rate without add-on controls option for any coating operation in the affected source for which you do not use the emission rate with add-on controls option. To demonstrate initial compliance, the coating operation(s) for which you use the emission rate with add-on controls option must meet the applicable emission limitations in §§63.3890, 63.3892, and 63.3893. You must conduct a separate initial compliance demonstration for each general use, magnet wire, rubber-to-metal, and extreme performance fluoropolymer coating operation, unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.3890(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.4490(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners and/or other additives, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate without add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners and/or other additives, or cleaning materials that have been reclaimed onsite (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coatings operation(s) for which you use the emission rate with add-on controls option. If you use coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site, the amount of each used in a month may be reduced by the amount of each that is reclaimed. That is, the amount used may be calculated as the amount consumed to account for materials that are reclaimed.

(b) *Compliance with operating limits.* Except as provided in §63.3960(a)(4), and except for solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of paragraph (j) of this section, you must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by §63.3892, using the procedures specified in §§63.3967 and 63.3968.

(c) *Compliance with work practice requirements.* You must develop, implement, and document your implementation of the work practice plan required by §63.3893 during the initial compliance period, as specified in §63.3930.

(d) *Compliance with emission limits.* You must follow the procedures in paragraphs (e) through (n) of this section to demonstrate compliance with the applicable emission limit in §63.3890 for each affected source in each subcategory.

(e) *Determine the mass fraction of organic HAP, density, volume used, and volume fraction of coating solids.* Follow the procedures specified in §63.3951(a) through (d) to determine the mass fraction of organic HAP, density, and volume of each coating, thinner and/or other additive, and cleaning material used during each month; and the volume fraction of coating solids for each coating used during each month.

(f) *Calculate the total mass of organic HAP emissions before add-on controls.* Using Equation 1 of §63.3951, calculate the total mass of organic HAP emissions before add-on controls from all coatings, thinners and/or other additives, and cleaning materials used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option.

(g) *Calculate the organic HAP emission reduction for each controlled coating operation.* Determine the mass of organic HAP emissions reduced for each controlled coating operation during each month. The emission reduction determination quantifies the total organic HAP emissions that pass through the emission capture system and are destroyed or removed by the add-on control device. Use the procedures in paragraph (h) of this section to calculate the mass of organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which you conduct a liquid-liquid material balance, use the procedures in paragraph (j) of this section to calculate the organic HAP emission reduction.

(h) Calculate the organic HAP emission reduction for each controlled coating operation not using liquid-liquid material balance. Use Equation 1 of this section to calculate the organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. The calculation applies the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings, thinners and/or other additives, and cleaning materials that are used in the coating operation served by the emission capture system and add-on control device during each month. You must assume zero efficiency for the emission capture system and add-on control device for any period of time a deviation specified in §63.3963(c) or (d) occurs in the controlled coating operation, including a deviation during a period of startup, shutdown, or malfunction, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device and the use of these data is approved by the Administrator. Equation 1 of this section treats the materials used during such a deviation as if they were used on an uncontrolled coating operation for the time period of the deviation.

$$H_C = (A_C + B_C + C_C - R_W - H_{UNC}) \left( \frac{CE}{100} \times \frac{DRE}{100} \right) \quad (Eq. 1)$$

Where:

$H_C$  = Mass of organic HAP emission reduction for the controlled coating operation during the month, kg.

$A_C$  = Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg, as calculated in Equation 1A of this section.

$B_C$  = Total mass of organic HAP in the thinners and/or other additives used in the controlled coating operation during the month, kg, as calculated in Equation 1B of this section.

$C_C$  = Total mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg, as calculated in Equation 1C of this section.

$R_W$  = Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the compliance period, kg, determined according to §63.3951(e)(4). (You may assign a value of zero to  $R_W$  if you do not wish to use this allowance.)

$H_{UNC}$  = Total mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used during all deviations specified in §63.3963(c) and (d) that occurred during the month in the controlled coating operation, kg, as calculated in Equation 1D of this section.

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in §§63.3964 and 63.3965 to measure and record capture efficiency.

DRE = Organic HAP destruction or removal efficiency of the add-on control device, percent. Use the test methods and procedures in §§63.3964 and 63.3966 to measure and record the organic HAP destruction or removal efficiency.

(1) Calculate the mass of organic HAP in the coatings used in the controlled coating operation, kg (lb), using Equation 1A of this section:

$$A_C = \sum_{i=1}^m (Vol_{c,i}) (D_{c,i}) (W_{c,i}) \quad (Eq. 1A)$$

Where:

$A_C$  = Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg.

$Vol_{c,i}$  = Total volume of coating, i, used during the month, liters.

$D_{c,i}$  = Density of coating, i, kg per liter.

$W_{c,i}$  = Mass fraction of organic HAP in coating, i, kg per kg. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart P of this part.

$m$  = Number of different coatings used.

(2) Calculate the mass of organic HAP in the thinners and/or other additives used in the controlled coating operation, kg (lb), using Equation 1B of this section:

$$B_C = \sum_{j=1}^n (Vol_{t,j}) (D_{t,j}) (W_{t,j}) \quad (Eq. 1B)$$

Where:

$B_C$  = Total mass of organic HAP in the thinners and/or other additives used in the controlled coating operation during the month, kg.

$Vol_{t,j}$  = Total volume of thinner and/or other additive, j, used during the month, liters.

$D_{t,j}$  = Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$  = Mass fraction of organic HAP in thinner and/or other additive, j, kg per kg. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart P of this part.

$n$  = Number of different thinners and/or other additives used.

(3) Calculate the mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg (lb), using Equation 1C of this section:

$$C_C = \sum_{k=1}^p (Vol_{s,k}) (D_{s,k}) (W_{s,k}) \quad (Eq. 1C)$$

Where:

$C_C$  = Total mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg.

$Vol_{s,k}$  = Total volume of cleaning material, k, used during the month, liters.

$D_{s,k}$  = Density of cleaning material, k, kg per liter.

$W_{s,k}$  = Mass fraction of organic HAP in cleaning material, k, kg per kg.

p = Number of different cleaning materials used.

(4) Calculate the mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used in the controlled coating operation during deviations specified in §63.3963(c) and (d), using Equation 1D of this section:

$$H_{UNC} = \sum_{k=1}^q (Vol_k)(D_k)(W_k) \quad (Eq. 1D)$$

Where:

$H_{UNC}$  = Total mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used during all deviations specified in §63.3963(c) and (d) that occurred during the month in the controlled coating operation, kg.

$Vol_h$  = Total volume of coating, thinner and/or other additive, or cleaning material, h, used in the controlled coating operation during deviations, liters.

$D_h$  = Density of coating, thinner and/or other additives, or cleaning material, h, kg per liter.

$W_h$  = Mass fraction of organic HAP in coating, thinner and/or other additives, or cleaning material, h, kg organic HAP per kg coating. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

q = Number of different coatings, thinners and/or other additives, and cleaning materials used.

(i) [Reserved]

(j) *Calculate the organic HAP emission reduction for each controlled coating operation using liquid-liquid material balances.* For each controlled coating operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emission reduction by applying the volatile organic matter collection and recovery efficiency to the mass of organic HAP contained in the coatings, thinners and/or other additives, and cleaning materials that are used in the coating operation controlled by the solvent recovery system during each month. Perform a liquid-liquid material balance for each month as specified in paragraphs (j)(1) through (6) of this section. Calculate the mass of organic HAP emission reduction by the solvent recovery system as specified in paragraph (j)(7) of this section.

(1) For each solvent recovery system, install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile organic matter recovered by the solvent recovery system each month. The device must be initially certified by the manufacturer to be accurate to within ±2.0 percent of the mass of volatile organic matter recovered.

(2) For each solvent recovery system, determine the mass of volatile organic matter recovered for the month, based on measurement with the device required in paragraph (j)(1) of this section.

(3) Determine the mass fraction of volatile organic matter for each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, kg volatile organic matter per kg coating. You may determine the volatile organic matter mass fraction using Method 24 of 40 CFR part 60, appendix A, or an EPA approved alternative method, or you may use information provided by the manufacturer or supplier of the coating. In the event of any inconsistency between information provided by the manufacturer or

supplier and the results of Method 24 of 40 CFR part 60, appendix A, or an approved alternative method, the test method results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(4) Determine the density of each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, kg per liter, according to §63.3951(c).

(5) Measure the volume of each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, liters.

(6) Each month, calculate the solvent recovery system's volatile organic matter collection and recovery efficiency, using Equation 2 of this section:

$$R_V = 100 \frac{M_{VR}}{\sum_{i=1}^m Vol_i D_i WV_{c,i} + \sum_{j=1}^n Vol_j D_j WV_{t,j} + \sum_{k=1}^p Vol_k D_k WV_{s,k}} \quad (Eq. 2)$$

Where:

$R_V$  = Volatile organic matter collection and recovery efficiency of the solvent recovery system during the month, percent.

$M_{VR}$  = Mass of volatile organic matter recovered by the solvent recovery system during the month, kg.

$Vol_i$  = Volume of coating, i, used in the coating operation controlled by the solvent recovery system during the month, liters.

$D_i$  = Density of coating, i, kg per liter.

$WV_{c,i}$  = Mass fraction of volatile organic matter for coating, i, kg volatile organic matter per kg coating. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

$Vol_j$  = Volume of thinner and/or other additive, j, used in the coating operation controlled by the solvent recovery system during the month, liters.

$D_j$  = Density of thinner and/or other additive, j, kg per liter.

$WV_{t,j}$  = Mass fraction of volatile organic matter for thinner and/or other additive, j, kg volatile organic matter per kg thinner and/or other additive. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

$Vol_k$  = Volume of cleaning material, k, used in the coating operation controlled by the solvent recovery system during the month, liters.

$D_k$  = Density of cleaning material, k, kg per liter.

$WV_{s,k}$  = Mass fraction of volatile organic matter for cleaning material, k, kg volatile organic matter per kg cleaning material.

m = Number of different coatings used in the coating operation controlled by the solvent recovery system during the month.

n = Number of different thinners and/or other additives used in the coating operation controlled by the solvent recovery system during the month.

p = Number of different cleaning materials used in the coating operation controlled by the solvent recovery system during the month.

(7) Calculate the mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system during the month, using Equation 3 of this section and according to paragraphs (j)(7)(i) through (iii) of this section:

$$H_{CSR} = (A_{CSR} + B_{CSR} + C_{CSR}) \left( \frac{R_V}{100} \right) \quad (Eq. 3)$$

Where:

$H_{CSR}$  = Mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system using a liquid-liquid material balance during the month, kg.

$A_{CSR}$  = Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3A of this section.

$B_{CSR}$  = Total mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3B of this section.

$C_{CSR}$  = Total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3C of this section.

$R_V$  = Volatile organic matter collection and recovery efficiency of the solvent recovery system, percent, from Equation 2 of this section.

(i) Calculate the mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, using Equation 3A of this section.

$$A_{CSR} = \sum_{i=1}^m (Vol_{c,i}) (D_{c,i}) (W_{c,i}) \quad (Eq. 3A)$$

Where:

$A_{CSR}$  = Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{c,i}$  = Total volume of coating, i, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{c,i}$  = Density of coating, i, kg per liter.

$W_{c,i}$  = Mass fraction of organic HAP in coating,  $i$ , kg organic HAP per kg coating. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart Pppp of this part.

$m$  = Number of different coatings used.

(ii) Calculate the mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system, kg, using Equation 3B of this section:

$$B_{CSR} = \sum_{j=1}^n (Vol_{t,j})(D_{t,j})(W_{t,j}) \quad (Eq. 3B)$$

Where:

$B_{CSR}$  = Total mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{t,j}$  = Total volume of thinner and/or other additive,  $j$ , used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{t,j}$  = Density of thinner and/or other additive,  $j$ , kg per liter.

$W_{t,j}$  = Mass fraction of organic HAP in thinner and/or other additive,  $j$ , kg lb organic HAP per kg thinner and/or other additive. For reactive adhesives as defined in §63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart Pppp of this part.

$n$  = Number of different thinners and/or other additives used.

(iii) Calculate the mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system during the month, kg, using Equation 3C of this section:

$$C_{CSR} = \sum_{k=1}^p (Vol_{s,k})(D_{s,k})(W_{s,k}) \quad (Eq. 3C)$$

Where:

$C_{CSR}$  = Total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{s,k}$  = Total volume of cleaning material,  $k$ , used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{s,k}$  = Density of cleaning material,  $k$ , kg per liter.

$W_{s,k}$  = Mass fraction of organic HAP in cleaning material,  $k$ , kg organic HAP per kg cleaning material.

$p$  = Number of different cleaning materials used.

(k) *Calculate the total volume of coating solids used.* Determine the total volume of coating solids used, liters, which is the combined volume of coating solids for all the coatings used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option, using Equation 2 of §63.3951.

(l) *Calculate the mass of organic HAP emissions for each month.* Determine the mass of organic HAP emissions, kg, during each month, using Equation 4 of this section:

$$H_{HAP} = H_e - \sum_{i=1}^q (H_{c,i}) - \sum_{j=1}^r (H_{CSR,j}) \quad (Eq. 4)$$

where:

$H_{HAP}$  = Total mass of organic HAP emissions for the month, kg.

$H_e$  = Total mass of organic HAP emissions before add-on controls from all the coatings, thinners and/or other additives, and cleaning materials used during the month, kg, determined according to paragraph (f) of this section.

$H_{C,i}$  = Total mass of organic HAP emission reduction for controlled coating operation, i, not using a liquid-liquid material balance, during the month, kg, from Equation 1 of this section.

$H_{CSR,j}$  = Total mass of organic HAP emission reduction for coating operation, j, controlled by a solvent recovery system using a liquid-liquid material balance, during the month, kg, from Equation 3 of this section.

q = Number of controlled coating operations not controlled by a solvent recovery system using a liquid-liquid material balance.

r = Number of coating operations controlled by a solvent recovery system using a liquid-liquid material balance.

(m) *Calculate the organic HAP emission rate for the compliance period.* Determine the organic HAP emission rate for the compliance period, kg (lb) of organic HAP emitted per liter (gal) coating solids used, using Equation 5 of this section:

$$H_{annual} = \frac{\sum_{y=1}^n H_{HAP,y}}{\sum_{y=1}^n V_{st,y}} \quad (Eq. 5)$$

Where:

$H_{annual}$  = Organic HAP emission rate for the compliance period, kg organic HAP emitted per liter coating solids used.

$H_{HAP,y}$  = Organic HAP emissions for month, y, kg, determined according to Equation 4 of this section.

$V_{st,y}$  = Total volume of coating solids used during month, y, liters, from Equation 2 of §63.3951.

y = Identifier for months.

n = Number of full or partial months in the compliance period (for the initial compliance period, n equals 12 if the compliance date falls on the first day of a month; otherwise n equals 13; for all following compliance periods, n equals 12).

(n) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period, calculated using Equation 5 of this section, must be less than or equal to the applicable emission limit for each subcategory in §63.3890 or the predominant activity or facility-specific emission limit allowed in §63.3890(c). You must keep all records as required by §§63.3930 and 63.3931. As part of the notification of compliance status required by §63.3910, you must identify the coating operation(s) for which you used the emission rate with add-on controls option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in §63.3890, and you achieved the operating limits required by §63.3892 and the work practice standards required by §63.3893.

### **§ 63.3962 [Reserved]**

### **§ 63.3963 How do I demonstrate continuous compliance with the emission limitations?**

(a) To demonstrate continuous compliance with the applicable emission limit in §63.3890, the organic HAP emission rate for each compliance period, determined according to the procedures in §63.3961, must be equal to or less than the applicable emission limit in §63.3890. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in §63.3960 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in §63.3961 on a monthly basis using data from the previous 12 months of operation. If you are complying with a facility-specific emission limit under §63.3890(c), you must also perform the calculation using Equation 1 in §63.3890(c)(2) on a monthly basis using the data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in §63.3890, this is a deviation from the emission limitation for that compliance period that must be reported as specified in §§63.3910(c)(6) and 63.3920(a)(7).

(c) You must demonstrate continuous compliance with each operating limit required by §63.3892 that applies to you, as specified in Table 1 to this subpart, when the coating line is in operation.

(1) If an operating parameter is out of the allowed range specified in Table 1 to this subpart, this is a deviation from the operating limit that must be reported as specified in §§63.3910(c)(6) and 63.3920(a)(7).

(2) If an operating parameter deviates from the operating limit specified in Table 1 to this subpart, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device and the use of these data is approved by the Administrator.

(d) You must meet the requirements for bypass lines in §63.3968(b) for controlled coating operations for which you do not conduct liquid-liquid material balances. If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be reported as specified in §§63.3910(c)(6) and 63.3920(a)(7). For the purposes of completing the compliance calculations specified in §§63.3961(h), you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation as indicated in Equation 1 of §63.3961.

(e) You must demonstrate continuous compliance with the work practice standards in §63.3893. If you did not develop a work practice plan, or you did not implement the plan, or you did not keep the records required by §63.3930(k)(8), this is a deviation from the work practice standards that must be reported as specified in §§63.3910(c)(6) and 63.3920(a)(7).

(f) As part of each semiannual compliance report required in §63.3920, you must identify the coating operation(s) for which you used the emission rate with add-on controls option. If there were no deviations from the emission limitations, submit a statement that you were in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in §63.3890, and you achieved the operating limits required by §63.3892 and the work practice standards required by §63.3893 during each compliance period.

(g)–(i) [Reserved]

(j) You must maintain records as specified in §§63.3930 and 63.3931.

[69 FR 157, Jan. 2, 2004, as amended at 71 FR 20465, Apr. 20, 2006]

### **§ 63.3964 What are the general requirements for performance tests?**

(a) You must conduct each performance test required by §63.3960 according to the requirements in §63.7(e)(1) and under the conditions in this section, unless you obtain a waiver of the performance test according to the provisions in §63.7(h).

(1) *Representative coating operation operating conditions.* You must conduct the performance test under representative operating conditions for the coating operation. Operations during periods of startup, shutdown, or malfunction and during periods of nonoperation do not constitute representative conditions. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation.

(2) *Representative emission capture system and add-on control device operating conditions.* You must conduct the performance test when the emission capture system and add-on control device are operating at a representative flow rate, and the add-on control device is operating at a representative inlet concentration. You must record information that is necessary to document emission capture system and add-on control device operating conditions during the test and explain why the conditions represent normal operation.

(b) You must conduct each performance test of an emission capture system according to the requirements in §63.3965. You must conduct each performance test of an add-on control device according to the requirements in §63.3966.

### **§ 63.3965 How do I determine the emission capture system efficiency?**

You must use the procedures and test methods in this section to determine capture efficiency as part of the performance test required by §63.3960.

(a) *Assuming 100 percent capture efficiency.* You may assume the capture system efficiency is 100 percent if both of the conditions in paragraphs (a)(1) and (2) of this section are met:

(1) The capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and directs all the exhaust gases from the enclosure to an add-on control device.

(2) All coatings, thinners and/or other additives, and cleaning materials used in the coating operation are applied within the capture system; coating solvent flash-off, curing, and drying occurs within the capture system; and the removal or evaporation of cleaning materials from the surfaces they are applied to occurs within the capture system. For example, this criterion is not met if parts enter the open shop environment when being moved between a spray booth and a curing oven.

(b) *Measuring capture efficiency.* If the capture system does not meet both of the criteria in paragraphs (a)(1) and (2) of this section, then you must use one of the three protocols described in paragraphs (c), (d), and (e) of this section to measure capture efficiency. The capture efficiency measurements use TVH capture efficiency as a surrogate for organic HAP capture efficiency. For the protocols in paragraphs (c) and (d) of this section, the capture efficiency

measurement must consist of three test runs. Each test run must be at least 3 hours duration or the length of a production run, whichever is longer, up to 8 hours. For the purposes of this test, a production run means the time required for a single part to go from the beginning to the end of the production, which includes surface preparation activities and drying and curing time.

(c) *Liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure.* The liquid-to-uncaptured-gas protocol compares the mass of liquid TVH in materials used in the coating operation to the mass of TVH emissions not captured by the emission capture system. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (c)(1) through (6) of this section to measure emission capture system efficiency using the liquid-to-uncaptured-gas protocol.

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners and/or other additives, and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions for routing to an add-on control device, such as the entrance and exit areas of an oven or spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204A or 204F of appendix M to 40 CFR part 51 to determine the mass fraction of TVH liquid input from each coating, thinner and/or other additive, and cleaning material used in the coating operation during each capture efficiency test run. To make the determination, substitute TVH for each occurrence of the term VOC in the methods.

(3) Use Equation 1 of this section to calculate the total mass of TVH liquid input from all the coatings, thinners and/or other additives, and cleaning materials used in the coating operation during each capture efficiency test run:

$$TVH_{used} = \sum_{i=1}^n (TVH_i)(Vol_i)(D_i) \quad (Eq. 1)$$

Where:

$TVH_{used}$  = Mass of liquid TVH in materials used in the coating operation during the capture efficiency test run, kg.

$TVH_i$  = Mass fraction of TVH in coating, thinner and/or other additive, or cleaning material, i, that is used in the coating operation during the capture efficiency test run, kg TVH per kg material.

$Vol_i$  = Total volume of coating, thinner and/or other additive, or cleaning material, i, used in the coating operation during the capture efficiency test run, liters.

$D_i$  = Density of coating, thinner and/or other additive, or cleaning material, i, kg material per liter material.

n = Number of different coatings, thinners and/or other additives, and cleaning materials used in the coating operation during the capture efficiency test run.

(4) Use Method 204D or 204E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system. They are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) Use Method 204D of appendix M to 40 CFR part 51 if the enclosure is a temporary total enclosure.

(ii) Use Method 204E of appendix M to 40 CFR 51 if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.

(5) For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 2 of this section:

$$CE = \frac{(TVH_{used} - TVH_{uncaptured})}{TVH_{used}} \times 100 \quad (\text{Eq. 2})$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

$TVH_{used}$  = Total mass of TVH liquid input used in the coating operation during the capture efficiency test run, kg.

$TVH_{uncaptured}$  = Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

(6) Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.

(d) *Gas-to-gas protocol using a temporary total enclosure or a building enclosure.* The gas-to-gas protocol compares the mass of TVH emissions captured by the emission capture system to the mass of TVH emissions not captured. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (d)(1) through (5) of this section to measure emission capture system efficiency using the gas-to-gas protocol.

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners and/or other additives, and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions generated by the coating operation for routing to an add-on control device, such as the entrance and exit areas of an oven or a spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204B or 204C of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions captured by the emission capture system during each capture efficiency test run as measured at the inlet to the add-on control device. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) The sampling points for the Method 204B or 204C measurement must be upstream from the add-on control device and must represent total emissions routed from the capture system and entering the add-on control device.

(ii) If multiple emission streams from the capture system enter the add-on control device without a single common duct, then the emissions entering the add-on control device must be simultaneously measured in each duct and the total emissions entering the add-on control device must be determined.

(3) Use Method 204D or 204E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system; they are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

- (i) Use Method 204D of appendix M to 40 CFR part 51 if the enclosure is a temporary total enclosure.
- (ii) Use Method 204E of appendix M to 40 CFR part 51 if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.
- (4) For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 3 of this section:

$$CE = \frac{TVH_{\text{captured}}}{(TVH_{\text{captured}} + TVH_{\text{uncaptured}})} \times 100 \quad (\text{Eq. 3})$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

$TVH_{\text{captured}}$  = Total mass of TVH captured by the emission capture system as measured at the inlet to the add-on control device during the emission capture efficiency test run, kg.

$TVH_{\text{uncaptured}}$  = Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

- (5) Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.

(e) *Alternative capture efficiency protocol.* As an alternative to the procedures specified in paragraphs (c) and (d) of this section and subject to the approval of the Administrator, you may determine capture efficiency using any other capture efficiency protocol and test methods that satisfy the criteria of either the DQO or LCL approach as described in appendix A to subpart KK of this part.

### **§ 63.3966 How do I determine the add-on control device emission destruction or removal efficiency?**

You must use the procedures and test methods in this section to determine the add-on control device emission destruction or removal efficiency as part of the performance test required by §63.3960. You must conduct three test runs as specified in §63.7(e)(3) and each test run must last at least 1 hour. If the source is a magnet wire coating machine, you may use the procedures in section 3.0 of appendix A to this subpart as an alternative.

- (a) For all types of add-on control devices, use the test methods specified in paragraphs (a)(1) through (5) of this section.

- (1) Use Method 1 or 1A of appendix A to 40 CFR part 60, as appropriate, to select sampling sites and velocity traverse points.
- (2) Use Method 2, 2A, 2C, 2D, 2F, or 2G of appendix A to 40 CFR part 60, as appropriate, to measure gas volumetric flow rate.
- (3) Use Method 3, 3A, or 3B of appendix A to 40 CFR part 60, as appropriate, for gas analysis to determine dry molecular weight.
- (4) Use Method 4 of appendix A to 40 CFR part 60, to determine stack gas moisture.

(5) Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run.

(b) Measure total gaseous organic mass emissions as carbon at the inlet and outlet of the add-on control device simultaneously, using either Method 25 or 25A of appendix A to 40 CFR part 60.

(1) Use Method 25 if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be more than 50 parts per million (ppm) at the control device outlet.

(2) Use Method 25A if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be 50 ppm or less at the control device outlet.

(3) Use Method 25A if the add-on control device is not an oxidizer.

(c) If two or more add-on control devices are used for the same emission stream, then you must measure emissions at the outlet to the atmosphere of each device. For example, if one add-on control device is a concentrator with an outlet to the atmosphere for the high-volume dilute stream that has been treated by the concentrator, and a second add-on control device is an oxidizer with an outlet to the atmosphere for the low-volume concentrated stream that is treated with the oxidizer, you must measure emissions at the outlet of the oxidizer and the high volume dilute stream outlet of the concentrator.

(d) For each test run, determine the total gaseous organic emissions mass flow rates for the inlet and the outlet of the add-on control device, using Equation 1 of this section. If there is more than one inlet or outlet to the add-on control device, you must calculate the total gaseous organic mass flow rate using Equation 1 of this section for each inlet and each outlet and then total all of the inlet emissions and total all of the outlet emissions:

$$M_f = Q_{sd} C_c (12) (0.0416) (10^{-6}) \quad (\text{Eq. 1})$$

Where:

$M_f$  = Total gaseous organic emissions mass flow rate, kg per hour (h).

$C_c$  = Concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, parts per million by volume (ppmv), dry basis.

$Q_{sd}$  = Volumetric flow rate of gases entering or exiting the add-on control device, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters/hour (dscm/h).

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter ( $\text{mol/m}^3$ ) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

(e) For each test run, determine the add-on control device organic emissions destruction or removal efficiency, using Equation 2 of this section:

$$DRE = \frac{M_{f,i} - M_{f,o}}{M_{f,i}} \times 100 \quad (\text{Eq. 2})$$

Where:

DRE = Organic emissions destruction or removal efficiency of the add-on control device, percent.

$M_{fi}$  = Total gaseous organic emissions mass flow rate at the inlet(s) to the add-on control device, using Equation 1 of this section, kg/h.

$M_{fo}$  = Total gaseous organic emissions mass flow rate at the outlet(s) of the add-on control device, using Equation 1 of this section, kg/h.

(f) Determine the emission destruction or removal efficiency of the add-on control device as the average of the efficiencies determined in the three test runs and calculated in Equation 2 of this section.

### **§ 63.3967 How do I establish the emission capture system and add-on control device operating limits during the performance test?**

During the performance test required by §63.3960 and described in §§63.3964, 63.3965, and 63.3966, you must establish the operating limits required by §63.3892 according to this section, unless you have received approval for alternative monitoring and operating limits under §63.8(f) as specified in §63.3892.

(a) *Thermal oxidizers.* If your add-on control device is a thermal oxidizer, establish the operating limits according to paragraphs (a)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(2) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for your thermal oxidizer.

(b) *Catalytic oxidizers.* If your add-on control device is a catalytic oxidizer, establish the operating limits according to either paragraphs (b)(1) and (2) or paragraphs (b)(3) and (4) of this section. If the source is a magnet wire coating machine, you may use the procedures in section 3.0 of appendix A to this subpart as an alternative.

(1) During the performance test, you must monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed maintained during the performance test. These are the minimum operating limits for your catalytic oxidizer.

(3) You must monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for your catalytic oxidizer as specified in paragraph (b)(4) of this section. During the performance test, you must monitor and record the temperature just before the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed during the performance test. This is the minimum operating limit for your catalytic oxidizer.

(4) You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s) for which you elect to monitor according to paragraph (b)(3) of this section. The plan must address, at a minimum, the elements specified in paragraphs (b)(4)(i) through (iii) of this section.

(i) Annual sampling and analysis of the catalyst activity ( *i.e.*, conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures. If problems are found during the catalyst activity test, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations.

(ii) Monthly external inspection of the catalytic oxidizer system, including the burner assembly and fuel supply lines for problems and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.

(iii) Annual internal inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found during the annual internal inspection of the catalyst, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations. If the catalyst bed is replaced and is not of like or better kind and quality as the old catalyst then you must conduct a new performance test to determine destruction efficiency according to §63.3966. If a catalyst bed is replaced and the replacement catalyst is of like or better kind and quality as the old catalyst, then a new performance test to determine destruction efficiency is not required and you may continue to use the previously established operating limits for that catalytic oxidizer.

(c) *Regenerative carbon adsorbers.* If your add-on control device is a regenerative carbon adsorber, establish the operating limits according to paragraphs (c)(1) and (2) of this section.

(1) You must monitor and record the total regeneration desorbing gas ( e.g., steam or nitrogen) mass flow for each regeneration cycle, and the carbon bed temperature after each carbon bed regeneration and cooling cycle for the regeneration cycle either immediately preceding or immediately following the performance test.

(2) The operating limits for your regenerative carbon adsorber are the minimum total desorbing gas mass flow recorded during the regeneration cycle and the maximum carbon bed temperature recorded after the cooling cycle.

(d) *Condensers.* If your add-on control device is a condenser, establish the operating limits according to paragraphs (d)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the condenser outlet (product side) gas temperature at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average condenser outlet (product side) gas temperature maintained during the performance test. This average condenser outlet gas temperature is the maximum operating limit for your condenser.

(e) *Concentrators.* If your add-on control device includes a concentrator, you must establish operating limits for the concentrator according to paragraphs (e)(1) through (4) of this section.

(1) During the performance test, you must monitor and record the desorption concentrate stream gas temperature at least once every 15 minutes during each of the three runs of the performance test.

(2) Use the data collected during the performance test to calculate and record the average temperature. This is the minimum operating limit for the desorption concentrate gas stream temperature.

(3) During the performance test, you must monitor and record the pressure drop of the dilute stream across the concentrator at least once every 15 minutes during each of the three runs of the performance test.

(4) Use the data collected during the performance test to calculate and record the average pressure drop. This is the minimum operating limit for the dilute stream across the concentrator.

(f) *Emission capture systems.* For each capture device that is not part of a PTE that meets the criteria of §63.3965(a), establish an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (f)(1) and (2) of this section. The operating limit for a PTE is specified in Table 1 to this subpart. If the source is a magnet wire coating machine, you may use the procedures in section 2.0 of appendix A to this subpart as an alternative.

(1) During the capture efficiency determination required by §63.3960 and described in §§63.3964 and 63.3965, you must monitor and record either the gas volumetric flow rate or the duct static pressure for each separate capture device in your emission capture system at least once every 15 minutes during each of the three test runs at a point in the duct between the capture device and the add-on control device inlet.

(2) Calculate and record the average gas volumetric flow rate or duct static pressure for the three test runs for each capture device. This average gas volumetric flow rate or duct static pressure is the minimum operating limit for that specific capture device.

**§ 63.3968 What are the requirements for continuous parameter monitoring system installation, operation, and maintenance?**

(a) *General.* You must install, operate, and maintain each CPMS specified in paragraphs (c), (e), (f), and (g) of this section according to paragraphs (a)(1) through (6) of this section. You must install, operate, and maintain each CPMS specified in paragraphs (b) and (d) of this section according to paragraphs (a)(3) through (5) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four equally spaced successive cycles of CPMS operation in 1 hour.

(2) You must determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation.

(3) You must record the results of each inspection, calibration, and validation check of the CPMS.

(4) You must maintain the CPMS at all times and have available necessary parts for routine repairs of the monitoring equipment.

(5) You must operate the CPMS and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating, except during monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, if applicable, calibration checks and required zero and span adjustments).

(6) You must not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. You must use all the data collected during all other periods in calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits.

(7) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Any period for which the monitoring system is out-of-control and data are not available for required calculations is a deviation from the monitoring requirements.

(b) *Capture system bypass line.* You must meet the requirements of paragraphs (b)(1) and (2) of this section for each emission capture system that contains bypass lines that could divert emissions away from the add-on control device to the atmosphere.

(1) You must monitor or secure the valve or closure mechanism controlling the bypass line in a nondiverting position in such a way that the valve or closure mechanism cannot be opened without creating a record that the valve was opened. The method used to monitor or secure the valve or closure mechanism must meet one of the requirements specified in paragraphs (b)(1)(i) through (v) of this section.

(i) *Flow control position indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. The time of occurrence and flow control position must be recorded, as well as every time the flow direction is changed. The flow control position indicator must be installed at the entrance to any bypass line that could divert the emissions away from the add-on control device to the atmosphere.

(ii) *Car-seal or lock-and-key valve closures.* Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. You must visually inspect the seal or closure mechanism at least once every month

to ensure that the valve is maintained in the closed position, and the emissions are not diverted away from the add-on control device to the atmosphere.

(iii) *Valve closure monitoring.* Ensure that any bypass line valve is in the closed (nondiverting) position through monitoring of valve position at least once every 15 minutes. You must inspect the monitoring system at least once every month to verify that the monitor will indicate valve position.

(iv) *Automatic shutdown system.* Use an automatic shutdown system in which the coating operation is stopped when flow is diverted by the bypass line away from the add-on control device to the atmosphere when the coating operation is running. You must inspect the automatic shutdown system at least once every month to verify that it will detect diversions of flow and shut down the coating operation.

(v) *Flow direction indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow direction indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. Each time the flow direction changes, the next reading of the time of occurrence and flow direction must be recorded. The flow direction indicator must be installed in each bypass line or air makeup supply line that could divert the emissions away from the add-on control device to the atmosphere.

(2) If any bypass line is opened, you must include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance reports required in §63.3920.

(c) *Thermal oxidizers and catalytic oxidizers.* If you are using a thermal oxidizer or catalytic oxidizer as an add-on control device (including those used with concentrators or with carbon adsorbers to treat desorbed concentrate streams), you must comply with the requirements in paragraphs (c)(1) through (3) of this section:

(1) For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.

(2) For a catalytic oxidizer, install gas temperature monitors upstream and/or downstream of the catalyst bed as required in §63.3967(b).

(3) For all thermal oxidizers and catalytic oxidizers, you must meet the requirements in paragraphs (a) and (c)(3)(i) through (v) of this section for each gas temperature monitoring device.

(i) Locate the temperature sensor in a position that provides a representative temperature.

(ii) Use a temperature sensor with a measurement sensitivity of 5 degrees Fahrenheit or 1.0 percent of the temperature value, whichever is larger.

(iii) Before using the sensor for the first time or when relocating or replacing the sensor, perform a validation check by comparing the sensor output to a calibrated temperature measurement device or by comparing the sensor output to a simulated temperature.

(iv) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor output to redundant temperature sensors, to calibrated temperature measurement devices, or to temperature simulation devices.

(v) Conduct a visual inspection of each sensor every quarter if redundant temperature sensors are not used.

(d) *Regenerative carbon adsorbers.* If you are using a regenerative carbon adsorber as an add-on control device, you must monitor the total regeneration desorbing gas ( e.g., steam or nitrogen) mass flow for each regeneration cycle, the carbon bed temperature after each regeneration and cooling cycle, and comply with paragraphs (a)(3) through (5) and (d)(1) through (3) of this section.

(1) The regeneration desorbing gas mass flow monitor must be an integrating device having a measurement sensitivity of plus or minus 10 percent capable of recording the total regeneration desorbing gas mass flow for each regeneration cycle.

(2) The carbon bed temperature monitor must be capable of recording the temperature within 15 minutes of completing any carbon bed cooling cycle.

(3) For all regenerative carbon adsorbers, you must meet the requirements in paragraphs (c)(3)(i) through (v) of this section for each temperature monitoring device.

(e) *Condensers*. If you are using a condenser, you must monitor the condenser outlet (product side) gas temperature and comply with paragraphs (a) and (e)(1) and (2) of this section.

(1) The temperature monitor must provide a gas temperature record at least once every 15 minutes.

(2) For all condensers, you must meet the requirements in paragraphs (c)(3)(i) through (v) of this section for each temperature monitoring device.

(f) *Concentrators*. If you are using a concentrator, such as a zeolite wheel or rotary carbon bed concentrator, you must comply with the requirements in paragraphs (f)(1) and (2) of this section.

(1) You must install a temperature monitor in the desorption gas stream. The temperature monitor must meet the requirements in paragraphs (a) and (c)(3) of this section.

(2) You must install a device to monitor pressure drop across the zeolite wheel or rotary carbon bed. The pressure monitoring device must meet the requirements in paragraphs (a) and (g)(2) of this section.

(g) *Emission capture systems*. The capture system monitoring system must comply with the applicable requirements in paragraphs (g)(1) and (2) of this section. If the source is a magnet wire coating machine, you may use the procedures in section 2.0 of appendix A to this subpart as an alternative.

(1) For each flow measurement device, you must meet the requirements in paragraphs (a) and (g)(1)(i) through (vii) of this section.

(i) Locate a flow sensor in a position that provides a representative flow measurement in the duct from each capture device in the emission capture system to the add-on control device.

(ii) Use a flow sensor with an accuracy of at least 10 percent of the flow.

(iii) Perform an initial sensor calibration in accordance with the manufacturer's requirements.

(iv) Perform a validation check before initial use or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values with electronic signal simulations or via relative accuracy testing.

(v) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor values with electronic signal simulations or via relative accuracy testing.

(vi) Perform leak checks monthly.

(vii) Perform visual inspections of the sensor system quarterly if there is no redundant sensor.

(2) For each pressure drop measurement device, you must comply with the requirements in paragraphs (a) and (g)(2)(i) through (vii) of this section.

- (i) Locate the pressure sensor(s) in or as close to a position that provides a representative measurement of the pressure drop across each opening you are monitoring.
- (ii) Use a pressure sensor with an accuracy of at least 0.5 inches of water column or 5 percent of the measured value, whichever is larger.
- (iii) Perform an initial calibration of the sensor according to the manufacturer's requirements.
- (iv) Conduct a validation check before initial operation or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.
- (v) Conduct accuracy audits every quarter and after every deviation. Accuracy audits include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.
- (vi) Perform monthly leak checks on pressure connections. A pressure of at least 1.0 inches of water column to the connection must yield a stable sensor result for at least 15 seconds.
- (vii) Perform a visual inspection of the sensor at least monthly if there is no redundant sensor.

## Other Requirements and Information

### § 63.3980 Who implements and enforces this subpart?

- (a) This subpart can be implemented and enforced by us, the U.S. Environmental Protection Agency (EPA), or a delegated authority such as your State, local, or tribal agency. If the Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.
- (b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator and are not transferred to the State, local, or tribal agency.
- (c) The authorities that will not be delegated to State, local, or tribal agencies are listed in paragraphs (c)(1) through (4) of this section:
  - (1) Approval of alternatives to the requirements in §63.3881 through 3883 and §63.3890 through 3893.
  - (2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.
  - (3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.
  - (4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

### § 63.3981 What definitions apply to this subpart?

Terms used in this subpart are defined in the CAA, in 40 CFR 63.2, and in this section as follows:

*Additive* means a material that is added to a coating after purchase from a supplier ( e.g., catalysts, activators, accelerators).

*Add-on control* means an air pollution control device, such as a thermal oxidizer or carbon adsorber, that reduces pollution in an air stream by destruction or removal before discharge to the atmosphere.

*Adhesive, adhesive coating* means any chemical substance that is applied for the purpose of bonding two surfaces together. Products used on humans and animals, adhesive tape, contact paper, or any other product with an adhesive incorporated onto or in an inert substrate shall not be considered adhesives under this subpart.

*Assembled on-road vehicle coating* means any coating operation in which coating is applied to the surface of some component or surface of a fully assembled motor vehicle or trailer intended for on-road use including, but not limited to, components or surfaces on automobiles and light-duty trucks that have been repaired after a collision or otherwise repainted, fleet delivery trucks, and motor homes and other recreational vehicles (including camping trailers and fifth wheels). Assembled on-road vehicle coating includes the concurrent coating of parts of the assembled on-road vehicle that are painted off-vehicle to protect systems, equipment, or to allow full coverage. Assembled on-road vehicle coating does not include surface coating operations that meet the applicability criteria of the automobiles and light-duty trucks NESHAP. Assembled on-road vehicle coating also does not include the use of adhesives, sealants, and caulks used in assembling on-road vehicles.

*Capture device* means a hood, enclosure, room, floor sweep, or other means of containing or collecting emissions and directing those emissions into an add-on air pollution control device.

*Capture efficiency or capture system efficiency* means the portion (expressed as a percentage) of the pollutants from an emission source that is delivered to an add-on control device.

*Capture system* means one or more capture devices intended to collect emissions generated by a coating operation in the use of coatings or cleaning materials, both at the point of application and at subsequent points where emissions from the coatings and cleaning materials occur, such as flashoff, drying, or curing. As used in this subpart, multiple capture devices that collect emissions generated by a coating operation are considered a single capture system.

*Cleaning material* means a solvent used to remove contaminants and other materials, such as dirt, grease, oil, and dried or wet coating ( e.g., depainting or paint stripping), from a substrate before or after coating application or from equipment associated with a coating operation, such as spray booths, spray guns, racks, tanks, and hangers. Thus, it includes any cleaning material used on substrates or equipment or both.

*Coating* means a material applied to a substrate for decorative, protective, or functional purposes. Such materials include, but are not limited to, paints, sealants, liquid plastic coatings, caulks, inks, adhesives, and maskants. Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances, or paper film or plastic film which may be pre-coated with an adhesive by the film manufacturer, are not considered coatings for the purposes of this subpart. A liquid plastic coating means a coating made from fine particle-size polyvinyl chloride (PVC) in solution (also referred to as a plastisol).

*Coating operation* means equipment used to apply cleaning materials to a substrate to prepare it for coating application (surface preparation) or to remove dried coating; to apply coating to a substrate (coating application) and to dry or cure the coating after application; or to clean coating operation equipment (equipment cleaning). A single coating operation may include any combination of these types of equipment, but always includes at least the point at which a given quantity of coating or cleaning material is applied to a given part and all subsequent points in the affected source where organic HAP are emitted from the specific quantity of coating or cleaning material on the specific part. There may be multiple coating operations in an affected source. Coating application with handheld, non-refillable aerosol containers, touch-up markers, or marking pens is not a coating operation for the purposes of this subpart.

*Coatings solids* means the nonvolatile portion of the coating that makes up the dry film.

*Continuous parameter monitoring system (CPMS)* means the total equipment that may be required to meet the data acquisition and availability requirements of this subpart, used to sample, condition (if applicable), analyze, and provide a record of coating operation, or capture system, or add-on control device parameters.

*Controlled coating operation* means a coating operation from which some or all of the organic HAP emissions are routed through an emission capture system and add-on control device.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart including but not limited to, any emission limit or operating limit or work practice standard;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limit, or operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

*Emission limitation* means the aggregate of all requirements associated with a compliance option including emission limit, operating limit, work practice standard, etc.

*Enclosure* means a structure that surrounds a source of emissions and captures and directs the emissions to an add-on control device.

*Exempt compound* means a specific compound that is not considered a VOC due to negligible photochemical reactivity. The exempt compounds are listed in 40 CFR 51.100(s).

*Extreme performance fluoropolymer coating* means coatings that are formulated systems based on fluoropolymer resins which often contain bonding matrix polymers dissolved in non-aqueous solvents as well as other ingredients. Extreme performance fluoropolymer coatings are typically used when one or more critical performance criteria are required including, but not limited to a nonstick low-energy surface, dry film lubrication, high resistance to chemical attack, extremely wide operating temperature, high electrical insulating properties, or that the surface comply with government ( e.g., USDA, FDA) or third party specifications for health, safety, reliability, or performance. Once applied to a substrate, extreme performance fluoropolymer coatings undergo a curing process that typically requires high temperatures, a chemical reaction, or other specialized technology.

*Facility maintenance* means the routine repair or renovation (including the surface coating) of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity.

*General use coating* means any material that meets the definition of coating but does not meet the definition of high performance coating, rubber-to-metal coating, magnet wire coating, or extreme performance fluoropolymer coating as defined in this section.

*High performance architectural coating* means any coating applied to architectural subsections which is required to meet the specifications of Architectural Aluminum Manufacturer's Association's publication number AAMA 605.2–2000.

*High performance coating* means any coating that meets the definition of high performance architectural coating or high temperature coating in this section.

*High temperature coating* means any coating applied to a substrate which during normal use must withstand temperatures of at least 538 degrees Celsius (1000 degrees Fahrenheit).

*Hobby shop* means any surface coating operation, located at an affected source, that is used exclusively for personal, noncommercial purposes by the affected source's employees or assigned personnel.

*Magnet wire coatings*, commonly referred to as magnet wire enamels, are applied to a continuous strand of wire which will be used to make turns (windings) in electrical devices such as coils, transformers, or motors. Magnet wire coatings provide high dielectric strength and turn-to-turn conductor insulation. This allows the turns of an electrical device to be placed in close proximity to one another which leads to increased coil effectiveness and electrical efficiency.

*Magnet wire coating machine* means equipment which applies and cures magnet wire coatings.

*Manufacturer's formulation data* means data on a material (such as a coating) that are supplied by the material manufacturer based on knowledge of the ingredients used to manufacture that material, rather than based on testing of the material with the test methods specified in §63.3941. Manufacturer's formulation data may include, but are not limited to, information on density, organic HAP content, volatile organic matter content, and coating solids content.

*Mass fraction of organic HAP* means the ratio of the mass of organic HAP to the mass of a material in which it is contained, expressed as kg of organic HAP per kg of material.

*Month* means a calendar month or a pre-specified period of 28 days to 35 days to allow for flexibility in recordkeeping when data are based on a business accounting period.

*Non-HAP coating* means, for the purposes of this subpart, a coating that contains no more than 0.1 percent by mass of any individual organic HAP that is an OSHA-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) and no more than 1.0 percent by mass for any other individual HAP.

*Organic HAP content* means the mass of organic HAP emitted per volume of coating solids used for a coating calculated using Equation 2 of §63.3941. The organic HAP content is determined for the coating in the condition it is in when received from its manufacturer or supplier and does not account for any alteration after receipt. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, organic HAP content is the mass of organic HAP that is emitted, rather than the organic HAP content of the coating as it is received.

*Permanent total enclosure (PTE)* means a permanently installed enclosure that meets the criteria of Method 204 of appendix M, 40 CFR part 51, for a PTE and that directs all the exhaust gases from the enclosure to an add-on control device.

*Personal watercraft* means a vessel (boat) which uses an inboard motor powering a water jet pump as its primary source of motive power and which is designed to be operated by a person or persons sitting, standing, or kneeling on the vessel, rather than in the conventional manner of sitting or standing inside the vessel.

*Protective oil* means an organic material that is applied to metal for the purpose of providing lubrication or protection from corrosion without forming a solid film. This definition of protective oil includes, but is not limited to, lubricating oils, evaporative oils (including those that evaporate completely), and extrusion oils. Protective oils used on miscellaneous metal parts and products include magnet wire lubricants and soft temporary protective coatings that are removed prior to installation or further assembly of a part or component.

*Reactive adhesive* means adhesive systems composed, in part, of volatile monomers that react during the adhesive curing reaction, and, as a result, do not evolve from the film during use. These volatile components instead become integral parts of the adhesive through chemical reaction. At least 70 percent of the liquid components of the system, excluding water, react during the process.

*Research or laboratory facility* means a facility 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 is not engaged in the manufacture of final or intermediate products for commercial purposes, except in a *de minimis* manner.

*Responsible official* means responsible official as defined in 40 CFR 70.2.

*Rubber-to-metal coatings* are coatings that contain heat-activated polymer systems in either solvent or water that, when applied to metal substrates, dry to a non-tacky surface and react chemically with the rubber and metal during a vulcanization process.

*Startup, initial* means the first time equipment is brought online in a facility.

*Surface preparation* means use of a cleaning material on a portion of or all of a substrate. This includes use of a cleaning material to remove dried coating, which is sometimes called depainting.

*Temporary total enclosure* means an enclosure constructed for the purpose of measuring the capture efficiency of pollutants emitted from a given source as defined in Method 204 of appendix M, 40 CFR part 51.

*Thinner* means an organic solvent that is added to a coating after the coating is received from the supplier.

*Total volatile hydrocarbon (TVH)* means the total amount of nonaqueous volatile organic matter determined according to Methods 204 and 204A through 204F of appendix M to 40 CFR part 51 and substituting the term TVH each place in the methods where the term VOC is used. The TVH includes both VOC and non-VOC.

*Uncontrolled coating operation* means a coating operation from which none of the organic HAP emissions are routed through an emission capture system and add-on control device.

*Volatile organic compound (VOC)* means any compound defined as VOC in 40 CFR 51.100(s).

*Volume fraction of coating solids* means the ratio of the volume of coating solids (also known as the volume of nonvolatiles) to the volume of a coating in which it is contained; liters (gal) of coating solids per liter (gal) of coating.

*Wastewater* means water that is generated in a coating operation and is collected, stored, or treated prior to being discarded or discharged.

**Table 1 to Subpart M of Part 63—Operating Limits if Using the Emission Rate With Add-On Controls Option**

If you are required to comply with operating limits by §63.3892(c), you must comply with the applicable operating limits in the following table:

<b>For the following device . . .</b>	<b>You must meet the following operating limit . . .</b>	<b>And you must demonstrate continuous compliance with the operating limit by . . .</b>
1. Thermal oxidizer	a. The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to §63.3967(a)	i. Collecting the combustion temperature data according to §63.3968(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average combustion temperature at or above the temperature limit.
2. Catalytic oxidizer	a. The average temperature measured just before the catalyst bed in any 3-hour period must not fall below the limit established according to §63.3967(b) (for magnet wire coating machines, temperature can be monitored before or after the catalyst bed); and either	i. Collecting the temperature data according to §63.3968(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average temperature before (or for magnet wire coating machines after) the catalyst bed at or above the temperature limit.

	<p>b. Ensure that the average temperature difference across the catalyst bed in any 3-hour period does not fall below the temperature difference limit established according to §63.3967(b) (2); or</p>	<p>i. Collecting the temperature data according to §63.3968(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average temperature difference at or above the temperature difference limit.</p>
	<p>c. Develop and implement an inspection and maintenance plan according to §63.3967(b)(4) or for magnet wire coating machines according to section 3.0 of appendix A to this subpart</p>	<p>i. Maintaining and up-to-date inspection and maintenance plan, records of annual catalyst activity checks, records of monthly inspections of the oxidizer system, and records of the annual internal inspections of the catalyst bed. If a problem is discovered during a monthly or annual inspection required by §63.3967(b)(4) or for magnet wire coating machines by section 3.0 of appendix A to this subpart, you must take corrective action as soon as practicable consistent with the manufacturer's recommendations.</p>
3. Regenerative carbon adsorber	<p>a. The total regeneration desorbing gas ( e.g., steam or nitrogen) mass flow for each carbon bed regeneration cycle must not fall below the total regeneration desorbing gas mass flow limit established according to §63.3967(c); and</p>	<p>i. Measuring the total regeneration desorbing gas ( e.g., steam or nitrogen) mass flow for each regeneration cycle according to §63.3968(d); and ii. Maintaining the total regeneration desorbing gas mass flow at or above the mass flow limit.</p>
	<p>b. The temperature of the carbon bed, after completing each regeneration and any cooling cycle, must not exceed the carbon bed temperature limit established according to §63.3967(c)</p>	<p>i. Measuring the temperature of the carbon bed after completing each regeneration and any cooling cycle according to §63.3968(d); and ii. Operating the carbon beds such that each carbon bed is not returned to service until completing each regeneration and any cooling cycle until the recorded temperature of the carbon bed is at or below the temperature limit.</p>
4. Condenser	<p>a. The average condenser outlet (product side) gas temperature in any 3-hour period must not exceed the temperature limit established</p>	<p>i. Collecting the condenser outlet (product side) gas temperature according to §63.3968(e); ii. Reducing the data to 3-hour block</p>

	according to §63.3967(d)	averages; and iii. Maintaining the 3-hour average gas temperature at the outlet at or below the temperature limit.
5. Concentrators, including zeolite wheels and rotary carbon adsorbers	a. The average gas temperature of the desorption concentrate stream in any 3-hour period must not fall below the limit established according to §63.3967(e); and	i. Collecting the temperature data according to 63.3968(f); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average temperature at or above the temperature limit.
	b. The average pressure drop of the dilute stream across the concentrator in any 3-hour period must not fall below the limit established according to §63.3967(e)	i. Collecting the pressure drop data according to 63.3968(f); ii. Reducing the pressure drop data to 3-hour block averages; and iii. Maintaining the 3-hour average pressure drop at or above the pressure drop limit.
6. Emission capture system that is a PTE according to §63.3965(a)	a. The direction of the air flow at all times must be into the enclosure; and either	i. Collecting the direction of air flow, and either the facial velocity of air through all natural draft openings according to §63.3968(b)(1) or the pressure drop across the enclosure according to §63.3968(g)(2); and ii. Maintaining the facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times.
	b. The average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minutes; or	i. See items 6.a.i and 6.a.ii.
	c. The pressure drop across the enclosure must be at least 0.007 inch H <sub>2</sub> O, as established in Method 204 of appendix M to 40 CFR part 51	i. See items 6.a.i and 6.a.ii.
7. Emission capture system that is not a PTE	a. The average gas volumetric flow rate or duct static pressure in each duct between a capture device and	i. Collecting the gas volumetric flow rate or duct static pressure for each capture device according to §63.3968(g);

according to §63.3965(a)	add-on control device inlet in any 3-hour period must not fall below the average volumetric flow rate or duct static pressure limit established for that capture device according to §63.3967(f)	ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average gas volumetric flow rate or duct static pressure for each capture device at or above the gas volumetric flow rate or duct static pressure limited.
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**Table 2 to Subpart M MMM of Part 63—Applicability of General Provisions to Subpart M MMM of Part 63**

You must comply with the applicable General Provisions requirements according to the following table:

<b>Citation</b>	<b>Subject</b>	<b>Applicable to subpart M MMM</b>	<b>Explanation</b>
§63.1(a)(1)–(14)	General Applicability	Yes	
§63.1(b)(1)–(3)	Initial Applicability Determination	Yes	Applicability to subpart M MMM is also specified in §63.3881.
§63.1(c)(1)	Applicability After Standard Established	Yes	
§63.1(c)(2)–(3)	Applicability of Permit Program for Area Sources	No	Area sources are not subject to subpart M MMM.
§63.1(c)(4)–(5)	Extensions and Notifications	Yes	
§63.1(e)	Applicability of Permit Program Before Relevant Standard is Set	Yes	
§63.2	Definitions	Yes	Additional definitions are specified in §63.3981.
§63.1(a)–(c)	Units and Abbreviations	Yes	
§63.4(a)(1)–(5)	Prohibited Activities	Yes	
§63.4(b)–(c)	Circumvention/Severability	Yes	
§63.5(a)	Construction/Reconstruction	Yes	
§63.5(b)(1)–(6)	Requirements for Existing Newly Constructed, and Reconstructed Sources	Yes	

§63.5(d)	Application for Approval of Construction/Reconstruction	Yes	
§63.5(e)	Approval of Construction/Reconstruction	Yes	
§63.5(f)	Approval of Construction/Reconstruction Based on Prior State Review	Yes	
§63.6(a)	Compliance With Standards and Maintenance Requirements—Applicability	Yes	
§63.6(b)(1)–(7)	Compliance Dates for New and Reconstructed Sources	Yes	Section 63.3883 specifies the compliance dates.
§63.6(c)(1)–(5)	Compliance Dates for Existing Sources	Yes	Section 63.3883 specifies the compliance dates.
§63.6(e)(1)–(2)	Operation and Maintenance	Yes	
§63.6(e)(3)	Startup, Shutdown, and Malfunction Plan	Yes	Only sources using an add-on control device to comply with the standard must complete startup, shutdown, and malfunction plans.
§63.6(f)(1)	Compliance Except During Startup, Shutdown, and Malfunction	Yes	Applies only to sources using an add-on control device to comply with the standard.
§63.6(f)(2)–(3)	Methods for Determining Compliance.	Yes	
§63.6(g)(1)–(3)	Use of an Alternative Standard	Yes	
§63.6(h)	Compliance With Opacity/Visible Emission Standards	No	Subpart Mmmm does not establish opacity standards and does not require continuous opacity monitoring systems (COMS).
§63.6(i)(1)–(16)	Extension of Compliance	Yes	
§63.6(j)	Presidential Compliance Exemption	Yes	
§63.7(a)(1)	Performance Test Requirements—	Yes	Applies to all affected sources.

	Applicability		Additional requirements for performance testing are specified in §§63.3964, 63.3965, and 63.3966.
§63.7(a)(2)	Performance Test Requirements— Dates	Yes	Applies only to performance tests for capture system and control device efficiency at sources using these to comply with the standard. Section 63.3960 specifies the schedule for performance test requirements that are earlier than those specified in §63.7(a)(2).
§63.7(a)(3)	Performance Tests Required By the Administrator	Yes	
§63.7(b)–(e)	Performance Test Requirements— Notification, Quality Assurance, Facilities Necessary for Safe Testing, Conditions During Test	Yes	Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standard.
§63.7(f)	Performance Test Requirements— Use of Alternative Test Method	Yes	Applies to all test methods except those used to determine capture system efficiency.
§63.7(g)–(h)	Performance Test Requirements— Data Analysis, Recordkeeping, Reporting, Waiver of Test	Yes	Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standard.
§63.8(a)(1)– (3)	Monitoring Requirements— Applicability	Yes	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standard. Additional requirements for monitoring are specified in §63.3968.
§63.8(a)(4)	Additional Monitoring Requirements	No	Subpart M does not have monitoring requirements for flares.
§63.8(b)	Conduct of Monitoring	Yes	
§63.8(c)(1)–	Continuous Monitoring Systems	Yes	Applies only to monitoring of

(3)	(CMS) Operation and Maintenance		capture system and add-on control device efficiency at sources using these to comply with the standard. Additional requirements for CMS operations and maintenance are specified in §63.3968.
§63.8(c)(4)	CMS	No	§63.3968 specifies the requirements for the operation of CMS for capture systems and add-on control devices at sources using these to comply.
§63.8(c)(5)	COMS	No	Subpart Mmmm does not have opacity or visible emission standards.
§63.8(c)(6)	CMS Requirements	No	Section 63.3968 specifies the requirements for monitoring systems for capture systems and add-on control devices at sources using these to comply.
§63.8(c)(7)	CMS Out-of-Control Periods	Yes	
§63.8(c)(8)	CMS Out-of-Control Periods and Reporting	No	§63.3920 requires reporting of CMS out-of-control periods.
§63.8(d)–(e)	Quality Control Program and CMS Performance Evaluation	No	Subpart Mmmm does not require the use of continuous emissions monitoring systems.
§63.8(f)(1)–(5)	Use of an Alternative Monitoring Method	Yes	
§63.8(f)(6)	Alternative to Relative Accuracy Test	No	Subpart Mmmm does not require the use of continuous emissions monitoring systems.
§63.8(g)(1)–(5)	Data Reduction	No	Sections 63.3967 and 63.3968 specify monitoring data reduction.
§63.9(a)–(d)	Notification Requirements	Yes	
§63.9(e)	Notification of Performance Test	Yes	Applies only to capture system and add-on control device performance tests at sources using these to comply with the

			standard.
§63.9(f)	Notification of Visible Emissions/Opa city Test	No	Subpart M MMM does not have opacity or visible emissions standards.
§63.9(g)(1)–(3)	Additional Notifications When Using CMS	No	Subpart M MMM does not require the use of continuous emissions monitoring systems.
§63.9(h)	Notification of Compliance Status	Yes	Section 63.3910 specifies the dates for submitting the notification of compliance status.
§63.9(i)	Adjustment of Submittal Deadlines	Yes	
§63.9(j)	Change in Previous Information	Yes	
§63.10(a)	Recordkeeping/Reporting—Applicability and General Information	Yes	
§63.10(b)(1)	General Recordkeeping Requirements	Yes	Additional requirements are specified in §§63.3930 and 63.3931.
§63.10(b)(2)(i)–(v)	Recordkeeping Relevant to Startup, Shutdown, and Malfunction Periods and CMS	Yes	Requirements for startup, shutdown, and malfunction records only apply to add-on control devices used to comply with the standard.
§63.10(b)(2)(vi)–(xi)		Yes	
§63.10(b)(2)(xii)	Records	Yes	
§63.10(b)(2)(xiii)		No	Subpart M MMM does not require the use of continuous emissions monitoring systems.
§63.10(b)(2)(xiv)		Yes	
§63.10(b)(3)	Recordkeeping Requirements for Applicability Determinations	Yes	
§63.10(c)(1)–(6)	Additional Recordkeeping Requirements for Sources with CMS	Yes	

§63.10(c) (7)–(8)		No	The same records are required in §63.3920(a)(7).
§63.10(c) (9)–(15)		Yes	
§63.10(d)(1)	General Reporting Requirements	Yes	Additional requirements are specified in §63.3920.
§63.10(d)(2)	Report of Performance Test Results	Yes	Additional requirements are specified in §63.3920(b).
§63.10(d)(3)	Reporting Opacity or Visible Emissions Observations	No	Subpart M MMM does not require opacity or visible emissions observations.
§63.10(d)(4)	Progress Reports for Sources With Compliance Extensions	Yes	
§63.10(d)(5)	Startup, Shutdown, and Malfunction Reports	Yes	Applies only to add-on control devices at sources using these to comply with the standard.
§63.10(e) (1)–(2)	Additional CMS Reports	No	Subpart M MMM does not require the use of continuous emissions monitoring systems.
§63.10(e) (3)	Excess Emissions/CMS Performance Reports	No	Section 63.3920 (b) specifies the contents of periodic compliance reports.
§63.10(e) (4)	COMS Data Reports	No	Subpart M MMM does not specify requirements for opacity or COMS.
§63.10(f)	Recordkeeping/Reporting Waiver	Yes	
§63.11	Control Device Requirements/Flares	No	Subpart M MMM does not specify use of flares for compliance.
§63.12	State Authority and Delegations	Yes	
§63.13	Addresses	Yes	
§63.14	Incorporation by Reference	Yes	
§63.15	Availability of Information/Confidentiality	Yes	

**Table 3 to Subpart M MMM of Part 63—Default Organic HAP Mass Fraction for Solvents and Solvent Blends**

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data and which match either the solvent blend name or the chemical abstract series (CAS) number. If a solvent blend matches both the name and CAS number for an entry, that entry's organic HAP mass fraction must be used for that solvent blend. Otherwise, use the organic HAP mass fraction for the entry matching either the solvent blend name or CAS number, or use the organic HAP mass fraction from table 4 to this subpart if neither the name or CAS number match.

<b>Solvent/solvent blend</b>	<b>CAS. No.</b>	<b>Average organic HAP mass fraction</b>	<b>Typical organic HAP, percent by mass</b>
1. Toluene	108-88-3	1.0	Toluene.
2. Xylene(s)	1330-20-7	1.0	Xylenes, ethylbenzene.
3. Hexane	110-54-3	0.5	n-hexane.
4. n-Hexane	110-54-3	1.0	n-hexane.
5. Ethylbenzene	100-41-4	1.0	Ethylbenzene.
6. Aliphatic 140		0	None.
7. Aromatic 100		0.02	1% xylene, 1% cumene.
8. Aromatic 150		0.09	Naphthalene.
9. Aromatic naphtha	64742-95-6	0.02	1% xylene, 1% cumene.
10. Aromatic solvent	64742-94-5	0.1	Naphthalene.
11. Exempt mineral spirits	8032-32-4	0	None.
12. Ligroines (VM & P)	8032-32-4	0	None.
13. Lactol spirits	64742-89-6	0.15	Toluene.
14. Low aromatic white spirit	64742-82-1	0	None.
15. Mineral spirits	64742-88-7	0.01	Xylenes.
16. Hydrotreated naphtha	64742-48-9	0	None.
17. Hydrotreated light distillate	64742-47-8	0.001	Toluene.
18. Stoddard solvent	8052-41-	0.01	Xylenes.

	3		
19. Super high-flash naphtha	64742-95-6	0.05	Xylenes.
20. Varsol <sup>®</sup> solvent	8052-49-3	0.01	0.5% xylenes, 0.5% ethylbenzene.
21. VM & P naphtha	64742-89-8	0.06	3% toluene, 3% xylene.
22. Petroleum distillate mixture	68477-31-6	0.08	4% naphthalene, 4% biphenyl.

**Table 4 to Subpart M of Part 63—Default Organic HAP Mass Fraction for Petroleum Solvent Groups<sup>a</sup>**

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data.

Solvent type	Average organic HAP mass fraction	Typical organic HAP, percent by mass
Aliphatic <sup>b</sup>	0.03	1% Xylene, 1% Toluene, and 1% Ethylbenzene.
Aromatic <sup>c</sup>	0.06	4% Xylene, 1% Toluene, and 1% Ethylbenzene.

<sup>a</sup>Use this table only if the solvent blend does not match any of the solvent blends in Table 3 to this subpart by either solvent blend name or CAS number and you only know whether the blend is aliphatic or aromatic.

<sup>b</sup>Mineral Spirits 135, Mineral Spirits 150 EC, Naphtha, Mixed Hydrocarbon, Aliphatic Hydrocarbon, Aliphatic Naphtha, Naphthol Spirits, Petroleum Spirits, Petroleum Oil, Petroleum Naphtha, Solvent Naphtha, Solvent Blend.

<sup>c</sup>Medium-flash Naphtha, High-flash Naphtha, Aromatic Naphtha, Light Aromatic Naphtha, Light Aromatic Hydrocarbons, Aromatic Hydrocarbons, Light Aromatic Solvent.

**Appendix A to Subpart M of Part 63—Alternative Capture Efficiency and Destruction Efficiency Measurement and Monitoring Procedures for Magnet Wire Coating Operations**

1.0 Introduction.

1.1 These alternative procedures for capture efficiency and destruction efficiency measurement and monitoring are intended principally for newer magnet wire coating machines where the control device is internal and integral to the oven so that it is difficult or infeasible to make gas measurements at the inlet to the control device.

1.2 In newer gas fired magnet wire ovens with thermal control (no catalyst), the burner tube serves as the control device (thermal oxidizer) for the process. The combustion of solvents in the burner tube is the principal source of heat for the oven.

1.3 In newer magnet wire ovens with a catalyst there is either a burner tube (gas fired ovens) or a tube filled with electric heating elements (electric heated oven) before the catalyst. A large portion of the solvent is often oxidized before reaching the catalyst. The combustion of solvents in the tube and across the catalyst is the principal source of heat for the oven. The internal catalyst in these ovens cannot be accessed without disassembly of the oven. This disassembly includes removal of the oven insulation. Oven reassembly often requires the installation of new oven insulation.

1.4 Some older magnet wire ovens have external afterburners. A significant portion of the solvent is oxidized within these ovens as well.

1.5 The alternative procedure for destruction efficiency determines the organic carbon content of the volatiles entering the control device based on the quantity of coating used, the carbon content of the volatile portion of the coating and the efficiency of the capture system. The organic carbon content of the control device outlet (oven exhaust for ovens without an external afterburner) is determined using Method 25 or 25A.

1.6 When it is difficult or infeasible to make gas measurements at the inlet to the control device, measuring capture efficiency with a gas-to-gas protocol (see §63.3965(d)) which relies on direct measurement of the captured gas stream will also be difficult or infeasible. In these situations, capture efficiency measurement is more appropriately done with a procedure which does not rely on direct measurement of the captured gas stream.

1.7 Magnet wire ovens are relatively small compared to many other coating ovens. The exhaust rate from an oven is low and varies as the coating use rate and solvent loading rate change from job to job. The air balance in magnet wire ovens is critical to product quality. Magnet wire ovens must be operated under negative pressure to avoid smoke and odor in the workplace, and the exhaust rate must be sufficient to prevent over heating within the oven.

1.8 The liquid and gas measurements needed to determine capture efficiency and control device efficiency using these alternative procedures may be made simultaneously.

1.9 Magnet wire facilities may have many ( e.g., 20 to 70 or more) individual coating lines each with its own capture and control system. With approval, representative capture efficiency and control device efficiency testing of one magnet wire coating machine out of a group of identical or very similar magnet wire coating machines may be performed rather than testing every individual magnet wire coating machine. The operating parameters must be established for each tested magnet wire coating machine during each capture efficiency test and each control device efficiency test. The operating parameters established for each tested magnet wire coating machine also serve as the operating parameters for untested or very similar magnet wire coating machines represented by a tested magnet wire coating machine.

## 2.0 Capture Efficiency.

2.1 If the capture system is a permanent total enclosure as described in §63.3965(a), then its capture efficiency may be assumed to be 100 percent.

2.2 If the capture system is not a permanent total enclosure, then capture efficiency must be determined using the liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure in §63.3965(c), or an alternative capture efficiency protocol (see §63.3965(e)) which does not rely on direct measurement of the captured gas stream.

2.3 As an alternative to establishing and monitoring the capture efficiency operating parameters in §63.3967(f), the monitoring described in either section 2.4 or 2.5, and the monitoring described in sections 2.6 and 2.7 may be used for magnet wire coating machines.

2.4 Each magnet wire oven must be equipped with an interlock mechanism which will stop or prohibit the application of coating either when any exhaust fan for that oven is not operating or when the oven experiences an over limit temperature condition.

2.5 Each magnet wire oven must be equipped with an alarm which will be activated either when any oven exhaust fan is not operating or when the oven experiences an over limit temperature condition.

2.6 If the interlock in 2.4 or the alarm in 2.5 is monitoring for over limit temperature conditions, then the temperature(s) that will trigger the interlock or the alarm must be included in the start-up, shutdown and malfunction plan and the interlock or alarm must be set to be activated when the oven reaches that temperature.

2.7 Once every 6 months, each magnet wire oven must be checked using a smoke stick or equivalent approach to confirm that the oven is operating at negative pressure compared to the surrounding atmosphere.

3.0 Control Device Efficiency.

3.1 Determine the weight fraction carbon content of the volatile portion of each coating, thinner, additive, or cleaning material used during each test run using either the procedure in section 3.2 or 3.3.

3.2 Following the procedures in Method 204F, distill a sample of each coating, thinner, additive, or cleaning material used during each test run to separate the volatile portion. Determine the weight fraction carbon content of each distillate using ASTM Method D5291-02, "Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants" (incorporated by reference, see §63.14).

3.3 Analyze each coating, thinner, additive or cleaning material used during each test run using Method 311. For each volatile compound detected in the gas chromatographic analysis of each coating, thinner, additive, or cleaning material calculate the weight fraction of that whole compound in the coating, thinner, additive, or cleaning material. For each volatile compound detected in the gas chromatographic analysis of each coating, thinner, additive, or cleaning material calculate the weight fraction of the carbon in that compound in the coating, thinner, additive, or cleaning material. Calculate the weight fraction carbon content of each coating, thinner, additive, or cleaning material as the ratio of the sum of the carbon weight fractions divided by the sum of the whole compound weight fractions.

3.4 Determine the mass fraction of total volatile hydrocarbon (TVH<sub>i</sub>) in each coating, thinner, additive, or cleaning material, i, used during each test run using Method 24. The mass fraction of total volatile hydrocarbon equals the weight fraction volatile matter (W<sub>v</sub> in Method 24) minus the weight fraction water (W<sub>w</sub> in Method 24), if any, present in the coating. The ASTM Method D6053-00, "Standard Test Method for Determination of Volatile Organic Compound (VOC) Content of Electrical Insulating Varnishes" (incorporated by reference, see §63.14), may be used as an alternative to Method 24 for magnet wire enamels. The specimen size for testing magnet wire enamels with ASTM Method D6053-00 must be 2.0 ±0.1 grams.

3.5 Determine the volume (VOL<sub>i</sub>) or mass (MASS<sub>i</sub>) of each coating, thinner, additive, or cleaning material, i, used during each test run.

3.6 Calculate the total volatile hydrocarbon input (TVHC<sub>inlet</sub>) to the control device during each test run, as carbon, using Equation 1:

$$TVHC_{inlet} = \sum_{i=1}^n (TVH_i \times VOL_i \times D_i \times CD_i) \quad (Eq. 1)$$

where:

TVH<sub>i</sub>= Mass fraction of TVH in coating, thinner, additive, or cleaning material, i, used in the coating operation during the test run.

VOL<sub>i</sub>= Volume of coating, thinner, additive, or cleaning material, i, used in the coating operation during the test run, liters.

D<sub>i</sub>= Density of coating, thinner, additive, or cleaning material, i, used in the coating operation during the test run, kg per liter.

$CD_i$  = Weight fraction carbon content of the distillate from coating, thinner, additive, or cleaning material,  $i$ , used in the coating operation during the test run, percent.

$n$  = Number of coating, thinner, additive, and cleaning materials used in the coating operation during the test run.

3.7 If the mass,  $MASS_i$ , of each coating, solvent, additive, or cleaning material,  $i$ , used during the test run is measured directly then  $MASS_i$  can be substituted for  $VOL_i \times D_i$  in Equation 1 in section 3.6.

3.8 Determine the TVHC output ( $TVHC_{outlet}$ ) from the control device, as carbon, during each test run using the methods in §63.3966(a) and the procedure for determining  $M_{fo}$  in §63.3966(d).  $TVHC_{outlet}$  equals  $M_{fo}$  times the length of the test run in hours.

3.9 Determine the control device efficiency (DRE) for each test run using Equation 2:

$$DRE = \frac{(TVHC_{inlet} - TVHC_{outlet})}{TVHC_{inlet}} \times 100 \quad (\text{Eq. 2})$$

3.10 The efficiency of the control device is the average of the three individual test run values determined in section 3.9.

3.11 As an alternative to establishing and monitoring the destruction efficiency operating parameters for catalytic oxidizers in §63.3967(b), the monitoring described in sections 3.12 and 3.13 may be used for magnet wire coating machines equipped with catalytic oxidizers.

3.12 During the performance test, you must monitor and record the temperature either just before or just after the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature either just before or just after the catalyst bed during the performance test. This is the minimum operating limit for your catalytic oxidizer and for the catalytic oxidizers in identical or very similar magnet wire coating machines represented by the tested magnet wire coating machine.

3.13 You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s). The plan must address, at a minimum, the elements specified in sections 3.14 and 3.15, and the elements specified in either (a) section 3.16 or (b) sections 3.17 and 3.18.

3.14 You must conduct a monthly external inspection of each catalytic oxidizer system, including the burner assembly and fuel supply lines for problems and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.

3.15 You must conduct an annual internal inspection of each accessible catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must replace the catalyst bed or take corrective action consistent with the manufacturer's recommendations. This provision does not apply to internal catalysts which cannot be accessed without disassembling the magnet wire oven.

3.16 You must take a sample of each catalyst bed and perform an analysis of the catalyst activity ( *i.e.*, conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures. This sampling and analysis must be done within the time period shown in Table 1 below of the most recent of the last catalyst activity test or the last catalyst replacement. For example, if the warranty for the catalyst is 3 years and the catalyst was more recently replaced then the sampling and analysis must be done within the earlier of 26,280 operating hours or 5 calendar years of the last catalyst replacement. If the warranty for the catalyst is 3 years and the catalyst was more recently tested then the sampling and analysis must be done within the earlier of 13,140 operating hours or 3 calendar years of the last catalyst activity test. If problems are found during the catalyst activity test, you must replace the catalyst bed or take corrective action consistent with the manufacturer's recommendations.

**Table 1—Catalyst Monitoring Requirements**

<b>If the catalyst was last (more recently) replaced and the warranty period is . . .</b>	<b>Then the time between catalyst replacement and the next catalyst activity test cannot exceed the earlier of . . .</b>	<b>And the catalyst was more recently tested, then the time between catalyst activity tests cannot exceed the earlier of . . .</b>
1 year	8,760 operating hours or 5 calendar years	8,760 operating hours or 3 calendar years.
2 years	15,520 operating hours or 5 calendar years	8,760 operating hours or 3 calendar years.
3 years	26,280 operating hours or 5 calendar years	13,100 operating hours or 3 calendar years.
4 years	35,040 operating hours or 5 calendar years	17,520 operating hours or 3 calendar years.
5 or more years	43,800 operating hours or 5 calendar years	21,900 operating hours or 3 calendar years.

3.17 During the performance test, you must determine the average concentration of organic compounds as carbon in the magnet wire oven exhaust stack gases ( $C_c$  in Equation 1 in §63.3966(d)) and the destruction efficiency of the catalytic oxidizer, and calculate the operating limit for oven exhaust stack gas concentration as follows. You must identify the highest organic HAP content coating used on this magnet wire coating machine or any identical or very similar magnet wire coating machines to which the same destruction efficiency test results will be applied. Calculate the percent emission reduction necessary to meet the magnet wire coating emission limit when using this coating. Calculate the average concentration of organic compounds as carbon in the magnet wire oven exhaust stack gases that would be equivalent to exactly meeting the magnet wire coating emissions limit when using the highest organic HAP content coating. The maximum operating limit for oven exhaust stack gas concentration equals 90 percent of this calculated concentration.

3.18 For each magnet wire coating machine equipped with a catalytic oxidizer you must perform an annual 10 minute test of the oven exhaust stack gases using EPA Method 25A. This test must be performed under steady state operating conditions similar to those at which the last destruction efficiency test for equipment of that type (either the specific magnet wire coating machine or an identical or very similar magnet wire coating machine) was conducted. If the average exhaust stack gas concentration during the annual test of a magnet wire coating machine equipped with a catalytic oxidizer is greater than the operating limit established in section 3.17 then that is a deviation from the operating limit for that catalytic oxidizer. If problems are found during the annual 10-minute test of the oven exhaust stack gases, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations.

3.19 If a catalyst bed is replaced and the replacement catalyst is not of like or better kind and quality as the old catalyst, then you must conduct a new performance test to determine destruction efficiency according to §63.3966 and establish new operating limits for that catalytic oxidizer unless destruction efficiency test results and operating limits for an identical or very similar unit (including consideration of the replacement catalyst) are available and approved for use for the catalytic oxidizer with the replacement catalyst.

3.20 If a catalyst bed is replaced and the replacement catalyst is of like or better kind and quality as the old catalyst, then a new performance test to determine destruction efficiency is not required and you may continue to use the previously established operating limits for that catalytic oxidizer.

## Attachment B

Rea Magnet Wire Co. Inc.  
4300 New Haven Avenue, Fort Wayne, Indiana 46803

### **40 CFR 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**Source:** 69 FR 33506, June 15, 2004, unless otherwise noted.

#### **WHAT THIS SUBPART COVERS**

#### **§63.6580 What is the purpose of subpart ZZZZ?**

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

#### **§63.6585 Am I subject to this subpart?**

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

**§63.6590 What parts of my plant does this subpart cover?**

This subpart applies to each affected source.

(a) Affected source. An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) Existing stationary RICE.

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) New stationary RICE. (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) Reconstructed stationary RICE. (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) Stationary RICE subject to limited requirements. (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(f) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part

60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

- (1) A new or reconstructed stationary RICE located at an area source;
- (2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;
- (3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;
- (4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;
- (5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;
- (6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;
- (7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

**§63.6595 When do I have to comply with this subpart?**

- (a) Affected sources. (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.
- (2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.
- (3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.
- (4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) Area sources that become major sources. If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

#### **EMISSION AND OPERATING LIMITATIONS**

##### **§63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?**

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

**§63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?**

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

**§63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?**

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[78 FR 6701, Jan. 30, 2013]

**§63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?**

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of

HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in §63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in §63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in §63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in §63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in §63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

#### **§63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?**

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2), or are on offshore vessels that meet §63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

## GENERAL COMPLIANCE REQUIREMENTS

### **§63.6605 What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must 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. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

## TESTING AND INITIAL COMPLIANCE REQUIREMENTS

### **§63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?**

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

**§63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?**

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

**§63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?**

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

**§63.6615 When must I conduct subsequent performance tests?**

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

**§63.6620 What performance tests and other procedures must I use?**

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 1})$$

Where:

$C_i$  = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

$C_o$  = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO<sub>2</sub>). If pollutant concentrations are to be corrected to 15 percent oxygen and CO<sub>2</sub> concentration is measured in lieu of oxygen concentration measurement, a CO<sub>2</sub> correction factor is needed. Calculate the CO<sub>2</sub> correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific  $F_o$  value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 2})$$

Where:

$F_o$  = Fuel factor based on the ratio of oxygen volume to the ultimate  $\text{CO}_2$  volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

$F_d$  = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19,  $\text{dsm}^3/\text{J}$  ( $\text{dscf}/10^6 \text{ Btu}$ ).

$F_c$  = Ratio of the volume of  $\text{CO}_2$  produced to the gross calorific value of the fuel from Method 19,  $\text{dsm}^3/\text{J}$  ( $\text{dscf}/10^6 \text{ Btu}$ ).

(ii) Calculate the  $\text{CO}_2$  correction factor for correcting measurement data to 15 percent  $\text{O}_2$ , as follows:

$$X_{\text{CO}_2} = \frac{5.9}{F_o} \quad (\text{Eq. 3})$$

Where:

$X_{\text{CO}_2}$  =  $\text{CO}_2$  correction factor, percent.

5.9 = 20.9 percent  $\text{O}_2$ —15 percent  $\text{O}_2$ , the defined  $\text{O}_2$  correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent  $\text{O}_2$  using  $\text{CO}_2$  as follows:

$$C_{\text{adj}} = C_d \frac{X_{\text{CO}_2}}{\% \text{CO}_2} \quad (\text{Eq. 4})$$

Where:

$C_{\text{adj}}$  = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent  $\text{O}_2$ .

$C_d$  = Measured concentration of CO, THC, or formaldehyde, uncorrected.

$X_{\text{CO}_2}$  =  $\text{CO}_2$  correction factor, percent.

$\% \text{CO}_2$  = Measured  $\text{CO}_2$  concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

- (1) Identification of the specific parameters you propose to use as operating limitations;
  - (2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;
  - (3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;
  - (4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and
  - (5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.
- (h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.
- (1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (e.g., operator adjustment, automatic controller adjustment, etc.) or unintentionally (e.g., wear and tear, error, etc.) on a routine basis or over time;
  - (2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;
  - (3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;
  - (4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;
  - (5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;
  - (6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and
  - (7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.
- (i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

**§63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?**

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O<sub>2</sub> or CO<sub>2</sub> according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO<sub>2</sub> concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

- (2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.
- (3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).
- (4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.
- (5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.
- (6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.
- (c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.
- (d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.
- (e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:
- (1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;
  - (2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;
  - (3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;
  - (4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;
  - (5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;
  - (6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.
  - (7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this

subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

**§63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?**

- (a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.
- (b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.
- (c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.
- (d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.
- (e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:
  - (1) The compliance demonstration must consist of at least three test runs.
  - (2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
  - (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O<sub>2</sub> using one of the O<sub>2</sub> measurement methods specified in Table 4 of this subpart. Measurements to determine O<sub>2</sub> concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O<sub>2</sub> emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

#### **CONTINUOUS COMPLIANCE REQUIREMENTS**

##### **§63.6635 How do I monitor and collect data to demonstrate continuous compliance?**

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

##### **§63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?**

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O<sub>2</sub> using one of the O<sub>2</sub> measurement methods specified in Table 4 of this subpart. Measurements to determine O<sub>2</sub> concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O<sub>2</sub> emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency

situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

#### **NOTIFICATIONS, REPORTS, AND RECORDS**

##### **§63.6645 What notifications must I submit and when?**

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart

and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in §63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in §63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

#### **§63.6650 What reports must I submit and when?**

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must 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. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required

information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

### **§63.6655 What records must I keep?**

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

#### **§63.6660 In what form and how long must I keep my records?**

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

#### **OTHER REQUIREMENTS AND INFORMATION**

#### **§63.6665 What parts of the General Provisions apply to me?**

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency

stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

#### **§63.6670 Who implements and enforces this subpart?**

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

#### **§63.6675 What definitions apply to this subpart?**

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see §63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 et seq., as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless of whether or not such failure is permitted by this subpart.
- (4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (e.g. biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO<sub>2</sub>.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO<sub>2</sub>.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control 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.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO<sub>x</sub>) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO<sub>x</sub>, CO, and volatile organic compounds (VOC) into CO<sub>2</sub>, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (i.e., remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites,

whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

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. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure  $C_3H_8$ .

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO<sub>x</sub> (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PTTTT of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

**Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions**

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. <sup>1</sup>
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O <sub>2</sub>	

<sup>1</sup> Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

**Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions**

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O <sub>2</sub> and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F. <sup>1</sup>
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O <sub>2</sub> and not using NSCR.	

<sup>1</sup>Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

**Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions**

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O <sub>2</sub> . If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O <sub>2</sub> until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. <sup>1</sup>
2. 4SLB stationary	a. Reduce CO emissions by 93 percent or more; or	

RICE		
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O <sub>2</sub>	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O <sub>2</sub>	

<sup>1</sup>Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

**Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP**

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

<b>For each . . .</b>	<b>You must meet the following operating limitation, except during periods of startup . . .</b>
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. <sup>1</sup>
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or

	equal to 1350 °F. <sup>1</sup>
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	

<sup>1</sup>Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

**Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions**

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE <sup>1</sup>	a. Change oil and filter every 500 hours of operation or annually, whichever comes first. <sup>2</sup> b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. <sup>3</sup>	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. <sup>3</sup>
2. Non-Emergency, non-black start	a. Change oil and filter every	

stationary CI RICE <100 HP	<p>1,000 hours of operation or annually, whichever comes first.<sup>2</sup></p> <p>b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;</p> <p>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.<sup>3</sup></p>	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O <sub>2</sub> .	
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	<p>a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O<sub>2</sub>; or</p> <p>b. Reduce CO emissions by 70 percent or more.</p>	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	<p>a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O<sub>2</sub>; or</p> <p>b. Reduce CO emissions by 70 percent or more.</p>	
6. Emergency stationary SI RICE and black start stationary SI RICE. <sup>1</sup>	<p>a. Change oil and filter every 500 hours of operation or annually, whichever comes first;<sup>2</sup></p> <p>b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;</p> <p>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.<sup>3</sup></p>	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	<p>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;<sup>2</sup></p> <p>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary;</p>	

	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. <sup>3</sup>	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; <sup>2</sup> b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. <sup>3</sup>	
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O <sub>2</sub> .	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O <sub>2</sub> .	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O <sub>2</sub> .	
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O <sub>2</sub> .	

<sup>1</sup>If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

<sup>2</sup>Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

<sup>3</sup>Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

**Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions**

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first; <sup>1</sup> b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O <sub>2</sub> ; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O <sub>2</sub> ; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE. <sup>2</sup>	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; <sup>1</sup>	
	b. Inspect air cleaner every 1,000 hours of operation or	

	annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year. <sup>2</sup>	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; <sup>1</sup> b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually,	

	whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	
10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	

	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; <sup>1</sup> b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

<sup>1</sup>Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

<sup>2</sup>If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[78 FR 6709, Jan. 30, 2013]

**Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests**

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually. <sup>1</sup>
2. 4SRB stationary RICE ≥5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually. <sup>1</sup>
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually. <sup>1</sup>
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.

<sup>1</sup>After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6711, Jan. 30, 2013]

**Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests**

As stated in §§63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Measure the O <sub>2</sub> at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005). <sup>ac</sup>	(a) Measurements to determine O <sub>2</sub> must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the	(1) ASTM D6522-00 (Reapproved 2005) <sup>abc</sup> or Method 10 of 40 CFR part 60,	(a) The CO concentration must be at 15 percent O <sub>2</sub> ,

		control device	appendix A	dry basis.
2. 4SRB stationary RICE	a. reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O <sub>2</sub> at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005). <sup>a</sup>	(a) measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03. <sup>a</sup>	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03, <sup>a</sup> provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) formaldehyde concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device	(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A	(a) THC concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) if using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O <sub>2</sub> concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005). <sup>a</sup>	(a) measurements to determine O <sub>2</sub> concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.

		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03. <sup>a</sup>	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03, <sup>a</sup> provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the stationary RICE.	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (2005), <sup>ac</sup> Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03. <sup>a</sup>	(a) CO concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

<sup>a</sup>Incorporated by reference, see 40 CFR 63.14. You may also obtain copies from University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

<sup>b</sup>You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.

<sup>c</sup>ASTM-D6522-00 (2005) may be used to test both CI and SI stationary RICE.

[78 FR 6711, Jan. 30, 2013]

**Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements**

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during

		the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O <sub>2</sub> or CO <sub>2</sub> at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using §63.6620 equals or exceeds the

		required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O <sub>2</sub> or CO <sub>2</sub> at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any)

		according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O <sub>2</sub> , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O <sub>2</sub> , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O <sub>2</sub> , dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O <sub>2</sub> ;

		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O <sub>2</sub> , or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

[78 FR 6712, Jan. 30, 2013]

**Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements**

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved <sup>a</sup> ; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

<p>2. New or reconstructed non-emergency 2SLB stationary RICE &gt;500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE &gt;500 HP located at a major source of HAP</p>	<p>a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS</p>	<p>i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved<sup>a</sup>; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and</p>
		<p>iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</p>
<p>3. New or reconstructed non-emergency 2SLB stationary RICE &gt;500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP</p>	<p>a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS</p>	<p>i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and</p>
		<p>iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.</p>
<p>4. Non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP</p>	<p>a. Reduce formaldehyde emissions and using NSCR</p>	<p>i. Collecting the catalyst inlet temperature data according to §63.6625(b); and</p>
		<p>ii. Reducing these data to 4-hour rolling averages; and</p>
		<p>iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</p>
		<p>iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.</p>
<p>5. Non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP</p>	<p>a. Reduce formaldehyde emissions and not</p>	<p>i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and</p>

	using NSCR	
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP $\geq 5,000$ located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent. <sup>a</sup>
7. New or reconstructed non-emergency stationary RICE $>500$ HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit <sup>a</sup> ; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE $>500$ HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit <sup>a</sup> ; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during

		the performance test.
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and  ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and  iii. Reducing these data to 4-hour rolling averages; and  iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and  v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the

	exhaust, and not using oxidation catalyst	required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and

		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	<p>i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O<sub>2</sub>; and either</p> <p>ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or</p> <p>iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.</p>
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	<p>i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O<sub>2</sub>, or the average reduction of emissions of THC is 30 percent or more; and either</p> <p>ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or</p> <p>iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.</p>

<sup>a</sup>After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

**Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports**

As stated in §63.6650, you must comply with the following requirements for reports:

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
<p>1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE &gt;500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE &gt;300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE &gt;500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP</p>	<p>Compliance report</p>	<p>a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or</p>	<p>i. Semiannually according to the requirements in §63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.</p>
		<p>b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or</p>	<p>i. Semiannually according to the requirements in §63.6650(b).</p>
		<p>c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4).</p>	<p>i. Semiannually according to the requirements in §63.6650(b).</p>
<p>2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis</p>	<p>Report</p>	<p>a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and</p>	<p>i. Annually, according to the requirements in §63.6650.</p>
		<p>b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and</p>	<p>i. See item 2.a.i.</p>
		<p>c. Any problems or errors suspected</p>	<p>i. See item 2.a.i.</p>

		with the meters.	
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period.	i. Semiannually according to the requirements in §63.6650(b)(1)-(5).
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in §63.6640(f)(4)( ii)	Report	a. The information in §63.6650(h)(1)	i. annually according to the requirements in §63.6650(h)(2)-(3).

[78 FR 6719, Jan. 30, 2013]

**Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.**

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that	Yes.	

	become major sources		
§63.6(c)(1)-(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)-(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	

§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	No	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§63.8(c)(2)-(3)	Monitoring system installation	Yes.	

§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)-(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission	No	Subpart ZZZZ does not contain opacity

	(VE)/opacity test		or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)-(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	

§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)-(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

**Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines**

1.0 SCOPE AND APPLICATION. WHAT IS THIS PROTOCOL?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O<sub>2</sub>) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

### 1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O<sub>2</sub>).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O <sub>2</sub> )	7782-44-7	

### 1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

### 1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

### 1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O<sub>2</sub>, or no more than twice the permitted CO level.

### 1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

## 2.0 SUMMARY OF PROTOCOL

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O<sub>2</sub> gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

## 3.0 DEFINITIONS

**3.1 Measurement System.** The total equipment required for the measurement of CO and O<sub>2</sub> concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O<sub>2</sub> and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre-sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

#### 4.0 INTERFERENCES.

When present in sufficient concentrations, NO and NO<sub>2</sub> are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

#### 5.0 SAFETY. [RESERVED]

#### 6.0 EQUIPMENT AND SUPPLIES.

##### 6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

##### 6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include

provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O<sub>2</sub> concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O<sub>2</sub>; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

## 7.0 REAGENTS AND STANDARDS. WHAT CALIBRATION GASES ARE NEEDED?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O<sub>2</sub>. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ± 5 percent of the label value. Dry ambient air (20.9 percent O<sub>2</sub>) is acceptable for calibration of the O<sub>2</sub> cell. If needed, any lower percentage O<sub>2</sub> calibration gas must be a mixture of O<sub>2</sub> in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

### 7.1.2 Up-Scale O<sub>2</sub> Calibration Gas Concentration.

Select an O<sub>2</sub> gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O<sub>2</sub>. When the average exhaust gas O<sub>2</sub> readings are above 6 percent, you may use dry ambient air (20.9 percent O<sub>2</sub>) for the up-scale O<sub>2</sub> calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO<sub>2</sub>).

## 8.0 SAMPLE COLLECTION AND ANALYSIS

### 8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the "sample conditioning phase" once per minute until constant readings are obtained. Then begin the "measurement data phase" and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the "measurement data phase" readings to calculate the average stack gas CO and O<sub>2</sub> concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than  $\pm 10$  percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than  $\pm 3$  percent, as instructed by the EC cell manufacturer.

## 9.0 QUALITY CONTROL (RESERVED)

## 10.0 CALIBRATION AND STANDARDIZATION

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O<sub>2</sub> and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to  $\pm 3$  percent of the up-scale gas value or  $\pm 1$  ppm, whichever is less restrictive, for the CO channel and less than or equal to  $\pm 0.3$  percent O<sub>2</sub> for the O<sub>2</sub> channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this "sample conditioning phase" once per minute until readings are constant for at least two minutes. Then begin the "measurement data phase" and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the “measurement data phase” readings from the reported standard gas value must be less than or equal to  $\pm 5$  percent or  $\pm 1$  ppm for CO or  $\pm 0.5$  percent O<sub>2</sub>, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single “measurement data phase” reading must be less than or equal to  $\pm 2$  percent or  $\pm 1$  ppm for CO or  $\pm 0.5$  percent O<sub>2</sub>, whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

#### 11.0 ANALYTICAL PROCEDURE

The analytical procedure is fully discussed in Section 8.

#### 12.0 CALCULATIONS AND DATA ANALYSIS

Determine the CO and O<sub>2</sub> concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the “measurement data phase”.

#### 13.0 PROTOCOL PERFORMANCE

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the “measurement data phase”. The maximum allowable deviation from the mean for each of the individual readings is  $\pm 2$  percent, or  $\pm 1$  ppm, whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than  $\pm 2$  percent or  $\pm 1$  ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO<sub>2</sub> gas standards that are generally recognized as representative of diesel-fueled engine NO and NO<sub>2</sub> emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO<sub>2</sub> interference response should be less than or equal to  $\pm 5$  percent of the up-scale CO calibration gas concentration.

13.3 Repeatability Check. Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.





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[78 FR 6721, Jan. 30, 2013]

**Indiana Department of Environmental Management  
Office of Air Quality**

**Technical Support Document (TSD) for a Part 70 Significant Source and  
Significant Permit Modification**

**Source Description and Location**

Source Name:	Rea Magnet Wire Company, Inc.
Source Location:	4300 New Haven Avenue, Fort Wayne, Indiana
County:	Allen
SIC Code:	3357
Operation Permit No.:	T 003-31617-00013
Operation Permit Issuance Date:	January 29, 2013
Significant Source Modification No.:	003-33777-00013
Significant Permit Modification No.:	003-33903-00013
Permit Reviewer:	Muhammad D. Khan

**Existing Approvals**

The source was issued Part 70 Operating Permit Renewal No. T003-31617-00013 on January 29, 2013. The source has since received the following approval:

- (a) Interim Significant Source Modification No. 003-33777I-00013, issued on November 4, 2013.

**County Attainment Status**

The source is located in Allen County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Attainment effective February 12, 2007, for the Fort Wayne area, including Allen County, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.

<sup>1</sup>Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

Unclassifiable or attainment effective April 5, 2005, for PM<sub>2.5</sub>.

- (a) **Ozone Standards**  
Volatile organic compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM<sub>2.5</sub>**  
Allen County has been classified as attainment for PM<sub>2.5</sub>. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM<sub>2.5</sub>

emissions. These rules became effective on July 15, 2008. On May 4, 2011, the air pollution control board issued an emergency rule establishing the direct PM<sub>2.5</sub> significant level at ten (10) tons per year. This rule became effective June 28, 2011. Therefore, direct PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (c) **Other Criteria Pollutants**  
Allen County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

### Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

### Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (ton/yr)
PM	0.21
PM <sub>10</sub>	0.74
PM <sub>2.5</sub>	0.73
SO <sub>2</sub>	0.07
VOC	>250
CO	8.06
NO <sub>x</sub>	12.48
GHGs as CO <sub>2</sub> e	<100,000
Single HAP	>10
Total HAPs	>25

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).
- (b) These emissions are based upon the Technical Support Documents for Part 70 Operating Permit Renewal No. T003-31617-00013, issued on January 29, 2013.
- (c) This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

### Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Rea Magnet Wire Company, Inc. on October 15, 2013, relating to the addition of a new magnet wire oven. The following is a list of the proposed emission unit and pollution control device(s):

Model	Oven ID	Construction Date	Max. Rating (lbs wire/hr)	Thermal Oxidizer type	Thermal oxidizer Heat Input Capacity (MMBtu/hr)	Stack ID #
Weather Rite V26 with 0.2 MMBtu/hr Annealer	560	2013	650	One internal TO for one oven	1.0	0443

**Enforcement Issues**

There are no pending enforcement actions related to this modification.

**Stack Summary**

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
0443	Magnet Wire Oven #560	79	1	2,100	1,285

**Emission Calculations**

See Appendix A of this Technical Support Document for detailed emission calculations.

**Permit Level Determination – Part 70**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

<b>Increase in PTE Before Controls of the Modification</b>	
<b>Pollutant</b>	<b>Potential To Emit (ton/yr)</b>
PM	0.01
PM <sub>10</sub>	0.04
PM <sub>2.5</sub>	0.04
SO <sub>2</sub>	0.00
VOC	77.06
CO	0.43
NO <sub>x</sub>	0.52
GHGs as CO <sub>2</sub> e	622
Single HAPs	7.33 (Xylene)
Total HAPs	31.17

**(a) Significant Source Modification**

This source modification is subject to 326 IAC 2-7-10.5(g)(4)(D) and 326 IAC 2-7-10.5(g)(6) since the potential to emit of VOC from the new oven is greater than twenty-five (25) tons per year and potential to emit a combination of HAPs is greater than twenty-five (25) tons per year.

**(b) Significant Permit Modification**

This modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d), because the modification requires a case-by-case determination of an emission limitation and requires significant changes in existing monitoring Part 70 permit terms and conditions.

**Permit Level Determination – PSD**

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source and permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process / Emission Unit	Potential to Emit (tons/year)							
	PM	PM <sub>10</sub>	PM <sub>2.5</sub> *	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	GHGs
Oven #560	0	0	0	0	39.96	0	0	0
Natural Gas Combustion for Oven #560	0.01	0.04	0.04	0.00	0.03	0.43	0.52	622.12
<b>Total for Modification</b>	<b>0.01</b>	<b>0.04</b>	<b>0.04</b>	<b>0.00</b>	<b>39.99</b>	<b>0.43</b>	<b>0.52</b>	<b>622.12</b>
<b>Significant Level</b>	<b>25</b>	<b>15</b>	<b>10</b>	<b>40</b>	<b>40</b>	<b>100</b>	<b>40</b>	<b>75,000 CO<sub>2e</sub></b>

\*PM<sub>2.5</sub> listed is direct PM<sub>2.5</sub>.

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Since the unrestricted potential to emit of VOC of the modification exceeds the PSD significant level, the source shall limit emissions as follows:

The VOC emissions from the one (1) Magnet Wire Oven, identified as Oven #560, shall be less than 39.96 tons per twelve consecutive month period, with compliance determined at the each month.

Compliance with the above limit, combined with the potential to emit VOC from Magnet Wire Oven #560 natural gas combustion emissions, shall limit the VOC emissions from this modification to less than forty (40) tons per twelve (12) consecutive month period and render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2014 modification (SSM No. 003-33777-00013).

**Federal Rule Applicability Determination**

The following is a discussion of the federal rule applicability for the source due to this modification:

**New Source Performance Standards (NSPS):**

- (a) **40 CFR 60, Subpart TT - Standards of Performance for Metal Coil Surface Coating**  
The requirements of 40 CFR 60, Subpart TT are not applicable to Magnet Wire Oven #560 because the magnet wire coated by this unit does not meet the definition of metal coil pursuant to 40 CFR 60.461 because it is not a continuous metal strip with a thickness of 0.15 millimeter or more.
- (b) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

**National Emission Standards for Hazardous Air Pollutants (NESHAP):**

- (c) **40 CFR 63, Subpart Mmmm - National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products**  
The Magnet Wire Oven, identified as Oven #560, is subject to the requirements of 40 CFR 63, Subpart Mmmm, which are incorporated by reference as 326 IAC 20-80 because the magnet wire oven will be used to coat miscellaneous metal parts and products as described in 40 CFR 63.3881. Pursuant to 40 CFR 63.3882, Magnet Wire Oven #560 is considered part of an existing affected source because the source commenced construction prior to August 13, 2002.

Nonapplicable portions of the NESHAP will not be included in the permit. The source is subject to the following portions of Subpart Mmmm:

- (1) 40 CFR 63.3880
- (2) 40 CFR 63.3881(a)(4),(b)
- (3) 40 CFR 3882
- (4) 40 CFR 63.3883(b),(d)
- (5) 40 CFR 63.3890(b)(3),(c)
- (6) 40 CFR 63.3891(c)
- (7) 40 CFR 63.3892(b),(c)
- (8) 40 CFR 63.3893(b),(c)
- (9) 40 CFR 63.3900(a)(2),(b),(c)
- (10) 40 CFR 63.3901
- (11) 40 CFR 63.3910
- (12) 40 CFR 63.3920
- (13) 40 CFR 63.3930
- (14) 40 CFR 63.3931
- (15) 40 CFR 63.3960(b),(c)
- (16) 40 CFR 63.3961
- (17) 40 CFR 63.3963
- (18) 40 CFR 63.3964
- (19) 40 CFR 63.3965
- (20) 40 CFR 63.3966
- (21) 40 CFR 63.3967
- (22) 40 CFR 63.3968
- (23) 40 CFR 63.3980
- (24) 40 CFR 63.3981

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart Mmmm.

- (d) **40 CFR 63, Subpart SSSS: National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil**  
The requirements of 40 CFR 63, Subpart SSSS are not applicable to Magnet Wire Oven #560 because the magnet wire coated by this unit does not meet the definition of metal

coil pursuant to 40 CFR 63.5110 because it is not a continuous metal strip that is at least 0.15 millimeter thick.

- (e) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification.

**Compliance Assurance Monitoring (CAM)**

- (f) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:
  - (1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;
  - (2) is subject to an emission limitation or standard for that pollutant; and
  - (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

<b>CAM Applicability Analysis</b>							
<b>Emission Unit</b>	<b>Control Device Used</b>	<b>Emission Limitation (Y/N)</b>	<b>Uncontrolled PTE (ton/yr)</b>	<b>Controlled PTE (ton/yr)</b>	<b>Part 70 Major Source Threshold (ton/yr)</b>	<b>CAM Applicable (Y/N)</b>	<b>Large Unit (Y/N)</b>
Oven #560 / VOC	Y - TO	Y	77.06	4.27	100	N	N
Oven #560 / Total HAPs	Y - TO	Y	31.17	0.32	25	N	N

TO = Thermal Oxidizer

Pursuant to 40 CFR 64.2(b)(1)(i), the requirements of CAM shall not apply to emission limitations or standards proposed by EPA after November 15, 1990 pursuant to section 111 or 112 of the Clean Air Act. Magnet Wire Oven #560 is subject to 40 CFR 63, Subpart Mmmm, which was promulgated after November 15, 1990. Subpart Mmmm includes an emission limitation for total organic HAP emissions. Therefore, Magnet Wire Oven #560 is not subject to CAM for total HAPs.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to Oven #560 as part of this modification.

**State Rule Applicability Determination**

The following state rules are applicable to the source due to the modification:

**326 IAC 2-2 and 2-3 (PSD)**

PSD applicability is discussed under the Permit Level Determination – PSD.

**326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**

The operation of Oven #560 will emit greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 would apply to the Oven #560, however, pursuant to 326 IAC 2-4.1-1(b)(2), because this Oven #560 is specifically regulated by NESHAP 40 CFR 63, Subpart Mmmm, which was issued

pursuant to Section 112(d) of the CAA, this Oven #560 is exempt from the requirements of 326 2-4.1.

**326 IAC 2-6 (Emission Reporting)**

Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). In accordance with the compliance schedule in 326 IAC 2-6-3(a)(1), an emission statement must be submitted annually. The first report is due no later than July 1, 2014, of each year, and every year thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

**326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)**

Pursuant to 326 IAC 6-3-1(b)(7), the requirements of 326 IAC 6-3 are not applicable to Magnet Wire Oven #560 because this unit uses the flow coating method of application.

**326 IAC 8-1-6 (General Reduction Requirements for New Facilities)**

The provisions of 326 IAC 8-1-6 apply to new facilities (as of January 1, 1980) that have potential VOC emissions of twenty-five (25) tons or more per year; are located anywhere in the state, and that are not otherwise regulated by another provision of 326 IAC 8, 326 IAC 20-48, or 326 IAC 20-56. Magnet Wire Oven #560 has potential VOC emissions greater than twenty-five (25) tons per year; however, the unit is subject to 326 IAC 8-2-8. Therefore, Magnet Wire Oven #560 is not subject to the requirements of 326 IAC 8-1-6.

**326 IAC 8-2-8 (Magnet Wire Coating Operations)**

The provisions of 326 IAC 8-2-8 apply to Magnet Wire Oven #560 because it will commence construction after January 1, 1980 and it has potential emissions of twenty-five (25) tons or greater per year of VOC. Pursuant to 326 IAC 8-2-9(b), the Permittee shall not cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of 1.7 pounds per gallon excluding water, delivered to the coating applicator from magnet wire coating operations.

- (a) Compliance with the 326 IAC 8-2-8 emission limitations shall be determined pursuant to 326 IAC 8-1-2(b). The VOC emissions from Magnet Wire Oven #560 shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, as allowed by 326 IAC 8-2-8.

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where:

L = Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating less water = 1.7 lb/gal.

D = Solvent density of VOC in the coating and shall be equal to 7.36 pounds of VOC per gallon of solvent for oven #560.

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

Actual solvent density shall be used to determine compliance of the surface coating operation using the compliance methods in 326 IAC 8-1-2(a).

$$\begin{aligned} E &= L / (1 - (L/D)) \\ &= 1.7 / (1 - (1.7 / 7.36)) \\ &= 2.21 \text{ lb/gal} \end{aligned}$$

- (b) The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21 lb/gal.
- (c) Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the thermal oxidizer shall be no less than the equivalent overall efficiency calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the non-compliant coating or, if multiple non-compliant coatings are used, the daily weighted average VOC content of all non-compliant coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied = 39.90 lb VOC/gal solids..

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied = 2.17 lb VOC/gal solids.

O = Equivalent overall efficiency of the capture system and control device as a percentage.

$$O = \frac{39.90 - 2.17}{39.90} \times 100$$

$$= 94.6\%$$

The overall efficiency of the thermal oxidizer for oven # 560 shall be equal to or greater than 94.6% or the efficiency required to comply with the limit of 1.7 lb/gal. The control efficiency of thermal oxidizer for oven #560 is 99% at a minimum temperature of 1285 deg F and shall ensure that the oven #560 complies with 326 IAC 8-2-8.

### **326 IAC 8-2-9 (Miscellaneous Metal Coating)**

Pursuant to 326 IAC 8-2-9(b)(1), the provisions of 326 IAC 8-2-9 are not applicable to surface coating of any metal parts or products limited by other sections of 326 IAC 8. Magnet Wire Oven #560 is subject to 326 IAC 8-2-8 (Magnet Wire Coating Operations); therefore, Magnet Wire Oven #560 is not subject to 326 IAC 8-2-9.

## **Compliance Determination and Monitoring Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The Compliance Determination Requirements applicable to this modification are as follows:

**Control Device Requirement**

In order to ensure compliance with 326 IAC 8-2-8 and the 326 IAC 2-2 (PSD) minor limit, the thermal oxidizer for Magnet Wire Oven #560 shall be in operation whenever the magnet wire oven is in operation.

**VOC Data Sheets**

Compliance with the VOC content limitation as specified for 326 IAC 8-2-8 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

**Equation for Determining Compliance with PSD Minor Limits**

Compliance with the PSD Minor Limits for Magnet Wire Oven #560 shall be determined by calculating the VOC emissions using the following equation:

$$\text{VOC Emissions (tons/month)} = \sum (\text{VOC Content } i \text{ (\%)} \times \text{Coating Amount } i \text{ (tons/month)} \times (1 - \text{Control Efficiency } \% / 100))$$

Where:

Control Efficiency % = control efficiency as demonstrated in most recent valid compliance test.

VOC Content i = Percent VOC content of coating i used.

Amount i = Usage, in tons of the coating i per month.

**Testing Requirement**

- (a) The Permittee shall repeat performance testing at least once every five (5) years from the last valid stack test to determine the overall control efficiency (capture and destruction efficiency) testing of the thermal oxidizer for VOC, and to determine the 3-hour average temperature using methods approved by the Commissioner. The Permittee shall conduct performance tests to verify VOC control efficiency as listed below. If the representative oven that is required to be tested has not been in operation for at least six (6) months prior to the test deadline, another similar oven in the same group of ovens shall be tested. If none of the ovens in a particular test group has been in operation for at least six (6) months prior to the test deadline, then the Permittee is not required to conduct testing for that group. However, upon startup of any oven in a test group that has not been in operation for at least six (6) months prior to the test deadline, the Permittee shall conduct performance test to verify VOC and/or HAP control efficiency within ninety (90) days of startup of that oven.
- (b) One (1) representative oven shall be tested for VOC emissions. Testing shall be performed such that no single oven is tested twice in a ten (10) year cycle. This test shall be repeated at least once every five (5) years from the date of this valid compliance determination.
- (c) Before using a coating that would lead to a higher VOC loading in pounds per hour than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify the VOC control efficiency for the thermal oxidizer associated with oven # 560 using methods approved by the commissioner.
- (d) For a higher VOC content coating than that used during the stack test in (a) above, the following procedure shall be followed:

- (1) Calculate the new minimum required control efficiency for the new coating ( $O_{new}$ ), using the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied = 39.90 lb VOC/gal solids

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied = 2.21 lb VOC per gal coating solids

O = Equivalent overall efficiency of the capture system and control device as a percentage.

- (2) If  $O_{new}$  is lower than the stack test control efficiency, the Permittee shall be allowed to use the higher VOC content enamel.

The compliance monitoring requirements applicable to this modification are as follows:

#### **Thermal Oxidizer Temperature**

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. For the purposes of this condition, continuous monitoring shall mean no less often than once per fifteen (15) minutes. The output from this monitoring system shall be recorded as three-hour average temperatures whenever the oxidizers are in operation.
- (b) The Permittee shall determine the three-hour average temperature from the latest valid stack test that demonstrates compliance with 326 IAC 8-2-8.
- (c) On and after the date the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the three-hour average temperature observed during the latest compliant stack test.
- (d) If the primary continuous monitoring system is not in operation, the oxidizer temperature shall be recorded using some manner of secondary system, such as with back-up electro-mechanical hardware or manually if necessary. Nothing in this permit shall excuse the Permittee from complying with the requirement to continuously monitor the temperature of the oxidizers. Continuous monitoring shall mean no less often than once per fifteen (15) minutes.
- (e) If the three-hour average temperature falls below the above mentioned three-hour average temperature, the Permittee shall take a reasonable response.

These compliance monitoring requirements are necessary because the thermal oxidizer for Magnet Wire Oven #560 must operate properly in order to ensure compliance with 326 IAC 8-2-8 (Magnet Wire Coating Operations) and 40 CFR 63, Subpart M and in order to render 326 IAC 2-2 (PSD) not applicable.

<b>Proposed Changes</b>
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The changes listed below have been made to Part 70 Operating Permit No. T003-31617-00013. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

**Change No. 1:** Section A.2 of the permit has been revised to include descriptive information for the new Magnet Wire Oven #560. Descriptive information for Oven #550 in Section A.2 has also been revised in order to be consistent with Section D.6. Section A.2 of the permit is modified as follows:

A.2 Emission Units and Pollution Control Equipment Summary  
 [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]

This stationary source consists of the following emission units and pollution control devices:

\*\*\*\*\*

- (b) ~~One (1) magnet wire coating application system, identified as Unit 550, including a Weather Rite V26 magnet wire oven, approved in 2012, with a maximum capacity of 1082 pounds of wire per hour, using an internal thermal incinerator (maximum heat input capacity of 200,000 BTU/hr), a wire cooler, a sheave cooler, and a wire annealer (maximum heat input capacity of 900,000 BTU/hr), exhausting to stacks no. 0439, and 0441.~~  
**Under the Miscellaneous Metal Parts and Products Coating NESHAP (40 CFR 63, Subpart MMMM), the following emission units are considered to be part of an existing magnet wire coating affected source.**

Model	Oven ID	Construction Date	Max. Rating (lbs wire/hr)	Thermal Oxidizer type	Thermal oxidizer Heat Input Capacity (MMBtu/hr)	Stack ID #
Weather Rite V26 with 0.2 MMBtu/hr Annealer	550	2012	1082	One internal TO for one oven	0.90	0439
Weather Rite V26 with 0.2 MMBtu/hr Annealer	560	2013	650	One Internal TO for one oven	1.0	0443

Note: TO is Thermal Oxidizer

\*\*\*\*\*

**Change No. 2:** Section A.3 of the permit has been revised to update the descriptive information. Section A.3 of the permit is modified as follows:

\*\*\*\*\*

- (b) Emergency generator as follows: natural gas turbines or reciprocating engines not exceeding 16,000 horsepower:

\*\*\*\*\*

Under the NESHAP, 40 CFR 63, Subpart (ZZZZ), the natural gas fired emergency generators; 395 HP, 103 HP, and 69 HP are considered ~~to be the area sources of HAP emissions~~ **affected facilities at a major source of HAP emissions.**

\*\*\*\*\*

**Change No. 3:** Condition D.5.9 has been removed from the permit as reporting is not required to show compliance with Condition D.5.1. Section D.5 of the permit is modified as follows:

~~D.5.9 Reporting Requirements~~

~~A quarterly summary of the information to document the compliance status with Condition D.5.1 shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C – General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.~~

**Change No. 4:** Section D.6 has been revised to include descriptive information for the new Magnet Wire Oven #560 and associated changes to the conditions in Section D.6. Section D.6 of the permit is modified as follows:

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b)

Model	Oven ID	Construction Date	Max. Rating (lbs wire/hr)	Thermal Oxidizer type	Thermal oxidizer Heat Input Capacity (MMBtu/hr)	Stack ID #
<b>Weather Rite V26 with 0.2 MMBtu/hr Annealer</b>	550	2012	1082	One internal TO for one oven	0.90	<b>0439</b>
<b>Weather Rite V26 with 0.2 MMBtu/hr Annealer</b>	<b>560</b>	<b>2013</b>	<b>650</b>	<b>One internal TO for one oven</b>	<b>1.0</b>	<b>0443</b>

**Note: TO is Thermal Oxidizer**

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 PSD Minor Limit [326 IAC 2-2]

(a) Pursuant to Significant Source Modification 003-32139-00013, the VOC emissions from the Weather Rite V26, identified as Oven #550, permitted in 2012, shall be less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

~~Compliance with the above limit shall render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable for ovens listed above.~~

**Compliance with the above limit, shall limit the VOC emissions from Oven #550 to less than 40 tons per twelve (12) consecutive month period and shall render the requirement of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to this modification (SSM # 003-32139-00013).**

(b) Pursuant to Significant Source Modification 003-33777-00013, the VOC emissions from the Weather Rite V26, identified as Oven #560, permitted in 2013, shall be less

**than 39.96 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**

**Compliance with the above limit, shall limit the VOC emissions from Oven #560 to less than 40 tons per twelve (12) consecutive month period and shall render the requirement of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to this modification (SSM # 003-33777-00013).**

**D.6.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-8]**

- (a)** Pursuant to 326 IAC 8-2-8(b) (Magnet Wire Coating Operation), the owner or operator of oven #550 shall not allow or permit the discharge into the atmosphere of any volatile organic compounds in excess of 0.20 kilograms per liter of coating (1.7 pounds per gallon) excluding water, delivered to the coating applicator ~~from each of the listed ovens.~~
- (b)** Pursuant to 326 IAC 8-2-8(b) (Magnet Wire Coating Operation), the owner or operator of oven #560 shall not allow or permit the discharge into the atmosphere of any volatile organic compounds in excess of 0.20 kilograms per liter of coating (1.7 pounds per gallon) excluding water, delivered to the coating applicator.

**D.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

A Preventive Maintenance Plan is required for ~~this facility~~ **these facilities** and its control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements**

**D.6.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]**

~~In order to comply with Conditions D.6.1 and D.6.2, the thermal oxidizers shall be in operation whenever anyone enamel oven is in operation.~~

- (a)** Pursuant to 326 IAC 8-1-2(a) and in order to ensure compliance with Conditions D.6.1(a), and D.6.2(a), the internal thermal oxidizer shall be in operation whenever Magnet Wire Oven #550 is in operation.
- (b)** Pursuant to 326 IAC 8-1-2(a) and in order to ensure compliance with Conditions D.6.1(b), and D.6.2(b), the internal thermal oxidizer shall be in operation whenever Magnet Wire Oven #560 is in operation.

**D.6.5 Volatile Organic Compounds (VOC) Calculations**

- (a)** In order to demonstrate compliance with the VOC emission limitations in Condition D.6.1(a), the Permittee shall determine the VOC emissions for each month for oven #550 using the following **equation methodology**:

$$\text{VOC emissions} = [(\text{VOC usage}) \times (1.0 - \text{CE}/100)]$$

CE = The control efficiency determined by most recent IDEM approved stack test.

$$\text{VOC Emissions (tons/month)} = \sum (\text{VOC Content } i \text{ (\%)} \times \text{Coating Amount } i \text{ (tons/month)} \times (1 - \text{Control Efficiency } \% / 100))$$

Control Efficiency % = control efficiency as demonstrated in most recent valid compliance test.

VOC Content i = Percent VOC content of coating i used.

Amount i = Usage, in tons of the coating i per month.

- (b)** In order to demonstrate compliance with the VOC emission limitations in Condition D.6.1(b), the Permittee shall determine the VOC emissions for each month for oven

**#560 using the following equation:**

$$\text{VOC Emissions (tons/month)} = \frac{\sum (\text{VOC Content } i \text{ (\%)} \times \text{Coating Amount } i \text{ (tons/month)})}{(1 - \text{Control Efficiency \%} / 100)}$$

**Control Efficiency % = control efficiency as demonstrated in most recent valid compliance test.**

**VOC Content i = Percent VOC content of coating i used.**

**Amount i = Usage, in tons of the coating i per month.**

D.6.6 Thermal oxidizer Operation

~~The thermal oxidizer for weather Rite V26 shall operate at all times that the oven is in operation. When operating, the thermal oxidizer shall maintain a minimum 3 hour average temperature of 1300°F until 3 hour block average minimum temperature determined in the latest compliance testing to maintain an overall control efficiency of not less than 95.8% of volatile organic compound (VOC) in order to determine compliance with Conditions D.6.1, and D.6.2.~~

D.6.76 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a), (c)]

Compliance with the VOC usage and content limitations contained in Conditions D.6.1(a), D.6.1(b), D.6.2(a) and D.6.2(b) shall be determined pursuant to 326 IAC 8-1-4(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ reserve the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4

D.6.87 Volatile Organic Compounds (VOC) [326 IAC 8-1-2(b)]

(a) Compliance with the VOC content and emission limitation **contained in Condition D.6.1(a)** shall be determined **as follows for Magnet Wire Oven #550** pursuant to ~~326 IAC 8-1-2(b)~~, using formulation data supplied by the coating manufacturer.

(1) **Pursuant to 326 IAC 8-1-2(b)(1), VOC emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, as allowed in Condition D.6.1(a).**

The equivalency was determined by the following equation:

$$E = \frac{L}{(1 - (L/D))}$$

~~= 1.7 / (1 - (1.7 / 7.36)) = 2.21 lbs VOC/gal coating solids~~

Where:

L = Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating less water = 1.7 lb/gal;

D= Baseline solvent density of VOC in the coating and shall be equal to seven and thirty-six hundredths (7.36) pounds of VOC per gallon of solvent;

E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

**Actual solvent density shall be used to determine compliance of the surface coating operation using the compliance methods in 326 IAC 8-1-2(a).**

$$= 1.7 / (1 - (1.7 / 7.36))$$

= 2.21 lbs VOC/gal coating solids

The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21.

- (2) Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the thermal oxidizer shall be no less than the equivalent overall efficiency necessary to comply with the equivalent emission limitation in (1).

$$O = \frac{V - E}{V} \times 100$$

$$O = \frac{52.86 - 2.21}{52.86} \times 100$$

$$= 95.8\%$$

Where:

V = The actual VOC content of the coating, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied = 52.86 lb VOC/gal solids

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied = 2.21 lb VOC per gal coating solids

O = Equivalent overall efficiency of the capture system and control device as a percentage.

$$O = \frac{52.86 - 2.21}{52.86} \times 100$$

$$= 95.8\%$$

The overall efficiency of the thermal oxidizer for oven #550 shall be equal to or greater than 95.8% or the efficiency required to comply with the limit of 1.7 lb/gal.

- (b) Compliance with the VOC content and emission limitation contained in Condition D.6.1(b) shall be determined as follows for Magnet Wire Oven #560, using formulation data supplied by the coating manufacturer.

- (1) Pursuant to 326 IAC 8-1-2(b)(1), VOC emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, as allowed in Condition D.6.1(b).

The equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where:

L = Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating less water = 1.7 lb/gal;

D = Baseline solvent density of VOC in the coating and shall be equal to seven and thirty-six hundredths (7.36) pounds of VOC per gallon of solvent;

**E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.**

**Actual solvent density shall be used to determine compliance of the surface coating operation using the compliance methods in 326 IAC 8-1-2(a).**

$$= 1.7 / (1 - (1.7 / 7.36))$$

$$= 2.21 \text{ lbs VOC/gal coating solids}$$

**The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21.**

- (2) Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the thermal oxidizer shall be no less than the equivalent overall efficiency necessary to comply with the equivalent emission limitation in (1).**

$$O = \frac{V - E}{V} \times 100$$

**Where:**

**V = The actual VOC content of the coating, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied = 39.90 lb VOC/gal solids**

**E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied = 2.21 lb VOC per gal coating solids**

**O = Equivalent overall efficiency of the capture system and control device as a percentage.**

$$O = \frac{39.90 - 2.21}{39.90} \times 100$$

$$= 94.6\%$$

**The overall efficiency of the thermal oxidizer for oven #560 shall be equal to or greater than 94.6% or the efficiency required to comply with the limit of 1.7 lb/gal.**

**D.6.98 Testing requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11][40 CFR 63, Subpart M]**

~~In order to determine compliance with Conditions D.6.1 and D.6.2, the Permittee shall conduct performance test for Oven #550 to determine the overall control efficiency (capture and destruction efficiency) testing of the thermal oxidizer for VOC, and to determine the 3-hour average temperature using methods approved by the Commissioner. The Permittee shall conduct performance tests to verify VOC and/or HAP control efficiency as listed below. The Permittee shall conduct performance test to verify VOC and/or HAP control efficiency within one hundred eighty (180) days of startup of the oven. Testing shall be conducted in accordance with Section C – Performance Testing.~~

- ~~(c) One (1) representative oven shall be tested for VOC emissions. Testing shall be performed such that no single oven is tested twice in a ten (10) year cycle. This test shall be repeated at least once every five (5) years from the date of this valid compliance determination.~~

- ~~(d) For a higher VOC content coating than that used during the stack test in (a) above, the following procedure shall be followed:~~
- ~~(1) Calculate the new minimum required control efficiency for the new coating ( $E_{new}$ )~~
  - ~~(2) Calculate the new maximum VOC loading ( $L_{new}$ ) for the higher VOC content enamel;~~
  - ~~(3) Calculate the current maximum VOC loading ( $L_{current}$ ); and~~
  - ~~(4) If  $E_{new}$  is lower than the stack test control efficiency, and  $L_{new}$  is lower than  $L_{current}$ , Permittee shall be allowed to use the higher VOC content enamel.~~
- ~~(e) Before using a coating that would lead to a higher VOC loading in pounds per hour than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Conditions D.6.1 and D.6.2 for the thermal oxidizer using methods approved by the commissioner.~~
- (a) In order to determine compliance with Conditions D.6.1 and D.6.2, the Permittee shall repeat performance testing at least once every five (5) years from the last valid stack test to determine the overall control efficiency (capture and destruction efficiency) testing of the thermal oxidizer for VOC, and to determine the 3-hour average temperature using methods approved by the Commissioner. The Permittee shall conduct performance tests to verify VOC control efficiency as listed below. If the representative oven that is required to be tested has not been in operation for at least six (6) months prior to the test deadline, another similar oven in the same group of ovens shall be tested. If none of the ovens in a particular test group has been in operation for at least six (6) months prior to the test deadline, then the Permittee is not required to conduct testing for that group. However, upon startup of any oven in a test group that has not been in operation for at least six (6) months prior to the test deadline, the Permittee shall conduct performance test to verify VOC and/or HAP control efficiency within ninety (90) days of startup of that oven. Section C - Performance Testing contains the Permittee's obligation with regards to the performance testing required by this condition.**
- (b) One (1) representative oven shall be tested for VOC emissions. Testing shall be performed such that no single oven is tested twice in a ten (10) year cycle. This test shall be repeated at least once every five (5) years from the date of this valid compliance determination.**
- (c) Before using a coating that would lead to a higher VOC loading in pounds per hour than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify the VOC control efficiency as per Condition D.6.8(a) and D.6.8(b) for the thermal oxidizer associated with oven #550 and 560 respectively using methods approved by the commissioner.**
- (d) For a higher VOC content coating than that used during the stack test in (a) above, the following procedure shall be followed:**
- (1) Calculate the new minimum required control efficiency for the new coating ( $O_{new}$ ), using the equation in Conditions D.6.7(a)(2) and D.6.7(b)(2).**
  - (2) If  $O_{new}$  is lower than the stack test control efficiency, the Permittee shall be allowed to use the higher VOC content enamel.**

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.6.109 Parametric Monitoring - Thermal Oxidizer Temperature for Oven #550 and Oven #560

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on **each of the thermal oxidizers for oven #550 and oven #560** for measuring operating temperature of the thermal oxidizers. For the purposes of this condition, continuous monitoring shall mean no less often than once per fifteen (15) minutes. The output from this monitoring system **shall be recorded as** ~~and the three hour average temperatures shall be recorded~~ whenever the oxidizers are in operation.
- (b) **The Permittee shall determine the three-hour average temperatures from the latest valid stack test that demonstrates compliance with Conditions D.6.1(a), D.6.1(b), D.6.2(a) and D.6.2(b).**
- (c) **On and after the date the stack test results are available, the Permittee shall operate the thermal oxidizers at or above the respective three-hour average temperatures observed during the latest compliant stack test.**
- (bd) If the primary continuous monitoring system is not in operation, the oxidizer temperature will be recorded using some manner of secondary system, such as with back-up electro-mechanical hardware or manually if necessary. Nothing in this permit shall excuse the Permittee from complying with the requirement to continuously monitor the temperature of the oxidizers. Continuous monitoring shall mean no less often than once per fifteen (15) minutes.
- (ee) ~~For the Weather Rite oven #550, the oven shall operate such that if the three-hour average temperature falls below the 3 hour block average minimum required in Condition D.6.6 until determined in the latest stack test, corrective actions shall be taken within 15 minutes to return oxidizer temperature to at least the required minimum temperature. Corrective action must return oxidizer temperature to or above the required minimum temperature within thirty (30) minutes of the corrective action, or the enamel flow to the oven shall be shut off. A reading that is below the required minimum temperature as established in the most recent compliant stack test is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered as a deviation from the permit.~~  
**If the three-hour average temperature falls below the above mentioned three-hour average temperature, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.**

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.140 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.6.1(a) and D.6.21(b), the Permittee shall maintain records in accordance with (1) through (43) below. Records maintained for (1) through (43) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Conditions ~~D.3.4~~ **D.6.1(a)** and ~~D.3.2~~ **D.6.1(b)**.
- (1) The VOC content of each coating material and solvent used less water.
- (2) **The actual VOC content of the coating, in units of pounds of VOC per gallon of coating solids as applied.**
- (23) Records shall include material balance calculations, purchase orders, invoices, supplier data sheets and material safety data sheets (MSDS) necessary to verify the type and amount used.

- ~~(3) — The cleanup solvent usage for each month;~~
- ~~(4) — The total VOC usage for each month;~~
- (b) To document the compliance status with Condition D.6.2(a) and D.6.2(b), the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limit established in Condition D.6.2(a) and D.6.2(b).**
- (1) The VOC content of each coating material and solvent used.**
- (2) The amount of coating material and solvent used on a monthly basis. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.**
- (3) The total weight of VOCs emitted each month.**
- ~~(bc) To document the compliance status with Condition D.6.10, the Permittee shall maintain:~~
- ~~(1) — Continuous temperature records and 3-hour average temperature records.~~  
**To document the compliance status with Condition D.6.9, the Permittee shall maintain continuous temperature records (on a three-hour average basis) for the thermal oxidizer and the three-hour average temperature used to demonstrate compliance during the most recent compliant stack test.**
- ~~(ed) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.~~

#### D.6.121 Reporting Requirements

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A quarterly summary of the information to document the compliance status with Conditions D.6.1(a), D.6.1(b), D.6.2(a) and D.6.2(b) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

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**Change No. 5:** The Organic Solvent Degreasing Operation rule (326 IAC 8-3) has been revised and the effective date for the revised rule is March 1, 2013. Section D.7 of the permit is modified as follows:

#### ~~D.7.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]~~

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~~Pursuant to 326 IAC 8-3-2 (Cold-Cleaner Operations) for cold-cleaner operations constructed after January 1980, the Permittee shall:~~

- ~~(a) — Equip the cleaner with a cover;~~
- ~~(b) — Equip the cleaner with a facility for draining cleaned parts;~~
- ~~(c) — Close the degreaser cover whenever parts are not being handled in the cleaner;~~
- ~~(d) — Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;~~
- ~~(e) — Provide a permanent, conspicuous label summarizing the operation requirements;~~

- ~~(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.~~

~~D.7.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]~~

- ~~(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the Permittee of a cold cleaner degreaser facility construction of which commenced after July 1, 1990 shall ensure that the following control equipment requirements are met:~~

- ~~(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:~~

~~(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));~~

~~(B) The solvent is agitated; or~~

~~(C) The solvent is heated.~~

- ~~(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.~~

- ~~(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).~~

- ~~(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.~~

- ~~(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):~~

~~(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.~~

~~(B) A water cover when solvent is used is insoluble in, and heavier than, water.~~

~~(C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.~~

- ~~(b) Pursuant to 326 IAC 8-3-5(b), (Cold Cleaner Degreaser Operation and Control), the Permittee shall ensure that the following operating requirements are met:~~

- ~~(1) Close the cover whenever articles are not being handled in the degreaser.~~

- ~~(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.~~
- ~~(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.~~

#### **D.7.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]**

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**Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements), for any cold cleaning degreasing operations that contains one (1) or more volatile organic compounds (VOC), the Permittee shall:**

- (a) The owner or operator of a cold cleaner degreaser shall ensure the following control equipment and operating requirements are met:**
  - (1) Equip the degreaser with a cover.**
  - (2) Equip the degreaser with a device for draining cleaned parts.**
  - (3) Close the degreaser cover whenever parts are not being handled in the degreaser.**
  - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases.**
  - (5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).**
  - (6) Store waste solvent only in closed containers.**
  - (7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.**
  
- (b) The owner or operator of a cold cleaner degreaser subject to this subsection shall ensure the following additional control equipment and operating requirements are met:**
  - (1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):**
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.**
    - (B) A water cover when solvent used is insoluble in, and heavier than, water.**
    - (C) A refrigerated chiller.**
    - (D) Carbon adsorption.**
    - (E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.**

- (2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.**
- (3) If used, solvent spray:**
  - (A) must be a solid, fluid stream; and**
  - (B) shall be applied at a pressure that does not cause excessive splashing.**

#### **D.7.3 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]**

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**Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), on and after January 1, 2015, the Permittee shall not operate a cold cleaner degreaser with a solvent that has a VOC composite partial vapor pressure than exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).**

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

#### **D.7.3 Record Keeping Requirements**

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- (a) To document the compliance status with Condition D.67.1, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.67.1.**
  - (1) The VOC content of each cleanup solvent used less water.**
  - (2) The amount of cleanup solvent used on a monthly basis. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.**
  - (3) The cleanup solvent usage for each month;**
  - (4) The total VOC usage for each month;**
- (b) Pursuant to 326 IAC 8-3-8(c)(2) and to document the compliance status with Condition D.7.3, on and after January 1, 2015, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.**
  - (1) The name and address of the solvent supplier.**
  - (2) The date of purchase (or invoice/bill dates of contract servicer indicating service date).**
  - (3) The type of solvent purchased.**
  - (4) The total volume of the solvent purchased.**
  - (5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).**
- (c) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.**

**D.7.5 Reporting Requirements**

A quarterly summary of the information to document the compliance status with Condition D.67.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

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**Change No. 6:** Section E.1 has been revised to include descriptive information for the new emission unit, Oven #560 and applicable portions of NESHAP; Subpart MMMM. Section E.1 of the permit is modified as follows:

**SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS**

Emissions Unit Description: [326 IAC 2-7-5(15)]						
Under the Miscellaneous Metal Parts and Products Coating NESHAP (40 CFR 63, Subpart MMMM), the following emission units are considered to be part of an existing magnet wire coating affected source.						
Model	Oven ID	Construction Date	Max. Rating (lbs wire/hr)	Thermal Oxidizer type	Thermal oxidizer Heat Input Capacity (MMBtu/hr)	Stack ID #
*****						
<b>Weather Rite V26 with 0.2 MMBtu/hr Annealer</b>	550	2012	1082	<b>One internal TO for one oven</b>	0.9	<b>0439</b>
<b>Weather Rite V26 with 0.2 MMBtu/hr Annealer</b>	<b>560</b>	<b>2013</b>	<b>650</b>	<b>One internal TO for one oven</b>	<b>1.0</b>	<b>0443</b>
Note : TO is Thermal Oxidizer						
*****						

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**Change No. 7:** IDEM, OAQ has updated Condition E.2.2 of the permit to contain the most recent rule applicability requirements of National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63, Subpart ZZZZ. Amendments to NESHAP ZZZZ were published in the Federal Register on January 30, 2013, with an effective date of April 1, 2013. The most recent version of 40 CFR Part 63, Subpart ZZZZ is now included in its entirety in the permit as Attachments B, but these changes are not shown in their entirety as bold and strikethrough text. Section E.2 of the permit is modified as follows:

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Insignificant Activities

- (1) One (1) Cummins 395 HP natural gas fired emergency generator exhausting to stack 415.
- (2) One (1) 103 HP natural gas fired emergency generator exhausting to stack 214.
- (3) One (1) 69 HP natural gas fired emergency generator exhausting to stack 295.

Under the NESHAP, 40 CFR 63, Subpart (ZZZZ), the natural gas fired emergency generators; 395 HP, 103 HP, and 69 HP are considered ~~to be the area sources of HAP emissions affected facilities at a major source of HAP emissions.~~

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

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E.2.2 National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

Pursuant to CFR Part 63, Subpart ZZZZ, the Permittee shall comply with the provision of National Emission Standards for Hazardous Air Pollutants for Stationary Spark Ignition Internal Combustion Engines which are incorporated by reference as 326 IAC 20-82 (included as Attachment B of this permit):

- ~~40 CFR 63.6595(a)(1)~~
- ~~40 CFR 63.6602 Table 2c.6~~
- ~~40 CFR 63.6605(a)-(b)~~
- ~~40 CFR 63.6625(e), (h), (j)~~
- ~~40 CFR 63.6625(f) (j)~~
- ~~40 CFR 63.6640(a) Table 6.9.a.i-ii~~
- ~~40 CFR 63.6640(b), (e)(f)(1)~~
- ~~40 CFR 63.6650(f)~~
- ~~40 CFR 63.6655(a), (a)(1)-(2), (a)(4)-(5)~~
- ~~40 CFR 63.6655(d)-(f)~~
- (1) **40 CFR 63.6660(a)-(c) 40 CFR 63.6580**
- (2) **40 CFR 63.6585(a), (b)**
- (3) **40 CFR 63.6590(a)(1)(ii)**
- (4) **40 CFR 63.6595(a)(1), (c)**
- (5) **40 CFR 63.6602**
- (6) **40 CFR 63.6605**
- (7) **40 CFR 63.6612**
- (8) **40 CFR 63.6625(e)(2), (f), (h), (j)**
- (9) **40 CFR 63.6635**
- (10) **40 CFR 6640(a), (b), (f)**
- (11) **40 CFR 63.6645(a)(5)**
- (12) **40 CFR 63.6650(f)**
- (13) **40 CFR 63.6655(a), (d), (e)(2)**
- (14) **40 CFR 63.6660**
- (15) **40 CFR 63.6665**
- (16) **40 CFR 63.6670**
- (17) **40 CFR 63.6675**
- (18) **Table 2c to 40 CFR 63 Subpart ZZZZ**
- (19) **Table 6 to 40 CFR 63 Subpart ZZZZ**
- (20) **Table 8 to 40 CFR 63 Subpart ZZZZ**

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**Change No.8:** The quarterly reporting form has been added for VOC PSD minor limit for Oven #560 and quarterly reporting form for oven #550 has been revised in order to be consistent with other issued IDEMs permit. The permit is modified as follows:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Rea Magnet Wire Company, Inc  
 Source Address: 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
 Part 70 Permit No.: T003-31617-00013  
 Facility: Oven #550  
 Parameter: VOC Emissions  
 Limit: Less than 40 tons per twelve (12) consecutive month period

$$\text{VOC Emissions (tons/month)} = \sum (\text{VOC Content } i \text{ (\%)} \times \text{Coating Amount } i \text{ (tons/month)} \times (1 - \text{Control Efficiency \%} / 100))$$

QUARTER:

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.  
 Deviation has been reported on:

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Phone: \_\_\_\_\_

~~Attach a signed certification to complete this report.~~

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

**Source Name:** Rea Magnet Wire Company, Inc  
**Source Address:** 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
**Part 70 Permit No.:** T003-31617-00013  
**Facility:** Oven #560  
**Parameter:** VOC Emissions  
**Limit:** Less than 39.96 tons per twelve (12) consecutive month period

$$\text{VOC Emissions (tons/month)} = \sum (\text{VOC Content } i \text{ (\%)} \times \text{Coating Amount } i \text{ (tons/month)} \times (1 - \text{Control Efficiency \%} / 100))$$

**QUARTER:**

**YEAR:**

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.  
 Deviation has been reported on:

**Submitted by:** \_\_\_\_\_  
**Title / Position:** \_\_\_\_\_  
**Signature:** \_\_\_\_\_  
**Date:** \_\_\_\_\_  
**Phone:** \_\_\_\_\_

\*\*\*\*\*

**Change No.9:** Changes Specific to Section C of the Permit.

- (a) *Section C - Compliance Monitoring, Section C - Response to Excursions or Exceedances, and Section C - General Reporting Requirements*  
 IDEM, OAQ has decided to clarify the Permittee's responsibility under CAM. Additionally, IDEM, OAQ is changing Section C - Compliance Monitoring to

clearly describe when new monitoring for new and existing units must begin.

- (b) *Section C – Instrument Specifications*  
IDEM, OAQ has decided to clarify Section C – Instrument Specifications to indicate that the analog instrument shall be capable of measuring values outside of the normal range.
- (c) *Section C - General Record Keeping Requirements*  
IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping.

C.10 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][**40 CFR 64**][**326 IAC 3-8**]

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- (a) **For new units:**  
**Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.**
  
- (ab) **For existing units:**  
Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance ~~or of initial start-up, whichever is later~~, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance ~~or the date of initial startup, whichever is later~~, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.  
  
The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).  
  
~~Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.~~
  
- (bc) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
  
- (ed) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction

is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

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(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. **The analog instrument shall be capable of measuring values outside of the normal range.**

(b) \*\*\*\*\*

\*\*\*\*\*

C.14 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

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(I) **Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:**

- (a) \* \* \*
- (b) \* \* \*
- (c) \* \* \*
- (d) \* \* \*
- (e) \* \* \*

(II)

(a) ***CAM Response to excursions or exceedances.***

(1) **Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.**

(2) **Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.**

(b) **If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the**

**IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.**

- (c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.**
- (d) Elements of a QIP:  
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).**
- (e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.**
- (f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:
  - (1) Failed to address the cause of the control device performance problems; or**
  - (2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.****
- (g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.**
- (h) *CAM recordkeeping requirements.*
  - (1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.**
  - (2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements****

\* \* \*

C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(323) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

\* \* \*

C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6][326 IAC 2-2][326 IAC 2-3]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, **where applicable:**

\* \* \*

Records of required monitoring information include the following, **where applicable:**

\* \* \*

- (b) \* \* \*
- (c) \* \* \*
- (d) \* \* \*

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [40 CFR 64][326 IAC 3-8]

\*\*\*\*\*

**Change No.10:** Condition D.5.6(c) has been revised to correct the typographical error. Condition D.5.6(c) of the permit has been modified as follows:

D.5.6 Testing requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11]

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- (c) Before using a coating that would lead to a higher VOC loading in pounds per hour than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.65.1 for the thermal oxidizer using methods approved by the commissioner.

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**Conclusion and Recommendation**

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 003-33777-00013 and Significant Permit Modification No. 003-33903-00013. The staff recommend to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed permit can be directed to Muhammad D. Khan at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-9664 or toll free at 1-800-451-6027 extension 3-9664.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

**Appendix A: Emissions Calculations  
Uncontrolled Emissions Summary**

**Company Name: Rea Magnet Wire Company, Inc.  
Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, IN 46803  
Significant Source Modification No.: 003-33777-00013  
Significant Permit Modification No.: 003-33903-00013  
Reviewer: Muhammad D. Khan  
Date: November 23, 2013**

Uncontrolled Potential Emissions

Emission Unit	Year of Construction	PM (tons/yr)	PM <sub>10</sub> (tons/yr)	PM <sub>2.5</sub> (tons/yr)	SO <sub>2</sub> (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	HAPs (tons/yr)	GHG (tons/yr)
701-702	1994	0	0	0	0	2.39	0	0	0.62	0
703-704	1994	0	0	0	0	2.39	0	0	0.62	0
705-706	1994	0	0	0	0	2.39	0	0	0.62	0
707-708	1994	0	0	0	0	2.39	0	0	0.62	0
709-710	1994	0	0	0	0	2.39	0	0	1.52	0
804	1978	0	0	0	0	5.82	0	0	1.52	0
805	1978	0	0	0	0	5.82	0	0	1.52	0
808	1977	0	0	0	0	5.82	0	0	1.52	0
809	1968	0	0	0	0	5.82	0	0	0.60	0
810	1979	0	0	0	0	5.82	0	0	0.60	0
811	1992	0	0	0	0	5.82	0	0	0.60	0
802	1978	0	0	0	0	2.31	0	0	0.60	0
803	1978	0	0	0	0	2.31	0	0	0.60	0
806	1977	0	0	0	0	2.31	0	0	0.60	0
807	1977	0	0	0	0	2.31	0	0	0.60	0
600	1991	0	0	0	0	62.36	0	0	23.38	0
605	1991	0	0	0	0	62.36	0	0	23.38	0
690	1991	0	0	0	0	62.36	0	0	23.38	0
695	1991	0	0	0	0	62.36	0	0	23.38	0
Applicator Cleaning Area	1991	0	0	0	0	10	0	0	0	0
812 and 813	2008	0	0	0	0	9.82	0	0	0.00	0
640	1973	0	0	0	0	93.55	0	0	35.08	0
650	1973	0	0	0	0	93.55	0	0	35.08	0
530	1973	0	0	0	0	298.69	0	0	108.13	0
540	1973	0	0	0	0	298.69	0	0	108.13	0
355-356	1973	0	0	0	0	298.69	0	0	108.13	0
357-358	1974	0	0	0	0	298.69	0	0	108.13	0
359-360	1974	0	0	0	0	298.69	0	0	108.13	0
361-362	1974	0	0	0	0	298.69	0	0	108.13	0
660	1973	0	0	0	0	298.69	0	0	108.13	0
500	1974	0	0	0	0	298.69	0	0	108.13	0
510	1974	0	0	0	0	298.69	0	0	108.13	0
520	1974	0	0	0	0	298.69	0	0	108.13	0
615	2006	0	0	0	0	55.31	0	0	21.13	0
635	2006	0	0	0	0	55.31	0	0	21.13	0
550	2012	0	0	0	0	188.16	0	0	103.94	0
Oven #560	2014	0	0	0	0	77.03	0	0	31.16	0
NG Combustion Oven #560	2014	0.01	0.04	0.04	0.00	0.03	0.43	0.52	0.01	622
Thermal oxidizers	N/A	0.17	0.69	0.69	0.05	0.50	7.65	9.11	0.17	10,997
Emergency Generators	N/A	0.04	0.05	0.04	0.00	0.13	0.41	3.37	0.41	150
<b>Total Emissions</b>	<b>N/A</b>	<b>0.22</b>	<b>0.78</b>	<b>0.77</b>	<b>0.06</b>	<b>3878.25</b>	<b>8.50</b>	<b>13.00</b>	<b>1459.71</b>	<b>11,769</b>

Company Name: Rea Magnet Wire Company, Inc.  
 Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, IN 46803  
 Significant Source Modification No.: 003-33777-00013  
 Significant Permit Modification No.: 003-33903-00013  
 Permit Reviewer : Muhammad D. Khan  
 Date: November 23, 2013

Limited Potential Emissions

Emission Unit	Year of Construction	PM (tons/yr)	PM <sub>10</sub> (tons/yr)	PM <sub>2.5</sub> (tons/yr)	SO <sub>2</sub> (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	HAPs (tons/yr)
701-702	1994	0	0	0	0	2.39	0	0	0.62
703-704	1994	0	0	0	0	2.39	0	0	0.62
705-706	1994	0	0	0	0	2.39	0	0	0.62
707-708	1994	0	0	0	0	2.39	0	0	0.62
709-710	1994	0	0	0	0	2.39	0	0	0.62
804	1978	0	0	0	0	0.87	0	0	1.52
805	1978	0	0	0	0	0.87	0	0	1.52
808	1977	0	0	0	0	0.87	0	0	1.52
809	1968	0	0	0	0	5.82	0	0	1.52
810	1979	0	0	0	0	0.35	0	0	1.52
802	1978	0	0	0	0	0.35	0	0	0.60
803	1978	0	0	0	0	0.35	0	0	0.60
806	1977	0	0	0	0	0.35	0	0	0.60
807	1977	0	0	0	0	0.35	0	0	0.60
*811	1992	0	0	0	0	<40	0	0	1.52
*600	1991	0	0	0	0		0	0	23.39
*605	1991	0	0	0	0		0	0	23.39
*690	1991	0	0	0	0		0	0	23.39
*695	1991	0	0	0	0		0	0	23.39
*Applicator Cleaning Area	1991	0	0	0	0	0	0	0	0
812 and 813	2008	0	0	0	0	0.91	0	0	0
640	1973	0	0	0	0	14.03	0	0	35.08
650	1973	0	0	0	0	14.03	0	0	35.08
530	1973	0	0	0	0	44.8	0	0	108.12
540	1973	0	0	0	0	44.8	0	0	108.12
355-356	1973	0	0	0	0	44.8	0	0	108.12
357-358	1974	0	0	0	0	44.8	0	0	108.12
359-360	1974	0	0	0	0	44.8	0	0	108.12
361-362	1974	0	0	0	0	44.8	0	0	108.12
660	1973	0	0	0	0	44.8	0	0	108.12
500	1974	0	0	0	0	44.8	0	0	108.12
510	1974	0	0	0	0	44.8	0	0	108.12
520	1974	0	0	0	0	44.8	0	0	108.12
*615	2006	0	0	0	0	2.8	0	0	21.13
*635	2006	0	0	0	0	2.8	0	0	21.13
*550	2012	0	0	0	0	<40	0	0	103.94
Oven #560	2014	0	0	0	0	<39.96	0	0	1.93
NG Combustion Oven #560	2014	0.01	0.04	0.04	0.00	0.03	0.43	0.52	0.01
Thermal oxidizers	N/A	0.17	0.69	0.69	0.05	0.50	7.65	9.11	0.23
Emergency Generators	N/A	0.04	0.05	0.04	0	0.13	0.41	3.37	0.41
Total Emissions	N/A	0.22	0.78	0.77	0.058	greater than 250	8.49595	13.00	single greater than 10 and total greater than 25

\* In order to render the requirements of 326 IAC 2-2 ( Prevention of Significant Deterioration) not applicable. and to comply with 326 IAC 8-2-8.

Units identified in color are required to have 85% control efficiency pursuant to 326 IAC 8-6-2 (Emission Limits)

**Appendix A: Emissions Calculations  
Controlled Emission Summary**

**Company Name: Rea Magnet Wire Company, Inc.**  
**Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, IN 46803**  
**Significant Source Modification No.: 003-33777-00013**  
**Significant Permit Modification No.: 003-33903-00013**  
**Permit Reviewer : Muhammad D. Khan**  
**Date: November 23, 2013**

**Controlled Potential Emissions**

<b>Emission Unit</b>	<b>Year of Construction</b>	<b>PM (tons/yr)</b>	<b>PM<sub>10</sub> (tons/yr)</b>	<b>PM<sub>2.5</sub> (tons/yr)</b>	<b>SO<sub>2</sub> (tons/yr)</b>	<b>VOC (tons/yr)</b>	<b>CO (tons/yr)</b>	<b>NOx (tons/yr)</b>	<b>HAPs (tons/yr)</b>
701-702	1994	0	0	0	0	0.04	0	0	0.010
703-704	1994	0	0	0	0	0.04	0	0	0.010
705-706	1994	0	0	0	0	0.04	0	0	0.010
707-708	1994	0	0	0	0	0.04	0	0	0.010
709-710	1994	0	0	0	0	0.04	0	0	0.010
804	1978	0	0	0	0	0.09	0	0	0.024
805	1978	0	0	0	0	0.09	0	0	0.024
808	1977	0	0	0	0	0.09	0	0	0.024
809	1968	0	0	0	0	0.09	0	0	0.024
810	1979	0	0	0	0	0.09	0	0	0.024
811	1992	0	0	0	0	0.09	0	0	0.024
802	1978	0	0	0	0	0.06	0	0	0.014
803	1978	0	0	0	0	0.06	0	0	0.014
806	1977	0	0	0	0	0.06	0	0	0.014
807	1977	0	0	0	0	0.06	0	0	0.014
600	1991	0	0	0	0	2.99	0	0	1.12
605	1991	0	0	0	0	2.99	0	0	1.12
690	1991	0	0	0	0	2.99	0	0	1.12
695	1991	0	0	0	0	2.99	0	0	1.12
Applicator Cleaning Area 812 and 813	1991	0	0	0	0	10	0	0	0
640	1973	0	0	0	0	1.03	0	0	0.39
650	1973	0	0	0	0	1.03	0	0	0.39
530	1973	0	0	0	0	3.29	0	0	1.19
540	1973	0	0	0	0	3.29	0	0	1.19
355-356	1973	0	0	0	0	3.29	0	0	1.19
357-358	1974	0	0	0	0	3.29	0	0	1.19
359-360	1974	0	0	0	0	3.29	0	0	1.19
361-362	1974	0	0	0	0	3.29	0	0	1.19
660	1973	0	0	0	0	3.29	0	0	1.19
500	1974	0	0	0	0	3.29	0	0	1.19
510	1974	0	0	0	0	3.29	0	0	1.19
520	1974	0	0	0	0	3.29	0	0	1.19
615	2006	0	0	0	0	0.44	0	0	0.17
635	2006	0	0	0	0	0.44	0	0	0.17
550	2012	0	0	0	0	1.88	0	0	1.04
Oven #560	2014	0	0	0	0	4.27	0	0	0.31
NG Combustion Oven #560	2014	0.01	0.04	0.04	0.00	0.03	0.43	0.52	0.01
Thermal oxidizers	N/A	0.17	0.69	0.69	0.05	0.50	7.65	9.11	0.17
Emergency Generators	N/A	0.04	0.05	0.04	0.00	0.13	0.41	3.37	0.41
<b>Total Emissions</b>	<b>N/A</b>	<b>0.22</b>	<b>0.78</b>	<b>0.77</b>	<b>0.058</b>	<b>115.20</b>	<b>8.50</b>	<b>13.00</b>	<b>single less than 10 and total less than 25</b>

**Appendix A: Emissions Calculations  
Modification Summary**

Company Name: Rea Magnet Wire Company, Inc.  
Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, IN 46803  
Significant Source Modification No.: 003-33777-00013  
Significant Permit Modification No.: 003-33903-00013  
Reviewer: Muhammad D. Khan  
Date: November 23, 2013

Uncontrolled Potential Emissions											
	Year of Construction	PM (tons/yr)	PM <sub>10</sub> (tons/yr)	PM <sub>2.5</sub> (tons/yr)	SO <sub>2</sub> (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	HAPs (tons/yr)	Single HAP (tons/yr)	GHG (tons/yr)
<b>Emission Unit</b>											
Oven #560	2014	0	0	0	0	77.03	0	0	31.16	7.33 (Xylene)	0
NG Combustion for Oven #560	2014	0.01	0.04	0.04	0.00	0.03	0.43	0.52	0.01	0.009 (Hexane)	622.02
<b>Total</b>		<b>0.01</b>	<b>0.04</b>	<b>0.04</b>	<b>0.00</b>	<b>77.06</b>	<b>0.43</b>	<b>0.52</b>	<b>31.17</b>	<b>7.33 (Xylene)</b>	<b>622.02</b>

Controlled Emissions											
	Year of Construction	PM (tons/yr)	PM <sub>10</sub> (tons/yr)	PM <sub>2.5</sub> (tons/yr)	SO <sub>2</sub> (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	HAPs (tons/yr)	Single HAP (tons/yr)	GHG (tons/yr)
<b>Emission Unit</b>											
Oven #560	2014	0	0	0	0	4.27	0	0	0.31	0.07 (Xylene)	0
NG Combustion for Oven #560	2014	0.01	0.04	0.04	0.00	0.03	0.43	0.52	0.01	0.009 (Hexane)	622.02
<b>Total</b>		<b>0.01</b>	<b>0.04</b>	<b>0.04</b>	<b>0.00</b>	<b>4.30</b>	<b>0.43</b>	<b>0.52</b>	<b>0.32</b>	<b>0.07 (Xylene)</b>	<b>622.02</b>

**Note:**  
Controlled VOC emissions are based on 94.46% control efficiency of interal thermal oxidizer.

Limited Emissions											
	Year of Construction	PM (tons/yr)	PM <sub>10</sub> (tons/yr)	PM <sub>2.5</sub> (tons/yr)	SO <sub>2</sub> (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	HAPs (tons/yr)	Single HAP (tons/yr)	GHG (tons/yr)
<b>Emission Unit</b>											
Oven #560	2014	0	0	0	0	39.96	0	0	1.93	0.45 (Xylene)	0
NG Combustion for Oven #560	2014	0.01	0.04	0.04	0.00	0.03	0.43	0.52	0.01	0.009 (Hexane)	622.02
<b>Total</b>		<b>0.01</b>	<b>0.04</b>	<b>0.04</b>	<b>0.00</b>	<b>39.99</b>	<b>0.43</b>	<b>0.52</b>	<b>1.94</b>	<b>0.45 (Xylene)</b>	<b>622.02</b>

**Appendix A: Emissions Calculations  
VOC and Particulate**

**From Surface Coating Operations -Limited VOC**

Company Name: Rea Magnet Wire Company, Inc.  
Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, IN 46803  
Significant Source Modification No.: 003-33777-00013  
Significant Permit Modification No.: 003-33903-00013  
Reviewer: Muhammad D. Khan  
Date: November 23, 2013

**Limited VOC Emissions**

Oven ID	Materials	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Volume % Water	Weight % Organics	Maximum Throughput units (lbs/hour)	Usage (gal/lbs)	Pounds VOC per gallon of coating less water	Uncontrolled VOC (tons per year)	lb VOC/gal solids	Equivalent Emission limit (lbs/gal coating solids)	Efficiency (%) Required for control device	Limited VOC Emissions (tons/yr)
701-702	PDG 923	8.06	70.30%	0.0%	70.3%	68.8	0.0014	5.67	2.39	24.00	2.15	0.00%	2.39
703-704	PDG 923	8.06	70.30%	0.0%	70.3%	68.8	0.0014	5.67	2.39	24.00	2.15	0.00%	2.39
705-706	PDG 923	8.06	70.30%	0.0%	70.3%	68.8	0.0014	5.67	2.39	24.00	2.15	0.00%	2.39
707-708	PDG 923	8.06	70.30%	0.0%	70.3%	68.8	0.0014	5.67	2.39	24.00	2.15	0.00%	2.39
709-710	PDG 923	8.06	70.30%	0.0%	70.3%	68.8	0.0014	5.67	2.39	24.00	2.15	0.00%	2.39
804	PDG 923	8.06	70.30%	0.0%	70.3%	111.7	0.0021	5.67	5.82	24.00	2.15	85.00%	0.87
805	PDG 923	8.06	70.30%	0.0%	70.3%	111.7	0.0021	5.67	5.82	24.00	2.15	85.00%	0.87
808	PDG 923	8.06	70.30%	0.0%	70.3%	111.7	0.0021	5.67	5.82	24.00	2.15	85.00%	0.87
809	PDG 923	8.06	70.30%	0.0%	70.3%	111.7	0.0021	5.67	5.82	24.00	2.15	0.00%	5.82
810	PDG 923	8.06	70.30%	0.0%	70.3%	111.7	0.0021	5.67	5.82	24.00	2.15	85.00%	0.87
811	PDG 923	8.06	70.30%	0.0%	70.3%	111.7	0.0021	5.67	5.82	24.00	2.15	85.00%	0.87
802	PDG 923	8.06	70.30%	0.0%	70.3%	233	0.0004	5.67	2.31	24.00	2.15	85.00%	0.35
803	PDG 923	8.06	70.30%	0.0%	70.3%	233	0.0004	5.67	2.31	24.00	2.15	85.00%	0.35
806	PDG 923	8.06	70.30%	0.0%	70.3%	233	0.0004	5.67	2.31	24.00	2.15	85.00%	0.35
807	PDG 923	8.06	70.30%	0.0%	70.3%	233	0.0004	5.67	2.31	24.00	2.15	85.00%	0.35
600	10635	8.25	79.60%	0.0%	79.6%	425.1	0.0051	6.57	62.36	38.40	2.21	94.24%	3.59
605	10635	8.25	79.60%	0.0%	79.6%	425.1	0.0051	6.57	62.36	38.40	2.21	94.24%	3.59
690	10635	8.25	79.60%	0.0%	79.6%	425.1	0.0051	6.57	62.36	38.40	2.21	94.24%	3.59
695	10635	8.25	79.60%	0.0%	79.6%	425.1	0.0051	6.57	62.36	38.40	2.21	94.24%	3.59
640	10635	8.25	79.60%	0.0%	79.6%	637.7	0.0051	6.57	93.55	38.40	2.14	85.00%	14.03
650	10635	8.25	79.60%	0.0%	79.6%	637.7	0.0051	6.57	93.55	38.40	2.14	85.00%	14.03
530	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	85.00%	44.80
540	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	85.00%	44.80
355-356	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	85.00%	44.80
357-358	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	85.00%	44.80
359-360	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	85.00%	44.80
361-362	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	85.00%	44.80
660	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	85.00%	44.80
500	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	85.00%	44.80
510	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	85.00%	44.80
520	10635	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	85.00%	44.80
615	10635	8.28	80.50%	0.0%	80.5%	332.4	0.0057	6.67	55.31	42.20	2.21	94.76%	2.90
635	10635	8.28	80.50%	0.0%	80.5%	332.4	0.0057	6.67	55.31	42.20	2.21	94.76%	2.90
Total Emissions for above units									3590.19				519.77

**METHODOLOGY:**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)  
 Uncontrolled VOC (tons per Year) = Density (lbs/gal)\* Weight of Organics (%) \* usage (gal/lb)\* Max.Throughput (lbs/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
 Equivalent Emission limit (lbs/gal coating solids) = 1.7/(1-1.7/Density of VOC in coating (lbs/gal) as applied  
 Efficiency (%) = lbs (VOC gal coating solids - Equivalent Emission limit (lbs/gal coating solids))/ lbs VOC/ gal coating solids  
 Controlled VOC (tons/yr) = Uncontrolled VOC (tons/yr) \* Eff (%)

Units identified in color are required to have 85% control efficiency pursuant to 326 IAC 8-6-2 (Emission Limits)

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations - Controlled**

**Company Name: Rea Magnet Wire Company, Inc.  
Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, IN 46803  
Significant Source Modification No.: 003-33777-00013  
Significant Permit Modification No.: 003-33903-00013**

**Reviewer: Muhammad D. Khan  
Date: November 23, 2013**

**Controlled VOC Emissions**

Oven ID	Materials	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Volume % Water	Weight % Organics	Maximum Throughput units (lbs/hour)	Usage (gal/lbs)	Pounds VOC per gallon of coating less water	Uncontrolled VOC (tons per year)	lb VOC/gal solids	Equivalent Emission limit (lbs/gal coating solids)	Efficiency (%) Required for control device	Controlled VOC Emissions (tons/yr)
701-702	PDG 923	8.06	70.30%	0.0%	70.3%	68.8	0.0014	5.67	2.39	24.00	2.15	98.40%	0.04
703-704	PDG 923	8.06	70.30%	0.0%	70.3%	68.8	0.0014	5.67	2.39	24.00	2.15	98.40%	0.04
705-706	PDG 923	8.06	70.30%	0.0%	70.3%	68.8	0.0014	5.67	2.39	24.00	2.15	98.40%	0.04
707-708	PDG 923	8.06	70.30%	0.0%	70.3%	68.8	0.0014	5.67	2.39	24.00	2.15	98.40%	0.04
709-710	PDG 923	8.06	70.30%	0.0%	70.3%	68.8	0.0014	5.67	2.39	24.00	2.15	98.40%	0.04
804	PDG 923	8.06	70.30%	0.0%	70.3%	111.7	0.0021	5.67	5.82	24.00	2.15	98.40%	0.09
805	PDG 923	8.06	70.30%	0.0%	70.3%	111.7	0.0021	5.67	5.82	24.00	2.15	98.40%	0.09
808	PDG 923	8.06	70.30%	0.0%	70.3%	111.7	0.0021	5.67	5.82	24.00	2.15	98.40%	0.09
809	PDG 923	8.06	70.30%	0.0%	70.3%	111.7	0.0021	5.67	5.82	24.00	2.15	98.40%	0.09
810	PDG 923	8.06	70.30%	0.0%	70.3%	111.7	0.0021	5.67	5.82	24.00	2.15	98.40%	0.09
811	PDG 923	8.06	70.30%	0.0%	70.3%	111.7	0.0021	5.67	5.82	24.00	2.15	98.40%	0.09
802	PDG 923	8.06	70.30%	0.0%	70.3%	233	0.0004	5.67	2.31	24.00	2.15	97.60%	0.06
803	PDG 923	8.06	70.30%	0.0%	70.3%	233	0.0004	5.67	2.31	24.00	2.15	97.60%	0.06
806	PDG 923	8.06	70.30%	0.0%	70.3%	233	0.0004	5.67	2.31	24.00	2.15	97.60%	0.06
807	PDG 923	8.06	70.30%	0.0%	70.3%	233	0.0004	5.67	2.31	24.00	2.15	97.60%	0.06
600	10635	8.25	79.60%	0.0%	79.6%	425.1	0.0051	6.57	62.36	38.40		95.20%	2.99
605	10635	8.25	79.60%	0.0%	79.6%	425.1	0.0051	6.57	62.36	38.40	2.21	95.20%	2.99
690	10635	8.25	79.60%	0.0%	79.6%	425.1	0.0051	6.57	62.36	38.40	2.14	95.20%	2.99
695	10635	8.25	79.60%	0.0%	79.6%	425.1	0.0051	6.57	62.36	38.40	2.14	95.20%	2.99
640	10635	8.25	79.60%	0.0%	79.6%	637.7	0.0051	6.57	93.55	38.40	2.14	98.90%	1.03
650	10635	8.25	79.60%	0.0%	79.6%	637.7	0.0051	6.57	93.55	38.40	2.14	98.90%	1.03
530	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	98.90%	3.29
540	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	98.90%	3.29
355-356	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	98.90%	3.29
357-358	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	98.90%	3.29
359-360	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	98.90%	3.29
361-362	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	98.90%	3.29
660	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	98.90%	3.29
500	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	98.90%	3.29
510	8359	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	98.90%	3.29
520	10635	8.54	78.40%	0.0%	78.4%	327.5	0.0311	6.70	298.69	36.60	2.12	98.90%	3.29
615	10635	8.28	80.50%	0.0%	80.5%	332.4	0.0057	6.67	55.31	42.20	2.14	99.20%	0.44
635	10635	8.28	80.50%	0.0%	80.5%	332.4	0.0057	6.67	55.31	42.20	2.14	99.20%	0.44
<b>Total Emissions</b>									<b>3590.19</b>				<b>48.74</b>

**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)  
 Uncontrolled VOC (tons per Year) = Density (lbs/gal)\* Weight of Organics (%) \* usage (gal/lb) \* Max.Throughput (lbs/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
 Equivalent Emission limit (lbs/gal coating solids) : 1.7/(1-1.7/Density (lbs/gal))  
 Efficiency (%) = lbs (VOC gal coating solids - Equivalent Emission limit (lbs/gal coating solids))/ lbs VOC/ gal coating solids  
 Controlled VOC (tons/yr) = Uncontrolled VOC (tons/yr) \* Eff (%)

**Appendix A: Emission Calculations  
Magnet Wire Coating Ovens  
Uncontrolled HAPs Emissions**

Company Name: Rea Magnet Wire Company, Inc.  
Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
Significant Source Modification No.: 003-33777-00013  
Significant Permit Modification No.: 003-33903-00013  
Reviewer: Muhammad D. Khan  
Date: November 23, 2013

Oven ID	Density (lbs/gal)	Weight % VOC	Usage (gal/lb)	Max Throughput unit (lbs/hr)	Weight of % Ethyl Benzene	Weight of % Xylene	Weight of % Cumene	Weight of % Phenol	Weight of % M-Cresol	Weight of % P-Cresol	Uncontrolled Ethyl Benzene Emissions (tons/yr)	Uncontrolled Xylene Emissions (tons/yr)	Uncontrolled Cumene Emissions (tons/yr)	Uncontrolled Phenol Emissions (tons/yr)	Uncontrolled M-cresol Emissions (tons/yr)	Uncontrolled P-Cresol Emissions (tons/yr)	Total Uncontrolled HAPs Emissions (tons/yr)
701-702	8.06	70.30%	0.0014	68.8	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.12	0.50	0.00	0.00	0.00	0.00	0.62
703-704	8.06	70.30%	0.0014	68.8	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.12	0.50	0.00	0.00	0.00	0.00	0.62
705-706	8.06	70.30%	0.0014	68.8	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.12	0.50	0.00	0.00	0.00	0.00	0.62
707-708	8.06	70.30%	0.0014	68.8	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.12	0.50	0.00	0.00	0.00	0.00	0.62
709-710	8.06	70.30%	0.0014	68.8	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.12	0.50	0.00	0.00	0.00	0.00	0.62
804	8.06	70.30%	0.0021	111.7	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.30	1.22	0.00	0.00	0.00	0.00	1.52
805	8.06	70.30%	0.0021	111.7	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.30	1.22	0.00	0.00	0.00	0.00	1.52
808	8.06	70.30%	0.0021	111.7	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.30	1.22	0.00	0.00	0.00	0.00	1.52
809	8.06	70.30%	0.0021	111.7	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.30	1.22	0.00	0.00	0.00	0.00	1.52
810	8.06	70.30%	0.0021	111.7	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.30	1.22	0.00	0.00	0.00	0.00	1.52
811	8.06	70.30%	0.0021	111.7	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.30	1.22	0.00	0.00	0.00	0.00	1.52
802	8.06	70.30%	0.0004	233	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.12	0.48	0.00	0.00	0.00	0.00	0.60
803	8.06	70.30%	0.0004	233	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.12	0.48	0.00	0.00	0.00	0.00	0.60
806	8.06	70.30%	0.0004	233	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.12	0.48	0.00	0.00	0.00	0.00	0.60
807	8.06	70.30%	0.0004	233	5.20%	20.90%	0.00%	0.00%	0.00%	0.00%	0.12	0.48	0.00	0.00	0.00	0.00	0.60
600	8.25	79.60%	0.0051	425.1	2.90%	12.10%	0.60%	16.50%	2.90%	2.50%	1.81	7.55	0.37	10.29	1.81	1.56	23.38
605	8.25	79.60%	0.0051	425.1	2.90%	12.10%	0.60%	16.50%	2.90%	2.50%	1.81	7.55	0.37	10.29	1.81	1.56	23.38
690	8.25	79.60%	0.0051	425.1	2.90%	12.10%	0.60%	16.50%	2.90%	2.50%	1.81	7.55	0.37	10.29	1.81	1.56	23.38
695	8.25	79.60%	0.0051	425.1	2.90%	12.10%	0.60%	16.50%	2.90%	2.50%	1.81	7.55	0.37	10.29	1.81	1.56	23.38
640	8.25	79.60%	0.0051	637.7	2.90%	12.10%	0.60%	16.50%	2.90%	2.50%	2.71	11.32	0.56	15.44	2.71	2.34	35.08
650	8.25	79.60%	0.0051	637.7	2.90%	12.10%	0.60%	16.50%	2.90%	2.50%	2.71	11.32	0.56	15.44	2.71	2.34	35.08
530	8.54	78.40%	0.0311	327.5	2.80%	11.80%	0.50%	16.00%	2.70%	2.40%	8.36	35.25	1.49	47.79	8.06	7.17	108.13
540	8.54	78.40%	0.0311	327.5	2.80%	11.80%	0.50%	16.00%	2.70%	2.40%	8.36	35.25	1.49	47.79	8.06	7.17	108.13
355-356	8.54	78.40%	0.0311	327.5	2.80%	11.80%	0.50%	16.00%	2.70%	2.40%	8.36	35.25	1.49	47.79	8.06	7.17	108.13
357-358	8.54	78.40%	0.0311	327.5	2.80%	11.80%	0.50%	16.00%	2.70%	2.40%	8.36	35.25	1.49	47.79	8.06	7.17	108.13
359-360	8.54	78.40%	0.0311	327.5	2.80%	11.80%	0.50%	16.00%	2.70%	2.40%	8.36	35.25	1.49	47.79	8.06	7.17	108.13
361-362	8.54	78.40%	0.0311	327.5	2.80%	11.80%	0.50%	16.00%	2.70%	2.40%	8.36	35.25	1.49	47.79	8.06	7.17	108.13
660	8.54	78.40%	0.0311	327.5	2.80%	11.80%	0.50%	16.00%	2.70%	2.40%	8.36	35.25	1.49	47.79	8.06	7.17	108.13
500	8.54	78.40%	0.0311	327.5	2.80%	11.80%	0.50%	16.00%	2.70%	2.40%	8.36	35.25	1.49	47.79	8.06	7.17	108.13
510	8.54	78.40%	0.0311	327.5	2.80%	11.80%	0.50%	16.00%	2.70%	2.40%	8.36	35.25	1.49	47.79	8.06	7.17	108.13
520	8.54	78.40%	0.0311	327.5	2.80%	11.80%	0.50%	16.00%	2.70%	2.40%	8.36	35.25	1.49	47.79	8.06	7.17	108.13
615	8.28	80.50%	0.0057	332.4	3.00%	12.40%	0.60%	16.70%	2.90%	2.60%	1.66	6.86	0.33	9.24	1.60	1.44	21.13
635	8.28	80.50%	0.0057	332.4	3.00%	12.40%	0.60%	16.70%	2.90%	2.60%	1.66	6.86	0.33	9.24	1.60	1.44	21.13
											<b>102.53</b>	<b>430.72</b>	<b>18.22</b>	<b>568.41</b>	<b>96.51</b>	<b>85.48</b>	<b>1301.87</b>

**Methodology**

Uncontrolled HAPs Emissions per oven (tons/yr) = Density (lbs/gal) x Weight Percent VOC (%) x Usage (gal/unit) x Max. Throughput (units/hr) x 8760 (hrs/yr) x 1 ton/2,000 lbs.

**Appendix A: Emission Calculations  
Magnet Wire Coating Ovens  
Limited HAPs Emissions**

Company Name: Rea Magnet Wire Company, Inc.  
Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
Significant Source Modification No.: 003-33777-00013  
Significant Permit Modification No.: 003-33903-00013  
Reviewer: Muhammad D. Khan  
Date: November 23, 2013

Oven ID	Uncontrolled Emissions							Eff. (%) Required for control device	Limited HAPs Emissions						Total Limited HAPs Emissions (tons/yr)
	Ethyl Benzene Emissions (tons/yr)	Uncontrolled Xylene Emissions (tons/yr)	Uncontrolled Cumene Emissions (tons/yr)	Uncontrolled Phenol Emissions (tons/yr)	Uncontrolled M-cresol Emissions (tons/yr)	Uncontrolled P-Cresol Emissions (tons/yr)	Limited Ethyl Benzene Emissions (tons/yr)		Limited Xylene Emissions (tons/yr)	Limited Cumene Emissions (tons/yr)	Limited Phenol Emissions (tons/yr)	Limited M- cresol Emissions (tons/yr)	Limited P- Cresol Emissions (tons/yr)		
701-702	0.12	0.5	0	0	0.00	0.00	0.12	0.50	0.00	0.00	0.00	0.00	0.00	0.62	
703-704	0.12	0.5	0	0	0.00	0.00	0.12	0.50	0.00	0.00	0.00	0.00	0.00	0.62	
705-706	0.12	0.5	0	0	0.00	0.00	0.12	0.50	0.00	0.00	0.00	0.00	0.00	0.62	
707-708	0.12	0.5	0	0	0.00	0.00	0.12	0.50	0.00	0.00	0.00	0.00	0.00	0.62	
709-710	0.12	0.5	0	0	0.00	0.00	0.12	0.50	0.00	0.00	0.00	0.00	0.00	0.62	
804	0.3	1.22	0	0	0.00	0.00	0.30	1.22	0.00	0.00	0.00	0.00	0.00	1.52	
805	0.3	1.22	0	0	0.00	0.00	0.30	1.22	0.00	0.00	0.00	0.00	0.00	1.52	
808	0.3	1.22	0	0	0.00	0.00	0.30	1.22	0.00	0.00	0.00	0.00	0.00	1.52	
809	0.3	1.22	0	0	0.00	0.00	0.30	1.22	0.00	0.00	0.00	0.00	0.00	1.52	
810	0.3	1.22	0	0	0.00	0.00	0.30	1.22	0.00	0.00	0.00	0.00	0.00	1.52	
811	0.3	1.22	0	0	0.00	0.00	0.30	1.22	0.00	0.00	0.00	0.00	0.00	1.52	
802	0.12	0.48	0	0	0.00	0.00	0.12	0.48	0.00	0.00	0.00	0.00	0.00	0.600	
803	0.12	0.48	0	0	0.00	0.00	0.12	0.48	0.00	0.00	0.00	0.00	0.00	0.600	
806	0.12	0.48	0	0	0.00	0.00	0.12	0.48	0.00	0.00	0.00	0.00	0.00	0.600	
807	0.12	0.48	0	0	0.00	0.00	0.12	0.48	0.00	0.00	0.00	0.00	0.00	0.600	
600	1.81	7.55	0.37	10.29	1.81	1.56	1.81	7.55	0.37	10.29	1.81	1.56	1.56	23.39	
605	1.81	7.55	0.37	10.29	1.81	1.56	1.81	7.55	0.37	10.29	1.81	1.56	1.56	23.39	
690	1.81	7.55	0.37	10.29	1.81	1.56	1.81	7.55	0.37	10.29	1.81	1.56	1.56	23.39	
695	1.81	7.55	0.37	10.29	1.81	1.56	1.81	7.55	0.37	10.29	1.81	1.56	1.56	23.39	
640	2.71	11.32	0.56	15.44	2.71	2.34	2.71	11.32	0.56	15.44	2.71	2.34	2.34	35.08	
650	2.71	11.32	0.56	15.44	2.71	2.34	2.71	11.32	0.56	15.44	2.71	2.34	2.34	35.08	
530	8.36	35.25	1.49	47.79	8.06	7.17	8.36	35.25	1.49	47.79	8.06	7.17	7.17	108.12	
540	8.36	35.25	1.49	47.79	8.06	7.17	8.36	35.25	1.49	47.79	8.06	7.17	7.17	108.12	
355-356	8.36	35.25	1.49	47.79	8.06	7.17	8.36	35.25	1.49	47.79	8.06	7.17	7.17	108.12	
357-358	8.36	35.25	1.49	47.79	8.06	7.17	8.36	35.25	1.49	47.79	8.06	7.17	7.17	108.12	
359-360	8.36	35.25	1.49	47.79	8.06	7.17	8.36	35.25	1.49	47.79	8.06	7.17	7.17	108.12	
361-362	8.36	35.25	1.49	47.79	8.06	7.17	8.36	35.25	1.49	47.79	8.06	7.17	7.17	108.12	
660	8.36	35.25	1.49	47.79	8.06	7.17	8.36	35.25	1.49	47.79	8.06	7.17	7.17	108.12	
500	8.36	35.25	1.49	47.79	8.06	7.17	8.36	35.25	1.49	47.79	8.06	7.17	7.17	108.12	
510	8.36	35.25	1.49	47.79	8.06	7.17	8.36	35.25	1.49	47.79	8.06	7.17	7.17	108.12	
520	8.36	35.25	1.49	47.79	8.06	7.17	8.36	35.25	1.49	47.79	8.06	7.17	7.17	108.12	
615	1.66	6.86	0.33	9.24	1.60	1.44	1.66	6.86	0.33	9.24	1.60	1.44	1.44	21.13	
635	1.66	6.86	0.33	9.24	1.60	1.44	1.66	6.86	0.33	9.24	1.60	1.44	1.44	21.13	
								<b>102.46</b>	<b>430.80</b>	<b>18.16</b>	<b>568.42</b>	<b>96.46</b>	<b>85.50</b>	<b>1301.80</b>	

**Methodology**

Controlled HAPs Emissions per oven (tons/yr) = Uncontrolled HAPs Emissions (tons/yr) x ( 1 - Oxidizer Efficiency %)

**Appendix A: Emission Calculations  
Magnet Wire Coating Ovens  
Controlled HAPs Emissions**

Company Name: Rea Magnet Wire Company, Inc.  
Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
Significant Source Modification No.: 003-33777-00013  
Significant Permit Modification No.: 003-33903-00013  
Reviewer: Muhammad D. Khan  
Date: November 23, 2013

Oven ID	Uncontrolled Ethyl Benzene Emissions (tons/yr)	Uncontrolled Xylene Emissions (tons/yr)	Uncontrolled Cumene Emissions (tons/yr)	Uncontrolled Phenol Emissions (tons/yr)	Uncontrolled M-cresol Emissions (tons/yr)	Uncontrolled P-Cresol Emissions (tons/yr)	Eff. (%) Required for control device	Controlled HAPs Emissions						Total Controlled HAPs Emissions (tons/yr)
								Controlled Ethyl Benzene Emissions (tons/yr)	Controlled Xylene Emissions (tons/yr)	Controlled Cumene Emissions (tons/yr)	Controlled Phenol Emissions (tons/yr)	Controlled M-cresol Emissions (tons/yr)	Controlled P-Cresol Emissions (tons/yr)	
701-702	0.12	0.5	0	0	0.00	0.00	98.40%	0.00	0.01	0.00	0.00	0.00	0.00	0.01
703-704	0.12	0.5	0	0	0.00	0.00	98.40%	0.00	0.01	0.00	0.00	0.00	0.00	0.01
705-706	0.12	0.5	0	0	0.00	0.00	98.40%	0.00	0.01	0.00	0.00	0.00	0.00	0.01
707-708	0.12	0.5	0	0	0.00	0.00	98.40%	0.00	0.01	0.00	0.00	0.00	0.00	0.01
709-710	0.12	0.5	0	0	0.00	0.00	98.40%	0.00	0.01	0.00	0.00	0.00	0.00	0.01
804	0.3	1.22	0	0	0.00	0.00	98.40%	0.00	0.02	0.00	0.00	0.00	0.00	0.02
805	0.3	1.22	0	0	0.00	0.00	98.40%	0.00	0.02	0.00	0.00	0.00	0.00	0.02
808	0.3	1.22	0	0	0.00	0.00	98.40%	0.00	0.02	0.00	0.00	0.00	0.00	0.02
809	0.3	1.22	0	0	0.00	0.00	98.40%	0.00	0.02	0.00	0.00	0.00	0.00	0.02
802	0.12	0.48	0	0	0.00	0.00	97.60%	0.00	0.01	0.00	0.00	0.00	0.00	0.014
803	0.12	0.48	0	0	0.00	0.00	97.60%	0.00	0.01	0.00	0.00	0.00	0.00	0.014
806	0.12	0.48	0	0	0.00	0.00	97.60%	0.00	0.01	0.00	0.00	0.00	0.00	0.014
807	0.12	0.48	0	0	0.00	0.00	97.60%	0.00	0.01	0.00	0.00	0.00	0.00	0.014
810	0.3	1.22	0	0	0.00	0.00	98.40%	0.00	0.02	0.00	0.00	0.00	0.00	0.02
811	0.3	1.22	0	0	0.00	0.00	98.40%	0.00	0.02	0.00	0.00	0.00	0.00	0.02
600	1.81	7.55	0.37	10.29	1.81	1.56	95.20%	0.09	0.36	0.02	0.49	0.09	0.07	1.12
605	1.81	7.55	0.37	10.29	1.81	1.56	95.20%	0.09	0.36	0.02	0.49	0.09	0.07	1.12
690	1.81	7.55	0.37	10.29	1.81	1.56	95.20%	0.09	0.36	0.02	0.49	0.09	0.07	1.12
695	1.81	7.55	0.37	10.29	1.81	1.56	95.20%	0.09	0.36	0.02	0.49	0.09	0.07	1.12
640	2.71	11.32	0.56	15.44	2.71	2.34	98.90%	0.03	0.12	0.01	0.17	0.03	0.03	0.39
650	2.71	11.32	0.56	15.44	2.71	2.34	98.90%	0.03	0.12	0.01	0.17	0.03	0.03	0.39
530	8.36	35.25	1.49	47.79	8.06	7.17	98.90%	0.09	0.39	0.02	0.53	0.09	0.08	1.19
540	8.36	35.25	1.49	47.79	8.06	7.17	98.90%	0.09	0.39	0.02	0.53	0.09	0.08	1.19
355-356	8.36	35.25	1.49	47.79	8.06	7.17	98.90%	0.09	0.39	0.02	0.53	0.09	0.08	1.19
357-358	8.36	35.25	1.49	47.79	8.06	7.17	98.90%	0.09	0.39	0.02	0.53	0.09	0.08	1.19
359-360	8.36	35.25	1.49	47.79	8.06	7.17	98.90%	0.09	0.39	0.02	0.53	0.09	0.08	1.19
361-362	8.36	35.25	1.49	47.79	8.06	7.17	98.90%	0.09	0.39	0.02	0.53	0.09	0.08	1.19
660	8.36	35.25	1.49	47.79	8.06	7.17	98.90%	0.09	0.39	0.02	0.53	0.09	0.08	1.19
500	8.36	35.25	1.49	47.79	8.06	7.17	98.90%	0.09	0.39	0.02	0.53	0.09	0.08	1.19
510	8.36	35.25	1.49	47.79	8.06	7.17	98.90%	0.09	0.39	0.02	0.53	0.09	0.08	1.19
520	8.36	35.25	1.49	47.79	8.06	7.17	98.90%	0.09	0.39	0.02	0.53	0.09	0.08	1.19
615	1.66	6.86	0.33	9.24	1.60	1.44	99.20%	0.01	0.05	0.00	0.07	0.01	0.01	0.17
635	1.66	6.86	0.33	9.24	1.60	1.44	99.20%	0.01	0.05	0.00	0.07	0.01	0.01	0.17
								<b>1.40</b>	<b>5.89</b>	<b>0.25</b>	<b>7.72</b>	<b>1.32</b>	<b>1.16</b>	<b>17.75</b>

**Methodology**

Controlled HAPs Emissions per oven (tons/yr) = Uncontrolled HAPs Emissions (tons/yr) x ( 1 - Oxidizer Efficiency %)

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only  
MM BTU/HR <100  
Thermal Oxidizers**

**Company Name: Rea Magnet Wire Company, Inc.  
Address City In Zip: 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
Significant Source Modification No.: 003-33777-00013  
Significant Permit Modification No.: 003-33903-00013  
Reviewer: Muhammad D. Khan  
Date: November 23, 2013**

Heat Input Capacity for Thermal Oxidizers = 20.6 MMBtu/hr  
Annealer for Oven #550 = 0.2 MMBtu/hr

Heat Input Capacity \*MMBtu/hr                      Potential Throughput MMCF/yr

20.8

182.2

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.17	0.69	0.05	9.1	0.50	7.7

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.  
\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.913E-04	1.093E-04	6.833E-03	1.640E-01	3.098E-04

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	4.555E-05	1.002E-04	1.275E-04	3.462E-05	1.913E-04

\* includes emissions from internal TO for oven #550 and associated annealer (0.2+ 0.9) MMBtu/hr =1.1 MMBtu/hr

Total HAPs Emissions: 1.719E-01

**Methodology**

All emission factors are based on normal firing.  
MMBtu = 1,000,000 Btu  
MMCF = 1,000,000 Cubic Feet of Gas  
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu  
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)  
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
The five highest organic and metal HAPs emission factors are provided above.  
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**  
**Thermal Oxidizers- Green house gas**

**Company Name: Rea Magnet Wire Company, Inc.**  
**Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, Indiana 46803**  
**Significant Source Modification No.: 003-33777-00013**  
**Significant Permit Modification No.: 003-00000-00013**  
**Reviewer: Muhammad D. Khan**  
**Date: November 23, 2013**

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
120,000.00	2.3	2.2	
Existing oxidizers -PTE in tons/yr	10,932	0.21	0.20
Summed Existing oxidizers Potential Emissions in tons/yr	10,933		
Existing oxidizers -CO2e in tons/yr	<b>10,997</b>		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2 lb/MMcf. The N2O Emission Factor for low Nox burner is 0.64 lb/MMcf.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (24) + N2O Potential Emission ton/yr x N2O GWP (298).



**Appendix A: Emission Calculations**  
**Natural Gas Combustion (Less than 100 MMBtu/hr): Magnet Wire Oven 560**

**Company Name: Rea Magnet Wire Company, Inc.**  
**Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, IN 46803**  
**MSM No.: 003-33777-00013**  
**SPM No.: 003-33903-00013**  
**Reviewer: Muhammad D. Khan**  
**Date: November 23, 2013**

			Criteria Pollutants					GHGs						
			PM*	PM10*	PM2.5*	SO2	NOx**	VOC	CO	CO2	N2O***	CH4	GHG Mass-Based	CO2e
Emission Factor in lb/MMCF			1.9	7.6	7.6	0.6	100.0	5.5	84.0	120000	2.2	2.3		
Emission Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emissions (tons/yr)											
Magnet Wire Oven 560 TO	1	8.588	0.008	0.033	0.033	0.003	0.429	0.024	0.361	515.29	0.01	0.01	515.31	518.35
Annealer	0.2	1.718	0.002	0.007	0.007	0.001	0.086	0.005	0.072	103.06	0.00	0.00	103.06	103.67
<b>Total</b>			<b>0.01</b>	<b>0.04</b>	<b>0.04</b>	<b>0.00</b>	<b>0.52</b>	<b>0.03</b>	<b>0.43</b>	<b>618.35</b>	<b>0.01</b>	<b>0.01</b>	<b>618.38</b>	<b>622.02</b>

Emission Factors are from AP-42, Tables 1.4-1 and 1.4-2.

\*PM emission factor is filterable PM only. PM10 emission factor is filterable PM10 and condensable PM combined. PM2.5 emission factor is filterable PM2.5 and condensable PM combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

\*\*\*Emission Factors for N2O: Uncontrolled = 2.2, Low NOx Burner = 0.64

			HAPs - Organics					HAPs - Metals					Total HAPs
			Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Lead	Cadmium	Chromium	Manganese	Nickel	
Emission Factor in lb/MMCF			2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	1.8880
Emission Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emissions (tons/yr)										
Magnet Wire O	1	8.588	9.0E-06	5.2E-06	3.2E-04	7.7E-03	1.5E-05	2.1E-06	4.7E-06	6.0E-06	1.6E-06	9.0E-06	8.1E-03
12 Annealer	0.2	1.718	1.8E-06	1.0E-06	6.4E-05	1.5E-03	2.9E-06	4.3E-07	9.4E-07	1.2E-06	3.3E-07	1.8E-06	1.6E-03
<b>Total</b>			<b>1.1E-05</b>	<b>6.2E-06</b>	<b>3.9E-04</b>	<b>9.3E-03</b>	<b>1.8E-05</b>	<b>2.6E-06</b>	<b>5.7E-06</b>	<b>7.2E-06</b>	<b>2.0E-06</b>	<b>1.1E-05</b>	<b>9.7E-03</b>

Emission Factors are from AP-42, Tables 1.4-3 and 1.4-4.

The five highest organic and metal HAPs emission factors are provided above. The total HAPs is the sum of all HAPs listed in AP-42, Tables 1.4-3 and 1.4-4.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Methodology**

Heating Value of Natural Gas is assumed to be 1020 MMBtu/MMCF

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) \* 8,760 hrs/yr \* 1 MMCF/1,020 MMBtu

Potential Emission (tons/yr) = Throughput (MMCF/yr) \* Emission Factor (lb/MMCF) \* (1 ton/2,000 lb)

GHG Mass-Based (ton/yr) = CO2 (ton/yr) + N2O (ton/yr) + CH4 (ton/yr)

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (24) + N2O Potential Emission ton/yr x N2O GWP (298).

**Appendix A: Emissions Calculations  
VOC and Particulate Emissions from Oven #560**

Company Name: Rea Magnet Wire Company, Inc.  
Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, IN 46803  
Significant Source Modification No.: 003-33777-00013  
Significant Permit Modification No.: 003-33903-00013  
Reviewer: Muhammad D. Khan  
Date: November 23, 2013

**VOC and Particulate Emissions**

Unit ID	Stack ID	Coating Material	Density (lb/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Material per Unit (gal/lb)	Maximum throughput (lb/hr)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (lb/hr)	Potential VOC (lb/day)	Uncontrolled VOC PTE (ton/yr)	Transfer Efficiency	Particulate Potential (ton/yr)	lb VOC/gal Coating Solids	Emission Limit per 8-2-8 (lb VOC/gal coating excluding water)	Equivalent 326 IAC 8-2-8 Emission Limit (lb VOC/gal Coating Solids)	Minimum Control efficiency (%)	Controlled VOC PTE (ton/yr)
560	443	Composite	8.93	76.30%	0%	76.3%	0%	17.10%	0.003971	650	6.81	17.59	422.09	77.03	100%	0.00	39.90	1.70	2.21	94.46%	4.27	

**Methodology**

Pounds of VOC per Gallon Coating Less Water = (Density (lb/gal) \* Weight % Organics) / (1 - Volume % Water)  
Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)  
Potential VOC (lb/hr) = Gal of Mat. (gal/lb) \* Maximum Throughput (lb/hr) \* Pounds VOC per gallon of Coating  
Potential VOC (lb/day) = Gal of Mat. (gal/lb) \* Maximum Throughput (lb/hr) \* Pounds VOC per gallon of Coating \* (24 hr/day)  
Potential VOC (ton/yr) = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/lb) \* Maximum Throughput (lb/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
Transfer Efficiency = 100% based on flowcoating  
Particulate Potential (ton/yr) = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1 - Weight % Volatiles) \* (1 - Transfer efficiency) \* (8760 hrs/yr) \* (1 ton/2000 lbs)  
lb VOC/gal Coating Solids as provided by the Source  
Equivalent 326 IAC 8-2-8 Emission Limit (lb VOC/gal Coating Solids) = 326 IAC 8-2-8 Emission Limit (lb VOC/gal of Coating less Water) / (1 - (326 IAC 8-2-8 Emission Limit/7.36))  
Minimum Control Efficiency = Minimum needed control efficiency to meet 326 IAC 8-2-8 limit = (lb VOC/gal Coating Solids - 326 IAC 8-2-8 Equivalent Emission limit) / (lb VOC/gal Coating Solids)  
Controlled/Limited VOC PTE (After Oxidizers) (tons/yr) = Uncontrolled VOC Emissions (tons/yr) x Oxidizer Eff. (%) Needed to meet 326 IAC 8-2-8 Emission Limit

**HAP Emissions**

Oven ID	Stack ID	Material	Density (lbs/gal)	Weight % VOC	Usage (gal/lb)	Max Throughput (lbs/hr)	Weight of % Ethyl Benzene	Weight of % Xylene	Weight of % Phenol	Weight of % 3-Methyl phenol	Weight of % 4-Methyl phenol	Weight of % 2,4-dimethyl phenol	Weight of % 1,2,4-trimethyl phenol	Weight of % 2-methyl phenol	Weight of % Naphthalene	Total HAP
560	443	Composite (70% Isonel and 30% Tritherm)	8.93	76.30%	0.003971	650.0	1.83%	7.26%	1.19%	6.51%	4.76%	3.01%	2.94%	2.45%	0.91%	
Uncontrolled Potential Emissions (ton/yr):							1.85	7.33	1.20	6.57	4.81	3.04	2.97	2.47	0.92	<b>31.16</b>
Controlled Potential Emissions (ton/yr):							0.02	0.07	0.01	0.07	0.05	0.03	0.03	0.02	0.01	<b>0.31</b>
Limited Potential Emissions (ton/yr):							0.11	0.45	0.07	0.41	0.30	0.19	0.18	0.15	0.06	<b>1.93</b>

PTE based on the worst case Formvar

**Methodology**

Uncontrolled Potential Emissions (ton/yr) = Density (lb/gal) \* Usage (gal/lb) \* Max Throughput (lb/hr) \* Wt % HAP \* (8760 hr/yr) \* (1 ton/2000 lb)  
Controlled Potential Emissions (ton/yr) = Uncontrolled Potential Emissions (ton/yr) \* (1 - Control Efficiency Needed to Meet 326 IAC 8-2-8 Emission Limit)  
Limited Potential Emissions (ton/yr) = 40 CFR 63, Subpart M MMM Emission Limit (lb HAP/gal solids) \* (Volume % Solids) \* Usage (gal/lb) \* Max Throughput (lb/hr) \* (8760 hr/yr) \* (1 ton/2000 lb)

Company Name: Rea Magnet Wire Company, Inc.  
Address City IN Zip : 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
Significant Source Modification No.: 003-33777-00013  
Significant Permit Modification No.: 003-33903-00013  
Reviewer: Muhammad D. Khan  
Date: November 23, 2013

## Magnet Wire Oven #550

Usage Date:	Gal/Hr	6.252
	Density (lb/gal)	8.18
	Lb/Hr	51.14
	Hr/Yr	8760
	Lb/Yr	447998.3
	Dest %	99%
	VOC %	84%
	<b>After Controls</b>	<b>Before Controls</b>
	<b>(tons/yr)</b>	<b>(tons/yr)</b>
VOC Emissions (oven)	1.88	188.16
Thermal Oxidizer (combustion)	0.03	0.03
<b>Oven Totals</b>	<b>1.91</b>	<b>188.19</b>

## HAPs

Oven 550		HAP Content	Lb/hr	Ton/Yr	Tons/yr
CAS No.		(percentage)	After Controls	Before Controls	
108-95-2	Phenol	20.6%	0.105	0.461	46.14
1330-20.7	Xylene	15.7%	0.080	0.352	35.17
100.41-4	Ethylbenzene	3.8%	0.019	0.085	8.51
108-39-4	3-methylphenol	3.0%	0.015	0.067	6.72
106-44-5	4-methylphenol	2.2%	0.011	0.049	4.93
95-48-7	2-methylphenol	1.1%	0.006	0.025	2.46
	<b>Total HAPS</b>		<b>0.237</b>	<b>1.039</b>	<b>103.94</b>

Thermal oxidizer and annealing emissions associated with oven #550 are included with the oxidizer emissions.

**Appendix A: Emission Calculations  
Reciprocating Internal Combustion Engines - Natural Gas  
2-Stroke Lean-Burn (2SLB) Engines**

**Company Name: Rea Magnet Wire Company, Inc.**  
**Address City IN Zip : 4300 New Haven Avenue, Fort Wayne, Indiana 46803**  
**Significant Source Modification No.: 003-33777-00013**  
**Significant Permit Modification No.: 003-33903-00013**  
**Reviewer: Muhammad D. Khan**  
**Date: November 23, 2013**

Natural Gas Emergency Generators

Emergency Generator-stack 415	395
Emergency Generator-stack 214	103
Emergency Generator-stack 295	69
<b>Total</b>	<b>567</b>

Maximum Output Horsepower Rating (hp)	567
Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr)	7500
Maximum Hours Operated per Year (hr/yr)	500
Potential Fuel Usage (MMBtu/yr)	2126
High Heat Value (MMBtu/MMscf)	1020
Potential Fuel Usage (MMcf/yr)	2.08

Criteria Pollutants	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor (lb/MMBtu)	3.84E-02	4.83E-02	3.84E-02	5.88E-04	3.17E+00	1.20E-01	3.86E-01
Potential Emissions (tons/yr)	0.04	0.05	0.04	0.001	3.37	0.13	0.41

\*PM emission factor is for filterable PM-10. PM10 emission factor is filterable PM10 + condensable PM.  
 PM2.5 emission factor is filterable PM2.5 + condensable PM.

**Hazardous Air Pollutants (HAPs)**

Pollutant	Emission Factor (lb/MMBtu)	PTE (tons/yr)
Acetaldehyde	7.76E-03	0.008
Acrolein	7.78E-03	0.008
Benzene	1.94E-03	0.002
1,3-Butadiene	8.20E-04	0.001
Ethylbenzene	1.08E-04	0.000
Formaldehyde	5.52E-02	0.059
Methanol	2.48E-03	0.003
Methylene Chloride	1.47E-04	0.000
Hexane	4.45E-04	0.000
Toluene	9.63E-04	0.001
2,2,4-Trimethylpentane	8.46E-04	0.001
Total PAH**	1.34E-04	0.000
<b>Total</b>		<b>0.08</b>

HAP pollutants consist of the twelve highest HAPs included in AP-42 Table 3.2-1.

\*\*PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

**Methodology**

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-1

Potential Fuel Usage (MMBtu/yr) = [Maximum Output hp Rating (hp)] \* [Brake Specific Fuel Consumption (Btu/hp-hr)] \* [Maximum Hrs Operated per Year (hr/yr)] / [1000000 Btu/MMBtu]

PTE (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] \* [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

Greenhouse Gases (GHGs)	Greenhouse Gas (GHG)		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu*	110	1.25	
Emission Factor in lb/MMcf**			2.2
Potential Emission in tons/yr	116.94	1.33	0.00
Summed Potential Emissions in tons/yr	118.27		
CO2e Total in tons/yr	149.52		

**Methodology**

\*The CO2 and CH4 emission factors are from Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2

\*\*The N2O emission factor is from AP 42, Table 1.4-2. The N2O Emission Factor for uncontrolled is 2.2 lb/MMcf. The N2O Emission Factor for low Nox burner is 0.64 lb/MMcf.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

For CO2 and CH4: Emission (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] \* [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

For N2O: Emission (tons/yr) = [Potential Fuel Usage (MMCF/yr)] \* [Emission Factor (lb/MMCF)] / [2,000 lb/ton]

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (24) + N2O Potential Emission ton/yr x N2O GWP (298).

**Abbreviations**

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

SO2 = Sulfur Dioxide

NOx = Nitrous Oxides

VOC = Volatile Organic Compounds

CO = Carbon Monoxide

CO2 = Carbon Dioxide

CH4 = Methane

N2O = Nitrous Oxide

CO2e = CO2 equivalent emissions



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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**Michael R. Pence**  
*Governor*

**Thomas W. Easterly**  
*Commissioner*

## SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

**TO:** Brett Kauser  
Rea Magnet Wire Company, Inc.  
4300 New Haven Avenue  
Fort Wayne, IN 46803

**DATE:** March 5, 2014

**FROM:** Matt Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

**SUBJECT:** Final Decision  
Significant Permit Modification  
003-33903-00013

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:  
Nelson Ayala – Plant Manager  
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at [jbrush@idem.IN.gov](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 6/13/2013



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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**Michael R. Pence**  
*Governor*

**Thomas W. Easterly**  
*Commissioner*

March 5, 2014

TO: Allen County Public Library

From: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

**Applicant Name: Rea Magnet Wire Company, Inc.**  
**Permit Number: 003-33903-00013**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures  
Final Library.dot 6/13/2013

# Mail Code 61-53

IDEM Staff	GHOTOPP 3/5/2014 Rea Magnet Wire Co. Inc 003-33903-00013 Final		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	 Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	

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1		Brett Kauser Rea Magnet Wire Co, Inc 4300 New Haven Ave Ft Wayne IN 46803 (Source CAATS) via confirmed delivery										
2		Nelson Ayala Plant Mgr Rea Magnet Wire Co, Inc 4300 New Haven Ave Ft Wayne IN 46803 (RO CAATS)										
3		Daniel & Sandy Trimmer 15021 Yellow River Road Columbia City IN 46725 (Affected Party)										
4		Duane & Deborah Clark Clark Farms 6973 E. 500 S. Columbia City IN 46725 (Affected Party)										
5		Allen County Public Library 900 Library Plaza, P.O. Box 2270 Fort Wayne IN 46802 (Library)										
6		Fort Wayne City Council and Mayors Office 200 E Berry Street Ste 120 Fort Wayne IN 46802 (Local Official)										
7		Mr. Jeff Coburn Plumbers & Steamfitters, Local 166 2930 W Ludwig Rd Fort Wayne IN 46818-1328 (Affected Party)										
8		Allen Co. Board of Commissioners 200 E Berry Street Ste 410 Fort Wayne IN 46802 (Local Official)										
9		Fort Wayne-Allen County Health Department 200 E Berry St Suite 360 Fort Wayne IN 46802 (Health Department)										
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