INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

Mr. Pravin Patel
Rolls Royce Corporation
2355 S. Tibbs Avenue
Indianapolis, IN 46241

Re: 097-30291-00311
Significant Permit Modification to
Part 70 Renewal No.: T097-25529-00311

Dear Mr. Patel:

Rolls Royce Corporation was issued a Part 70 Operating Permit Renewal on March 22, 2010 for a stationary manufacturing and testing facility for aerospace engines. A letter requesting changes to this permit was received on February 24, 2011.. 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.

The modification consists of the installation of two (2) natural gas fired turbine generators. For your convenience, the entire Part 70 Operating Permit as modified is attached.

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 Laura Spriggs, OAQ, 100 North Senate Avenue, MC 61-53 1003 IGCN, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Laura Spriggs or extension (3-5693), or dial (317) 233-5693.

Sincerely,

Donald F. Robin, P.E., Section Chief
Permits Branch
Office of Air Quality

Attachments

DFR/lss

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

Tom Rarick
ERM
11350 North Meridian, Suite 220
Carmel, IN 46032

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Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Rolls Royce Corporation
Plant 8 - 2001 South Tibbs Ave.
Plant 5 - 2355 South Tibbs Ave.
Indianapolis, Indiana 46241

(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.

Operation Permit No.: T097-25529-00311	
Issued by: / Original Signed by: Chrystal A. Wagner, Section Chief Permits Branch Office of Air Quality	Issuance Date: March 22, 2010 Expiration Date: March 22, 2015

Minor Permit Modification No.: 097-29888-00311, issued March 1, 2011

Significant Permit Modification No.: 097-30291-00311	
Issued by: Donald F. Robin, P.E., Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date: March 22, 2015

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Attachment F: 40 CFR 63, Subpart YYYY: National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

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, A.3 through A.4 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 manufacturing and testing facility for aerospace engines.

Source Address:	Plant 8 - 2001 South Tibbs Ave., Indianapolis, IN 46241 Plant 5 - 2355 South Tibbs Ave., Indianapolis, IN 46241
General Source Phone Number:	317-230-2000
SIC Code:	3724
County Location:	Marion
Source Location Status:	Nonattainment for $PM_{2.5}$ Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules and Nonattainment NSR Major Source, Section 112 of the Clean Air Act Nested Source with fossil fuel fired boilers (or combinations thereof) totaling more than two hundred fifty million (250,000,000) British thermal units per hour heat input, as 1 of 28 Source Categories

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This aerospace engine manufacturing and testing company consists of two (2) plants:

(a) Plant 8 is located at 2001 South Tibbs Avenue, Indianapolis, Indiana 46241; and

(b) Plant 5 is located at 2355 South Tibbs Avenue, Indianapolis, Indiana 46241.

Since the two (2) plants are located on contiguous properties, have the same SIC code and are under common control of the same entity, they are considered one (1) source, as defined by 326 IAC 2-7-1(22). This determination was made during the issuance of the Part 70 Permit 097-7238-00311 in 2003 and has not been changed in this permitting approval.

A.3 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) Six (6) boilers identified below:

EU ID	Unit Identification	MMBtu/hr	Fuels Permitted to Use	Stack	Date constructed
0070-58	Babcock & Wilcox Boiler	44	Natural Gas, Landfill Gas, No. 2, No. 4 & No. 6 fuel oil	8-3	1953
0070-59	Babcock & Wilcox Boiler	44	Natural Gas, Landfill Gas, No. 2, No. 4, & No. 6 fuel oil	8-4	1953
0070-62	Combustion Engineering Boiler	244	Natural Gas, Landfill Gas, No. 2, No. 4, & No. 6 fuel oil	8-5	1969
0070-63	Combustion Engineering Boiler	244	Natural Gas, Landfill Gas, No. 2, No. 4, & No. 6 fuel oil	8-6	1969

EU ID	Unit Identification	MMBtu/hr	Fuels Permitted to Use	Stack	Date constructed
0070-64	Combustion Engineering Boiler	244	Natural Gas, Landfill Gas, No. 2, No. 4, & No. 6 fuel oil	8-7	1969
0070-65	Combustion Engineering Boiler	244	Natural Gas, Landfill Gas, No. 2, No. 4, & No. 6 fuel oil	8-8	1969

(b) Two (2) gas turbines identified below:

Emission Unit ID No.	Unit Identification	Maximum Capacity, MMBtu/hr	Fuels Permitted to use	Stack No.	Date Constructed or last permitted
0070-80	Gas Turbine	68	Natural Gas, Landfill gas	8-80	1999
0070-71	Gas Turbine	35	Natural Gas	8-9	1999

Under 40 CFR 60, Subpart GG, 0070-80 and 0070-71 are considered affected facilities. Under 40 CFR 63, Subpart YYYY, 0070-80 and 00070-71 are considered existing affected sources.

(c) Seven (7) paint booths identified as emission units 0070-N56a, units 0070-10a, 0070-10b, 0070-10c, 0070-10d, 0070-84, and 0070-85, controlled by dry filters, exhausting out stacks identified as SN56 a, 5-10a, 5-10b, 5-10c, 5-10d, S-84, and S-85, respectively. Paint booths 0070-N56a, 0070-10a, 0070-10b, 0070-10c, and 0070-10d were installed prior to 1974 and modified in 1998 to comply with the aerospace NESHAPs. Paint booths 0070-84, 0070-85, and 0070-86 were installed in 2003. Under 40 CFR 63, Subpart GG, the paint booths are considered affected facilities.

(d) Facility-wide wipe cleaning operations.

(e) Degreasing operations, consisting of:

(1) Two (2) Open Top Vapor Degreasers, identified as emission units 0070-13 and 0070-31, using perchloroethylene as the solvent, exhausting inside the building, and reconstructed in 1997.

(2) One (1) Open Top Vapor Degreaser, identified as emission unit 0311-82, permitted to use N-Propyl Bromide and Perchlorethylene as the solvent, exhausting inside the building, and reconstructed in 2000.

(3) Portable Cold Cleaner Degreasing Tanks, used for degreasing parts, identified as emission unit 0070-12, using mineral spirits as the solvent, and exhausting into the building.

(4) Spray cleaning booths, constructed prior to 1990, identified as emission unit 0070-14, using mineral spirits as the solvent, and exhausting outside the building.

(5) One (1) stationary enclosed parts cleaning machine, Vacuum Degreaser Model V4-EX, identified as emission unit 24087, approved in 2006 for construction, using only Tetrachloroethylene as the solvent, with a cleaning capacity of 1.135 cubic meters, and exhausting inside the building.

Under 40 CFR 63, Subpart T, the degreasing operations are considered existing affected facilities.

(f) Miscellaneous sand and shot Blast Machine operations identified as:

(1) Emission unit 0070-N55, miscellaneous sanding and blasting, controlled by dust collector, exhausting out stack SN55, constructed in 1991.

(g) Woodworking operations, prior to 1969, consisting of:

(1) Emission unit 0070-72, controlled by dust collector, exhausting out stack 8-16,

(2) Emission unit 0070-05, controlled by dust collector, exhausting out stack 5-8.

(h) Jet fueled turbine engines, identified as follows:

(1) Two (2) emission units, identified as 0070-66, constructed in 1955, with a maximum operating capacity of 107 million British thermal units per hour each, exhausting out stacks identified as 8-11A and 8-11B. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-66 are considered existing affected sources.

(2) Twelve (12) emission units, identified as 0070-67, constructed in 1955, with a maximum operating capacity of 27.2 million British thermal units per hour each, exhausting out stacks identified 8-13A through M respectively. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-67 are considered existing affected sources.

(3) Two (2) natural gas fired turbine generators, identified as 0070-68a and 0070-68b, approved in 2011 for construction, each with a single 39 MMBtu/hr combustor, exhausting out stacks identified as 8-12A and 8-12B. Under 40 CFR 60, Subpart KKKK, the turbines identified as 0070-68a and 0070-68b are considered affected sources. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68a and 0070-68b are considered new affected sources.

(4) Three (3) jet fuel fired turbine generators, identified as 0070-68c, 0070-68d, and 0070-68e, constructed in 1955, each with two (2) 27.2 MMBtu/hr combustor units, exhausting out stacks identified as 8-12C, 8-12D, and 8-12E. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68c, 0070-68d, and 0070-68e are considered existing affected sources.

(5) Four (4) emission units identified as 0070-69, constructed in 1955, with a maximum operating capacity of 27.2 million British thermal per hour units each, exhausting out stacks identified as 8-14A through D. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-69 are considered existing affected sources.

(i) Three (3) American Shack Heaters, identified as emission unit 0070-70, exhausting out stacks identified 8-6 A through C consisting of:

(1) Two (2) natural gas fired heaters, identified as 0070-70A and 0070-70B, having a maximum heating input capacity of 90.0 million British thermal units per hour each; and

(2) One (1) natural gas fired heater, identified as 0070-70C, having a maximum heat input capacity of 90 million British thermal units per hour.

(j) Forty-nine (49) engine test stand cells identified below. These test stand cells are used to test engines manufactured at the source. The engines tested are fueled by either Jet fuel, Diesel Oil #2, or Natural Gas. All test stand cells except test stand cells 133 and 135 (Emission Unit IDs 0070-87 and 0070-88) were constructed prior to 1977. Test stand cells 133 and 135 (Emission Unit IDs 0070-87 and 0070-88) were approved in 2007 for construction. Test cell 111 (Emission Unit ID 0070-N4) was approved in 1999 for modification. Test cell 824 (Emission Unit ID 0070-N32) was approved in 2008 for modification. Test cell 114 (Emission Unit ID 0070-N6) was approved in 2011 for

modification.

Engine Test Cells - Plant 5				
Emission Unit ID No.	Engine Test Cell ID	Maximum Test Cell Capacity	Type of Fuels Used	Stack ID
0070-N3	109	5000 brake horsepower	Jet fuel, Diesel	SN3
0070-N4	111	10000 pounds of thrust (a maximum of 6 engines tested per day)	Jet fuel	SN4
0070-N5	113	10000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN5
0070-N6	114	30000 pounds of fuel per hour	Jet fuel	SN6
0070-N7	115	7000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN7
0070-N8	116	5000 brake horsepower	Jet fuel, Diesel	SN8
0070-N9	117	5000 brake horsepower	Jet fuel, Diesel	SN9
0070-N10	118	5000 brake horsepower	Jet fuel, Diesel	SN10
0070-N11	119	5000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN11
0070-N12	120	7000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN12
0070-N13	121	10000 brake horsepower	Jet fuel, Diesel	SN13
0070-N15	123	5000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN15
0070-N16	140	1500 brake horsepower	Jet fuel	SN16
0070-N17	141	750 brake horsepower	Jet fuel	SN17
0070-N18	142	800 brake horsepower	Jet fuel	SN18
0070-N19	143	750 brake horsepower	Jet fuel	SN19
0070-N20	144	750 brake horsepower	Jet fuel	SN20
0070-N21	145	750 brake horsepower	Jet fuel	SN21
0070-N22	146	1500 brake horsepower	Jet fuel	SN22
0070-N23	147	1500 brake horsepower	Jet fuel	SN23
0070-N24	148	1500 brake horsepower	Jet fuel	SN24
0070-N25	149	650 brake horsepower	Jet fuel	SN25
0070-N27	152	1500 brake horsepower	Jet fuel	SN27
0070-87	133	715 brake horsepower, with maximum fuel flow capacity of 59 gal/hr	Jet fuel	S87
0070-88	135	715 brake horsepower, with maximum fuel flow capacity of 59 gal/hr	Jet fuel	S88

Engine Test Cells - Plant 8				
Emission Unit ID	Engine Test Cell	Maximum Test Cell Capacity	Type of Fuels Used	Stack ID
0070-N34	843	10000 brake horsepower	Jet fuel	SN34(A,B)
0070-N35	861	9000 pounds of thrust	Jet fuel, Diesel	SN35
0070-N36	862	6000 brake horsepower	Jet fuel, Diesel	SN36
0070-N37	871	15000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN37(A,B)
0070-N38	872	9000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN38(A,B)
0070-N39	873	9000 brake horsepower	Jet fuel	SN39(A,B,C)
0070-N40	875	5000 brake horsepower	Diesel	SN40
0070-N41	881	10000 pounds of thrust	Jet fuel	SN41(A,B)
0070-N42	882	30000 pounds of thrust	Jet fuel	SN42(A,B,C,D,E,F)
0070-N43	883	2500 brake horsepower	Jet fuel	SN43(A,B)
0070-N44	884	2000 brake horsepower	Jet fuel	SN44
0070-N45	885	800 brake horsepower	Jet fuel, Diesel	SN45(A,B)
0070-N46	886	30000 pounds of thrust	Jet fuel, Diesel	SN46(A,B,C,D)
0070-N47	893	500 pounds of thrust	Diesel	SN47
0070-N48	894	350 brake horsepower	Diesel	SN48
0070-N29	821	10 pounds/second air	Jet fuel, Diesel & Natural Gas	SN29(A,B)
0070-N30	822	50 pounds/second air	Jet fuel, Diesel & Natural Gas	SN30(A,B)
0070-N31	823	60 pounds/second air	Jet fuel, Diesel & Natural Gas	SN31(A,B)
0070-N32	824	120 pounds/second air	Jet fuel, Diesel & Natural Gas	SN32(A,B)
0070-N33	826	25 pounds/second air	Jet fuel, Diesel	SN33(A,B)
0070-N54	8137	10 pounds/second air	Jet fuel, Diesel & Natural Gas	SN54
0070-N54a	8137	12.5 MMBtu/hr	No. 2 Diesel fuel	Not Available
0070-N55	8126	0.5 pounds/second air	Jet fuel, Diesel & Natural Gas	Not Available
0070-N56	8128	1 pounds/second air	Jet fuel, Diesel & Natural Gas	Not Available

Under 40 CFR 63, Subpart PPPPP, the collection of test cells in (j) is considered an existing affected source.

(k) Rental diesel-fired generators, identified as 0070-89, permitted in 2008 and 2009, and approved for installation on an as-needed basis.

A.4 Specifically Regulated 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) Classified documents incinerator with a maximum rated capacity of 125 pounds per two hour cycle. [326 IAC 4-2] [326 IAC 9-1]

(b) The following activities or categories of activities with individual HAP emissions not previously identified which have potential emissions greater than 1 pound per day but less than 5 pounds per day or 1 ton per year of a single HAP. [326 IAC 6.5-1]

(1) Stationary and portable welding, brazing, soldering and cutting operations
(2) Fuel and oil nozzle test stands
(3) Penetrant test
(4) Chemical milling and deoxidizing solution
(5) Air stripper at waste treatment plant
(6) Print shop operations
(7) All plating operations
(8) Powder coating

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

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]

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, T097-25529-00311, 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]

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]

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)]

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)]

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)]

(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 April 15 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 (12)][326 IAC 2-7-6(1) and (6)][326 IAC 1-6-3]

(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)(8) 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 T097-25529-00311 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)]

(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]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) 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) or (c). 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) and (c)(1).

(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]

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]

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 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 thirty percent (30%) 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.2 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.3 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.4 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.5 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.6 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.7 Performance Testing [326 IAC 3-6]

(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.8 Compliance Requirements [326 IAC 2-1.1-11]

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.9 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

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(34).

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.

C.10 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(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.

(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.11 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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.12 Risk Management Plan [326 IAC 2-7-5(11)] [40 CFR 68]

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.13 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to 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 excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning 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 normal or usual manner of operation.

(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 record the reasonable response steps taken.

C.14 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.15 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(32) ("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.16 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. 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) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in

326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.

(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(d) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and

(2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2][326 IAC 2-3]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. 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.

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (ww) and/or 326 IAC 2-3-1 (pp), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).

(f) The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:

(1) The name, address, and telephone number of the major stationary source.

(2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.

(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).

(4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part 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

(g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

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 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]

(a) Six (6) boilers identified below:

Emission Unit ID No.	Unit Identification	Maximum Capacity, MMBtu/hr	Fuels Permitted to Use	Stack No.	Date Constructed or Reconstructed
0070-58	Babcock & Wilcox Boiler	44	Natural Gas, Landfill Gas, No. 2, No. 4 & No. 6 fuel oil	8-3	1953
0070-59	Babcock & Wilcox Boiler	44	Natural Gas, Landfill Gas, No. 2, No. 4 & No. 6 fuel oil	8-4	1953
0070-62	Combustion Engineering Boiler	244	Natural Gas, Landfill Gas, No. 2, No. 4 & No. 6 fuel oil	8-5	1969
0070-63	Combustion Engineering Boiler	244	Natural Gas, Landfill Gas, No. 2, No. 4 & No. 6 fuel oil	8-6	1969
0070-64	Combustion Engineering Boiler	244	Natural Gas, Landfill Gas, No. 2, No. 4 & No. 6 fuel oil	8-7	1969
0070-65	Combustion Engineering Boiler	244	Natural Gas, Landfill Gas, No. 2, No. 4 & No. 6 fuel oil	8-8	1969

(b) Two (2) gas turbines identified below:

Emission Unit ID No.	Unit Identification	Maximum Capacity, MMBtu/hr	Fuels Permitted to Use	Stack No.	Date Constructed
0070-80	Gas Turbine	68	Natural Gas, Landfill gas	8-80	1999
0070-71	Gas Turbine	35	Natural Gas	8-9	1999

Under 40 CFR 60, Subpart GG, 0070-80 and 0070-71 are considered affected facilities. Under 40 CFR 63, Subpart YYYY, 0070-80 and 00070-71 are considered existing affected sources.

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

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

D.1.1 Oxides of Nitrogen (NOx) and Particulate Matter ten microns in aerodynamic diameter (PM10) emissions limits [326 IAC 2-7-5(1)] [326 IAC 2-2]

Pursuant to CP-099-0311-01, issued on June 10, 1999 and Administrative Amendment No. 097-11888-0311, issued August 17, 2000 the net increases of NOx and PM10 emissions from the modification are limited to less than the significance levels. The Permittee accepted emission limits on all units involved in the modification for NOx of 325.75 tons per year and PM10 of 130

tons per year to keep the net emissions of the modification below 40 tons per year. The following limits from CP-099-0311-01 and 097-11888-0311 apply:

(a) NOx limitations (based on all boilers and turbines, Emission Units 58, 59, 62, 63, 64, 65, 71, and 80): the input of natural gas and natural gas equivalents to the equipment covered in this permit shall be limited to less than 6205 MMCF natural gas per twelve (12) month consecutive period with compliance determined at the end of each month. This usage limitation is equivalent to a potential to emit of less than 325.74 tons per year, which keeps net emissions below 40 tons per year.

(1) For the purposes of determining compliance every million cubic feet of natural gas shall be equivalent to the following:

Natural Gas Equivalents for Nitrogen Oxide Emissions					
Emission Units	MMCF per gal #4 oil	MMCF per gal #2 oil	MMCF per MMCF landfill gas	MMCF per MMCF natural gas	MMCF per gal #6 oil
Boilers (Emission Unit ID 0070-58 and 59)	0.00023	0.00023	N.A.	N.A.	0.00048
Boilers (Emission Unit ID 0070-62, 63, 64 and 65)	N.A.	0.00023	0.31928	N.A.	0.00060
Turbine (Emission Unit ID 0070-80)	N.A.	N.A.	0.8257	3.90000	N.A.
Turbines (Emission Unit ID 0070-71)	N.A.	N.A.	0.34130	4.50000	N.A.

and

(2) NOx emissions are limited to:

(A) Boilers (Emission Unit ID ## 0070-62, 63, 64 and 65) shall be limited to 0.1 lbs/MMBtu when burning natural gas;

(B) Boilers (Emission Unit ID 0070- 58, 59, 62, 63, 64 and 65) shall be limited to 0.175 lbs/MMBtu when burning #2 fuel oil;

(C) Boilers (Emission Unit ID 0070- 62, 63, 64 and 65) shall be limited to 0.058 lbs/MMBtu when burning landfill gas;

(D) Boilers (Emission Unit ID 0070-58 and 59) shall be limited to 0.175 lbs/MMBtu when burning #4 fuel oil;

(E) Boilers (Emission Unit ID 0070-58 and 59) shall be limited to 0.336 lbs/MMBtu when burning #6 fuel oil;

(F) Boilers (Emission Unit ID 0070-62, 63, 64 and 65) shall be limited to 0.447 lbs/MMBtu when burning #6 fuel oil;

(G) Turbines (Emission Unit ID 0070-71, and 80) shall be limited to 0.062 lbs/MMBtu when burning landfill gas.

(H) Turbine (Emission Unit ID 0070-80) shall be limited to 0.15 lbs/MMBtu when burning landfill gas.

(I) Turbine (Emission Unit ID 0070-80) shall be limited to 0.390 lbs/MMBtu when combusting natural gas.

(J) Turbine (Emission Unit ID 0070-71) shall be limited to 0.450 lbs/MMBtu when combusting natural gas.

(b) PM_{10} limitation for Emission Unit ID 0070-58, 0070-59, 0070-62, 0070-63, 0070-64, 0070-65, 0070-71, and 0070-80: the input of No.4 oil and No. 4 oil equivalents shall be limited to 37,142,800 gallons of No.4 oil per twelve (12) month consecutive period with compliance determined at the end of each month.

(1) For the purposes of determining compliance every gallon of No.4 oil shall be equivalent to the following:

Fuel Oil Equivalents for PM-10 Emissions				
Emission Units	gal per gal #2 oil	gal per CF landfill gas	gal per CF natural gas	gal per gal #6 oil
Boilers (Emission Unit ID 0070-62, 63, 64 and 65)	0.280	0.00116	0.00088	2.60
Boilers (Emission Unit ID 0070- 58, 59)	0.280	N.A.	0.00088	2.60
Turbine (Emission Unit ID 0070-80)	N.A.	0.00132	0.00088	N.A.

and

(2) PM10 emissions are limited to:

(A) Boilers (Emission Unit ID 0070-62, 63, 64 and 65) shall be limited to 0.014 lbs/MMBtu when combusting landfill gas; and

(B) Turbine (Emission Unit ID 0070-80) shall be limited to 0.016 lbs/MMBtu when combusting landfill gas

D.1.2 Particulate Matter Limitations Except Lake County [326 IAC 6.5-6]

(a) Pursuant to 326 IAC 6.5-6-33 (Particulate Matter Limitations Marion County: Rolls Royce Corporation), the Permittee shall comply with the following emission limitations for Particulate Matter (PM):

Source	NEDS Plant ID	Point Input ID	Process	Emission Limits	
				tons per year	Lbs/million Btu
Rolls Royce Corporation	0311	02	Boilers 0070-58 and 0070-59	130.0/yr	0.15
	0311	03	Boilers 0070-62 thru 0070-65		0.15

(b) Pursuant to 326 IAC 6.5-6-33(b), the Permittee shall comply with the following:

(1) Boilers 0070-58, 0070-59, and 0070-62 thru 0070-65 shall use only #6 fuel oil, #4 fuel oil, #2 fuel oil, natural gas or landfill gas as fuel.

(2) Boilers 0070-58, 0070-59, and 0070-62 thru 0070-65 shall have the following limitations depending upon the fuel being used:

(A) When using #4 fuel oil, the amount used for the listed boilers collectively shall not exceed thirty-seven million one hundred forty-two thousand eight hundred (37,142,800) gallons per year based on a three hundred sixty-five (365) day rolling figure.

(B) When either #6 fuel oil, #2 fuel oil, natural gas or land fill gas is used, the limitation listed in clause (A) shall be adjusted as follows:

(i) When using #6 fuel oil, the gallons per year of #4 fuel oil shall be reduced by two and six-tenths (2.6) gallon used.

(ii) When using natural gas, the gallons per year of #4 fuel oil shall be reduced by eighty-eight hundred-thousandths (0.00088) gallon per cubic foot of natural gas burned.

(iii) When using #2 fuel oil, the gallons per year of #4 fuel oil shall be reduced by twenty-eight hundredths (0.28) gallon per gallon used.

(iv) When using landfill gas, the gallons per year of #4 fuel oil shall be reduced by one hundred sixteen hundred thousandths (0.00116) gallon per cubic foot of landfill gas burned.

D.1.3 PM Emissions Limitations [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2 (Particulate Limitations), particulate matter (PM) emissions from emission units 0070-71and 0070-80 shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.1.4 Marion County Sulfur Dioxide Emission Limitations [326 IAC 7-4-2]

(a) Pursuant to 326 IAC 7-4-2(28), the sulfur dioxide emissions from Boilers 0070-58, 0070-59, and 0070-62 thru 0070-65 shall be limited as follows:

(1) Boilers 0070-58, 0070-59, and 0070-62 thru 0070-65 shall be allowed to burn Natural gas at any time.

(2) Babcock and Wilcox 0070-58 and 0070-59 and Combustion Engineering Boilers 0070-62 thru 0070-65 shall burn fuel oil with a sulfur content of two and one tenths (2.1) pounds per million Btu during periods when one of the following conditions are met:

(A) Fuel oil is burned in no more than three (3) Babcock and Wilcox Boilers and fuel oil is not burned in any Combustion Engineering Boilers.

(B) Fuel oil is burned in no more than two (2) Babcock and Wilcox Boilers and no more than two (2) Combustion Engineering Boilers

(C) Fuel oil is burned in no more than one (1) Babcock and Wilcox Boilers and no more than three (3) Combustion Engineering Boilers.

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for emission units 0070-58, 0070-59, and 0070-62 through 0070-65 when burning fuel oil. 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.1.6 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-6] [326 IAC 3-7-4] [326 IAC 7-2-1]

Pursuant to 326 IAC 7-2-1 and 326 IAC 3-7-4 or 326 IAC 3-6, the Permittee shall demonstrate that the sulfur dioxide emissions from boilers 0070-58, 0070-59, and 0070-62 thru 0070-65 do not exceed the pounds per million Btu heat input limits in condition D.1.4. Compliance shall be determined utilizing one of the following options.

(a) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;

(b) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(1) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(2) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

(c) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from 0070-58, 0070-59, and 0070-62 thru 0070-65, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a), (b), or (c) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.7 PM, PM-10, and NOx Emissions

Compliance with Conditions D.1.1 and D.1.2 shall be demonstrated within 30 days of the end of each month based on the amount of fuel combusted for the most recent 365 day period.

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

D.1.8 Visible Emissions Notations

(a) Visible emission notations of the emission units 0070-58, 0070-59, 0070-62, 0070-63, 0070-64 and 0070-65 stack exhausts shall be performed once per day during normal

daylight operations when burning fuel oil. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. 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.1.9 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.2, the Permittee shall maintain records of the day and quantity of each type of fuel used in boilers, identified as emission units 0070-58, 0070-59, 0070-62, 0070-63, 0070-64, and 0070-65, and its #4 fuel oil equivalence for PM.

(b) To document the compliance status with Conditions D.1.4 and D.1.6, the Permittee shall maintain records in accordance with (1) through (6) below.

(1) Calendar dates covered in the compliance determination period;

(2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;

(3) To certify compliance when burning natural gas only, the Permittee shall maintain records of fuel used.

If the fuel supplier certification is used to demonstrate compliance, when burning alternate fuels and not determining compliance pursuant to 326 IAC 3-7-4, the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications;

(5) The name of the fuel supplier; and

(6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

(c) To document the compliance status with Condition D.1.1, the Permittee shall maintain records of the day, amount and type of fuel combusted in emission units 0070-58, 0070-59, 0070-62, 0070-63, 0070-64 and 0070-65 and the natural gas equivalence for NOx and PM_{10}.

(d) To document the compliance status with Condition D.1.8, the Permittee shall maintain records of daily visible emission notations of the stack exhaust for emission units 0070-58, 0070-59, 0070-62, 0070-63, 0070-64, and 0070-65 when combusting fuel oil once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

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

D.1.10 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.1.1, D.1.2, and D.1.4, shall be submitted using the reporting forms located at the end of this permit, or their equivalent, no 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. The report 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).

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]

(c) Seven (7) paint booths identified as emission units 0070-N56a, 0070-10a, 0070-10b, 0070-10c, 0070-10d, 0070-84, and 0070-85, controlled by dry filters, exhausting out stacks identified as SN56a, 5-10a, 5-10b, 5-10c, 5-10d, S-84, and S-85, respectively. Paint booths 0070-N56a, 0070-10a, 0070-10b, 0070-10c, and 0070-10d were installed prior to 1974 and modified in 1998 to comply with the aerospace NESHAPs. Paint booths 0070-84 and 0070-85 were installed in 2003. Under 40 CFR 63, Subpart GG, the paint booths are considered affected facilities.

(d) Facility-wide wipe cleaning operations.

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

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

D.2.1 VOC Emissions [326 IAC 8-1-1]

Pursuant to 326 IAC 8-1-1(b), the actual emissions of volatile organic compounds (VOC) from each paint booth identified as, 0070-N56a, 0070-10a, 0070-10b, 0070-10c, 0070-10d, 0070-84, and 0070-85 shall be limited to less than 15.0 pounds of VOCs per day before add-on controls.

Compliance with this condition shall make the Miscellaneous Metal Parts Rule 326 IAC 8-2-9 not applicable.

D.2.2 Particulate Matter [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a), the particulate matter (PM) emissions from each paint booth, identified as emission units 0070-56Na, 0070-10a, 0070-10b, 0070-10c, 0070-10d, 0070-84, and 0070-85, shall not exceed 0.03 grains per dry standard cubic foot of exhaust air.

D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for emission units 0070-N56a, 0070-10a, 0070-10b, 0070-10c, 0070-10d, 0070-84, and 0070-85. 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.2.4 Particulate Control

In order to comply with Condition D.2.2, the dry filters for particulate control shall be in operation and control emissions from the paint booths at all times the paint booths are in operation.

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

D.2.5 Monitoring

(a) To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth stacks (SN56a, 5-10a, 5-10b, 5-10c, 5-10d, S-84, and S-85) while one or more of the booths are in operation. If a condition exists which should result in a response step, 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.

(b) Monthly inspections shall be performed of the coating emissions from the stacks and the

presence of overspray on the rooftops and the nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emissions is observed, the Permittee shall take reasonable response steps. 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.2.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.1, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken daily and shall be complete and sufficient to establish compliance with Condition D.2.1.

(1) The VOC content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on a daily basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coating and those used as cleanup solvents.

(3) The weight of VOCs input each day.

(b) To document the compliance status with Conditions D.2.2 and D.2.5, the Permittee shall maintain a log of weekly overspray observations and monthly inspections. The Permittee shall include in its record when an observation was not taken and the reason for the lack of observation (e.g. the process did not operate that week).

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

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]

(e) Degreasing operations, consisting of:

(1) Two (2) Open Top Vapor Degreasers, identified as emission units 0070-13 and 0070-31, using perchloroethylene as the solvent, exhausting inside the building, and reconstructed in 1997.

(2) One (1) Open Top Vapor Degreaser, identified as emission unit 0311-82, permitted to use N-Propyl Bromide and Perchloroethylene as the solvent, exhausting inside the building, and reconstructed in 2000.

(3) Portable Cold Cleaner Degreasing Tanks, used for degreasing parts, identified as emission unit 0070-12, using mineral spirits as the solvent, and exhausting into the building.

(4) Spray cleaning booths, constructed prior to 1990, identified as emission unit 0070-14, using mineral spirits as the solvent, and exhausting outside the building.

(5) One (1) stationary enclosed parts cleaning machine, Vacuum Degreaser Model V4-EX, identified as emission unit 24087, approved in 2006 for construction, using only Tetrachloroethylene as the solvent, with a cleaning capacity of 1.135 cubic meters, and exhausting inside the building.

Under 40 CFR 63, Subpart T, the degreasing operations are considered existing affected facilities.

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

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

D.3.1 Degreasing Operations [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the Permittee shall ensure that the following control equipment requirements are met, unless more stringent requirements are applicable under 326 IAC 8-3-5 or 326 IAC 20-6 and 40 CFR 63 Subpart T:

(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.3.2 Degreasing Operations [326 IAC 8-3-3]

Pursuant to 326 IAC 8-3-3 (Open Top Vapor Degreasing Operations) the Permittee shall ensure that the following control equipment requirements are met, unless more stringent requirements

are applicable under 326 IAC 8-3-6 or 326 IAC 20-6 and 40 CFR 63 Subpart T:

(a) Equip the open top vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone;

(b) Keep the cover closed at all times except when processing workloads through the degreaser;

(c) Minimize solvent carry-out by:

(1) Racking parts to allow complete drainage;

(2) Moving parts in and out of the degreaser at less than eleven (11) feet per minute;

(3) Degreasing the workload in the vapor zone at least thirty (30) seconds or until condensation ceases;

(4) Tipping out any pools of solvent on the cleaned parts before removal;

(5) Allowing parts to dry within the degreaser for at least fifteen (15) seconds or until visually dry;

(d) Not degrease porous or absorbent materials, such as cloth, leather, wood or rope;

(e) Not occupy more than half of the degreaser's open top area with the workload;

(f) Not load the degreaser such that the vapor level drops more than fifty percent (50%) of the vapor depth when the workload is removed;

(g) Never spray above the vapor level;

(h) Repair solvent leaks immediately, or shut down the degreaser;

(i) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere;

(j) Not use workplace fans near the degreaser opening;

(k) Not allow visually detectable water in the solvent exiting the water separator; and

(l) Provide a permanent, conspicuous label summarizing the operating requirements.

D.3.3 Degreasing Operations [326 IAC 8-3-5]

Pursuant to 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control) the Permittee shall ensure the following requirements are met, unless more stringent requirements are applicable under 326 IAC 8-3-2:

(a) The Permittee shall ensure that the following operating 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 used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) The owner or operator of a cold cleaning facility 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.3.4 Degreasing Operations [326 IAC 8-3-6]

Pursuant to 326 IAC 8-3-6 (Open top vapor degreaser operation and control requirements), for open top vapor degreasers existing as of July 1, 1990, emission units 0070-13, 0070-31, and

0311-82 the Permittee shall ensure that the following control equipment requirements are met:

(a) The Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover that can be opened and closed easily without disturbing the vapor zone.

(2) Equip the degreaser with the following switches:

(A) A condenser flow switch and thermostat which shuts off sump heat if condenser coolant stops circulating or becomes too warm.

(B) A spray safety switch which shuts off spray pump if the vapor level drops more than ten (10) centimeters (four (4) inches).

(3) Equip the degreaser with a permanent, conspicuous label which lists the operating requirements.

(4) Equip the degreaser with one (1) of the following control devices:

(A) A freeboard ratio of seventy-five hundredths (0.75) or greater and a powered cover if the degreaser opening is greater than one (1) square meter (ten and eight-tenths (10.8) square feet).

(B) A refrigerated chiller.

(C) An enclosed design in which the cover opens only when the article is actually entering or exiting the degreaser.

(D) A carbon adsorption system with ventilation which, with the cover open, achieves a ventilation rate of greater than or equal to fifteen (15) cubic meters per minute per square meter (fifty (50) cubic feet per minute per square foot) of air to vapor interface area and an average of less than twenty-five (25) parts per million of solvent is exhausted over one (1) complete adsorption cycle.

(E) Other systems of demonstrated equivalent or better control as those outlined in clauses (A) through (D). Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) The Permittee shall ensure that the following operating requirements are met:

(1) Keep the cover closed at all times except when processing workloads through the degreaser.

(2) Minimize solvent carryout emissions by:

(A) Racking articles to allow complete drainage;

(B) Moving articles in and out of the degreaser at less than three and three-tenths (3.3) meters per minute (eleven (11) feet per minute);

(C) Degreasing the workload in the vapor zone at least thirty (30) seconds or until condensation ceases;

(D) Tipping out any pools of solvent on the cleaned articles before removal; and

(E) Allowing articles to dry within the degreaser for at least fifteen (15) seconds or until visually dry.

(3) Prohibit the entrance into the degreaser of porous or absorbent materials such as, but not limited to, cloth, leather, wood, or rope.

(4) Prohibit occupation of more than one-half (1/2) of the degreaser's open top area with the workload.

(5) Prohibit the loading of the degreaser to the point where the vapor level would drop more than ten (10) centimeters (four (4) inches) when the workload is removed.

(6) Prohibit solvent spraying above the vapor level.

(7) Repair solvent leaks immediately or shut down the degreaser if leaks cannot be repaired immediately.

(8) 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.

(9) Prohibit the exhaust ventilation rate from exceeding twenty (20) cubic meters per minute per square meter (sixty-five (65) cubic feet per minute per square foot) of degreaser open area unless a greater ventilation rate is necessary to meet Occupational Safety and Health Administration requirements.

(10) Prohibit the use of workplace fans near the degreaser opening.

(11) Prohibit visually detectable water in the solvent exiting the water separator.

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]

(f) Miscellaneous sand and shot blast machine operations identified as:

(1) Emission unit 0070-N55, miscellaneous sanding and blasting, controlled by dust collector, exhausting out stack SN55, constructed in 1991.

(g) Woodworking operations, prior to 1969, consisting of:

(1) Emission unit 0070-72, controlled by dust collector, exhausting out stack 8-16,

(2) Emission unit 0070-05, controlled by dust collector, exhausting out stack 5-8.

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

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

D.4.1 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (formerly 326 IAC 6-1-2(a)), particulate matter (PM) emissions from emission units 0070-05, 0070-72, and 0070-N55 shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for the miscellaneous sanding and blasting 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.4.3 Particulate Control

In order to comply with Condition D.4.1, the dust collector for particulate control shall be in operation and control emissions from the miscellaneous sanding and blasting at all times this unit is in operation.

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

D.4.4 Visible Emissions Notations

(a) Daily visible emission notations of the miscellaneous sanding and blasting stack exhaust (stack SN55) shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. 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.

D.4.5 Broken or Failed Bag Detection (Mandatory for operations with a baghouse)

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.4.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.4, the Permittee shall maintain daily records of the visible emission notations of the miscellaneous sanding and blasting stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation (e.g. the process did not operate that day).

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

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]

(h) Jet fueled turbine engines, identified as follows:

(1) Two (2) emission units, identified as 0070-66, with a maximum operating capacity of 107 million British thermal units per hour each, exhausting out stacks identified as 8-11A and 8-11B. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-66 are considered existing affected sources.

(2) Twelve (12) emission units, identified as 0070-67, with a maximum operating capacity of 27.2 million British thermal units per hour each, exhausting out stacks identified 8-13A through M respectively. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-67 are considered existing affected sources.

(3) Two (2) natural gas fired turbine generators, identified as 0070-68a and 0070-68b, approved in 2011 for construction, each with a single 39 MMBtu/hr combustor, exhausting out stacks identified as 8-12A and 8-12B. Under 40 CFR 60, Subpart KKKK, the turbines identified as 0070-68a and 0070-68b are considered affected sources. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68a and 0070-68b are considered new affected sources.

(4) Three (3) jet fuel fired turbine generators, identified as 0070-68c, 0070-68d, and 0070-68e, constructed in 1955, each with two (2) 27.2 MMBtu/hr combustor units, exhausting out stacks identified as 8-12C, 8-12D, and 8-12E. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68c, 0070-68d, and 0070-68e are considered existing affected sources.

(5) Four (4) emission units, identified as 0070-69, with a maximum operating capacity of 27.2 million British thermal per hour units each, exhausting out stacks identified as 8-14A through D. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-69 are considered existing affected sources.

(i) Three (3) American Shack Heaters, identified as emission unit 0070-70, exhausting out stacks identified 8-6A through C consisting of:

(1) Two (2) natural gas fired heaters, identified as 0070-70A and 0070-70B, having a maximum heating put capacity of 90.0 million British thermal units per hour each; and

(2) One (1) natural gas fired heater, identified as 0070-70C, having a maximum heat input capacity of 90 million British thermal units per hour.

(j) Forty-nine (49) engine test stand cells identified below. These test stand cells are used to test engines manufactured at the source. The engines tested are fueled by either Jet fuel, Diesel Oil #2 or Natural Gas. All test stand cells except test stand cells 133 and 135 (Emission Unit IDs 0070-87 and 0070-88) were constructed prior to 1977. Test stand cells 133 and 135 (Emission Unit IDs 0070-87 and 0070-88) were approved in 2007 for construction. Test cell 111 (Emission Unit ID 0070-N4) was approved in 1999 for modification. Test cell 824 (Emission Unit ID 0070-N32) was approved in 2008 for modification. Test cell 114 (Emission Unit 0070-N6) was approved in 2011 for modification.

Engine Test Cells - Plant 5				
Emission Unit ID No.	Engine Test Cell ID	Maximum Test Cell Capacity	Type of Fuels Used	Stack ID
0070-N3	109	5000 brake horsepower	Jet fuel, Diesel	SN3
0070-N4	111	10000 pounds of thrust (a maximum of 6 engines tested per day)	Jet fuel	SN4
0070-N5	113	10000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN5
0070-N6	114	30000 pounds of fuel per hour	Jet fuel	SN6
0070-N7	115	7000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN7
0070-N8	116	5000 brake horsepower	Jet fuel, Diesel	SN8
0070-N9	117	5000 brake horsepower	Jet fuel, Diesel	SN9
0070-N10	118	5000 brake horsepower	Jet fuel, Diesel	SN10
0070-N11	119	5000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN11
0070-N12	120	7000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN12
0070-N13	121	10000 brake horsepower	Jet fuel, Diesel	SN13
0070-N15	123	5000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN15
0070-N16	140	1500 brake horsepower	Jet fuel	SN16
0070-N17	141	750 brake horsepower	Jet fuel	SN17
0070-N18	142	800 brake horsepower	Jet fuel	SN18
0070-N19	143	750 brake horsepower	Jet fuel	SN19
0070-N20	144	750 brake horsepower	Jet fuel	SN20
0070-N21	145	750 brake horsepower	Jet fuel	SN21
0070-N22	146	1500 brake horsepower	Jet fuel	SN22
0070-N23	147	1500 brake horsepower	Jet fuel	SN23
0070-N24	148	1500 brake horsepower	Jet fuel	SN24
0070-N25	149	650 brake horsepower	Jet fuel	SN25
0070-N27	152	1500 brake horsepower	Jet fuel	SN27
0070-87	133	715 brake horsepower, with maximum fuel flow capacity of 59 gal/hr	Jet fuel	S87
0070-88	135	715 brake horsepower, with maximum fuel flow capacity of 59 gal/hr	Jet fuel	S88

Engine Test Cells - Plant 8				
Emission Unit ID	Engine Test Cell	Maximum Test Cell Capacity	Type of Fuels Used	Stack ID
0070-N34	843	10000 brake horsepower	Jet fuel	SN34(A,B)
0070-N35	861	9000 pounds of thrust	Jet fuel, Diesel	SN35
0070-N36	862	6000 brake horsepower	Jet fuel, Diesel	SN36
0070-N37	871	15000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN37(A,B)
0070-N38	872	9000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN38(A,B)
0070-N39	873	9000 brake horsepower	Jet fuel	SN39(A,B,C)
0070-N40	875	5000 brake horsepower	Diesel	SN40
0070-N41	881	10000 pounds of thrust	Jet fuel	SN41(A,B)
0070-N42	882	30000 pounds of thrust	Jet fuel	SN42(A,B,C,D,E,F)
0070-N43	883	2500 brake horsepower	Jet fuel	SN43(A,B)
0070-N44	884	2000 brake horsepower	Jet fuel	SN44
0070-N45	885	800 brake horsepower	Jet fuel, Diesel	SN45(A,B)
0070-N46	886	30000 pounds of thrust	Jet fuel, Diesel	SN46(A,B,C,D)
0070-N47	893	500 pounds of thrust	Diesel	SN47
0070-N48	894	350 brake horsepower	Diesel	SN48
0070-N29	821	10 pounds/second air	Jet fuel, Diesel & Natural Gas	SN29(A,B)
0070-N30	822	50 pounds/second air	Jet fuel, Diesel & Natural Gas	SN30(A,B)
0070-N31	823	60 pounds/second air	Jet fuel, Diesel & Natural Gas	SN31(A,B)
0070-N32	824	120 pounds/second air	Jet fuel, Diesel & Natural Gas	SN32(A,B)
0070-N33	826	25 pounds/second air	Jet fuel, Diesel	SN33(A,B)
0070-N54	8137	10 pounds/second air	Jet fuel, Diesel & Natural Gas	SN54
0070-N54a	8137	12.5 MMBtu/hr	No. 2 Diesel fuel	Not Available
0070-N55	8126	0.5 pounds/second air	Jet fuel, Diesel & Natural Gas	Not Available
0070-N56	8128	1 pounds/second air	Jet fuel, Diesel & Natural Gas	Not Available

Under 40 CFR 63, Subpart PPPPP, the collection of test cells in (j) is considered an existing affected source.

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

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

D.5.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Limitations), particulate matter (PM) emissions from emission units 0070-66, 0070-67, 0070-68a through 0070-68b, 0070-69, 0070-70a, 0070-70b, 0070-70c, 0070-N3 through 0070-N54, 0070-87, and 0070-88 shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.5.2 Sulfur Dioxide (SO_2) [326 IAC 7-1.1-2(a)]

Pursuant to 326 IAC 7-1.1-2(a) (SO_2 Emissions Limitations) the SO_2 emissions from emission units 0070-70c, 0070-N3 through 0070-N54, 0070-87 and 0070-88 shall not exceed five tenths (0.5) pounds per MMBtu heat input, when combusting distillate oil alone or simultaneous with any permitted fuel.

D.5.3 PSD Minor NOx Limit [326 IAC 2-2]

(a) The NOx emissions from the Test Cell 111 (Emission Unit ID 0070-N4) shall not exceed 0.1409 pounds per gallon or 62 pounds per hour and shall combust less than 567,779 gallons of Jet A fuel per twelve (12) month period with compliance determined at the end of each month. This fuel usage limitation is equivalent to 40 tons of NOx emissions per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

(b) The NOx emissions from the test cell 0070-N32 and the two (2) natural gas shack heaters (0070-70A and 0070-70B) shall be limited as follows:

(1) The NOx emission rate from test cell 824, identified as 0070-N32, shall not exceed 0.40 pounds per gallon of diesel/jet fuel combusted or an emission rate determined from the most recent emissions test.

(2) The NOx emission rate from test cell 824, identified as 0070-N32, shall not exceed 4,284 pounds per million cubic feet (lb/MMCF) of natural gas combusted or an emission rate determined from the most recent emissions test.

(3) The NOx emission rate from the two natural gas shack heaters, identified as 0070-70A and 0070-70B, shall not exceed 100 pounds per million cubic feet (lb/MMCF).

(4) The combined total NOx emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these emission limits will ensure that the potential to emit from this modification is less than 40 tons of NOx per year and therefore will render the requirements of 326 IAC 2-2 not applicable.

(c) The NOx emissions from natural gas turbine generators, 0070-68a and 0070-68b, shall be limited as follows:

(1) The total natural gas usage for the two (2) natural gas turbine generators, 0070-68a and 0070-68b, shall be less than two hundred forty (240) million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) The NOx emission rate from each of the two (2) natural gas turbine generators, 0070-68a and 0070-68b, shall be less than 326.4 lb/MMCF.

Compliance with these limits will ensure that the potential to emit from the modification is less than forty (40) tons per twelve (12) consecutive month period and will render the requirements of 326 IAC 2-2 not applicable.

D.5.4 PSD Minor PM Limit [326 IAC 2-2]

The PM emissions from the test cell 0070-N32 and the two (2) natural gas shack heaters (0070-70A and 0070-70B) shall be limited as follows:

(a) The PM emission rate from test cell 824, identified as 0070-N32, shall not exceed 0.01 pound per gallon of diesel/jet fuel combusted.

(b) The PM emission rate from test cell 824, identified as 0070-N32, shall not exceed 10.4 pounds per million cubic feet (lb/MMCF) of natural gas combusted.

(c) The PM emission rate from the two natural gas shack heaters, identified as 0070-70A and 0070-70B, shall not exceed 1.9 pounds per million cubic feet (lb/MMCF).

(d) The combined total PM emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these emission limits will ensure that the potential to emit from this modification is less than 25 tons of PM per year and therefore will render the requirements of 326 IAC 2-2 not applicable.

D.5.5 PSD Minor PM_{10} Limit[326 IAC 2-2] and Nonattainment NSR Minor $PM_{2.5}$ Limit [326 IAC 2-1.1-5]

The PM_{10} and $PM_{2.5}$ emissions from the test cell 0070-N32 and the two (2) natural gas shack heaters (0070-70A and 0070-70B) shall be limited as follows:

(a) The PM_{10} and $PM_{2.5}$ emission rates from test cell 824, identified as 0070-N32, shall each not exceed 0.01 pounds per gallon of diesel/jet fuel combusted.

(b) The PM_{10} and $PM_{2.5}$ emission rates from test cell 824, identified as 0070-N32, shall each not exceed 0.081 pounds per million cubic feet (lb/MMCF) of natural gas combusted.

(c) The PM_{10} and $PM_{2.5}$ emission rates from the two natural gas shack heaters, identified as 0070-70A and 0070-70B, shall each not exceed 7.6 pounds per million cubic feet (lb/MMCF).

(d) The combined total PM10 emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 15 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(e) The combined total PM2.5 emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 10 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these emission limits will ensure that the potential to emit from this modification is less than 15 tons per year of PM_{10} and 10 tons per year of $PM_{2.5}$ and therefore will render the requirements of 326 IAC 2-2 and 326 IAC 2-1.1-5 not applicable.

D.5.6 PSD Minor SO_2 Limit [326 IAC 2-2]

The SO_2 emissions from the test cell 0070-N32 and the two (2) natural gas shack heaters (0070-70A and 0070-70B) shall be limited as follows:

(a) The SO_2 emission rate from test cell 824, identified as 0070-N32, shall not exceed 0.07 pound per gal of diesel/jet fuel combusted.

(b) The SO2 emission rate from test cell 824, identified as 0070-N32, shall not exceed 0.617 pounds per million cubic feet (lb/MMCF) of natural gas combusted.

(c) The SO2 emission rate from the two natural gas shack heaters, identified as 0070-70A and 0070-70B, shall not exceed 0.6 pound per million cubic feet (lb/MMCF).

(d) The combined total SO_2 emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these emission limits will ensure that the potential to emit from this modification is less than 40 tons of SO_2 per year and therefore will render the requirements of 326 IAC 2-2 not applicable.

D.5.7 PSD Minor CO Limit [326 IAC 2-2]

The CO emissions from the test cell 0070-N32 and the two (2) natural gas shack heaters (0070-70A and 0070-70B) shall be limited as follows:

(a) The CO emission rate from test cell 824, identified as 0070-N32, shall not exceed 1.21 pounds per gallon diesel/jet fuel combusted or an emission rate determined from the most recent emissions test.

(b) The CO emission rate from test cell 824, identified as 0070-N32, shall not exceed 332.9 pounds per million cubic feet (lb/MMCF) of natural gas combusted or an emission rate determined from the most recent emissions test.

(c) The CO emission rate from the two natural gas shack heaters, identified as 0070-70A and 0070-70B, shall not exceed 84 pounds per million cubic feet (lb/MMCF).

(d) The combined total CO emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 100 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these emission limits will ensure that the potential to emit from this modification is less than 100 tons of CO per year and therefore will render the requirements of 326 IAC 2-2 not applicable.

D.5.8 PSD Minor VOC Limit [326 IAC 2-2]

The VOC emissions from the test cell 0070-N32 and the two (2) natural gas shack heaters (0070-70A and 0070-70B) shall be limited as follows:

(a) The VOC emission rate from test cell 824, identified as 0070-N32, shall not exceed 0.21 pounds per gallon diesel/jet fuel combusted or an emission rate determined from the most recent emissions test.

(b) The VOC emission rate from test cell 824, identified as 0070-N32, shall not exceed 123.9 pounds per million cubic feet (lb/MMCF) of natural gas combusted or an emission rate determined from the most recent emissions test.

(c) The VOC emission rate from the two natural gas shack heaters, identified as 0070-70A and 0070-70B, shall not exceed 5.5 pounds per million cubic feet (lb/MMCF).

(d) The combined total VOC emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these emission limits will ensure that the potential to emit is less than 40 tons of VOC per year and therefore will render the requirements of 326 IAC 2-2 not applicable.

D.5.9 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

(a) The VOC emission rate from test cell 824 (0070-N32) shall be limited to 0.21 pounds of VOC per gallon (lb/gal) of diesel/jet fuel combusted or an emission rate determined from the most recent emissions test.

(b) The VOC emissions from test cell 824 (0070-N32) shall not exceed twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with this limit will limit the VOC emissions from test cell 0070-N32 to less than 25 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. Therefore, 326 IAC 8-1-6 does not apply.

D.5.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these units. 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.5.11 Sulfur Dioxide Emissions and Sulfur Content

Compliance with Conditions D.5.2 shall be determined utilizing one of the following options:

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed five-tenths percent (0.5%) by weight by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a certification;

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the thirteen (13) MMBtu per hour heater, forty nine (49) Engine test stand cells identified as emission units 0070-N3 through 0070-N54 and test cells 0070-87 and 0070-88, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

D.5.12 Particulate Emissions (PM), Particulate Emissions less than 10 microns (PM10), Particulate Emissions less than 2.5 microns (PM2.5), Carbon Monoxide (CO), Volatile Organic Compounds (VOC), and Nitrogen Oxides (NO_X) Emissions

(a) Compliance with Condition D.5.3(b) shall be determined by the following equation:

$E_{NOx} = \Sigma E_{DOS}$

$E_{DOS} = ((G_{diesel/jet\ juel} \times A) + (CF_{natural\ gas} \times D) + (C_{SH} \times 100)) / 2000$

Where:

E_{NOx} = Emissions of NO_x in tons per month
E_{DOS} = Emissions of NOx in tons per month at each different operating scenario
A = 0.40 or emission rate determined from most recent emissions test in pounds per gallon
D = 4,284 or emission rate determined from most recent emissions test in pounds per million cubic feet
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used per operating scenario in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used per operating scenario in test cell 0070-N32
C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

(b) Compliance with Condition D.5.4 shall be determined by the following equation:

$E_{PM} = ((G_{diesel/jet\ juel} \times 0.01) + (CF_{natural\ gas} \times 10.4) + (C_{SH} \times 1.9)) / 2000$

Where:

E_{PM} = Emissions of PM in tons per month
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used each month in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used each month in test cell 0070-N32
C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

(c) Compliance with Condition D.5.5(d) shall be determined by the following equation:

$E_{PM10} = ((G_{diesel/jet\ juel} \times 0.01) + (CF_{natural\ gas} \times .081) + (C_{SH} \times 7.6)) / 2000$

Where:

E_{PM10} = Emissions of PM10 in tons per month
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used each month in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used each month in test cell 0070-N32
C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

(d) Compliance with Condition D.5.5(e) shall be determined by the following equation:

$E_{PM2.5} = ((G_{diesel/jet\ juel} \times 0.01) + (CF_{natural\ gas} \times .081) + (C_{SH} \times 7.6)) / 2000$

Where:

$E_{PM2.5}$ = Emissions of PM2.5 in tons per month
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used each month in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used each month in test cell 0070-N32

C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

(e) Compliance with Condition D.5.6 shall be determined by the following equation:

$$E_{SO2} = ((G_{diesel/jet\ juel} \times 0.07) + (CF_{natural\ gas} \times 0.617) + (C_{SH} \times 0.6)) / 2000$$

Where:

E_{SO2} = Emissions of SO_2 in tons per month
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used each month in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used each month in test cell 0070-N32
C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

(f) Compliance with Condition D.5.7 shall be determined by the following equation:

$$E_{CO} = \Sigma E_{DOS}$$

$$E_{DOS} = ((G_{diesel/jet\ juel} \times C) + (CF_{natural\ gas} \times E) + (C_{SH} \times 84)) / 2000$$

Where:

E_{CO} = Emissions of CO in tons per month
E_{DOS} = Emissions of CO in tons per month at each different operating scenario
C = 1.21 or emission rate determined from most recent emissions test in pounds per gallon
E = 332.9 or emission rate determined from most recent emissions test in pounds per million cubic feet
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used per operating scenario in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used per operating scenario in test cell 0070-N32
C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

(g) Compliance with Condition D.5.8 shall be determined by the following equation:

$$E_{VOC} = \Sigma E_{DOS}$$

$$E_{DOS} = ((G_{diesel/jet\ juel} \times B) + (CF_{natural\ gas} \times F) + (C_{SH} \times 5.5)) / 2000$$

Where:

E_{VOC} = Emissions of VOC in tons per month
E_{DOS} = Emissions of VOC in tons per month at each different operating scenario
B = 0.21 or emission rate determined from most recent emissions test in pounds per gallon
F = 123.9 or emission rate determined from most recent emissions test in pounds per million cubic feet
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used per operating scenario in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used per operating scenario in test cell 0070-N32
C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

(h) Compliance with Condition D.5.9 shall be determined by the following equation:

$$E_{VOC} = \Sigma E_{DOS}$$

$$E_{DOS} = ((G_{diesel/jet\ juel} \times B) + (CF_{natural\ gas} \times F)) / 2000$$

Where:

E_{VOC} = Emissions of VOC in tons per month
E_{DOS} = Emissions of VOC in tons per month at each different operating scenario
B = 0.21 or emission rate determined from most recent emissions test in pounds per gallon
F = 123.9 or emission rate determined from most recent emissions test in pounds per million cubic feet
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used per operating scenario in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used per operating scenario in test cell 0070-N32

D.5.13 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) To demonstrate compliance with Conditions D.5.3, D.5.7, D.5.8, and D.5.9, the Permittee shall perform NOx, CO, and VOC testing for each operating scenario no later than 60 days after startup but no later than 180 days after initial startup on test cell (0070-N32), when combusting diesel/jet fuel and natural gas (unless the Permittee chooses to use emission factors established in the permit) using methods as approved by the Commissioner.

(b) If utilizing a different size engine other than the one tested in subsection (a), in order to demonstrate compliance with Conditions D.5.3, D.5.7, D.5.8, and D.5.9, the Permittee shall perform NOx, CO, and VOC testing for each operating scenario for the new engine no later than 60 days after startup of the new engine on test cell (0070-N32), when combusting diesel/jet fuel and natural gas (unless the Permittee chooses to use emission factors established in the permit) using methods as approved by the Commissioner.

(c) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.5.14 Record Keeping Requirements

(a) To document the compliance status with Condition D.5.3(a), the Permittee shall maintain records of the amount of Jet A fuel combusted in Test Cell 111 (Emission Unit ID 0070-N4) on a monthly basis.

(b) To document the compliance status with Conditions D.5.2 and D.5.11, the Permittee shall maintain records in accordance with (1) through (6) below:

(1) Calendar dates covered in the compliance determination period;

(2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;

(3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period;

If the fuel supplier certification is used to demonstrate compliance, the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications;

(5) The name of the fuel supplier; and

(6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

(c) To document the compliance status with Conditions D.5.3(b), D.5.4, D.5.5, D.5.6, D.5.7 and D.5.8, the Permittee shall maintain monthly records of the usage of jet fuel, diesel fuel, and natural gas by test cell 824 (0070-N32) for each engine operating scenario tested and the usage of natural gas to the two (2) shack heaters (0070-70A and 0070-70B).

(d) To document the compliance status with Condition D.5.9, the Permittee shall maintain monthly records of the usage of jet fuel, diesel fuel, and natural gas used by test cell 824 (0070-N32) for each engine operating scenario tested.

(e) To document the compliance status with Conditions D.5.3(b), D.5.4, D.5.5, D.5.6, D.5.7, D.5.8 and D.5.9, the Permittee shall maintain records of the monthly emissions as required by Conditions D.5.3(b)(4), D.5.4(d), D.5.5(d), D.5.5(e), D.5.6(d), D.5.7(d), D. 5.8(d), and D.5.9(b).

(f) To document the compliance status with Condition D.5.3(c), the Permittee shall maintain records of the amount of natural gas combusted in natural gas turbine generators, 0070-68a and 0070-68b.

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

D.5.15 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.5.3 through D.5.9 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, no later than thirty (30) days after the end of the period being reported. Section C – Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. The report 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).

SECTION D.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]: Insignificant activities

(a) Classified documents incinerator with a maximum rated capacity of 125 pounds per two hour cycle.[326 IAC 4-2] [326 IAC 9-1]

(b) The following activities or categories of activities with individual HAP emissions not previously identified which have potential emissions greater than 1 pound per day but less than 5 pounds per day or 1 ton per year of a single HAP; [326 IAC 6.5-1]

(1) Stationary and portable welding, brazing, soldering and cutting operations
(2) Fuel and oil nozzle test stands
(3) Penetrant test
(4) Chemical milling and deoxidizing solution
(5) Air stripper at waste treatment plant
(6) Print shop operations
(7) All plating operations
(8) Powder coating

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

Emission Limitations and Standards [326 IAC 2-7-5(1)] [326 IAC 8-4][326 IAC 12]

D.6.1 Incinerators [326 IAC 4-2]

Pursuant to 326 IAC 4-2, the confidential document incinerator shall:

(a) Consist of primary and secondary chambers or the equivalent;

(b) Be equipped with a primary burner;

(c) Comply with 326 IAC 5-1 and 326 IAC 2;

(d) Be maintained, operated and burn waste in accordance with manufacturers specifications; or an operation and maintenance plan that complies with the following:

(1) Be designed to meet the PM emission limitation specified in subsection (a)(5) and include the following: procedures for receiving, handling and charging waste, procedures for incinerator startup and shutdown, procedures for responding to a malfunction, procedures for maintaining proper combustion air supply levels, procedures for operating the incinerator and associated air pollution control systems, procedures for handling ash, and a list of wastes that can be burned in the incinerator.

(2) Each incinerator operator shall review the plan before initial implementation of the operation and maintenance plan and annually thereafter.

(3) The operational and maintenance plan must be readily accessible to incinerator operators.

(4) The owner or operator of the incinerator shall notify the department, in

writing, thirty days after the operation and maintenance plan is initially developed pursuant to this section.

(e) Not emit particulate matter in excess of one of the following:

(1) Three tenths (0.3) pound of particulate matter per one thousand (1,000) pounds of dry exhaust has under standard conditions corrected to fifty percent (50%) excess air for incinerators with a maximum solid waste capacity of greater than or equal to two hundred (200) pounds per hour.

(2) Five-tenths (0.5) pound of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air for incinerators with solid waste capacity less than two hundred (200) pounds per hour.

(f) The owner or operator of the incinerator must make the manufacturer's specifications or the operation and maintenance plan available to the department upon request.

If any of the requirements of (a) through (e) above are not met, then the owner or operator shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation. This condition is not federally enforceable.

D.6.2 Carbon Monoxide [326 IAC 9-1]

Pursuant to 326 IAC 9-1-2 (Carbon Monoxide Emission Limits), the confidential document incinerator shall not be operated unless the waste gas stream is burned in a direct-flame afterburner or a secondary chamber.

D.6.3 Particulate Matter Emissions [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2 the PM emissions from each facility with the potential to emit particulate matter shall not exceed 0.03 grains per dry standard cubic foot of exhaust air.

SECTION D.7 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]:

(k) Rental diesel-fired generators, identified as 0070-89, permitted in 2008 and 2009, and approved for installation on an as-needed basis.

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

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

D.7.1 Rental Units [326 IAC 2-7-10.5] [326 IAC 2-7-12]

The Permittee may remove, replace, and add rental diesel-fired generators at any time without prior approval under 326 IAC 2-7-10.5 and 326 IAC 2-7-12, provided that each generator is diesel-fired only.

D.7.2 PSD Minor Limit for NOx [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following limits:

(a) The NOx emissions from each rental diesel-fired generator with a rated output capacity of less than or equal to six hundred (600) hp shall not exceed 4.41 lb/MMBtu.

(b) The NOx emissions from each rental diesel-fired generator with a rated output capacity of greater than six hundred (600) hp shall not exceed 3.2 lb/MMBtu.

(c) The combined total NOx emissions from the rental diesel-fired generators shall be less than forty (40) tons per twelve (12) consecutive month period with compliance determined at the end of each month. The following equation shall be used to determine compliance:

NOx Emissions (ton/month) = (4.41A + 3.2B) x (0.14 MMBtu/gal) x (1 ton/2000 lb)

Where:

A = Diesel fuel usage for units with a rated output capacity of less than or equal to 600 hp (gal/month)

B = Diesel fuel usage for units with a rated output capacity of greater than 600 hp (gal/month)

Compliance with these limits will limit the NOx emissions from these generators to less than forty (40) tons per twelve (12) consecutive month period and render 326 IAC 2-2 (PSD) not applicable.

D.7.3 Nonroad Engines [326 IAC 12] [40 CFR 60, Subpart IIII] [326 IAC 20-82] [40 CFR 63, Subpart ZZZZ] [40 CFR 1068.30]

In order to render the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII), which are incorporated by reference as 326 IAC 12, and the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), which are incorporated by reference as 326 IAC 20-82, not applicable, and to ensure the rental units (0070-89) are nonroad engines, as defined at 40 CFR 1068.30, the Permittee shall comply with the following:

(a) Any rental diesel-fired generator, that is part of 0070-89, shall remain at a location for a period not to exceed twelve (12) consecutive months.

(b) Any unit that replaces a rental diesel-fired generator at a location that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period.

(c) For the purposes of this condition and pursuant to 40 CFR 1068.30 *Nonroad Engine* (2)(iii), a location is any single site at a building, structure, facility, or installation.

Compliance with these limits shall render the requirements of 40 CFR 60, Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines) and 40 CFR 63, Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) not applicable.

D.7.4 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from each of the diesel-fired generators shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

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

D.7.5 Record Keeping Requirements

(a) To document the compliance status with Condition D.7.2(c), the Permittee shall keep monthly records of the total monthly fuel usage for rental diesel-fired generators with a rated output capacity of less than or equal to 600 hp and shall keep monthly records of the total monthly fuel usage for rental diesel-fired generators with a rated output capacity of greater than 600 hp.

(b) The Permittee shall maintain records of the dates of installation and removal of diesel-fired engines and the location of each unit as these units are installed and removed.

(c) The Permittee shall maintain records of the make, model, horsepower rating, the manufacture date, and model year of each rental generator brought onto the site.

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

D.7.6 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.7.2(c) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, no later than thirty (30) days after the end of the quarter being reported. Section C – General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. The report 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).

SECTION E.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]

(b) Two (2) gas turbines identified below:

Emission Unit ID No.	Unit Identification	Maximum Capacity, MMBtu/hr	Fuels Permitted to Use	Stack No.	Date Constructed
0070-80	Gas Turbine	68	Natural Gas, Landfill gas	8-80	1999
0070-71	Gas Turbine	35	Natural Gas	8-9	1999

Under 40 CFR 60, Subpart GG, 0070-80 and 0070-71 are considered affected facilities.

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

New Source Performance Standards Requirements (NSPS) [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to NSPS [326 IAC 12-1-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated as 326 IAC 12-1-1, apply to the facilities described in this section except when otherwise specified in 40 CFR Part 60, Subpart GG.

E.1.2 Standards of Performance for Stationary Gas Turbines [40 CFR Part 60, Subpart GG] [326 IAC 12]

The Permittee shall comply with the provisions of 40 CFR 60, Subpart GG - Standards of Performance for Stationary Gas Turbines, which are incorporated by reference as 326 IAC 12. The entire rule is included as Attachment A of the permit. The two (2) gas turbines identified as 0070-80, and 0070-71 are subject to the following requirements of 40 CFR Part 60, Subpart GG:

(1) 40 CFR 60.330
(2) 40 CFR 60.331
(3) 40 CFR 60.332(a)(2), (4)
(4) 40 CFR 60.333(b)
(5) 40 CFR 60.334(c)
(6) 40 CFR 60.335(a), (b)(2)

SECTION E.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]:

(e) Degreasing operations, consisting of:

(1) Two (2) Open Top Vapor Degreasers, identified as emission units 0070-13 and 0070-31, using perchloroethylene as the solvent, exhausting inside the building, and reconstructed in 1997.

(2) One (1) Open Top Vapor Degreaser, identified as emission unit 0311-82,permitted to use N-Propyl Bromide and Perchloroethylene as the solvent, exhausting insde the building, and reconstructed in 2000.

(3) Portable Cold Cleaner Degreasing Tanks, used for degreasing parts, identified as emission unit 0070-12, using mineral spirits as the solvent, and exhausting into the building.

(4) Spray cleaning booths, constructed prior to 1990, identified as emission unit 0070-14, using mineral spirits as the solvent, and exhausting outside the building.

(5) One (1) stationary enclosed parts cleaning machine, Vacuum Degreaser Model V4-EX, identified as emission unit 24087, approved in 2006 for construction, using only Tetrachloroethylene as the solvent, with a cleaning capacity of 1.135 cubic meters, and exhausting inside the building.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

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

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 Appendix B to 40 CFR 63, Subpart T in accordance with the schedule in 40 CFR Part 63, Subpart T.

E.2.2 National Emission Standards for Halogenated Solvent Cleaning [40 CFR 63, Subpart T] [326 IAC 20-6]

The Permittee which engages in halogenated solvent cleaning shall comply with the following provisions of 40 CFR 63, Subpart T, which is incorporated by reference as 326 IAC 20-6-1 (included as Attachment B of the permit):

(1) 40 CFR 63.460
(2) 40 CFR 63.461
(3) 40 CFR 63.463(a)(1-7),(b)(1)(i),(b)(2)(i),(c),(d),(e),
(4) 40 CFR 63.465(e)
(5) 40 CFR 63.466(a)(1),(b)(1),(c)(1-4)
(6) 40 CFR 63.467(a),(b)
(7) 40 CFR 63.468(a),(b),(d),(f)
(8) 40 CFR 63, Subpart T - Appendix B (applicable portions)

SECTION E.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]

(c) Seven (7) paint booths identified as emission units 0070-N56a, 0070-10a, 0070-10b, 0070-10c, 0070-10d, 0070-84, and 0070-85, controlled by dry filters, exhausting out stacks identified as SN56a, 5-10a, 5-10b, 5-10c, 5-10d, S-84, and S-85, respectively. Paint booths 0070-N56a, 0070-10a, 0070-10b, 0070-10c, and 0070-10d were installed prior to 1974 and modified in 1998 to comply with the aerospace NESHAPs. Paint booths 0070-84 and 0070-85 were installed in 2003. Under 40 CFR 63, Subpart GG, the paint booths are considered affected facilities.

(d) Facility-wide wipe cleaning operations.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.3.1 General Provisions Relating to HAPs [326 IAC 20-1-1][40 CFR Part 63, Subpart A]

The Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, as specified in Table 1 of 40 CFR 63, Subpart GG in accordance with the schedule in 40 CFR Part 63, Subpart GG.

E.3.2 National Emission Standards for Aerospace Manufacturing and Rework Facilities [40 CFR 63, Subpart GG][326 IAC 20-15]

The Permittee which engages in aerospace manufacturing and rework shall comply with the following provisions of 40 CFR 63, Subpart GG, which is incorporated by reference as 326 IAC 20-15-1 (included as Attachment C of the permit):

(1) 40 CFR 63.741
(2) 40 CFR 63.742
(3) 40 CFR 63.744(a)(1-3), (b)(2), (c)(1)(ii), (c)(2-3), (d)
(4) 40 CFR 63.745(b), (c), (f), (g)
(5) 40 CFR 63.748
(6) 40 CFR 63.750(a), (b)
(7) 40 CFR 63.751(a), (c)
(8) 40 CFR 63.752(a), (b)(1), (b)(2), (b)(5), (d)
(9) 40 CFR 63.753(b), (c)
(10) Table 1 to 40 CFR 63, Subpart GG (applicable portions)

SECTION E.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]

(j) Forty-nine (49) engine test stand cells identified below. These test stand cells are used to test engines manufactured at the source. The engines tested are fueled by either Jet fuel, Diesel Oil #2 or Natural Gas. All test stand cells except test stand cells 133 and 135 (Emission Unit IDs 0070-87 and 0070-88) were constructed prior to 1977. Test stand cells 133 and 135 (Emission Unit IDs 0070-87 and 0070-88) were approved in 2007 for construction. Test cell 111 (Emission Unit ID 0070-N4) was approved in 1999 for modification. Test cell 824 (Emission Unit ID 0070-N32) was approved in 2008 for modification. Test cell 114 (Emission Unit 0070-N6) was approved in 2011 for modification.

Engine Test Cells - Plant 5				
Emission Unit ID No.	Engine Test Cell ID	Maximum Test Cell Capacity	Type of Fuels Used	Stack ID
0070-N3	109	5000 brake horsepower	Jet fuel, Diesel	SN3
0070-N4	111	10000 pounds of thrust (a maximum of 6 engines tested per day)	Jet fuel	SN4
0070-N5	113	10000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN5
0070-N6	114	30000 pounds of fuel per hour	Jet fuel	SN6
0070-N7	115	7000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN7
0070-N8	116	5000 brake horsepower	Jet fuel, Diesel	SN8
0070-N9	117	5000 brake horsepower	Jet fuel, Diesel	SN9
0070-N10	118	5000 brake horsepower	Jet fuel, Diesel	SN10
0070-N11	119	5000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN11
0070-N12	120	7000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN12
0070-N13	121	10000 brake horsepower	Jet fuel, Diesel	SN13
0070-N15	123	5000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN15
0070-N16	140	1500 brake horsepower	Jet fuel	SN16
0070-N17	141	750 brake horsepower	Jet fuel	SN17
0070-N18	142	800 brake horsepower	Jet fuel	SN18
0070-N19	143	750 brake horsepower	Jet fuel	SN19
0070-N20	144	750 brake horsepower	Jet fuel	SN20
0070-N21	145	750 brake horsepower	Jet fuel	SN21

Engine Test Cells - Plant 5				
Emission Unit ID No.	Engine Test Cell ID	Maximum Test Cell Capacity	Type of Fuels Used	Stack ID
0070-N22	146	1500 brake horsepower	Jet fuel	SN22
0070-N23	147	1500 brake horsepower	Jet fuel	SN23
0070-N24	148	1500 brake horsepower	Jet fuel	SN24
0070-N25	149	650 brake horsepower	Jet fuel	SN25
0070-N27	152	1500 brake horsepower	Jet fuel	SN27
0070-87	133	715 brake horsepower, with maximum fuel flow capacity of 59 gal/hr	Jet fuel	S87
0070-88	135	715 brake horsepower, with maximum fuel flow capacity of 59 gal/hr	Jet fuel	S88

Engine Test Cells - Plant 8				
Emission Unit ID	Engine Test Cell	Maximum Test Cell Capacity	Type of Fuels Used	Stack ID
0070-N34	843	10000 brake horsepower	Jet fuel	SN34(A,B)
0070-N35	861	9000 pounds of thrust	Jet fuel, Diesel	SN35
0070-N36	862	6000 brake horsepower	Jet fuel, Diesel	SN36
0070-N37	871	15000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN37(A,B)
0070-N38	872	9000 brake horsepower	Jet fuel, Diesel & Natural Gas	SN38(A,B)
0070-N39	873	9000 brake horsepower	Jet fuel	SN39(A,B,C)
0070-N40	875	5000 brake horsepower	Diesel	SN40
0070-N41	881	10000 pounds of thrust	Jet fuel	SN41(A,B)
0070-N42	882	30000 pounds of thrust	Jet fuel	SN42(A,B,C,D,E, F)
0070-N43	883	2500 brake horsepower	Jet fuel	SN43(A,B)
0070-N44	884	2000 brake horsepower	Jet fuel	SN44
0070-N45	885	800 brake horsepower	Jet fuel, Diesel	SN45(A,B)
0070-N46	886	30000 pounds of thrust	Jet fuel, Diesel	SN46(A,B,C,D)
0070-N47	893	500 pounds of thrust	Diesel	SN47

Engine Test Cells - Plant 8				
Emission Unit ID	Engine Test Cell	Maximum Test Cell Capacity	Type of Fuels Used	Stack ID
0070-N48	894	350 brake horsepower	Diesel	SN48
0070-N29	821	10 pounds/second air	Jet fuel, Diesel & Natural Gas	SN29(A,B)
0070-N30	822	50 pounds/second air	Jet fuel, Diesel & Natural Gas	SN30(A,B)
0070-N31	823	60 pounds/second air	Jet fuel, Diesel & Natural Gas	SN31(A,B)
0070-N32	824	120 pounds/second air	Jet fuel, Diesel & Natural Gas	SN32(A,B)
0070-N33	826	25 pounds/second air	Jet fuel, Diesel	SN33(A,B)
0070-N54	8137	10 pounds/second air	Jet fuel, Diesel & Natural Gas	SN54
0070-N54a	8137	12.5 MMBtu/hr	No. 2 Diesel fuel	Not Available
0070-N55	8126	0.5 pounds/second air	Jet fuel, Diesel & Natural Gas	Not Available
0070-N56	8128	1 pounds/second air	Jet fuel, Diesel & Natural Gas	Not Available

Under 40 CFR 63, Supbart PPPPP, the collection of test cells in (j) is considered an existing affected source.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.4.1 General Provisions Relating to NESHAP PPPPP [326 IAC 20-1-1][40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.9290(b), the Permittee does not have to comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1.

E.4.2 Engine Test Cells/Stands NESHAP [40 CFR 63, Subpart PPPPP][326 IAC 20-75]

The Permittee which operates engine test cells/stands is subject to the following provisions of 40 CFR 63, Subpart PPPPP, which is incorporated by reference as 326 IAC 20-75-1 (included as Attachment D of the permit):

(1) 40 CFR 63.9280
(2) 40 CFR 63.9285
(3) 40 CFR 63.9290(a), (b)
(4) 40 CFR 63.9375

SECTION E.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]

(h) Jet fueled turbine engines, identified as follows:

(3) Two (2) natural gas fired turbine generators, identified as 0070-68a and 0070-68b, approved in 2011 for construction, each with a single 39 MMBtu/hr combustor, exhausting out stacks identified as 8-12A and 8-12B. Under 40 CFR 60, Subpart KKKK, the turbines identified as 0070-68a and 0070-68b are considered affected sources. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68a and 0070-68b are considered new affected sources.

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

New Source Performance Standards Requirements (NSPS) [326 IAC 2-7-5(1)]

E.5.1 General Provisions Relating to NSPS [326 IAC 12-1-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated as 326 IAC 12-1-1, apply to the facilities described in this section except when otherwise specified in 40 CFR Part 60, Subpart KKKK.

E.5.2 Standards of Performance for Stationary Combustion Turbines [40 CFR Part 60, Subpart KKKK] [326 IAC 12]

The Permittee shall comply with the provisions of 40 CFR 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines, which are incorporated by reference as 326 IAC 12. The entire rule is included as Attachment E of the permit. The two (2) gas turbines identified as 0070-68a, and 0070-68b are subject to the following requirements of 40 CFR Part 60, Subpart KKKK:

(1) 40 CFR 60.4300
(2) 40 CFR 60.4305
(3) 40 CFR 60.4320
(4) 40 CFR 60.4330(a)(2)
(5) 40 CFR 60.4333
(6) 40 CFR 60.4335
(7) 40 CFR 60.4340
(8) 40 CFR 60.4345
(9) 40 CFR 60.4350
(10) 40 CFR 60.4355
(11) 40 CFR 60.4360
(12) 40 CFR 60.4365
(13) 40 CFR 60.4370(b), (c)
(14) 40 CFR 60.4375
(15) 40 CFR 60.4380
(16) 40 CFR 60.4385
(17) 40 CFR 60.4395
(18) 40 CFR 60.4400
(19) 40 CFR 60.4405
(20) 40 CFR 60.4410
(21) 40 CFR 60.4415
(22) 40 CFR 60.4420
(23) Table 1 of 40 CFR 60, Subpart KKKK

SECTION E.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]

(b) Two (2) gas turbines identified below:

Emission Unit ID No.	Unit Identification	Maximum Capacity, MMBtu/hr	Fuels Permitted to use	Stack No.	Date Constructed or last permitted
0070-80	Gas Turbine	68	Natural Gas, Landfill gas	8-80	1999
0070-71	Gas Turbine	35	Natural Gas	8-9	1999

Under 40 CFR 60, Subpart GG, 0070-80 and 0070-71 are considered affected facilities. Under 40 CFR 63, Subpart YYYY, 0070-80 and 0070-71 are considered existing affected sources.

(h) Jet fueled turbine engines, identified as follows:

(1) Two (2) emission units, identified as 0070-66, with a maximum operating capacity of 107 million British thermal units per hour each, exhausting out stacks identified as 8-11A and 8-11B. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-66 are considered existing affected sources.

(2) Twelve (12) emission units, identified as 0070-67, with a maximum operating capacity of 27.2 million British thermal units per hour each, exhausting out stacks identified 8-13A through M respectively. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-67 are considered existing affected sources.

(3) Two (2) natural gas fired turbine generators, identified as 0070-68a and 0070-68b, approved in 2011 for construction, each with a single 39 MMBtu/hr combustor, exhausting out stacks identified as 8-12A and 8-12B. Under 40 CFR 60, Subpart KKKK, the turbines identified as 0070-68a and 0070-68b are considered affected sources. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68a and 0070-68b are considered new affected sources.

(4) Three (3) jet fuel fired turbine generators, identified as 0070-68c, 0070-68d, and 0070-68e, constructed in 1955, each with two (2) 27.2 MMBtu/hr combustor units, exhausting out stacks identified as 8-12C, 8-12D, and 8-12E. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68c, 0070-68d, and 0070-68e are considered existing affected sources.

(5) Four (4) emission units, identified as 0070-69, with a maximum operating capacity of 27.2 million British thermal per hour units each, exhausting out stacks identified as 8-14A through D. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-69 are considered existing affected sources.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.6.1 General Provisions Relating to NESHAP YYYY [326 IAC 20-1-1][40 CFR Part 63, Subpart A]

(a) The Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, as specified in Table 7 of 40 CFR 63, Subpart YYYY in accordance with the schedule in 40 CFR Part 63, Subpart YYYY for all new affected sources.

(b) Pursuant to 40 CFR 63.6090(b)(4), the Permittee does not have to comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for existing affected sources.

E.6.2 Stationary Combustion Turbines NESHAP [40 CFR 63, Subpart YYYY][326 IAC 20-90]

(a) The Permittee which operates stationary combustion turbines that are new affected sources is subject to the following provisions of 40 CFR 63, Subpart YYYY, which is incorporated by reference as 326 IAC 20-90-1 (included as Attachment F of the permit):

(1) 40 CFR 63.6080
(2) 40 CFR 63.6085
(3) 40 CFR 63.6090(a)(2)
(4) 40 CFR 63.6095(d)
(5) 40 CFR 63.6145(a), (c)
(6) 40 CFR 63.6155(a)(1)
(7) 40 CFR 63.6160
(8) 40 CFR 63.6165
(9) 40 CFR 63.6170
(10) 40 CFR 63.6175
(11) Table 7 of 40 CFR 63, Subpart YYYY

(b) The Permittee which operates stationary combustion turbines that are existing affected sources is subject to the following provisions of 40 CFR 63, Subpart YYYY, which is incorporated by reference as 326 IAC 20-90-1 (included as Attachment F of the permit):

(1) 40 CFR 63.6080
(2) 40 CFR 63.6085
(3) 40 CFR 63.6090(a)(1), (b)(4)
(4) 40 CFR 63.6170
(5) 40 CFR 63.6175

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Rolls Royce Corporation
Source Address: 2001 and 2355 South Tibbs Ave, Indianapolis, Indiana 46241
Part 70 Permit No.: T097-25529-00311

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: Rolls Royce Corporation
Source Address: 2001 and 2355 South Tibbs Ave, Indianapolis, Indiana 46241
Part 70 Permit No.: T097-25529-00311

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**) daytime 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_2, VOC, NO_X, 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: Rolls Royce Corporation
Source Address: 2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241
Part 70 Permit No.: T097-25529-00311
Facility: Emission Unit ID 0070-58, 59, 62, 63, 64, 65, 71 and 80
Parameter: PM10
Limit: 37,142,800 gal per twelve (12) consecutive month period of No. 4 oil and No.4 oil equivalents
Permittee must submit this page for each 12 consecutive month period in the reporting period.

Month: _____ **Year:** _____

Month	No. 4 Oil Usage (gal/month)	No. 6 Oil Usage (gal/day)	Equivalent No. 4 Oil (gal/month)	Natural Gas Usage MMCF/day	Equivalent No. 4 Oil (gal/month)	No. 2 oil Usage (gal/day)	Equivalent No. 4 Oil Usage (gal/month)	Landfill gas Usage MMCF/day Boiler	Landfill Gas Usage MMCF/day Turbine	Equivalent No. 4 Oil (gal/month)	No. 4 Oil Usage and its equivalent (gal/month)
TOTAL											

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____ Date: _____

Title / Position: _____ Phone: _____

Signature: _____

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

Part 70 Quarterly Report

Source Name: Rolls Royce Corporation
Source Address: 2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241
Part 70 Permit No.: T097-25529-00311
Facility: Test Cell 111 (Emission Unit ID 0070-N4)
Parameter: Jet Fuel Usage
Limit: 567,779 gallons of Jet Fuel per 12 consecutive month period.

YEAR: QUARTER:

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 Quarterly Report

Source Name: Rolls Royce Corporation
Source Address: 2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241
Part 70 Permit No.: T097-25529-00311
Facility: Natural Gas Turbine Generators, 0070-68a and 0070-68b
Parameter: Natural Gas Fuel Usage
Limit: Less than 240 MMCF per twelve (12) consecutive month period.

YEAR: QUARTER:

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 Quarterly Report

Source Name: Rolls Royce Corporation
Source Address: 2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241
Part 70 Permit No.: T097-25529-00311
Facility: Emission Unit ID 0070-58, 59, 62, 63, 64, 65, 71, and 80
Parameter: Oxides of Nitrogen
Limit: 6205 MMCF of natural gas and natural gas equivalents during the last 12 month consecutive period.

Permittee must submit this page for each 12 consecutive month period in the reporting period.

Month	Natural Gas Usage (MMCF/month)					No. 6 oil Usage (gal/month)		No. 4 Oil usage (gal/mo)	No. 2 oil usage (gal/mo)	Landfill Gas usage (MMCF/month)		Natural Gas Usage and its equivalent (MMCF/mo)
	boilers	Turbine ID Number								boilers	turbines	
		0070-80	0070-71									
Total												

QUARTER: _____ **YEAR:**_____

☐ **No deviation occurred in this quarter.**
☐ **Deviation/s occurred in this quarter.**
Deviation has been reported on: _____

Submitted by: _____ **Date:** _____

Title / Position:_____ **Phone:** _____

Signature: _____

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

Part 70 Quarterly Report

Source Name: Rolls Royce Corporation
Source Address: 2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241
Part 70 Permit No.: T097-25529-00311
Facility: Rental Diesel-Fired Generators (0070-89)
Parameter: NOx Emissions
Limit: Shall be less than forty (40) tons per twelve (12) consecutive month period. The following equation shall be used to determine compliance:

NOx Emissions (ton/month) = (4.41A + 3.2B) x (0.14 MMBtu/gal) x (1 ton/2000 lb),
where:

A = Diesel fuel usage for units with a rated output capacity of less than or equal to 600 hp (gal/month)

B = Diesel fuel usage for units with a rated output capacity of greater than 600 hp (gal/month)

YEAR: QUARTER:

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 Quarterly Report

Source Name:	Rolls Royce Corporation
Source Address:	2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241
Part 70 Permit No.:	T097-25529-00311
Facility:	Test cell 0070-N32 and the two (2) natural gas shack heaters (0070-70A and 0070-70B)
Parameter:	Particulate Emissions (PM)
Limit:	The combined total PM emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month calculated using the following equation:

$$E_{PM} = ((G_{diesel/jet\ juel} \times 0.01) + (CF_{natural\ gas} \times 10.4) + (C_{SH} \times 1.9)) / 2000$$

Where:

E_{PM} = Emissions of PM in tons per month
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used each month in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used each month in test cell 0070-N32
C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	PM emissions (Tons This Month)	PM emissions (Tons Previous 11 Months)	PM emissions (12 Month Total in Tons)
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 Quarterly Report

Source Name:	Rolls Royce Corporation
Source Address:	2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241
Part 70 Permit No.:	T097-25529-00311
Facility:	Test cell 0070-N32 and the two (2) natural gas shack heaters (0070-70A and 0070-70B)
Parameter:	Particulate Emissions less 10 microns (PM_{10})
Limit:	The combined total PM_{10} emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 15 tons per twelve (12) consecutive month period with compliance determined at the end of each month calculated using the following equation:

$$E_{PM10} = ((G_{diesel/jet\ juel} \times 0.01) + (CF_{natural\ gas} \times .081) + (C_{SH} \times 7.6)) / 2000$$

Where:

E_{PM10} = Emissions of PM_{10} in tons per month
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used each month in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used each month in test cell 0070-N32
C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	PM_{10} emissions (Tons This Month)	PM_{10} emissions (Tons Previous 11 Months)	PM_{10} emissions (12 Month Total in Tons)
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 Quarterly Report

Source Name:	Rolls Royce Corporation
Source Address:	2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241
Part 70 Permit No.:	T097-25529-00311
Facility:	Test cell 0070-N32 and the two (2) natural gas shack heaters (0070-70A and 0070-70B)
Parameter:	Particulate Emission less than 2.5 Microns ($PM_{2.5}$)
Limit:	The combined total $PM_{2.5}$ emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 10 tons per twelve (12) consecutive month period with compliance determined at the end of each month calculated using the following equation:

$$E_{PM2.5} = ((G_{diesel/jet\ juel} \times 0.01) + (CF_{natural\ gas} \times .081) + (C_{SH} \times 7.6)) / 2000$$

Where:

$E_{PM2.5}$ = Emissions of $PM_{2.5}$ in tons per month
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used each month in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used each month in test cell 0070-N32
C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	$PM_{2.5}$ emissions (Tons This Month)	$PM_{2.5}$ emissions (Tons Previous 11 Months)	$PM_{2.5}$ emissions (12 Month Total in Tons)
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 Quarterly Report

Source Name: Rolls Royce Corporation
Source Address: 2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241
Part 70 Permit No.: T097-25529-00311
Facility: Test cell 0070-N32 and the two (2) natural gas shack heaters (0070-70A and 0070-70B)
Parameter: Nitrogen Oxide (NOx)
Limit: The combined total NOx emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month calculated using the following equation:

$$E_{NOx} = \Sigma E_{DOS}$$

$$E_{DOS} = ((G_{diesel/jet\ juel} \times A) + (CF_{natural\ gas} \times D) + (C_{SH} \times 100)) / 2000$$

Where:

E_{NOx} = Emissions of NO_x in tons per month
E_{DOS} = Emissions of NOx in tons per month at each different operating scenario
A = 0.40 or emission rate determined from most recent emissions test in pounds per gallon
D = 4,284 or emission rate determined from most recent emissions test in pounds per million cubic feet
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used per operating scenario in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used per operating scenario in test cell 0070-N32
C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	NOx emissions (Tons This Month)	NOx emissions (Tons Previous 11 Months)	NOx emissions (12 Month Total in Tons)
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 Quarterly Report

Source Name: Rolls Royce Corporation
Source Address: 2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241
Part 70 Permit No.: T097-25529-00311
Facility: Test cell 0070-N32 and the two (2) natural gas shack heaters (0070-70A and 0070-70B)
Parameter: Sulfur Dioxide (SO_2)
Limit: The combined total SO_2 emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month calculated using the following equation:

$$E_{SO2} = ((G_{diesel/jet\ juel} \times 0.07) + (CF_{natural\ gas} \times 0.617) + (C_{SH} \times 0.6)) / 2000$$

Where:

E_{SO2} = Emissions of SO_2 in tons per month
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used each month in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used each month in test cell 070-N32
C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	SO_2 emissions (Tons This Month)	SO_2 emissions (Tons Previous 11 Months)	SO_2 emissions (12 Month Total in Tons)
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 Quarterly Report

Source Name: Rolls Royce Corporation
Source Address: 2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241
Part 70 Permit No.: T097-25529-00311
Facility: Test cell 0070-N32 and the two (2) natural gas shack heaters (0070-70A and 0070-70B)
Parameter: Carbon Monoxide (CO)
Limit: The combined total CO emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 100 tons per twelve (12) consecutive month period with compliance determined at the end of each month calculated using the following equation:

$$E_{CO} = \Sigma E_{DOS}$$

$$E_{DOS} = ((G_{diesel/jet\ juel} \times C) + (CF_{natural\ gas} \times E) + (C_{SH} \times 84)) / 2000$$

Where:

E_{CO} = Emissions of CO in tons per month
E_{DOS} = Emissions of CO in tons per month at each different operating scenario
C = 1.21 or emission rate determined from most recent emissions test in pounds per gallon
E = 332.9 or emission rate determined from most recent emissions test in pounds per million cubic feet
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used per operating scenario in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used per operating scenario in test cell 0070-N32
C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	CO emissions (Tons This Month)	CO emissions (Tons Previous 11 Months)	CO emissions (12 Month Total in Tons)
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 Quarterly Report

Source Name: Rolls Royce Corporation
Source Address: 2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241
Part 70 Permit No.: T097-25529-00311
Facility: Test cell 0070-N32 and the two (2) natural gas shack heaters (0070-70A and 0070-70B)
Parameter: Volatile Organic Compounds (VOC)
Limit: The combined total VOC emissions from test cell 824 and the two natural gas shack heaters, identified as Emission Units 0070-N32, 0070-70A, and 0070-70B, shall be less than 40 tons per twelve (12) consecutive month period with compliance determined at the end of each month calculated using the following equation:

$$E_{VOC} = \Sigma E_{DOS}$$

$$E_{DOS} = ((G_{diesel/jet\ juel} \times B) + (CF_{natural\ gas} \times F) + (C_{SH} \times 5.5)) / 2000$$

Where:

E_{VOC} = Emissions of VOC in tons per month
E_{DOS} = Emissions of VOC in tons per month at each different operating scenario
B = 0.21 or emission rate determined from most recent emissions test in pounds per gallon
F = 123.9 or emission rate determined from most recent emissions test in pounds per million cubic feet
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used per operating scenario in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used per operating scenario in test cell 0070-N32
C_{SH} = million cubic feet of natural gas used in stack heaters 0070-70A and 0070-70B

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC emissions (Tons This Month)	VOC emissions (Tons Previous 11 Months)	VOC emissions (12 Month Total in Tons)
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 Quarterly Report

Source Name: Rolls Royce Corporation
Source Address: 2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241
Part 70 Permit No.: T097-25529-00311
Facility: Test cell 0070-N32
Parameter: Volatile Organic Compounds (VOC)
Limit: The combined total VOC emissions from test cell 824, identified as 0070-N32 shall be less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month calculated using the following equation:

$E_{VOC} = \Sigma E_{DOS}$

$E_{DOS} = ((G_{diesel/jet\ juel} \times B) + (CF_{natural\ gas} \times F)) / 2000$

Where:

E_{VOC} = Emissions of VOC in tons per month
E_{DOS} = Emissions of VOC in tons per month at each different operating scenario
B = 0.21 or emission rate determined from most recent emissions test in pounds per gallon
F = 123.9 or emission rate determined from most recent emissions test in pounds per million cubic feet
$G_{diesel/jet\ juel}$ = gallons of diesel/jet fuel used per operating scenario in test cell 0070-N32
$CF_{natural\ gas}$ = million cubic feet of natural gas used per operating scenario in test cell 0070-N32

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC emissions (Tons This Month)	VOC emissions (Tons Previous 11 Months)	VOC emissions (12 Month Total in Tons)
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: Rolls Royce Corporation
Source Address: 2001 and 2355 South Tibbs Ave, Indianapolis, Indiana 46241
Part 70 Permit No.: T097-25529-00311

Months: _____ to _____ Year: _____

This report shall be submitted quarterly based on a calendar year. 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".	
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Page 2 of 2

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

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

Indiana Department of Environmental Management
Office of Air Quality

Attachment A
to a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	Rolls Royce Corporation
Source Location:	Plant 8 - 2001 South Tibbs Ave., Indianapolis, IN 46241
	Plant 5 - 2355 South Tibbs Ave., Indianapolis, IN 46241
County:	Marion
SIC Code:	3724
Permit Renewal No.:	T097-25529-00311

Title 40: Protection of Environment
PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart GG—Standards of Performance for Stationary Gas Turbines

§ 60.330 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour, based on the lower heating value of the fuel fired.

(b) Any facility under paragraph (a) of this section which commences construction, modification, or reconstruction after October 3, 1977, is subject to the requirements of this part except as provided in paragraphs (e) and (j) of §60.332.

[44 FR 52798, Sept. 10, 1979, as amended at 52 FR 42434, Nov. 5, 1987; 65 FR 61759, Oct. 17, 2000]

§ 60.331 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Stationary gas turbine* means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self propelled. It may, however, be mounted on a vehicle for portability.

(b) *Simple cycle gas turbine* means any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam.

(c) *Regenerative cycle gas turbine* means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine.

(d) *Combined cycle gas turbine* means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to heat water or generate steam.

(e) *Emergency gas turbine* means any stationary gas turbine which operates as a mechanical or electrical power source only when the primary power source for a facility has been rendered inoperable by an emergency situation.

(f) *Ice fog* means an atmospheric suspension of highly reflective ice crystals.

(g) *ISO standard day conditions* means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

(h) *Efficiency* means the gas turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output based on the lower heating value of the fuel.

(i) *Peak load* means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.

(j) *Base load* means the load level at which a gas turbine is normally operated.

(k) *Fire-fighting turbine* means any stationary gas turbine that is used solely to pump water for extinguishing fires.

(l) *Turbines employed in oil/gas production or oil/gas transportation* means any stationary gas turbine used to provide power to extract crude oil/natural gas from the earth or to move crude oil/natural gas, or products refined from these substances through pipelines.

(m) A *Metropolitan Statistical Area* or *MSA* as defined by the Department of Commerce.

(n) *Offshore platform gas turbines* means any stationary gas turbine located on a platform in an ocean.

(o) *Garrison facility* means any permanent military installation.

(p) *Gas turbine model* means a group of gas turbines having the same nominal air flow, combuster inlet pressure, combuster inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

(q) *Electric utility stationary gas turbine* means any stationary gas turbine constructed for the purpose of supplying more than one-third of its potential electric output capacity to any utility power distribution system for sale.

(r) *Emergency fuel* is a fuel fired by a gas turbine only during circumstances, such as natural gas supply curtailment or breakdown of delivery system, that make it impossible to fire natural gas in the gas turbine.

(s) *Unit operating hour* means a clock hour during which any fuel is combusted in the affected unit. If the unit combusts fuel for the entire clock hour, it is considered to be a full unit operating hour. If the unit combusts fuel for only part of the clock hour, it is considered to be a partial unit operating hour.

(t) *Excess emissions* means a specified averaging period over which either:

(1) The NO_Xemissions are higher than the applicable emission limit in §60.332;

(2) The total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in §60.333; or

(3) The recorded value of a particular monitored parameter is outside the acceptable range specified in the parameter monitoring plan for the affected unit.

(u) *Natural gas* means a naturally occurring fluid mixture of hydrocarbons (*e.g.* , methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Equivalents of this in other units are as follows: 0.068 weight percent total sulfur, 680 parts per million by weight (ppmw) total sulfur, and 338 parts per million by volume (ppmv) at 20 degrees Celsius total sulfur. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

(v) *Duct burner* means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.

(w) *Lean premix stationary combustion turbine* means any stationary combustion turbine where the air and fuel are thoroughly mixed to form a lean mixture for combustion in the combustor. Mixing may occur before or in the combustion chamber. A unit which is capable of operating in both lean premix and diffusion flame modes is considered a lean premix stationary combustion turbine when it is in the lean premix mode, and it is considered a diffusion flame stationary combustion turbine when it is in the diffusion flame mode.

(x) *Diffusion flame stationary combustion turbine* means any stationary combustion turbine where fuel and air are injected at the combustor and are mixed only by diffusion prior to ignition. A unit which is capable of operating in both lean premix and diffusion flame modes is considered a lean premix stationary combustion turbine when it is in the lean premix mode, and it is considered a diffusion flame stationary combustion turbine when it is in the diffusion flame mode.

(y) *Unit operating day* means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982; 65 FR 61759, Oct. 17, 2000; 69 FR 41359, July 8, 2004]

§ 60.332 Standard for nitrogen oxides.

(a) On and after the date on which the performance test required by §60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b), (c), and (d) of this section shall comply with one of the following, except as provided in paragraphs (e), (f), (g), (h), (i), (j), (k), and (l) of this section.

(1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0075\frac{(14.4)}{Y} + F$$

where:

STD = allowable ISO corrected (if required as given in §60.335(b)(1)) NO_X emission concentration (percent by volume at 15 percent oxygen and on a dry basis),

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour, and

F = NO_X emission allowance for fuel-bound nitrogen as defined in paragraph (a)(4) of this section.

(2) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0150\frac{(14.4)}{Y} + F$$

where:

STD = allowable ISO corrected (if required as given in §60.335(b)(1)) NO_X emission concentration (percent by volume at 15 percent oxygen and on a dry basis),

Y = manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour, and

F = NO_X emission allowance for fuel-bound nitrogen as defined in paragraph (a)(4) of this section.

(3) The use of F in paragraphs (a)(1) and (2) of this section is optional. That is, the owner or operator may choose to apply a NO_X allowance for fuel-bound nitrogen and determine the appropriate F-value in accordance with paragraph (a)(4) of this section or may accept an F-value of zero.

(4) If the owner or operator elects to apply a NO_X emission allowance for fuel-bound nitrogen, F shall be defined according to the nitrogen content of the fuel during the most recent performance test required under §60.8 as follows:

Fuel-bound nitrogen (percent by weight)	**F (NO_Xpercent by volume)**
N ≤ .015	0
0.015 < N≤ 0.1	0.04 (N)
0.1 < N ≤ 0.25	0.004+0.0067(N–0.1)
N > 0.25	0.005

Where:

N = the nitrogen content of the fuel (percent by weight).

or:

Manufacturers may develop and submit to EPA custom fuel-bound nitrogen allowances for each gas turbine model they manufacture. These fuel-bound nitrogen allowances shall be substantiated with data and must be approved for use by the Administrator before the initial performance test required by §60.8. Notices of approval of custom fuel-bound nitrogen allowances will be published in the Federal Register.

(b) Electric utility stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.

(c) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired, shall comply with the provisions of paragraph (a)(2) of this section.

(d) Stationary gas turbines with a manufacturer's rated base load at ISO conditions of 30 megawatts or less except as provided in §60.332(b) shall comply with paragraph (a)(2) of this section.

(e) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired and that have commenced construction prior to October 3, 1982 are exempt from paragraph (a) of this section.

(f) Stationary gas turbines using water or steam injection for control of NO_X emissions are exempt from paragraph (a) when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine.

(g) Emergency gas turbines, military gas turbines for use in other than a garrison facility, military gas turbines installed for use as military training facilities, and fire fighting gas turbines are exempt from paragraph (a) of this section.

(h) Stationary gas turbines engaged by manufacturers in research and development of equipment for both gas turbine emission control techniques and gas turbine efficiency improvements are exempt from paragraph (a) on a case-by-case basis as determined by the Administrator.

(i) Exemptions from the requirements of paragraph (a) of this section will be granted on a case-by-case basis as determined by the Administrator in specific geographical areas where mandatory water restrictions are required by governmental agencies because of drought conditions. These exemptions will be allowed only while the mandatory water restrictions are in effect.

(j) Stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour that commenced construction, modification, or reconstruction between the dates of October 3, 1977, and January 27, 1982, and were required in the September 10, 1979,Federal Register(44 FR 52792) to comply with paragraph (a)(1) of this section, except electric utility stationary gas turbines, are exempt from paragraph (a) of this section.

(k) Stationary gas turbines with a heat input greater than or equal to 10.7 gigajoules per hour (10 million Btu/hour) when fired with natural gas are exempt from paragraph (a)(2) of this section when being fired with an emergency fuel.

(l) Regenerative cycle gas turbines with a heat input less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) are exempt from paragraph (a) of this section.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982; 65 FR 61759, Oct. 17, 2000; 69 FR 41359, July 8, 2004]

§ 60.333 Standard for sulfur dioxide.

On and after the date on which the performance test required to be conducted by §60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with one or the other of the following conditions:

(a) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 percent by weight (8000 ppmw).

[44 FR 52798, Sept. 10, 1979, as amended at 69 FR 41360, July 8, 2004]

§ 60.334 Monitoring of operations.

(a) Except as provided in paragraph (b) of this section, the owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water or steam injection to control NO_X emissions shall install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine.

(b) The owner or operator of any stationary gas turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and which uses water or steam injection to control NO_X emissions may, as an alternative to operating the continuous monitoring system described in paragraph (a) of this section, install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of NO_X and O_2monitors. As an alternative, a CO_2monitor may be used to adjust the measured NO_X concentrations to 15 percent $O_2$by either converting the CO_2hourly averages to equivalent O_2concentrations using Equation F–14a or F–14b in appendix F to part 75 of this chapter and making the adjustments to 15 percent O_2, or by using the CO_2readings directly to make the adjustments, as described in Method 20. If the option to use a CEMS is chosen, the CEMS shall be installed, certified, maintained and operated as follows:

(1) Each CEMS must be installed and certified according to PS 2 and 3 (for diluent) of 40 CFR part 60, appendix B, except the 7-day calibration drift is based on unit operating days, not calendar days. Appendix F, Procedure 1 is not required. The relative accuracy test audit (RATA) of the $NO_X$and diluent monitors may be performed individually or on a combined basis, *i.e.* , the relative accuracy tests of the CEMS may be performed either:

(i) On a ppm basis (for NO_X) and a percent O_2basis for oxygen; or

(ii) On a ppm at 15 percent O_2basis; or

(iii) On a ppm basis (for NO_X) and a percent CO_2basis (for a CO_2monitor that uses the procedures in Method 20 to correct the NO_X data to 15 percent O_2).

(2) As specified in §60.13(e)(2), during each full unit operating hour, each monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required to validate the hour.

(3) For purposes of identifying excess emissions, CEMS data must be reduced to hourly averages as specified in §60.13(h).

(i) For each unit operating hour in which a valid hourly average, as described in paragraph (b)(2) of this section, is obtained for both NO_X and diluent, the data acquisition and handling system must calculate and record the hourly NO_X emissions in the units of the applicable NO_X emission standard under §60.332(a), *i.e.* , percent NO_X by volume, dry basis, corrected to 15 percent $O_2$and International Organization for Standardization (ISO) standard conditions (if required as given in §60.335(b)(1)). For any hour in which the hourly average O_2concentration exceeds 19.0 percent O_2, a diluent cap value of 19.0 percent O_2may be used in the emission calculations.

(ii) A worst case ISO correction factor may be calculated and applied using historical ambient data. For the purpose of this calculation, substitute the maximum humidity of ambient air (Ho), minimum ambient temperature (T_a), and minimum combustor inlet absolute pressure (P_o) into the ISO correction equation.

(iii) If the owner or operator has installed a NO_XCEMS to meet the requirements of part 75 of this chapter, and is continuing to meet the ongoing requirements of part 75 of this chapter, the CEMS may be used to meet the requirements of this section, except that the missing data substitution methodology provided for at 40 CFR part 75, subpart D, is not required for purposes of identifying excess emissions. Instead, periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance report required in §60.7(c).

(c) For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and which does not use steam or water injection to control NO_X emissions, the owner or operator may, but is not required to, for purposes of determining excess emissions, use a CEMS that meets the requirements of paragraph (b) of this section. Also, if the owner or operator has previously submitted and received EPA, State, or local permitting authority approval of a procedure for monitoring compliance with the applicable NO_X emission limit under §60.332, that approved procedure may continue to be used.

(d) The owner or operator of any new turbine constructed after July 8, 2004, and which uses water or steam injection to control NO_X emissions may elect to use either the requirements in paragraph (a) of this section for continuous water or steam to fuel ratio monitoring or may use a NO_XCEMS installed, certified, operated, maintained, and quality-assured as described in paragraph (b) of this section.

(e) The owner or operator of any new turbine that commences construction after July 8, 2004, and which does not use water or steam injection to control NO_X emissions, may, but is not required to, elect to use a NO_XCEMS installed, certified, operated, maintained, and quality-assured as described in paragraph (b) of this section. Other acceptable monitoring approaches include periodic testing approved by EPA or the State or local permitting authority or continuous parameter monitoring as described in paragraph (f) of this section.

(f) The owner or operator of a new turbine that commences construction after July 8, 2004, which does not use water or steam injection to control NO_X emissions may, but is not required to, perform continuous parameter monitoring as follows:

(1) For a diffusion flame turbine without add-on selective catalytic reduction controls (SCR), the owner or operator shall define at least four parameters indicative of the unit's NO_X formation characteristics and shall monitor these parameters continuously.

(2) For any lean premix stationary combustion turbine, the owner or operator shall continuously monitor the appropriate parameters to determine whether the unit is operating in low-NO_X mode.

(3) For any turbine that uses SCR to reduce NO_X emissions, the owner or operator shall continuously monitor appropriate parameters to verify the proper operation of the emission controls.

(4) For affected units that are also regulated under part 75 of this chapter, if the owner or operator elects to monitor NO_X emission rate using the methodology in appendix E to part 75 of this chapter, or the low mass emissions methodology in §75.19 of this chapter, the requirements of this paragraph (f) may be met by performing the parametric monitoring described in section 2.3 of appendix E or in §75.19(c)(1)(iv)(H) of this chapter.

(g) The steam or water to fuel ratio or other parameters that are continuously monitored as described in paragraphs (a), (d) or (f) of this section shall be monitored during the performance test required under §60.8, to establish acceptable values and ranges. The owner or operator may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. The owner or operator shall develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO_X emission controls. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer's recommendations and other relevant information shall be included in the monitoring plan. For affected units that are also subject to part 75 of this chapter and that use the low mass emissions methodology in §75.19 of this chapter or the NO_X emission measurement methodology in appendix E to part 75, the owner or operator may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a quality-assurance plan, as described in §75.19 (e)(5) or in section 2.3 of appendix E and section 1.3.6 of appendix B to part 75 of this chapter.

(h) The owner or operator of any stationary gas turbine subject to the provisions of this subpart:

(1) Shall monitor the total sulfur content of the fuel being fired in the turbine, except as provided in paragraph (h)(3) of this section. The sulfur content of the fuel must be determined using total sulfur methods described in §60.335(b)(10). Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), ASTM D4084–82, 94, D5504–01, D6228–98, or Gas Processors Association Standard 2377–86 (all of which are incorporated by reference-see §60.17), which measure the major sulfur compounds may be used; and

(2) Shall monitor the nitrogen content of the fuel combusted in the turbine, if the owner or operator claims an allowance for fuel bound nitrogen (*i.e.* , if an F-value greater than zero is being or will be used by the owner or operator to calculate STD in §60.332). The nitrogen content of the fuel shall be determined using methods described in §60.335(b)(9) or an approved alternative.

(3) Notwithstanding the provisions of paragraph (h)(1) of this section, the owner or operator may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in §60.331(u), regardless of whether an existing custom schedule approved by the administrator for subpart GG requires such monitoring. The owner or operator shall use one of the following sources of information to make the required demonstration:

(i) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or

(ii) Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

(4) For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and for which a custom fuel monitoring schedule has previously been approved, the owner or operator may, without submitting a special petition to the Administrator, continue monitoring on this schedule.

(i) The frequency of determining the sulfur and nitrogen content of the fuel shall be as follows:

(1) *Fuel oil.* For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix D to part 75 of this chapter (*i.e.* , flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank). If an emission allowance is being claimed for fuel-bound nitrogen, the nitrogen content of the oil shall be determined and recorded once per unit operating day.

(2) *Gaseous fuel.* Any applicable nitrogen content value of the gaseous fuel shall be determined and recorded once per unit operating day. For owners and operators that elect not to demonstrate sulfur content using options in paragraph (h)(3) of this section, and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day.

(3) *Custom schedules.* Notwithstanding the requirements of paragraph (i)(2) of this section, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in paragraphs (i)(3)(i) and (i)(3)(ii) of this section, custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in §60.333.

(i) The two custom sulfur monitoring schedules set forth in paragraphs (i)(3)(i)(A) through (D) and in paragraph (i)(3)(ii) of this section are acceptable, without prior Administrative approval:

(A) The owner or operator shall obtain daily total sulfur content measurements for 30 consecutive unit operating days, using the applicable methods specified in this subpart. Based on the results of the 30 daily samples, the required frequency for subsequent monitoring of the fuel's total sulfur content shall be as specified in paragraph (i)(3)(i)(B), (C), or (D) of this section, as applicable.

(B) If none of the 30 daily measurements of the fuel's total sulfur content exceeds 0.4 weight percent (4000 ppmw), subsequent sulfur content monitoring may be performed at 12 month intervals. If any of the samples taken at 12-month intervals has a total sulfur content between 0.4 and 0.8 weight percent (4000 and 8000 ppmw), follow the procedures in paragraph (i)(3)(i)(C) of this section. If any measurement exceeds 0.8 weight percent (8000 ppmw), follow the procedures in paragraph (i)(3)(i)(D) of this section.

(C) If at least one of the 30 daily measurements of the fuel's total sulfur content is between 0.4 and 0.8 weight percent (4000 and 8000 ppmw), but none exceeds 0.8 weight percent (8000 ppmw), then:

(*1*) Collect and analyze a sample every 30 days for three months. If any sulfur content measurement exceeds 0.8 weight percent (8000 ppmw), follow the procedures in paragraph (i)(3)(i)(D) of this section. Otherwise, follow the procedures in paragraph (i)(3)(i)(C)(*2*) of this section.

(*2*) Begin monitoring at 6-month intervals for 12 months. If any sulfur content measurement exceeds 0.8 weight percent (8000 ppmw), follow the procedures in paragraph (i)(3)(i)(D) of this section. Otherwise, follow the procedures in paragraph (i)(3)(i)(C)(*3*) of this section.

(*3*) Begin monitoring at 12-month intervals. If any sulfur content measurement exceeds 0.8 weight percent (8000 ppmw), follow the procedures in paragraph (i)(3)(i)(D) of this section. Otherwise, continue to monitor at this frequency.

(D) If a sulfur content measurement exceeds 0.8 weight percent (8000 ppmw), immediately begin daily monitoring according to paragraph (i)(3)(i)(A) of this section. Daily monitoring shall continue until 30 consecutive daily samples, each having a sulfur content no greater than 0.8 weight percent (8000 ppmw), are obtained. At that point, the applicable procedures of paragraph (i)(3)(i)(B) or (C) of this section shall be followed.

(ii) The owner or operator may use the data collected from the 720-hour sulfur sampling demonstration described in section 2.3.6 of appendix D to part 75 of this chapter to determine a custom sulfur sampling schedule, as follows:

(A) If the maximum fuel sulfur content obtained from the 720 hourly samples does not exceed 20 grains/100 scf (*i.e.* , the maximum total sulfur content of natural gas as defined in §60.331(u)), no additional monitoring of the sulfur content of the gas is required, for the purposes of this subpart.

(B) If the maximum fuel sulfur content obtained from any of the 720 hourly samples exceeds 20 grains/100 scf, but none of the sulfur content values (when converted to weight percent sulfur) exceeds 0.4 weight percent (4000 ppmw), then the minimum required sampling frequency shall be one sample at 12 month intervals.

(C) If any sample result exceeds 0.4 weight percent sulfur (4000 ppmw), but none exceeds 0.8 weight percent sulfur (8000 ppmw), follow the provisions of paragraph (i)(3)(i)(C) of this section.

(D) If the sulfur content of any of the 720 hourly samples exceeds 0.8 weight percent (8000 ppmw), follow the provisions of paragraph (i)(3)(i)(D) of this section.

(j) For each affected unit that elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the owner or operator shall submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under §60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows:

(1) Nitrogen oxides.

(i) For turbines using water or steam to fuel ratio monitoring:

(A) An excess emission shall be any unit operating hour for which the average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with §60.332, as established during the performance test required in §60.8. Any unit operating hour in which no water or steam is injected into the turbine shall also be considered an excess emission.

(B) A period of monitor downtime shall be any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid.

(C) Each report shall include the average steam or water to fuel ratio, average fuel consumption, ambient conditions (temperature, pressure, and humidity), gas turbine load, and (if applicable) the nitrogen content of the fuel during each excess emission. You do not have to report ambient conditions if you opt to use

the worst case ISO correction factor as specified in §60.334(b)(3)(ii), or if you are not using the ISO correction equation under the provisions of §60.335(b)(1).

(ii) If the owner or operator elects to take an emission allowance for fuel bound nitrogen, then excess emissions and periods of monitor downtime are as described in paragraphs (j)(1)(ii)(A) and (B) of this section.

(A) An excess emission shall be the period of time during which the fuel-bound nitrogen (N) is greater than the value measured during the performance test required in §60.8 and used to determine the allowance. The excess emission begins on the date and hour of the sample which shows that N is greater than the performance test value, and ends with the date and hour of a subsequent sample which shows a fuel nitrogen content less than or equal to the performance test value.

(B) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour that a required sample is taken, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

(iii) For turbines using $NO_X$and diluent CEMS:

(A) An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NO_X concentration exceeds the applicable emission limit in §60.332(a)(1) or (2). For the purposes of this subpart, a “4-hour rolling average NO_X concentration” is the arithmetic average of the average NO_X concentration measured by the CEMS for a given hour (corrected to 15 percent $O_2$and, if required under §60.335(b)(1), to ISO standard conditions) and the three unit operating hour average NO_X concentrations immediately preceding that unit operating hour.

(B) A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO_X concentration or diluent (or both).

(C) Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. You do not have to report ambient conditions if you opt to use the worst case ISO correction factor as specified in §60.334(b)(3)(ii), or if you are not using the ISO correction equation under the provisions of §60.335(b)(1).

(iv) For owners or operators that elect, under paragraph (f) of this section, to monitor combustion parameters or parameters that document proper operation of the NO_X emission controls:

(A) An excess emission shall be a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit.

(B) A period of monitor downtime shall be a unit operating hour in which any of the required parametric data are either not recorded or are invalid.

(2) Sulfur dioxide. If the owner or operator is required to monitor the sulfur content of the fuel under paragraph (h) of this section:

(i) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the

fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

(ii) If the option to sample each delivery of fuel oil has been selected, the owner or operator shall immediately switch to one of the other oil sampling options (*i.e.* , daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.8 weight percent. The owner or operator shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and shall evaluate excess emissions according to paragraph (j)(2)(i) of this section. When all of the fuel from the delivery has been burned, the owner or operator may resume using the as-delivered sampling option.

(iii) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample.

(3) *Ice fog.* Each period during which an exemption provided in §60.332(f) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

(4) *Emergency fuel.* Each period during which an exemption provided in §60.332(k) is in effect shall be included in the report required in §60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported.

(5) All reports required under §60.7(c) shall be postmarked by the 30th day following the end of each 6-month period.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982; 65 FR 61759, Oct. 17, 2000; 69 FR 41360, July 8, 2004; 71 FR 9457, Feb. 24, 2006]

§ 60.335 Test methods and procedures.

(a) The owner or operator shall conduct the performance tests required in §60.8, using either

(1) EPA Method 20,

(2) ASTM D6522–00 (incorporated by reference, see §60.17), or

(3) EPA Method 7E and either EPA Method 3 or 3A in appendix A to this part, to determine $NO_X$and diluent concentration.

(4) Sampling traverse points are to be selected following Method 20 or Method 1, (non-particulate procedures) and sampled for equal time intervals. The sampling shall be performed with a traversing single-hole probe or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

(5) Notwithstanding paragraph (a)(4) of this section, the owner or operator may test at few points than are specified in Method 1 or Method 20 if the following conditions are met:

(i) You may perform a stratification test for NO_X and diluent pursuant to

(A) [Reserved]

(B) The procedures specified in section 6.5.6.1(a) through (e) appendix A to part 75 of this chapter.

(ii) Once the stratification sampling is completed, the owner or operator may use the following alternative sample point selection criteria for the performance test:

(A) If each of the individual traverse point NO_X concentrations, normalized to 15 percent O_2, is within ±10 percent of the mean normalized concentration for all traverse points, then you may use 3 points (located either 16.7, 50.0, and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The 3 points shall be located along the measurement line that exhibited the highest average normalized NO_Xconcentration during the stratification test; or

(B) If each of the individual traverse point NO_X concentrations, normalized to 15 percent O_2, is within ±5 percent of the mean normalized concentration for all traverse points, then you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid.

(6) Other acceptable alternative reference methods and procedures are given in paragraph (c) of this section.

(b) The owner or operator shall determine compliance with the applicable nitrogen oxides emission limitation in §60.332 and shall meet the performance test requirements of §60.8 as follows:

(1) For each run of the performance test, the mean nitrogen oxides emission concentration (NO_{Xo}) corrected to 15 percent O_2shall be corrected to ISO standard conditions using the following equation. Notwithstanding this requirement, use of the ISO correction equation is optional for: Lean premix stationary combustion turbines; units used in association with heat recovery steam generators (HRSG) equipped with duct burners; and units equipped with add-on emission control devices:

$$NO_X=(NO_{Xo})(P_r/P_o)^{0.5}\ e^{19\ (Ho-0.00633)(288°K/T_a)^{1.53}}$$

Where:

NO_X= emission concentration of NO_Xat 15 percent $O_2$and ISO standard ambient conditions, ppm by volume, dry basis,

NO_{Xo}= mean observed NO_Xconcentration, ppm by volume, dry basis, at 15 percent O_2,

P_r= reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg,

P_o= observed combustor inlet absolute pressure at test, mm Hg,

H_o= observed humidity of ambient air, g H_2O/g air,

e = transcendental constant, 2.718, and

T_a= ambient temperature, °K.

(2) The 3-run performance test required by §60.8 must be performed within ±5 percent at 30, 50, 75, and 90-to-100 percent of peak load or at four evenly-spaced load points in the normal operating range of the gas turbine, including the minimum point in the operating range and 90-to-100 percent of peak load, or at

the highest achievable load point if 90-to-100 percent of peak load cannot be physically achieved in practice. If the turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel. Notwithstanding these requirements, performance testing is not required for any emergency fuel (as defined in §60.331).

(3) For a combined cycle turbine system with supplemental heat (duct burner), the owner or operator may elect to measure the turbine NO_X emissions after the duct burner rather than directly after the turbine. If the owner or operator elects to use this alternative sampling location, the applicable NO_X emission limit in §60.332 for the combustion turbine must still be met.

(4) If water or steam injection is used to control NO_X with no additional post-combustion NO_X control and the owner or operator chooses to monitor the steam or water to fuel ratio in accordance with §60.334(a), then that monitoring system must be operated concurrently with each EPA Method 20, ASTM D6522–00 (incorporated by reference, see §60.17), or EPA Method 7E run and shall be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable §60.332 NO_X emission limit.

(5) If the owner operator elects to claim an emission allowance for fuel bound nitrogen as described in §60.332, then concurrently with each reference method run, a representative sample of the fuel used shall be collected and analyzed, following the applicable procedures described in §60.335(b)(9). These data shall be used to determine the maximum fuel nitrogen content for which the established water (or steam) to fuel ratio will be valid.

(6) If the owner or operator elects to install a CEMS, the performance evaluation of the CEMS may either be conducted separately (as described in paragraph (b)(7) of this section) or as part of the initial performance test of the affected unit.

(7) If the owner or operator elects to install and certify a NO_XCEMS under §60.334(e), then the initial performance test required under §60.8 may be done in the following alternative manner:

(i) Perform a minimum of 9 reference method runs, with a minimum time per run of 21 minutes, at a single load level, between 90 and 100 percent of peak (or the highest physically achievable) load.

(ii) Use the test data both to demonstrate compliance with the applicable NO_X emission limit under §60.332 and to provide the required reference method data for the RATA of the CEMS described under §60.334(b).

(iii) The requirement to test at three additional load levels is waived.

(8) If the owner or operator elects under §60.334(f) to monitor combustion parameters or parameters indicative of proper operation of NO_X emission controls, the appropriate parameters shall be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in §60.334(g).

(9) To determine the fuel bound nitrogen content of fuel being fired (if an emission allowance is claimed for fuel bound nitrogen), the owner or operator may use equipment and procedures meeting the requirements of:

(i) For liquid fuels, ASTM D2597–94 (Reapproved 1999), D6366–99, D4629–02, D5762–02 (all of which are incorporated by reference, *see* §60.17); or

(ii) For gaseous fuels, shall use analytical methods and procedures that are accurate to within 5 percent of the instrument range and are approved by the Administrator.

(10) If the owner or operator is required under §60.334(i)(1) or (3) to periodically determine the sulfur content of the fuel combusted in the turbine, a minimum of three fuel samples shall be collected during the performance test. Analyze the samples for the total sulfur content of the fuel using:

(i) For liquid fuels, ASTM D129–00, D2622–98, D4294–02, D1266–98, D5453–00 or D1552–01 (all of which are incorporated by reference, *see* §60.17); or

(ii) For gaseous fuels, ASTM D1072–80, 90 (Reapproved 1994); D3246–81, 92, 96; D4468–85 (Reapproved 2000); or D6667–01 (all of which are incorporated by reference, see §60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the prior approval of the Administrator.

(11) The fuel analyses required under paragraphs (b)(9) and (b)(10) of this section may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

(c) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) Instead of using the equation in paragraph (b)(1) of this section, manufacturers may develop ambient condition correction factors to adjust the nitrogen oxides emission level measured by the performance test as provided in §60.8 to ISO standard day conditions.

[69 FR 41363, July 8, 2004, as amended at 71 FR 9458, Feb. 24, 2006]

Indiana Department of Environmental Management
Office of Air Quality

Attachment B
to a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	Rolls Royce Corporation
Source Location:	Plant 8 - 2001 South Tibbs Ave., Indianapolis, IN 46241
	Plant 5 - 2355 South Tibbs Ave., Indianapolis, IN 46241
County:	Marion
SIC Code:	3724
Permit Renewal No.:	T097-25529-00311

Title 40: Protection of Environment
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart T—National Emission Standards for Halogenated Solvent Cleaning

Source: 59 FR 61805, Dec. 2, 1994, unless otherwise noted.

§ 63.460 Applicability and designation of source.

(a) The provisions of this subpart apply to each individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride (CAS No. 75–09–2), perchloroethylene (CAS No. 127–18–4), trichloroethylene (CAS No. 79–01–6), 1,1,1-trichloroethane (CAS No. 71–55–6), carbon tetrachloride (CAS No. 56–23–5) or chloroform (CAS No. 67–66–3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent. The concentration of these solvents may be determined using EPA test method 18, material safety data sheets, or engineering calculations. Wipe cleaning activities, such as using a rag containing halogenated solvent or a spray cleaner containing halogenated solvent are not covered under the provisions of this subpart.

(b) Except as noted in appendix C (General Provisions Applicability to subpart T) of this subpart, the provisions of subpart A of this part (General Provisions) apply to owners or operators of any solvent cleaning machine meeting the applicability criteria of paragraph (a) of this section.

(c) Except as provided in paragraph (g) of this section, each solvent cleaning machine subject to this subpart that commenced construction or reconstruction after November 29, 1993 shall achieve compliance with the provisions of this subpart, except for §63.471, immediately upon start-up or by December 2, 1994, whichever is later.

(d) Except as provided in paragraph (g) of this section, each solvent cleaning machine subject to this subpart that commenced construction or reconstruction on or before November 29, 1993 shall achieve compliance with the provisions of this subpart, except for §63.471, no later than December 2, 1997.

(e) In delegating implementation and enforcement authority to a State under section 112(d) of the Act, the authority contained in paragraph (f) of this section shall be retained by the Administrator and not transferred to a State.

(f) [Reserved]

(g) Each continuous web cleaning machine subject to this subpart shall achieve compliance with the provisions of this subpart, except for §63.471, no later than December 2, 1999.

(h) If you are an owner or operator of an area source subject to this subpart, you are exempt from 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 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 applicable to area sources.

(i) The compliance date for the requirements in §63.471 depends on the date that construction or reconstruction of the affected facility commences. For purposes of this paragraph, affected facility means all solvent cleaning machines, except solvent cleaning machines used in the manufacture and maintenance of aerospace products, solvent cleaning machines used in the manufacture of narrow tubing, and continuous web cleaning machines, located at a major source that are subject to the facility-wide limits in table 1 of §63.471(b)(2), and for area sources, affected facility means all solvent cleaning machines, except cold batch cleaning machines, located at an area source that are subject to the facility-wide limits in table 1 of §63.471(b)(2).

(1) Each affected facility that was constructed or reconstructed on or before August 17, 2006, shall be in compliance with the provisions of this subpart no later than May 3, 2010.

(2) Each affected facility that was constructed or reconstructed on or after August 17, 2006, shall be in compliance with the provisions of this subpart on May 3, 2007 or immediately upon startup, whichever is later.

[59 FR 61805, Dec. 2, 1994; 59 FR 67750, Dec. 30, 1994, as amended at 60 FR 29485, June 5, 1995; 63 FR 68400, Dec. 11, 1998; 68 FR 37349, June 23, 2003; 70 FR 75345, Dec. 19, 2005; 72 FR 25157, May 3, 2007]

§ 63.461 Definitions.

Unless defined below, all terms used in this subpart are used as defined in the 1990 Clean Air Act, or in subpart A of 40 CFR part 63:

Administrator means the Administrator of the United States Environmental Protection Agency or his or her authorized representative (e.g., State that has been delegated the authority to implement the provisions of this part.)

Air blanket means the layer of air inside the solvent cleaning machine freeboard located above the solvent/air interface. The centerline of the air blanket is equidistant between the sides of the machine.

Air knife system means a device that directs forced air at high pressure, high volume, or a combination of high pressure and high volume, through a small opening directly at the surface of a continuous web part. The purpose of this system is to remove the solvent film from the surfaces of the continuous web part.

Automated parts handling system means a mechanical device that carries all parts and parts baskets at a controlled speed from the initial loading of soiled or wet parts through the removal of the cleaned or dried parts. Automated parts handling systems include, but are not limited to, hoists and conveyors.

Batch cleaning machine means a solvent cleaning machine in which individual parts or a set of parts move through the entire cleaning cycle before new parts are introduced into the solvent cleaning machine. An open-top vapor cleaning machine is a type of batch cleaning machine. A solvent cleaning

machine, such as a ferris wheel or a cross-rod degreaser, that clean multiple batch loads simultaneously and are manually loaded are batch cleaning machines.

Carbon adsorber means a bed of activated carbon into which an air-solvent gas-vapor stream is routed and which adsorbs the solvent on the carbon.

Clean liquid solvent means fresh unused solvent, recycled solvent, or used solvent that has been cleaned of soils (e.g., skimmed of oils or sludge and strained of metal chips).

Cleaning capacity means, for a cleaning machine without a solvent/air interface, the maximum volume of parts that can be cleaned at one time. In most cases, the cleaning capacity is equal to the volume (length times width times height) of the cleaning chamber.

Cold cleaning machine means any device or piece of equipment that contains and/or uses liquid solvent, into which parts are placed to remove soils from the surfaces of the parts or to dry the parts. Cleaning machines that contain and use heated, nonboiling solvent to clean the parts are classified as cold cleaning machines.

Combined squeegee and air-knife system means a system consisting of a combination of a squeegee system and an air-knife system within a single enclosure.

Consumption means the amount of halogenated hazardous air pollutant solvent added to the solvent cleaning machine.

Continuous web cleaning machine means a solvent cleaning machine in which parts such as film, coils, wire, and metal strips are cleaned at speeds typically in excess of 11 feet per minute. Parts are generally uncoiled, cleaned such that the same part is simultaneously entering and exiting the solvent application area of the solvent cleaning machine, and then recoiled or cut. For the purposes of this subpart, all continuous web cleaning machines are considered to be a subset of in-line solvent cleaning machines.

Cover means a lid, top, or portal cover that shields the solvent cleaning machine openings from air disturbances when in place and is designed to be easily opened and closed without disturbing the vapor zone. Air disturbances include, but are not limited to, lip exhausts, ventilation fans, and general room drafts. Types of covers include, but are not limited to, sliding, biparting, and rolltop covers.

Cross-rod solvent cleaning machine means a batch solvent cleaning machine in which parts baskets are suspended from “cross-rods” as they are moved through the machine. In a cross-rod cleaning machine, parts are loaded semi-continuously, and enter and exit the machine from a single portal.

Downtime mode means the time period when a solvent cleaning machine is not cleaning parts and the sump heating coils, if present, are turned off.

Dwell means the technique of holding parts within the freeboard area but above the vapor zone of the solvent cleaning machine. Dwell occurs after cleaning to allow solvent to drain from the parts or parts baskets back into the solvent cleaning machine.

Dwell time means the required minimum length of time that a part must dwell, as determined by §63.465(d).

Emissions means halogenated hazardous air pollutant solvent consumed (i.e., halogenated hazardous air pollutant solvent added to the machine) minus the liquid halogenated hazardous air pollutant solvent removed from the machine and the halogenated hazardous air pollutant solvent removed from the machine in the solid waste.

Existing means any solvent cleaning machine the construction or reconstruction of which was commenced on or before November 29, 1993. A machine, the construction or reconstruction of which was commenced on or before November 29, 1993, but that did not meet the definition of a solvent cleaning machine on December 2, 1994, because it did not use halogenated HAP solvent liquid or vapor covered under this subpart to remove soils, becomes an existing source when it commences to use such liquid or vapor. A solvent cleaning machine moved within a contiguous facility or to another facility under the same ownership, constitutes an existing machine.

Freeboard area means; for a batch cleaning machine, the area within the solvent cleaning machine that extends from the solvent/air interface to the top of the solvent cleaning machine; for an in-line cleaning machine, it is the area within the solvent cleaning machine that extends from the solvent/air interface to the bottom of the entrance or exit opening, whichever is lower.

Freeboard height means; for a batch cleaning machine, the distance from the solvent/air interface, as measured during the idling mode, to the top of the cleaning machine; for an in-line cleaning machine, it is the distance from the solvent/air interface to the bottom of the entrance or exit opening, whichever is lower, as measured during the idling mode.

Freeboard ratio means the ratio of the solvent cleaning machine freeboard height to the smaller interior dimension (length, width, or diameter) of the solvent cleaning machine.

Freeboard refrigeration device (also called a chiller) means a set of secondary coils mounted in the freeboard area that carries a refrigerant or other chilled substance to provide a chilled air blanket above the solvent vapor. A primary condenser capable of meeting the requirements of §63.463(e)(2)(i) is defined as both a freeboard refrigeration device and a primary condenser for the purposes of these standards.

Halogenated hazardous air pollutant solvent or halogenated HAP solvent means methylene chloride (CAS No. 75–09–2), perchloroethylene (CAS No. 127–18–4), trichloroethylene (CAS No. 79–01–6), 1,1,1-trichloroethane (CAS No. 71–55–6), carbon tetrachloride (CAS No. 56–23–5), and chloroform (CAS No. 67–66–3).

Hoist means a mechanical device that carries the parts basket and the parts to be cleaned from the loading area into the solvent cleaning machine and to the unloading area at a controlled speed. A hoist may be operated by controls or may be programmed to cycle parts through the cleaning cycle automatically.

Idling mode means the time period when a solvent cleaning machine is not actively cleaning parts and the sump heating coils, if present, are turned on.

Idling-mode cover means any cover or solvent cleaning machine design that allows the cover to shield the cleaning machine openings during the idling mode. A cover that meets this definition can also be used as a working-mode cover if that definition is also met.

Immersion cold cleaning machine means a cold cleaning machine in which the parts are immersed in the solvent when being cleaned. A remote reservoir cold cleaning machine that is also an immersion cold cleaning machine is considered an immersion cold cleaning machine for purposes of this subpart.

In-line cleaning machine or continuous cleaning machine means a solvent cleaning machine that uses an automated parts handling system, typically a conveyor, to automatically provide a continuous supply of parts to be cleaned. These units are fully enclosed except for the conveyor inlet and exit portals. In-line cleaning machines can be either cold or vapor cleaning machines.

Leak-proof coupling means a threaded or other type of coupling that prevents solvents from leaking while filling or draining solvent to and from the solvent cleaning machine.

Lip exhaust means a device installed at the top of the opening of a solvent cleaning machine that draws in air and solvent vapor from the freeboard area and ducts the air and vapor away from the solvent cleaning area.

Monthly reporting period means any calendar month in which the owner or operator of a solvent cleaning machine is required to calculate and report the solvent emissions from each solvent cleaning machine.

New means any solvent cleaning machine the construction or reconstruction of which is commenced after November 29, 1993.

Open-top vapor cleaning machine means a batch solvent cleaning machine that has its upper surface open to the air and boils solvent to create solvent vapor used to clean and/or dry parts.

Part means any object that is cleaned in a solvent cleaning machine. Parts include, but are not limited to, discrete parts, assemblies, sets of parts, and parts cleaned in a continuous web cleaning machine (i.e., continuous sheets of metal, film).

Primary condenser means a series of circumferential cooling coils on a vapor cleaning machine through which a chilled substance is circulated or recirculated to provide continuous condensation of rising solvent vapors and, thereby, create a concentrated solvent vapor zone.

Reduced room draft means decreasing the flow or movement of air across the top of the freeboard area of the solvent cleaning machine to meet the specifications of §63.463(e)(2)(ii). Methods of achieving a reduced room draft include, but are not limited to, redirecting fans and/or air vents to not blow across the cleaning machine, moving the cleaning machine to a corner where there is less room draft, and constructing a partial or complete enclosure around the cleaning machine.

Remote reservoir cold cleaning machine means any device in which liquid solvent is pumped to a sink-like work area that drains solvent back into an enclosed container while parts are being cleaned, allowing no solvent to pool in the work area.

Remote reservoir continuous web cleaning machine means a continuous web cleaning machine in which there is no exposed solvent sump. In these units, the solvent is pumped from an enclosed chamber and is typically applied to the continuous web part through a nozzle or series of nozzles. The solvent then drains from the part and is collected and recycled through the machine, allowing no solvent to pool in the work or cleaning area.

Soils means contaminants that are removed from the parts being cleaned. Soils include, but are not limited to, grease, oils, waxes, metal chips, carbon deposits, fluxes, and tars.

Solvent/air interface means, for a vapor cleaning machine, the location of contact between the concentrated solvent vapor layer and the air. This location of contact is defined as the mid-line height of the primary condenser coils. For a cold cleaning machine, it is the location of contact between the liquid solvent and the air.

Solvent/air interface area means; for a vapor cleaning machine, the surface area of the solvent vapor zone that is exposed to the air; for an in-line cleaning machine, it is the total surface area of all the sumps; for a cold cleaning machine, it is the surface area of the liquid solvent that is exposed to the air.

Solvent cleaning machine means any device or piece of equipment that uses halogenated HAP solvent liquid or vapor to remove soils from the surfaces of materials. Types of solvent cleaning machines include, but are not limited to, batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machines. Buckets, pails, and beakers with capacities of 7.6 liters (2 gallons) or less are not considered solvent cleaning machines.

Solvent vapor zone means; for a vapor cleaning machine, the area that extends from the liquid solvent surface to the level that solvent vapor is condensed. This condensation level is defined as the midline height of the primary condenser coils.

Squeegee system means a system that uses a series of pliable surfaces to remove the solvent film from the surfaces of the continuous web part. These pliable surfaces, called squeegees, are typically made of rubber or plastic media, and need to be periodically replaced to ensure continued proper function.

Sump means the part of a solvent cleaning machine where the liquid solvent is located.

Sump heater coils means the heating system on a cleaning machine that uses steam, electricity, or hot water to heat or boil the liquid solvent.

Superheated part technology means a system that is part of the continuous web process that heats the continuous web part either directly or indirectly to a temperature above the boiling point of the cleaning solvent. This could include a process step, such as a tooling die that heats the part as it is processed, as long as the part remains superheated through the cleaning machine.

Superheated vapor system means a system that heats the solvent vapor, either passively or actively, to a temperature above the solvent's boiling point. Parts are held in the superheated vapor before exiting the machine to evaporate the liquid solvent on them. Hot vapor recycle is an example of a superheated vapor system.

Vapor cleaning machine means a batch or in-line solvent cleaning machine that boils liquid solvent generating solvent vapor that is used as a part of the cleaning or drying cycle.

Water layer means a layer of water that floats above the denser solvent and provides control of solvent emissions. In many cases, the solvent used in batch cold cleaning machines is sold containing the appropriate amount of water to create a water cover.

Working mode means the time period when the solvent cleaning machine is actively cleaning parts.

Working-mode cover means any cover or solvent cleaning machine design that allows the cover to shield the cleaning machine openings from outside air disturbances while parts are being cleaned in the cleaning machine. A cover that is used during the working mode is opened only during parts entry and removal. A cover that meets this definition can also be used as an idling-mode cover if that definition is also met.

[59 FR 61805, Dec. 2, 1994; 60 FR 29485, June 5, 1995, as amended at 63 FR 24751, May 5, 1998; 64 FR 67798, Dec. 3, 1999]

§ 63.462 Batch cold cleaning machine standards.

(a) Each owner or operator of an immersion batch cold solvent cleaning machine shall comply with the requirements specified in paragraph (a)(1) or (a)(2) of this section.

(1) Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal, and a water layer at a minimum thickness of 2.5 centimeters (1.0 inch) on the surface of the solvent within the cleaning machine, or

(2) Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal and a freeboard ratio of 0.75 or greater.

(b) Each owner or operator of a remote-reservoir batch cold solvent cleaning machine shall employ a tightly fitting cover over the solvent sump that shall be closed at all times except during the cleaning of parts.

(c) Each owner or operator of a batch cold solvent cleaning machine complying with paragraph (a)(2) or (b) of this section shall comply with the work and operational practice requirements specified in paragraphs (c)(1) through (c)(9) of this section as applicable.

(1) All waste solvent shall be collected and stored in closed containers. The closed container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container.

(2) If a flexible hose or flushing device is used, flushing shall be performed only within the freeboard area of the solvent cleaning machine.

(3) The owner or operator shall drain solvent cleaned parts for 15 seconds or until dripping has stopped, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while draining.

(4) The owner or operator shall ensure that the solvent level does not exceed the fill line.

(5) Spills during solvent transfer shall be wiped up immediately. The wipe rags shall be stored in covered containers meeting the requirements of paragraph (c)(1) of this section.

(6) When an air- or pump-agitated solvent bath is used, the owner or operator shall ensure that the agitator is operated to produce a rolling motion of the solvent but not observable splashing against tank walls or parts being cleaned.

(7) The owner or operator shall ensure that, when the cover is open, the cold cleaning machine is not exposed to drafts greater than 40 meters per minute (132 feet per minute), as measured between 1 and 2 meters (3.3 and 6.6 feet) upwind and at the same elevation as the tank lip.

(8) Except as provided in paragraph (c)(9) of this section, sponges, fabric, wood, and paper products shall not be cleaned.

(9) The prohibition in paragraph (c)(8) of this section does not apply to the cleaning of porous materials that are part of polychlorinated biphenyl (PCB) laden transformers if those transformers are handled throughout the cleaning process and disposed of in compliance with an approved PCB disposal permit issued in accordance with the Toxic Substances Control Act.

(d) Each owner or operator of a batch cold cleaning machine shall submit an initial notification report as described in §63.468 (a) and (b) and a compliance report as described in §63.468(c).

(e) Each owner or operator subject to the requirements of paragraph (c)(1) through (8) of this section may request to use measures other than those described in these paragraphs. The owner or operator must demonstrate to the Administrator (or delegated State, local, or Tribal authority) that the alternative measures will result in equivalent or better emissions control compared to the measures described in paragraphs (c)(1) through (8) of this section. For example, storing solvent and solvent-laden materials in

an enclosed area that is ventilated to a solvent recovery or destruction device may be considered an acceptable alternative.

[59 FR 61805, Dec. 2, 1994; 60 FR 29485, June 5, 1995, as amended at 64 FR 67799, Dec. 3, 1999; 68 FR 37349, June 23, 2003]

§ 63.463 Batch vapor and in-line cleaning machine standards.

(a) Except as provided in §63.464 for all cleaning machines, each owner or operator of a solvent cleaning machine subject to the provisions of this subpart shall ensure that each existing or new batch vapor or in-line solvent cleaning machine subject to the provisions of this subpart conforms to the design requirements specified in paragraphs (a)(1) through (7) of this section. The owner or operator of a continuous web cleaning machine shall comply with the requirements of paragraph (g) or (h) of this section, as appropriate, in lieu of complying with this paragraph.

(1) Each cleaning machine shall be designed or operated to meet the control equipment or technique requirements in paragraph (a)(1)(i) or (a)(1)(ii) of this section.

(i) An idling and downtime mode cover, as described in §63.463(d)(1)(i), that may be readily opened or closed, that completely covers the cleaning machine openings when in place, and is free of cracks, holes, and other defects.

(ii) A reduced room draft as described in §63.463(e)(2)(ii).

(2) Each cleaning machine shall have a freeboard ratio of 0.75 or greater.

(3) Each cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts.

(4) Each vapor cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils. This requirement does not apply to a vapor cleaning machine that uses steam to heat the solvent.

(5) Each vapor cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.

(6) Each vapor cleaning machine shall have a primary condenser.

(7) Each cleaning machine that uses a lip exhaust shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the requirements of paragraph (e)(2)(vii) of this section.

(b) Except as provided in §63.464, each owner or operator of an existing or new batch vapor cleaning machine shall comply with either paragraph (b)(1) or (b)(2) of this section.

(1) Each owner or operator of a batch vapor cleaning machine with a solvent/air interface area of 1.21 square meters (13 square feet) or less shall comply with the requirements specified in either paragraph (b)(1)(i) or (b)(1)(ii) of this section.

(i) Employ one of the control combinations listed in table 1 of this subpart or other equivalent methods of control as determined using the procedure in §63.469, equivalent methods of control.

Table 1—Control Combinations for Batch Vapor Solvent Cleaning Machines With a Solvent/Air Interface Area of 1.21 Square Meters (13 Square Feet) or Less

Option	Control combinations
1	Working-mode cover, freeboard ratio of 1.0, superheated vapor.
2	Freeboard refrigeration device, superheated vapor.
3	Working-mode cover, freeboard refrigeration device.
4	Reduced room draft, freeboard ratio of 1.0, superheated vapor.
5	Freeboard refrigeration device, reduced room draft.
6	Freeboard refrigeration device, freeboard ratio of 1.0.
7	Freeboard refrigeration device, dwell.
8	Reduced room draft, dwell, freeboard ratio of 1.0.
9	Freeboard refrigeration device, carbon adsorber.
10	Freeboard ratio of 1.0, superheated vapor, carbon adsorber.

Note: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

(ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.22 kilograms per hour per square meter (0.045 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in §63.465(a) and appendix A to this part.

(2) Each owner or operator of a batch vapor cleaning machine with a solvent/air interface area greater than 1.21 square meters (13 square feet) shall comply with the requirements specified in either paragraph (b)(2)(i) or (b)(2)(ii) of this section.

(i) Employ one of the control combinations listed in table 2 of this subpart or other equivalent methods of control as determined using the procedure in §63.469, equivalent methods of control.

Table 2—Control Combinations for Batch Vapor Solvent Cleaning Machines With a Solvent/Air Interface Area Greater than 1.21 Square Meters (13 Square Feet)

Option	Control combinations
1	Freeboard refrigeration device, freeboard ratio of 1.0, superheated vapor.
2	Dwell, freeboard refrigeration device, reduced room draft.
3	Working-mode cover, freeboard refrigeration device, superheated vapor.
4	Freeboard ratio of 1.0, reduced room draft, superheated vapor.

Option	Control combinations
5	Freeboard refrigeration device, reduced room draft, superheated vapor.
6	Freeboard refrigeration device, reduced room draft, freeboard ratio of 1.0.
7	Freeboard refrigeration device, superheated vapor, carbon adsorber.

Note: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

(ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.22 kilograms per hour per square meter (0.045 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in §63.465(a) and appendix A of this part.

(c) Except as provided in §63.464 for all cleaning machines, each owner or operator of an in-line cleaning machine shall comply with paragraph (c)(1) or (2) of this section as appropriate. The owner or operator of a continuous web cleaning machine shall comply with the requirements of paragraph (g) or (h) of this section, as appropriate, in lieu of complying with this paragraph.

(1) Each owner or operator of an existing in-line cleaning machine shall comply with the requirements specified in either paragraph (c)(1)(i) or (c)(1)(ii) of this section.

(i) Employ one of the control combinations listed in table 3 of this subpart or other equivalent methods of control as determined using the procedure in §63.469, equivalent methods of control.

Table 3—Control Combinations for Existing In-Line Solvent Cleaning Machines

Option	Control combinations
1	Superheated vapor, freeboard ratio of 1.0.
2	Freeboard refrigeration device, freeboard ratio of 1.0.
3	Dwell, freeboard refrigeration device.
4	Dwell, carbon adsorber.

Note: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

(ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.10 kilograms per hour per square meter (0.021 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in §63.465(a) and appendix A to this part.

(2) Each owner or operator of a new in-line cleaning machine shall comply with the requirements specified in either paragraph (c)(2)(i) or (c)(2)(ii) of this section.

(i) Employ one of the control combinations listed in table 4 of this subpart or other equivalent methods of control as determined using the procedure in §63.469, equivalent methods of control section.

Table 4—Control Combinations for New In-Line Solvent Cleaning Machines

Option	Control combinations
1	Superheated vapor, freeboard refrigeration device.
2	Freeboard refrigeration device, carbon adsorber.
3	Superheated vapor, carbon adsorber.

Note: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

(ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.10 kilograms per hour per square meter (0.021 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in §63.465(a) and appendix A to this part.

(d) Except as provided in §63.464 for all cleaning machines, each owner or operator of an existing or new batch vapor or in-line solvent cleaning machine shall meet all of the following required work and operational practices specified in paragraphs (d)(1) through (12) of this section as applicable. The owner or operator of a continuous web cleaning machine shall comply with the requirements of paragraph (g) or (h) of this section, as appropriate, in lieu of complying with this paragraph.

(1) Control air disturbances across the cleaning machine opening(s) by incorporating the control equipment or techniques in paragraph (d)(1)(i) or (d)(1)(ii) of this section.

(i) Cover(s) to each solvent cleaning machine shall be in place during the idling mode, and during the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover(s) to not be in place.

(ii) A reduced room draft as described in §63.463(e)(2)(ii).

(2) The parts baskets or the parts being cleaned in an open-top batch vapor cleaning machine shall not occupy more than 50 percent of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of 0.9 meters per minute (3 feet per minute) or less.

(3) Any spraying operations shall be done within the vapor zone or within a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine).

(4) Parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes shall be tipped or rotated before being removed from any solvent cleaning machine unless an equally effective approach has been approved by the Administrator.

(5) Parts baskets or parts shall not be removed from any solvent cleaning machine until dripping has stopped.

(6) During startup of each vapor cleaning machine, the primary condenser shall be turned on before the sump heater.

(7) During shutdown of each vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.

(8) When solvent is added or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leakproof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.

(9) Each solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Administrator's satisfaction to achieve the same or better results as those recommended by the manufacturer.

(10) Each operator of a solvent cleaning machine shall complete and pass the applicable sections of the test of solvent cleaning procedures in appendix A to this part if requested during an inspection by the Administrator.

(11) Waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.

(12) Sponges, fabric, wood, and paper products shall not be cleaned.

(e) Each owner or operator of a solvent cleaning machine complying with paragraph (b), (c), (g), or (h) of this section shall comply with the requirements specified in paragraphs (e)(1) through (4) of this section.

(1) Conduct monitoring of each control device used to comply with §63.463 of this subpart as provided in §63.466.

(2) Determine during each monitoring period whether each control device used to comply with these standards meets the requirements specified in paragraphs (e)(2)(i) through (xi) of this section.

(i) If a freeboard refrigeration device is used to comply with these standards, the owner or operator shall ensure that the chilled air blanket temperature (in °F), measured at the center of the air blanket, is no greater than 30 percent of the solvent's boiling point.

(ii) If a reduced room draft is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(ii)(A) and (e)(2)(ii)(B) of this section.

(A) Ensure that the flow or movement of air across the top of the freeboard area of the solvent cleaning machine or within the solvent cleaning machine enclosure does not exceed 15.2 meters per minute (50 feet per minute) at any time as measured using the procedures in §63.466(d).

(B) Establish and maintain the operating conditions under which the wind speed was demonstrated to be 15.2 meters per minute (50 feet per minute) or less as described in §63.466(d).

(iii) If a working-mode cover is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(iii)(A) and (e)(2)(iii)(B) of this section.

(A) Ensure that the cover opens only for part entrance and removal and completely covers the cleaning machine openings when closed.

(B) Ensure that the working-mode cover is maintained free of cracks, holes, and other defects.

(iv) If an idling-mode cover is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(iv)(A) and (e)(2)(iv)(B) of this section.

(A) Ensure that the cover is in place whenever parts are not in the solvent cleaning machine and completely covers the cleaning machine openings when in place.

(B) Ensure that the idling-mode cover is maintained free of cracks, holes, and other defects.

(v) If a dwell is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(v)(A) and (e)(2)(v)(B) of this section.

(A) Determine the appropriate dwell time for each type of part or parts basket, or determine the maximum dwell time using the most complex part type or parts basket, as described in §63.465(d).

(B) Ensure that, after cleaning, each part is held in the solvent cleaning machine freeboard area above the vapor zone for the dwell time determined for that particular part or parts basket, or for the maximum dwell time determined using the most complex part type or parts basket.

(vi) If a superheated vapor system is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(vi)(A) through (e)(2)(vi)(C) of this section.

(A) Ensure that the temperature of the solvent vapor at the center of the superheated vapor zone is at least 10 °F above the solvent's boiling point.

(B) Ensure that the manufacturer's specifications for determining the minimum proper dwell time within the superheated vapor system is followed.

(C) Ensure that parts remain within the superheated vapor for at least the minimum proper dwell time.

(vii) If a carbon adsorber in conjunction with a lip exhaust or other exhaust internal to the cleaning machine is used to comply with these standards, the owner or operator shall comply with the following requirements:

(A) Ensure that the concentration of organic solvent in the exhaust from this device does not exceed 100 parts per million of any halogenated HAP compound as measured using the procedure in §63.466(e). If the halogenated HAP solvent concentration in the carbon adsorber exhaust exceeds 100 parts per million, the owner or operator shall adjust the desorption schedule or replace the disposable canister, if

not a regenerative system, so that the exhaust concentration of halogenated HAP solvent is brought below 100 parts per million.

(B) Ensure that the carbon adsorber bed is not bypassed during desorption.

(C) Ensure that the lip exhaust is located above the solvent cleaning machine cover so that the cover closes below the lip exhaust level.

(viii) If a superheated part system is used to comply with the standards for continuous web cleaning machines in paragraph (g) of this section, the owner or operator shall ensure that the temperature of the continuous web part is at least 10 degrees Fahrenheit above the solvent boiling point while the part is traveling through the cleaning machine.

(ix) If a squeegee system is used to comply with the continuous web cleaning requirements of paragraph (g)(3)(iii) or (h)(2)(i) of this section, the owner or operator shall comply with the following requirements.

(A) Determine the appropriate maximum product throughput for the squeegees used in the squeegee system, as described in §63.465(f).

(B) Conduct the weekly monitoring required by §63.466(a)(3). Record the results required by §63.467(a)(6).

(C) Calculate the total amount of continuous web product processed since the squeegees were replaced and compare to the maximum product throughput for the squeegees.

(D) Ensure squeegees are replaced at or before the maximum product throughput is attained.

(E) Redetermine the maximum product throughput for the squeegees if any solvent film is visible on the continuous web part immediately after it exits the cleaning machine.

(x) If an air knife system is used to comply with the continuous web cleaning requirements of paragraph (g)(3)(iii) or (h)(2)(i) of this section, the owner or operator shall comply with the following requirements.

(A) Determine the air knife parameter and parameter value that demonstrate to the Administrator's satisfaction that the air knife is properly operating. An air knife is properly operating if no visible solvent film remains on the continuous web part after it exits the cleaning machine.

(B) Maintain the selected air knife parameter value at the level determined in paragraph (a) of this section.

(C) Conduct the weekly monitoring required by §63.466(a)(3).

(D) Redetermine the proper air knife parameter value if any solvent film is visible on the continuous web part immediately after it exits the cleaning machine.

(xi) If a combination squeegee and air knife system is used to comply with the continuous web cleaning requirements of paragraph (g)(3)(iii) or (h)(2)(i) of this section, the owner or operator shall comply with the following requirements.

(A) Determine the system parameter and value that demonstrate to the Administrator's satisfaction that the system is properly operating.

(B) Maintain the selected parameter value at the level determined in paragraph (a) of this section.

(C) Conduct the weekly monitoring required by §63.466(a)(3).

(D) Redetermine the proper parameter value if any solvent film is visible on the continuous web part immediately after it exits the cleaning machine.

(3) If any of the requirements of paragraph (e)(2) of this section are not met, determine whether an exceedance has occurred using the criteria in paragraphs (e)(3)(i) and (e)(3)(ii) of this section.

(i) An exceedance has occurred if the requirements of paragraphs (e)(2)(ii)(B), (e)(2)(iii)(A), (e)(2)(iv)(A), (e)(2)(v), (e)(2)(vi)(B), (e)(2)(vi)(C), (e)(2)(vii)(B), or (e)(2)(vii)(C) of this section have not been met.

(ii) An exceedance has occurred if the requirements of paragraphs (e)(2)(i), (e)(2)(ii)(A), (e)(2)(iii)(B), (e)(2)(iv)(B), (e)(2)(vi)(A), or (e)(2)(vii)(A) of this section have not been met and are not corrected within 15 days of detection. Adjustments or repairs shall be made to the solvent cleaning system or control device to reestablish required levels. The parameter must be remeasured immediately upon adjustment or repair and demonstrated to be within required limits.

(4) The owner or operator shall report all exceedances and all corrections and adjustments made to avoid an exceedance as specified in §63.468(h).

(f) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards in paragraphs (b)(1)(ii), (b)(2)(ii), (c)(1)(ii), or (c)(2)(ii) of this section shall comply with the requirements specified in paragraphs (f)(1) through (f)(5) of this section.

(1) Conduct an initial performance test to comply with the requirements specified in paragraphs (f)(1)(i) and (f)(1)(ii) of this section.

(i) Demonstrate compliance with the applicable idling emission limit.

(ii) Establish parameters that will be monitored to demonstrate compliance. If a control device is used that is listed in paragraph (e)(2) of this section, then the requirements for that control device as listed in paragraph (e)(2) of this section shall be used unless the owner or operator can demonstrate to the Administrator's satisfaction that an alternative strategy is equally effective.

(2) Conduct the periodic monitoring of the parameters used to demonstrate compliance as described in §63.466(f).

(3) Operate the solvent cleaning machine within parameters identified in the initial performance test.

(4) If any of the requirements in paragraphs (f)(1) through (f)(3) of this section are not met, determine whether an exceedance has occurred using the criteria in paragraphs (f)(4)(i) and (f)(4)(ii) of this section.

(i) If using a control listed in paragraph (e) of this section, the owner or operator shall comply with the appropriate parameter values in paragraph (e)(2) and the exceedance delineations in paragraphs (e)(3)(i) and (e)(3)(ii) of this section.

(ii) If using a control not listed in paragraph (e) of this section, the owner or operator shall indicate whether the exceedance of the parameters that are monitored to determine the proper functioning of this control would be classified as an immediate exceedance or whether a 15 day repair period would be allowed. This information must be submitted to the Administrator for approval.

(5) The owner or operator shall report all exceedances and all corrections and adjustments made to avoid an exceedance as specified in §63.468(h).

(g) Except as provided in §63.464 and in paragraph (h) of this section for remote reservoir continuous web cleaning machines, each owner or operator of a continuous web cleaning machine shall comply with paragraphs (g)(1) through (4) of this section for each continuous web cleaning machine.

(1) Except as provided in paragraph (g)(2) of this section, install, maintain, and operate one of the following control combinations on each continuous web cleaning machine.

(i) For each existing continuous web cleaning machine, the following control combinations are allowed:

(A) Superheated vapor or superheated part technology, and a freeboard ratio of 1.0 or greater.

(B) Freeboard refrigeration device and a freeboard ratio of 1.0 or greater.

(C) Carbon adsorption system meeting the requirements of paragraph (e)(2)(vii) of this section.

(ii) For each new continuous web cleaning machine, the following control combinations are allowed:

(A) Superheated vapor or superheated part technology, and a freeboard refrigeration device.

(B) A freeboard refrigeration device and a carbon adsorber meeting the requirements of paragraph (e)(2)(vii) of this section.

(C) Superheated vapor or superheated part technology, and a carbon adsorber meeting the requirements of paragraph (e)(2)(vii) of this section.

(2) If a carbon adsorber system can be demonstrated to the Administrator's satisfaction to have an overall solvent control efficiency (i.e., capture efficiency removal efficiency) of 70 percent or greater, this system is equivalent to the options in paragraph (g) of this section.

(3) In lieu of complying with the provisions of paragraph (a) of this section, the owner or operator of a continuous web cleaning machine shall comply with the following provisions:

(i) Each cleaning machine shall meet one of the following control equipment or technique requirements:

(A) An idling and downtime mode cover, as described in paragraph (d)(1)(i) of this section, that may be readily opened or closed; that completely covers the cleaning machine openings when in place; and is free of cracks, holes, and other defects. A continuous web part that completely occupies an entry or exit port when the machine is idle is considered to meet this requirement.

(B) A reduced room draft as described in paragraph (e)(2)(ii) of this section.

(C) Gasketed or leakproof doors that separate both the continuous web part feed reel and take-up reel from the room atmosphere if the doors are checked according to the requirements of paragraph (e)(2)(iii) of this section.

(D) A cleaning machine that is demonstrated to the Administrator's satisfaction to be under negative pressure during idling and downtime and is vented to a carbon adsorption system that meets the requirements of either paragraph (e)(2)(vii) of this section or paragraph (g)(2) of this section.

(ii) Each continuous web cleaning machine shall have a freeboard ratio of 0.75 or greater unless that cleaning machine is a remote reservoir continuous web cleaning machine.

(iii) Each cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts, unless the cleaning machine is a continuous web cleaning machine that has a squeegee system or air knife system installed, maintained, and operated on the continuous web cleaning machine meeting the requirements of paragraph (e) of this section.

(iv) Each vapor cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils. This requirement does not apply to a vapor cleaning machine that uses steam to heat the solvent.

(v) Each vapor cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.

(vi) Each vapor cleaning machine shall have a primary condenser.

(vii) Each cleaning machine that uses a lip exhaust or any other exhaust within the solvent cleaning machine shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the requirements of either paragraph (e)(2)(vii) or (g)(2) of this section.

(4) In lieu of complying with the provisions of paragraph (d) of this section, the owner or operator of a continuous web cleaning machine shall comply with the following provisions:

(i) Control air disturbances across the cleaning machine opening(s) by incorporating one of the following control equipment or techniques:

(A) Cover(s) to each solvent cleaning machine shall be in place during the idling mode and during the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover(s) in place. A continuous web part that completely occupies an entry or exit port when the machine is idle is considered to meet this requirement.

(B) A reduced room draft as described in paragraph (e)(2)(ii) of this section.

(C) Gasketed or leakproof doors or covers that separate both the continuous web part feed reel and take-up reel from the room atmosphere if the doors are checked according to the requirements of paragraph (e)(2)(iii) of this section.

(D) A cleaning machine that is demonstrated to the Administrator's satisfaction to be under negative pressure during idling and downtime and is vented to a carbon adsorption system that meets either the requirements of paragraph (e)(2)(vii) of this section or paragraph (g)(2) of this section.

(ii) Any spraying operations shall be conducted in a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine) or within a machine having a door or cover that meets the requirements of paragraph (g)(4)(i)(C) of this section.

(iii) During startup of each vapor cleaning machine, the primary condenser shall be turned on before the sump heater.

(iv) During shutdown of each vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.

(v) When solvent is added or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leakproof couplings, and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.

(vi) Each solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Administrator's satisfaction to achieve the same or better results as those recommended by the manufacturer.

(vii) Waste solvent, still bottoms, sump bottoms, and waste absorbent materials used in the cleaning process for continuous web cleaning machines shall be collected and stored in waste containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.

(viii) Except as provided in paragraph (g)(4)(ix) of this section, sponges, fabric, wood, and paper products shall not be cleaned.

(ix) The prohibition in paragraph (g)(4)(viii) of this section does not apply to absorbent materials that are used as part of the cleaning process of continuous web cleaning machines, including rollers and roller covers.

(h) Except as provided in §63.464, each owner or operator of a remote reservoir continuous web cleaning machine shall comply with paragraphs (h)(1) through (4) of this section.

(1) Except as provided in paragraph (h)(2) of this section, install, maintain, and operate one of the following controls on each new remote reservoir continuous web cleaning machine.

(i) Superheated vapor or superheated part technology.

(ii) A carbon adsorber meeting the requirements of paragraph (e)(2)(vii) of this section.

(iii) If a carbon adsorber system can be demonstrated to the Administrator's satisfaction to have an overall solvent control efficiency (i.e., capture efficiency removal efficiency) of 70 percent or greater, this system is equivalent to the options in paragraphs (h)(1)(i) and (h)(1)(ii) of this section.

(2) In lieu of complying with the provisions of paragraph (a) of this section, the owner or operator of a remote reservoir continuous web cleaning machine shall comply with the following provisions:

(i) Each cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts, unless the cleaning machine is a continuous web cleaning machine that has a squeegee system or air knife system installed, maintained, and operated on the continuous web cleaning machine meeting the requirements of paragraph (e) of this section.

(ii) Each vapor cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils.

(iii) Each vapor cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.

(iv) Each vapor cleaning machine shall have a primary condenser.

(v) Each cleaning machine that uses a lip exhaust or any other exhaust within the solvent cleaning machine shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the requirements of either paragraph (e)(2)(vii) or (g)(2) of this section.

(3) In lieu of complying with the provisions of paragraph (d) of this section, the owner or operator of a remote reservoir continuous web cleaning machine shall comply with the following provisions:

(i) Any spraying operations shall be conducted in a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine) or within a machine having a door or cover that meets the requirements of paragraph (g)(4)(i)(C) of this section.

(ii) During startup of each vapor cleaning machine, the primary condenser shall be turned on before the sump heater.

(iii) During shutdown of each vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.

(iv) When solvent is added or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leakproof couplings, and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.

(v) Each solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Administrator's satisfaction to achieve the same or better results as those recommended by the manufacturer.

(vi) Waste solvent, still bottoms, sump bottoms, and waste absorbent materials used in the cleaning process for continuous web cleaning machines shall be collected and stored in waste containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.

(vii) Except as provided in paragraph (h)(3)(viii) of this section, sponges, fabric, wood, and paper products shall not be cleaned.

(viii) The prohibition in paragraph (h)(3)(vii) of this section does not apply to absorbent materials that are used as part of the cleaning process of continuous web cleaning machines, including rollers and roller covers.

[59 FR 61805, Dec. 2, 1994; 60 FR 29485, June 5, 1995, as amended at 64 FR 67799, Dec. 3, 1999; 65 FR 54422, Sept. 8, 2000; 68 FR 37349, June 23, 2003]

§ 63.464 Alternative standards.

(a) As an alternative to meeting the requirements in §63.463, each owner or operator of a batch vapor or in-line solvent cleaning machine can elect to comply with the requirements of §63.464. An owner or operator of a solvent cleaning machine who elects to comply with §63.464 shall comply with the requirements specified in either paragraph (a)(1) or (a)(2) of this section.

(1) If the cleaning machine has a solvent/air interface, as defined in §63.461, the owner or operator shall comply with the requirements specified in paragraphs (a)(1)(i) and (a)(1)(ii) of this section.

(i) Maintain a log of solvent additions and deletions for each solvent cleaning machine.

(ii) Ensure that the emissions from each solvent cleaning machine are equal to or less than the applicable emission limit presented in table 5 of this subpart as determined using the procedures in §63.465(b) and (c).

Table 5—Emission Limits for Batch Vapor and In-Line Solvent Cleaning Machines With a Solvent/Air Interface

Solvent cleaning machine	3-month rolling average monthly emission limit (kilograms/square meters/month)
Batch vapor solvent cleaning machines	150
Existing in-line solvent cleaning machines	153
New in-line solvent cleaning machines	99

(2) If the cleaning machine is a batch vapor cleaning machine and does not have a solvent/air interface, the owner or operator shall comply with the requirements specified in paragraphs (a)(2)(i) and (a)(2)(ii) of this section.

(i) Maintain a log of solvent additions and deletions for each solvent cleaning machine.

(ii) Ensure that the emissions from each solvent cleaning machine are equal to or less than the appropriate limits as described in paragraphs (a)(2)(ii)(A) and (a)(2)(ii)(B) of this section.

(A) For cleaning machines with a cleaning capacity, as reported in §63.468(d), that is less than or equal to 2.95 cubic meters, the emission limit shall be determined using table 6 or equation 1. If using table 6, and the cleaning capacity of the cleaning machine falls between two cleaning capacity sizes, then the lower of the two emission limits applies.

(B) For cleaning machines with a cleaning capacity as reported in §63.468(d), that is greater than 2.95 cubic meters, the emission limit shall be determined using equation 1.

$EL = 330 * (Vol)^{0.6}$ (1)

where:

EL = the 3-month rolling average monthly emission limit (kilograms/month).

Table 6—Emission Limits for Cleaning Machines Without a Solvent/Air Interface

Cleaning capacity (cubic meters)	3–month rolling average monthly emission limit (kilograms/month)
0.00	0
0.05	55
0.10	83
0.15	106
0.20	126
0.25	144
0.30	160
0.35	176
0.40	190
0.45	204
0.50	218
0.55	231
0.60	243
0.65	255
0.70	266
0.75	278
0.80	289
0.85	299
0.90	310
0.95	320
1.00	330
1.05	340
1.10	349
1.15	359
1.20	368
1.25	377
1.30	386
1.35	395

Cleaning capacity (cubic meters)	3–month rolling average monthly emission limit (kilograms/month)
1.40	404
1.45	412
1.50	421
1.55	429
1.60	438
1.65	446
1.70	454
1.75	462
1.80	470
1.85	477
1.90	485
1.95	493
2.00	500
2.05	508
2.10	515
2.15	522
2.20	530
2.25	537
2.30	544
2.35	551
2.40	558
2.45	565
2.50	572
2.55	579
2.60	585
2.65	592
2.70	599
2.75	605
2.80	612
2.85	619

Cleaning capacity (cubic meters)	3–month rolling average monthly emission limit (kilograms/month)
2.90	625
2.95	632

Vol = the cleaning capacity of the solvent cleaning machine (cubic meters).

(b) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with §63.464(a) shall demonstrate compliance with the applicable 3-month rolling average monthly emission limit on a monthly basis as described in §63.465(b) and (c).

(c) If the applicable 3-month rolling average emission limit is not met, an exceedance has occurred. All exceedances shall be reported as required in §63.468(h).

(d) As an alternative to meeting the requirements in §63.463, each owner or operator of a continuous web cleaning machine can demonstrate an overall cleaning system control efficiency of 70 percent or greater using the procedures in §63.465(g). This demonstration can be made for either a single cleaning machine or for a solvent cleaning system that contains one or more cleaning machines and ancillary equipment, such as storage tanks and distillation units. If the demonstration is made for a cleaning system, the facility must identify any modifications required to the procedures in §63.465(g) and they must be approved by the Administrator.

[59 FR 61805, Dec. 2, 1994, as amended at 64 FR 67801, Dec. 3, 1999; 65 FR 54423, Sept. 8, 2000]

§ 63.465 Test methods.

(a) Except as provided in paragraphs (f) and (g) of this section for continuous web cleaning machines, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with an idling emission limit standard in §63.463(b)(1)(ii), (b)(2)(ii), (c)(1)(ii), or (c)(2)(ii) shall determine the idling emission rate of the solvent cleaning machine using Reference Method 307 in appendix A of this part.

(b) Except as provided in paragraph (g) of this section for continuous web cleaning machines, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with §63.464 shall, on the first operating day of every month ensure that the solvent cleaning machine system contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent, and used solvent that has been cleaned of soils. A fill line must be indicated during the first month the measurements are made. The solvent level within the machine must be returned to the same fill-line each month, immediately prior to calculating monthly emissions as specified in paragraph (c) of this section. The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations.

(c) Except as provided in paragraphs (f) and (g) of this section for continuous web cleaning machines, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with §63.464 shall, on the first operating day of the month, comply with the requirements specified in paragraphs (c)(1) through (3) of this section.

(1) Using the records of all solvent additions and deletions for the previous monthly reporting period required under §63.464(a), determine solvent emissions (Ei) using equation 2 for cleaning machines with a solvent/air interface and equation 3 for cleaning machines without a solvent/air interface:

$$E_i = \frac{SA_i - LSR_i - SSR_i}{AREA_i} \quad (2) \qquad E_n = SA_i - LSR_i - SSR_i \quad (3)$$

where:

E_i=the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent monthly reporting period i, (kilograms of solvent per square meter of solvent/air interface area per month).

E_n=the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent monthly reporting period i, (kilograms of solvent per month).

SA_i=the total amount of halogenated HAP liquid solvent added to the solvent cleaning machine during the most recent monthly reporting period i, (kilograms of solvent per month).

LSR_i=the total amount of halogenated HAP liquid solvent removed from the solvent cleaning machine during the most recent monthly reporting period i, (kilograms of solvent per month).

SSR_i=the total amount of halogenated HAP solvent removed from the solvent cleaning machine in solid waste, obtained as described in paragraph (c)(2) of this section, during the most recent monthly reporting period i, (kilograms of solvent per month).

$AREA_i$=the solvent/air interface area of the solvent cleaning machine (square meters).

(2) Determine SSR_iusing the method specified in paragraph (c)(2)(i) or (c)(2)(ii) of this section.

(i) From tests conducted using EPA reference method 25d.

(ii) By engineering calculations included in the compliance report.

(3) Determine the monthly rolling average, EA, for the 3-month period ending with the most recent reporting period using equation 4 for cleaning machines with a solvent/air interface or equation 5 for cleaning machines without a solvent/air interface:

$$EA_i = \frac{\sum_{j=1}^{3} E_i}{3} \quad (4) \qquad EA_n = \frac{\sum_{j=1}^{3} E_n}{3} \quad (5)$$

Where:

EA_i=the average halogenated HAP solvent emissions over the preceding 3 monthly reporting periods, (kilograms of solvent per square meter of solvent/air interface area per month).

EA_n=the average halogenated HAP solvent emissions over the preceding 3 monthly reporting periods (kilograms of solvent per month).

E_i=halogenated HAP solvent emissions for each month (j) for the most recent 3 monthly reporting periods (kilograms of solvent per square meter of solvent/air interface area).

E_n=halogenated HAP solvent emissions for each month (j) for the most recent 3 monthly reporting periods (kilograms of solvent per month).

j=1 = the most recent monthly reporting period.

j=2 = the monthly reporting period immediately prior to j=1.

j=3 = the monthly reporting period immediately prior to j=2.

(d) Each owner or operator of a batch vapor or in-line solvent cleaning machine using a dwell to comply with §63.463 shall determine the appropriate dwell time for each part or parts basket using the procedure specified in paragraphs (d)(1) and (d)(2) of this section.

(1) Determine the amount of time for the part or parts basket to cease dripping once placed in the vapor zone. The part or parts basket used for this determination must be at room temperature before being placed in the vapor zone.

(2) The proper dwell time for parts to remain in the freeboard area above the vapor zone is no less than 35 percent of the time determined in paragraph (d)(1) of this section.

(e) An owner or operator of a source shall determine their potential to emit from all solvent cleaning operations, using the procedures described in paragraphs (e)(1) through (e)(3) of this section. A facility's total potential to emit is the sum of the HAP emissions from all solvent cleaning operations, plus all HAP emissions from other sources within the facility.

(1) Determine the potential to emit for each individual solvent cleaning using equation 6.

$PTE_i=H_i \times W_i \times SAI_i$(6)

Where:

PTE_i=the potential to emit for solvent cleaning machine i (kilograms of solvent per year).

H_i=hours of operation for solvent cleaning machine i (hours per year).

=8760 hours per year, unless otherwise restricted by a Federally enforceable requirement.

W_i=the working mode uncontrolled emission rate (kilograms per square meter per hour).

=1.95 kilograms per square meter per hour for batch vapor and cold cleaning machines.

=1.12 kilograms per square meter per hour for in-line cleaning machines.

SAI_i= solvent/air interface area of solvent cleaning machine i (square meters). Section 63.461 defines the solvent/air interface area for those machines that have a solvent/air interface. Cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area using the procedure in paragraph (e)(2) of this section.

(2) Cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area using equation 7.

$SAI=2.20 * (Vol)^{0.6}$ (7)

Where:

SAI=the solvent/air interface area (square meters).

Vol=the cleaning capacity of the solvent cleaning machine (cubic meters).

(3) Sum the $PTE_i$for all solvent cleaning operations to obtain the total potential to emit for solvent cleaning operations at the facility.

(f) Each owner or operator of a continuous web cleaning machine using a squeegee system to comply with §63.463(g)(3) shall determine the maximum product throughput using the method in this paragraph. The maximum product throughput for each squeegee type used at a facility must be determined prior to December 2, 1999, the compliance date for these units.

(1) Conduct daily visual inspections of the continuous web part. This monitoring shall be conducted at the point where the continuous web part exits the squeegee system. It is not necessary for the squeegees to be new at the time monitoring is begun if the following two conditions are met:

(i) The continuous web part leaving the squeegee system has no visible solvent film.

(ii) The amount of continuous web that has been processed through the squeegees since the last replacement is known.

(2) Continue daily monitoring until a visible solvent film is noted on the continuous web part.

(3) Determine the length of continuous web product that has been cleaned using the squeegee since it was installed.

(4) The maximum product throughput for the purposes of this rule is equal to the time it takes to clean 95 percent of the length of product determined in paragraph (f)(3) of this section. This time period, in days, may vary depending on the amount of continuous web product cleaned each day.

(g) Each owner or operator of a continuous web cleaning machine demonstrating compliance with the alternative standard of §63.464(d) shall, on the first day of every month, ensure that the solvent cleaning machine contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent, and used solvent that has been cleaned of soils. A fill-line must be indicated during the first month the measurements are made. The solvent level with the machine must be returned to the same fill-line each month, immediately prior to calculating overall cleaning system control efficiency emissions as specified in paragraph (h) in this section. The solvent cleaning machine does not need to be emptied and filled with fresh unused solvent prior to the calculation.

(h) Each owner or operator of a continuous web cleaning machines complying with §63.464(d) shall, on the first operating day of the month, comply with the following requirements.

(1) Using the records of all solvent additions, solvent deletions, and solvent recovered from the carbon adsorption system for the previous monthly reporting period required under §63.467(e), determine the overall cleaning system control efficiency (E_o) using Equation 8 of this section as follows:

$$E_o = R_i / \left(R_i + Sa_i - SSR_i \right) \qquad \text{(Eq. 8)}$$

Where:

E_o= overall cleaning system control efficiency.

R_i= the total amount of halogenated HAP liquid solvent recovered from the carbon adsorption system and recycled to the solvent cleaning system during the most recent monthly reporting period, i, (kilograms of solvent per month).

Sa_i= the total amount of halogenated HAP liquid solvent added to the solvent cleaning system during the most recent monthly reporting period, i, (kilograms of solvent per month).

SSR_i= the total amount of halogenated HAP solvent removed from the solvent cleaning system in solid waste, obtained as described in paragraph (c)(2) of this section, during the most recent monthly reporting period, i, (kilograms of solvent per month).

[59 FR 61805, Dec. 2, 1994, as amended at 64 FR 67801, Dec. 3, 1999; 65 FR 54423, Sept. 8, 2000]

§ 63.466 Monitoring procedures.

(a) Except as provided in paragraph (g) of this section, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards in §63.463(b)(1)(i), (b)(2)(i), (c)(1)(i), (c)(2)(i), (g)(1), or (g)(2) shall conduct monitoring and record the results on a weekly basis for the control devices, as appropriate, specified in paragraphs (a)(1) through (5) of this section.

(1) If a freeboard refrigeration device is used to comply with these standards, the owner or operator shall use a thermometer or thermocouple to measure the temperature at the center of the air blanket during the idling mode.

(2) If a superheated vapor system is used to comply with these standards, the owner or operator shall use a thermometer or thermocouple to measure the temperature at the center of the superheated solvent vapor zone while the solvent cleaning machine is in the idling mode.

(3) If a squeegee system, air knife system, or combination squeegee and air knife system is used to comply with the requirements of §63.463(g) or (h), the owner or operator shall visually inspect the continuous web part exiting the solvent cleaning machine to ensure that no solvent film is visible on the part.

(4) Except as provided in paragraph (a)(5) of this section, if a superheated part system is used to comply with the requirements of §63.463(g) or (h), the owner or operator shall use a thermometer, thermocouple, or other temperature measurement device to measure the temperature of the continuous web part while it is in the solvent cleaning machine. This measurement can also be taken at the exit of the solvent cleaning machine.

(5) As an alternative to complying with paragraph (a)(4) of this section, the owner or operator can provide data, sufficient to satisfy the Administrator, that demonstrate that the part temperature remains above the boiling point of the solvent at all times that the part is within the continuous web solvent cleaning machine. This data could include design and operating conditions such as information supporting any exothermic reaction inherent in the processing.

(b) Except as provided in paragraph (g) of this section, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards of §63.463 (b)(1)(i), (b)(2)(i), (c)(1)(i), or (c)(2)(i) shall conduct monitoring and record the results on a monthly basis for the control devices, as appropriate, specified in paragraphs (b)(1) and (b)(2) of this section.

(1) If a cover (working-mode, downtime-mode, and/or idling-mode cover) is used to comply with these standards, the owner or operator shall conduct a visual inspection to determine if the cover is opening and closing properly, completely covers the cleaning machine openings when closed, and is free of cracks, holes, and other defects.

(2) If a dwell is used, the owner or operator shall determine the actual dwell time by measuring the period of time that parts are held within the freeboard area of the solvent cleaning machine after cleaning.

(c) Except as provided in paragraph (g) of this section, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment or idling standards in §63.463 shall monitor the hoist speed as described in paragraphs (c)(1) through (c)(4) of this section.

(1) The owner or operator shall determine the hoist speed by measuring the time it takes for the hoist to travel a measured distance. The speed is equal to the distance in meters divided by the time in minutes (meters per minute).

(2) The monitoring shall be conducted monthly. If after the first year, no exceedances of the hoist speed are measured, the owner or operator may begin monitoring the hoist speed quarterly.

(3) If an exceedance of the hoist speed occurs during quarterly monitoring, the monitoring frequency returns to monthly until another year of compliance without an exceedance is demonstrated.

(4) If an owner or operator can demonstrate to the Administrator's satisfaction in the initial compliance report that the hoist cannot exceed a speed of 3.4 meters per minute (11 feet per minute), the required monitoring frequency is quarterly, including during the first year of compliance.

(d) Except as provided in paragraph (g) of this section, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards in §63.463 (b)(1)(i), (b)(2)(i), (c)(1)(i), or (c)(2)(i) using a reduced room draft shall conduct monitoring and record the results as specified in paragraph(d)(1) or (d)(2) of this section.

(1) If the reduced room draft is maintained by controlling room parameters (i.e., redirecting fans, closing doors and windows, etc.), the owner or operator shall conduct an initial monitoring test of the windspeed and of room parameters, quarterly monitoring of windspeed, and weekly monitoring of room parameters as specified in paragraphs (d)(1)(i) and (d)(1)(ii) of this section.

(i) Measure the windspeed within 6 inches above the top of the freeboard area of the solvent cleaning machine using the procedure specified in paragraphs (d)(1)(i)(A) through (d)(1)(i)(D) of this section.

(A) Determine the direction of the wind current by slowly rotating a velometer or similar device until the maximum speed is located.

(B) Orient a velometer in the direction of the wind current at each of the four corners of the machine.

(C) Record the reading for each corner.

(D) Average the values obtained at each corner and record the average wind speed.

(ii) Monitor on a weekly basis the room parameters established during the initial compliance test that are used to achieve the reduced room draft.

(2) If an enclosure (full or partial) is used to achieve a reduced room draft, the owner or operator shall conduct an initial monitoring test and, thereafter, monthly monitoring tests of the windspeed within the

enclosure using the procedure specified in paragraphs (d)(2)(i) and (d)(2)(ii) of this section and a monthly visual inspection of the enclosure to determine if it is free of cracks, holes and other defects.

(i) Determine the direction of the wind current in the enclosure by slowly rotating a velometer inside the entrance to the enclosure until the maximum speed is located.

(ii) Record the maximum wind speed.

(e) Except as provided in paragraph (g) of this section, each owner or operator using a carbon adsorber to comply with this subpart shall measure and record the concentration of halogenated HAP solvent in the exhaust of the carbon adsorber weekly with a colorimetric detector tube. This test shall be conducted while the solvent cleaning machine is in the working mode and is venting to the carbon adsorber. The exhaust concentration shall be determined using the procedure specified in paragraphs (e)(1) through (e)(3) of this section.

(1) Use a colorimetric detector tube designed to measure a concentration of 100 parts per million by volume of solvent in air to an accuracy of ±25 parts per million by volume.

(2) Use the colorimetric detector tube according to the manufacturer's instructions.

(3) Provide a sampling port for monitoring within the exhaust outlet of the carbon adsorber that is easily accessible and located at least 8 stack or duct diameters downstream from any flow disturbance such as a bend, expansion, contraction, or outlet; downstream from no other inlet; and 2 stack or duct diameters upstream from any flow disturbance such as a bend, expansion, contraction, inlet or outlet.

(f) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards of §63.463 (b)(1)(ii), (b)(2)(ii), (c)(1)(ii), or (c)(2)(ii) shall comply with the requirements specified in paragraphs (f)(1) and (f)(2) of this section.

(1) If using controls listed in paragraphs (a) through (e) of this section, the owner or operator shall comply with the monitoring frequency requirements in paragraphs (a) through (e) of this section.

(2) If using controls not listed in paragraphs (a) through (e) of this section, the owner or operator shall establish the monitoring frequency for each control and submit it to the Administrator for approval in the initial test report.

(g) Each owner or operator using a control device listed in paragraphs (a) through (e) of this section can use alternative monitoring procedures approved by the Administrator.

[59 FR 61805, Dec. 2, 1994, as amended at 64 FR 67802, Dec. 3, 1999]

§ 63.467 Recordkeeping requirements.

(a) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of §63.463 shall maintain records in written or electronic form specified in paragraphs (a)(1) through (7) of this section for the lifetime of the machine.

(1) Owner's manuals, or if not available, written maintenance and operating procedures, for the solvent cleaning machine and control equipment.

(2) The date of installation for the solvent cleaning machine and all of its control devices. If the exact date for installation is not known, a letter certifying that the cleaning machine and its control devices were installed prior to, or on, November 29, 1993, or after November 29, 1993, may be substituted.

(3) If a dwell is used to comply with these standards, records of the tests required in §63.465(d) to determine an appropriate dwell time for each part or parts basket.

(4) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards of §63.463(b)(1)(ii), (b)(2)(ii), (c)(1)(ii), or (c)(2)(ii) shall maintain records of the initial performance test, including the idling emission rate and values of the monitoring parameters measured during the test.

(5) Records of the halogenated HAP solvent content for each solvent used in a solvent cleaning machine subject to the provisions of this subpart.

(6) If a squeegee system is used to comply with these standards, records of the test required by §63.466(f) to determine the maximum product throughput for the squeegees and records of both the weekly monitoring required by §63.466(a)(3) for visual inspection and the length of continuous web product cleaned during the previous week.

(7) If an air knife system or a combination squeegee and air knife system is used to comply with these standards, records of the determination of the proper operating parameter and parameter value for the air knife system.

(b) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with §63.463 shall maintain records specified in paragraphs (b)(1) through (b)(4) of this section either in electronic or written form for a period of 5 years.

(1) The results of control device monitoring required under §63.466.

(2) Information on the actions taken to comply with §63.463(e) and (f). This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.

(3) Estimates of annual solvent consumption for each solvent cleaning machine.

(4) If a carbon adsorber is used to comply with these standards, records of the date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in §63.466(e).

(c) Except as provided in paragraph (e) of this section for continuous web cleaning machines, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of §63.464 shall maintain records specified in paragraphs (c)(1) through (3) of this section either in electronic or written form for a period of 5 years.

(1) The dates and amounts of solvent that are added to the solvent cleaning machine.

(2) The solvent composition of wastes removed from cleaning machines as determined using the procedure described in §63.465(c)(2).

(3) Calculation sheets showing how monthly emissions and the rolling 3-month average emissions from the solvent cleaning machine were determined, and the results of all calculations.

(d) Each owner or operator of a solvent cleaning machine without a solvent/air interface complying with the provisions of §63.464 shall maintain records on the method used to determine the cleaning capacity of the cleaning machine.

(e) Each owner or operator of a continuous web cleaning machine complying with the provisions of §63.464(d) shall maintain the following records in either electronic or written form for a period of 5 years.

(1) The dates and amounts of solvent that are added to the solvent cleaning machine.

(2) The dates and amounts of solvent that are recovered from the desorption of the carbon adsorber system.

(3) The solvent composition of wastes removed from each cleaning machine as determined using the procedures in §63.465(c)(2).

(4) Calculation sheets showing the calculation and results of determining the overall cleaning system control efficiency, as required by §63.465.

[59 FR 61805, Dec. 2, 1994, as amended at 64 FR 67802, Dec. 3, 1999; 68 FR 37349, June 23, 2003]

§ 63.468 Reporting requirements.

(a) Each owner or operator of an existing solvent cleaning machine subject to the provisions of this subpart shall submit an initial notification report to the Administrator no later than August 29, 1995. This report shall include the information specified in paragraphs (a)(1) through (a)(6) of this section.

(1) The name and address of the owner or operator.

(2) The address (i.e., physical location) of the solvent cleaning machine(s).

(3) A brief description of each solvent cleaning machine including machine type (batch vapor, batch cold, vapor in-line or cold in-line), solvent/air interface area, and existing controls.

(4) The date of installation for each solvent cleaning machine or a letter certifying that the solvent cleaning machine was installed prior to, or after, November 29, 1993.

(5) The anticipated compliance approach for each solvent cleaning machine.

(6) An estimate of annual halogenated HAP solvent consumption for each solvent cleaning machine.

(b) Each owner or operator of a new solvent cleaning machine subject to the provisions of this subpart shall submit an initial notification report to the Administrator. New sources for which construction or reconstruction had commenced and initial startup had not occurred before December 2, 1994, shall submit this report as soon as practicable before startup but no later than January 31, 1995. New sources for which the construction or reconstruction commenced after December 2, 1994, shall submit this report as soon as practicable before the construction or reconstruction is planned to commence. This report shall include all of the information required in §63.5(d)(1) of subpart A (General Provisions), with the revisions and additions in paragraphs (b)(1) through (b)(3) of this section.

(1) The report shall include a brief description of each solvent cleaning machine including machine type (batch vapor, batch cold, vapor in-line, or cold-line), solvent/air interface area, and existing controls.

(2) The report shall include the anticipated compliance approach for each solvent cleaning machine.

(3) In lieu of §63.5(d)(1)(ii)(H) of subpart A of this part, the owner or operator must report an estimate of annual halogenated HAP solvent consumption for each solvent cleaning machine.

(c) Each owner or operator of a batch cold solvent cleaning machine subject to the provisions of this subpart shall submit a compliance report to the Administrator. For existing sources, this report shall be submitted to the Administrator no later than 150 days after the compliance date specified in §63.460(d). For new sources, this report shall be submitted to the Administrator no later than 150 days after startup or May 1, 1995, whichever is later. This report shall include the requirements specified in paragraphs (c)(1) through (c)(4) of this section.

(1) The name and address of the owner or operator.

(2) The address (i.e., physical location) of the solvent cleaning machine(s).

(3) A statement, signed by the owner or operator of the solvent cleaning machine, stating that the solvent cleaning machine for which the report is being submitted is in compliance with the provisions of this subpart.

(4) The compliance approach for each solvent cleaning machine.

(d) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of §63.463 shall submit to the Administrator an initial statement of compliance for each solvent cleaning machine. For existing sources, this report shall be submitted to the Administrator no later than 150 days after the compliance date specified in §63.460(d). For new sources, this report shall be submitted to the Administrator no later than 150 days after startup or May 1, 1995, whichever is later. This statement shall include the requirements specified in paragraphs (d)(1) through (d)(6) of this section.

(1) The name and address of the owner or operator.

(2) The address (i.e., physical location) of the solvent cleaning machine(s).

(3) A list of the control equipment used to achieve compliance for each solvent cleaning machine.

(4) For each piece of control equipment required to be monitored, a list of the parameters that are monitored and the values of these parameters measured on or during the first month after the compliance date.

(5) Conditions to maintain the wind speed requirements of §63.463(e)(2)(ii), if applicable.

(6) Each owner or operator of a solvent cleaning machine complying with the idling emission limit standards of §63.463(b)(1)(ii), (b)(2)(ii), (c)(1)(ii), and (c)(2)(ii) shall submit a test report for tests of idling emissions meeting the specifications in Method 307 of appendix A to this subpart. This report shall comply with the requirements specified in paragraphs (d)(6)(i) through (d)(6)(iv) of this section.

(i) This test must be on the same specific model cleaner used at the source. The test can be done by the owner or operator of the affected machine or can be supplied by the vendor of that solvent cleaning machine or a third party.

(ii) This report must clearly state the monitoring parameters, monitoring frequency and the delineation of exceedances for each parameter.

(iii) If a solvent cleaning machine vendor or third party test report is used to demonstrate compliance, it shall include the following for the solvent cleaning machine tested: Name of person(s) or company that performed the test, model name, the date the solvent cleaning machine was tested, serial number, and a diagram of the solvent cleaning machine tested.

(iv) If a solvent cleaning machine vendor or third party test report is used, the owner or operator of the solvent cleaning machine shall comply with the requirements specified in either paragraphs (d)(6)(iv)(A) and (d)(6)(iv)(B) of this section.

(A) Submit a statement by the solvent cleaning machine vendor that the unit tested is the same as the unit the report is being submitted for.

(B) Demonstrate to the Administrator's satisfaction that the solvent emissions from the solvent cleaning machine for which the test report is being submitted are equal to or less than the solvent emissions from the solvent cleaning machine in the vendor test report.

(7) If a carbon adsorber is used to comply with these standards, the date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in §63.466(e).

(e) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of §63.464 shall submit to the Administrator an initial statement of compliance for each solvent cleaning machine. For existing sources, this report shall be submitted to the Administrator no later than 150 days after the compliance date specified in §63.460(d). For new sources, this report shall be submitted to the Administrator no later than 150 days after startup or May 1, 1995, whichever is later. The statement shall include the information specified in paragraphs (e)(1) through (e)(4) of this section.

(1) The name and address of the solvent cleaning machine owner or operator.

(2) The address of the solvent cleaning machine(s).

(3) The solvent/air interface area for each solvent cleaning machine or, for cleaning machines without a solvent/air interface, a description of the method used to determine the cleaning capacity and the results.

(4) The results of the first 3-month average emissions calculation.

(f) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of §63.463 shall submit an annual report by February 1 of the year following the one for which the reporting is being made. This report shall include the requirements specified in paragraphs (f)(1) through (f)(3) of this section.

(1) A signed statement from the facility owner or his designee stating that, “All operators of solvent cleaning machines have received training on the proper operation of solvent cleaning machines and their control devices sufficient to pass the test required in §63.463(d)(10).”

(2) An estimate of solvent consumption for each solvent cleaning machine during the reporting period.

(3) The reports required under paragraphs (f) and (g) of this section can be combined into a single report for each facility.

(g) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of §63.464 shall submit a solvent emission report every year. This solvent emission report shall contain the requirements specified in paragraphs (g)(1) through (g)(4) of this section.

(1) The size and type of each unit subject to this subpart (solvent/air interface area or cleaning capacity).

(2) The average monthly solvent consumption for the solvent cleaning machine in kilograms per month.

(3) The 3-month monthly rolling average solvent emission estimates calculated each month using the method as described in §63.465(c).

(4) The reports required under paragraphs (f) and (g) of this section can be combined into a single report for each facility.

(h) Each owner or operator of a batch vapor or in-line solvent cleaning machine shall submit an exceedance report to the Administrator semiannually except when, the Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source or, an exceedance occurs. Once an exceedance has occurred the owner or operator shall follow a quarterly reporting format until a request to reduce reporting frequency under paragraph (i) of this section is approved. Exceedance reports shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. The exceedance report shall include the applicable information in paragraphs (h) (1) through (3) of this section.

(1) Information on the actions taken to comply with §63.463 (e) and (f). This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.

(2) If an exceedance has occurred, the reason for the exceedance and a description of the actions taken.

(3) If no exceedances of a parameter have occurred, or a piece of equipment has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.

(i) An owner or operator who is required to submit an exceedance report on a quarterly (or more frequent) basis may reduce the frequency of reporting to semiannual if the conditions in paragraphs (i)(1) through (i)(3) of this section are met.

(1) The source has demonstrated a full year of compliance without an exceedance.

(2) The owner or operator continues to comply with all relevant recordkeeping and monitoring requirements specified subpart A (General Provisions) and in this subpart.

(3) The Administrator does not object to a reduced frequency of reporting for the affected source as provided in paragraph (e)(3)(iii) of subpart A (General Provisions).

(j) [Reserved]

(k) Each owner or operator of a solvent cleaning machine requesting an equivalency determination, as described in §63.469 shall submit an equivalency request report to the Administrator. For existing sources, this report must be submitted to the Administrator no later than June 3, 1996. For new sources, this report must be submitted and approved by the Administrator prior to startup.

[59 FR 61805, Dec. 2, 1994; 60 FR 29485, June 5, 1995, as amended at 64 FR 69643, Dec. 14, 1999; 71 FR 75346, Dec. 19, 2005]

§ 63.469 Equivalent methods of control.

Upon written application, the Administrator may approve the use of equipment or procedures after they have been satisfactorily demonstrated to be equivalent, in terms of reducing emissions of methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride or chloroform to the atmosphere, to those prescribed for compliance within a specified paragraph of this subpart. The application must contain a complete description of the equipment or procedure and the proposed

equivalency testing procedure and the date, time, and location scheduled for the equivalency demonstration.

§ 63.470 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a 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 of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§63.460, 63.462(a) through (d), and 63.463 through 63.464 (except for the authorities in §63.463(d)(9)). Use the procedures in §63.469 to request the use of alternative equipment or procedures.

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

[68 FR 37349, June 23, 2003]

§ 63.471 Facility-wide standards.

(a) Each owner or operator of an affected facility shall comply with the requirements specified in this section. For purposes of this section, affected facility means all solvent cleaning machines, except solvent cleaning machines used in the manufacture and maintenance of aerospace products, solvent cleaning machines used in the manufacture of narrow tubing, and continuous web cleaning machines, located at a major source that are subject to the facility-wide limits in paragraph (b)(2) of this section, and for area sources, affected facility means all solvent cleaning machines, except cold batch cleaning machines, located at an area source that are subject to the facility-wide limits in paragraph (b)(2) of this section.

(b)(1) Each owner or operator of an affected facility must maintain a log of solvent additions and deletions for each solvent cleaning machine.

(2) Each owner or operator of an affected facility must ensure that the total emissions of perchloroethylene (PCE), trichloroethylene (TCE) and methylene chloride (MC) used at the affected facility are equal to or less than the applicable facility-wide 12-month rolling total emission limit presented in Table 1 of this section as determined using the procedures in paragraph (c) of this section.

Table 1—Facility-wide Emission Limits for Facilities With Solvent Cleaning Machines

Solvents emitted	Facility-wide annual emission limits in kg—for general population degreasing machines	Facility-wide annual emission limit in kg for military depot maintenance facilities
PCE only[a]	4,800	8,000
TCE only	14,100	23,500
MC only	60,000	100,000
Multiple solvents—Calculate the MC-weighted emissions using equation 1	60,000	100,000

[a]PCE emission limit calculated using CalEPA URE.

Note: In the equation, the facility emissions of PCE and TCE are weighted according to their carcinogenic potency relative to that of MC. The value of A is 12.5. The value for B is 4.25.

$$WE = (PCE \times A) + (TCE \times B) + (MC) \quad \text{(Eq. 9)}$$

Where:

WE = Weighted 12-month rolling total emissions in kg (lbs).

PCE = 12-month rolling total PCE emissions from all solvent cleaning machines at the facility in kg (lbs).

TCE = 12-month rolling total TCE emission from all solvent cleaning machines at the facility in kg (lbs).

MC = 12-month rolling total MC emissions from all solvent cleaning machines at the facility in kg (lbs).

(c) Each owner or operator of an affected facility shall on the first operating day of every month, demonstrate compliance with the applicable facility-wide emission limit on a 12-month rolling total basis using the procedures in paragraphs (c)(1) through (5) of this section. For purposes of this paragraph, “each solvent cleaning machine” means each solvent cleaning machine that is part of an affected facility regulated by this section.

(1) Each owner or operator of an affected facility shall, on the first operating day of every month, ensure that each solvent cleaning machine system contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent, and used solvent that has been cleaned of soiled materials. A fill line must be indicated during the first month the measurements are made. The solvent level within the machine must be returned to the same fill-line each month, immediately prior to calculating monthly emissions as specified in paragraphs (c)(2) and (3) of this section. The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations.

(2) Each owner or operator of an affected facility shall, on the first operating day of the month, using the records of all solvent additions and deletions for the previous month, determine solvent emissions (E_{unit}) from each solvent cleaning machine using equation 10:

$$E_{unit} = SA_i - LSR_i - SSR_i \qquad \text{(Eq. 10)}$$

Where:

E_{unit}= the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent month i, (kilograms of solvent per month).

SA_i= the total amount of halogenated HAP liquid solvent added to the solvent cleaning machine during the most recent month i, (kilograms of solvent per month).

LSR_i= the total amount of halogenated HAP liquid solvent removed from the solvent cleaning machine during the most recent month i, (kilograms of solvent per month).

SSR_i= the total amount of halogenated HAP solvent removed from the solvent cleaning machine in solid waste, obtained as described in paragraph (c)(3) of this section, during the most recent month i, (kilograms of solvent per month).

(3) Each owner or operator of an affected facility shall, on the first operating day of the month, determine SSR_iusing the method specified in paragraph (c)(3)(i) or (c)(3)(ii) of this section.

(i) From tests conducted using EPA reference method 25d.

(ii) By engineering calculations included in the compliance report.

(4) Each owner or operator of an affected facility shall on the first operating day of the month, after 12 months of emissions data are available, determine the 12-month rolling total emissions, ET_{unit}, for the 12-month period ending with the most recent month using equation 11:

$$ET_{unit} = \left[\sum_{j=1}^{12} E_{unit}\right] \qquad \text{(Eq. 11)}$$

Where:

ET_{unit}= the total halogenated HAP solvent emissions over the preceding 12 months, (kilograms of solvent emissions per 12-month period).

E_{unit}= halogenated HAP solvent emissions for each month (j) for the most recent 12 months (kilograms of solvent per month).

(5) Each owner or operator of an affected facility shall on the first operating day of the month, after 12 months of emissions data are available, determine the 12-month rolling total emissions, $ET_{facility}$, for the 12-month period ending with the most recent month using equation 12:

$$ET_{facility} = \left[\sum_{j=1}^{i} ET_{unit}\right] \qquad \text{(Eq. 12)}$$

Where:

$ET_{facility}$= the total halogenated HAP solvent emissions over the preceding 12 months for all cleaning machines at the facility, (kilograms of solvent emissions per 12-month period).

ET_{unit}= the total halogenated HAP solvent emissions over the preceding 12 months for each unit j, where i equals the total number of units at the facility (kilograms of solvent emissions per 12-month period).

(d) If the applicable facility-wide emission limit presented in Table 1 of paragraph (b)(2) is not met, an exceedance has occurred. All exceedances shall be reported as required in §63.468(h).

(e) Each owner or operator of an affected facility shall maintain records specified in paragraphs (e)(1) through (3) of this section either in electronic or written form for a period of 5 years. For purposes of this paragraph, “each solvent cleaning machine” means each solvent cleaning machine that is part of an affected facility regulated by this section.

(1) The dates and amounts of solvent that are added to each solvent cleaning machine.

(2) The solvent composition of wastes removed from each solvent cleaning machines as determined using the procedure described in paragraph (c)(3) of this section.

(3) Calculation sheets showing how monthly emissions and the 12-month rolling total emissions from each solvent cleaning machine were determined, and the results of all calculations.

(f) Each owner or operator of an affected facility shall submit an initial notification report to the Administrator no later than May 3, 2010. This report shall include the information specified in paragraphs (f)(1) through (5) of this section.

(1) The name and address of the owner or operator of the affected facility.

(2) The address (i.e., physical location) of the solvent cleaning machine(s) that is part of an affected facility regulated by this section.

(3) A brief description of each solvent cleaning machine at the affected facility including machine type (batch vapor, batch cold, vapor in-line or cold in-line), solvent/air interface area, and existing controls.

(4) The date of installation for each solvent cleaning machine.

(5) An estimate of annual halogenated HAP solvent consumption for each solvent cleaning machine.

(g) Each owner or operator of an affected facility shall submit to the Administrator an initial statement of compliance on or before May 3, 2010. The statement shall include the information specified in paragraphs (g)(1) through (g)(3) of this section.

(1) The name and address of the owner or operator of the affected facility.

(2) The address (i.e., physical location) of each solvent cleaning machine that is part of an affected facility regulated by this section.

(3) The results of the first 12-month rolling total emissions calculation.

(h) Each owner or operator of an affected facility shall submit a solvent emission report every year. This solvent emission report shall contain the requirements specified in paragraphs (h)(1) through (h)(3) of this section.

(1) The average monthly solvent consumption for the affected facility in kilograms per month.

(2) The 12-month rolling total solvent emission estimates calculated each month using the method as described in paragraph (c) of this section.

(3) This report can be combined with the annual report required in §63.468(f) and (g) into a single report for each facility.

[72 FR 25158, May 3, 2007]

Appendix A to Subpart T of Part 63—Test of Solvent Cleaning Procedures

General Questions

___ 1. What is the maximum allowable speed for parts entry and removal?

A. 8.5 meters per minute (28 feet per minute).

B. 3.4 meters per minute (11 feet per minute).

C. 11 meters per minute (36 feet per minute).

D. No limit.

___ 2. How do you ensure that parts enter and exit the solvent cleaning machine at the speed required in the regulation?

A. Program on computerized hoist monitors speed.

B. Can judge the speed by looking at it.

C. Measure the time it takes the parts to travel a measured distance.

___ 3. Identify the sources of air disturbances.

A. Fans

B. Open doors

C. Open windows

D. Ventilation vents

E. All of the above

___ 4. What are the three operating modes?

A. Idling, working and downtime

B. Precleaning, cleaning, and drying

C. Startup, shutdown, off

D. None of the above

___ 5. When can parts or parts baskets be removed from the solvent cleaning machine?

A. When they are clean

B. At any time

C. When dripping stops

D. Either A or C is correct

___ 6. How must parts be oriented during cleaning?

A. It does not matter as long as they fit in the parts basket.

B. So that the solvent pools in the cavities where the dirt is concentrated.

C. So that solvent drains from them freely.

___ 7. During startup, what must be turned on first, the primary condenser or the sump heater?

A. Primary condenser

B. Sump heater

C. Turn both on at same time

D. Either A or B is correct

___ 8. During shutdown, what must be turned off first, the primary condenser or the sump heater?

A. Primary condenser

B. Sump heater

C. Turn both off at same time

D. Either A or B is correct

___ 9. In what manner must solvent be added to and removed from the solvent cleaning machine?

A. With leak proof couplings

B. With the end of the pipe in the solvent sump below the liquid solvent surface.

C. So long as the solvent does not spill, the method does not matter.

D. A and B

___ 10. What must be done with waste solvent and still and sump bottoms?

A. Pour down the drain

B. Store in closed container

C. Store in a bucket

D. A or B

___ 11. What types of materials are prohibited from being cleaned in solvent cleaning machines using halogenated HAP solvents?

A. Sponges

B. Fabrics

C. Paper

D. All of the above

Control Device Specific Questions

[ ] Freeboard Refrigeration Device

___ 1. What temperature must the FRD achieve?

A. Below room temperature

B. 50 °F

C. Below the solvent boiling point

D. 30 percent below the solvent boiling point

[ ] Working-Mode Cover

___ 2. When can a cover be open?

A. While parts are in the cleaning machine

B. During parts entry and removal

C. During maintenance

D. During measurements for compliance purposes

E. A and C

F. B, C, and D

___ 3. Covers must be maintained in what condition?

A. Free of holes

B. Free of cracks

C. So that they completely seal cleaner opening

D. All of the above

[ ] Dwell

___ 4. Where must the parts be held for the appropriate dwell time?

A. In the vapor zone

B. In the freeboard area above the vapor zone

C. Above the cleaning machine

D. In the immersion sump

Answers

General Questions

1. B

2. A or C

3. E

4. A

5. C

6. C

7. A

8. B

9. D

10. B

11. D

Control Device Specific Questions

1. D

2. F

3. D

4. B

[59 FR 61818, Dec. 2, 1994; 60 FR 29485, June 5, 1995]

Appendix B to Subpart T of Part 63—General Provisions Applicability to Subpart T

Reference	Applies to subpart T		Comments
	BCC	BVI	
63.1(a) (1)–(3)	Yes	Yes	
63.1(a)(4)	Yes	Yes	Subpart T (this appendix) specifies applicability of each paragraph in subpart A to subpart T.
63.1(a)(5)	No	No	
63.1(a) (6)–(8)	Yes	Yes	
63.1(a)(9)	No	No	
63.1(a)(10)	Yes	Yes	
63.1(a)(11)	No	No	Subpart T allows submittal of notifications and reports through the U.S. mail, fax, and courier. Subpart T requires that the postmark for notifications and reports submitted through the U.S. mail or other non-Governmental mail carriers be on or before deadline specified in an applicable requirement.
63.1(a) (12)–(14)	Yes	Yes	
63.1(b)(1)	No	No	Subpart T specifies applicability.
63.1(b)(2)	No	Yes	
63.1(b)(3)	No	No	Subpart T requires that a record of halogenated cleaning machine applicability determination be kept on site for 5 years, or until the cleaning machine changes its operations. The record shall be sufficiently detailed to allow the Administrator to make a finding about the source's applicability status with regard to subpart T.
63.1(c)(1)	Yes	Yes	
63.1(c)(2)	Yes	Yes	Subpart T, §63.460(h) exempts area sources subject to this subpart from the obligation to obtain Title V operating permits.

Reference	Applies to subpart T		Comments
	BCC	BVI	
63.1(c)(3)	No	No	
63.1(c)(4)	Yes	Yes	
63.1(c)(5)	Yes	Yes	Subpart T does not require continuous monitoring systems (CMS) or continuous opacity monitoring systems. Therefore, notifications and requirements for CMS and COMS specified in subpart A do not apply to subpart T.
63.1(d)	No	No	
63.1(e)	No	Yes	
63.2	Yes	Yes	Subpart T definitions (§63.461) for existing and new overlap with the definitions for existing source and new source in subpart A (§63.2). Both subpart A and T also define Administrator.
63.3(a)–(c)	Yes	Yes	
63.4(a) (1)–(3)	Yes	Yes	
63.4(a)(4)	No	No	
63.4(a)(5)	Yes	Yes	
63.4(b)–(c)	Yes	Yes	
63.5(a)(1)	Yes	Yes	
63.5(a)(2)	Yes	Yes	
63.5(b)(1)	Yes	Yes	
63.5(b)(2)	No	No	
63.5(b)(3)	No	No	Subpart T overrides the requirement for approval prior to constructing a new or reconstructing an existing major source.
63.5(b)(4)–(6)	Yes	Yes	
63.5(c)	No	No	
63.5 (d)–(f)	No	No	Subpart T overrides the requirement to submit an application for approval of construction or reconstruction of a halogenated solvent cleaning machine.
63.6(a)	Yes	Yes	
63.6(b) (1)–(5)	Yes	Yes	Subpart T, §63.460, specifies compliance dates.
63.6(b)(6)	No	No	

Reference	Applies to subpart T		Comments
	BCC	BVI	
63.6(b)(7)	No	No	Subpart T has the same requirements for affected halogenated HAP solvent cleaning machine subcategories that are located at area sources as it does for those located at major sources.
63.6(c)(1)–(2)	Yes	Yes	Subpart T allows 3 years from the date of promulgation for both area and major existing sources to comply.
63.6(c) (3)–(4)	No	No	
63.6(c)(5)	Yes	Yes	Subpart T has the same requirements for affected halogenated HAP solvent cleaning machine subcategories that are located at area sources as it does for those located at major sources.
			Subpart T allows 3 years from the date of promulgation for both area and major existing sources to comply.
63.6(d)	No	No	
63.6(e)(1)–(2)	Yes	Yes	
63.6(e)(3)	No	No	Subpart T overrides the requirement of a startup, shutdown, and malfunction plan. Subpart T specifies startup and shutdown procedures to be followed by an owner or operator for batch vapor and in-line cleaning machines.
63.6(f)–(g)	Yes	Yes	
63.6(h)	No	No	Subpart T does not require compliance with an opacity or visible emission standard.
63.6(i) (1)–(14)	Yes	Yes	
63.6(i)(15)	No	No	
63.6(i)(16)	Yes	Yes	
63.6(j)	Yes	Yes	
63.7(a)	No	Yes	Subpart T gives owners or operators the option to perform an idling emission performance test as a way of demonstrating compliance. Other options are also available that do not require a performance test.
63.7(b)	No	Yes	This is only required for those owners or operators that choose the idling emission standard as their compliance option.
63.7(c)(1)	No	Yes	This is only required for those owners or operators that choose the idling emission standard as their compliance option.
63.7(c) (2)–(3)	No	No	Subpart T does not require a site-specific test plan for the idling emission performance test.

Reference	Applies to subpart T		Comments
	BCC	BVI	
63.7(c)(4)	No	No	Subpart T does not require a performance test that involves the retrieval of gas samples, and therefore this does not apply.
63.7(d)	No	No	Requirements do not apply to the idling emission performance test option.
63.7(e)	No	Yes	
63.7(f)	No	Yes	
63.7(g)	No	Yes	Subpart T specifies what is required to demonstrate idling emission standard compliance through the use of the Environmental Protection Agency test method 307 and control device monitoring. Reports and records of testing and monitoring are required for compliance verification. Three runs of the test are required for compliance, as specified in §63.7(e) of subpart A.
63.7(h)	No	No	Subpart T does not require the use of a performance test to comply with the standard. The idling emission standard option (which requires an idling emission performance test) is an alternative option offered to owners or operators of batch vapor and in-line cleaning machines for compliance flexibility.
63.8 (a)–(b)	Yes	Yes	
63.8 (c)–(e)	No	No	Subpart T does not require the use of continuous monitoring systems to demonstrate compliance.
63.8(f)	Yes	Yes	
63.8(g)	No	No	Subpart T does not require continuous opacity monitoring systems and continuous monitoring systems data.
63.9(a) (1)–(4)	Yes	Yes	
63.9(b)(1)	Yes	Yes	
63.9(b)(2)	Yes	Yes	Subpart T includes all of those requirements stated in subpart A, except that subpart A also requires a statement as to whether the affected source is a major or an area source, and an identification of the relevant standard (including the source's compliance date). Subpart T also has some more specific information requirements specific to the affected source (see subpart T, §§63.468(a)–(b)).
63.9(b)(3)	Yes	Yes	The subpart A and subpart T initial notification reports differ (see above).
63.9(b)(4)	No	No	Subpart T does not require an application for approval of construction or reconstruction.
63.9(b)(5)	Yes	Yes	
63.9(c)	Yes	Yes	
63.9(d)	Yes	Yes	

Reference	Applies to subpart T		Comments
	BCC	BVI	
63.9(e)	Yes	Yes	Under subpart T, this requirement only applies to owners or operators choosing to comply with the idling emissions standard.
63.9(f)	No	No	Subpart T does not require opacity or visible emission observations.
63.9(g)(1)	No	No	Subpart T does not require the use of continuous monitoring systems or continuous opacity monitoring systems.
63.9(h)	No	No	Section 63.468 of subpart T requires an initial statement of compliance for existing sources to be submitted to the Administrator no later than 150 days after the compliance date specified in §63.460(d) of subpart T. For new sources, this report is to be submitted to the Administrator no later than 150 days from the date specified in §63.460(c).
63.9(i)	Yes	Yes	
63.9(j)	Yes	Yes	
63.10(a)	Yes	Yes	
63.10(b)	No	No	Recordkeeping requirements are specified in subpart T.
63.10(c) (1)–(15)	No	No	Subpart T does not require continuous monitoring systems.
63.10(d)(1)	Yes	Yes	
63.10(d)(2)	No	No	Reporting requirements are specified in subpart T.
63.10(e) (l)–(2)	No	No	Subpart T does not require continuous emissions monitoring systems.
63.10(e)(3)	No	No	Subpart T does not require continuous monitoring systems.
63.10(e)(4)	No	No	Subpart T does not require continuous opacity monitoring systems.
63.10(f)	Yes	Yes	
63.11(a)	Yes	Yes	
63.11(b)	No	No	Flares are not a control option under subpart T.
63.12 (a)–(c)	Yes	Yes	
63.13 (a)–(c)	Yes	Yes	
63.14	No	No	Subpart T requirements do not require the use of the test methods incorporated by reference in subpart A.
63.15(a)–(b)	Yes	Yes	

BCC=Batch Cold Cleaning Machines.

BVI=Batch Vapor and In-line Cleaning Machines.

[59 FR 61818, Dec. 2, 1994; 60 FR 29485, June 5, 1995, as amended at 70 FR 75346, Dec. 19, 2005]

Indiana Department of Environmental Management
Office of Air Quality

Attachment C
to a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	Rolls Royce Corporation
Source Location:	Plant 8 - 2001 South Tibbs Ave., Indianapolis, IN 46241
	Plant 5 - 2355 South Tibbs Ave., Indianapolis, IN 46241
County:	Marion
SIC Code:	3724
Permit Renewal No.:	T097-25529-00311

Title 40: Protection of Environment
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart GG—National Emission Standards for Aerospace Manufacturing and Rework Facilities

Source: 60 FR 45956, Sept. 1, 1996, unless otherwise noted.

§ 63.741 Applicability and designation of affected sources.

(a) This subpart applies to facilities that are engaged, either in part or in whole, in the manufacture or rework of commercial, civil, or military aerospace vehicles or components and that are major sources as defined in §63.2.

(b) The owner or operator of an affected source shall comply with the requirements of this subpart and of subpart A of this part, except as specified in §63.743(a) and Table 1 of this subpart.

(c) *Affected sources.* The affected sources to which the provisions of this subpart apply are specified in paragraphs (c)(1) through (7) of this section. The activities subject to this subpart are limited to the manufacture or rework of aerospace vehicles or components as defined in this subpart. Where a dispute arises relating to the applicability of this subpart to a specific activity, the owner or operator shall demonstrate whether or not the activity is regulated under this subpart.

(1) Each cleaning operation as follows:

(i) All hand-wipe cleaning operations constitute an affected source.

(ii) Each spray gun cleaning operation constitutes an affected source.

(iii) All flush cleaning operations constitute an affected source.

(2) For organic HAP or VOC emissions, each primer application operation, which is the total of all primer applications at the facility.

(3) For organic HAP or VOC emissions, each topcoat application operation, which is the total of all topcoat applications at the facility.

(4) For organic HAP or VOC emissions, each depainting operation, which is the total of all depainting at the facility.

(5) Each chemical milling maskant application operation, which is the total of all chemical milling maskant applications at the facility.

(6) Each waste storage and handling operation, which is the total of all waste handling and storage at the facility.

(7) For inorganic HAP emissions, each spray booth or hangar that contains a primer or topcoat application operation subject to §63.745(g) or a depainting operation subject to §63.746(b)(4).

(d) An owner or operator of an affected source subject to this subpart shall obtain an operating permit from the permitting authority in the State in which the source is located. The owner or operator shall apply for and obtain such permit in accordance with the regulations contained in part 70 of this chapter and in applicable State regulations.

(e) All wastes that are determined to be hazardous wastes under the Resource Conservation and Recovery Act of 1976 (PL 94–580) (RCRA) as implemented by 40 CFR parts 260 and 261, and that are subject to RCRA requirements as implemented in 40 CFR parts 262 through 268, are exempt from the requirements of this subpart.

(f) This subpart does not contain control requirements for use of specialty coatings, adhesives, adhesive bonding primers, or sealants at aerospace facilities. It also does not regulate research and development, quality control, and laboratory testing activities, chemical milling, metal finishing, electrodeposition (except for electrodeposition of paints), composites processing (except for cleaning and coating of composite parts or components that become part of an aerospace vehicle or component as well as composite tooling that comes in contact with such composite parts or components prior to cure), electronic parts and assemblies (except for cleaning and topcoating of completed assemblies), manufacture of aircraft transparencies, and wastewater operations at aerospace facilities. These requirements do not apply to the rework of aircraft or aircraft components if the holder of the Federal Aviation Administration (FAA) design approval, or the holder's licensee, is not actively manufacturing the aircraft or aircraft components. These requirements also do not apply to parts and assemblies not critical to the vehicle's structural integrity or flight performance. The requirements of this subpart also do not apply to primers, topcoats, chemical milling maskants, strippers, and cleaning solvents containing HAP and VOC at concentrations less than 0.1 percent for carcinogens or 1.0 percent for noncarcinogens, as determined from manufacturer's representations. Additional specific exemptions from regulatory coverage are set forth in paragraphs (e), (g), (h), (i) and (j) of this section and §§63.742, 63.744(a)(1), (b), (e), 63.745(a), (f)(3), (g)(4), 63.746(a), (b)(5), 63.747(c)(3), and 63.749(d).

(g) The requirements for primers, topcoats, and chemical milling maskants in §63.745 and §63.747 do not apply to the use of low-volume coatings in these categories for which the annual total of each separate formulation used at a facility does not exceed 189 l (50 gal), and the combined annual total of all such primers, topcoats, and chemical milling maskants used at a facility does not exceed 757 l (200 gal). Primers and topcoats exempted under paragraph (f) of this section and under §63.745(f)(3) and (g)(4) are not included in the 50 and 200 gal limits. Chemical milling maskants exempted under §63.747(c)(3) are also not included in these limits.

(h) Regulated activities associated with space vehicles designed to travel beyond the limit of the earth's atmosphere, including but not limited to satellites, space stations, and the Space Shuttle System (including orbiter, external tanks, and solid rocket boosters), are exempt from the requirements of this subpart, except for depainting operations found in §63.746.

(i) Any waterborne coating for which the manufacturer's supplied data demonstrate that organic HAP and VOC contents are less than or equal to the organic HAP and VOC content limits for its coating type, as specified in §§63.745(c) and 63.747(c), is exempt from the following requirements of this subpart: §§63.745 (d) and (e), 63.747(d) and (e), 63.749 (d) and (h), 63.750 (c) through (h) and (k) through (n), 63.752 (c) and (f), and 63.753 (c) and (e). A facility shall maintain the manufacturer's supplied data and annual purchase records for each exempt waterborne coating readily available for inspection and review and shall retain these data for 5 years.

(j) Regulated activities associated with the rework of antique aerospace vehicles or components are exempt from the requirements of this subpart.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15016, Mar. 27, 1998; 63 FR 46532, Sept. 1, 1998]

§ 63.742 Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this section as follows:

Aerospace facility means any facility that produces, reworks, or repairs in any amount any commercial, civil, or military aerospace vehicle or component.

Aerospace vehicle or component means any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft including but not limited to airplanes, helicopters, missiles, rockets, and space vehicles.

Aircraft fluid systems means those systems that handle hydraulic fluids, fuel, cooling fluids, or oils.

Aircraft transparency means the aircraft windshield, canopy, passenger windows, lenses, and other components which are constructed of transparent materials.

Antique aerospace vehicle or component means an aircraft or component thereof that was built at least 30 years ago. An antique aerospace vehicle would not routinely be in commercial or military service in the capacity for which it was designed.

Carbon adsorber means one vessel in a series of vessels in a carbon adsorption system that contains carbon and is used to remove gaseous pollutants from a gaseous emission source.

Carbon Adsorber control efficiency means the total efficiency of the control system, determined by the product of the capture efficiency and the control device efficiency.

Chemical milling maskant means a coating that is applied directly to aluminum components to protect surface areas when chemical milling the component with a Type I or Type II etchant. Type I chemical milling maskants are used with a Type I etchant and Type II chemical milling maskants are used with a Type II etchant. This definition does not include bonding maskants, critical use and line sealer maskants, and seal coat maskants. Additionally, maskants that must be used with a combination of Type I or II etchants and any of the above types of maskants (i.e., bonding, critical use and line sealer, and seal coat) are also exempt from this subpart. (See also Type I and Type II etchant definitions.)

Chemical milling maskant application operation means application of chemical milling maskant for use with Type I or Type II chemical milling etchants.

Cleaning operation means collectively spray gun, hand-wipe, and flush cleaning operations.

Cleaning solvent means a liquid material used for hand-wipe, spray gun, or flush cleaning. This definition does not include solutions that contain HAP and VOC below the de minimis levels specified in §63.741(f).

Closed-cycle depainting system means a dust-free, automated process that removes permanent coating in small sections at a time and maintains a continuous vacuum around the area(s) being depainted to capture emissions.

Coating means a material that is applied to the surface of an aerospace vehicle or component to form a decorative, protective, or functional solid film, or the solid film itself.

Coating operation means the use of a spray booth, tank, or other enclosure or any area, such as a hangar, for the application of a single type of coating (e.g., primer); the use of the same spray booth for the application of another type of coating (e.g., topcoat) constitutes a separate coating operation for which compliance determinations are performed separately.

Coating unit means a series of one or more coating applicators and any associated drying area and/or oven wherein a coating is applied, dried, and/or cured. A coating unit ends at the point where the coating is dried or cured, or prior to any subsequent application of a different coating. It is not necessary to have an oven or flashoff area in order to be included in this definition.

Confined space means a space that: (1) Is large enough and so configured that an employee can bodily enter and perform assigned work; (2) has limited or restricted means for entry or exit (for example, fuel tanks, fuel vessels, and other spaces that have limited means of entry); and (3) is not suitable for continuous employee occupancy.

Control device means destruction and/or recovery equipment used to destroy or recover HAP or VOC emissions generated by a regulated operation.

Control system means a combination of pollutant capture system(s) and control device(s) used to reduce discharge to the atmosphere of HAP or VOC emissions generated by a regulated operation.

Depainting means the removal of a permanent coating from the outer surface of an aerospace vehicle or component, whether by chemical or non-chemical means. For non-chemical means, this definition excludes hand and mechanical sanding, and any other non-chemical removal processes that do not involve blast media or other mechanisms that would result in airborne particle movement at high velocity.

Depainting operation means the use of a chemical agent, media blasting, or any other technique to remove permanent coatings from the outer surface of an aerospace vehicle or components. The depainting operation includes washing of the aerospace vehicle or component to remove residual stripper, media, or coating residue.

Electrodeposition of paint means the application of a coating using a water-based electrochemical bath process. The component being coated is immersed in a bath of the coating. An electric potential is applied between the component and an oppositely charged electrode hanging in the bath. The electric potential causes the ionized coating to be electrically attracted, migrated, and deposited on the component being coated.

Electrostatic spray means a method of applying a spray coating in which an electrical charge is applied to the coating and the substrate is grounded. The coating is attracted to the substrate by the electrostatic potential between them.

Exempt solvent means specified organic compounds that have been determined by the EPA to have negligible photochemical reactivity and are listed in 40 CFR 51.100.

Exterior primer means the first layer and any subsequent layers of identically formulated coating applied to the exterior surface of an aerospace vehicle or component where the component is used on the exterior of the aerospace vehicle. Exterior primers are typically used for corrosion prevention, protection from the environment, functional fluid resistance, and adhesion of subsequent exterior topcoats. Coatings that are defined as specialty coatings are not included under this definition.

Flush cleaning means the removal of contaminants such as dirt, grease, oil, and coatings from an aerospace vehicle or component or coating equipment by passing solvent over, into, or through the item being cleaned. The solvent may simply be poured into the item being cleaned and then drained, or be assisted by air or hydraulic pressure, or by pumping. Hand-wipe cleaning operations where wiping, scrubbing, mopping, or other hand action are used are not included.

General aviation (GA) means that segment of civil aviation that encompasses all facets of aviation except air carriers, commuters, and military. General aviation includes charter and corporate-executive transportation, instruction, rental, aerial application, aerial observation, business, pleasure, and other special uses.

General aviation rework facility means any aerospace facility with the majority of its revenues resulting from the reconstruction, repair, maintenance, repainting, conversion, or alteration of general aviation aerospace vehicles or components.

Hand-wipe cleaning operation means the removal of contaminants such as dirt, grease, oil, and coatings from an aerospace vehicle or component by physically rubbing it with a material such as a rag, paper, or cotton swab that has been moistened with a cleaning solvent.

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

High efficiency particulate air (HEPA) filter means a filter that has a 99.97 percent reduction efficiency for 0.3 micron aerosol.

High volume low pressure (HVLP) spray equipment means spray equipment that is used to apply coating by means of a spray gun that operates at 10.0 psig of atomizing air pressure or less at the air cap.

Inorganic hazardous air pollutant (HAP) means any HAP that is not organic.

Large commercial aircraft means an aircraft of more than 110,000 pounds, maximum certified take-off weight manufactured for non-military use.

Leak means any visible leakage, including misting and clouding.

Limited access space means internal surfaces or passages of an aerospace vehicle or component that cannot be reached without the aid of an airbrush or a spray gun extension for the application of coatings.

Mechanical sanding means aerospace vehicle or component surface conditioning which uses directional and random orbital abrasive tools and aluminum oxide or nylon abrasive pads for the purpose of corrosion rework, substrate repair, prepaint surface preparation, and other maintenance activities.

Natural draft opening means any opening in a room, building, or total enclosure that remains open during operation of the facility and that is not connected to a duct in which a fan is installed. The rate and direction of the natural draft through such an opening is a consequence of the difference in pressures on either side of the wall containing the opening.

Non-chemical based depainting equipment means any depainting equipment or technique, including, but not limited to, media blasting equipment, that can depaint an aerospace vehicle or component in the absence of a chemical stripper. This definition does not include mechanical sanding or hand sanding.

Nonregenerative carbon adsorber means a carbon adsorber vessel in which the spent carbon bed does not undergo carbon regeneration in the adsorption vessel.

Operating parameter value means a minimum or maximum value established for a control device or process parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limitation.

Organic hazardous air pollutant (HAP) means any HAP that is organic.

Primer means the first layer and any subsequent layers of identically formulated coating applied to the surface of an aerospace vehicle or component. Primers are typically used for corrosion prevention, protection from the environment, functional fluid resistance, and adhesion of subsequent coatings. Coatings that are defined as specialty coatings are not included under this definition.

Radome means the non-metallic protective housing for electromagnetic transmitters and receivers (e.g., radar, electronic countermeasures, etc.).

Recovery device means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value, use, or reuse. Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators, or organic-water separators or organic removal devices such as decanters, strippers, or thin-film evaporation units.

Research and Development means an operation whose primary purpose is for research and development of new processes and products, that is conducted under the close supervision of technically trained personnel, and is not involved in the manufacture of final or intermediate products for commerical purposes, except in a de mimnimis manner.

Self-priming topcoat means a topcoat that is applied directly to an uncoated aerospace vehicle or component for purposes of corrosion prevention, environmental protection, and functional fluid resistance. More than one layer of identical coating formulation may be applied to the vehicle or component.

Semi-aqueous cleaning solvent means a solution in which water is a primary ingredient (″ 60 percent of the solvent solution as applied must be water.)

Softener means a liquid that is applied to an aerospace vehicle or component to degrade coatings such as primers and topcoats specifically as a preparatory step to subsequent depainting by non-chemical based depainting equipment. Softeners may contain VOC but shall not contain any HAP as determined from MSDS's or manufacturer supplied information.

Solids means the non-volatile portion of the coating which after drying makes up the dry film.

Space vehicle means a man-made device, either manned or unmanned, designed for operation beyond earth's atmosphere. This definition includes integral equipment such as models, mock-ups, prototypes, molds, jigs, tooling, hardware jackets, and test coupons. Also included is auxiliary equipment associated with test, transport, and storage, which through contamination can compromise the space vehicle performance.

Specialty coating means a coating that, even though it meets the definition of a primer, topcoat, or self-priming topcoat, has additional performance criteria beyond those of primers, topcoats, and self-priming topcoats for specific applications. These performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary protection or marking, sealing, adhesively joining substrates, or enhanced corrosion protection. Individual specialty coatings are defined in appendix A to this subpart and in the CTG for Aerospace Manufacturing and Rework Operations (EPA 453/R–97–004).

Spot stripping means the depainting of an area where it is not technically feasible to use a non-chemical depainting technique.

Spray gun means a device that atomizes a coating or other material and projects the particulates or other material onto a substrate.

Stripper means a liquid that is applied to an aerospace vehicle or component to remove permanent coatings such as primers and topcoats.

Surface preparation means the removal of contaminants from the surface of an aerospace vehicle or component, or the activation or reactivation of the surface in preparation for the application of a coating.

Temporary total enclosure means a total enclosure that is constructed for the sole purpose of measuring the emissions from an affected source that are not delivered to an emission control device. A temporary total enclosure must be constructed and ventilated (through stacks suitable for testing) so that it has minimal impact on the performance of the permanent emission capture system. A temporary total enclosure will be assumed to achieve total capture of fugitive emissions if it conforms to the requirements found in §63.750(g)(4) and if all natural draft openings are at least four duct or hood equivalent diameters away from each exhaust duct or hood. Alternatively, the owner or operator may apply to the Administrator for approval of a temporary enclosure on a case-by-case basis.

Topcoat means a coating that is applied over a primer on an aerospace vehicle or component for appearance, identification, camouflage, or protection. Coatings that are defined as specialty coatings are not included under this definition.

Total enclosure means a permanent structure that is constructed around a gaseous emission source so that all gaseous pollutants emitted from the source are collected and ducted through a control device, such that 100% capture efficiency is achieved. There are no fugitive emissions from a total enclosure. The only openings in a total enclosure are forced makeup air and exhaust ducts and any natural draft openings such as those that allow raw materials to enter and exit the enclosure for processing. All access doors or windows are closed during routine operation of the enclosed source. Brief, occasional openings of such doors or windows to accommodate process equipment adjustments are acceptable, but if such openings are routine or if an access door remains open during the entire operation, the access door must be considered a natural draft opening. The average inward face velocity across the natural draft openings of the enclosure must be calculated including the area of such access doors. The drying oven itself may be part of the total enclosure. An enclosure that meets the requirements found in §63.750(g)(4) is a permanent total enclosure.

Touch-up and repair operation means that portion of the coating operation that is the incidental application of coating used to cover minor imperfections in the coating finish or to achieve complete coverage. This definition includes out-of-sequence or out-of-cycle coating.

Two-stage filter system means a dry particulate filter system using two layers of filter media to remove particulate. The first stage is designed to remove the bulk of the particulate and a higher efficiency second stage is designed to remove smaller particulate.

Type I etchant means a chemical milling etchant that contains varying amounts of dissolved sulfur and does not contain amines.

Type II etchant means a chemical milling etchant that is a strong sodium hydroxide solution containing amines.

Volatile organic compound (VOC) means any compound defined as VOC in 40 CFR 51.100. This includes any organic compound other than those determined by the EPA to be an exempt solvent. For purposes of determining compliance with emission limits, VOC will be measured by the approved test methods. Where such a method also inadvertently measures compounds that are exempt solvent, an owner or operator may exclude these exempt solvents when determining compliance with an emission standard.

Waterborne (water-reducible) coating means any coating that contains more than 5 percent water by weight as applied in its volatile fraction.

Waterwash system means a control system that utilizes flowing water (i.e., a conventional waterwash system) or a pumpless system to remove particulate emissions from the exhaust air stream in spray coating application or dry media blast depainting operations.

Nomenclature for determining carbon adsorber efficiency —The nomenclature defined below is used in §63.750(g):

(1) A_k= the area of each natural draft opening (k) in a total enclosure, in square meters.

(2) C_{aj}= the concentration of HAP or VOC in each gas stream (j) exiting the emission control device, in parts per million by volume.

(3) C_{bi}= the concentration of HAP or VOC in each gas stream (i) entering the emission control device, in parts per million by volume.

(4) C_{di}= the concentration of HAP or VOC in each gas stream (i) entering the emission control device from the affected source, in parts per million by volume.

(5) C_{fk}= the concentration of HAP or VOC in each uncontrolled gas stream (k) emitted directly to the atmosphere from the affected source, in parts per million by volume.

(6) C_{gv}= the concentration of HAP or VOC in each uncontrolled gas stream entering each individual carbon adsorber vessel (v), in parts per million by volume. For the purposes of calculating the efficiency of the individual carbon adsorber vessel, C_{gv}may be measured in the carbon adsorption system's common inlet duct prior to the branching of individual inlet ducts to the individual carbon adsorber vessels.

(7) C_{hv}= the concentration of HAP or VOC in the gas stream exiting each individual carbon adsorber vessel (v), in parts per million by volume.

(8) E = the control device efficiency achieved for the duration of the emission test (expressed as a fraction).

(9) F = the HAP or VOC emission capture efficiency of the HAP or VOC capture system achieved for the duration of the emission test (expressed as a fraction).

(10) FV = the average inward face velocity across all natural draft openings in a total enclosure, in meters per hour.

(11) H_v= the individual carbon adsorber vessel (v) efficiency achieved for the duration of the emission test (expressed as a fraction).

(12) H_{sys}= the efficiency of the carbon adsorption system calculated when each carbon adsorber vessel has an individual exhaust stack (expressed as a fraction).

(13) M_{ci}= the total mass in kilograms of each batch of coating (i) applied, or of each coating applied at an affected coating operation during a 7 to 30-day period, as appropriate, as determined from records at the affected source. This quantity shall be determined at a time and location in the process after all ingredients (including any dilution solvent) have been added to the coating, or if ingredients are added after the mass of the coating has been determined, appropriate adjustments shall be made to account for them.

(14) M_r= the total mass in kilograms of HAP or VOC recovered for a 7 to 30-day period.

(15) Q_{aj}= the volumetric flow rate of each gas stream (j) exiting the emission control device in either dry standard cubic meters per hour when EPA Method 18 in appendix A of part 60 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(16) Q_{bi}= the volumetric flow rate of each gas stream (i) entering the emission control device, in dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(17) Q_{di}= the volumetric flow rate of each gas stream (i) entering the emission control device from the affected source in either dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(18) Q_{fk}= the volumetric flow rate of each uncontrolled gas stream (k) emitted directly to the atmosphere from the affected source in either dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(19) Q_{gv}= the volumetric flow rate of each gas stream entering each individual carbon adsorber vessel (v) in either dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration. For purposes of calculating the efficiency of the individual carbon adsorber vessel, the value of Q_{gv}can be assumed to equal the value of Q_{hv}measured for that carbon adsorber vessel.

(20) Q_{hv}= the volumetric flow rate of each gas stream exiting each individual carbon adsorber vessel (v) in either dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(21) Q_{ini}= the volumetric flow rate of each gas stream (i) entering the total enclosure through a forced makeup air duct in standard cubic meters per hour (wet basis).

(22) Q_{outj}= the volumetric flow rate of each gas stream (j) exiting the total enclosure through an exhaust duct or hood in standard cubic meters per hour (wet basis).

(23) R = the overall HAP or VOC emission reduction achieved for the duration of the emission test (expressed as a percentage).

(24) RS_i= the total mass in kilograms of HAP or VOC retained in the coating after drying.

(25) W_{oi}= the weight fraction of VOC in each batch of coating (i) applied, or of each coating applied at an affected coating operation during a 7- to 30-day period, as appropriate, as determined by EPA Method 24 or formulation data. This value shall be determined at a time and location in the process after all ingredients (including any dilution solvent) have been added to the coating, or if ingredients are added after the weight fraction of HAP or VOC in the coating has been determined, appropriate adjustments shall be made to account for them.

[60 FR 45956, Sept. 1, 1995, as amended at 63 FR 15017, Mar. 27, 1998; 63 FR 46533, Sept. 1, 1998; 65 FR 76945, Dec. 8, 2000]

§ 63.743 Standards: General.

(a) Except as provided in paragraphs (a)(4) through (a)(10) of this section and in Table 1 of this subpart, each owner or operator of an affected source subject to this subpart is also subject to the following sections of subpart A of this part:

(1) §63.4, Prohibited activities and circumvention;

(2) §63.5, Construction and reconstruction; and

(3) §63.6, Compliance with standards and maintenance requirements.

(4) For the purposes of this subpart, all affected sources shall submit any request for an extension of compliance not later than 120 days before the affected source's compliance date. The extension request should be requested for the shortest time necessary to attain compliance, but in no case shall exceed 1 year.

(5)(i) For the purposes of this subpart, the Administrator (or the State with an approved permit program) will notify the owner or operator in writing of his/her intention to deny approval of a request for an extension of compliance submitted under either §63.6(i)(4) or §63.6(i)(5) within 60 calendar days after receipt of sufficient information to evaluate the request.

(ii) In addition, for purposes of this subpart, if the Administrator does not notify the owner or operator in writing of his/her intention to deny approval within 60 calendar days after receipt of sufficient information to evaluate a request for an extension of compliance, then the request shall be considered approved.

(6)(i) For the purposes of this subpart, the Administrator (or the State) will notify the owner or operator in writing of the status of his/her application submitted under §63.6(i)(4)(ii) (that is, whether the application contains sufficient information to make a determination) within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted, rather than 15 calendar days as provided for in §63.6(i)(13)(i).

(ii) In addition, for the purposes of this subpart, if the Administrator does not notify the owner or operator in writing of the status of his/her application within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted, then the information in the application or the supplementary information is to be considered sufficient upon which to make a determination.

(7) For the purposes of this subpart, each owner or operator who has submitted an extension request application under §63.6(i)(5) is to be provided 30 calendar days to present additional information or arguments to the Administrator after he/she is notified that the application is not complete, rather than 15 calendar days as provided for in §63.6(i)(13)(ii).

(8) For the purposes of this subpart, each owner or operator is to be provided 30 calendar days to present additional information to the Administrator after he/she is notified of the intended denial of a compliance extension request submitted under either §63.6(i)(4) or §63.6(i)(5), rather than 15 calendar days as provided for in §63.6(1)(12)(iii)(B) and §63.6(i)(13)(iii)(B).

(9) For the purposes of this subpart, a final determination to deny any request for an extension submitted under either §63.6(i)(4) or §63.6(i)(5) will be made within 60 calendar days after presentation of additional information or argument (if the application is complete), or within 60 calendar days after the final date specified for the presentation if no presentation is made, rather than 30 calendar days as provided for in §63.6(i)(12)(iv) and §63.6(i)(13)(iv).

(10) For the purposes of compliance with the requirements of §63.5(b)(4) of the General Provisions and this subpart, owners or operators of existing primer or topcoat application operations and depainting operations who construct or reconstruct a spray booth or hangar that does not have the potential to emit 10 tons/yr or more of an individual inorganic HAP or 25 tons/yr or more of all inorganic HAP combined shall only be required to notify the Administrator of such construction or reconstruction on an annual basis. Notification shall be submitted on or before March 1 of each year and shall include the information required in §63.5(b)(4) for each such spray booth or hangar constructed or reconstructed during the prior calendar year, except that such information shall be limited to inorganic HAP's. No advance notification or written approval from the Administrator pursuant to §63.5(b)(3) shall be required for the construction or reconstruction of such a spray booth or hangar unless the booth or hangar has the potential to emit 10 tons/yr or more of an individual inorganic HAP or 25 tons/yr or more of all inorganic HAP combined.

(b) *Startup, shutdown, and malfunction plan.* Each owner or operator that uses an air pollution control device or equipment to control HAP emissions shall prepare a startup, shutdown, and malfunction plan in accordance with §63.6. Dry particulate filter systems operated per the manufacturer's instructions are exempt from a startup, shutdown, and malfunction plan. A startup, shutdown, and malfunction plan shall be prepared for facilities using locally prepared operating procedures. In addition to the information required in §63.6, this plan shall also include the following provisions:

(1) The plan shall specify the operation and maintenance criteria for each air pollution control device or equipment and shall include a standardized checklist to document the operation and maintenance of the equipment;

(2) The plan shall include a systematic procedure for identifying malfunctions and for reporting them immediately to supervisory personnel; and

(3) The plan shall specify procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur.

(c) An owner or operator who uses an air pollution control device or equipment not listed in this subpart shall submit a description of the device or equipment, test data verifying the performance of the device or equipment in controlling organic HAP and/or VOC emissions, as appropriate, and specific operating parameters that will be monitored to establish compliance with the standards to the Administrator for approval not later than 120 days prior to the compliance date.

(d) Instead of complying with the individual coating limits in §§63.745 and 63.747, a facility may choose to comply with the averaging provisions specified in paragraphs (d)(1) through (d)(6) of this section.

(1) Each owner or operator of a new or existing source shall use any combination of primers, topcoats (including self-priming topcoats), Type I chemical milling maskants, or Type II chemical milling maskants such that the monthly volume-weighted average organic HAP and VOC contents of the combination of primers, topcoats, Type I chemical milling maskants, or Type II chemical milling maskants, as determined in accordance with the applicable procedures set forth in §63.750, complies with the specified content limits in §§63.745(c) and 63.747(c), unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(2) Averaging is allowed only for uncontrolled primers, topcoats (including self-priming topcoats), Type I chemical milling maskants, or Type II chemical milling maskants.

(3) Averaging is not allowed between primers and topcoats (including self-priming topcoats).

(4) Averaging is not allowed between Type I and Type II chemical milling maskants.

(5) Averaging is not allowed between primers and chemical milling maskants, or between topcoats and chemical milling maskants.

(6) Each averaging scheme shall be approved in advance by the permitting agency and adopted as part of the facility's title V permit.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15017, Mar. 27, 1998; 71 FR 20457, Apr. 20, 2006]

§ 63.744 Standards: Cleaning operations.

(a) *Housekeeping measures.* Each owner or operator of a new or existing cleaning operation subject to this subpart shall comply with the requirements in these paragraphs unless the cleaning solvent used is identified in Table 1 of this section or contains HAP and VOC below the de minimis levels specified in §63.741(f).

(1) Unless the owner or operator satisfies the requirements in paragraph (a)(4) of this section, place used solvent-laden cloth, paper, or any other absorbent applicators used for cleaning in bags or other closed containers. Ensure that these bags and containers are kept closed at all times except when depositing or removing these materials from the container. Use bags and containers of such design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement.

(2) Unless the owner or operator satisfies the requirements in paragraph (a)(4) of this section, store fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations in closed containers.

(4) Demonstrate to the Administrator (or delegated State, local, or Tribal authority) that equivalent or better alternative measures are in place compared to the use of closed containers for the solvent-laden materials described in paragraph (a)(1) of this section, or the storage of solvents described in paragraph (a)(2) of this section.

(3) Conduct the handling and transfer of cleaning solvents to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or spent cleaning solvents in such a manner that minimizes spills.

(b) *Hand-wipe cleaning.* Each owner or operator of a new or existing hand-wipe cleaning operation (excluding cleaning of spray gun equipment performed in accordance with paragraph (c) of this section) subject to this subpart shall use cleaning solvents that meet one of the requirements specified in

paragraphs (b)(1), (b)(2), and (b)(3) of this section. Cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in §63.741(f) are exempt from the requirements in paragraphs (b)(1), (b)(2), and (b)(3) of this section.

(1) Meet one of the composition requirements in Table 1 of this section;

(2) Have a composite vapor pressure of 45 mm Hg (24.1 in. H_2O) or less at 20 °C (68 °F); or

(3) Demonstrate that the volume of hand-wipe solvents used in cleaning operations has been reduced by at least 60% from a baseline adjusted for production. The baseline shall be established as part of an approved alternative plan administered by the State. Demonstrate that the volume of hand-wipe cleaning solvents used in cleaning operations has been reduced by at least 60 percent from a baseline adjusted for production. The baseline shall be calculated using data from 1996 and 1997, or as otherwise agreed upon by the Administrator or delegated State Authority. The baseline shall be approved by the Administrator or delegated State Authority and shall be included as part of the facility's title V or part 70 permit.

(c) *Spray gun cleaning.* Each owner or operator of a new or existing spray gun cleaning operation subject to this subpart in which spray guns are used for the application of coatings or any other materials that require the spray guns to be cleaned shall use one or more of the techniques, or their equivalent, specified in paragraphs (c)(1) through (c)(4) of this section. Spray gun cleaning operations using cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in §63.741(f) are exempt from the requirements in paragraphs (c)(1) through (c)(4) of this section.

(1)(i) Enclosed system. Clean the spray gun in an enclosed system that is closed at all times except when inserting or removing the spray gun. Cleaning shall consist of forcing solvent through the gun.

(ii) If leaks are found during the monthly inspection required in §63.751(a), repairs shall be made as soon as practicable, but no later than 15 days after the leak was found. If the leak is not repaired by the 15th day after detection, the cleaning solvent shall be removed, and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued.

(2) *Nonatomized cleaning.* Clean the spray gun by placing cleaning solvent in the pressure pot and forcing it through the gun with the atomizing cap in place. No atomizing air is to be used. Direct the cleaning solvent from the spray gun into a vat, drum, or other waste container that is closed when not in use.

(3) Disassembled spray gun cleaning. Disassemble the spray gun and clean the components by hand in a vat, which shall remain closed at all times except when in use. Alternatively, soak the components in a vat, which shall remain closed during the soaking period and when not inserting or removing components.

(4) *Atomizing cleaning.* Clean the spray gun by forcing the cleaning solvent through the gun and direct the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions.

(5) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems that can be programmed to spray into a closed container, shall be exempt from the requirements of paragraph (c) of this section.

(d) *Flush cleaning.* Each owner or operator of a flush cleaning operation subject to this subpart (excluding those in which Table 1 or semi-aqueous cleaning solvents are used) shall empty the used cleaning solvent each time aerospace parts or assemblies, or components of a coating unit (with the exception of

spray guns) are flush cleaned into an enclosed container or collection system that is kept closed when not in use or into a system with equivalent emission control.

(e) *Exempt cleaning operations.* The following cleaning operations are exempt from the requirements of paragraph (b) of this section:

(1) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;

(2) Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, or hydrazine);

(3) Cleaning and surface activation prior to adhesive bonding;

(4) Cleaning of electronic parts and assemblies containing electronic parts;

(5) Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;

(6) Cleaning of fuel cells, fuel tanks, and confined spaces;

(7) Surface cleaning of solar cells, coated optics, and thermal control surfaces;

(8) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used in the interior of the aircraft;

(9) Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components;

(10) Cleaning of aircraft transparencies, polycarbonate, or glass substrates;

(11) Cleaning and cleaning solvent usage associated with research and development, quality control, and laboratory testing;

(12) Cleaning operations, using nonflamable liquids, conducted within five feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections; and

(13) Cleaning operations identified as essential uses under the Montreal Protocol for which the Administrator has allocated essential use allowances or exemptions in 40 CFR 82.4.

Table 1—Composition Requirements for Approved Cleaning Solvents

Cleaning solvent type	Composition requirements
Aqueous	Cleaning solvents in which water is the primary ingredient (≥80 percent of cleaning solvent solution as applied must be water). Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives, such as organic solvents (e.g., high boiling point alcohols), builders, saponifiers, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than 93 °C (200° F) (as reported by the manufacturer), and the solution must be miscible with water.
Hydrocarbon-based	Cleaners that are composed of photochemically reactive hydrocarbons and/or oxygenated hydrocarbons and have a maximum vapor pressure of 7 mm Hg at 20 °C (3.75 in. H_2O and 68 °F). These cleaners also contain no HAP.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15018, Mar. 27 1998; 63 FR 46533, Sept. 1, 1998; 68 FR 37352, June 23, 2003]

§ 63.745 Standards: Primer and topcoat application operations.

(a) Each owner or operator of a new or existing primer or topcoat application operation subject to this subpart shall comply with the requirements specified in paragraph (c) of this section for those coatings that are uncontrolled (no control device is used to reduce organic HAP emissions from the operation), and in paragraph (d) of this section for those coatings that are controlled (organic HAP emissions from the operation are reduced by the use of a control device). Aerospace equipment that is no longer operational, intended for public display, and not easily capable of being moved is exempt from the requirements of this section.

(b) Each owner or operator shall conduct the handling and transfer of primers and topcoats to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

(c) *Uncontrolled coatings—organic HAP and VOC content levels.* Each owner or operator shall comply with the organic HAP and VOC content limits specified in paragraphs (c)(1) through (c)(4) of this section for those coatings that are uncontrolled.

(1) Organic HAP emissions from primers shall be limited to an organic HAP content level of no more than: 540 g/L (4.5 lb/gal) of primer (less water), as applied, for general aviation rework facilities; or 650 g/L (5.4 lb/gal) of exterior primer (less water), as applied, to large commercial aircraft components (parts or assemblies) or fully assembled, large commercial aircraft at existing affected sources that produce fully assembled, large commercial aircraft; or 350 g/L (2.9 lb/gal) of primer (less water), as applied.

(2) VOC emissions from primers shall be limited to a VOC content level of no more than: 540 g/L (4.5 lb/gal) of primer (less water and exempt solvents), as applied, for general aviation rework facilities; or 650 g/L (5.4 lb/gal) of exterior primer (less water and exempt solvents), as applied, to large commercial aircraft components (parts or assemblies) or fully assembled, large commercial aircraft at existing affected sources that produce fully assembled, large commercial aircraft; or 350 g/L (2.9 lb/gal) of primer (less water and exempt solvents), as applied.

(3) Organic HAP emissions from topcoats shall be limited to an organic HAP content level of no more than: 420 g/L (3.5 lb/gal) of coating (less water) as applied or 540 g/L (4.5 lb/gal) of coating (less water) as applied for general aviation rework facilities. Organic HAP emissions from self-priming topcoats shall be limited to an organic HAP content level of no more than: 420 g/L (3.5 lb/gal) of self-priming topcoat

(less water) as applied or 540 g/L (4.5 lb/gal) of self-priming topcoat (less water) as applied for general aviation rework facilities.

(4) VOC emissions from topcoats shall be limited to a VOC content level of no more than: 420 g/L (3.5 lb/gal) of coating (less water and exempt solvents) as applied or 540 g/L (4.5 lb/gal) of coating (less water and exempt solvents) as applied for general aviation rework facilities. VOC emissions from self-priming topcoats shall be limited to a VOC content level of no more than: 420 g/L (3.5 lb/gal) of self-priming topcoat (less water and exempt solvents) as applied or 540 g/L (4.5 lb/gal) of self-priming topcoat (less water) as applied for general aviation rework facilities.

(d) *Controlled coatings—control system requirements.* Each control system shall reduce the operation's organic HAP and VOC emissions to the atmosphere by 81% or greater, taking into account capture and destruction or removal efficiencies, as determined using the procedures in §63.750(g) when a carbon adsorber is used and in §63.750(h) when a control device other than a carbon adsorber is used.

(e) *Compliance methods.* Compliance with the organic HAP and VOC content limits specified in paragraphs (c)(1) through (c)(4) of this section shall be accomplished by using the methods specified in paragraphs (e)(1) and (e)(2) of this section either by themselves or in conjunction with one another.

(1) Use primers and topcoats (including self-priming topcoats) with HAP and VOC content levels equal to or less than the limits specified in paragraphs (c)(1) through (c)(4) of this section; or

(2) Use the averaging provisions described in §63.743(d).

(f) *Application equipment.* Except as provided in paragraph (f)(3) of this section, each owner or operator of a new or existing primer or topcoat (including self-priming topcoat) application operation subject to this subpart in which any of the coatings contain organic HAP or VOC shall comply with the requirements specified in paragraphs (f)(1) and (f)(2) of this section.

(1) All primers and topcoats (including self-priming topcoats) shall be applied using one or more of the application techniques specified in paragraphs (f)(1)(i) through (f)(1)(ix) of this section.

(i) Flow/curtain coat application;

(ii) Dip coat application;

(iii) Roll coating;

(iv) Brush coating;

(v) Cotton-tipped swab application;

(vi) Electrodeposition (dip) coating;

(vii) High volume low pressure (HVLP) spraying;

(viii) Electrostatic spray application; or

(ix) Other coating application methods that achieve emission reductions equivalent to HVLP or electrostatic spray application methods, as determined according to the requirements in §63.750(i).

(2) All application devices used to apply primers or topcoats (including self-priming topcoats) shall be operated according to company procedures, local specified operating procedures, and/or the manufacturer's specifications, whichever is most stringent, at alltimes. Equipment modified by the facility shall maintain a transfer efficiency equivalent to HVLP and electrostatic spray application techniques.

(3) The following situations are exempt from the requirements of paragraph (f)(1) of this section:

(i) Any situation that normally requires the use of an airbrush or an extension on the spray gun to properly reach limited access spaces;

(ii) The application of coatings that contain fillers that adversely affect atomization with HVLP spray guns and that the permitting agency has determined cannot be applied by any of the application methods specified in paragraph (f)(1) of this section;

(iii) The application of coatings that normally have a dried film thickness of less than 0.0013 centimeter (0.0005 in.) and that the permitting agency has determined cannot be applied by any of the application methods specified in paragraph (f)(1) of this section;

(iv) The use of airbrush application methods for stenciling, lettering, and other identification markings;

(v) The use of hand-held spray can application methods; and

(vi) Touch-up and repair operations.

(g) *Inorganic HAP emissions.* Except as provided in paragraph (g)(4) of this section, each owner or operator of a new or existing primer or topcoat application operation subject to this subpart in which any of the coatings that are spray applied contain inorganic HAP, shall comply with the applicable requirements in paragraphs (g)(1) through (g)(3) of this section.

(1) Apply these coatings in a booth or hangar in which air flow is directed downward onto or across the part or assembly being coated and exhausted through one or more outlets.

(2) Control the air stream from this operation as follows:

(i) For existing sources, the owner or operator must choose one of the following:

(A) Before exhausting it to the atmosphere, pass the air stream through a dry particulate filter system certified using the methods described in §63.750(o) to meet or exceed the efficiency data points in Tables 1 and 2 of this section; or

Table 1—Two-Stage Arrestor; Liquid Phase Challenge for Existing Sources

Filtration efficiency requirement, %	Aerodynamic particle size range, μm
>90	>5.7
>50	>4.1
>10	>2.2

Table 2—Two-Stage Arrestor; Solid Phase Challenge for Existing Sources

Filtration efficiency requirement, %	Aerodynamic particle size range, µm
>90	>8.1
>50	>5.0
>10	>2.6

(B) Before exhausting it to the atmosphere, pass the air stream through a waterwash system that shall remain in operation during all coating application operations; or

(C) Before exhausting it to the atmosphere, pass the air stream through an air pollution control system that meets or exceeds the efficiency data points in Tables 1 and 2 of this section and is approved by the permitting authority.

(ii) For new sources, either:

(A) Before exhausting it to the atmosphere, pass the air stream through a dry particulate filter system certified using the methods described in §63.750(o) to meet or exceed the efficiency data points in Tables 3 and 4 of this section; or

Table 3—Three-Stage Arrestor; Liquid Phase Challenge for New Sources

Filtration efficiency requirement, %	Aerodynamic particle size range, µm
>95	>2.0
>80	>1.0
>65	>0.42

Table 4—Three-Stage Arrestor; Solid Phase Challenge for New Sources

Filtration efficiency requirement, %	Aerodynamic particle size range, µm
>95	>2.5
>85	>1.1
>75	>0.70

(B) Before exhausting it to the atmosphere, pass the air stream through an air pollution control system that meets or exceeds the efficiency data points in Tables 3 and 4 of this section and is approved by the permitting authority.

(iii) Owners or operators of new sources that have commenced construction or reconstruction after June 6, 1994 but prior to October 29, 1996 may comply with the following requirements in lieu of the requirements in paragraph (g)(2)(ii) of this section:

(A) Pass the air stream through either a two-stage dry particulate filter system or a waterwash system before exhausting it to the atmosphere.

(B) If the primer or topcoat contains chromium or cadmium, control shall consist of a HEPA filter system, three-stage filter system, or other control system equivalent to the three stage filter system as approved by the permitting agency.

(iv) If a dry particulate filter system is used, the following requirements shall be met:

(A) Maintain the system in good working order;

(B) Install a differential pressure gauge across the filter banks;

(C) Continuously monitor the pressure drop across the filter and read and record the pressure drop once per shift; and

(D) Take corrective action when the pressure drop exceeds or falls below the filter manufacturer's recommended limit(s).

(v) If a conventional waterwash system is used, continuously monitor the water flow rate and read and record the water flow rate once per shift. If a pumpless system is used, continuously monitor the booth parameter(s) that indicate performance of the booth per the manufacturer's recommendations to maintain the booth within the acceptable operating efficiency range and read and record the parameters once per shift.

(3) If the pressure drop across the dry particulate filter system, as recorded pursuant to §63.752(d)(1), is outside the limit(s) specified by the filter manufacturer or in locally prepared operating procedures, shut down the operation immediately and take corrective action. If the water path in the waterwash system fails the visual continuity/flow characteristics check, or the water flow rate recorded pursuant to §63.752(d)(2) exceeds the limit(s) specified by the booth manufacturer or in locally prepared operating procedures, or the booth manufacturer's or locally prepared maintenance procedures for the filter or waterwash system have not been performed as scheduled, shut down the operation immediately and take corrective action. The operation shall not be resumed until the pressure drop or water flow rate is returned within the specified limit(s).

(4) The requirements of paragraphs (g)(1) through (g)(3) of this section do not apply to the following:

(i) Touch-up of scratched surfaces or damaged paint;

(ii) Hole daubing for fasteners;

(iii) Touch-up of trimmed edges;

(iv) Coating prior to joining dissimilar metal components;

(v) Stencil operations performed by brush or air brush;

(vi) Section joining;

(vii) Touch-up of bushings and other similar parts;

(viii) Sealant detackifying;

(ix) Painting parts in an area identified in a title V permit, where the permitting authority has determined that it is not technically feasible to paint the parts in a booth; and

(x) The use of hand-held spray can application methods.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15019, Mar. 27, 1998; 63 FR 46533, Sept. 1, 1998; 65 FR 76945, Dec. 8, 2000]

§ 63.746 Standards: Depainting operations.

(a) *Applicability.* Each owner or operator of a new or existing depainting operation subject to this subpart shall comply with the requirements in paragraphs (a)(1) through (a)(3) of this section, and with the requirements specified in paragraph (b) where there are no controls for organic HAP, or paragraph (c) where organic HAP are controlled using a control system. This section does not apply to an aerospace manufacturing or rework facility that depaints six or less completed aerospace vehicles in a calendar year.

(1) The provisions of this section apply to the depainting of the outer surface areas of completed aerospace vehicles, including the fuselage, wings, and vertical and horizontal stabilizers of the aircraft, and the outer casing and stabilizers of missiles and rockets. These provisions do not apply to the depainting of parts or units normally removed from the aerospace vehicle for depainting. However, depainting of wings and stabilizers is always subject to the requirements of this section regardless of whether their removal is considered by the owner or operator to be normal practice for depainting.

(2) Aerospace vehicles or components that are intended for public display, no longer operational, and not easily capable of being moved are exempt from the requirements of this section.

(3) The following depainting operations are exempt from the requirements of this section:

(i) Depainting of radomes; and

(ii) Depainting of parts, subassemblies, and assemblies normally removed from the primary aircraft structure before depainting.

(b)(1) *HAP emissions—non-HAP chemical strippers and technologies.* Except as provided in paragraphs (b)(2) and (b)(3) of this section, each owner or operator of a new or existing aerospace depainting operation subject to this subpart shall emit no organic HAP from chemical stripping formulations and agents or chemical paint softeners.

(2) Where non-chemical based equipment is used to comply with paragraph (b)(1) of this section, either in total or in part, each owner or operator shall operate and maintain the equipment according to the manufacturer's specifications or locally prepared operating procedures. During periods of malfunctions of such equipment, each owner or operator may use substitute materials during the repair period provided the substitute materials used are those available that minimize organic HAP emissions. In no event shall substitute materials be used for more than 15 days annually, unless such materials are organic HAP-free.

(3) Each owner or operator of a new or existing depainting operation shall not, on an annual average basis, use more than 26 gallons of organic HAP-containing chemical strippers or alternatively 190 pounds of organic HAP per commercial aircraft depainted; or more than 50 gallons of organic HAP-containing chemical strippers or alternatively 365 pounds of organic HAP per military aircraft depainted for spot stripping and decal removal.

(4) Each owner or operator of a new or existing depainting operation complying with paragraph (b)(2), that generates airborne inorganic HAP emissions from dry media blasting equipment, shall also comply with the requirements specified in paragraphs (b)(4)(i) through (b)(4)(v) of this section.

(i) Perform the depainting operation in an enclosed area, unless a closed-cycle depainting system is used.

(ii)(A) For existing sources pass any air stream removed from the enclosed area or closed-cycle depainting system through a dry particulate filter system, certified using the method described in §63.750(o) to meet or exceed the efficiency data points in Tables 1 and 2 of §63.745, through a baghouse, or through a waterwash system before exhausting it to the atmosphere.

(B) For new sources pass any air stream removed from the enclosed area or closed-cycle depainting system through a dry particulate filter system certified using the method described in §63.750(o) to meet or exceed the efficiency data points in Tables 3 and 4 of §63.745 or through a baghouse before exhausting it to the atmosphere.

(c) Owners or operators of new sources that have commenced construction or reconstruction after June 6, 1994 but prior to October 29, 1996 may comply with the following requirements in lieu of the requirements in paragraph (b)(4)(ii)(B) of this section:

(*1*) Pass the air stream through either a two-stage dry particulate filter system or a waterwash system before exhausting it to the atmosphere.

(*2*) If the coating being removed contains chromium or cadmium, control shall consist of a HEPA filter system, three-stage filter system, or other control system equivalent to the three-stage filter system as approved by the permitting agency.

(iii) If a dry particulate filter system is used, the following requirements shall be met:

(A) Maintain the system in good working order;

(B) Install a differential pressure gauge across the filter banks;

(C) Continuously monitor the pressure drop across the filter, and read and record the pressure drop once per shift; and

(D) Take corrective action when the pressure drop exceeds or falls below the filter manufacturer's recommended limits.

(iv) If a waterwash system is used, continuously monitor the water flow rate, and read and record the water flow rate once per shift.

(v) If the pressure drop, as recorded pursuant to §63.752(e)(7), is outside the limit(s) specified by the filter manufacturer or in locally prepared operating procedures, whichever is more stringent, shut down the operation immediately and take corrective action. If the water path in the waterwash system fails the visual continuity/flow characteristics check, as recorded pursuant to §63.752(e)(7), or the water flow rate, as recorded pursuant to §63.752(d)(2), exceeds the limit(s) specified by the booth manufacturer or in locally prepared operating procedures, or the booth manufacturer's or locally prepared maintenance procedures for the filter or waterwash system have not been performed as scheduled, shut down the operation immediately and take corrective action. The operation shall not be resumed until the pressure drop or water flow rate is returned within the specified limit(s).

(5) Mechanical and hand sanding operations are exempt from the requirements in paragraph (b)(4) of this section.

(c) *Organic HAP emissions—organic HAP-containing chemical strippers.* Each owner or operator of a new or existing organic HAP-containing chemical stripper depainting operation subject to this subpart shall comply with the requirements specified in this paragraph.

(1) All organic HAP emissions from the operation shall be reduced by the use of a control system. Each control system that was installed before the effective date shall reduce the operations' organic HAP emissions to the atmosphere by 81 percent or greater, taking into account capture and destruction or removal efficiencies.

(2) Each control system installed on or after the effective date shall reduce organic HAP emissions to the atmosphere by 95 percent or greater. Reduction shall take into account capture and destruction or removal efficiencies, and may take into account the volume of chemical stripper used relative to baseline levels (e.g., the 95 percent efficiency may be achieved by controlling emissions at 81 percent efficiency with a control system and using 74 percent less stripper than in baseline applications). The baseline shall be calculated using data from 1996 and 1997, which shall be on a usage per aircraft or usage per square foot of surface basis.

(3) The capture and destruction or removal efficiencies are to be determined using the procedures in §63.750(g) when a carbon adsorber is used and those in §63.750(h) when a control device other than a carbon adsorber is used.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15020, Mar. 27, 1998; 63 FR 46533, Sept. 1, 1998]

§ 63.747 Standards: Chemical milling maskant application operations.

(a) Each owner or operator of a new or existing chemical milling maskant operation subject to this subpart shall comply with the requirements specified in paragraph (c) of this section for those chemical milling maskants that are uncontrolled (no control device is used to reduce organic HAP emissions from the operation) and in paragraph (d) of this section for those chemical milling maskants that are controlled (organic HAP emissions from the operation are reduced by the use of a control device).

(b) Each owner or operator shall conduct the handling and transfer of chemical milling maskants to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

(c) *Uncontrolled maskants—organic HAP and VOC content levels.* Each owner or operator shall comply with the organic HAP and VOC content limits specified in paragraphs (c)(1) and (c)(2) of this section for each chemical milling maskant that is uncontrolled.

(1) Organic HAP emissions from chemical milling maskants shall be limited to organic HAP content levels of no more than 622 grams of organic HAP per liter (5.2 lb/gal) of Type I chemical milling maskant (less water) as applied, and no more than 160 grams of organic HAP per liter (1.3 lb/gal) of Type II chemical milling maskant (less water) as applied.

(2) VOC emissions from chemical milling maskants shall be limited to VOC content levels of no more than 622 grams of VOC per liter (5.2 lb/gal) of Type I chemical milling maskant (less water and exempt solvents) as applied, and no more than 160 grams of VOC per liter (1.3 lb/gal) of Type II chemical milling maskant (less water and exempt solvents) as applied.

(3) The requirements of paragraphs (c)(1) and (c)(2) of this section do not apply to the following:

(i) Touch-up of scratched surfaces or damaged maskant; and

(ii) Touch-up of trimmed edges.

(d) *Controlled maskants—control system requirements.* Each control system shall reduce the operation's organic HAP and VOC emissions to the atmosphere by 81% or greater, taking into account capture and destruction or removal efficiencies, as determined using the procedures in §63.750(g) when a carbon adsorber is used and in §63.750(h) when a control device other than a carbon adsorber is used.

(e) *Compliance methods.* Compliance with the organic HAP and VOC content limits specified in paragraphs (c)(1) and (c)(2) of this section may be accomplished by using the methods specified in paragraphs (e)(1) and (e)(2) of this section either by themselves or in conjunction with one another.

(1) Use chemical milling maskants with HAP and VOC content levels equal to or less than the limits specified in paragraphs (c)(1) and (c)(2) of this section.

(2) Use the averaging provisions described in §63.743(d).

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15021, Mar. 27, 1998]

§ 63.748 Standards: Handling and storage of waste.

Except as provided in §63.741(e), the owner or operator of each facility subject to this subpart that produces a waste that contains HAP shall conduct the handling and transfer of the waste to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

§ 63.749 Compliance dates and determinations.

(a) *Compliance dates.* (1) Each owner or operator of an existing affected source subject to this subpart shall comply with the requirements of this subpart by September 1, 1998, except as specified in paragraph (a)(2) of this section. Owners or operators of new affected sources subject to this subpart shall comply on the effective date or upon startup, whichever is later. In addition, each owner or operator shall comply with the compliance dates specified in §63.6(b) and (c).

(2) Owners or operators of existing primer or topcoat application operations and depainting operations who construct or reconstruct a spray booth or hangar must comply with the new source requirements for inorganic HAP specified in §§63.745(g)(2)(ii) and 63.746(b)(4) for that new spray booth or hangar upon startup. Such sources must still comply with all other existing source requirements by September 1, 1998.

(b) *General.* Each facility subject to this subpart shall be considered in noncompliance if the owner or operator fails to submit a startup, shutdown, and malfunction plan as required by §63.743(b) or uses a control device other than one specified in this subpart that has not been approved by the Administrator, as required by §63.743(c).

(c) *Cleaning operations.* Each cleaning operation subject to this subpart shall be considered in noncompliance if the owner or operator fails to institute and carry out the housekeeping measures required under §63.744(a). Incidental emissions resulting from the activation of pressure release vents and valves on enclosed cleaning systems are exempt from this paragraph.

(1) *Hand-wipe cleaning.* An affected hand-wipe cleaning operation shall be considered in compliance when all hand-wipe cleaning solvents, excluding those used for hand cleaning of spray gun equipment under §63.744(c)(3), meet either the composition requirements specified in §63.744(b)(1) or the vapor pressure requirement specified in §63.744(b)(2).

(2) *Spray gun cleaning.* An affected spray gun cleaning operation shall be considered in compliance when each of the following conditions is met:

(i) One of the four techniques specified in §63.744 (c)(1) through (c)(4) is used;

(ii) The technique selected is operated according to the procedures specified in §63.744 (c)(1) through (c)(4) as appropriate; and

(iii) If an enclosed system is used, monthly visual inspections are conducted and any leak detected is repaired within 15 days after detection. If the leak is not repaired by the 15th day after detection, the solvent shall be removed and the enclosed cleaner shall be shut down until the cleaner is repaired or its use is permanently discontinued.

(3) *Flush cleaning.* An affected flush cleaning operation shall be considered in compliance if the operating requirements specified in §63.744(d) are implemented and carried out.

(d) *Organic HAP and VOC content levels—primer and topcoat application operations*— (1) *Performance test periods.* For uncontrolled coatings that are not averaged, each 24 hours is considered a performance test. For compliant and non-compliant coatings that are averaged together, each 30-day period is considered a performance test, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program. When using a control device other than a carbon adsorber, three 1-hour runs constitute the test period for the initial and any subsequent performance test. When using a carbon adsorber, each rolling material balance period is considered a performance test.

(2) *Initial performance tests.* If a control device is used, each owner or operator shall conduct an initial performance test to demonstrate compliance with the overall reduction efficiency specified in paragraph §63.745, unless a waiver is obtained under either §63.7(e)(2)(iv) or §63.7(h). The initial performance test shall be conducted according to the procedures and test methods specified in §63.7 and §63.750(g) for carbon adsorbers and in §63.750(h) for control devices other than carbon adsorbers. For carbon adsorbers, the initial performance test shall be used to establish the appropriate rolling material balance period for determining compliance. The procedures in paragraphs (d)(2)(i) through (d)(2)(vi) of this section shall be used in determining initial compliance with the provisions of this subpart for carbon adsorbers.

(i)(A) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual carbon adsorber vessels pursuant to §63.750(g) (2) or (4), the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all of the individual carbon adsorber vessels.

(B) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel pursuant to §63.750(g) (3) or (4), each carbon adsorber vessel shall be tested individually. The test for each carbon adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

(ii) EPA Method 1 or 1A of appendix A of part 60 is used for sample and velocity traverses.

(iii) EPA Method 2, 2A, 2C, or 2D of appendix A of part 60 is used for velocity and volumetric flow rates.

(iv) EPA Method 3 of appendix A of part 60 is used for gas analysis.

(v) EPA Method 4 of appendix A of part 60 is used for stack gas moisture.

(vi) EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(3) The primer application operation is considered in compliance when the conditions specified in paragraphs (d)(3)(i) through (d)(3)(iv) of this section, as applicable, and in paragraph (e) of this section are met. Failure to meet any one of the conditions identified in these paragraphs shall constitute noncompliance.

(i) For all uncontrolled primers, all values of $H_i$and H_a(as determined using the procedures specified in §63.750 (c) and (d)) are less than or equal to 350 grams of organic HAP per liter (2.9 lb/gal) of primer (less water) as applied, and all values of $G_i$and G_a(as determined using the procedures specified in §63.750 (e) and (f)) are less than or equal to 350 grams of organic VOC per liter (2.9 lb/gal) of primer (less water and exempt solvents) as applied.

(ii) If a control device is used:

(A) The overall control system efficiency, E_k, as determined using the procedures specified in §63.750(g) for control systems containing carbon adsorbers and in §63.750(h) for control systems with other control devices, is equal to or greater than 81% during the initial performance test and any subsequent performance test;

(B) If an incinerator other than a catalytic incinerator is used, the average combustion temperature for all 3-hour periods is greater than or equal to the average combustion temperature established under §63.751(b)(11); and

(C) If a catalytic incinerator is used, the average combustion temperatures for all 3-hour periods are greater than or equal to the average combustion temperatures established under §63.751(b)(12).

(iii)(A) Uses an application technique specified in §63.745 (f)(1)(i) through (f)(1)(viii), or

(B) Uses an alternative application technique, as allowed under §63.745(f)(1)(ix), such that the emissions of both organic HAP and VOC for the implementation period of the alternative application method are less than or equal to the emissions generated using HVLP or electrostatic spray application methods as determined using the procedures specified in §63.750(i).

(iv) Operates all application techniques in accordance with the manufacturer's specifications or locally prepared operating procedures, whichever is more stringent.

(4) The topcoat application operation is considered in compliance when the conditions specified in paragraphs (e)(4)(i) through (e)(4)(iv) of this section, as applicable, and in paragraph (f) of this section are met. Failure to meet any of the conditions identified in these paragraphs shall constitute noncompliance.

(i) For all uncontrolled topcoats, all values of $H_i$and H_a(as determined using the procedures specified in §63.750(c) and (d)) are less than or equal to 420 grams organic HAP per liter (3.5 lb/gal) of topcoat (less water) as applied, and all values of $G_i$and G_a(as determined using the procedures specified in §63.750(e) and (f)) are less than or equal to 420 grams organic VOC per liter (3.5 lb/gal) of topcoat (less water and exempt solvents) as applied.

(ii) If a control device is used,

(A) The overall control system efficiency, E_k, as determined using the procedures specified in §63.750(g) for control systems containing carbon adsorbers and in §63.750(h) for control systems with other control devices, is equal to or greater than 81% during the initial performance test and any subsequent performance test;

(B) If an incinerator other than a catalytic incinerator is used, the average combustion temperature for all 3-hour periods is greater than or equal to the average combustion temperature established under §63.751(b)(11); and

(C) If a catalytic incinerator is used, the average combustion temperatures for all 3-hour periods are greater than or equal to the average combustion temperatures established under §63.751(b)(12).

(iii)(A) Uses an application technique specified in §63.745 (f)(1)(i) through (f)(1)(viii); or

(B) Uses an alternative application technique, as allowed under §63.745(f)(1)(ix), such that the emissions of both organic HAP and VOC for the implementation period of the alternative application method are less than or equal to the emissions generated using HVLP or electrostatic spray application methods as determined using the procedures specified in §63.750(i).

(iv) Operates all application techniques in accordance with the manufacturer's specifications or locally prepared operating procedures.

(e) *Inorganic HAP emissions—primer and topcoat application operations.* For each primer or topcoat application operation that emits inorganic HAP, the operation is in compliance when:

(1) It is operated according to the requirements specified in §63.745(g)(1) through (g)(3); and

(2) It is shut down immediately whenever the pressure drop or water flow rate is outside the limit(s) established for them and is not restarted until the pressure drop or water flow rate is returned within these limit(s), as required under §63.745(g)(3).

(f) *Organic HAP emissions—Depainting operations—* (1) *Performance test periods.* When using a control device other than a carbon adsorber, three 1-hour runs constitute the test period for the initial and any subsequent performance test. When a carbon adsorber is used, each rolling material balance period is considered a performance test. Each 24-hour period is considered a performance test period for determining compliance with §63.746(b)(1). For uncontrolled organic emissions from depainting operations, each calendar year is considered a performance test period for determining compliance with the HAP limits for organic HAP-containing chemical strippers used for spot stripping and decal removal.

(2) *Initial performance tests.* If a control device is used, each owner or operator shall conduct an initial performance test to demonstrate compliance with the overall reduction efficiency specified in §63.746(c), unless a waiver is obtained under either §63.7(e)(2)(iv) or §63.7(h). The initial performance test shall be conducted according to the procedures and test methods specified in §63.7 and §63.750(g) for carbon adsorbers and in §63.750(h) for control devices other than carbon adsorbers. For carbon adsorbers, the initial performance test shall be used to establish the appropriate rolling material balance period for determining compliance. The procedures in paragraphs (2)(i) through (2)(vi) of this section shall be used in determining initial compliance with the provisions of this subpart for carbon adsorbers.

(i)(A) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual carbon adsorber vessels pursuant to §63.750(g)(2) or (4), the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all of the individual carbon adsorber vessels.

(B) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel pursuant to §63.750(g) (3) or (4), each carbon adsorber vessel shall be tested individually. The test for

each carbon adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

(ii) EPA Method 1 or 1A of appendix A of part 60 is used for sample and velocity traverses.

(iii) EPA Method 2, 2A, 2C, or 2D of appendix A of part 60 is used for velocity and volumetric flow rates.

(iv) EPA Method 3 of appendix A of part 60 is used for gas analysis.

(v) EPA Method 4 of appendix A of part 60 is used for stack gas moisture.

(vi) EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(3) An organic HAP-containing chemical stripper depainting operation is considered in compliance when the conditions specified in paragraph (g)(3)(i) of this section are met.

(i) If a carbon adsorber (or other control device) is used, the overall control efficiency of the control system, as determined using the procedures specified in §63.750(g) (or other control device as determined using the procedures specified in §63.750(h)), is equal to or greater than 81% for control systems installed before the effective date, or equal to or greater than 95% for control systems installed on or after the effective date, during the initial performance test and all subsequent material balances (or performance tests, as appropriate).

(ii) For non-HAP depainting operations complying with §63.746(b)(1);

(A) For any spot stripping and decal removal, the value of C, as determined using the procedures specified in §63.750(j), is less than or equal to 26 gallons of organic HAP-containing chemical stripper or 190 pounds of organic HAP per commercial aircraft depainted calculated on a yearly average; and is less than or equal to 50 gallons of organic HAP-containing chemical stripper or 365 pounds of organic HAP per military aircraft depainted calculated on a yearly average; and

(B) The requirements of §63.746(b)(2) are carried out during malfunctions of non-chemical based equipment.

(g) *Inorganic HAP emissions—depainting operations.* Each depainting operation is in compliance when:

(1) The operating requirements specified in §63.746(b)(4) are followed; and

(2) It is shut down immediately whenever the pressure drop or water flow rate is outside the limit(s) established for them and is not restarted until the pressure drop or water flow rate is returned within these limit(s), as required under §63.746(b)(4)(v).

(h) *Chemical milling maskant application operations* —(1) *Performance test periods.* For uncontrolled chemical milling maskants that are not averaged, each 24-hour period is considered a performance test. For compliant and noncompliant chemical milling maskants that are averaged together, each 30-day period is considered a performance test, unless the permitting agency specifies a shorter period as part of an ambient ozone control program. When using a control device other than a carbon adsorber, three 1-hour runs constitute the test period for the initial and any subsequent performance test. When a carbon adsorber is used, each rolling material balance period is considered a performance test.

(2) *Initial performance tests.* If a control device is used, each owner or operator shall conduct an initial performance test to demonstrate compliance with the overall reduction efficiency specified in §63.747(d),

unless a waiver is obtained under either §63.7(e)(2)(iv) or §63.7(h). The initial performance test shall be conducted according to the procedures and test methods specified in §63.7 and §63.750(g) for carbon adsorbers and in §63.750(h) for control devices other than carbon adsorbers. For carbon adsorbers, the initial performance test shall be used to establish the appropriate rolling material balance period for determining compliance. The procedures in paragraphs (h)(2) (i) through (vi) of this section shall be used in determining initial compliance with the provisions of this subpart for carbon adsorbers.

(i)(A) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual carbon adsorber vessels pursuant to §63.750(g) (2) or (4), the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all of the individual carbon adsorber vessels.

(B) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel pursuant to §63.750(g) (3) or (4), each carbon adsorber vessel shall be tested individually. The test for each carbon adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

(ii) EPA Method 1 or 1A of appendix A of part 60 is used for sample and velocity traverses.

(iii) EPA Method 2, 2A, 2C, or 2D of appendix A of part 60 is used for velocity and volumetric flow rates.

(iv) EPA Method 3 of appendix A of part 60 is used for gas analysis.

(v) EPA Method 4 of appendix A of part 60 is used for stack gas moisture.

(vi) EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(3) The chemical milling maskant application operation is considered in compliance when the conditions specified in paragraphs (i)(3)(i) and (i)(3)(ii) of this section are met.

(i) For all uncontrolled chemical milling maskants, all values of $H_i$and H_a(as determined using the procedures specified in §63.750 (k) and (l)) are less than or equal to 622 grams of organic HAP per liter (5.2 lb/gal) of Type I chemical milling maskant as applied (less water), and 160 grams of organic HAP per liter (1.3 lb/gal) of Type II chemical milling maskant as applied (less water). All values of $G_i$and G_a(as determined using the procedures specified in §63.750 (m) and (n)) are less than or equal to 622 grams of VOC per liter (5.2 lb/gal) of Type I chemical milling maskant as applied (less water and exempt solvents), and 160 grams of VOC per liter (1.3 lb/gal) of Type II chemical milling maskant (less water and exempt solvents) as applied.

(ii) If a carbon adsorber (or other control device) is used, the overall control efficiency of the control system, as determined using the procedures specified in §63.750(g) (or systems with other control devices as determined using the procedures specified in §63.750(h)), is equal to or greater than 81% during the initial performance test period and all subsequent material balances (or performance tests, as appropriate).

(i) *Handling and storage of waste.* For those wastes subject to this subpart, failure to comply with the requirements specified in §63.748 shall be considered a violation.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15021, Mar. 27, 1998]

§ 63.750 Test methods and procedures.

(a) *Composition determination.* Compliance with the hand-wipe cleaning solvent approved composition list specified in §63.744(b)(1) for hand-wipe cleaning solvents shall be demonstrated using data supplied by the manufacturer of the cleaning solvent. The data shall identify all components of the cleaning solvent and shall demonstrate that one of the approved composition definitions is met.

(b) *Vapor pressure determination.* The composite vapor pressure of hand-wipe cleaning solvents used in a cleaning operation subject to this subpart shall be determined as follows:

(1) For single-component hand-wipe cleaning solvents, the vapor pressure shall be determined using MSDS or other manufacturer's data, standard engineering reference texts, or other equivalent methods.

(2) The composite vapor pressure of a blended hand-wipe solvent shall be determined by quantifying the amount of each organic compound in the blend using manufacturer's supplied data or a gas chromatographic analysis in accordance with ASTM E 260–91 or 96 (incorporated by reference—see §63.14 of subpart A of this part) and by calculating the composite vapor pressure of the solvent by summing the partial pressures of each component. The vapor pressure of each component shall be determined using manufacturer's data, standard engineering reference texts, or other equivalent methods. The following equation shall be used to determine the composite vapor pressure:

$$PP_c = \sum_{i=1}^{n} \frac{(W_i)(VP_i)/MW_i}{\frac{W_w}{MW_w} + \sum_{e=1}^{n} \frac{W_e}{MW_e} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

where:

W_i=Weight of the “i”th VOC compound, grams.

W_w=Weight of water, grams.

W_e=Weight of non-HAP, nonVOC compound, grams.

MW_i=Molecular weight of the “i”th VOC compound, g/g-mole.

MW_w=Molecular weight of water, g/g-mole.

MW_e=Molecular weight of exempt compound, g/g-mole.

PP_c=VOC composite partial pressure at 20 °C, mm Hg.

VP_i=Vapor pressure of the “i”th VOC compound at 20 °C, mm Hg.

(c) *Organic HAP content level determination—compliant primers and topcoats.* For those uncontrolled primers and topcoats complying with the primer and topcoat organic HAP content limits specified in §63.745(c) without being averaged, the following procedures shall be used to determine the mass of organic HAP emitted per volume of coating (less water) as applied.

(1) For coatings that contain no exempt solvents, determine the total organic HAP content using manufacturer's supplied data or Method 24 of 40 CFR part 60, appendix A, to determine the VOC content. The VOC content shall be used as a surrogate for total HAP content for coatings that contain no

exempt solvent. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance shall be based on the results from the Method 24 analysis.

When Method 24 is used to determine the VOC content of water-reducible coatings, the precision adjustment factors in Reference Method 24 shall be used. If the adjusted analytical VOC content is less than the formulation solvent content, then the analytical VOC content should be set equal to the formulation solvent content.

(2) For each coating formulation as applied, determine the organic HAP weight fraction, water weight fraction (if applicable), and density from manufacturer's data. If these values cannot be determined using the manufacturer's data, the owner or operator shall submit an alternative procedure for determining their values for approval by the Administrator. Recalculation is required only when a change occurs in the coating formulation.

(3) For each coating as applied, calculate the mass of organic HAP emitted per volume of coating (lb/gal) less water as applied using equations 1, 2, and 3:

$$V_{wi} = \frac{D_{ci} W_{wi}}{D_w} \qquad Eq.\ 1$$

where:

V_{wi}=volume (gal) of water in one gal of coating i.

D_{ci}=density (lb of coating per gal of coating) of coating i.

W_{wi}=weight fraction (expressed as a decimal) of water in coating i.

D_w=density of water, 8.33 lb/gal.

$$M_{Hi} = D_{ci} W_{Hi} \qquad Eq.\ 2$$

where:

M_{Hi}=mass (lb) of organic HAP in one gal of coating i.

D_{ci}=density (lb of coating per gal of coating) of coating i.

W_{Hi}=weight fraction (expressed as a decimal) of organic HAP in coating i.

$$H_i = \frac{M_{Hi}}{(1 - V_{wi})} \qquad Eq.\ 3$$

where:

H_i=mass of organic HAP emitted per volume of coating i (lb/gal) less water as applied.

M_{Hi}=mass (lb) of organic HAP in one gal of coating i.

V_{wi}=volume (gal) of water in one gal of coating i.

(d) *Organic HAP content level determination—averaged primers and topcoats.* For those uncontrolled primers and topcoats that are averaged together in order to comply with the primer and topcoat organic HAP content limits specified in §63.745(c), the following procedure shall be used to determine the monthly volume-weighted average mass of organic HAP emitted per volume of coating (less water) as applied, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(1)(i) Determine the total organic HAP weight fraction as applied of each coating. If any ingredients, including diluent solvent, are added to a coating prior to its application, the organic HAP weight fraction of the coating shall be determined at a time and location in the process after all ingredients have been added.

(ii) Determine the total organic HAP weight fraction of each coating as applied each month.

(A) If no changes have been made to a coating, either as supplied or as applied, or if a change has been made that has a minimal effect on the organic HAP content of the coating, the value previously determined may continue to be used until a change in formulation has been made by either the manufacturer or the user.

(B) If a change in formulation or a change in the ingredients added to the coating takes place, including the ratio of coating to diluent solvent, prior to its application, either of which results in a more than minimal effect on the organic HAP content of the coating, the total organic HAP weight fraction of the coating shall be redetermined.

(iii) Manufacturer's formulation data may be used to determine the total organic HAP content of each coating and any ingredients added to the coating prior to its application. If the total organic HAP content cannot be determined using the manufacturer's data, the owner or operator shall submit an alternative procedure for determining the total organic HAP weight fraction for approval by the Administrator.

(2)(i) Determine the volume both in total gallons as applied and in total gallons (less water) as applied of each coating. If any ingredients, including diluent solvents, are added prior to its application, the volume of each coating shall be determined at a time and location in the process after all ingredients (including any diluent solvent) have been added.

(ii) Determine the volume of each coating (less water) as applied each month, unless the permitting agency specifies a shorter period as part of an ambient ozone control program.

(iii) The volume applied may be determined from company records.

(3)(i) Determine the density of each coating as applied. If any ingredients, including diluent solvent, are added to a coating prior to its application, the density of the coating shall be determined at a time and location in the process after all ingredients have been added.

(ii) Determine the density of each coating as applied each month, unless the permitting agency specifies a shorter period as part of an ambient ozone control program.

(A) If no changes have been made to a coating, either as supplied or as applied, or if a change has been made that has a minimal effect on the density of the coating, then the value previously determined may continue to be used until a change in formulation has been made by either the manufacturer or the user.

(B) If a change in formulation or a change in the ingredients added to the coating takes place, including the ratio of coating to diluent solvent, prior to its application, either of which results in a more than minimal effect on the density of the coating, then the density of the coating shall be redetermined.

(iii) The density may be determined from company records, including manufacturer's data sheets. If the density of the coating cannot be determined using the company's records, including the manufacturer's data, then the owner or operator shall submit an alternative procedure for determining the density for approval by the Administrator.

(4) Calculate the total volume in gallons as applied (less water) by summing the individual volumes of each coating (less water) as applied, which were determined under paragraph (d)(2) of this section.

(5) Calculate the volume-weighted average mass of organic HAP in coatings emitted per unit volume (lb/gal) of coating (less water) as applied during each 30-day period using equation 4:

$$H_a = \frac{\sum_{i=1}^{n} W_{Hi} D_{ci} V_{ci}}{C_{lw}} \qquad Eq.\ 4$$

where:

H_a=volume-weighted average mass of organic HAP emitted per unit volume of coating (lb/gal) (less water) as applied during each 30-day period for those coatings being averaged.

n=number of coatings being averaged.

W_{Hi}=weight fraction (expressed as a decimal) of organic HAP in coating i as applied that is being averaged during each 30-day period.

D_{ci}=density (lb of coating per gal of coating) of coating i as applied that is being averaged during each 30-day period.

V_{ci}=volume (gal) of coating i as applied that is being averaged during the 30-day period.

C_{lw}=total volume (gal) of all coatings (less water) as applied that are being averaged during each 30-day period.

(e) *VOC content level determination—compliant primers and topcoats.* For those uncontrolled primers and topcoats complying with the primer and topcoat VOC content levels specified in §63.745(c) without being averaged, the following procedure shall be used to determine the mass of VOC emitted per volume of coating (less water and exempt solvents) as applied.

(1) Determine the VOC content of each formulation (less water and exempt solvents) as applied using manufacturer's supplied data or Method 24 of 40 CFR part 60, appendix A, to determine the VOC content. The VOC content shall be used as a surrogate for total HAP content for coatings that contain no exempt solvent. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance shall be based on the results from the Method 24 analysis.

When Method 24 is used to determine the VOC content of water-reducible coatings, the precision adjustment factors in Reference Method 24 shall be used. If the adjusted analytical VOC content is less

than the formulation solvent content, then the analytical VOC content should be set equal to the formulation solvent content.

(2) For each coating applied, calculate the mass of VOC emitted per volume of coating (lb/gal) (less water and exempt solvents) as applied using equations 5, 6, and 7:

$$V_{wi} = \frac{D_{ci} W_{wi}}{D_w} \qquad Eq.\ 5$$

where:

V_{wi}=volume (gal) of water in one gal of coating i.

D_{ci}=density (lb of coating per gal of coating) of coating i.

W_{wi}=weight fraction (expressed as a decimal) of water in coating i.

D_w=density of water, 8.33 lb/gal.

$$M_{Vi} = D_{ci} W_{Vi} \qquad Eq.\ 6$$

where:

M_{Vi}=mass (lb) of VOC in one gal of coating i.

D_{ci}=density (lb of coating per gal of coating) of coating i.

W_{Vi}=weight fraction (expressed as a decimal) of VOC in coating i.

$$G_i = \frac{M_{vi}}{(1 - V_{wi}) - V_{xi}} \qquad Eq.\ 7$$

where:

G_i=mass of VOC emitted per volume of coating i (lb/gal) (less water and exempt solvents) as applied.

M_{Vi}=mass (lb) of VOC in one gal of coating i.

V_{wi}=volume (gal) of water in one gal of coating i.

V_{Xi}=volume (gal) of exempt solvents in one gal of coating i.

(3)(i) If the VOC content is found to be different when EPA Method 24 is used during an enforcement inspection from that used by the owner or operator in calculating G_a, compliance shall be based, except as provided in paragraph (e)(3)(ii) of this section, upon the VOC content obtained using EPA Method 24.

(ii) If the VOC content of a coating obtained using Method 24 would indicate noncompliance as determined under either §63.749 (d)(3)(i) or (d)(4)(i), an owner or operator may elect to average the coating with other uncontrolled coatings and (re)calculate G_i(using the procedure specified in paragraph

(f) of this section), provided appropriate and sufficient records were maintained for all coatings included in the average (re)calculation. The (re)calculated value of G_i($G_a$in paragraph (f)) for the averaged coatings shall then be used to determine compliance.

(f) *VOC content level determination—averaged primers and topcoats.* For those uncontrolled primers and topcoats that are averaged within their respective coating category in order to comply with the primer and topcoat VOC content limits specified in §63.745 (c)(2) and (c)(4), the following procedure shall be used to determine the monthly volume-weighted average mass of VOC emitted per volume of coating (less water and exempt solvents) as applied, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(1)(i) Determine the VOC content (lb/gal) as applied of each coating. If any ingredients, including diluent solvent, are added to a coating prior to its application, the VOC content of the coating shall be determined at a time and location in the process after all ingredients have been added.

(ii) Determine the VOC content of each coating as applied each month, unless the permitting agency specifies a shorter period as part of an ambient ozone control program.

(A) If no changes have been made to a coating, either as supplied or as applied, or if a change has been made that has a minimal effect on the VOC content of the coating, the value previously determined may continue to be used until a change in formulation has been made by either the manufacturer or the user.

(B) If a change in formulation or a change in the ingredients added to the coating takes place, including the ratio of coating to diluent solvent, prior to its application, either of which results in a more than minimal effect on the VOC content of the coating, the VOC content of the coating shall be redetermined.

(iii) Determine the VOC content of each primer and topcoat formulation (less water and exempt solvents) as applied using EPA Method 24 or from manufacturer's data.

(2)(i) Determine the volume both in total gallons as applied and in total gallons (less water and exempt solvents) as applied of each coating. If any ingredients, including diluent solvents, are added prior to its application, the volume of each coating shall be determined at a time and location in the process after all ingredients (including any diluent solvent) have been added.

(ii) Determine the volume of each coating (less water and exempt solvents) as applied each day.

(iii) The volume applied may be determined from company records.

(3) Calculate the total volume in gallons (less water and exempt solvents) as applied by summing the individual volumes of each coating (less water and exempt solvents) as applied, which were determined under paragraph (f)(2) of this section.

(4) Calculate the volume-weighted average mass of VOC emitted per unit volume (lb/gal) of coating (less water and exempt solvents) as applied for each coating category during each 30-day period using equation 8:

$$G_a = \frac{\sum_{i=1}^{n} (VOC)_{ai} V_{ai}}{C_{twes}} \qquad Eq.\ 8$$

where:

G_a=volume weighted average mass of VOC per unit volume of coating (lb/gal) (less water and exempt solvents) as applied during each 30-day period for those coatings being averaged.

n=number of coatings being averaged.

$(VOC)_{ci}$=VOC content (lb/gal) of coating i (less water and exempt solvents) as applied (as determined using the procedures specified in paragraph (f)(1) of this section) that is being averaged during the 30-day period.

V_{ci}=volume (gal) of coating i (less water and exempt solvents) as applied that is being averaged during the 30-day period.

C_{lwes}=total volume (gal) of all coatings (less water and exempt solvents) as applied during each 30-day period for those coatings being averaged.

(5)(i) If the VOC content is found to be different when EPA Method 24 is used during an enforcement inspection from that used by the owner or operator in calculating G_a, recalculation of $G_a$is required using the new value. If more than one coating is involved, the recalculation shall be made once using all of the new values.

(ii) If recalculation is required, an owner or operator may elect to include in the recalculation of $G_a$uncontrolled coatings that were not previously included provided appropriate and sufficient records were maintained for these other coatings to allow daily recalculations.

(iii) The recalculated value of $G_a$under either paragraph (f)(5)(i) or (f)(5)(ii) of this section shall be used to determine compliance.

(g) *Overall VOC and/or organic HAP control efficiency—carbon adsorber.* Each owner or operator subject to the requirements of §63.745(d), §63.746(c), or §63.747(d) shall demonstrate initial compliance with the requirements of this subpart by following the procedures of paragraph (g)(1), (2), (3), (4), or (5) as applicable and paragraphs (6), (7), and (8) of this section. When an initial compliance demonstration is required by this subpart, the procedures in paragraphs (g)(9) through (g)(14) of this section shall be used in determining initial compliance with the provisions of this subpart.

(1) To demonstrate initial and continuous compliance with §63.745(d), §63.746(c), or §63.747(d) when emissions are controlled by a dedicated solvent recovery device, each owner or operator of the affected operation may perform a liquid-liquid HAP or VOC material balance over rolling 7- to 30-day periods in lieu of demonstrating compliance through the methods in paragraph (g)(2), (g)(3), or (g)(4) of this section. Results of the material balance calculations performed to demonstrate initial compliance shall be submitted to the Administrator with the notification of compliance status required by §63.9(h) and by §63.753 (c)(1)(iv), (d)(3)(i), and (e)(3). When demonstrating compliance by this procedure, §63.7(e)(3) of subpart A does not apply. The amount of liquid HAP or VOC applied and recovered shall be determined as discussed in paragraph (g)(1)(iii) of this section. The overall HAP or VOC emission reduction (R) is calculated using equation 9:

$$R = \frac{M_r}{\sum_{i=1}^{n} [W_{oi}\ M_{ci} - RS_i]} \times 100 \qquad Eq.\ 9$$

(i) The value of $RS_i$is zero unless the owner or operator submits the following information to the Administrator for approval of a measured RS_ivalue that is greater than zero:

(A) Measurement techniques; and

(B) Documentation that the measured value of RS_i exceeds zero.

(ii) The measurement techniques of paragraph (g)(1)(i)(A) of this section shall be submitted to the Administrator for approval with the notification of performance test required under §63.7(b).

(iii) Each owner or operator demonstrating compliance by the test method described in paragraph (g)(1) of this section shall:

(A) Measure the amount of coating or stripper as applied;

(B) Determine the VOC or HAP content of all coating and stripper applied using the test method specified in §63.750(c) (1) through (3) or (e) (1) and (2) of this section;

(C) Install, calibrate, maintain, and operate, according to the manufacturer's specifications, a device that indicates the amount of HAP or VOC recovered by the solvent recovery device over rolling 7- to 30-day periods; the device shall be certified by the manufacturer to be accurate to within ±2.0 percent, and this certification shall be kept on record;

(D) Measure the amount of HAP or VOC recovered; and

(E) Calculate the overall HAP or VOC emission reduction (R) for rolling 7- to 30-day periods using equation 9.

(F) Compliance is demonstrated if the value of R is equal to or greater than the overall HAP control efficiencies required by §63.745(d), §63.746(c), or §63.747(d).

(2) To demonstrate initial compliance with §63.745(d), §63.746(c), or §63.747(d) when affected HAP emission points are controlled by an emission control device other than a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel, each owner or operator of an affected source shall perform a gaseous emission test using the following procedures.

(i) Construct the overall HAP emission reduction system so that all volumetric flow rates and total HAP or VOC emissions can be accurately determined by the applicable test methods and procedures specified in §63.750(g) (9) through (14).

(ii) Determine capture efficiency from the HAP emission points by capturing, venting, and measuring all HAP emissions from the HAP emission points. During a performance test, the owner or operator of affected HAP emission points located in an area with other gaseous emission sources not affected by this subpart shall isolate the affected HAP emission points from all other gaseous emission points by one of the following methods:

(A) Build a temporary total enclosure around the affected HAP emission point(s); or

(B) Shut down all gaseous emission points not affected by this subpart and continue to exhaust fugitive emissions from the affected HAP emission points through any building ventilation system and other room exhausts such as drying ovens. All ventilation air must be vented through stacks suitable for testing.

(iii) Operate the emission control device with all affected HAP emission points connected and operating.

(iv) Determine the efficiency (E) of the control device using equation 10:

(v) Determine the efficiency (F) of the capture system using equation 11:

$$E = \frac{\sum_{i=1}^{n} Q_{bi}\ C_{bi} - \sum_{j=1}^{p} Q_{aj}\ C_{aj}}{\sum_{i=1}^{n} Q_{bi}\ C_{bi}} \qquad Eq.\ 10$$

$$F = \frac{\sum_{i=1}^{n} Q_{di}\ C_{di}}{\sum_{i=1}^{n} Q_{di}\ C_{di} + \sum_{k=1}^{p} Q_{fk}\ C_{fk}} \qquad Eq.\ 11$$

(vi) For each HAP emission point subject to §63.745(d), §63.746(c), or §63.747(d), compliance is demonstrated if the product of (E) × (F) is equal to or greater than the overall HAP control efficiencies required under §63.745(d), §63.746(c), or §63.747(d).

(3) To demonstrate compliance with §63.745(d), §63.746(c), or §63.747(d) when affected HAP emission points are controlled by a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel, each owner or operator of an affected source shall perform a gaseous emission test using the following procedures:

(i) Construct the overall HAP emission reduction system so that each volumetric flow rate and the total HAP emissions can be accurately determined by the applicable test methods and procedures specified in §63.750(g) (9) through (14);

(ii) Assure that all HAP emissions from the affected HAP emission point(s) are segregated from gaseous emission points not affected by this subpart and that the emissions can be captured for measurement, as described in paragraphs (g)(2)(ii) (A) and (B) of this section;

(iii) Operate the emission control device with all affected HAP emission points connected and operating;

(iv) Determine the efficiency (H_v) of each individual carbon adsorber vessel (v) using equation 12:

$$H_v = \frac{Q_{gv}\ C_{gv} - Q_{kv}\ C_{kv}}{Q_{gv}\ C_{gv}} \qquad Eq.\ 12$$

(v) Determine the efficiency of the carbon adsorption system (H_{sys}) by computing the average efficiency of the individual carbon adsorber vessels as weighted by the volumetric flow rate (Q_{hv}) of each individual carbon adsorber vessel (v) using equation 13:

$$H_{sys} = \frac{\sum_{v=1}^{q} H_v\ Q_{kv}}{\sum_{v=1}^{q} Q_{kv}} \qquad Eq.\ 13$$

(vi) Determine the efficiency (F) of the capture system using equation 11.

(vii) For each HAP emission point subject to §63.745(d), §63.746(c), or §63.747(d), compliance is demonstrated if the product of (H_{sys}) × (F) is equal to or greater than the overall HAP control efficiency required by §63.745(d), §63.746(c), or §63.747(d).

(4) An alternative method of demonstrating compliance with §63.745(d), §63.746(c), or §63.747(d) is the installation of a total enclosure around the affected HAP emission point(s) and the ventilation of all HAP emissions from the total enclosure to a control device with the efficiency specified in paragraph (g)(4)(iii) of this section. If this method is selected, the compliance test methods described in paragraphs (g)(1), (g)(2), and (g)(3) of this section are not required. Instead, each owner or operator of an affected source shall:

(i) Demonstrate that a total enclosure is installed. An enclosure that meets the requirements in paragraphs (g)(4)(i) (A) through (D) of this section shall be considered a total enclosure. The owner or operator of an enclosure that does not meet these requirements may apply to the Administrator for approval of the enclosure as a total enclosure on a case-by-case basis. The enclosure shall be considered a total enclosure if it is demonstrated to the satisfaction of the Administrator that all HAP emissions from the affected HAP emission point(s) are contained and vented to the control device. The requirements for automatic approval are as follows:

(A) The total area of all natural draft openings shall not exceed 5% of the total surface area of the total enclosure's walls, floor, and ceiling;

(B) All sources of emissions within the enclosure shall be a minimum of four equivalent diameters away from each natural draft opening;

(C) The average inward face velocity (FV) across all natural draft openings shall be a minimum of 3,600 meters per hour as determined by the following procedures:

(*1*) All forced makeup air ducts and all exhaust ducts are constructed so that the volumetric flow rate in each can be accurately determined by the test methods and procedures specified in §63.750(g) (10) and (11); volumetric flow rates shall be calculated without the adjustment normally made for moisture content; and

(*2*) Determine FV by equation 14:

$$FV = \frac{\sum_{j=1}^{n} Q_{out\,j} - \sum_{i=1}^{p} Q_{in\,i}}{\sum_{k=1}^{q} A_k} \qquad Eq.\ 14$$

(D) The air passing through all natural draft openings shall flow into the enclosure continuously. If FV is less than or equal to 9,000 meters per hour, the continuous inward flow of air shall be verified by continuous observation using smoke tubes, streamers, tracer gases, or other means approved by the Administrator over the period that the volumetric flow rate tests required to determine FV are carried out. If FV is greater than 9,000 meters per hour, the direction of airflow through the natural draft openings shall be presumed to be inward at all times without verification.

(ii) Determine the control device efficiency using equation 10 or equations 12 and 13, as applicable, and the test methods and procedures specified in §63.750(g) (9) through (14).

(iii) Compliance shall be achieved if the installation of a total enclosure is demonstrated and the value of E determined from equation 10 (or the value of H_{sys}determined from equations 12 and 13, as applicable)

is equal to or greater than the overall HAP control efficiencies required under §63.745(d), §63.746(c), or §63.747(d).

(5) When nonregenerative carbon adsorbers are used to comply with §63.745(d), §63.746(c), or §63.747(d), the owner or operator may conduct a design evaluation to demonstrate initial compliance in lieu of following the compliance test procedures of paragraphs (g)(1), (2), (3), and (4) of this section. The design evaluation shall consider the vent stream composition, component concentrations, flow rate, relative humidity, and temperature, and shall establish the design exhaust vent stream organic compound concentration level, capacity of the carbon bed, type and working capacity of activated carbon used for the carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and the emission point operating schedule.

(6)(i) To demonstrate initial compliance with §63.745(d), §63.746(c), or §63.747(d) when hard piping or ductwork is used to direct VOC and HAP emissions from a VOC and HAP source to the control device, each owner or operator shall demonstrate upon inspection that the criteria of paragraph (g)(6)(i)(A) and paragraph (g)(6)(i) (B) or (C) of this section VR/FD are met.

(A) The equipment shall be vented to a control device.

(B) The control device efficiency (E or H_{sys}, as applicable) determined using equation 10 or equations 12 and 13, respectively, and the test methods and procedures specified in §63.750(g) (9) through (14), shall be equal to or greater than the overall HAP control efficiency required by §63.745(d), §63.746(c), or §63.747(d).

(C) When a nonregenerative carbon adsorber is used, the ductwork from the affected emission point(s) shall be vented to the control device and the carbon adsorber shall be demonstrated, through the procedures of §63.750(g) (1), (2), (3), (4), or (5), to meet the requirements of §63.745(d), §63.746(c), or §63.747(d).

(7) Startups and shutdowns are normal operation for this source category. Emissions from these activities are to be included when determining if the standards specified in §63.745(d), §63.746(c), or §63.747(d) are being attained.

(8) An owner or operator who uses compliance techniques other than those specified in this subpart shall submit a description of those compliance procedures, subject to the Administrator's approval, in accordance with §63.7(f) of subpart A.

(9) Either EPA Method 18 or EPA Method 25A of appendix A of part 60, as appropriate to the conditions at the site, shall be used to determine VOC and HAP concentration of air exhaust streams as required by §63.750(g) (1) through (6). The owner or operator shall submit notice of the intended test method to the Administrator for approval along with the notification of the performance test required under §63.7(b). Method selection shall be based on consideration of the diversity of organic species present and their total concentration and on consideration of the potential presence of interfering gases. Except as indicated in paragraphs (g)(9) (i) and (ii) of this section, the test shall consist of three separate runs, each lasting a minimum of 30 minutes.

(i) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual carbon adsorber vessels pursuant to paragraph (g) (2) or (4) of this section, the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all of the individual carbon adsorber vessels.

(ii) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel

pursuant to §63.750(g) (3) or (4), each carbon adsorber vessel shall be tested individually. The test for each carbon adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

(10) EPA Method 1 or 1A of appendix A of part 60 is used for sample and velocity traverses.

(11) EPA Method 2, 2A, 2C, or 2D of appendix A of part 60 is used for velocity and volumetric flow rates.

(12) EPA Method 3 of appendix A of part 60 is used for gas analysis.

(13) EPA Method 4 of appendix A of part 60 is used for stack gas moisture.

(14) EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(h) *Overall VOC and/or organic HAP control efficiency—control devices other than carbon adsorbers.* Calculate the overall control efficiency of a control system with a control device other than a carbon adsorber using the following procedure.

(1) Calculate the overall control efficiency using equation 15:

$$E_k = R_k F_k \qquad Eq.\ 15$$

where:

E_k=overall VOC and/or organic HAP control efficiency (expressed as a decimal) of control system k.

R_k=destruction or removal efficiency (expressed as a decimal) of total organic compounds or total organic HAP for control device k as determined under paragraph (h)(2) of this section.

F_k=capture efficiency (expressed as a decimal) of capture system k as determined under paragraph (h)(3) of this section.

(2) The organic HAP destruction or removal efficiency $R_k$of a control device other than a carbon adsorber shall be determined using the procedures described below. The destruction efficiency may be measured as either total organic HAP or as TOC minus methane and ethane according to these procedures.

(i) Use Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, to select the sampling sites.

(ii) Determine the gas volumetric flow rate using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(iii) Use Method 18 of 40 CFR part 60, appendix A, to measure either TOC minus methane and ethane or total organic HAP. Alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of this part may be used.

(iv) Use the following procedure to calculate the destruction or removal efficiency:

(A) The destruction or removal efficiency test shall consist of three runs. The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be

taken. If grab sampling is used, the samples shall be taken at approximately equal intervals in time such as 15-minute intervals during the run.

(B) Calculate the mass rate of either TOC (minus methane and ethane) or total organic HAP (E_i, $E_o$using equations 16 and 17:

$$E_i = K_2 \left(\sum_{j=1}^{n} C_{ij} M_{ij} \right) Q_i \qquad Eq.\ 16$$

$$E_o = K_2 \left(\sum_{j=1}^{n} C_{oj} M_{oj} \right) Q_o \qquad Eq.\ 17$$

where:

E_i, E_o=mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet and outlet of the control device, respectively, dry basis, kg/hr.

K_2=constant, 2.494×10^{-6}(parts per million)$^{-1}$(gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.

n=number of sample components in the gas stream.

C_{ij}, C_{oj}=concentration of sample component j of the gas stream at the inlet and outlet of the control device, respectively, dry basis, parts per million by volume.

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

Q_i, Q_o=flow rate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.

(*1*) Where the mass rate of TOC is being calculated, all organic compounds (minus methane and ethane) measured by EPA Method 18 shall be summed using equation 16 in paragraph (h)(2)(iv)(B) of this section.

(*2*) Where the mass rate of total organic HAP is being calculated, only the organic HAP species shall be summed using equation 17 in paragraph (h)(2)(iv)(B) of this section. The list of organic HAP is provided in §63.104 of subpart F of this part.

(C) Calculate the destruction or removal efficiency for TOC (minus methane and ethane) or total organic HAP using equation 18:

$$R = \frac{E_i - E_o}{E_i} \times 100 \qquad Eq.\ 18$$

where:

R=destruction or removal efficiency of control device, percent.

E_i=mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet to the control device as calculated under paragraph (h)(2)(iv)(B) of this section, kg TOC per hour or kg organic HAP per hour.

E_o=mass rate of TOC (minus methane and ethane) or total organic HAP at the outlet of the control device, as calculated under paragraph (h)(2)(iv)(B) of this section, kg TOC per hour or kg organic HAP per hour.

(3) Determine the capture efficiency $F_k$of each capture system to which organic HAP and VOC emissions from coating operations are vented. The capture efficiency value shall be determined using Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure as found in appendix B to §52.741 of part 52 of this chapter for total enclosures, and the capture efficiency protocol specified in §52.741(a)(4)(iii) of part 52 of this chapter for all other enclosures.

(i)(1) *Alternative application method—primers and topcoats.* Each owner or operator seeking to use an alternative application method (as allowed in §63.745(f)(1)(ix)) in complying with the standards for primers and topcoats shall use the procedures specified in paragraphs (i)(2)(i) and (i)(2)(ii) or (i)(2)(iii) of this section to determine the organic HAP and VOC emission levels of the alternative application technique as compared to either HVLP or electrostatic spray application methods.

(2)(i) For the process or processes for which the alternative application method is to be used, the total organic HAP and VOC emissions shall be determined for an initial 30-day period, the period of time required to apply coating to five completely assembled aircraft, or a time period approved by the permitting agency. During this initial period, only HVLP or electrostatic spray application methods shall be used. The emissions shall be determined based on the volumes, organic HAP contents (less water), and VOC contents (less water and exempt solvents) of the coatings as applied.

(ii) Upon implementation of the alternative application method, use the alternative application method in production on actual production parts or assemblies for a period of time sufficient to coat an equivalent amount of parts and assemblies with coatings identical to those used in the initial 30-day period. The actual organic HAP and VOC emissions shall be calculated for this post-implementation period.

(iii) Test the proposed application method against either HVLP or electrostatic spray application methods in a laboratory or pilot production area, using parts and coatings representative of the process(es) where the alternative method is to be used. The laboratory test will use the same part configuration(s) and the same number of parts for both the proposed method and the HVLP or electrostatic spray application methods.

(iv) Whenever the approach in either paragraph (i)(2)(ii) or (i)(2)(iii) of this section is used, the owner or operator shall calculate both the organic HAP and VOC emission reduction using equation:

$$P = \frac{E_b - E_a}{E_b} \times 100 \qquad Eq.\ 19$$

where:

P=organic HAP or VOC emission reduction, percent.

E_b=organic HAP or VOC emissions, in pounds, before the alternative application technique was implemented, as determined under paragraph (i)(2)(i) of this section.

E_a=organic HAP of VOC emissions, in pounds, after the alternative application technique was implemented, as determined under paragraph (i)(2)(ii) of this section.

(3) Each owner or operator seeking to demonstrate that an alternative application method achieves emission reductions equivalent to HVLP or electrostatic spray application methods shall comply with the following:

(i) Each coating shall be applied such that the dried film thickness is within the range specified by the applicable specification(s) for the aerospace vehicle or component being coated.

(ii) If no such dried film thickness specification(s) exists, the owner or operator shall ensure that the dried film thickness applied during the initial 30-day period is equivalent to the dried film thickness applied during the alternative application method test period for similar aerospace vehicles or components.

(iii) Failure to comply with these dried film thickness requirements shall invalidate the test results obtained under paragraph (i)(2)(i) of this section.

(j) *Spot stripping and decal removal.* Each owner or operator seeking to comply with §63.746(b)(3) shall determine the volume of organic HAP-containing chemical strippers or alternatively the weight of organic HAP used per aircraft using the procedure specified in paragraphs (j)(1) through (j)(3) of this section.

(1) For each chemical stripper used for spot stripping and decal removal, determine for each annual period the total volume as applied or the total weight of organic HAP using the procedure specified in paragraph (d)(2) of this section.

(2) Determine the total number of aircraft for which depainting operations began during the annual period as determined from company records.

(3) Calculate the annual average volume of organic HAP-containing chemical stripper or weight of organic HAP used for spot stripping and decal removal per aircraft using equation 20 (volume) or equation 21 (weight):

$$C = \frac{\sum_{i=1}^{n} V_{si}}{A} \qquad Eq.\ 20$$

where:

C=annual average volume (gal per aircraft) of organic HAP-containing chemical stripper used for spot stripping and decal removal.

n=number of organic HAP-containing chemical strippers used in the annual period.

V_{si}=volume (gal) of organic HAP-containing chemical stripper (i) used during the annual period.

A=number of aircraft for which depainting operations began during the annual period.

$$C = \frac{\sum_{i=1}^{n}\left(V_{si} D_{ki}\left(\sum_{i=1}^{m} W_{ki}\right)\right)}{\mathrm{A}} \qquad Eq.\ 21$$

where:

C = annual average weight (lb per aircraft) of organic HAP (chemical stripper) used for spot stripping and decal removal.

m = number of organic HAP contained in each chemical stripper, as applied.

n = number of organic HAP-containing chemical strippers used in the annual period.

W_{hi}= weight fraction (expressed as a decimal) of each organic HAP (i) contained in the chemical stripper, as applied, for each aircraft depainted.

D_{hi}= density (lb/gal) of each organic HAP-containing chemical stripper (i), used in the annual period.

V_{si}= volume (gal) of organic HAP-containing chemical stripper (i) used during the annual period.

A = number of aircraft for which depainting operations began during the annual period.

(k) *Organic HAP content level determination—compliant chemical milling maskants.* For those uncontrolled chemical milling maskants complying with the chemical milling maskant organic HAP content limit specified in §63.747(c)(1) without being averaged, the following procedures shall be used to determine the mass of organic HAP emitted per unit volume of coating (chemical milling maskant) i as applied (less water), H_i(lb/gal).

(1) For coatings that contain no exempt solvents, determine the total organic HAP content using manufacturer's supplied data or Method 24 of 40 CFR part 60, appendix A to determine the VOC content. The VOC content shall be used as a surrogate for total HAP content for coatings that contain no exempt solvent. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance shall be based on the results from the Method 24 analysis.

When Method 24 is used to determine the VOC content of water-reducible coatings, the precision adjustment factors in Reference Method 24 shall be used. If the adjusted analytical VOC content is less than the formulation solvent content, then the analytical VOC content should be set equal to the formulation solvent content.

(2) [Reserved]

(l) *Organic HAP content level determination—averaged chemical milling maskants.* For those uncontrolled chemical milling maskants that are averaged together in order to comply with the chemical milling maskant organic HAP content level specified in §63.747(c)(1), the procedure specified in paragraphs (l)(1) through (l)(4) of this section shall be used to determine the monthly volume-weighted average mass of organic HAP emitted per volume of chemical milling maskant (less water) as applied, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(1) Determine the total organic HAP weight fraction as applied of each chemical milling maskant used during each 30-day period using the procedure specified in paragraph (d)(1) of this section.

(2) Determine for each 30-day period:

(i) The individual volume of each chemical milling maskant applied in terms of total gallons (less water) (using the procedure specified in paragraph (d)(2) of this section), and

(ii) The total volume in gallons of all chemical milling maskants (less water) as applied by summing the individual volumes of each chemical milling maskant as applied (less water).

(3) Determine the density of each chemical milling maskant as applied used during each 30-day period using the procedure specified in paragraph (d)(3) of this section.

(4) Calculate the volume-weighted average mass of organic HAP emitted per unit volume (lb/gal) of chemical milling maskant (less water) as applied for all chemical milling maskants during each 30-day period using equation 22:

$$H_a = \frac{\sum_{i=1}^{n} W_{Hi} D_{mi} V_{mi}}{M_{lw}} \qquad \text{Eq. 22}$$

where:

H_a=volume-weighted mass of organic HAP emitted per unit volume of chemical milling maskants (lb/gal) (less water) as applied during each 30-day period for those chemical milling maskants being averaged.

n=number of chemical milling maskants being averaged.

W_{Hi}=weight fraction (expressed as a decimal) of organic HAP in chemical milling maskant i (less water) as applied during each 30-day period that is averaged.

D_{mi}=density (lb chemical milling maskant per gal coating) of chemical milling maskant i as applied during each 30-day period that is averaged.

V_{mi}=volume (gal) of chemical milling maskant i (less water) as applied during the 30-day period that is averaged.

M_{lw}=total volume (gal) of all chemical milling maskants (less water) as applied during each 30-day period that is averaged.

(m) *VOC content level determination—compliant chemical milling maskants.* For those uncontrolled chemical milling maskants complying with the chemical milling maskant VOC content limit specified in §63.747(c)(2) without being averaged, the procedure specified in paragraphs (m)(1) and (m)(2) of this section shall be used to determine the mass of VOC emitted per volume of chemical milling maskant (less water and exempt solvents) as applied.

(1) Determine the mass of VOC emitted per unit volume of chemical milling maskant (lb/gal) (less water and exempt solvents) as applied, G_i, for each chemical milling maskant using the procedures specified in paragraphs (e)(1) and (e)(2) of this section.

(2)(i) If the VOC content is found to be different when EPA Method 24 is used during an enforcement inspection from that used by the owner or operator in calculating G_i, compliance shall be based, except as provided in paragraph (m)(2)(ii) of this section, upon the VOC content obtained using EPA Method 24.

(ii) If the VOC content of a chemical milling maskant obtained using EPA Method 24 would indicate noncompliance as determined under §63.749(h)(3)(i), an owner or operator may elect to average the chemical milling maskant with other uncontrolled chemical milling maskants and (re)calculate G_a(using the procedure specified in paragraph (n) of this section), provided appropriate and sufficient records were

maintained for all chemical milling maskants included in the average recalculation. The (re)calculated value of $G_a$for the averaged chemical milling maskants shall then be used to determine compliance.

(n) *VOC content level determination—averaged chemical milling maskants.* For those uncontrolled chemical milling maskants that are averaged together in order to comply with the chemical milling maskant VOC content limit specified in §63.747(c)(2), the procedure specified in paragraphs (n)(1) through (n)(4) of this section shall be used to determine the monthly volume-weighted average mass of VOC emitted per volume of chemical milling maskant (less water and exempt solvents) as applied, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(1) Determine the VOC content of each chemical milling maskant (less water and exempt solvents) as applied used during each 30-day period using the procedure specified in paragraph (f)(1) of this section.

(2)(i) Determine the individual volume of each chemical milling maskant applied in terms of total gallons (less water and exempt solvents) using the procedure specified in paragraph (f)(2) of this section, and

(ii) Calculate the total volume in gallons of all chemical milling maskants (less water and exempt solvents) as applied by summing the individual volumes of each chemical milling maskant (less water and exempt solvents) as applied.

(3) Calculate the volume-weighted average mass of VOC emitted per unit volume (lb/gal) of chemical milling maskant (less water and exempt solvents) as applied during each 30-day period using equation 23:

$$G_a = \frac{\sum_{i=1}^{n} (VOC)_{mi} V_{mi}}{M_{lwes}} \qquad \text{Eq. 23}$$

where:

G_a=volume-weighted average mass of VOC per unit volume of chemical milling maskant (lb/gal) (less water and exempt solvents) as applied during each 30-day period for those chemical milling maskants that are averaged.

n=number of chemical milling maskants being averaged.

$(VOC)_{mi}$=VOC content (lb/gal) of chemical milling maskant i (less water and exempt solvents) as applied during the 30-day period that is averaged.

V_{mi}=volume (gal) of chemical milling maskant i (less water and exempt solvents) as applied during the 30-day period that is averaged.

M_{lwes}=total volume (gal) of all chemical milling maskants (less water and exempt solvents) as applied during each 30-day period that is averaged.

(4)(i) If the VOC content is found to be different when EPA Method 24 is used during an enforcement inspection from that used by the owner or operator in calculating G_a, recalculation of $G_a$is required using the new value. If more than one chemical milling maskant is involved, the recalculation shall be made once using all of the new values.

(ii) If recalculation is required, an owner or operator may elect to include in the recalculation of $G_a$uncontrolled chemical milling maskants that were not previously included provided appropriate and sufficient records were maintained for these other chemical milling maskants to allow daily recalculations.

(iii) The recalculated value of $G_a$under either paragraph (n)(4)(i) or (n)(4)(ii) of this section shall be used to determine compliance.

(o) *Inorganic HAP emissions—dry particulate filter certification requirements.* Dry particulate filters used to comply with §63.745(g)(2) or §63.746(b)(4) must be certified by the filter manufacturer or distributor, paint/depainting booth supplier, and/or the facility owner or operator using method 319 in appendix A of subpart A of this part, to meet or exceed the efficiency data points found in Tables 1 and 2, or 3 and 4 of §63.745 for existing or new sources respectively.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15021, Mar. 27, 1998; 63 FR 46534, Sept. 1, 1998; 65 FR 62215, Oct. 17, 2000]

§ 63.751 Monitoring requirements.

(a) *Enclosed spray gun cleaners.* Each owner or operator using an enclosed spray gun cleaner under §63.744(c)(1) shall visually inspect the seals and all other potential sources of leaks associated with each enclosed gun spray cleaner system at least once per month. Each inspection shall occur while the system is in operation.

(b) *Incinerators and carbon adsorbers—initial compliance demonstrations.* Each owner or operator subject to the requirements in this subpart must demonstrate initial compliance with the requirements of §§63.745(d), 63.746(c), and 63.747(d) of this subpart. Each owner or operator using a carbon adsorber to comply with the requirements in this subpart shall comply with the requirements specified in paragraphs (b)(1) through (7) of this section. Each owner or operator using an incinerator to comply with the requirements in this subpart shall comply with the requirements specified in paragraphs (b)(8) through (12) of this section.

(1) Except as allowed by paragraph (b)(2) or (b)(5) of this section, for each control device used to control organic HAP or VOC emissions, the owner or operator shall fulfill the requirements of paragraph (b)(1) (i) or (ii) of this section.

(i) The owner or operator shall establish as a site-specific operating parameter the outlet total HAP or VOC concentration that demonstrates compliance with §63.745(d), §63.746(c), or §63.747(d) as appropriate; or

(ii) The owner or operator shall establish as the site-specific operating parameter the control device efficiency that demonstrates compliance with §63.745(d), §63.746(c), or §63.747(d).

(iii) When a nonregenerative carbon adsorber is used to comply with §63.745(d), §63.746(c), or §63.747(d), the site-specific operating parameter value may be established as part of the design evaluation used to demonstrate initial compliance. Otherwise, the site-specific operating parameter value shall be established during the initial performance test conducted according to the procedures of §63.750(g).

(2) For each nonregenerative carbon adsorber, in lieu of meeting the requirements of §63.751(b)(1), the owner or operator may establish as the site-specific operating parameter the carbon replacement time interval, as determined by the maximum design flow rate and organic concentration in the gas stream vented to the carbon adsorption system. The carbon replacement time interval shall be established either

as part of the design evaluation to demonstrate initial compliance or during the initial performance test conducted according to the procedures in §63.750(g) (1), (2), (3), or (4).

(3) Each owner or operator venting solvent HAP emissions from a source through a room, enclosure, or hood, to a control device to comply with §63.745(d), §63.746(c), or §63.747(d) shall:

(i) Submit to the Administrator with the compliance status report required by §63.9(h) of the General Provisions a plan that:

(A) Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained;

(B) Discusses why this parameter is appropriate for demonstrating ongoing compliance; and

(C) Identifies the specific monitoring procedures;

(ii) Set the operating parameter value, or range of values, that demonstrate compliance with §63.745(d), §63.746(c), or §63.747(d), as appropriate; and

(iii) Conduct monitoring in accordance with the plan submitted to the Administrator unless comments received from the Administrator require an alternate monitoring scheme.

(4) Owners or operators subject to §63.751(b) (1), (2), or (3) shall calculate the site-specific operating parameter value, or range of values, as the arithmetic average of the maximum and/or minimum operating parameter values, as appropriate, that demonstrate compliance with §63.745(d), §63.746(c), or §63.747(d) during the multiple test runs required by §63.750 (g)(2) and (g)(1).

(5) For each solvent recovery device used to comply with §63.745(d), §63.746(c), or §63.747(d), in lieu of meeting the requirements of paragraph (b)(1) of this section, the results of the material balance calculation conducted in accordance with §63.750(g)(1) may serve as the site-specific operating parameter that demonstrates compliance with §63.745(d), §63.746(c), or §63.747(d).

(6) *Continuous compliance monitoring.* Following the date on which the initial compliance demonstration is completed, continuous compliance with §63.745(d), §63.746(c), or §63.747(d) of this subpart shall be demonstrated as outlined in this paragraph.

(i) Each owner or operator of an affected source subject to §63.745(d), §63.746(c), or §63.747(d) of this subpart shall monitor the applicable parameters specified in paragraph (b)(6)(ii), (b)(6)(iii), or (b)(6)(iv) of this section depending on the type of control technique used.

(ii) Compliance monitoring shall be subject to the following provisions:

(A) Except as allowed by paragraph (b)(6)(iii)(A)(*2*) of this section, all continuous emission monitors shall comply with performance specification (PS) 8 or 9 in 40 CFR part 60, appendix B, as appropriate depending on whether VOC or HAP concentration is being measured. The requirements in appendix F of 40 CFR part 60 shall also be followed. In conducting the quarterly audits required by appendix F, owners or operators shall challenge the monitors with compounds representative of the gaseous emission stream being controlled.

(B) If the effluent from multiple emission points are combined prior to being channeled to a common control device, the owner or operator is required only to monitor the common control device, not each emission point.

(iii) Owners or operators complying with §63.745(d), §63.746(c), or §63.747(d) through the use of a control device and establishing a site-specific operating parameter in accordance with paragraph (b)(1) of this section shall fulfill the requirements of paragraph (b)(6)(iii)(A) of this section and paragraph (b)(6)(iii)(B) or (C) of this section, as appropriate.

(A) The owner or operator shall install, calibrate, operate, and maintain a continuous emission monitor.

(*1*) The continuous emission monitor shall be used to measure continuously the total HAP or VOC concentration at both the inlet and the outlet whenever HAP from coating and paint stripping operations are vented to the control device, or when continuous compliance is demonstrated through a percent efficiency calculation; or

(*2*) For owners or operators using a nonregenerative carbon adsorber, in lieu of using continuous emission monitors as specified in paragraph (b)(6)(iii)(A)(*1*) of this section, the owner or operator may use a portable monitoring device to monitor total HAP or VOC concentration at the inlet and outlet or the outlet of the carbon adsorber as appropriate.

(*a*) The monitoring device shall be calibrated, operated, and maintained in accordance with the manufacturer's specifications.

(*b*) The monitoring device shall meet the requirements of part 60, appendix A, Method 21, sections 2, 3, 4.1, 4.2, and 4.4. The calibration gas shall either be representative of the compounds to be measured or shall be methane, and shall be at a concentration associated with 125% of the expected organic compound concentration level for the carbon adsorber outlet vent.

(*c*) The probe inlet of the monitoring device shall be placed at approximately the center of the carbon adsorber outlet vent. The probe shall be held there for at least 5 minutes during which flow into the carbon adsorber is expected to occur. The maximum reading during that period shall be used as the measurement.

(B) If complying with §63.745(d), §63.746(c), or §63.747(d) through the use of a carbon adsorption system with a common exhaust stack for all of the carbon vessels, the owner or operator shall not operate the control device at an average control efficiency less than that required by §63.745(d), §63.746(c), or §63.747(d) for three consecutive adsorption cycles.

(C) If complying with §63.745(d), §63.746(c), or §63.747(d) through the use of a carbon adsorption system with individual exhaust stacks for each of the multiple carbon adsorber vessels, the owner or operator shall not operate any carbon adsorber vessel at an average control efficiency less than that required by §63.745(d), §63.746(c), or §63.747(d) as calculated daily using a 7 to 30-day rolling average.

(D) If complying with §63.745(d), §63.746(c), or §63.747(d) through the use of a nonregenerative carbon adsorber, in lieu of the requirements of paragraph (b)(6)(iii) (B) or (C) of this section, the owner or operator may monitor the VOC or HAP concentration of the adsorber exhaust daily, at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater, or at a frequency as determined by the owner or operator and approved by the Administrator.

(iv) Owners or operators complying with §63.745(d), §63.746(c), or §63.747(d) through the use of a nonregenerative carbon adsorber and establishing a site-specific operating parameter for the carbon replacement time interval in accordance with paragraph (b)(2) shall replace the carbon in the carbon adsorber system with fresh carbon at the predetermined time interval as determined in the design evaluation.

(v) Owners or operators complying with §63.745(d), §63.746(c), or §63.747(d) by capturing emissions through a room, enclosure, or hood shall install, calibrate, operate, and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with paragraph (b)(3) of this section whenever VOC and HAP from coating and stripper operations are vented through the capture device. The capture device shall not be operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with paragraph (b)(3) of this section for any 3-hour period.

(7) Owners or operators complying with paragraph (b)(4) or (b)(5) of this section shall calculate the site-specific operating parameter value as the arithmetic average of the minimum operating parameter values that demonstrate compliance with §63.745(d)and §63.747(d) during the three test runs required by §63.750(h)(2)(iv).

(8) All temperature monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications. Every 3 months, facilities shall replace the temperature sensors or have the temperature sensors recalibrated. As an alternative, a facility may use a continuous emission monitoring system (CEMS) to verify that there has been no change in the destruction efficiency and effluent composition of the incinerator.

(9) Where an incinerator other than a catalytic incinerator is used, a thermocouple equipped with a continuous recorder shall be installed and continuously operated in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(10) Where a catalytic incinerator is used, thermocouples, each equipped with a continuous recorder, shall be installed and continuously operated in the gas stream immediately before and after the catalyst bed.

(11) For each incinerator other than a catalytic incinerator, each owner or operator shall establish during each performance test during which compliance is demonstrated, including the initial performance test, the minimum combustion temperature as a site-specific operating parameter. This minimum combustion temperature shall be the operating parameter value that demonstrates compliance with §63.745(d) and §63.747(d).

(12) For each catalytic incinerator, each owner or operator shall establish during each performance test during which compliance is demonstrated, including the initial performance test, the minimum gas temperature upstream of the catalyst bed and the minimum gas temperature difference across the catalyst bed as site-specific operating parameters. These minimum temperatures shall be the operating parameter values that demonstrate compliance with §63.745(d) and §63.747(d).

(c) *Dry particulate filter, HEPA filter, and waterwash systems—primer and topcoat application operations.* (1) Each owner or operator using a dry particulate filter system to meet the requirements of §63.745(g)(2) shall, while primer or topcoat application operations are occurring, continuously monitor the pressure drop across the system and read and record the pressure drop once per shift following the recordkeeping requirements of §63.752(d).

(2) Each owner or operator using a conventional waterwash system to meet the requirements of §63.745(g)(2) shall, while primer or topcoat application operations are occurring, continuously monitor the water flow rate through the system and read and record the water flow rate once per shift following the recordkeeping requirements of §63.752(d). Each owner or operator using a pumpless waterwash system to meet the requirements of §63.745(g)(2) shall, while primer and topcoat application operations are occurring, measure and record the parameter(s) recommended by the booth manufacturer that indicate booth performance once per shift, following the recordkeeping requirements of §63.752(d).

(d) *Particulate filters and waterwash booths—depainting operations.* Each owner or operator using a dry particulate filter or a conventional waterwash system in accordance with the requirements of §63.746(b)(4) shall, while depainting operations are occurring, continuously monitor the pressure drop across the particulate filters or the water flow rate through the conventional waterwash system and read and record the pressure drop or the water flow rate once per shift following the recordkeeping requirements of §63.752(e). Each owner or operator using a pumpless waterwash system to meet the requirements of §63.746(b)(4) shall, while depainting operations are occurring, measure and record the parameter(s) recommended by the booth manufacturer that indicate booth performance once per shift, following the recordkeeping requirements of §63.752(e).

(e) *Use of an alternative monitoring method* —(1) *General.* Until permission to use an alternative monitoring method has been granted by the Administrator under this paragraph, the owner or operator of an affected source shall remain subject to the requirements of this section.

(2) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring methods or procedures of this section including, but not limited to, the following:

(i) Alternative monitoring requirements when the affected source is infrequently operated; or

(ii) Alternative locations for installing continuous monitoring systems when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements; or

(iii) Alternatives to the American Society for Testing and Materials (ASTM) test methods or sampling procedures specified in this section.

(3) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative monitoring method, requirement, or procedure, the Administrator may require the use of a method, requirement, or procedure specified in this section. If the results of the specified and the alternative method, requirement, or procedure do not agree, the results obtained by the specified method, requirement, or procedure shall prevail.

(4)(i) *Request to use alternative monitoring method.* An owner or operator who wishes to use an alternative monitoring method shall submit an application to the Administrator as described in paragraph (e)(4)(ii) of this section. The application may be submitted at any time provided that the monitoring method is not used to demonstrate compliance with a relevant standard or other requirement. If the alternative monitoring method is to be used to demonstrate compliance with a relevant standard, the application shall be submitted not later than with the site-specific test plan required in §63.7(c) (if requested) or with the site-specific performance evaluation plan (if requested), or at least 60 days before the performance evaluation is scheduled to begin.

(ii) The application shall contain a description of the proposed alternative monitoring system and information justifying the owner's or operator's request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required method.

(iii) The owner or operator may submit the information required in this paragraph well in advance of the submittal dates specified in paragraph (e)(4)(i) of this section to ensure a timely review by the Administrator in order to meet the compliance demonstration date specified in this subpart.

(5) *Approval of request to use alternative monitoring method.* (i) The Administrator will notify the owner or operator of his/her intention to deny approval of the request to use an alternative monitoring method within 60 calendar days after receipt of the original request and within 60 calendar days after receipt of any supplementary information that is submitted. If notification of intent to deny approval is not received within 60 calendar days, the alternative monitoring method is to be considered approved. Before

disapproving any request to use an alternative monitoring method, the Administrator will notify the applicant of the Administrator's intent to disapprove the request together with:

(A) Notice of the information and findings on which the intended disapproval is based; and

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

(ii) If the Administrator approves the use of an alternative monitoring method for an affected source under paragraph (e)(5)(i) of this section, the owner or operator of such source shall continue to use the alternative monitoring method until approval is received from the Administrator to use another monitoring method as allowed by paragraph (e) of this section.

(f) *Reduction of monitoring data.* (1) The data may be recorded in reduced or nonreduced form (e.g., parts per million (ppm) pollutant and % O_2or nanograms per Joule (ng/J) of pollutant).

(2) All emission data shall be converted into units specified in this subpart for reporting purposes. After conversion into units specified in this subpart, the data may be rounded to the same number of significant digits as used in this subpart to specify the emission limit (e.g., rounded to the nearest 1% overall reduction efficiency).

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15023, Mar. 27, 1998; 63 FR 46534, Sept. 1, 1998; 65 FR 76945, Dec. 8, 2000]

§ 63.752 Recordkeeping requirements.

(a) *General.* Each owner or operator of a source subject to this subpart shall fulfill all recordkeeping requirements specified in §63.10 (a), (b), (d), and (f).

(b) *Cleaning operation.* Each owner or operator of a new or existing cleaning operation subject to this subpart shall record the information specified in paragraphs (b)(1) through (b)(5) of this section, as appropriate.

(1) The name, vapor pressure, and documentation showing the organic HAP constituents of each cleaning solvent used for affected cleaning operations at the facility.

(2) For each cleaning solvent used in hand-wipe cleaning operations that complies with the composition requirements specified in §63.744(b)(1) or for semi-aqueous cleaning solvents used for flush cleaning operations:

(i) The name of each cleaning solvent used;

(ii) All data and calculations that demonstrate that the cleaning solvent complies with one of the composition requirements; and

(iii) Annual records of the volume of each solvent used, as determined from facility purchase records or usage records.

(3) For each cleaning solvent used in hand-wipe cleaning operations that does not comply with the composition requirements in §63.744(b)(1), but does comply with the vapor pressure requirement in §63.744(b)(2):

(i) The name of each cleaning solvent used;

(ii) The composite vapor pressure of each cleaning solvent used;

(iii) All vapor pressure test results, if appropriate, data, and calculations used to determine the composite vapor pressure of each cleaning solvent; and

(iv) The amount (in gallons) of each cleaning solvent used each month at each operation.

(4) For each cleaning solvent used for the exempt hand-wipe cleaning operations specified in §63.744(e) that does not conform to the vapor pressure or composition requirements of §63.744(b):

(i) The identity and amount (in gallons) of each cleaning solvent used each month at each operation; and

(ii) A list of the processes set forth in §63.744(e) to which the cleaning operation applies.

(5) A record of all leaks from enclosed spray gun cleaners identified pursuant to §63.751(a) that includes for each leak found:

(i) Source identification;

(ii) Date leak was discovered; and

(iii) Date leak was repaired.

(c) *Primer and topcoat application operations—organic HAP and VOC.* Each owner or operator required to comply with the organic HAP and VOC content limits specified in §63.745(c) shall record the information specified in paragraphs (c)(1) through (c)(6) of this section, as appropriate.

(1) The name and VOC content as received and as applied of each primer and topcoat used at the facility.

(2) For uncontrolled primers and topcoats that meet the organic HAP and VOC content limits in §63.745(c)(1) through (c)(4) without averaging:

(i) The mass of organic HAP emitted per unit volume of coating as applied (less water) (H_i) and the mass of VOC emitted per unit volume of coating as applied (less water and exempt solvents) (G_i) for each coating formulation within each coating category used each month (as calculated using the procedures specified in §63.750(c) and (e));

(ii) All data, calculations, and test results (including EPA Method 24 results) used in determining the values of $H_i$and G_i; and

(iii) The volume (gal) of each coating formulation within each coating category used each month.

(3) For “low HAP content” uncontrolled primers with organic HAP content less than or equal to 250 g/l (2.1 lb/gal) less water as applied and VOC content less than or equal to 250 g/l (2.1 lb/gal) less water and exempt solvents as applied:

(i) Annual purchase records of the total volume of each primer purchased; and

(ii) All data, calculations, and test results (including EPA Method 24 results) used in determining the organic HAP and VOC content as applied. These records shall consist of the manufacturer's certification when the primer is applied as received, or the data and calculations used to determine $H_i$if not applied as received.

(4) For primers and topcoats complying with the organic HAP or VOC content level by averaging:

(i) The monthly volume-weighted average masses of organic HAP emitted per unit volume of coating as applied (less water) (H_a) and of VOC emitted per unit volume of coating as applied (less water and exempt solvents) (G_a) for all coatings (as determined by the procedures specified in §63.750(d) and (f)); and

(ii) All data, calculations, and test results (including EPA Method 24 results) used to determine the values of $H_a$and G_a.

(5) For primers and topcoats that are controlled by a control device other than a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in §63.750(h)) and all test results, data, and calculations used in determining the overall control efficiency;

(ii) If an incinerator other than a catalytic incinerator is used, continuous records of the firebox temperature recorded under §63.751(b)(9) and all calculated 3-hour averages of the firebox temperature; and

(iii) If a catalytic incinerator is used, continuous records of the temperature recorded under §63.751(b)(10) and all calculated 3-hour averages of the recorded temperatures.

(6) For primer and topcoats that are controlled by a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in §63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The length of the rolling material balance period and all data and calculations used for determining this rolling period. The record of the certification of the accuracy of the device that measures the amount of HAP or VOC recovered; or

(ii) For nonregenerative carbon adsorbers, the overall control efficiency of the control system (as determined using the procedures specified in §63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The record of the carbon replacement time established as the site-specific operating parameter to demonstrate compliance.

(d) *Primer and topcoat application operations—inorganic HAP emissions.* (1) Each owner or operator complying with §63.745(g) for the control of inorganic HAP emissions from primer and topcoat application operations through the use of a dry particulate filter system or a HEPA filter system shall record the pressure drop across the operating system once each shift during which coating operations occur.

(2) Each owner or operator complying with §63.745(g) through the use of a conventional waterwash system shall record the water flow rate through the operating system once each shift during which coating operations occur. Each owner or operator complying with §63.745(g) through the use of a pumpless waterwash system shall record the parameter(s) recommended by the booth manufacturer that indicate the performance of the booth once each shift during which coating operations occur.

(3) This log shall include the acceptable limit(s) of pressure drop, water flow rate, or for the pumpless waterwash booth, the booth manufacturer recommended parameter(s) that indicate the booth

performance, as applicable, as specified by the filter or booth manufacturer or in locally prepared operating procedures.

(e) *Depainting operations.* Each owner or operator subject to the depainting standards specified in §63.746 shall record the information specified in paragraphs (e)(1) through (e)(7) of this section, as appropriate.

(1) *General.* For all chemical strippers used in the depainting operation:

(i) The name of each chemical stripper; and

(ii) Monthly volumes of each organic HAP containing chemical stripper used or monthly weight of organic HAP-material used for spot stripping and decal removal.

(2) For HAP-containing chemical strippers that are controlled by a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in §63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The length of the rolling material balance period and all data and calculations used for determining this rolling period. The record of the certification of the accuracy of the device that measures the amount of HAP or VOC recovered; or

(ii) For nonregenerative carbon adsorbers, the overall control efficiency of the control system (as determined using the procedures specified in §63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The record of the carbon replacement time established as the site-specific operating parameter to demonstrate compliance.

(3) For HAP-containing chemical strippers that are controlled by a control device other than a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in §63.750(h)) and all test results, data, and calculations used in determining the overall control efficiency;

(ii) [Reserved]

(4) For each type of aircraft depainted at the facility, a listing of the parts, subassemblies, and assemblies normally removed from the aircraft before depainting. Prototype, test model or aircraft that exist in low numbers (i.e., less than 25 aircraft of any one type) are exempt from this requirement.

(5) *Non-chemical based equipment.* If dry media blasting equipment is used to comply with the organic HAP emission limit specified in §63.746(b)(1):

(i) The names and types of non-chemical based equipment; and

(ii) For periods of malfunction,

(A) The non-chemical method or technique that malfunctioned;

(B) The date that the malfunction occurred;

(C) A description of the malfunction;

(D) The methods used to depaint aerospace vehicles during the malfunction period;

(E) The dates that these methods were begun and discontinued; and

(F) The date that the malfunction was corrected.

(6) *Spot stripping and decal removal.* For spot stripping and decal removal, the volume of organic HAP-containing chemical stripper or weight of organic HAP used, the annual average volume of organic HAP-containing chemical stripper or weight of organic HAP used per aircraft, the annual number of aircraft stripped, and all data and calculations used.

(7) *Inorganic HAP emissions.* Each owner or operator shall record the actual pressure drop across the particulate filters or the visual continuity of the water curtain and water flow rate for conventional waterwash systems once each shift in which the depainting process is in operation. For pumpless waterwash systems, the owner or operator shall record the parameter(s) recommended by the booth manufacturer that indicate the performance of the booth once per shift in which the depainting process is in operation. This log shall include the acceptable limit(s) of the pressure drop as specified by the filter manufacturer, the visual continuity of the water curtain and the water flow rate for conventional waterwash systems, or the recommended parameter(s) that indicate the booth performance for pumpless systems as specified by the booth manufacturer or in locally prepared operating procedures.

(f) *Chemical milling maskant application operations.* Each owner or operator seeking to comply with the organic HAP and VOC content limits for the chemical milling maskant application operation, as specified in §63.747(c), or the control system requirements specified in §63.747(d), shall record the information specified in paragraphs (f)(1) through (f)(4) of this section, as appropriate.

(1) For uncontrolled chemical milling maskants that meet the organic HAP or VOC content limit without averaging:

(i) The mass of organic HAP emitted per unit volume of chemical milling maskant as applied (less water) (H_i) and the mass of VOC emitted per unit volume of chemical milling maskant as applied (less water and exempt solvents) (G_i) for each chemical milling maskant formulation used each month (as determined by the procedures specified in §63.750 (k) and (m));

(ii) All data, calculations, and test results (including EPA Method 24 results) used in determining the values of $H_i$and G_i; and

(iii) The volume (gal) of each chemical milling maskant formulation used each month.

(2) For chemical milling maskants complying with the organic HAP or VOC content level by averaging:

(i) The monthly volume-weighted average masses of organic HAP emitted per unit volume of chemical milling maskant as applied (less water) (H_a) and of VOC emitted per unit volume of chemical milling maskant as applied (less water and exempt solvents) (G_a) for all chemical milling maskants (as determined by the procedures specified in §63.750 (l) and (n)); and

(ii) All data, calculations, and test results (including EPA Method 24 results) used to determine the values of $H_a$and G_a.

(3) For chemical milling maskants that are controlled by a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in §63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency.

The length of the rolling material balance period and all data and calculations used for determining this rolling period. The record of the certification of the accuracy of the device that measures the amount of HAP or VOC recovered; or

(ii) For nonregenerative carbon adsorbers, the overall control efficiency of the control system (as determined using the procedures specified in §63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The record of the carbon replacement time established as the site-specific operating parameter to demonstrate compliance.

(4) For chemical milling maskants that are controlled by a control device other than a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in §63.750(h)) and all test results, data, and calculations used in determining the overall control efficiency;

(ii) If an incinerator other than a catalytic incinerator is used, continuous records of the firebox temperature recorded under §63.751(b)(9) and all calculated 3-hour averages of the firebox temperature; and

(iii) If a catalytic incinerator is used, continuous records of the temperature recorded under §63.751(b)(10) and all calculated 3-hour averages of the recorded temperatures.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15023, Mar. 27, 1998; 63 FR 46534, Sept. 1, 1998]

§ 63.753 Reporting requirements.

(a)(1) Except as provided in paragraphs (a)(2) and (a)(3) of this section, each owner or operator subject to this subpart shall fulfill the requirements contained in §63.9(a) through (e) and (h) through (j), Notification requirements, and §63.10(a), (b), (d), and (f), Recordkeeping and reporting requirements, of the General Provisions, 40 CFR part 63, subpart A, and that the initial notification for existing sources required in §63.9(b)(2) shall be submitted not later than September 1, 1997. In addition to the requirements of §63.9(h), the notification of compliance status shall include:

(i) Information detailing whether the source has operated within the specified ranges of its designated operating parameters.

(ii) For each coating line, where averaging will be used along with the types of quantities of coatings the facility expects to use in the first year of operation. Averaging scheme shall be approved by the Administrator or delegated State authority and shall be included as part of the facility's title V or part 70 permit.

(2) The initial notification for existing sources, required in §63.9(b)(2) shall be submitted no later than September 1, 1997. For the purposes of this subpart, a title V or part 70 permit application may be used in lieu of the initial notification required under §63.9(b)(2), provided the same information is contained in the permit application as required by §63.9(b)(2), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. Permit applications shall be submitted by the same due dates as those specified for the initial notifications.

(3) For the purposes of this subpart, the Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment to a particular time period or postmark deadline submitted under §63.9(i) within 30 calendar days of receiving sufficient information to evaluate the request, rather than 15 calendar days as provided for in §63.9(i)(3).

(b) *Cleaning operation.* Each owner or operator of a cleaning operation subject to this subpart shall submit the following information:

(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) Any instance where a noncompliant cleaning solvent is used for a non-exempt hand-wipe cleaning operation;

(ii) A list of any new cleaning solvents used for hand-wipe cleaning in the previous 6 months and, as appropriate, their composite vapor pressure or notification that they comply with the composition requirements specified in §63.744(b)(1);

(iii) Any instance where a noncompliant spray gun cleaning method is used;

(iv) Any instance where a leaking enclosed spray gun cleaner remains unrepaired and in use for more than 15 days; and

(v) If the operations have been in compliance for the semiannual period, a statement that the cleaning operations have been in compliance with the applicable standards. Sources shall also submit a statement of compliance signed by a responsible company official certifying that the facility is in compliance with all applicable requirements.

(c) *Primer and topcoat application operations.* Each owner or operator of a primer or topcoat application operation subject to this subpart shall submit the following information:

(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) For primers and topcoats where compliance is not being achieved through the use of averaging or a control device, each value of $H_i$and G_i, as recorded under §63.752(c)(2)(i), that exceeds the applicable organic HAP or VOC content limit specified in §63.745(c);

(ii) For primers and topcoats where compliance is being achieved through the use of averaging, each value of $H_a$and G_a, as recorded under §63.752(c)(4)(i), that exceeds the applicable organic HAP or VOC content limit specified in §63.745(c);

(iii) If incinerators are used to comply with the standards, all periods when the 3-hour average combustion temperature(s) is (are) less than the average combustion temperature(s) established under §63.751(b)(11) or (12) during the most recent performance test during which compliance was demonstrated;

(iv) If a carbon adsorber is used;

(A) each rolling period when the overall control efficiency of the control system is calculated to be less than 81%, the initial material balance calculation, and any exceedances as demonstrated through the calculation; or,

(B) for nonregenerative carbon adsorbers, submit the design evaluation, the continuous monitoring system performance report, and any excess emissions as demonstrated through deviations of monitored values.

(v) For control devices other than an incinerator or carbon adsorber, each exceedance of the operating parameter(s) established for the control device under the initial performance test during which compliance was demonstrated;

(vi) All times when a primer or topcoat application operation was not immediately shut down when the pressure drop across a dry particulate filter or HEPA filter system, the water flow rate through a conventional waterwash system, or the recommended parameter(s) that indicate the booth performance for pumpless systems, as appropriate, was outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operating procedures;

(vii) If the operations have been in compliance for the semiannual period, a statement that the operations have been in compliance with the applicable standards; and,

(2) Annual reports beginning 12 months after the date of the notification of compliance status listing the number of times the pressure drop or water flow rate for each dry filter or waterwash system, as applicable, was outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operating procedures.

(d) *Depainting operation.* Each owner or operator of a depainting operation subject to this subpart shall submit the following information:

(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) Any 24-hour period where organic HAP were emitted from the depainting of aerospace vehicles, other than from the exempt operations listed in §63.746 (a), (b)(3), and (b)(5).

(ii) Any new chemical strippers used at the facility during the reporting period;

(iii) The organic HAP content of these new chemical strippers;

(iv) For each chemical stripper that undergoes reformulation, its organic HAP content;

(v) Any new non-chemical depainting technique in use at the facility since the notification of compliance status or any subsequent semiannual report was filed;

(vi) For periods of malfunctions:

(A) The non-chemical method or technique that malfunctioned;

(B) The date that the malfunction occurred;

(C) A description of the malfunction;

(D) The methods used to depaint aerospace vehicles during the malfunction period;

(E) The dates that these methods were begun and discontinued; and

(F) The date that the malfunction was corrected;

(vii) All periods where a nonchemical depainting operation subject to §63.746(b)(2) and (b)(4) for the control of inorganic HAP emissions was not immediately shut down when the pressure drop, water flow

rate, or recommended booth parameter(s) was outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operational procedures;

(viii) A list of new and discontinued aircraft models depainted at the facility over the last 6 months and a list of the parts normally removed for depainting for each new aircraft model being depainted; and

(ix) If the depainting operation has been in compliance for the semiannual period, a statement signed by a responsible company official that the operation was in compliance with the applicable standards.

(2) Annual reports occurring every 12 months from the date of the notification of compliance status that identify:

(i) The average volume per aircraft of organic HAP-containing chemical strippers or weight of organic HAP used for spot stripping and decal removal operations if it exceeds the limits specified in §63.746(b)(3); and

(ii) The number of times the pressure drop limit(s) for each filter system or the number of times the water flow rate limit(s) for each waterwash system were outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operating procedures.

(3) Where a control device is used to control organic HAP emissions, semiannual reports that identify:

(i) If a carbon adsorber is used,

(A) each rolling period when the overall control efficiency of the control system is calculated to be less than 81% for existing systems or less than 95% for new systems, the initial material balance calculation, and any exceedances as demonstrated through the calculation; or,

(B) for nonregenerative carbon adsorbers, submit the design evaluation, the continuous monitoring system performance report, and any excess emissions as demonstrated through deviations of monitored values.

(ii) For control devices other than a carbon adsorber, each exceedance of the operating parameter(s) established for the control device under the initial performance test during which compliance was demonstrated;

(iii) Descriptions of any control devices currently in use that were not listed in the notification of compliance status or any subsequent report.

(e) *Chemical milling maskant application operation.* Each owner or operator of a chemical milling maskant application operation subject to this subpart shall submit semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(1) For chemical milling maskants where compliance is not being achieved through the use of averaging or a control device, each value of $H_i$and G_i, as recorded under §63.752(f)(1)(i), that exceeds the applicable organic HAP or VOC content limit specified in §63.747(c);

(2) For chemical milling maskants where compliance is being achieved through the use of averaging, each value of $H_a$and G_a, as recorded under §63.752(f)(2)(i), that exceeds the applicable organic HAP or VOC content limit specified in §63.747(c);

(3) Where a control device is used,

(i) If incinerators are used to comply with the standards, all periods when the 3-hour average combustion temperature(s) is (are) less than the average combustion temperature(s) established under §63.751(b)(11) or (12) during the most recent performance test during which compliance was demonstrated;

(ii) If a carbon adsorber is used,

(A) Each rolling period when the overall control efficiency of the control system is calculated to be less than 81%, the initial material balance calculation, and any exceedances as demonstrated through the calculation; or,

(B) For nonregenerative carbon adsorbers, submit the design evaluation, the continuous monitoring system performance report, and any excess emissions as demonstrated through deviations of monitored values.

(iii) For control devices other than an incinerator or carbon adsorber, each exceedance of the operating parameter(s) established for the control device under the initial performance test during which compliance was demonstrated;

(4) All chemical milling maskants currently in use that were not listed in the notification of compliance status or any other subsequent semiannual report;

(5) Descriptions of any control devices currently in use that were not listed in the notification of compliance status or any subsequent report; and

(6) If the operations have been in compliance for the semiannual period, a statement that the chemical milling maskant application operation has been in compliance with the applicable standards.

[60 FR 45956, Sept. 1, 1996; 61 FR 4903, Feb. 9, 1996, as amended at 61 FR 66227, Dec. 17, 1996; 63 FR 15023, Mar. 27, 1998; 63 FR 46535, Sept. 1, 1998]

§§ 63.754-63.758 [Reserved]

§ 63.759 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a 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 of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§63.741, 63.743, 63.744(a)(3), (b) through (e), 63.745 through 63.748, and 63.649(a).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

[68 FR 37352, June 23, 2003]

Table 1 to Subpart GG of Part 63—General Provisions Applicability to Subpart GG

Reference	Applies to affected sources in subpart GG	Comment
63.1(a)(1)	Yes	
63.1(a)(2)	Yes	
63.1(a)(3)	Yes	
63.1(a)(4)	Yes	
63.1(a)(5)	No	Reserved.
63.1(a)(6)	Yes	
63.1(a)(7)	Yes	
63.1(a)(8)	Yes	
63.1(a)(9)	No	Reserved.
63.1(a)(10)	Yes	
63.1(a)(11)	Yes	
63.1(a)(12)	Yes	
63.1(a)(13)	Yes	
63.1(a)(14)	Yes	
63.1(b)(1)	Yes	
63.1(b)(2)	Yes	
63.1(b)(3)	Yes	
63.1(c)(1)	Yes	
63.1(c)(2)	Yes	Subpart GG does not apply to area sources.
63.1(c)(3)	No	Reserved.
63.1(c)(4)	Yes	
63.1(c)(5)	Yes	
63.1(d)	No	Reserved.

Reference	Applies to affected sources in subpart GG	Comment
63.1(e)	Yes	
63.2	Yes	
63.3	Yes	
63.4(a)(1)	Yes	
63.4(a)(2)	Yes	
63.4(a)(3)	Yes	
63.4(a)(4)	No	Reserved.
63.4(a)(5)	Yes	
63.4(b)	Yes	
63.4(c)	Yes	
63.5(a)	Yes	
63.5(b)(1)	Yes	
63.5(b)(2)	No	Reserved.
63.5(b)(3)	Yes	
63.5(b)(4)	Yes	
63.5(b)(5)	Yes	
63.5(b)(6)	Yes	
63.5(c)	No	Reserved.
63.5(d)(1)(i)	Yes	
63.5(d)(1)(ii)(A)–(H)	Yes	
63.5(d)(1)(ii)(I)	No	Reserved.
63.5(d)(1)(ii)(J)	Yes	
63.5(d)(1)(iii)	Yes	
63.5(d)(2)–(4)	Yes	
63.5(e)	Yes	
63.5(f)	Yes	
63.6(a)	Yes	
63.6(b)(1)–(5)	Yes	§63.749(a) specifies compliance dates for new sources.

Reference	Applies to affected sources in subpart GG	Comment
63.6(b)(6)	No	Reserved.
63.6(b)(7)	Yes	
63.6(c)(1)	Yes	
63.6(c)(2)	No	The standards in subpart GG are promulgated under section 112(d) of the Act.
63.6(c)(3)–(4)	No	Reserved.
63.6(c)(5)	Yes	
63.6(d)	No	Reserved.
63.6(e)	Yes	63.743(b) includes additional provisions for the operation and maintenance plan.
63.6(f)	Yes	
63.6(g)	Yes	
63.6(h)	No	The standards in subpart GG do not include opacity standards.
63.6(i)(1)–(3)	Yes	
63.6(i)(4)(i)(A)	Yes	
63.6(i)(4)(i)(B)	No	§63.743(a)(4) specifies that requests for extension of compliance must be submitted no later than 120 days before an affected source's compliance date.
63.6(i)(4)(ii)	No	The standards in subpart GG are promulgated under section 112(d) of the Act.
63.6(i)(5)–(12)	Yes	
63.6(i)(13)	Yes	
63.6(i)(14)	Yes	
63.6(i)(15)	No	Reserved.
63.6(i)(16)	Yes	
63.6(j)	Yes	
63.7(a)(1)	Yes	
63.7(a)(2)(i)–(vi)	Yes	
63.7(a)(2)(vii)–(viii)	No	Reserved.
63.7(a)(2)(ix)	Yes	
63.7(a)(3)	Yes	

Reference	Applies to affected sources in subpart GG	Comment
63.7(b)	Yes	
63.7(c)	Yes	
63.7(d)	Yes	
63.7(e)	Yes	
63.7(f)	Yes	
63.7(g)(1)	Yes	
63.7(g)(2)	No	Reserved.
63.7(g)(3)	Yes	
63.7(h)	Yes	
63.8(a)(1)–(2)	Yes	
63.8(a)(3)	No	Reserved.
63.8(a)(4)	Yes	
63.8(b)	Yes	
63.8(c)	Yes	
63.8(d)	No	
63.8(e)(1)–(4)	Yes	
63.8(e)(5)(i)	Yes	
63.8(e)(5)(ii)	No	The standards in subpart GG do not include opacity standards.
63.8(f)(1)	Yes	
63.8(f)(2)(i)–(vii)	Yes	
63.8(f)(2)(viii)	No	The standards in subpart GG do not include opacity standards.
63.8(f)(2)(ix)	Yes	
63.8(f)(3)–(6)	Yes	
63.8(g)	Yes	
63.9(a)	Yes	
63.9(b)(1)	Yes	
63.9(b)(2)	Yes	§63.753(a)(1) requires submittal of the initial notification at least 1 year prior to the compliance date; §63.753(a)(2) allows a title V or part 70 permit application to be substituted for the initial notification in certain circumstances.

Reference	Applies to affected sources in subpart GG	Comment
63.9(b)(3)	Yes	
63.9(b)(4)	Yes	
63.9(b)(5)	Yes	
63.9(c)	Yes	
63.9(d)	Yes	
63.9(e)	Yes	
63.9(f)	No	The standards in subpart GG do not include opacity standards.
63.9(g)(1)	No	
63.9(g)(2)	No	The standards in subpart GG do not include opacity standards.
63.9(g)(3)	No	
63.9(h)(1)–(3)	Yes	§63.753(a)(1) also specifies additional information to be included in the notification of compliance status.
63.9(h)(4)	No	Reserved.
63.9(h)(5)–(6)	Yes	
63.9(i)	Yes	
63.9(j)	Yes	
63.10(a)	Yes	
63.10(b)	Yes	
63.10(c)(1)	No	
63.10(c)(2)–(4)	No	Reserved.
63.10(c)(5)–(8)	No	
63.10(c)(9)	No	Reserved.
63.10(c)(10)–(13)	No	
63.10(c)(14)	No	§63.8(d) does not apply to this subpart.
63.10(c)(15)	No	
63.10(d)(1)–(2)	Yes	
63.10(d)(3)	No	The standards in subpart GG do not include opacity standards.
63.10(d)(4)	Yes	
63.10(d)(5)	Yes	

Reference	Applies to affected sources in subpart GG	Comment
63.(10)(e)(1)	No	
63.10(e)(2)(i)	No	
63.10(e)(2)(ii)	No	The standards in subpart GG do not include opacity standards.
63.10(e)(3)	No	
63.10(e)(4)	No	The standards in subpart GG do not include opacity standards.
63.10(f)	Yes	
63.11	Yes	
63.12	Yes	
63.13	Yes	
63.14	Yes	
63.15	Yes	

[63 FR 15024, Mar. 27, 1998]

Appendix A to Subpart GG of Part 63—Specialty Coating Definitions

Ablative coating —A coating that chars when exposed to open flame or extreme temperatures, as would occur during the failure of an engine casing or during aerodynamic heating. The ablative char surface serves as an insulative barrier, protecting adjacent components from the heat or open flame.

Adhesion promoter —A very thin coating applied to a substrate to promote wetting and form a chemical bond with the subsequently applied material.

Adhesive bonding primer —A primer applied in a thin film to aerospace components for the purpose of corrosion inhibition and increased adhesive bond strength by attachment. There are two categories of adhesive bonding primers: primers with a design cure at 250 °F or below and primers with a design cure above 250 °F.

Aerosol coating —A hand-held, pressurized, nonrefillable container that expels an adhesive or a coating in a finely divided spray when a valve on the container is depressed.

Antichafe coating —A coating applied to areas of moving aerospace components that may rub during normal operations or installation.

Bearing coating —A coating applied to an antifriction bearing, a bearing housing, or the area adjacent to such a bearing in order to facilitate bearing function or to protect base material from excessive wear. A material shall not be classified as a bearing coating if it can also be classified as a dry lubricative material or a solid film lubricant.

Bonding maskant —A temporary coating used to protect selected areas of aerospace parts from strong acid or alkaline solutions during processing for bonding.

Caulking and smoothing compounds —Semi-solid materials which are applied by hand application methods and are used to aerodynamically smooth exterior vehicle surfaces or fill cavities such as bolt hole accesses. A material shall not be classified as a caulking and smoothing compound if it can also be classified as a sealant.

Chemical agent-resistant coating (CARC) —An exterior topcoat designed to withstand exposure to chemical warfare agents or the decontaminants used on these agents.

Clear coating —A transparent coating usually applied over a colored opaque coating, metallic substrate, or placard to give improved gloss and protection to the color coat. In some cases, a clearcoat refers to any transparent coating without regard to substrate.

Commercial exterior aerodynamic structure primer —A primer used on aerodynamic components and structures that protrude from the fuselage, such as wings and attached components, control surfaces, horizontal stabilizers, vertical fins, wing-to-body fairings, antennae, and landing gear and doors, for the purpose of extended corrosion protection and enhanced adhesion.

Commercial interior adhesive —Materials used in the bonding of passenger cabin interior components. These components must meet the FAA fireworthiness requirements.

Compatible substrate primer —Includes two categories: compatible epoxy primer and adhesive primer. *Compatible epoxy primer* is primer that is compatible with the filled elastomeric coating and is epoxy based. The compatible substrate primer is an epoxy-polyamide primer used to promote adhesion of elastomeric coatings such as impact-resistant coatings. *Adhesive primer* is a coating that (1) inhibits corrosion and serves as a primer applied to bare metal surfaces or prior to adhesive application, or (2) is applied to surfaces that can be expected to contain fuel. Fuel tank coatings are excluded from this category.

Corrosion prevention system —A coating system that provides corrosion protection by displacing water and penetrating mating surfaces, forming a protective barrier between the metal surface and moisture. Coatings containing oils or waxes are excluded from this category.

Critical use and line sealer maskant —A temporary coating, not covered under other maskant categories, used to protect selected areas of aerospace parts from strong acid or alkaline solutions such as those used in anodizing, plating, chemical milling and processing of magnesium, titanium, high-strength steel, high-precision aluminum chemical milling of deep cuts, and aluminum chemical milling of complex shapes. Materials used for repairs or to bridge gaps left by scribing operations (i.e. line sealer) are also included in this category.

Cryogenic flexible primer —A primer designed to provide corrosion resistance, flexibility, and adhesion of subsequent coating systems when exposed to loads up to and surpassing the yield point of the substrate at cryogenic temperatures (−275 °F and below).

Cryoprotective coating —A coating that insulates cryogenic or subcooled surfaces to limit propellant boil-off, maintain structural integrity of metallic structures during ascent or re-entry, and prevent ice formation.

Cyanoacrylate adhesive —A fast-setting, single component adhesive that cures at room temperature. Also known as “super glue.”

Dry lubricative material —A coating consisting of lauric acid, cetyl alcohol, waxes, or other non-cross linked or resin-bound materials which act as a dry lubricant.

Electric or radiation-effect coating —A coating or coating system engineered to interact, through absorption or reflection, with specific regions of the electromagnetic energy spectrum, such as the ultraviolet, visible, infrared, or microwave regions. Uses include, but are not limited to, lightning strike protection, electromagnetic pulse (EMP) protection, and radar avoidance. Coatings that have been designated as “classified” by the Department of Defense are exempt.

Electrostatic discharge and electromagnetic interference (EMI) coating —A coating applied to space vehicles, missiles, aircraft radomes, and helicopter blades to disperse static energy or reduce electromagnetic interference.

Elevated-temperature Skydrol-resistant commercial primer —A primer applied primarily to commercial aircraft (or commercial aircraft adapted for military use) that must withstand immersion in phosphate-ester (PE) hydraulic fluid (Skydrol 500b or equivalent) at the elevated temperature of 150 °F for 1,000 hours.

Epoxy polyamide topcoat —A coating used where harder films are required or in some areas where engraving is accomplished in camouflage colors.

Fire-resistant (interior) coating —For civilian aircraft, fire-resistant interior coatings are used on passenger cabin interior parts that are subject to the FAA fireworthiness requirements. For military aircraft, fire-resistant interior coatings are used on parts subject to the flammability requirements of MIL-STD-1630A and MIL-A-87721. For space applications, these coatings are used on parts subject to the flammability requirements of SE-R-0006 and SSP 30233.

Flexible primer —A primer that meets flexibility requirements such as those needed for adhesive bond primed fastener heads or on surfaces expected to contain fuel. The flexible coating is required because it provides a compatible, flexible substrate over bonded sheet rubber and rubber-type coatings as well as a flexible bridge between the fasteners, skin, and skin-to-skin joints on outer aircraft skins. This flexible bridge allows more topcoat flexibility around fasteners and decreases the chance of the topcoat cracking around the fasteners. The result is better corrosion resistance.

Flight test coating —A coating applied to aircraft other than missiles or single-use aircraft prior to flight testing to protect the aircraft from corrosion and to provide required marking during flight test evaluation.

Fuel tank adhesive —An adhesive used to bond components exposed to fuel and that must be compatible with fuel tank coatings.

Fuel tank coating —A coating applied to fuel tank components to inhibit corrosion and/or bacterial growth and to assure sealant adhesion in extreme environmental conditions.

High temperature coating —A coating designed to withstand temperatures of more than 350 °F.

Insulation covering —Material that is applied to foam insulation to protect the insulation from mechanical or environmental damage.

Intermediate release coating —A thin coating applied beneath topcoats to assist in removing the topcoat in depainting operations and generally to allow the use of less hazardous depainting methods.

Lacquer —A clear or pigmented coating formulated with a nitrocellulose or synthetic resin to dry by evaporation without a chemical reaction. Lacquers are resoluble in their original solvent.

Metalized epoxy coating —A coating that contains relatively large quantities of metallic pigmentation for appearance and/or added protection.

Mold release —A coating applied to a mold surface to prevent the molded piece from sticking to the mold as it is removed.

Nonstructural adhesive —An adhesive that bonds nonload bearing aerospace components in noncritical applications and is not covered in any other specialty adhesive categories.

Optical anti-reflection coating —A coating with a low reflectance in the infrared and visible wavelength ranges, which is used for anti-reflection on or near optical and laser hardware.

Part marking coating —Coatings or inks used to make identifying markings on materials, components, and/or assemblies. These markings may be either permanent or temporary.

Pretreatment coating —An organic coating that contains at least 0.5 percent acids by weight and is applied directly to metal or composite surfaces to provide surface etching, corrosion resistance, adhesion, and ease of stripping.

Rain erosion-resistant coating— A coating or coating system used to protect the leading edges of parts such as flaps, stabilizers, radomes, engine inlet nacelles, etc. against erosion caused by rain impact during flight.

Rocket motor bonding adhesive— An adhesive used in rocket motor bonding applications.

Rocket motor nozzle coating— A catalyzed epoxy coating system used in elevated temperature applications on rocket motor nozzles.

Rubber-based adhesive— Quick setting contact cements that provide a strong, yet flexible, bond between two mating surfaces that may be of dissimilar materials.

Scale inhibitor— A coating that is applied to the surface of a part prior to thermal processing to inhibit the formation of scale.

Screen print ink— Inks used in screen printing processes during fabrication of decorative laminates and decals.

Seal coat maskant— An overcoat applied over a maskant to improve abrasion and chemical resistance during production operations.

Sealant— A material used to prevent the intrusion of water, fuel, air, or other liquids or solids from certain areas of aerospace vehicles or components. There are two categories of sealants: extrudable/rollable/brushable sealants and sprayable sealants.

Silicone insulation material— Insulating material applied to exterior metal surfaces for protection from high temperatures caused by atmospheric friction or engine exhaust. These materials differ from ablative coatings in that they are not “sacrificial.”

Solid film lubricant— A very thin coating consisting of a binder system containing as its chief pigment material one or more of the following: molybdenum, graphite, polytetrafluoroethylene (PTFE), or other solids that act as a dry lubricant between faying surfaces.

Specialized function coatings— Coatings that fulfill extremely specific engineering requirements that are limited in application and are characterized by low volume usage. This category excludes coatings covered in other Specialty Coating categories.

Structural autoclavable adhesive— An adhesive used to bond load-carrying aerospace components that is cured by heat and pressure in an autoclave.

Structural nonautoclavable adhesive— An adhesive cured under ambient conditions that is used to bond load-carrying aerospace components or for other critical functions, such as nonstructural bonding in the proximity of engines.

Temporary protective coating— A coating applied to provide scratch or corrosion protection during manufacturing, storage, or transportation. Two types include peelable protective coatings and alkaline removable coatings. These materials are not intended to protect against strong acid or alkaline solutions. Coatings that provide this type of protection from chemical processing are not included in this category.

Thermal control coating— Coatings formulated with specific thermal conductive or radiative properties to permit temperature control of the substrate.

Touch-up and Repair Coating— A coating used to cover minor coating imperfections appearing after the main coating operation.

Wet fastener installation coating— A primer or sealant applied by dipping, brushing, or daubing to fasteners that are installed before the coating is cured.

Wing coating— A corrosion-resistant topcoat that is resilient enough to withstand the flexing of the wings.

[63 FR 15026, Mar. 27, 1998]

Indiana Department of Environmental Management
Office of Air Quality

Attachment D
to a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	Rolls Royce Corporation
Source Location:	Plant 8 - 2001 South Tibbs Ave., Indianapolis, IN 46241
	Plant 5 - 2355 South Tibbs Ave., Indianapolis, IN 46241
County:	Marion
SIC Code:	3724
Permit Renewal No.:	T097-25529-00311

Title 40: Protection of Environment
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart PPPPP—National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Stands

Source: 68 FR 28785, May 27, 2003, unless otherwise noted.

What This Subpart Covers

§ 63.9280 What is the purpose of subpart PPPPP?

This subpart PPPPP establishes national emission standards for hazardous air pollutants (NESHAP) for engine test cells/stands located at major sources of hazardous air pollutants (HAP) emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations contained in this NESHAP.

§ 63.9285 Am I subject to this subpart?

You are subject to this subpart if you own or operate an engine test cell/stand that is located at a major source of HAP emissions.

(a) An engine test cell/stand is any apparatus used for testing uninstalled stationary or uninstalled mobile (motive) engines.

(b) An uninstalled engine is an engine that is not installed in, or an integrated part of, the final product.

(c) 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.

§ 63.9290 What parts of my plant does this subpart cover?

This subpart applies to each new, reconstructed, or existing affected source.

(a) *Affected source.* An affected source is the collection of all equipment and activities associated with engine test cells/stands used for testing uninstalled stationary or uninstalled mobile (motive) engines located at a major source of HAP emissions.

(1) *Existing affected source.* An affected source is existing if you commenced construction or reconstruction of the affected source on or before May 14, 2002. A change in ownership of an existing affected source does not make that affected source a new or reconstructed affected source.

(2) *New affected source.* An affected source is new if you commenced construction of the affected source after May 14, 2002.

(3) *Reconstructed affected source.* An affected source is reconstructed if you meet the definition of reconstruction in §63.2 of subpart A of this part and reconstruction is commenced after May 14, 2002. Changes made to an existing affected source primarily for the purpose of complying with revisions to engine testing requirements under 40 CFR parts 80, 86, 89, 90, 91, or 92 are not considered a modification or reconstruction. In addition, passive measurement and control instrumentation and electronics are not included as part of any affected source reconstruction evaluation.

(b) Existing affected sources do not have to meet the requirements of this subpart and of subpart A of this part.

(c) Any portion of a new or reconstructed affected source located at a major source that is used exclusively for testing internal combustion engines with rated power of less than 25 horsepower (hp) (19 kilowatts(kW)) does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.9345(b).

(d) Any portion of a new or reconstructed affected source located at a major source that meets any of the criteria specified in paragraphs (d)(1) through (4) of this section does not have to meet the requirements of this subpart and of subpart A of this part.

(1) Any portion of the affected source used exclusively for testing combustion turbine engines.

(2) Any portion of the affected source used exclusively for testing rocket engines.

(3) Any portion of the affected source used in research and teaching activities at facilities that are not engaged in the development of engines or engine test services for commercial purposes.

(4) Any portion of the affected source operated to test or evaluate fuels (such as knock engines), transmissions, or electronics.

§ 63.9295 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you start up your new or reconstructed affected source before May 27, 2003, you must comply with the emission limitations in this subpart no later than May 27, 2003.

(2) If you start up your new or reconstructed affected source on or after May 27, 2003, you must comply with the emission limitations in this subpart upon startup.

(b) *Area sources that become major sources.* If your new or reconstructed affected source is located at an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, your new or reconstructed affected source must be in compliance with this subpart when the area source becomes a major source.

(c) You must meet the notification requirements in §63.9345 and in 40 CFR part 63, subpart A.

Emission Limitations

§ 63.9300 What emission limitations must I meet?

For each new or reconstructed affected source that is used in whole or in part for testing internal combustion engines with rated power of 25 hp (19 kW) or more and that is located at a major source, you must comply with the emission limitations in Table 1 to this subpart. (Tables are found at the end of this subpart.)

§ 63.9301 What are my options for meeting the emission limits?

You may use either a continuous parameter monitoring system (CPMS) or a continuous emission monitoring system (CEMS) to demonstrate compliance with the emission limitations. Continuous monitoring systems must meet the requirements in §63.9306 (CPMS) and §63.9307 (CEMS).

§ 63.9302 What operating limits must I meet?

(a) For any new or reconstructed affected source on which you use add-on controls, you must meet the operating limits specified in Table 2 to this subpart. These operating limits must be established during the performance test according to the requirements in §63.9324. You must meet the operating limits at all times after you establish them.

(b) If you use an add-on control device other than those listed in Table 2 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).

General Compliane Requirements

§ 63.9305 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitation that applies to you at all times, except during periods of startup, shutdown, or malfunction (SSM) of your control device or associated monitoring equipment.

(b) If you must comply with the emission limitation, you must operate and maintain your engine test cell/stand, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times.

(c) You must develop a written SSM plan (SSMP) for emission control devices and associated monitoring equipment according to the provisions in §63.6(e)(3). The plan will apply only to emission control devices, and not to engine test cells/stands.

[68 FR 28785, May 27, 2003, as amended at 71 FR 20470, Apr. 20, 2006]

§ 63.9306 What are my continuous parameter monitoring system (CPMS) installation, operation, and maintenance requirements?

(a) *General.* You must install, operate, and maintain each CPMS specified in paragraphs (c) and (d) of this section according to paragraphs (a)(1) through (7) of this section. You must install, operate, and

maintain each CPMS specified in paragraph (b) 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 an engine test cell/stand 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 (iv) 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 engine testing operation is stopped when flow is diverted by the bypass line away from the add-on control device to the atmosphere when an engine test cell/stand is operating. 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 engine test cell/stand in operation.

(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 §63.9350.

(c) *Thermal oxidizers and catalytic oxidizers.* If you are using a thermal oxidizer or catalytic oxidizer as an add-on control device, 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, you must install a gas temperature monitor in the gas stream immediately before the catalyst bed, and if you established operating limits according to §63.9324(b)(1) and (2), also install a gas temperature monitor in the gas stream immediately after the catalyst bed.

(i) If you establish operating limits according to §63.9324(b)(1) and (2), then you must install the gas temperature monitors both upstream and downstream of the catalyst bed. The temperature monitors must be in the gas stream immediately before and after the catalyst bed to measure the temperature difference across the bed.

(ii) If you establish operating limits according to §63.9324(b)(3) and (4), then you must install a gas temperature monitor upstream of the catalyst bed. The temperature monitor must be in the gas stream immediately before the catalyst bed to measure the temperature.

(3) For all thermal oxidizers and catalytic oxidizers, you must meet the requirements in paragraphs (a) and (c)(3)(i) through (vii) 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 4 degrees Fahrenheit or 0.75 percent of the temperature value, whichever is larger.

(iii) Shield the temperature sensor system from electromagnetic interference and chemical contaminants.

(iv) If a gas temperature chart recorder is used, it must have a measurement sensitivity in the minor division of at least 20 degrees Fahrenheit.

(v) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owner's manual. Following the electronic calibration, you must conduct a temperature sensor validation check in which a second or redundant temperature sensor placed near the process temperature sensor must yield a reading within 30 degrees Fahrenheit of the process temperature sensor reading.

(vi) Conduct calibration and validation checks anytime the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor.

(vii) At least monthly, inspect components for integrity and electrical connections for continuity, oxidation, and galvanic corrosion.

(d) Emission capture systems. The capture system monitoring system must comply with the applicable requirements in paragraphs (d)(1) and (2) of this section.

(1) For each flow measurement device, you must meet the requirements in paragraphs (a) and (d)(1)(i) through (iv) 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) Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(iii) Conduct a flow sensor calibration check at least semiannually.

(iv) At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.

(2) For each pressure drop measurement device, you must comply with the requirements in paragraphs (a) and (d)(2)(i) through (vi) 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) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(iii) Check pressure tap pluggage daily.

(iv) Using an inclined manometer with a measurement sensitivity of 0.0002 inch water, check gauge calibration quarterly and transducer calibration monthly.

(v) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

(vi) At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.

§ 63.9307 What are my continuous emissions monitoring system installation, operation, and maintenance requirements?

(a) You must install, operate, and maintain each CEMS to monitor carbon monoxide (CO) or total hydrocarbons (THC) and oxygen (O_2) at the outlet of the exhaust system of the engine test cell/stand or at the outlet of the emission control device.

(b) To comply with the CO or THC percent reduction emission limitation, you may install, operate, and maintain a CEMS to monitor CO or THC and O_2at both the inlet and the outlet of the emission control device.

(c) To comply with either emission limitations, the CEMS must be installed and operated according to the requirements described in paragraphs (c)(1) through (4) of this section.

(1) You must install, operate, and maintain each CEMS according to the applicable Performance Specification (PS) of 40 CFR part 60, appendix B (PS–3 or PS–4A).

(2) You must conduct a performance evaluation of each CEMS according to the requirements in 40 CFR 63.8 and according to PS–3 of 40 CFR part 60, appendix B, using Reference Method 3A or 3B for the O_2CEMS, and according to PS–4A of 40 CFR part 60, appendix B, using Reference Method 10 or 10B for the CO CEMS. If the fuel used in the engines being tested is natural gas, you may use ASTM D 6522–00, Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide and Oxygen Concentrations in Emissions from Natural Gas Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers (incorporated by reference, see §63.14). As an alternative to Method 3B, you may use ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus],” (incorporated by reference, see §63.14).

(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, each representing a different 15-minute period within the same hour, to have a valid hour of data.

(4) All CEMS data must be reduced as specified in §63.8(g)(2) and recorded as CO concentration in parts per million by volume, dry basis (ppmvd), corrected to 15 percent O_2content.

(d) If you have CEMS that are subject to paragraph (a) or (b) of this section, you must properly maintain and operate the monitors continuously according to the requirements described in paragraphs (d)(1) and (2) of this section.

(1) *Proper maintenance.* You must maintain the monitoring equipment at all times that the engine test cell/stand is operating, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(2) *Continued operation.* You must operate your CEMS according to paragraphs (d)(2)(i) and (ii) of this section.

(i) You must conduct all monitoring in continuous operation at all times that the engine test cell/stand is operating, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration drift checks and required zero and high-level adjustments). Quality assurance or control activities must be performed according to procedure 1 of 40 CFR part 60, appendix F.

(ii) Data recorded during monitoring malfunctions, associated repairs, out-of-control periods, and required quality assurance or control activities must not be used for purposes of calculating data averages. You must use all of the data collected from all other periods in assessing compliance. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring equipment 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 constitutes a deviation from the monitoring requirements.

Testing and Initial Compliance Requirements

§ 63.9310 By what date must I conduct the initial compliance demonstrations?

You must conduct the initial compliance demonstrations that apply to you in Table 3 to this subpart within 180 calendar days after the compliance date that is specified for your new or reconstructed affected source in §63.9295 and according to the provisions in §63.7(a)(2).

§ 63.9320 What procedures must I use?

(a) You must conduct each initial compliance demonstration that applies to you in Table 3 to this subpart.

(b) You must conduct an initial performance evaluation of each capture and control system according to §§63.9321, 63.9322, 63.9323 and 63.9324, and each CEMS according to the requirements in 40 CFR 63.8 and according to the applicable Performance Specification of 40 CFR part 60, appendix B (PS–3 or PS–4A).

(c) The initial demonstration of compliance with the carbon monoxide (CO) or total hydrocarbon (THC) concentration limitation consists of the first 4-hour rolling average CO or THC concentration recorded after completion of the CEMS performance evaluation. You must correct the CO or THC concentration at the outlet of the engine test cell/stand or the emission control device to a dry basis and to 15 percent O_2content according to Equation 1 of this section:

$$C_c = C_{unc}\left(\frac{5.9}{(20.9 - \%O_{2d})}\right) \qquad \text{(Eq. 1)}$$

Where:

C_c= concentration of CO or THC, corrected to 15 percent oxygen, ppmvd

C_{unc}= total uncorrected concentration of CO or THC, ppmvd

$\%O_{2d}$= concentration of oxygen measured in gas stream, dry basis, percent by volume.

(d) The initial demonstration of compliance with the CO or THC percent reduction emission limitation consists of the first 4-hour rolling average percent reduction in CO or THC recorded after completion of the performance evaluation of the capture/control system and/or CEMS. You must complete the actions described in paragraphs (d)(1) through (2) of this section.

(1) Correct the CO or THC concentrations at the inlet and outlet of the emission control device to a dry basis and to 15 percent O_2content using Equation 1 of this section.

(2) Calculate the percent reduction in CO or THC using Equation 2 of this section:

$$R = \frac{C_i - C_o}{C_i} \times 100 \qquad \text{(Eq. 2)}$$

Where:

R = percent reduction in CO or THC

C_i= corrected CO or THC concentration at inlet of the emission control device

C_o= corrected CO or THC concentration at the outlet of the emission control device.

§ 63.9321 What are the general requirements for performance tests?

(a) You must conduct each performance test required by §63.9310 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 engine testing conditions.* You must conduct the performance test under representative operating conditions for the test cell/stand. Operations during periods of SSM, 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 §63.9322. You must conduct each performance test of an add-on control device according to the requirements in §63.9323.

§ 63.9322 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 §63.9310.

(a) *Assuming 100 percent capture efficiency.* You may assume the capture system efficiency is 100 percent if both 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 potential to emit (PTE) and directs all the exhaust gases from the enclosure to an add-on control device.

(2) All engine test operations creating exhaust gases for which the test is applicable are conducted within the capture system.

(b) *Measuring capture efficiency.* If the capture system does not meet the criteria in paragraphs (a)(1) and (2) of this section, then you must use one of the two protocols described in paragraphs (c) and (d) of this section to measure capture efficiency. The capture efficiency measurements use total volatile hydrocarbon (TVH) capture efficiency as a surrogate for organic HAP capture efficiency. For the protocol in paragraph (c) of this section, the capture efficiency measurement must consist of three test runs. Each test run must be at least 3 hours in 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 engine test to go from the beginning to the end.

(c) *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 (c)(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 engine test cell/stand and all areas where emissions from the engine testing subsequently occur. 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 of appendix M to 40 CFR part 51 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 engine test cell/stand 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 1 of this section:

$$CE = \frac{TVH_{captured}}{\left(TVH_{captured} + TVH_{uncaptured}\right)} \times 100 \qquad \text{(Eq. 1)}$$

Where:

CE = capture efficiency of the emission capture system vented to the add-on control device, percent

$TVH_{captured}$= 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, determined according to paragraph (c)(2) of this section

$TVH_{uncaptured}$= 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, determined according to paragraph (c)(3) of this section.

(5) Determine the capture efficiency the emission capture system as the average of the capture efficiencies measured in the three test runs.

(d) *Alternative capture efficiency protocol.* As an alternative to the procedure specified in paragraph (c) of this section, you may determine capture efficiency using any other capture efficiency protocol and test methods that satisfy the criteria of either the data quality objective or lower control limit approach as described in appendix A to subpart KK of this part.

§ 63.9323 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 §63.9310. You must conduct three test runs as specified in §63.7(e)(3), and each test run must last at least 1 hour.

(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. The ANSI/ASME PTC 19.10–1981 Part 10 is an acceptable alternative to Method 3B (incorporated by reference, see §63.14).

(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, as specified in paragraphs (b)(1) through (3) of this section. You must use the same method for both the inlet and outlet measurements.

(1) Use Method 25 of appendix A to 40 CFR part 60 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 at the control device outlet.

(2) Use Method 25A of appendix A to 40 CFR part 60 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.

(c) 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.

$$M_f = Q_{sd} C_c (12)(0.0416)(10^{-6}) \qquad \text{(Eq. 1)}$$

Where:

M_f= total gaseous organic emissions mass flow rate, kg/hour (kg/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 (mol/m^3) (@ 293 Kelvin [K] and 760 millimeters of mercury [mmHg]).

(d) For each test run, determine the add-on control device organic emissions destruction or removal efficiency, using Equation 2 of this section:

$$DRE = 100 \times \frac{M_{fi} - M_{fo}}{M_{fi}} \qquad \text{(Eq. 2)}$$

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.

(e) 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.

§ 63.9324 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 §63.9310, you must establish the operating limits required by §63.9302 according to this section, unless you have received approval for alternative monitoring and operating limits under §63.8(f) as specified in §63.9302.

(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.

(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) As an alternative to monitoring the temperature difference across the catalyst bed, you may 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.

(ii) Monthly inspection of the 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 and monthly external visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must take corrective action consistent with the manufacturer's recommendation and conduct a new performance test to determine destruction efficiency according to §63.9323.

(c) *Emission capture system.* For each capture device that is not part of a PTE that meets the criteria of §63.9322(a), establish an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (c)(1) and (2) of this section. The operating limit for a PTE is specified in Table 3 to this subpart.

(1) During the capture efficiency determination required by §63.9310, 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.

§ 63.9330 How do I demonstrate initial compliance with the emission limitation?

(a) You must demonstrate initial compliance with the emission limitation that applies to you according to Table 3 to this subpart.

(b) You must submit the Notification of Compliance Status containing results of the initial compliance demonstration according to the requirements in §63.9345(c).

Continuous Compliance Requirements

§ 63.9335 How do I monitor and collect data to demonstrate continuous compliance?

(a) Except for monitor malfunctions, associated repairs, and required quality assurance or quality control activities (including, as applicable, calibration drift checks and required zero and high-level adjustments of the monitoring system), you must conduct all monitoring in continuous operation at all times the engine test cell/stand is operating.

(b) Do not use data recorded during monitor malfunctions, associated repairs, and required quality assurance or quality control activities for meeting the requirements of this subpart, including data averages and calculations. You must use all the data collected during all other periods in assessing the performance of the emission control device or in assessing emissions from the new or reconstructed affected source.

§ 63.9340 How do I demonstrate continuous compliance with the emission limitations?

(a) You must demonstrate continuous compliance with the emission limitation in Table 1 to this subpart that applies to you according to methods specified in Table 5 to this subpart.

(b) You must report each instance in paragraphs (b)(1) and (2) of this section. These instances are deviations from the emission limitation in this subpart and must be reported according to the requirements in §63.9350.

(1) You must report each instance in which you did not meet the emission limitation that applies to you.

(2) You must report each instance in which you did not meet the requirements in Table 7 to this subpart that apply to you.

(c) *Startups, shutdowns, and malfunctions.* (1) Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of SSM of control devices and associated monitoring equipment are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1).

(2) The Administrator will determine whether deviations that occur during a period of SSM of control devices and associated monitoring equipment are violations, according to the provisions in §63.6(e).

[68 FR 28785, May 27, 2003, as amended at 71 FR 20470, Apr. 20, 2006]

Notifications, Reports, and Records

§ 63.9345 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.8(e), 63.8(f)(4) and (6), and 63.9(b), (g)(1), (g)(2) and (h) that apply to you by the dates specified.

(b) If you own or operate a new or reconstructed test cell/stand used for testing internal combustion engines, you are required to submit an Initial Notification as specified in paragraphs (b)(1) through (3) of this section.

(1) As specified in §63.9(b)(2), if you start up your new or reconstructed affected source before the effective date of this subpart, you must submit an Initial Notification not later than 120 calendar days after May 27, 2003.

(2) As specified in §63.9(b), if you start up your new or reconstructed affected source on or after the effective date of this subpart, you must submit an Initial Notification not later than 120 calendar days after you become subject to this subpart.

(3) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.9290(c), your notification should include the information in §63.9(b)(2)(i) through (v) and a statement that your new or reconstructed engine test cell/stand has no additional requirements and explain the basis of the exclusion (for example, that the test cell/stand is used exclusively for testing internal combustion engines with rated power of less than 25 hp (19 kW)).

(c) If you are required to comply with the emission limitations in Table 1 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For each initial compliance demonstration with the emission limitation, you must submit the Notification of Compliance Status before the close of business on the 30th calendar day following the completion of the initial compliance demonstration.

(d) You must submit a notification of initial performance evaluation of your CEMS or performance testing of your control device at least 60 calendar days before the performance testing/evaluation is scheduled to begin as required in §63.8(e)(2).

§ 63.9350 What reports must I submit and when?

(a) If you own or operate a new or reconstructed affected source that must meet the emission limitation, you must submit a semiannual compliance report according to Table 6 to this subpart by the applicable dates specified in paragraphs (a)(1) through (6) of this section, unless the Administrator has approved a different schedule.

(1) The first semiannual compliance report must cover the period beginning on the compliance date specified in §63.9295 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 specified in §63.9295.

(2) The first semiannual 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 in §63.9295.

(3) Each subsequent semiannual 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) Each subsequent 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.

(5) For each new or reconstructed engine test cell/stand that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established the date 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 (a)(1) through (4) of this section.

(6) If you had an SSM of a control device or associated monitoring equipment during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in paragraphs §63.10(d)(5)(i).

(b) If there is no deviation from the applicable emission limitation and the CEMS or CPMS was not out-of-control, according to §63.8(c)(7), the semiannual compliance report must contain the information described in paragraphs (b)(1) through (4) of this section.

(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 report and beginning and ending dates of the reporting period.

(4) A statement that no deviation from the emission limit occurred during the reporting period and that no CEMS or CPMS was out-of-control, according to §63.8(c)(7).

(c) For each deviation from an emission limit, the semiannual compliance report must include the information in paragraphs (b)(1) through (3) of this section and the information included in paragraphs (c)(1) through (4) of this section.

(1) The date and time that each deviation started and stopped.

(2) The total operating time of each new or reconstructed engine test cell/stand during the reporting period.

(3) A summary of the total duration of the deviation during the reporting period (recorded in 4-hour periods), and the total duration as a percent of the total operating time during that reporting period.

(4) 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.

(d) For each CEMS or CPMS deviation, the semiannual compliance report must include the information in paragraphs (b)(1) through (3) of this section and the information included in paragraphs (d)(1) through (10) of this section.

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

(2) The date and time that each CEMS or CPMS was out-of-control including the information in §63.8(c)(8).

(3) A summary of the total duration of CEMS or CPMS downtime during the reporting period (reported in 4-hour periods), and the total duration of CEMS or CPMS downtime as a percent of the total engine test cell/stand operating time during that reporting period.

(4) A breakdown of the total duration of CEMS or CPMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes and other unknown causes.

(5) The monitoring equipment manufacturer(s) and model number(s) of each monitor.

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

(7) The date and time period of each deviation from an operating limit in Table 2 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 SSM or during another period.

(8) A summary of the total duration of each deviation from an operating limit in Table 2 to this subpart, 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.

(9) A breakdown of the total duration of the deviations from the operating limits in Table 2 to this subpart and bypasses of the add-on control device during the semiannual reporting period by identifying deviations due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(10) A description of any changes in CEMS, CPMS, or controls since the last reporting period.

(e) If you had an SSM of a control device or associated monitoring equipment during the semiannual reporting period that was not consistent with your SSMP, you must submit an immediate SSM report according to the requirements in §63.10(d)(5)(ii).

§ 63.9355 What records must I keep?

(a) You must keep the records as described in paragraphs (a)(1) through (5) 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 requirements in §63.10(b)(2)(xiv).

(2) Records of performance evaluations as required in §63.10(b)(2)(viii).

(3) Records of the occurrence and duration of each malfunction of the air pollution control equipment, if applicable, as required in §63.10(b)(2)(ii).

(4) Records of all maintenance on the air pollution control equipment, if applicable, as required in §63.10(b)(iii).

(5) The calculation of the mass of organic HAP emission reduction by emission capture systems and add-on control devices.

(b) For each CPMS, you must keep the records as described in paragraphs (b)(1) through (7) of this section.

(1) For each deviation, a record of whether the deviation occurred during a period of SSM of the control device and associated monitoring equipment.

(2) The records in §63.6(e)(3)(iii) through (v) related to SSM.

(3) The records required to show continuous compliance with each operating limit specified in Table 2 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 §63.9322(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 §§63.9321 and 63.9322(b) through (e), including the records specified in paragraphs (b)(5)(i) and (ii) of this section that apply to you.

(i) 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 C 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 E 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 an alternative protocol. Records needed to document a capture efficiency determination using an alternative method or protocol as specified in §63.9322(e), if applicable.

(6) The records specified in paragraphs (b)(6)(i) and (ii) of this section for each add-on control device organic HAP destruction or removal efficiency determination as specified in §63.9323.

(i) Records of each add-on control device performance test conducted according to §§63.9321, 63.9322, and 63.9323.

(ii) Records of the engine testing 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 §63.9324 and to document compliance with the operating limits as specified in Table 2 to this subpart.

(c) For each CEMS, you must keep the records as described in paragraphs (c)(1) through (4) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (i.e., superceded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Request for alternatives to the relative accuracy test for CEMS as required in §63.8(f)(6)(i), if applicable.

(4) The records in §63.6(e)(3)(iii) through (v) related to SSM of the control device and associated monitoring equipment.

(d) You must keep the records required in Table 5 to this subpart to show continuous compliance with each emission limitation that applies to you.

§ 63.9360 In what form and how long must I keep my records?

(a) You must maintain all applicable records in such a manner that they can be readily accessed and are suitable for inspection according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each records for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must retain your records of the most recent 2 years on site, or your records must be accessible on site. Your records of the remaining 3 years may be retained off site.

Other Requirements and Information

§ 63.9365 What parts of the General Provisions apply to me?

Table 7 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

§ 63.9370 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, 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, in addition to 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 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 section 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are described in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the emission limitations in §63.9300 under §63.6(g).

(2) Approval of major changes to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major changes to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major changes to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

§ 63.9375 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:

CAA means the Clean Air Act (42 U.S.C. 7401 et seq., as amended by Public Law 101–549, 104 Statute 2399).

Area source means any stationary source of HAP that is not a major source as defined in this part.

Combustion turbine engine means a device in which air is compressed in a compressor, enters a combustion chamber, and is compressed further by the combustion of fuel injected into the combustion chamber. The hot compressed combustion gases then expand over a series of curved vanes or blades arranged on a central spindle that rotates.

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 limitations;

(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 in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

Engine means any internal combustion engine, any combustion turbine engine, or any rocket engine.

Engine Test Cell/Stand means any apparatus used for testing uninstalled stationary or uninstalled mobile (motive) engines.

Hazardous Air Pollutant (HAP) means any air pollutant listed in or pursuant to section 112(b) of the CAA.

Internal combustion engine means a device in which air enters a combustion chamber, is mixed with fuel, compressed in the chamber, and combusted. Fuel may enter the combustion chamber with the air or be injected into the combustion chamber. Expansion of the hot combustion gases in the chamber rotates a shaft, either through a reciprocating or rotary action. For purposes of this subpart, this definition does not include combustion turbine engines.

Major source, as used in this subpart, shall have the same meaning as in §63.2.

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.

Rated power means the maximum power output of an engine in use.

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.

Responsible official means responsible official as defined by 40 CFR 70.2.

Rocket engine means a device consisting of a combustion chamber in which materials referred to as propellants, which provide both the fuel and the oxygen for combustion, are burned. Combustion gases escape through a nozzle, providing thrust.

Uninstalled engine means an engine not installed in, or an integrated part of, the final product.

[68 FR 28785, May 27, 2003, as amended at 71 FR 20470, Apr. 20, 2006]

Table 1 to Subpart PPPPP of Part 63—Emission Limitations

You must comply with the emission limits that apply to your affected source in the following table as required by §63.9300.

For each new or reconstructed affected source located at a major source facility that is used in whole or in part for testing . . .	You must meet one of the following emission limitations:
1. internal combustion engines with rated power of 25 hp (19 kW) or more	a. limit the concentration of CO or THC to 20 ppmvd or less (corrected to 15 percent O_2content); or b. achieve a reduction in CO or THC of 96 percent or more between the inlet and outlet concentrations (corrected to 15 percent O_2content) of the emission control device.

Table 2 to Subpart PPPPP of Part 63—Operating Limits

If you are required to comply with operating limits in §63.9302, you must comply with the applicable operating limits in the following table:

For the following device . . .	You must meet the following operating limit . . .	and you must demonstrate continuous compliance with the operating limit by . . .
1. Thermal oxidizer	a. The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to §63.9324(a)	i. Collecting the combustion temperature data according to §63.9306(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 §63.9324(b)	i. Collecting the temperature data according to §63.9306(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average temperature before the catalyst bed at or above the temperature limit.
	b. Either 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 §63.9324(b)(2) or develop and implement an inspection and maintenance plan according to §63.9324(b)(3) and (4)	i. Either collecting the temperature data according to §63.9306(c), reducing the data to 3-hour block averages, and maintaining the 3-hour average temperature difference at or above the temperature difference limit; or ii. Complying with the inspection and maintenance plan developed according to §63.9324(b)(3) and (4).

For the following device . . .	You must meet the following operating limit . . .	and you must demonstrate continuous compliance with the operating limit by . . .
3. Emission capture system that is a PTE according to §63.9322(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 §63.9306(d)(1) or the pressure drop across the enclosure according to §63.9306(d)(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 minute; or	Follow the requirements in 3ai and ii of this table.
	c. The pressure drop across the enclosure must be at least 0.007 inch H_2O, as established in Method 204 of appendix M to 40 CFR part 51	Follow the requirements in 3ai and ii of this table.
4. Emission capture system that is not a PTE according to §63.9322(a)	a. The average gas volumetric flow rate or duct static pressure in each duct between a capture device and 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 §63.9306(d)	i. Collecting the gas volumetric flow rate or duct static pressure for each capture device according to §63.9306(d); 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 limit.

Table 3 to Subpart PPPPP of Part 63—Requirements for Initial Compliance Demonstrations

As stated in §63.9321, you must demonstrate initial compliance with each emission limitation that applies to you according to the following table:

For each new or reconstructed affected source complying with . . .	You must . . .	Using . . .	According to the following requirements . . .
1. The CO or THC outlet concentration emission limitation	a. Demonstrate CO or THC emissions are 20 ppmvd or less	i. EPA Methods 3A and 10 of appendix A to 40 CFR part 60 for CO measurement or EPA Method 25A of appendix A to 40 CFR part 60 for THC measurement; or	You must demonstrate that the outlet concentration of CO or THC emissions from the test cell/stand or emission control device is 20 ppmvd or less, corrected to 15 percent O_2content, using the first 4-hour rolling average after a successful performance evaluation.

For each new or reconstructed affected source complying with . . .	You must . . .	Using . . .	According to the following requirements . . .
		ii. A CEMS for CO or THC and O_2at the outlet of the engine test cell/stand or emission control device	This demonstration is conducted immediately following a successful performance evaluation of the CEMS as required in §63.9320(b). The demonstration consists of the first 4-hour rolling average of measurements. The CO or THC concentration must be corrected to 15 percent O_2content, dry basis using Equation 1 in §63.9320.
2. The CO or THC percent reduction emission limitation	a. Demonstrate a reduction in CO or THC of 96 percent or more	i. You must conduct an initial performance test to determine the capture and control efficiencies of the equipment and to establish operating limits to be achieved on a continuous basis; or	You must demonstrate that the reduction in CO or THC emissions is at least 96 percent using the first 4-hour rolling average after a successful performance evaluation. Your inlet and outlet measurements must be on a dry basis and corrected to 15 percent O_2content.
		ii. A CEMS for CO or THC and O_2at both the inlet and outlet of the emission control device	This demonstration is conducted immediately following a successful performance evaluation of the CEMS as required in §63.9320(b). The demonstration consists of the first 4-hour rolling average of measurements. The inlet and outlet CO or THC concentrations must be corrected to 15 percent O_2content using Equation 1 in §63.9320. The reduction in CO or THC is calculated using Equation 2 in §63.9320.

Table 4 to Subpart PPPPP of Part 63—Initial Compliance With Emission Limitations

As stated in §63.9330, you must demonstrate initial compliance with each emission limitation that applies to you according to the following table:

For the . . .	You have demonstrated initial compliance if . . .
1. CO or THC concentration emission limitation	The first 4-hour rolling average CO or THC concentration is 20 ppmvd or less, corrected to 15 percent O_2content.
2. CO or THC percent reduction emission limitation	The first 4-hour rolling average reduction in CO or THC is 96 percent or more, dry basis, corrected to 15 percent O_2content.

Table 5 to Subpart PPPPP of Part 63—Continuous Compliance With Emission Limitations

As stated in §63.9340, you must demonstrate continuous compliance with each emission limitation that applies to you according to the following table:

For the . . .	You must . . .	By . . .
1. CO or THC concentration emission limitation	a. Demonstrate CO or THC emissions are 20 ppmvd or less over each 4-hour rolling averaging period	i. Collecting the CPMS data according to §63.9306(a), reducing the measurements to 1-hour averages; or ii. Collecting the CEMS data according to §63.9307(a), reducing the measurements to 1-hour averages, correcting them to 15 percent O_2content, dry basis, according to §63.9320;
2. CO or THC percent reduction emission limitation	a. Demonstrate a reduction in CO or THC of 96 percent or more over each 4-hour rolling averaging period	i. Collecting the CPMS data according to §63.9306(a), reducing the measurements to 1-hour averages; or ii. Collecting the CEMS data according to §63.9307(b), reducing the measurements to 1-hour averages, correcting them to 15 percent O_2content, dry basis, calculating the CO or THC percent reduction according to §63.9320.

Table 6 to Subpart PPPPP of Part 63—Requirements for Reports

As stated in §63.9350, you must submit each report that applies to you according to the following table:

If you own or operate a new or reconstructed affected source that must comply with emission limitations, you must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. If there are no deviations from the emission limitations that apply to you, a statement that there were no deviations from the emission limitations during the reporting period	Semiannually, according to the requirements in §63.9350.
	b. If there were no periods during which the CEMS or CPMS were out of control as specified in §63.8(c)(7), a statement that there were no periods during which the CEMS or CPMS was out of control during the reporting period	Semiannually, according to the requirements in §63.9350.
	c. If you have a deviation from any emission limitation during the reporting period, the report must contain the information in §63.9350(c)	Semiannually, according to the requirements in §63.9350.
	d. If there were periods during which the CEMS or CPMS were out of control, as specified in §63.8(c)(7), that report must contain the information in §63.9350(d)	Semiannually, according to the requirements in §63.9350.

If you own or operate a new or reconstructed affected source that must comply with emission limitations, you must submit a . . .	The report must contain . . .	You must submit the report . . .
	e. If you had an SSM of a control device or associated monitoring equipment during the reporting period, the report must include the information in §63.10(d)(5)(i)	Semiannually, according to the requirements in §63.9350.

Table 7 to Subpart PPPPP of Part 63—Applicability of General Provisions to Subpart PPPPP

As stated in 63.9365, you must comply with the General Provisions in §§63.1 through 63.15 that apply to you according to the following table:

Citation	Subject	Brief description	Applies to subpart PPPPP
§63.1(a)(1)	Applicability	General applicability of the General Provisions	Yes. Additional terms defined in §63.9375.
§63.1(a)(2)–(4)	Applicability	Applicability of source categories	Yes.
§63.1(a)(5)	[Reserved]		
§63.1(a)(6)–(7)	Applicability	Contact for source category information; extension of compliance through early reduction	Yes.
§63.1(a)(8)	Applicability	Establishment of State rules or programs	No. Refers to State programs.
§63.1(a)(9)	[Reserved]		
§63.1(a)(10)–(14)	Applicability	Explanation of time periods, postmark deadlines	Yes.
§63.1(b)(1)	Applicability	Initial applicability	Yes. Subpart PPPPP clarifies applicability at §63.9285.
§63.1(b)(2)	Applicability	Title V operating permit-reference to part 70	Yes. All major affected sources are required to obtain a Title V permit.
§63.1(b)(3)	Applicability	Record of applicability determination	Yes.
§63.1(c)(1)	Applicability	Applicability after standards are set	Yes. Subpart PPPPP clarifies the applicability of each paragraph of subpart A to sources subject to subpart PPPPP.

Citation	Subject	Brief description	Applies to subpart PPPPP
§63.1(c)(2)	Applicability	Title V permit requirement for area sources	No. Area sources are not subject to subpart PPPPP.
§63.1(c)(3)	[Reserved]		
§63.1(c)(4)	Applicability	Extension of compliance for existing sources	No. Existing sources are not covered by the substantive control requirements of subpart PPPPP.
§63.1(c)(5)	Applicability	Notification requirements for an area source becoming a major source	Yes.
§63.1(d)	[Reserved]		
§63.1(e)	Applicability	Applicability of permit program before a relevant standard has been set	Yes.
§63.2	Definitions	Definitions for Part 63 standards	Yes. Additional definitions are specified in §63.9375.
§63.3	Units and Abbreviations	Units and abbreviations for Part 63 standards	Yes.
§63.4	Prohibited Activities	Prohibited activities; compliance date; circumvention, severability	Yes.
§63.5(a)	Construction/Reconstruction	Construction and reconstruction—applicability	Yes.
§63.5(b)(1)	Construction/Reconstruction	Requirements upon construction or reconstruction	Yes.
§63.5(b)(2)	[Reserved].		
§63.5(b)(3)	Construction/Reconstruction	Approval of construction	Yes.
§63.5(b)(4)	Construction/Reconstruction	Notification of construction	Yes.
§63.5(b)(5)	Construction/Reconstruction	Compliance	Yes.
§63.5(b)(6)	Construction/Reconstruction	Addition of equipment	Yes.
§63.5(c)	[Reserved]		
§63.5(d)	Construction/Reconstruction	Application for construction reconstruction	Yes.
§63.5(e)	Construction/Reconstruction	Approval of construction or reconstruction	Yes.

Citation	Subject	Brief description	Applies to subpart PPPPP
§63.5(f)	Construction/Reconstruction	Approval of construction or reconstruction based on prior State review	Yes.
§63.6(a)	Applicability	Applicability of standards and monitoring requirements	Yes.
§63.6(b)(1)–(2)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for 112(f)	Yes.
§63.6(b)(3)	Compliance Dates for New and Reconstructed Sources	Compliance dates for sources constructed or reconstructed before effective date	No. Compliance is required by startup or effective date.
§63.6(b)(4)	Compliance Dates for New and Reconstructed Sources	Compliance dates for sources also subject to §112(f) standards	Yes.
§63.6(b)(5)	Compliance Dates for New and Reconstructed Sources	Notification	Yes.
§63.6(b)(6)	[Reserved].		
§63.6(b)(7)	Compliance Dates for New and Reconstructed Sources	Compliance dates for new and reconstructed area sources that become major	Yes.
§63.6(c)(1)–(2)	Compliance Dates for Existing Sources	Effective date establishes compliance date	No. Existing sources are not covered by the substantive control requirements of subpart PPPPP.
§63.6(c)(3)–(4)	[Reserved].		
§63.6(c)(5)	Compliance Dates for Existing Sources	Compliance dates for existing area sources that becomes major	Yes. If the area source become a major source by addition or reconstruction, the added or reconstructed portion will be subject to subpart PPPPP.
§63.6(d)	[Reserved].		
§63.6(e)(1)–(2)	Operation and Maintenance Requirements	Operation and maintenance	Yes. Except that you are not required to have an SSMP for control devices and associated monitoring equipment.

Citation	Subject	Brief description	Applies to subpart PPPPP
§63.6(e)(3)	SSMP	1. Requirement for SSM and SSMP 2. Content of SSMP.	Yes. You must develop an SSMP for each control device and associated monitoring equipment.
§63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM of control devices or associated monitoring equipment	Yes, but you must comply with emission standards at all times except during SSM of control devices and associated monitoring equipment only.
§63.6(f)(2)–(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§63.6(g)(1)–(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§63.6(h)	Opacity/Visible Emission (VE) Standards	Requirements for opacity/VE standards	No. Subpart PPPPP does not establish opacity/VE standards and does not require continuous opacity monitoring systems (COMS).
§63.6(i)(1)–(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	No. Compliance extension provisions apply to existing sources, which do not have emission limitations in subpart PPPPP.
§63.6(j)	Presidential Compliance Exemption	President may exempt source category from requirement to comply with rule	Yes.
§63.7(a)(1)–(2)	Performance Test Dates	Dates for conducting initial performance testing and other compliance demonstrations: Must conduct within 180 days after first subject to rule	Yes.
§63.7(a)(3)	Section 114 Authority	Administrator may require a performance test under CAA Section 114 at any time	Yes.
§63.7(b)(1)	Notification Performance Test	Must notify Administrator 60 days before the test	Yes.

Citation	Subject	Brief description	Applies to subpart PPPPP
§63.7(b)(2)	Notification of Rescheduling	If have to reschedule performance test, must notify Administrator 5 days before schedule date of rescheduled date	Yes.
§63.7(c)	Quality Assurance/Test Plan	1. Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with	Yes.
		2. Test plan approval procedures	Yes.
		3. Performance audit requirements	Yes.
		4. Internal and external QA procedures for testing	Yes.
§63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
§63.7(e)(1)	Conditions for Conducting Performance Tests	Performance tests must be conducted under representative conditions; cannot conduct performance tests during SSM; not a violation to exceed standard during SSM	Yes.
§63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to rule and EPA test methods unless Administrator approves alternative	Yes.
§63.7(e)(3)	Test Run Duration	1. Must have three test runs of at least 1 hour each	Yes.
		2. Compliance is based on arithmetic mean of three runs	Yes.
		3. Conditions when data from an additional test run can be used	Yes.
§63.7(e)(4)	Other Performance Testing	Administrator may require other testing under section 114 of the CAA	Yes.
§63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an alternative test method	Yes.
§63.7(g)	Performance Test Data Analysis	1. Must include raw data in performance test report	Yes.

Citation	Subject	Brief description	Applies to subpart PPPPP
		2. Must submit performance test data 60 days after end of test with the Notification of Compliance Status	Yes.
		3. Keep data for 5 years	Yes.
§63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes. Subpart PPPPP contains specific requirements for monitoring at §63.9325.
§63.8(a)(2)	Performance Specifications	Performance Specifications in appendix B of part 60 apply	Yes.
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring with Flares	Unless your rule says otherwise, the requirements for flares in 63.11 apply	No. Subpart PPPPP does not have monitoring requirements for flares.
§63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§63.8(b)(2)–(3)	Multiple Effluents and Multiple Monitoring Systems	1. Specific requirements for installing monitoring systems	Yes.
		2. Must install on each effluent before it is combined and before it is released to the atmosphere unless Administrator approves otherwise	Yes.
		3. If more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	Yes.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	Yes.
§63.8(c)(1)(i)	Routine and predictable CMS malfunctions	1. Keep parts for routine repairs of CMS readily available 2. Reporting requirements for SSM when action is described in SSMP	Yes.

Citation	Subject	Brief description	Applies to subpart PPPPP
		3. Reporting requirements for SSM when action is described in SSMP	Yes.
§63.8(c)(1)(ii)	SSM of CMS Not in SSMP	Reporting requirements for SSM of CMS when action is not described in SSMP	Yes.
§63.8(c)(1)(iii)	Compliance with Operation and Maintenance Requirements	1. How Administrator determines if source complying with operation and maintenance requirements 2. Review of source O&M procedures, records, manufacturer's instructions and recommendations, and inspection	Yes.
§63.8(c)(2)–(3)	Monitoring System Installation	1. Must install to get representative emission of parameter measurements	Yes.
		2. Must verify operational status before or at performance test	Yes.
§63.8(c)(4)	Continuous Monitoring System (CMS) Requirements	1. CMS must be operating except during breakdown, out of control, repair, maintenance, and high-level calibration drifts	No. Follow specific requirements in §63.9335(a) and (b) of subpart PPPPP.
		2. COMS must have a minimum of one cycle of sampling and analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period	No. Follow specific requirements in §63.9335(a) and (b) of subpart PPPP.
		3. CEMS must have a minimum of one cycle of operation for each successive 15-minute period	No. Follow specific requirements in §63.9335(a) and (b) of subpart PPPPP.
§63.8(c)(5)	COMS Minimum Procedures	COMS minimum procedures	No. Subpart PPPPP does not have opacity/VE standards.
§63.8(c)(6)–(8)	CMS Requirements	Zero and high-level calibration check requirements, out-of-control periods	Yes. Except that PPPP does not require COMS.
§63.8(d)	CMS Quality Control	1. Requirements for CMS quality control, including calibration, etc	Yes.

Citation	Subject	Brief description	Applies to subpart PPPPP
		2. Must keep quality control plan on record for 5 years. Keep old versions for 5 years after revisions	Yes.
§63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	Yes. Except for §63.8(e)(5)(ii), which applies to COMS.
§63.8(f)(1)–(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	Yes.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for CEMS	Yes.
§63.8(g)	Data Reduction	1. COMS 6-minute averages calculated over at least 36 evenly spaced data points 2. CEMS 1-hour averages computed over at least 4 equally spaced data points	Yes. Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §63.9340.
§63.8(g)(5)	Data Reduction	Data that cannot be used in computing averages for CEMS and COMS	No. Specific language is located at §63.9335(a).
§63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§63.9(b)(1)–(5)	Initial Notifications	1. Submit notification subject 120 days after effective date	Yes.
		2. Notification of intent to construct/ reconstruct; notification of commencement of construct/ reconstruct; notification of startup	Yes.
		3. Contents of each	Yes.
§63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed BACT/LAER	No. Compliance extensions do not apply to new or reconstructed sources.
§63.9(d)	Notification of Special Compliance Requirements for New Source	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	No. Subpart PPPPP does not require performance testing.

Citation	Subject	Brief description	Applies to subpart PPPPP
§63.9(f)	Notification of Opacity/VE Test	Notify Administrator 30 days prior	No. Subpart PPPPP does not have opacity/VE standards.
§63.9(g)(1)	Additional Notifications when Using CMS	Notification of performance evaluation	Yes.
§63.9(g)(2)	Additional Notifications when Using CMS	Notification of use of COMS data	No. Subpart PPPPP does not contain opacity or VE standards.
§63.9(g)(3)	Additional Notifications when Using CMS	Notification that exceeded criterion for relative accuracy	Yes. If alternative is in use.
§63.9(h)(1)–(6)	Notification of Compliance Status	1. Contents	Yes.
		2. Due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after	Yes.
		3. When to submit to Federal vs. State authority	Yes.
§63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change in when notifications must be submitted	Yes.
§63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
§63.10(a)	Recordkeeping/Reporting	1. Applies to all, unless compliance extension	Yes.
		2. When to submit to Federal vs. State authority	Yes.
		3. Procedures for owners of more than one source	Yes.
§63.10(b)(1)	Recordkeeping/Reporting	1. General requirements	Yes.
		2. Keep all records readily available	Yes.
		3. Keep for 5 years	Yes.
§63.10(b)(2)(i)–(v)	Records Related to SSM	1. Occurrence of each of operation (process equipment)	Yes.
		2. Occurrence of each malfunction of air pollution equipment	Yes.

Citation	Subject	Brief description	Applies to subpart PPPPP
		3. Maintenance on air pollution control equipment	Yes.
		4. Actions during SSM	Yes.
		5. All information necessary to demonstrate conformance with the SSMP	Yes.
§63.10(b)(2)(vi)–(xi)	CMS Records	Malfunctions, inoperative, out of control	Yes.
§63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.
§63.10(b)(2)(xiv)	Records	All documentation supporting initial notification and notification of compliance status	Yes.
§63.10(b)(3)	Records	Applicability determinations	Yes.
§63.10(c)(1)–(6), (9)–(15)	Records	Additional records for CEMS	Yes.
§63.10(c)(7)–(8)	Records	Records of excess emissions and parameter monitoring exceedances for CMS	No. Specific language is located at §63.9355 of subpart PPPPP.
§63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	No. Subpart PPPPP does not have opacity/VE standards.
§63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	No. Compliance extensions do not apply to new or reconstructed sources.
§63.10(d)(5)	SSM Reports	Contents and submission	Yes.
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Additional CMS reports	Yes.
§63.10(e)(2)(ii)	Additional CMS Reports	COMS-related report	No. Subpart PPPPP does not require COMS.
§63.10(e)(3)	Additional CMS Reports	Excess emissions and parameter exceedances reports	No. Specific language is located in §63.9350 of subpart PPPPP.

Citation	Subject	Brief description	Applies to subpart PPPPP
§63.10(e)(4)	Additional CMS Reports	Reporting COMS data	No. Subpart PPPPP does not require COMS.
§63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for Administrator to waive	Yes.
§63.11	Control Device Requirements	Requirements for flares	No. Subpart PPPPP does not specify use of flares for compliance.
§63.12	State Authority and Delegations	State authority to enforce standards	Yes.
§63.13	Addresses of State Air Pollution Control Offices and EPA Regional Offices	Addresses where reports, notifications, and requests are sent	Yes.
§63.14	Incorporations by Reference	Test methods incorporated by reference	Yes. ASTM D 6522–00 and ANSI/ASME PTC 19.10–1981 (incorporated by reference-See §63.14).
§63.15	Availability of Information and Confidentiality	Public and confidential information	Yes.

[68 FR 28785, May 27, 2003, as amended at 71 FR 20470, Apr. 20, 2006]

Indiana Department of Environmental Management
Office of Air Quality

Attachment E
to a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	Rolls Royce Corporation
Source Location:	Plant 8 - 2001 South Tibbs Ave., Indianapolis, IN 46241
	Plant 5 - 2355 South Tibbs Ave., Indianapolis, IN 46241
County:	Marion
SIC Code:	3724
Permit Renewal No.:	T097-25529-00311

Title 40: Protection of Environment
PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart KKKK—Standards of Performance for Stationary Combustion Turbines

Source: 71 FR 38497, July 6, 2006, unless otherwise noted.

Introduction

§ 60.4300 What is the purpose of this subpart?

This subpart establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005.

Applicability

§ 60.4305 Does this subpart apply to my stationary combustion turbine?

(a) If you are the owner or operator of a stationary combustion turbine with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005, your turbine is subject to this subpart. Only heat input to the combustion turbine should be included when determining whether or not this subpart is applicable to your turbine. Any additional heat input to associated heat recovery steam generators (HRSG) or duct burners should not be included when determining your peak heat input. However, this subpart does apply to emissions from any associated HRSG and duct burners.

(b) Stationary combustion turbines regulated under this subpart are exempt from the requirements of subpart GG of this part. Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of subparts Da, Db, and Dc of this part.

§ 60.4310 What types of operations are exempt from these standards of performance?

(a) Emergency combustion turbines, as defined in §60.4420(i), are exempt from the nitrogen oxides (NO_X) emission limits in §60.4320.

(b) Stationary combustion turbines engaged by manufacturers in research and development of equipment for both combustion turbine emission control techniques and combustion turbine efficiency improvements are exempt from the NO_Xemission limits in §60.4320 on a case-by-case basis as determined by the Administrator.

(c) Stationary combustion turbines at integrated gasification combined cycle electric utility steam generating units that are subject to subpart Da of this part are exempt from this subpart.

(d) Combustion turbine test cells/stands are exempt from this subpart.

Emission Limits

§ 60.4315 What pollutants are regulated by this subpart?

The pollutants regulated by this subpart are nitrogen oxide (NO_X) and sulfur dioxide (SO_2).

§ 60.4320 What emission limits must I meet for nitrogen oxides (NOX)?

(a) You must meet the emission limits for NO_Xspecified in Table 1 to this subpart.

(b) If you have two or more turbines that are connected to a single generator, each turbine must meet the emission limits for NO_X.

§ 60.4325 What emission limits must I meet for NOXif my turbine burns both natural gas and distillate oil (or some other combination of fuels)?

You must meet the emission limits specified in Table 1 to this subpart. If your total heat input is greater than or equal to 50 percent natural gas, you must meet the corresponding limit for a natural gas-fired turbine when you are burning that fuel. Similarly, when your total heat input is greater than 50 percent distillate oil and fuels other than natural gas, you must meet the corresponding limit for distillate oil and fuels other than natural gas for the duration of the time that you burn that particular fuel.

§ 60.4330 What emission limits must I meet for sulfur dioxide (SO_2)?

(a) If your turbine is located in a continental area, you must comply with either paragraph (a)(1), (a)(2), or (a)(3) of this section. If your turbine is located in Alaska, you do not have to comply with the requirements in paragraph (a) of this section until January 1, 2008.

(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO_2in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output;

(2) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement; or

(3) For each stationary combustion turbine burning at least 50 percent biogas on a calendar month basis, as determined based on total heat input, you must not cause to be discharged into the atmosphere from the affected source any gases that contain SO_2in excess of 65 ng SO_2/J (0.15 lb SO_2/MMBtu) heat input.

(b) If your turbine is located in a noncontinental area or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit, you must comply with one or the other of the following conditions:

(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO_2in excess of 780 ng/J (6.2 lb/MWh) gross output, or

(2) You must not burn in the subject stationary combustion turbine any fuel which contains total sulfur with potential sulfur emissions in excess of 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.

[71 FR 38497, July 6, 2006, as amended at 74 FR 11861, Mar. 20, 2009]

General Compliance Requirements

§ 60.4333 What are my general requirements for complying with this subpart?

(a) You must operate and maintain your stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

(b) When an affected unit with heat recovery utilizes a common steam header with one or more combustion turbines, the owner or operator shall either:

(1) Determine compliance with the applicable NO_Xemissions limits by measuring the emissions combined with the emissions from the other unit(s) utilizing the common heat recovery unit; or

(2) Develop, demonstrate, and provide information satisfactory to the Administrator on methods for apportioning the combined gross energy output from the heat recovery unit for each of the affected combustion turbines. The Administrator may approve such demonstrated substitute methods for apportioning the combined gross energy output measured at the steam turbine whenever the demonstration ensures accurate estimation of emissions related under this part.

Monitoring

§ 60.4335 How do I demonstrate compliance for NOXif I use water or steam injection?

(a) If you are using water or steam injection to control NO_Xemissions, you must install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine when burning a fuel that requires water or steam injection for compliance.

(b) Alternatively, you may use continuous emission monitoring, as follows:

(1) Install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a NO_Xmonitor and a diluent gas (oxygen (O_2) or carbon dioxide (CO_2)) monitor, to determine the hourly NO_Xemission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu); and

(2) For units complying with the output-based standard, install, calibrate, maintain, and operate a fuel flow meter (or flow meters) to continuously measure the heat input to the affected unit; and

(3) For units complying with the output-based standard, install, calibrate, maintain, and operate a watt meter (or meters) to continuously measure the gross electrical output of the unit in megawatt-hours; and

(4) For combined heat and power units complying with the output-based standard, install, calibrate, maintain, and operate meters for useful recovered energy flow rate, temperature, and pressure, to continuously measure the total thermal energy output in British thermal units per hour (Btu/h).

§ 60.4340 How do I demonstrate continuous compliance for NOXif I do not use water or steam injection?

(a) If you are not using water or steam injection to control NO_Xemissions, you must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NO_Xemission result from the performance test is less than or equal to 75 percent of the NO_Xemission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_Xemission limit for the turbine, you must resume annual performance tests.

(b) As an alternative, you may install, calibrate, maintain and operate one of the following continuous monitoring systems:

(1) Continuous emission monitoring as described in §§60.4335(b) and 60.4345, or

(2) Continuous parameter monitoring as follows:

(i) For a diffusion flame turbine without add-on selective catalytic reduction (SCR) controls, you must define parameters indicative of the unit's NO_Xformation characteristics, and you must monitor these parameters continuously.

(ii) For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low-NO_Xmode.

(iii) For any turbine that uses SCR to reduce NO_Xemissions, you must continuously monitor appropriate parameters to verify the proper operation of the emission controls.

(iv) For affected units that are also regulated under part 75 of this chapter, with state approval you can monitor the NO_Xemission rate using the methodology in appendix E to part 75 of this chapter, or the low mass emissions methodology in §75.19, the requirements of this paragraph (b) may be met by performing the parametric monitoring described in section 2.3 of part 75 appendix E or in §75.19(c)(1)(iv)(H).

§ 60.4345 What are the requirements for the continuous emission monitoring system equipment, if I choose to use this option?

If the option to use a NO_XCEMS is chosen:

(a) Each NO_Xdiluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B to this part, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in appendix F to this part is not required. Alternatively, a NO_Xdiluent CEMS that is installed and certified according to appendix A of part 75 of this chapter is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis.

(b) As specified in §60.13(e)(2), during each full unit operating hour, both the NO_Xmonitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NO_Xemission rate for the hour.

(c) Each fuel flowmeter shall be installed, calibrated, maintained, and operated according to the manufacturer's instructions. Alternatively, with state approval, fuel flowmeters that meet the installation, certification, and quality assurance requirements of appendix D to part 75 of this chapter are acceptable for use under this subpart.

(d) Each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer's instructions.

(e) The owner or operator shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of this section. For the CEMS and fuel flow meters, the owner or operator may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in section 1 of appendix B to part 75 of this chapter.

§ 60.4350 How do I use data from the continuous emission monitoring equipment to identify excess emissions?

For purposes of identifying excess emissions:

(a) All CEMS data must be reduced to hourly averages as specified in §60.13(h).

(b) For each unit operating hour in which a valid hourly average, as described in §60.4345(b), is obtained for both $NO_X$and diluent monitors, the data acquisition and handling system must calculate and record the hourly NO_Xemission rate in units of ppm or lb/MMBtu, using the appropriate equation from method 19 in appendix A of this part. For any hour in which the hourly average O_2concentration exceeds 19.0 percent O_2(or the hourly average CO_2concentration is less than 1.0 percent CO_2), a diluent cap value of 19.0 percent O_2or 1.0 percent CO_2(as applicable) may be used in the emission calculations.

(c) Correction of measured NO_Xconcentrations to 15 percent $O_2$is not allowed.

(d) If you have installed and certified a NO_Xdiluent CEMS to meet the requirements of part 75 of this chapter, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under §60.7(c).

(e) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages.

(f) Calculate the hourly average NO_Xemission rates, in units of the emission standards under §60.4320, using either ppm for units complying with the concentration limit or the following equation for units complying with the output based standard:

(1) For simple-cycle operation:

$$E = \frac{(NO_x)_h * (HI)_h}{P} \qquad \text{(Eq. 1)}$$

Where:

E = hourly NO_Xemission rate, in lb/MWh,

$(NO_X)_h$= hourly NO_Xemission rate, in lb/MMBtu,

$(HI)_h$= hourly heat input rate to the unit, in MMBtu/h, measured using the fuel flowmeter(s), *e.g.* , calculated using Equation D–15a in appendix D to part 75 of this chapter, and

P = gross energy output of the combustion turbine in MW.

(2) For combined-cycle and combined heat and power complying with the output-based standard, use Equation 1 of this subpart, except that the gross energy output is calculated as the sum of the total electrical and mechanical energy generated by the combustion turbine, the additional electrical or mechanical energy (if any) generated by the steam turbine following the heat recovery steam generator, and 100 percent of the total useful thermal energy output that is not used to generate additional electricity or mechanical output, expressed in equivalent MW, as in the following equations:

$$P = (Pe)_t + (Pe)_c + Ps + Po \qquad \text{(Eq. 2)}$$

Where:

P = gross energy output of the stationary combustion turbine system in MW.

$(Pe)_t$= electrical or mechanical energy output of the combustion turbine in MW,

$(Pe)_c$= electrical or mechanical energy output (if any) of the steam turbine in MW, and

$$Ps = \frac{Q * H}{3.413 \times 10^6 \text{ Btu/MWh}} \qquad \text{(Eq. 3)}$$

Where:

Ps = useful thermal energy of the steam, measured relative to ISO conditions, not used to generate additional electric or mechanical output, in MW,

Q = measured steam flow rate in lb/h,

H = enthalpy of the steam at measured temperature and pressure relative to ISO conditions, in Btu/lb, and 3.413 x 10_6= conversion from Btu/h to MW.

Po = other useful heat recovery, measured relative to ISO conditions, not used for steam generation or performance enhancement of the combustion turbine.

(3) For mechanical drive applications complying with the output-based standard, use the following equation:

$$E = \frac{(NO_x)_m}{BL * AL} \qquad (Eq. 4)$$

Where:

E = NO_Xemission rate in lb/MWh,

$(NO_X)_m$= NO_Xemission rate in lb/h,

BL = manufacturer's base load rating of turbine, in MW, and

AL = actual load as a percentage of the base load.

(g) For simple cycle units without heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section to assess excess emissions on a 4-hour rolling average basis, as described in §60.4380(b)(1).

(h) For combined cycle and combined heat and power units with heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section to assess excess emissions on a 30 unit operating day rolling average basis, as described in §60.4380(b)(1).

§ 60.4355 How do I establish and document a proper parameter monitoring plan?

(a) The steam or water to fuel ratio or other parameters that are continuously monitored as described in §§60.4335 and 60.4340 must be monitored during the performance test required under §60.8, to establish acceptable values and ranges. You may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. You must develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO_Xemission controls. The plan must:

(1) Include the indicators to be monitored and show there is a significant relationship to emissions and proper operation of the NO_Xemission controls,

(2) Pick ranges (or designated conditions) of the indicators, or describe the process by which such range (or designated condition) will be established,

(3) Explain the process you will use to make certain that you obtain data that are representative of the emissions or parameters being monitored (such as detector location, installation specification if applicable),

(4) Describe quality assurance and control practices that are adequate to ensure the continuing validity of the data,

(5) Describe the frequency of monitoring and the data collection procedures which you will use (e.g., you are using a computerized data acquisition over a number of discrete data points with the average (or maximum value) being used for purposes of determining whether an exceedance has occurred), and

(6) Submit justification for the proposed elements of the monitoring. If a proposed performance specification differs from manufacturer recommendation, you must explain the reasons for the

differences. You must submit the data supporting the justification, but you may refer to generally available sources of information used to support the justification. You may rely on engineering assessments and other data, provided you demonstrate factors which assure compliance or explain why performance testing is unnecessary to establish indicator ranges. When establishing indicator ranges, you may choose to simplify the process by treating the parameters as if they were correlated. Using this assumption, testing can be divided into two cases:

(i) All indicators are significant only on one end of range (e.g., for a thermal incinerator controlling volatile organic compounds (VOC) it is only important to insure a minimum temperature, not a maximum). In this case, you may conduct your study so that each parameter is at the significant limit of its range while you conduct your emissions testing. If the emissions tests show that the source is in compliance at the significant limit of each parameter, then as long as each parameter is within its limit, you are presumed to be in compliance.

(ii) Some or all indicators are significant on both ends of the range. In this case, you may conduct your study so that each parameter that is significant at both ends of its range assumes its extreme values in all possible combinations of the extreme values (either single or double) of all of the other parameters. For example, if there were only two parameters, A and B, and A had a range of values while B had only a minimum value, the combinations would be A high with B minimum and A low with B minimum. If both A and B had a range, the combinations would be A high and B high, A low and B low, A high and B low, A low and B high. For the case of four parameters all having a range, there are 16 possible combinations.

(b) For affected units that are also subject to part 75 of this chapter and that have state approval to use the low mass emissions methodology in §75.19 or the NO_Xemission measurement methodology in appendix E to part 75, you may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a QA plan, as described in §75.19(e)(5) or in section 2.3 of appendix E to part 75 of this chapter and section 1.3.6 of appendix B to part 75 of this chapter.

§ 60.4360 How do I determine the total sulfur content of the turbine's combustion fuel?

You must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in §60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17), which measure the major sulfur compounds, may be used.

§ 60.4365 How can I be exempted from monitoring the total sulfur content of the fuel?

You may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input for units located in continental areas and 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input for units located in noncontinental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. You must use one of the following sources of information to make the required demonstration:

(a) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for noncontinental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur or less per 100 standard cubic feet for noncontinental areas, has potential sulfur emissions of less than less than 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input for continental areas and has potential sulfur emissions of less than less than 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input for noncontinental areas; or

(b) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input for continental areas or 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input for noncontinental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

§ 60.4370 How often must I determine the sulfur content of the fuel?

The frequency of determining the sulfur content of the fuel must be as follows:

(a) *Fuel oil.* For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix D to part 75 of this chapter (*i.e.* , flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank).

(b) *Gaseous fuel.* If you elect not to demonstrate sulfur content using options in §60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating day.

(c) *Custom schedules.* Notwithstanding the requirements of paragraph (b) of this section, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in paragraphs (c)(1) and (c)(2) of this section, custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in §60.4330.

(1) The two custom sulfur monitoring schedules set forth in paragraphs (c)(1)(i) through (iv) and in paragraph (c)(2) of this section are acceptable, without prior Administrative approval:

(i) The owner or operator shall obtain daily total sulfur content measurements for 30 consecutive unit operating days, using the applicable methods specified in this subpart. Based on the results of the 30 daily samples, the required frequency for subsequent monitoring of the fuel's total sulfur content shall be as specified in paragraph (c)(1)(ii), (iii), or (iv) of this section, as applicable.

(ii) If none of the 30 daily measurements of the fuel's total sulfur content exceeds half the applicable standard, subsequent sulfur content monitoring may be performed at 12-month intervals. If any of the samples taken at 12-month intervals has a total sulfur content greater than half but less than the applicable limit, follow the procedures in paragraph (c)(1)(iii) of this section. If any measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section.

(iii) If at least one of the 30 daily measurements of the fuel's total sulfur content is greater than half but less than the applicable limit, but none exceeds the applicable limit, then:

(A) Collect and analyze a sample every 30 days for 3 months. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, follow the procedures in paragraph (c)(1)(iii)(B) of this section.

(B) Begin monitoring at 6-month intervals for 12 months. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, follow the procedures in paragraph (c)(1)(iii)(C) of this section.

(C) Begin monitoring at 12-month intervals. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, continue to monitor at this frequency.

(iv) If a sulfur content measurement exceeds the applicable limit, immediately begin daily monitoring according to paragraph (c)(1)(i) of this section. Daily monitoring shall continue until 30 consecutive daily samples, each having a sulfur content no greater than the applicable limit, are obtained. At that point, the applicable procedures of paragraph (c)(1)(ii) or (iii) of this section shall be followed.

(2) The owner or operator may use the data collected from the 720-hour sulfur sampling demonstration described in section 2.3.6 of appendix D to part 75 of this chapter to determine a custom sulfur sampling schedule, as follows:

(i) If the maximum fuel sulfur content obtained from the 720 hourly samples does not exceed 20 grains/100 scf, no additional monitoring of the sulfur content of the gas is required, for the purposes of this subpart.

(ii) If the maximum fuel sulfur content obtained from any of the 720 hourly samples exceeds 20 grains/100 scf, but none of the sulfur content values (when converted to weight percent sulfur) exceeds half the applicable limit, then the minimum required sampling frequency shall be one sample at 12 month intervals.

(iii) If any sample result exceeds half the applicable limit, but none exceeds the applicable limit, follow the provisions of paragraph (c)(1)(iii) of this section.

(iv) If the sulfur content of any of the 720 hourly samples exceeds the applicable limit, follow the provisions of paragraph (c)(1)(iv) of this section.

Reporting

§ 60.4375 What reports must I submit?

(a) For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, you must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

(b) For each affected unit that performs annual performance tests in accordance with §60.4340(a), you must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test.

§ 60.4380 How are excess emissions and monitor downtime defined for NOX?

For the purpose of reports required under §60.7(c), periods of excess emissions and monitor downtime that must be reported are defined as follows:

(a) For turbines using water or steam to fuel ratio monitoring:

(1) An excess emission is any unit operating hour for which the 4-hour rolling average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with §60.4320, as established during the performance test required in §60.8. Any unit operating hour in which no water or steam is injected into the turbine when a

fuel is being burned that requires water or steam injection for NO_Xcontrol will also be considered an excess emission.

(2) A period of monitor downtime is any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid.

(3) Each report must include the average steam or water to fuel ratio, average fuel consumption, and the combustion turbine load during each excess emission.

(b) For turbines using continuous emission monitoring, as described in §§60.4335(b) and 60.4345:

(1) An excess emissions is any unit operating period in which the 4-hour or 30-day rolling average NO_Xemission rate exceeds the applicable emission limit in §60.4320. For the purposes of this subpart, a "4-hour rolling average NO_Xemission rate" is the arithmetic average of the average NO_Xemission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NO_Xemission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NO_Xemission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a "30-day rolling average NO_Xemission rate" is the arithmetic average of all hourly NO_Xemission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NO_Xemissions rates for the preceding 30 unit operating days if a valid NO_Xemission rate is obtained for at least 75 percent of all operating hours.

(2) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO_Xconcentration, CO2 or O_2concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

(3) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

(c) For turbines required to monitor combustion parameters or parameters that document proper operation of the NO_Xemission controls:

(1) An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit.

(2) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid.

§ 60.4385 How are excess emissions and monitoring downtime defined for SO_2?

If you choose the option to monitor the sulfur content of the fuel, excess emissions and monitoring downtime are defined as follows:

(a) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the

fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

(b) If the option to sample each delivery of fuel oil has been selected, you must immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. You must continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and you must evaluate excess emissions according to paragraph (a) of this section. When all of the fuel from the delivery has been burned, you may resume using the as-delivered sampling option.

(c) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

§ 60.4390 What are my reporting requirements if I operate an emergency combustion turbine or a research and development turbine?

(a) If you operate an emergency combustion turbine, you are exempt from the NO_Xlimit and must submit an initial report to the Administrator stating your case.

(b) Combustion turbines engaged by manufacturers in research and development of equipment for both combustion turbine emission control techniques and combustion turbine efficiency improvements may be exempted from the NO_Xlimit on a case-by-case basis as determined by the Administrator. You must petition for the exemption.

§ 60.4395 When must I submit my reports?

All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

Performance Tests

§ 60.4400 How do I conduct the initial and subsequent performance tests, regarding NOX?

(a) You must conduct an initial performance test, as required in §60.8. Subsequent NO_Xperformance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).

(1) There are two general methodologies that you may use to conduct the performance tests. For each test run:

(i) Measure the NO_Xconcentration (in parts per million (ppm)), using EPA Method 7E or EPA Method 20 in appendix A of this part. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then, use the following equation to calculate the NO_Xemission rate:

$$E = \frac{1.194 \times 10^{-7} * (NO_X)_c * Q_{std}}{P} \qquad \text{(Eq. 5)}$$

Where:

E = NO_Xemission rate, in lb/MWh

1.194×10^{-7}= conversion constant, in lb/dscf-ppm

$(NO_X)_c$= average NO_Xconcentration for the run, in ppm

Q_{std}= stack gas volumetric flow rate, in dscf/hr

P = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or

(ii) Measure the $NO_X$and diluent gas concentrations, using either EPA Methods 7E and 3A, or EPA Method 20 in appendix A of this part. Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the NO_Xemission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the NO_Xemission rate in lb/MWh.

(2) Sampling traverse points for $NO_X$and (if applicable) diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

(3) Notwithstanding paragraph (a)(2) of this section, you may test at fewer points than are specified in EPA Method 1 or EPA Method 20 in appendix A of this part if the following conditions are met:

(i) You may perform a stratification test for $NO_X$and diluent pursuant to

(A) [Reserved], or

(B) The procedures specified in section 6.5.6.1(a) through (e) of appendix A of part 75 of this chapter.

(ii) Once the stratification sampling is completed, you may use the following alternative sample point selection criteria for the performance test:

(A) If each of the individual traverse point NO_Xconcentrations is within ±10 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±5ppm or ±0.5 percent CO_2(or O_2) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NO_Xconcentration during the stratification test; or

(B) For turbines with a NO_Xstandard greater than 15 ppm @ 15% O_2, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NO_Xconcentrations is within ±5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±3ppm or ±0.3 percent CO_2(or O_2) from the mean for all traverse points; or

(C) For turbines with a NO_Xstandard less than or equal to 15 ppm @ 15% O_2, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NO_Xconcentrations is within ±2.5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±1ppm or ±0.15 percent CO_2(or O_2) from the mean for all traverse points.

(b) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. You may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. You must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes.

(1) If the stationary combustion turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.

(2) For a combined cycle and CHP turbine systems with supplemental heat (duct burner), you must measure the total NO_Xemissions after the duct burner rather than directly after the turbine. The duct burner must be in operation during the performance test.

(3) If water or steam injection is used to control $NO_X$with no additional post-combustion NO_Xcontrol and you choose to monitor the steam or water to fuel ratio in accordance with §60.4335, then that monitoring system must be operated concurrently with each EPA Method 20 or EPA Method 7E run and must be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable §60.4320 NO_Xemission limit.

(4) Compliance with the applicable emission limit in §60.4320 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NO_Xemission rate at each tested level meets the applicable emission limit in §60.4320.

(5) If you elect to install a CEMS, the performance evaluation of the CEMS may either be conducted separately or (as described in §60.4405) as part of the initial performance test of the affected unit.

(6) The ambient temperature must be greater than 0 °F during the performance test.

§ 60.4405 How do I perform the initial performance test if I have chosen to install a NOX-diluent CEMS?

If you elect to install and certify a NO_X-diluent CEMS under §60.4345, then the initial performance test required under §60.8 may be performed in the following alternative manner:

(a) Perform a minimum of nine RATA reference method runs, with a minimum time per run of 21 minutes, at a single load level, within plus or minus 25 percent of 100 percent of peak load. The ambient temperature must be greater than 0 °F during the RATA runs.

(b) For each RATA run, concurrently measure the heat input to the unit using a fuel flow meter (or flow meters) and measure the electrical and thermal output from the unit.

(c) Use the test data both to demonstrate compliance with the applicable NO_Xemission limit under §60.4320 and to provide the required reference method data for the RATA of the CEMS described under §60.4335.

(d) Compliance with the applicable emission limit in §60.4320 is achieved if the arithmetic average of all of the NO_Xemission rates for the RATA runs, expressed in units of ppm or lb/MWh, does not exceed the emission limit.

§ 60.4410 How do I establish a valid parameter range if I have chosen to continuously monitor parameters?

If you have chosen to monitor combustion parameters or parameters indicative of proper operation of NO_Xemission controls in accordance with §60.4340, the appropriate parameters must be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in §60.4355.

§ 60.4415 How do I conduct the initial and subsequent performance tests for sulfur?

(a) You must conduct an initial performance test, as required in §60.8. Subsequent SO_2performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests.

(1) If you choose to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see §60.17) for natural gas or ASTM D4177 (incorporated by reference, see §60.17) for oil. Alternatively, for oil, you may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference, see §60.17). The fuel analyses of this section may be performed either by you, a service contractor retained by you, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using:

(i) For liquid fuels, ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see §60.17); or

(ii) For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17).

(2) Measure the SO_2concentration (in parts per million (ppm)), using EPA Methods 6, 6C, 8, or 20 in appendix A of this part. In addition, the American Society of Mechanical Engineers (ASME) standard, ASME PTC 19–10–1981–Part 10, “Flue and Exhaust Gas Analyses,” manual methods for sulfur dioxide (incorporated by reference, see §60.17) can be used instead of EPA Methods 6 or 20. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then use the following equation to calculate the SO_2emission rate:

$$E = \frac{1.664 \times 10^{-7} * (SO_2)_c * Q_{std}}{P} \qquad \text{(Eq. 6)}$$

Where:

E = SO_2emission rate, in lb/MWh

1.664×10^{-7}= conversion constant, in lb/dscf-ppm

$(SO_2)_c$= average SO_2concentration for the run, in ppm

Q_{std}= stack gas volumetric flow rate, in dscf/hr

P = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and

mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or

(3) Measure the $SO_2$and diluent gas concentrations, using either EPA Methods 6, 6C, or 8 and 3A, or 20 in appendix A of this part. In addition, you may use the manual methods for sulfur dioxide ASME PTC 19–10–1981–Part 10 (incorporated by reference, see §60.17). Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the SO_2emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the SO_2emission rate in lb/MWh.

(b) [Reserved]

Definitions

§ 60.4420 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein will have the meaning given them in the Clean Air Act and in subpart A (General Provisions) of this part.

Biogas means gas produced by the anaerobic digestion or fermentation of organic matter including manure, sewage sludge, municipal solid waste, biodegradable waste, or any other biodegradable feedstock, under anaerobic conditions. Biogas is comprised primarily of methane and CO_2.

Combined cycle combustion turbine means any stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to generate steam that is only used to create additional power output in a steam turbine.

Combined heat and power combustion turbine means any stationary combustion turbine which recovers heat from the exhaust gases to heat water or another medium, generate steam for useful purposes other than additional electric generation, or directly uses the heat in the exhaust gases for a useful purpose.

Combustion turbine model means a group of combustion turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

Combustion turbine test cell/stand means any apparatus used for testing uninstalled stationary or uninstalled mobile (motive) combustion turbines.

Diffusion flame stationary combustion turbine means any stationary combustion turbine where fuel and air are injected at the combustor and are mixed only by diffusion prior to ignition.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary combustion turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.

Efficiency means the combustion turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output—based on the higher heating value of the fuel.

Emergency combustion turbine means any stationary combustion turbine which operates in an emergency situation. Examples include stationary combustion turbines used to produce power for critical networks or equipment, including power supplied to portions of a facility, when electric power from the local utility is interrupted, or stationary combustion turbines used to pump water in the case of fire or

flood, etc. Emergency stationary combustion turbines do not include stationary combustion turbines used as peaking units at electric utilities or stationary combustion turbines at industrial facilities that typically operate at low capacity factors. Emergency combustion turbines may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are required by the manufacturer, the vendor, or the insurance company associated with the turbine. Required testing of such units should be minimized, but there is no time limit on the use of emergency combustion turbines.

Excess emissions means a specified averaging period over which either (1) the NO_Xemissions are higher than the applicable emission limit in §60.4320; (2) the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in §60.4330; or (3) the recorded value of a particular monitored parameter is outside the acceptable range specified in the parameter monitoring plan for the affected unit.

Gross useful output means the gross useful work performed by the stationary combustion turbine system. For units using the mechanical energy directly or generating only electricity, the gross useful work performed is the gross electrical or mechanical output from the turbine/generator set. For combined heat and power units, the gross useful work performed is the gross electrical or mechanical output plus the useful thermal output (i.e., thermal energy delivered to a process).

Heat recovery steam generating unit means a unit where the hot exhaust gases from the combustion turbine are routed in order to extract heat from the gases and generate steam, for use in a steam turbine or other device that utilizes steam. Heat recovery steam generating units can be used with or without duct burners.

Integrated gasification combined cycle electric utility steam generating unit means a coal-fired electric utility steam generating unit that burns a synthetic gas derived from coal in a combined-cycle gas turbine. No solid coal is directly burned in the unit during operation.

ISO conditions means 288 Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

Lean premix stationary combustion turbine means any stationary combustion turbine where the air and fuel are thoroughly mixed to form a lean mixture before delivery to the combustor. Mixing may occur before or in the combustion chamber. A lean premixed turbine may operate in diffusion flame mode during operating conditions such as startup and shutdown, extreme ambient temperature, or low or transient load.

Natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1,100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, the Northern Mariana Islands, or offshore platforms.

Peak load means 100 percent of the manufacturer's design capacity of the combustion turbine at ISO conditions.

Regenerative cycle combustion turbine means any stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine.

Simple cycle combustion turbine means any stationary combustion turbine which does not recover heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine, or which does not recover heat from the combustion turbine exhaust gases for purposes other than enhancing the performance of the combustion turbine itself.

Stationary combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), heat recovery system, and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, any combined cycle combustion turbine, and any combined heat and power combustion turbine based system. Stationary means that the combustion turbine is not self propelled or intended to be propelled while performing its function. It may, however, be mounted on a vehicle for portability.

Unit operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Unit operating hour means a clock hour during which any fuel is combusted in the affected unit. If the unit combusts fuel for the entire clock hour, it is considered to be a full unit operating hour. If the unit combusts fuel for only part of the clock hour, it is considered to be a partial unit operating hour.

Useful thermal output means the thermal energy made available for use in any industrial or commercial process, or used in any heating or cooling application, i.e., total thermal energy made available for processes and applications other than electrical or mechanical generation. Thermal output for this subpart means the energy in recovered thermal output measured against the energy in the thermal output at 15 degrees Celsius and 101.325 kilopascals of pressure.

[71 FR 38497, July 6, 2006, as amended at 74 FR 11861, Mar. 20, 2009]

Table 1 to Subpart KKKK of Part 60—Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines

Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NO_X emission standard
New turbine firing natural gas, electric generating	≤ 50 MMBtu/h	42 ppm at 15 percent O_2 or 290 ng/J of useful output (2.3 lb/MWh).
New turbine firing natural gas, mechanical drive	≤ 50 MMBtu/h	100 ppm at 15 percent O_2 or 690 ng/J of useful output (5.5 lb/MWh).
New turbine firing natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	25 ppm at 15 percent O_2 or 150 ng/J of useful output (1.2 lb/MWh).
New, modified, or reconstructed turbine firing natural gas	> 850 MMBtu/h	15 ppm at 15 percent O_2 or 54 ng/J of useful output (0.43 lb/MWh)

Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NO_X emission standard
New turbine firing fuels other than natural gas, electric generating	≤ 50 MMBtu/h	96 ppm at 15 percent O_2 or 700 ng/J of useful output (5.5 lb/MWh).
New turbine firing fuels other than natural gas, mechanical drive	≤ 50 MMBtu/h	150 ppm at 15 percent O_2 or 1,100 ng/J of useful output (8.7 lb/MWh).
New turbine firing fuels other than natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	74 ppm at 15 percent O_2 or 460 ng/J of useful output (3.6 lb/MWh).
New, modified, or reconstructed turbine firing fuels other than natural gas	> 850 MMBtu/h	42 ppm at 15 percent O_2 or 160 ng/J of useful output (1.3 lb/MWh).
Modified or reconstructed turbine	≤ 50 MMBtu/h	150 ppm at 15 percent O_2 or 1,100 ng/J of useful output (8.7 lb/MWh).
Modified or reconstructed turbine firing natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	42 ppm at 15 percent O_2 or 250 ng/J of useful output (2.0 lb/MWh).
Modified or reconstructed turbine firing fuels other than natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	96 ppm at 15 percent O_2 or 590 ng/J of useful output (4.7 lb/MWh).
Turbines located north of the Arctic Circle (latitude 66.5 degrees north), turbines operating at less than 75 percent of peak load, modified and reconstructed offshore turbines, and turbine operating at temperatures less than 0 °F	≤ 30 MW output	150 ppm at 15 percent O_2 or 1,100 ng/J of useful output (8.7 lb/MWh).
Turbines located north of the Arctic Circle (latitude 66.5 degrees north), turbines operating at less than 75 percent of peak load, modified and reconstructed offshore turbines, and turbine operating at temperatures less than 0 °F	> 30 MW output	96 ppm at 15 percent O_2 or 590 ng/J of useful output (4.7 lb/MWh).
Heat recovery units operating independent of the combustion turbine	All sizes	54 ppm at 15 percent O_2 or 110 ng/J of useful output (0.86 lb/MWh).

Indiana Department of Environmental Management
Office of Air Quality

Attachment F
to a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	Rolls Royce Corporation
Source Location:	Plant 8 - 2001 South Tibbs Ave., Indianapolis, IN 46241
	Plant 5 - 2355 South Tibbs Ave., Indianapolis, IN 46241
County:	Marion
SIC Code:	3724
Permit Renewal No.:	T097-25529-00311

Title 40: Protection of Environment
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart YYYY—National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

Source: 69 FR 10537, Mar. 5, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.6080 What is the purpose of subpart YYYY?

Subpart YYYY establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emissions from stationary combustion turbines located at major sources of HAP emissions, and requirements to demonstrate initial and continuous compliance with the emission and operating limitations.

§ 63.6085 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary combustion turbine located at a major source of HAP emissions.

(a) Stationary combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, the combustion turbine portion of any stationary cogeneration cycle combustion system, or the combustion turbine portion of any stationary combined cycle steam/electric generating system. Stationary means that the combustion turbine is not self propelled or intended to be propelled while performing its function, although it may be mounted on a vehicle for portability or transportability. Stationary combustion turbines covered by this subpart include simple cycle stationary combustion turbines, regenerative/recuperative cycle stationary combustion turbines, cogeneration cycle stationary combustion turbines, and combined cycle stationary combustion turbines. Stationary combustion turbines subject to this subpart do not include turbines located at a research or laboratory facility, if research is conducted on the turbine itself and the turbine is not being used to power other applications at the research or laboratory facility.

(b) A major source of HAP emissions is a contiguous site under common control 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.

§ 63.6090 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 combustion turbine located at a major source of HAP emissions.

(1) *Existing stationary combustion turbine.* A stationary combustion turbine is existing if you commenced construction or reconstruction of the stationary combustion turbine on or before January 14, 2003. A change in ownership of an existing stationary combustion turbine does not make that stationary combustion turbine a new or reconstructed stationary combustion turbine.

(2) *New stationary combustion turbine.* A stationary combustion turbine is new if you commenced construction of the stationary combustion turbine after January 14, 2003.

(3) *Reconstructed stationary combustion turbine.* A stationary combustion turbine is reconstructed if you meet the definition of reconstruction in §63.2 of subpart A of this part and reconstruction is commenced after January 14, 2003.

(b) *Subcategories with limited requirements.* (1) A new or reconstructed stationary combustion turbine located at a major source which meets either of the following criteria does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6145(d):

(i) The stationary combustion turbine is an emergency stationary combustion turbine; or

(ii) The stationary combustion turbine is located on the North Slope of Alaska.

(2) A stationary combustion turbine which burns landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, or a stationary combustion turbine where gasified municipal solid waste (MSW) is used to generate 10 percent or more of the gross heat input on an annual basis does not have to meet the requirements of this subpart except for:

(i) The initial notification requirements of §63.6145(d); and

(ii) Additional monitoring and reporting requirements as provided in §63.6125(c) and §63.6150.

(3) An existing, new, or reconstructed stationary combustion turbine with a rated peak power output of less than 1.0 megawatt (MW) at International Organization for Standardization (ISO) standard day conditions, which is located at a major source, does not have to meet the requirements of this subpart and of subpart A of this part. This determination applies to the capacities of individual combustion turbines, whether or not an aggregated group of combustion turbines has a common add-on air pollution control device. No initial notification is necessary, even if the unit appears to be subject to other requirements for initial notification. For example, a 0.75 MW emergency turbine would not have to submit an initial notification.

(4) Existing stationary combustion turbines in all subcategories do not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary for any existing stationary

combustion turbine, even if a new or reconstructed turbine in the same category would require an initial notification.

(5) Combustion turbine engine test cells/stands do not have to meet the requirements of this subpart but may have to meet the requirements of subpart A of this part if subject to another subpart. No initial notification is necessary, even if the unit appears to be subject to other requirements for initial notification.

§ 63.6092 Are duct burners and waste heat recovery units covered by subpart YYYY?

No, duct burners and waste heat recovery units are considered steam generating units and are not covered under this subpart. In some cases, it may be difficult to separately monitor emissions from the turbine and duct burner, so sources are allowed to meet the required emission limitations with their duct burners in operation.

§ 63.6095 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you start up a new or reconstructed stationary combustion turbine which is a lean premix oil-fired stationary combustion turbine or a diffusion flame oil-fired stationary combustion turbine as defined by this subpart on or before March 5, 2004, you must comply with the emissions limitations and operating limitations in this subpart no later than March 5, 2004.

(2) If you start up a new or reconstructed stationary combustion turbine which is a lean premix oil-fired stationary combustion turbine or a diffusion flame oil-fired stationary combustion turbine as defined by this subpart after March 5, 2004, you must comply with the emissions limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If your new or reconstructed stationary combustion turbine is an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, it must be in compliance with any applicable requirements of this subpart when it becomes a major source.

(c) You must meet the notification requirements in §63.6145 according to the schedule in §63.6145 and in 40 CFR part 63, subpart A.

(d) *Stay of standards for gas-fired subcategories.* If you start up a new or reconstructed stationary combustion turbine that is a lean premix gas-fired stationary combustion turbine or diffusion flame gas-fired stationary combustion turbine as defined by this subpart, you must comply with the Initial Notification requirements set forth in §63.6145 but need not comply with any other requirement of this subpart until EPA takes final action to require compliance and publishes a document in the Federal Register.

[69 FR 10537, Mar. 5, 2004, as amended at 69 FR 51188, Aug. 18, 2004]

Emission and Operating Limitations

§ 63.6100 What emission and operating limitations must I meet?

For each new or reconstructed stationary combustion turbine which is a lean premix gas-fired stationary combustion turbine, a lean premix oil-fired stationary combustion turbine, a diffusion flame gas-fired stationary combustion turbine, or a diffusion flame oil-fired stationary combustion turbine as defined by this subpart, you must comply with the emission limitations and operating limitations in Table 1 and Table 2 of this subpart.

General Compliance Requirements

§ 63.6105 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operating limitations which apply to you at all times except during startup, shutdown, and malfunctions.

(b) If you must comply with emission and operating limitations, you must operate and maintain your stationary combustion turbine, oxidation catalyst emission control device or other air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

Testing and Initial Compliance Requirements

§ 63.6110 By what date must I conduct the initial performance tests or other initial compliance demonstrations?

(a) You must conduct the initial performance tests or other initial compliance demonstrations in Table 4 of this subpart that apply to you within 180 calendar days after the compliance date that is specified for your stationary combustion turbine in §63.6095 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test to determine outlet formaldehyde concentration on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (b)(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.

§ 63.6115 When must I conduct subsequent performance tests?

Subsequent performance tests must be performed on an annual basis as specified in Table 3 of this subpart.

§ 63.6120 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Table 3 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements of the General Provisions at §63.7(e)(1) and under the specific conditions in Table 2 of this subpart.

(c) Do not conduct performance tests or compliance evaluations during periods of startup, shutdown, or malfunction. Performance tests must be conducted at high load, defined as 100 percent plus or minus 10 percent.

(d) You must conduct three separate test runs for each performance test, and each test run must last at least 1 hour.

(e) If your stationary combustion turbine is not equipped with an oxidation catalyst, you must petition the Administrator for operating limitations that you will monitor to demonstrate compliance with the formaldehyde emission limitation in Table 1. You must measure these operating parameters during the initial performance test and continuously monitor thereafter. Alternatively, you may petition the Administrator for approval of no additional operating limitations. If you submit a petition under this section, you must not conduct the initial performance test until after the petition has been approved or disapproved by the Administrator.

(f) If your stationary combustion turbine is not equipped with an oxidation catalyst and you petition the Administrator for approval of additional operating limitations to demonstrate compliance with the formaldehyde emission limitation in Table 1, your petition must include the following information described in paragraphs (f)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as additional 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.

(g) If you petition the Administrator for approval of no additional operating limitations, your petition must include the information described in paragraphs (g)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary combustion turbine 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 why establishing limitations on the parameters is not possible;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of why you could not establish upper and/or lower values for the parameters which would establish limits on the parameters as operating limitations;

(5) For the parameters which could change in such a way as to increase HAP emissions, 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, unreasonable or unnecessary to adopt the parameters as operating limitations.

§ 63.6125 What are my monitor installation, operation, and maintenance requirements?

(a) If you are operating a stationary combustion turbine that is required to comply with the formaldehyde emission limitation and you use an oxidation catalyst emission control device, you must monitor on a continuous basis your catalyst inlet temperature in order to comply with the operating limitations in Table 2 and as specified in Table 5 of this subpart.

(b) If you are operating a stationary combustion turbine that is required to comply with the formaldehyde emission limitation and you are not using an oxidation catalyst, you must continuously monitor any parameters specified in your approved petition to the Administrator, in order to comply with the operating limitations in Table 2 and as specified in Table 5 of this subpart.

(c) If you are operating a stationary combustion turbine which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, or a stationary combustion turbine where gasified MSW is used to generate 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 turbine in a manner which minimizes HAP emissions.

(d) If you are operating a lean premix gas-fired stationary combustion turbine or a diffusion flame gas-fired stationary combustion turbine as defined by this subpart, and you use any quantity of distillate oil to fire any new or existing stationary combustion turbine which is located at the same major source, you must monitor and record your distillate oil usage daily for all new and existing stationary combustion turbines located at the major source with a non-resettable hour meter to measure the number of hours that distillate oil is fired.

§ 63.6130 How do I demonstrate initial compliance with the emission and operating limitations?

(a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 4 of this subpart.

(b) You must submit the Notification of Compliance Status containing results of the initial compliance demonstration according to the requirements in §63.6145(f).

Continuous Compliance Requirements

§ 63.6135 How do I monitor and collect data to demonstrate continuous compliance?

(a) Except for monitor malfunctions, associated repairs, and required quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments of the monitoring system), you must conduct all parametric monitoring at all times the stationary combustion turbine is operating.

(b) Do not use data recorded during monitor malfunctions, associated repairs, and required quality assurance or quality control activities for meeting the requirements of this subpart, including data averages and calculations. You must use all the data collected during all other periods in assessing the performance of the control device or in assessing emissions from the new or reconstructed stationary combustion turbine.

§ 63.6140 How do I demonstrate continuous compliance with the emission and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Table 1 and Table 2 of this subpart according to methods specified in Table 5 of this subpart.

(b) You must report each instance in which you did not meet each emission imitation or operating limitation. You must also report each instance in which you did not meet the requirements in Table 7 of 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 §63.6150.

(c) Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, and malfunction are not violations if you have operated your stationary combustion turbine in accordance with §63.6(e)(1)(i).

[69 FR 10537, Mar. 5, 2004, as amended at 71 FR 20467, Apr. 20, 2006]

Notifications, Reports, and Records

§ 63.6145 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), 63.8(f)(4), and 63.9(b) and (h) that apply to you by the dates specified.

(b) As specified in §63.9(b)(2), if you start up your new or reconstructed stationary combustion turbine before March 5, 2004, you must submit an Initial Notification not later than 120 calendar days after March 5, 2004.

(c) As specified in §63.9(b), if you start up your new or reconstructed stationary combustion turbine on or after March 5, 2004, you must submit an Initial Notification not later than 120 calendar days after you become subject to this subpart.

(d) If you are required to submit an Initial Notification but are otherwise not affected by the emission limitation requirements of this subpart, in accordance with §63.6090(b), your notification must include the information in §63.9(b)(2)(i) through (v) and a statement that your new or reconstructed stationary combustion turbine has no additional emission limitation requirements and must explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary combustion turbine).

(e) If you are required to conduct an initial performance test, you must submit a notification of intent to conduct an initial performance test at least 60 calendar days before the initial performance test is scheduled to begin as required in §63.7(b)(1).

(f) If you are required to comply with the emission limitation for formaldehyde, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For each performance test required to demonstrate compliance with the emission limitation for formaldehyde, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test.

§ 63.6150 What reports must I submit and when?

(a) Anyone who owns or operates a stationary combustion turbine which must meet the emission limitation for formaldehyde must submit a semiannual compliance report according to Table 6 of this subpart. The semiannual compliance report must contain the information described in paragraphs (a)(1) through (a)(4) of this section. The semiannual compliance report must be submitted by the dates specified in paragraphs (b)(1) through (b)(5) of this section, unless the Administrator has approved a different schedule.

(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) For each deviation from an emission limitation, the compliance report must contain the information in paragraphs (a)(4)(i) through (a)(4)(iii) of this section.

(i) The total operating time of each stationary combustion turbine during the reporting period.

(ii) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(iii) Information on the number, duration, and cause for monitor downtime incidents (including unknown cause, if applicable, other than downtime associated with zero and span and other daily calibration checks).

(b) Dates of submittal for the semiannual compliance report are provided in (b)(1) through (b)(5) of this section.

(1) The first semiannual compliance report must cover the period beginning on the compliance date specified in §63.6095 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 specified in §63.6095.

(2) The first semiannual 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 in §63.6095.

(3) Each subsequent semiannual 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) Each subsequent 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.

(5) For each stationary combustion turbine that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established the date for submitting annual 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 (4) of this section.

(c) If you are operating as a stationary combustion turbine which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, or a stationary combustion

turbine where gasified MSW is used to generate 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 6 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (d)(1) through (5) of this section. You must report the data specified in (c)(1) through (c)(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, digester gas, or gasified MSW 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.

(d) Dates of submittal for the annual report are provided in (d)(1) through (d)(5) of this section.

(1) The first annual report must cover the period beginning on the compliance date specified in §63.6095 and ending on December 31.

(2) The first annual report must be postmarked or delivered no later than January 31.

(3) Each subsequent annual report must cover the annual reporting period from January 1 through December 31.

(4) Each subsequent annual report must be postmarked or delivered no later than January 31.

(5) For each stationary combustion turbine that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established the date for submitting annual 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 (d)(1) through (4) of this section.

(e) If you are operating a lean premix gas-fired stationary combustion turbine or a diffusion flame gas-fired stationary combustion turbine as defined by this subpart, and you use any quantity of distillate oil to fire any new or existing stationary combustion turbine which is located at the same major source, you must submit an annual report according to Table 6 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (d)(1) through (5) of this section. You must report the data specified in (e)(1) through (e)(3) of this section.

(1) The number of hours distillate oil was fired by each new or existing stationary combustion turbine during the reporting period.

(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.

§ 63.6155 What records must I keep?

(a) You must keep the records as described in paragraphs (a)(1) through (5).

(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 requirements in §63.10(b)(2)(xiv).

(2) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(3) Records of the occurrence and duration of each startup, shutdown, or malfunction as required in §63.10(b)(2)(i).

(4) Records of the occurrence and duration of each malfunction of the air pollution control equipment, if applicable, as required in §63.10(b)(2)(ii).

(5) Records of all maintenance on the air pollution control equipment as required in §63.10(b)(iii).

(b) If you are operating a stationary combustion turbine which fires landfill gas, digester gas or gasified MSW equivalent to 10 percent or more of the gross heat input on an annual basis, or if you are operating a lean premix gas-fired stationary combustion turbine or a diffusion flame gas-fired stationary combustion turbine as defined by this subpart, and you use any quantity of distillate oil to fire any new or existing stationary combustion turbine which is located at the same major source, you must keep the records of your daily fuel usage monitors.

(c) You must keep the records required in Table 5 of this subpart to show continuous compliance with each operating limitation that applies to you.

§ 63.6160 In what form and how long must I keep my records?

(a) You must maintain all applicable records in such a manner that they can be readily accessed and are suitable for inspection 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 retain your records of the most recent 2 years on site or your records must be accessible on site. Your records of the remaining 3 years may be retained off site.

Other Requirements and Information

§ 63.6165 What parts of the General Provisions apply to me?

Table 7 of this subpart shows which parts of the General Provisions in §63.1 through 15 apply to you.

§ 63.6170 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 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 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 section 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the EPA 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:

(1) Approval of alternatives to the emission limitations or operating limitations in §63.6100 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 to determine outlet formaldehyde concentration, as specified in §63.6110(b).

§ 63.6175 What definitions apply to this subpart?

Terms used in this subpart are defined in the CAA; in 40 CFR 63.2, the General Provisions of this part; and in this section:

Area source means any stationary source of HAP that is not a major source as defined in this part.

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 reciprocating internal combustion engines.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Public Law 101–549, 104 Stat. 2399).

Cogeneration cycle stationary combustion turbine means any stationary combustion turbine that recovers heat from the stationary combustion turbine exhaust gases using an exhaust heat exchanger, such as a heat recovery steam generator.

Combined cycle stationary combustion turbine means any stationary combustion turbine that recovers heat from the stationary combustion turbine exhaust gases using an exhaust heat exchanger to generate steam for use in a steam turbine.

Combustion turbine engine test cells/stands means engine test cells/stands, as defined in subpart PPPPP of this part, that test stationary combustion turbines.

Compressor station means any permanent combination of compressors that move natural gas at increased pressure from fields, in transmission pipelines, or into storage.

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;

(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; or

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diffusion flame gas-fired stationary combustion turbine means:

(1)(i) Each stationary combustion turbine which is equipped only to fire gas using diffusion flame technology,

(ii) Each stationary combustion turbine which is equipped both to fire gas using diffusion flame technology and to fire oil, during any period when it is firing gas, and

(iii) Each stationary combustion turbine which is equipped both to fire gas using diffusion flame technology and to fire oil, and is located at a major source where all new, reconstructed, and existing stationary combustion turbines fire oil no more than an aggregate total of 1000 hours during the calendar year.

(2) Diffusion flame gas-fired stationary combustion turbines do not include:

(i) Any emergency stationary combustion turbine,

(ii) Any stationary combustion turbine located on the North Slope of Alaska, or

(iii) Any stationary combustion turbine burning landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, or any stationary combustion turbine where gasified MSW is used to generate 10 percent or more of the gross heat input on an annual basis.

Diffusion flame oil-fired stationary combustion turbine means:

(1)(i) Each stationary combustion turbine which is equipped only to fire oil using diffusion flame technology, and

(ii) Each stationary combustion turbine which is equipped both to fire oil using diffusion flame technology and to fire gas, and is located at a major source where all new, reconstructed, and existing stationary combustion turbines fire oil more than an aggregate total of 1000 hours during the calendar year, during any period when it is firing oil.

(2) Diffusion flame oil-fired stationary combustion turbines do not include:

(i) Any emergency stationary combustion turbine, or

(ii) Any stationary combustion turbine located on the North Slope of Alaska.

Diffusion flame technology means a configuration of a stationary combustion turbine where fuel and air are injected at the combustor and are mixed only by diffusion prior to ignition.

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_2.

Distillate oil 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.

Emergency stationary combustion turbine means any stationary combustion turbine that operates in an emergency situation. Examples include stationary combustion turbines used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility is interrupted, or stationary combustion turbines used to pump water in the case of fire or flood, etc. Emergency stationary combustion turbines do not include stationary combustion turbines used as peaking units at electric utilities or stationary combustion turbines at industrial facilities that typically operate at low capacity factors. Emergency stationary combustion turbines may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are required by the manufacturer, the vendor, or the insurance company associated with the turbine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary combustion turbines.

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 pollutant (HAP) means any air pollutant listed in or pursuant to section 112(b) of the CAA.

ISO standard day conditions means 288 degrees Kelvin (15 °C), 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_2.

Lean premix gas-fired stationary combustion turbine means:

(1)(i) Each stationary combustion turbine which is equipped only to fire gas using lean premix technology,

(ii) Each stationary combustion turbine which is equipped both to fire gas using lean premix technology and to fire oil, during any period when it is firing gas, and

(iii) Each stationary combustion turbine which is equipped both to fire gas using lean premix technology and to fire oil, and is located at a major source where all new, reconstructed, and existing stationary combustion turbines fire oil no more than an aggregate total of 1000 hours during the calendar year.

(2) Lean premix gas-fired stationary combustion turbines do not include:

(i) Any emergency stationary combustion turbine,

(ii) Any stationary combustion turbine located on the North Slope of Alaska, or

(iii) Any stationary combustion turbine burning landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, or any stationary combustion turbine where gasified MSW is used to generate 10 percent or more of the gross heat input on an annual basis.

Lean premix oil-fired stationary combustion turbine means:

(1)(i) Each stationary combustion turbine which is equipped only to fire oil using lean premix technology, and

(ii) Each stationary combustion turbine which is equipped both to fire oil using lean premix technology and to fire gas, and is located at a major source where all new, reconstructed, and existing stationary combustion turbines fire oil more than an aggregate total of 1000 hours during the calendar year, during any period when it is firing oil.

(2) Lean premix oil-fired stationary combustion turbines do not include:

(i) Any emergency stationary combustion turbine, or

(ii) Any stationary combustion turbine located on the North Slope of Alaska.

Lean premix technology means a configuration of a stationary combustion turbine where the air and fuel are thoroughly mixed to form a lean mixture for combustion in the combustor. Mixing may occur before or in the combustion chamber.

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 this section, 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 this section, 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 this standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Municipal solid waste as used in this subpart is as defined in §60.1465 of Subpart AAAA of 40 CFR Part 60, New Source Performance Standards for Small Municipal Waste Combustion Units.

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. May be field or pipeline quality. For the purposes of this subpart, the definition of natural gas includes similarly constituted fuels such as field gas, refinery gas, and syngas.

Natural gas transmission means the pipelines used for the long distance transport of natural gas (excluding processing). Specific equipment used in natural gas transmission includes the land, mains, valves, meters, boosters, regulators, storage vessels, dehydrators, compressors, and their driving units and appurtenances, and equipment used transporting gas from a production plant, delivery point of purchased gas, gathering system, storage area, or other wholesale source of gas to one or more distribution area(s).

Natural gas transmission and storage facility means any grouping of equipment where natural gas is processed, compressed, or stored prior to entering a pipeline to a local distribution company or (if there is no local distribution company) to a final end user. Examples of a facility for this source category are: an underground natural gas storage operation; or a natural gas compressor station that receives natural gas via pipeline, from an underground natural gas storage operation, or from a natural gas processing plant. The emission points associated with these phases include, but are not limited to, process vents. Processes that may have vents include, but are not limited to, dehydration and compressor station engines. Facility, for the purpose of a major source determination, means natural gas transmission and storage equipment that is located inside the boundaries of an individual surface site (as defined in this section) and is connected by ancillary equipment, such as gas flow lines or power lines. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Natural gas transmission and storage equipment or groupings of equipment located on different gas leases, mineral fee tracts, lease tracts, subsurface unit areas, surface fee tracts, or surface lease tracts shall not be considered part of the same facility.

North Slope of Alaska means the area north of the Arctic Circle (latitude 66.5 degrees North).

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 emission control device means an emission control device that incorporates catalytic oxidation to reduce CO emissions.

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.

Regenerative/recuperative cycle stationary combustion turbine means any stationary combustion turbine that recovers heat from the stationary combustion turbine exhaust gases using an exhaust heat exchanger to preheat the combustion air entering the combustion chamber of the stationary combustion turbine.

Research or laboratory facility means any stationary source whose primary purpose is to conduct research and development into new processes and products, where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a *de minimis* matter.

Simple cycle stationary combustion turbine means any stationary combustion turbine that does not recover heat from the stationary combustion turbine exhaust gases.

Stationary combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, the combustion turbine portion of any stationary cogeneration cycle combustion system, or the combustion turbine portion of any stationary combined cycle steam/electric generating system. Stationary means that the combustion turbine is not self propelled or intended to be propelled while performing its function. Stationary combustion turbines do not include turbines located at a research or laboratory facility, if research is conducted on the turbine itself and the turbine is not being used to power other applications at the research or laboratory facility.

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.

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.

[69 FR 10537, Mar. 5, 2004, as amended at 71 FR 20467, Apr. 20, 2006]

Table 1 to Subpart YYYY of Part 63—Emission Limitations

As stated in §63.6100, you must comply with the following emission limitations

For each new or reconstructed stationary combustion turbine described in §63.6100 which is . . .	You must meet the following emission limitations . . .
1. a lean premix gas-fired stationary combustion turbine as defined in this subpart, 2. a lean premix oil-fired stationary combustion turbine as defined in this subpart, 3. a diffusion flame gas-fired stationary combustion turbine as defined in this subpart, or 4. a diffusion flame oil-fired stationary combustion turbine as defined in this subpart.	limit the concentration of formaldehyde to 91 ppbvd or less at 15 percent O_2.

Table 2 to Subpart YYYY of Part 63—Operating Limitations

As stated in §§63.6100 and 63.6140, you must comply with the following operating limitations

For . . .	You must . . .
1. each stationary combustion turbine that is required to comply with the emission limitation for formaldehyde and is using an oxidation catalyst	maintain the 4-hour rolling average of the catalyst inlet temperature within the range suggested by the catalyst manufacturer.
2. each stationary combustion turbine that is required to comply with the emission limitation for formaldehyde and is not using an oxidation catalyst	maintain any operating limitations approved by the Administrator.

Table 3 to Subpart YYYY of Part 63—Requirements for Performance Tests and Initial Compliance Demonstrations

As stated in §63.6120, you must comply with the following requirements for performance tests and initial compliance demonstrations

You must . . .	Using . . .	According to the following requirements . . .
a. demonstrate formaldehyde emissions meet the emission limitations specified in Table 1 by a performance test initially and on an annual basis AND	Test Method 320 of 40 CFR part 63, appendix A; ASTM D6348–03 provided that %R as determined in Annex A5 of ASTM D6348–03 is equal or greater than 70% and less than or equal to 130%; or other methods approved by the Administrator	formaldehyde concentration must be corrected to 15 percent O_2, dry basis. Results of this test consist of the average of the three 1 hour runs. Test must be conducted within 10 percent of 100 percent load.
b. select the sampling port location and the number of traverse points AND	Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	if using an air pollution control device, the sampling site must be located at the outlet of the air pollution control device.
c. determine the O_2concentration at the sampling port location AND	Method 3A or 3B of 40 CFR part 60, appendix A	measurements to determine O_2concentration must be made at the same time as the performance test.
d. determine the moisture content at the sampling port location for the purposes of correcting the formaldehyde concentration to a dry basis	Method 4 of 40 CFR part 60, appendix A or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03	measurements to determine moisture content must be made at the same time as the performance test.

Table 4 to Subpart YYYY of Part 63—Initial Compliance With Emission Limitations

As stated in §§63.6110 and 63.6130, you must comply with the following requirements to demonstrate initial compliance with emission limitations

For the . . .	You have demonstrated initial compliance if . . .
emission limitation for formaldehyde.	the average formaldehyde concentration meets the emission limitations specified in Table 1.

Table 5 to Subpart YYYY of Part 63—Continuous Compliance With Operating Limitations

As stated in §§63.6135 and 63.6140, you must comply with the following requirements to demonstrate continuing compliance with operating limitations:

For each stationary combustion turbine complying with the emission limitation for formaldehyde . . .	You must demonstrate continuous compliance by . . .
1. with an oxidation catalyst	continuously monitoring the inlet temperature to the catalyst and maintaining the 4-hour rolling average of the inlet temperature within the range suggested by the catalyst manufacturer.
2. without the use of an oxidation catalyst	continuously monitoring the operating limitations that have been approved in your petition to the Administrator.

Table 6 to Subpart YYYY of Part 63—Requirements for Reports

As stated in §63.6150, you must comply with the following requirements for reports

If you own or operate a . . .	you must . . .	According to the following requirements . . .
1. stationary combustion turbine which must comply with the formaldehyde emission limitation	report your compliance status	semiannually, according to the requirements of §63.6150.
2. stationary combustion turbine which fires landfill gas, digester gas or gasified MSW equivalent to 10 percent or more of the gross heat input on an annual basis	report (1) 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, digester gas, or gasified MSW is equivalent to 10 percent or more of the gross heat input on an annual basis, (2) the operating limits provided in your federally enforceable permit, and any deviations from these limits, and (3) any problems or errors suspected with the meters	annually, according to the requirements in §63.6150.

If you own or operate a . . .	you must . . .	According to the following requirements . . .
3. a lean premix gas-fired stationary combustion turbine or a diffusion flame gas-fired stationary combustion turbine as defined by this subpart, and you use any quantity of distillate oil to fire any new or existing stationary combustion turbine which is located at the same major source	report (1) the number of hours distillate oil was fired by each new or existing stationary combustion turbine during the reporting period, (2) the operating limits provided in your federally enforceable permit, and any deviations from these limits, and (3) any problems or errors suspected with the meters	annually, according to the requirements in §63.6150.

Table 7 of Subpart YYYY of Part 63—Applicability of General Provisions to Subpart YYYY

You must comply with the applicable General Provisions requirements:

Citation	Subject	Applies to Subpart YYYY	Explanation
§63.1	General applicability of the General Provisions	Yes	Additional terms defined in §63.6175.
§63.2	Definitions	Yes	Additional terms defined in §63.6175.
§63.3	Units and abbreviations	Yes	
§63.4	Prohibited activities	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 become major	Yes	
§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	Yes	
§63.6(d)	[Reserved]		
§63.6(e)(1)	Operation and maintenance	Yes	
§63.6(e)(2)	[Reserved]		

Citation	Subject	Applies to Subpart YYYY	Explanation
§63.6(e)(3)	SSMP	Yes	
§63.6(f)(1)	Applicability of standards except during startup, shutdown, or malfunction (SSM)	Yes	
§63.6(f)(2)	Methods for determining compliance	Yes	
§63.6(f)(3)	Finding of compliance	Yes	
§63.6(g)(1)–(3)	Use of alternative standard	Yes	
§63.6(h)	Opacity and visible emission standards	No	Subpart YYYY 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 YYYY contains performance test dates at §63.6110.
§63.7(a)(3)	Section 114 authority	Yes	
§63.7(b)(1)	Notification of performance test	Yes	
§63.7(b)(2)	Notification of rescheduling	Yes	
§63.7(c)	Quality assurance/test plan	Yes	
§63.7(d)	Testing facilities	Yes	
§63.7(e)(1)	Conditions for conducting performance tests	Yes	
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart YYYY specifies test methods at §63.6120.
§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 YYYY contains specific requirements for monitoring at §63.6125.

Citation	Subject	Applies to Subpart YYYY	Explanation
§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	Yes	
§63.8(c)(1)(ii)	Parts for repair of CMS readily available	Yes	
§63.8(c)(1)(iii)	SSMP for CMS required	Yes	
§63.8(c)(2)–(3)	Monitoring system installation	Yes	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart YYYY does not require continuous opacity monitoring systems (COMS).
§63.8(c)(5)	COMS minimum procedures	No	
§63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart YYYY 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.
§63.8(f)(1)–(5)	Alternative monitoring method	Yes	
§63.8(f)(6)	Alternative to relative accuracy test	Yes	
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6135 and 63.6140.
§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.
§63.9(c)	Request for compliance extension	Yes	
§63.9(d)	Notification of special compliance requirements for new sources	Yes	

Citation	Subject	Applies to Subpart YYYY	Explanation
§63.9(e)	Notification of performance test	Yes	
§63.9(f)	Notification of visible emissions/opacity test	No	Subpart YYYY does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	
§63.9(g)(2)	Notification of use of COMS data	No	Subpart YYYY does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to relative accuracy test audit (RATA) is exceeded	Yes	If alternative is in use.
§63.9(h)	Notification of compliance status	Yes	Except that notifications for sources not conducting performance tests are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
§63.9(i)	Adjustment of submittal deadlines	Yes	
§63.9(j)	Change in previous information	Yes	
§63.10(a)	Administrative provisions for recordkeeping and reporting	Yes	
§63.10(b)(1)	Record retention	Yes	
§63.10(b)(2)(i)–(iii)	Records related to SSM	Yes	
§63.10(b)(2)(iv)–(v)	Records related to actions during SSM	Yes	
§63.10(b)(2)(vi)–(xi)	CMS 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 CMS	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	

Citation	Subject	Applies to Subpart YYYY	Explanation
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart YYYY does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No	Subpart YYYY does not require reporting of startup, shutdowns, or malfunctions.
§63.10(e)(1) and (2)(i)	Additional CMS reports	Yes	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart YYYY does not require COMS.
§63.10(e)(3)	Excess emissions and parameter exceedances reports	Yes	
§63.10(e)(4)	Reporting COMS data	No	Subpart YYYY does not require COMS.
§63.10(f)	Waiver for recordkeeping and 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	

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (TSD)
for a Part 70 Significant Source Modification
and a Part 70 Significant Permit Modification

Source Description and Location

Source Name:	Rolls Royce Corporation
Source Location:	Plant 8 - 2001 South Tibbs Ave., Indianapolis, IN 46241 Plant 5 - 2355 South Tibbs Ave., Indianapolis, IN 46241
County:	Marion
SIC Code:	3724
Part 70 Operating Permit Renewal No.:	T097-25529-00311
Operation Permit Issuance Date:	March 22, 2010
Significant Source Modification No.:	097-30260-00311
Significant Permit Modification No.:	097-30291-00311
Permit Reviewer:	Laura Spriggs

Public Notice Information

On April 9, 2011, the Office of Air Quality (OAQ) had a notice published in the *Indianapolis Star*, in Indianapolis, Indiana, stating that Rolls Royce Corporation had applied for a significant modification to their Part 70 Operating Permit Renewal issued on March 22, 2010 to construct two (2) new natural gas turbine generators. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments Received

On May 6, 2011, OAQ received comments from Pravin Patel of Rolls Royce Corporation. The comments are summarized in the subsequent pages, with IDEM's corresponding responses.

The IDEM does not amend the Technical Support Document (TSD). The TSD is maintained to document the original review. This addendum to the TSD is used to document responses to comments and changes made from the time the permit was drafted until a final decision is made.

The summary of the comments and IDEM, OAQ responses, including changes to the permit (language deleted is shown in ~~strikeout~~ and language added is shown in **bold**) are as follows:

Comment No. 1

Condition D.2.5 (a)
We have a VOC limit of less than 15 lb/day which already restricts operation and indirectly limits PM emissions. Also based on the Aerospace NESHAP we have a monitoring plan to monitor

pressure drop at the paint booths every shift and a PM plan. Because of these requirements, Rolls-Royce suggests that we eliminate the daily monitoring requirements. Also, we will be performing monthly inspection for overspray on the roof per D.2.5(b). Rolls-Royce recommends eliminating the weekly overspray inspection requirement stated in D.2.5(a). You can state that "if we see overspray on the rooftop during monthly inspection then start weekly overspray inspection."

IDEM Response No. 1

IDEM, OAQ agrees that because these paint booths are subject to 40 CFR 63, Subpart GG, which requires continuous pressure drop monitoring, the requirement for daily inspection of the filters can be removed from the permit. However, IDEM, OAQ does not agree that the requirement to perform weekly overspray observations and the monthly inspections to monitor the performance of the filters can be removed. These monitoring requirements are necessary for the Permittee to evaluate continuous compliance with the applicable requirements.

The permit has been revised as follows:

D.2.5 Monitoring

(a) ~~Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters.~~ To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth stacks (SN56a, 5-10a, 5-10b, 5-10c, 5-10d, S-84, and S-85) while one or more of the booths are in operation. If a condition exists which should result in a response step, 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.

(b) * * *

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

D.2.6 Record Keeping Requirements

(a) * * *

(b) To document the compliance status with Conditions D.2.2 and D.2.5, the Permittee shall maintain a log of weekly overspray observations and ~~daily and~~ monthly inspections. The Permittee shall include in its record when an observation was not taken and the reason for the lack of observation (e.g. the process did not operate that week).

(c) * * *

Comment No. 2

Condition E.5.2(18)
This condition requires gas turbines testing annually. The new units are similar and will not operate 24 hours/7 days. Rolls-Royce suggests that the performance test should be conducted for one unit after 1000 hours of operation or similar condition.

IDEM Response No. 2

The performance testing referenced in the comment is required pursuant to 40 CFR 60.4400, which is part of the New Source Performance Standards for Stationary Combustion Turbines, 40 CFR 60, Subpart KKKK, a federal rule. IDEM, OAQ does not have the authority to grant a waiver from or allow alternatives to the requirements of 40 CFR 60, Subpart KKKK, unless such alternatives are specified in the rule. Rolls Royce Corporation may petition the U.S. EPA for any requested variances from the federal rule requirements. No change is being made to the permit as a result of this comment.

Other Changes

Upon further review, the OAQ has decided to make the following revisions to the permit:

Change No. 1:

On October 1, 2010, revisions to Title 326 of the Indiana Administrative Code (IAC) were published in the Indiana Register. Some of the revisions affect the IAC references included in the permit. The permit has been revised to reflect the revisions that were made to Title 326 of the IAC.

The permit has been revised as follows:

SECTION A SOURCE SUMMARY

* * *

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

* * *

* * *

A.3 Emission Units and Pollution Control Equipment Summary
[326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(1**4**~~5~~)]

* * *

A.4 Specifically Regulated Insignificant Activities
[326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(1**4**~~5~~)]

* * *

* * *

SECTION B GENERAL CONDITIONS

* * *

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

(a) * * *
(b) * * *

(c) * * *
(d) * * *

(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)(**8**~~9~~) be revised in response to an emergency.
(f) * * *
(g) * * *

* * *

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

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) **or** ~~,~~(c)~~, or (e)~~ without a prior permit revision, if each of the following conditions is met:

(1) * * *
(2) * * *
(3) * * *
(4) * * *
(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)~~,~~ **or** (c)~~, or (e)~~. 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)~~,~~ **and** (c)(1)~~, and (e)(2)~~.
(b) * * *
(c) * * *
(d) * * *
(e) * * *

* * *

SECTION C SOURCE OPERATION CONDITIONS

*** * ***

C.12 Risk Management Plan [326 IAC 2-7-5(**11**~~12~~)] [40 CFR 68]

* * *

* * *

C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2][326 IAC 2-3]

(a) * * *
(b) * * *

(c) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2-2-1(**oo**~~qq~~) and/or 326 IAC 2-3-1(~~ll~~**jj**)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(~~ee~~**dd**) and/or 326 IAC 2-3-1(~~z~~**y**)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(**pp**~~rr~~) and/or 326 IAC 2-3-1(~~mm~~**kk**)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(**oo**~~qq~~) and/or 326 IAC 2-3-1(~~ll~~**jj**)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.

(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(**pp**~~rr~~)(2)(A)(iii) and/or 326 IAC 2-3-1 (~~mm~~**kk**)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(d) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a "project" (as defined in 326 IAC 2-2-1(**oo**~~qq~~) and/or 326 IAC 2-3-1(~~ll~~**jj**)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(**dd**~~ee~~) and/or 326 IAC 2-3-1(**y**~~z~~)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(**pp**~~rr~~) and/or 326 IAC 2-3-1(~~mm~~**kk**)), the Permittee shall comply with following:

* * *

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2][326 IAC 2-3]

(a) * * *
(b) * * *
(c) * * *

(d) * * *

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (~~qq~~**oo**) and/or 326 IAC 2-3-1 (~~ll~~**jj**)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (**ww**~~xx~~) and/or 326 IAC 2-3-1 (**pp**~~qq~~), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).

(f) * * *

(g) * * *

* * *

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1**4**~~5~~)]
* * *

*** * ***

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1**4**~~5~~)]

* * *

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1**4**~~5~~)]

* * *

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1**4**~~5~~)]

* * *

* * *

D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(1**2**~~3~~)]

* * *

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1**4**~~5~~)]

* * *

SECTION D.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1**4**~~5~~)]

* * *

SECTION D.7 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1**4**~~5~~)]

* * *

SECTION E.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1**4**~~5~~)]

* * *

SECTION E.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1**4**~~5~~)]

* * *

SECTION E.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1**4**~~5~~)]

* * *

SECTION E.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1**4**~~5~~)]

* * *

SECTION E.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1~~4~~5)]

* * *

SECTION E.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1~~4~~5)]

* * *

Change No. 2:

IDEM, OAQ has determined that since the Permittee is required to record the types and amounts of fuel used for the boilers, a semi-annual natural gas boiler certification reporting requirement is not necessary. The permit has been revised as follows:

D.1.10 Reporting Requirements

~~(a) The natural gas and landfill gas boiler certification shall be submitted using the reporting forms located at the end of this permit, or its equivalent, no later than thirty (30) days after the end of the six (6) month period being reported. Section C – General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The natural gas and landfill gas fired boiler certification 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)~~ A quarterly summary of the information to document the compliance status with Conditions D.1.1, D.1.2, and D.1.4, shall be submitted using the reporting forms located at the end of this permit, or their equivalent, no 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. The report 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).

* * * * *

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

~~PART 70 OPERATING PERMIT~~
~~SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION~~

~~Source Name: Rolls Royce Corporation~~
~~Source Address: 2001 and 2355 South Tibbs Ave, Indianapolis, Indiana 46241~~
~~Part 70 Permit No.: T097-25529-00311~~

~~☐ Natural Gas Only~~ ~~☐ Alternate Fuel burned~~ ~~From:_____ To:_____~~

~~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

Technical Support Document (TSD) for a
Part 70 Significant Source Modification and Significant Permit Modification

Source Description and Location

Source Name:	Rolls Royce Corporation
Source Location:	Plant 8 - 2001 South Tibbs Ave., Indianapolis, IN 46241 Plant 5 - 2355 South Tibbs Ave., Indianapolis, IN 46241
County:	Marion
SIC Code:	3724
Part 70 Operating Permit Renewal No.:	T097-25529-00311
Operation Permit Issuance Date:	March 22, 2010
Significant Source Modification No.:	097-30260-00311
Significant Permit Modification No.:	097-30291-00311
Permit Reviewer:	Laura Spriggs

Source Definition

Rolls Royce Corporation consists of two (2) plants:

(a) Plant 8 is located at 2001 South Tibbs Avenue, Indianapolis, Indiana 46241; and

(b) Plant 5 is located at 2355 South Tibbs Avenue, Indianapolis, Indiana 46241.

Since the two (2) plants are located on contiguous properties, have the same SIC code and are under common control of the same entity, they are considered one (1) source, as defined by 326 IAC 2-7-1(22). This determination was made during the issuance of the Part 70 Permit T097-7238-00311 in 2003 and has not been changed in this permitting approval.

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T097-25529-00311 on March 22, 2010. The source has since received the following approvals:

(a) Significant Source Modification No.: 097-29886-00311, issued on

(b) Minor Permit Modification No.: 097-29888-00311, issued on

County Attainment Status

The source is located in Marion County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of Indianapolis bounded by 11th Street on the north; Capitol Avenue on the west; Georgia Street

Pollutant	Designation
	on the south; and Delaware Street on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of Indianapolis and Marion County.
O_3	Attainment effective November 8, 2007, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Attainment effective July 10, 2000, for the part of Franklin Township bounded by Thompson Road on the south; Emerson Avenue on the west; Five Points Road on the east; and Troy Avenue on the north. Attainment effective July 10, 2000, for the part of Wayne Township bounded by Rockville Road on the north; Girls School Road on the east; Washington Street on the south; and Bridgeport Road on the west. The remainder of the county is not designated.
[1]Attainment effective October 18, 2000, for the 1-hour ozone standard for the Indianapolis area, including Marion County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour designation was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM2.5.	

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) 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 NOx emissions are considered when evaluating the rule applicability relating to ozone. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Marion County has been classified as nonattainment for $PM_{2.5}$ in 70 FR 943 dated January 5, 2005. On May 8, 2008, U.S. EPA promulgated specific New Source Review rules for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Marion County has been classified as attainment or unclassifiable in Indiana for SO2, CO, PM10, NO2, and lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

This source includes an aerospace engine manufacturing and testing operation and fossil fuel fired boilers totaling more than two hundred fifty million (250,000,000) British thermal units per hour heat input. There are no applicable New Source Performance Standards that were in effect on August 7, 1980.

(1) Since the primary 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 Standards that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, Nonattainment New Source Review, and Part 70 Permit applicability, except as outlined in (2) below.

(2) Since emission units 0070-58, 0070-59, 0070-62, 0070-63, 0070-64, and 0070-65 are one (1) of the twenty-eight (28) listed source categories (fossil fuel fired boilers totaling more

than 250 MMBtu/hr) under 326 IAC 2-2, 326 IAC 2-3, and 326 IAC 2-7, fugitive emissions are counted toward the determination of PSD, Emission Offset, Nonattainment New Source Review, and Part 70 Permit applicability for these types of units only.

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	Greater than 250
PM_{10}	Greater than 250
$PM_{2.5}$	Greater than 250
SO_2	Greater than 250
VOC	Greater than 250
CO	Greater than 250
NO_X	Greater than 250
Single HAP	Greater than 10
Total HAPs	Greater than 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(gg)(1).

(b) This existing source is a major stationary source, under nonattainment new source review rules (326 IAC 2-1.1-5) since direct $PM_{2.5}$ and SO_2 are emitted at a rate of 100 tons per year or more.

(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).

(d) These emissions are based upon the technical support document for Part 70 Operating Permit Renewal No. T097-25529-00311, issued on March 22, 2010.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Rolls Royce Corporation on February 24, 2011, relating to a modification to the turbines in the D3 test cell. The D3 test cell is currently described as follows:

> Ten (10) emission units identified as 0070-68, with a maximum operating capacity of 27.2 million British thermal units per hour each, exhausting out stacks identified as 8-12A through J.

The D3 test cell is comprised of five separate turbine units, each with two identical jet fuel fired 27.2 MMBtu/hr combustion sections which drive a single compressor section that runs a cooler to produce low temperature air for engine testing in various test cells. As such, there are a total of ten combustor sections, but there are five turbine combinations.

The specific modification would replace the combustor units in two of the five sets of turbines. The purpose of the modification is to modernize these units by using a single natural gas fired combustor, which would continue to drive the turbine section. The new combustor section would

be rated at 39 MMBtu/hr and as such, the rated capacity of the units would be smaller than the current two unit combination. The new combustor section should use less fuel for to produce the same output due to gains in efficiency and the NOx and CO emissions are expected to be less as a result of the newer design and use of natural gas as fuel instead of jet fuel.

The description of the D3 test cell will be revised as follows:

> Two (2) natural gas fired turbine generators, identified as 0070-68a and 0070-68b, approved in 2011 for construction, each with a single 39 MMBtu/hr combustor, exhausting out stacks identified as 8-12A and 8-12B.
>
> Three (3) jet fuel fired turbine generators, identified as 0070-68c, 0070-68d and 0070-68e, constructed in 1955, each with two (2) 27.2 MMBtu/hr combustor units, exhausting out stacks identified as 8-12C, 8-12D, and 8-12E.

Enforcement Issues

There are no pending enforcement actions related to this modification.

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.

Unrestricted PTE of the Modification	
Pollutant	**Potential to Emit** (ton/yr)
PM	0.65
PM_{10}	2.25
$PM_{2.5}$	2.25
SO_2	1.16
VOC	0.72
CO	28.01
NO_X	109.32
Total HAPs	0.35

This source modification is subject to 326 IAC 2-7-10.5(f)(4) (significant source modification) because the potential to emit from the modification is greater than twenty-five (25) tons per year for NOx.

Additionally, the 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 involves a case-by-case determination of an emission limitation and is a modification under Title I of the Clean Air Act.

Permit Level Determination – PSD and Nonattainment NSR

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.

	Potential to Emit (ton/yr)						
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_X**
D3 Test Cell NG Turbine Generators: 0700-68a and 0700-68b	0.23	0.81	0.81	0.42	0.26	10.04	39.17
PSD Significant Level	25	15	N/A	40	40	100	40
NA NSR Significant Level	N/A	N/A	10	40	N/A	N/A	N/A

(a) This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, the PSD requirements of 326 IAC 2-2 do not apply.

(b) This modification to an existing minor stationary source is not major because the emissions increase is less than the Nonattainment NSR major levels. Therefore, the Nonattainment NSR requirements of 326 IAC 2-1.1-5 do not apply.

Since this source is considered a major PSD source and the unrestricted potential to emit of this modification is greater than forty (40) tons of NOx per year, the Permittee has elected to limit the potential to emit of this modification as follows:

(a) The total natural gas usage for the two (2) natural gas turbine generators, 0700-68a and 0700-68b, shall be less than two hundred forty (240) million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The NOx emission rate from each of the two (2) natural gas turbine generators, 0700-68a and 0700-68b, shall be less than 326.4 lb/MMCF.

Compliance with these emission limits will ensure that the potential to emit from this modification is less than forty (40) tons of NOx per twelve (12) consecutive month period and will render the requirements of 326 IAC 2-2 not applicable.

Discussion of Project Non-Aggregation

Rolls Royce Corporation submitted a separate application on November 17, 2010 to modify Test Cell 114 (Emission Unit ID 0700-N6) to accommodate an engine development project. The Permittee indicated that while the unrestricted potential to emit of the test cell was going to increase, the actual emissions would not. Based on an Actual-to-Projected-Actual test, the project did not result in a significant net emissions increase. The Permittee has provided the following justification as to why this current project (D3 turbines) and the Test Cell 114 project should not be considered aggregated for the purposes of PSD and/or Nonattainment NSR.

The emission units associated with each project are in no way physically, operationally, or organizationally associated with each other and the two projects were planned, funded and approved through independent organizational units.

The missions of the two facilities where these two emission units are located differ greatly. Air Facility D, which includes the D3 turbines, is a common air producing plant located at Plant 8 that services numerous test facilities. The purpose of this facility is to simulate inlet and/or exhaust conditions that the engine would see in flight. Air Facility D is independent of the specific engines that are produced in Indianapolis. The improvements to Air Facility D are based upon the improved fuel efficiency and reduced emissions of new turbine engine technology.

Test Cell 114 is an engine test stand located at Plant 5. The purpose of Test Cell 114 is to provide development engine testing with an ambient inlet and exhaust for large turbofan engines. There is no physical connection between Air Facility D and Test Cell 114. Not only are the two facilities located at different plants, but Test Cell 114 has no need for conditioned inlet and/or exhaust. Additionally, Air Facility D does not have the capacity now or after improvement to provide conditioned inlet and/or exhaust to Test Cell 114, if required.

The approval process for the two projects was completely independent. Air Facility D and Test Cell 114 were submitted on two separate capital schemes, which required independent justification and signature approval. By submitting as separate capital schemes, the approvals were not linked. That is to say, once capital project could have been approved without the other.

Based on this justification, IDEM, OAQ agrees that the two projects should not be aggregated and can be evaluated as separate projects for PSD and Nonattainment NSR.

Federal Rule Applicability Determination

The following is a discussion of the federal rule applicability due to this modification:

New Source Performance Standards (NSPS)

(a) *40 CFR 60, Subpart KKKK: Standards of Performance for Stationary Combustion Turbines*
The two (2) natural gas combustion turbines, 0700-68a and 0700-68b are subject to the requirements of the Standards of Performance for Stationary Combustion Turbines, 40 CFR 60.4300, Subpart KKKK because they each have a heat input at peak load equal to or greater than 10 MMBtu/hr and are commencing construction after February 18, 2005.

The entire rule has been included as Attachment E to the permit. The following are the provisions of 40 CFR 60, Subpart KKKK applicable to the two (2) natural gas combustion turbines, 0700-68a and 0700-68b:

(1) 40 CFR 60.4300
(2) 40 CFR 60.4305
(3) 40 CFR 60.4320
(4) 40 CFR 60.4330(a)(2)
(5) 40 CFR 60.4333
(6) 40 CFR 60.4335
(7) 40 CFR 60.4340
(8) 40 CFR 60.4345
(9) 40 CFR 60.4350
(10) 40 CFR 60.4355
(11) 40 CFR 60.4360

(12) 40 CFR 60.4365
(13) 40 CFR 60.4370(b), (c)
(14) 40 CFR 60.4375
(15) 40 CFR 60.4380
(16) 40 CFR 60.4385
(17) 40 CFR 60.4395
(18) 40 CFR 60.4400
(19) 40 CFR 60.4405
(20) 40 CFR 60.4410
(21) 40 CFR 60.4415
(22) 40 CFR 60.4420
(23) Table 1 of 40 CFR 60, Subpart KKKK

(b) *40 CFR 60, Subpart GG: Standards of Performance for Stationary Gas Turbines*
Pursuant to 40 CFR 60.4305(b), stationary combustion turbines regulated under 40 CFR 60, Subpart KKKK are exempt from the requirements of 40 CFR 60, Subpart GG. Therefore, the requirements of 40 CFR 60, Subpart GG are not included for the two (2) natural gas combustion turbines, 0700-68a and 0700-68b.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(c) *40 CFR 63, Subpart YYYY: National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines*
The provisions of the National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines (40 CFR 63.6080, Subpart YYYY), which are incorporated by reference as 326 IAC 20-90, are applicable to each stationary combustion turbine at Rolls Royce Corporation since it is a major source of HAPs. Pursuant to 40 CFR 63.6090(b)(4), existing stationary combustion turbines (those that commenced construction or reconstruction on or before January 14, 2003) do not have to meet the requirements of 40 CFR 63, Subpart A or Subpart YYYY and no initial notitifcation is necessary. The two (2) natural gas combustion turbines, 0700-68a and 0700-68b, are considered new affected sources since construction will commence after January 14, 2003. Pursuant to 40 CFR 63.6095(d), there is a stay of the standards for new lean premix gas-fired stationary combustion turbines such as 0700-68a and 0700-68b. Initial notification requirements are still applicable, but compliance with other requirements are not necessary until EPA takes final action.

The entire rule has been included as Attachment F to the permit. The following are the provisions of 40 CFR 63, Subpart YYYY applicable to the two (2) natural gas combustion turbines, 0700-68a and 0700-68b:

(1) 40 CFR 63.6080
(2) 40 CFR 63.6085
(3) 40 CFR 63.6090(a)(2)
(4) 40 CFR 63.6095(d)
(5) 40 CFR 63.6145(a), (c)
(6) 40 CFR 63.6155(a)(1)
(7) 40 CFR 63.6160
(8) 40 CFR 63.6155
(9) 40 CFR 63.6170
(10) 40 CFR 63.6175
(11) Table 7 of 40 CFR 63, Subpart YYYY

Compliance Assurance Monitoring (CAM)

(d) 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 natural gas combustion turbines (0070-68a and 0070-68b) do not use a control device. Therefore, based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to 0070-68a and 0070-68b.

State Rule Applicability Determination

The following is a discussion of the state rule applicability due to this modification:

326 IAC 2-2 and 2-1.1-5 (PSD and Nonattainment New Source Review)
Since this source is considered a major PSD source and the unrestricted potential to emit of this modification is greater than forty (40) tons of NOx per year, the Permittee has elected to limit the potential to emit of this modification as follows:

(a) The total natural gas usage for the two (2) natural gas turbine generators, 0700-68a and 0700-68b, shall be less than two hundred forty (240) million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The NOx emission rate from each of the two (2) natural gas turbine generators, 0700-68a and 0700-68b, shall be less than 326.4 lb/MMCF.

Compliance with these emission limits will ensure that the potential to emit from this modification is less than forty (40) tons of NOx per twelve (12) consecutive month period and will render the requirements of 326 IAC 2-2 not applicable.

The Permittee submitted a justification for how this project should not be aggregated with the Test Cell 114 project, permitted under Significant Source Modification No. 097-29886-00311 and Minor Permit Modification No. 097-29888-00311. See the *Permit Level Determination – PSD and Nonattainment NSR* section of this TSD for further details. Based on the justification provided, IDEM, OAQ agrees that the projects should not be aggregated and can be evaluated separately.

326 IAC 2-1.1-5 (Nonattainment New Source Review)
This source is a major source under Nonattainment NSR. The potential to emit PM2.5 and SO2 from this project are less than ten (10) and forty (40) tons per year, respectively. Therefore, this project is a minor project under 326 IAC 2-1.1-5.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of the natural gas turbine generators (0070-68a and 0070-68b) will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)
Since this source is required to have an operating permit under 326 IAC 2-7, and has a potential to emit greater than two hundred fifty (250) tons per year VOC and PM10, an emission statement covering the previous calendar year must be submitted by July 1 of each year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1-2 (Opacity Limitations)
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 for the natural gas turbine generators, 0700-68a and 0700-68b shall meet the following:

(a) Opacity shall not exceed an average of thirty percent (30%) 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.

326 IAC 6.5 (Particulate Matter Emission Limitations)
Pursuant to 326 IAC 6.5-1-2(a), particulate matter from the natural gas turbine generators, 0070-68a and 0070-68b, shall not exceed 0.03 gr/dscf each.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)
The provisions of 326 IAC 7-1.1 are not applicable to the natural gas turbine generators, 0070-68a or 0070-68b because they each have a potential to emit sulfur dioxide of less than twenty-five (25) tons per year and less than ten (10) tons per hour.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)
The provisions of 326 IAC 8-1-6 are not applicable to the natural gas combustion turbines, 0070-68a or 0070-68b because the potential VOC emissions from these units is less than twenty-five (25) tons per year.

326 IAC 9 (Carbon Monoxide Rules)
The provisions of 326 IAC 9 are not applicable to the natural gas turbine generators, 0070-68a or 0070-68b because there is not an emission limit established for these types of units in 326 IAC 9-1-2.

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 and Compliance Monitoring Requirements have not changed as a result of this modification. Some Compliance Determination and Compliance Monitoring

Requirements not related to this modification have been revised as described in the "Proposed Changes" section of this Technical Support Document.

The Permittee has indicated that controls are required to comply with the 326 IAC 6.5 particulate limits for the paint booths and the miscellaneous sanding and blasting operation. Compliance monitoring and determination requirements have been added for these units as shown in the *Proposed Changes* section of the permit.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit Renewal No. T097-25529-00311. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Summary of Changes to Section A of the Permit:

(a) The descriptive information for the new natural gas turbine generators has been added.

(b) References to applicable federal rules have been added for the turbines.

(c) The Emission Unit ID for 0070-N54 (test cell 8137) has been corrected.

The permit has been revised as follows:

A.3 Emission Units and Pollution Control Equipment Summary
[326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(15)]

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

(a) * * *

(b) Two (2) gas turbines identified below:

Emission Unit ID No.	Unit Identification	Maximum Capacity, MMBtu/hr	Fuels Permitted to use	Stack No.	Date Constructed or last permitted
0070-80	Gas Turbine	68	Natural Gas, Landfill gas	8-80	1999
0070-71	Gas Turbine	35	Natural Gas	8-9	1999

Under 40 CFR 60, Subpart GG, 0070-80 and 0070-71 are considered affected facilities. **Under 40 CFR 63, Subpart YYYY, 0070-80 and 00070-71 are considered existing affected sources.**

(c) * * *

(d) * * *

(e) * * *

(f) * * *

(g) * * *

(h) Jet fueled turbine engines, ~~constructed in 1955,~~ identified as follows:

(1) Two (2) emission units**,** identified as 0070-66, **constructed in 1955,** with a maximum operating capacity of 107 million British thermal units per hour each,

exhausting out stacks identified as 8-11A and 8-11B.~~;~~ **Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-66 are considered existing affected sources.**

(2) Twelve (12) emission units**,** identified as 0070-67, **constructed in 1955,** with a maximum operating capacity of 27.2 million British thermal units per hour each, exhausting out stacks identified 8-13A through M respectively. **Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-67 are considered existing affected sources.**

(3) **Two (2) natural gas fired turbine generators, identified as 0070-68a and 0070-68b, approved in 2011 for construction, each with a single 39 MMBtu/hr combustor, exhausting out stacks identified as 8-12A and 8-12B. Under 40 CFR 60, Subpart KKKK, the turbines identified as 0070-68a and 0070-68b are considered affected sources. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68a and 0070-68b are considered new affected sources.** ~~Ten (10) emission units identified as 0070-68, with a maximum operating capacity of 27.2 million British thermal units per hour each, exhausting out stacks identified as 8-12A through J.~~

(4) Three (3) jet fuel fired turbine generators, identified as 0070-68c, 0070-68d, and 0070-68e, constructed in 1955, each with two (2) 27.2 MMBtu/hr combustor units, exhausting out stacks identified as 8-12C, 8-12D, and 8-12E. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68c, 0070-68d, and 0070-68e are considered existing affected sources.

(**5**4) Four (4) emission units identified as 0070-69, **constructed in 1955,** with a maximum operating capacity of 27.2 million British thermal per hour units each, exhausting out stacks identified as 8-14A through D. **Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-69 are considered existing affected sources.**

(i) * * *

(j) Forty-nine (49) engine test stand cells identified below. These test stand cells are used to test engines manufactured at the source. The engines tested are fueled by either Jet fuel, Diesel Oil #2, or Natural Gas. All test stand cells except test stand cells 133 and 135 (Emission Unit IDs 0070-87 and 0070-88) were constructed prior to 1977. Test stand cells 133 and 135 (Emission Unit IDs 0070-87 and 0070-88) were approved in 2007 for construction. Test cell 111 (Emission Unit ID 0070-N4) was approved in 1999 for modification. Test cell 824 (Emission Unit ID 0070-N32) was approved in 2008 for modification. Test cell 114 (Emission Unit ID 0070-N6) was approved in 2011 for modification.

Engine Test Cells - Plant 5				
Emission Unit ID No.	Engine Test Cell ID	Maximum Test Cell Capacity	Type of Fuels Used	Stack ID
* * *	* * *	* * *	* * *	* * *

Engine Test Cells - Plant 8

Engine Test Cells - Plant 8				
Emission Unit ID	Engine Test Cell	Maximum Test Cell Capacity	Type of Fuels Used	Stack ID
* * *	* * *	* * *	* * *	* * *
0070-**N**54	8137	10 pounds/second air	Jet fuel, Diesel & Natural Gas	SN54
* * *	* * *	* * *	* * *	* * *

Summary of Changes to the D Sections of the Permit:

(a) A statement indicating that the turbines in Section D.1 are existing affected sources under 40 CFR 63, Subpart YYYY was added to the descriptive information.

(b) The Permittee indicated that the paint booths in Section D.2 of the permit require the use of the dry filters to comply with the 326 IAC 6.5 particulate limit. Therefore, compliance determination, monitoring, and record keeping requirements were added to this section.

(c) A statement indicating that the degreasing operations in Section D.3 are existing affected facilities under 40 CFR 63, Subpart T was added to be consistent with the descriptive information in Section A of the permit.

(d) The Permittee indicated that the miscellaneous sanding and blasting operations require the use of the dust collector in order to comply with the 326 IAC 6.5 particulate limit, but that the woodworking operations do not. Additional requirements have been added for the sanding and blasting operations.

(e) The descriptive information for the new natural gas turbine generators has been added to Section D.5 of the permit and references to the applicable federal rules has been added to the descriptive language for the turbines in Section D.5.

(f) The Emission Unit ID for 0070-N54 (test cell 8137) has been corrected in Section D.5.

(g) A limit on natural gas usage and the NOx emission rate from the new natural gas turbine generators has been added to Condition D.5.3 in order to limit the project to less than forty (40) tons of NOx per twelve (12) consecutive month period, to render 326 IAC 2-2 (PSD) not applicable. A corresponding record keeping requirement and reporting form have been added as well.

(h) Condition D.5.9 has been revised to return the VOC minor limit to how it was written before the renewal was issued in order to effectively limit the emissions to less than twenty-five (25) tons per twelve (12) consecutive month period.

The permit has been revised as follows:

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]
(a) * * *

(b) Two (2) gas turbines identified below:

Emission Unit ID No.	Unit Identification	Maximum Capacity, MMBtu/hr	Fuels Permitted to Use	Stack No.	Date Constructed
0070-80	Gas Turbine	68	Natural Gas, Landfill gas	8-80	1999
0070-71	Gas Turbine	35	Natural Gas	8-9	1999

Under 40 CFR 60, Subpart GG, 0070-80 and 0070-71 are considered affected facilities. **Under 40 CFR 63, Subpart YYYY, 0070-80 and 00070-71 are considered existing affected sources.**

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

* * * * *

SECTION D.2 FACILITY OPERATION CONDITIONS

* * *

Compliance Determination Requirements

D.2.4 Particulate Control

In order to comply with Condition D.2.2, the dry filters for particulate control shall be in operation and control emissions from the paint booths at all times the paint booths are in operation.

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

D.2.5 Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth stacks (SN56a, 5-10a, 5-10b, 5-10c, 5-10d, S-84, and S-85) while one or more of the booths are in operation. If a condition exists which should result in a response step, 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.

(b) Monthly inspections shall be performed of the coating emissions from the stacks and the presence of overspray on the rooftops and the nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emissions is observed, the Permittee shall take reasonable response steps. 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.2.**6**~~4~~ Record Keeping Requirements

(a) * * *

(b) To document the compliance status with Conditions D.2.2 and D.2.5, the Permittee shall maintain a log of weekly overspray observations and daily and monthly inspections. The Permittee shall include in its record when an observation was not taken and the reason for the lack of observation (e.g. the process did not operate that week).

(~~b~~**c**) * * *

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(e) * * *

Under 40 CFR 63, Subpart T, the degreasing operations are considered existing affected facilities.

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

* * * * *

SECTION D.4 FACILITY OPERATION CONDITIONS

* * *

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

A Preventive Maintenance Plan is required for the miscellaneous sanding and blasting 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.4.3 Particulate Control

In order to comply with Condition D.4.1, the dust collector for particulate control shall be in operation and control emissions from the miscellaneous sanding and blasting at all times this unit is in operation.

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

D.4.4 Visible Emissions Notations

(a) Daily visible emission notations of the miscellaneous sanding and blasting stack exhaust (stack SN55) shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. 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.

D.4.5 Broken or Failed Bag Detection (Mandatory for operations with a baghouse)

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.4.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.4, the Permittee shall maintain daily records of the visible emission notations of the miscellaneous sanding and blasting stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation (e.g. the process did not operate that day).

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

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(h) Jet fueled turbine engines, ~~constructed in 1955,~~ identified as follows:

(1) Two (2) emission units**,** identified as 0070-66, with a maximum operating capacity of 107 million British thermal units per hour each, exhausting out stacks identified as 8-11A and 8-11B.~~;~~ **Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-66 are considered existing affected sources.**

(2) Twelve (12) emission units**,** identified as 0070-67, with a maximum operating capacity of 27.2 million British thermal units per hour each, exhausting out stacks identified 8-13A

through M respectively. **Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-67 are considered existing affected sources.**

(3) **Two (2) natural gas fired turbine generators, identified as 0070-68a and 0070-68b, approved in 2011 for construction, each with a single 39 MMBtu/hr combustor, exhausting out stacks identified as 8-12A and 8-12B. Under 40 CFR 60, Subpart KKKK, the turbines identified as 0070-68a and 0070-68b are considered affected sources. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68a and 0070-68b are considered new affected sources.**~~Ten (10) emission units identified as 0070-68, with a maximum operating capacity of 27.2 million British thermal units per hour each, exhausting out stacks identified as 8-12A through J.~~

(4) Three (3) jet fuel fired turbine generators, identified as 0070-68c, 0070-68d, and 0070-68e, constructed in 1955, each with two (2) 27.2 MMBtu/hr combustor units, exhausting out stacks identified as 8-12C, 8-12D, and 8-12E. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68c, 0070-68d, and 0070-68e are considered existing affected sources.

(**5**~~4~~) Four (4) emission units**,** identified as 0070-69, with a maximum operating capacity of 27.2 million British thermal per hour units each, exhausting out stacks identified as 8-14A through D. **Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-69 are considered existing affected sources.**

(i) * * *

(j) Forty-nine (49) engine test stand cells identified below. These test stand cells are used to test engines manufactured at the source. The engines tested are fueled by either Jet fuel, Diesel Oil #2 or Natural Gas. All test stand cells except test stand cells 133 and 135 (Emission Unit IDs 0070-87 and 0070-88) were constructed prior to 1977. Test stand cells 133 and 135 (Emission Unit IDs 0070-87 and 0070-88) were approved in 2007 for construction. Test cell 111 (Emission Unit ID 0070-N4) was approved in 1999 for modification. Test cell 824 (Emission Unit ID 0070-N32) was approved in 2008 for modification. Test cell 114 (Emission Unit 0070-N6) was approved in 2011 for modification.

* * *

Engine Test Cells - Plant 8				
Emission Unit ID	Engine Test Cell	Maximum Test Cell Capacity	Type of Fuels Used	Stack ID
* * *	* * *	* * *	* * *	* * *
0070-**N**54	8137	10 pounds/second air	Jet fuel, Diesel & Natural Gas	SN54
* * *	* * *	* * *	* * *	* * *

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

D.5.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Limitations), particulate matter (PM) emissions from emission units 0070-66, 0070-67, 0070-68**a through 0070-68b**, 0070-69, 0070-70a, 0070-70b,

0070-70c, 0070-N3 through 0070-N54, 0070-87, and 0070-88 shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.5.2 Sulfur Dioxide (SO_2) [326 IAC 7-1.1-2(a)]

* * *

D.5.3 PSD Minor NOx Limit [326 IAC 2-2]

(a) * * *

(b) * * *

(c) The NOx emissions from natural gas turbine generators, 0070-68a and 0070-68b, shall be limited as follows:

(1) The total natural gas usage for the two (2) natural gas turbine generators, 0070-68a and 0070-68b, shall be less than two hundred forty (240) million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) The NOx emission rate from each of the two (2) natural gas turbine generators, 0070-68a and 0070-68b, shall be less than 326.4 lb/MMCF.

Compliance with these limits will ensure that the potential to emit from the modification is less than forty (40) tons per twelve (12) consecutive month period and will render the requirements of 326 IAC 2-2 not applicable.

* * *

D.5.9 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

(a) The VOC emission rate from test cell 824 (0070-N32) shall be limited to 0.21 pounds of VOC per gallon (lb/gal) of diesel/jet fuel combusted or an emission rate determined from the most recent emissions test.

(b) The VOC emissions from test cell 824 (0070-N32) shall not exceed twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with this limit will limit the VOC emissions from test cell 0070-N32 to less than 25 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. Therefore, 326 IAC 8-1-6 does not apply.

* * *

D.5.14 Record Keeping Requirements

(a) To document the compliance status with Condition D.5.3**(a)**, the Permittee shall maintain records of the amount of Jet A fuel combusted in Test Cell 111 (Emission Unit ID 0070-N4) on a monthly basis.

(b) * * *

(c) * * *

(d) * * *

(e) * * *

(f) To document the compliance status with Condition D.5.3(c), the Permittee shall

maintain records of the amount of natural gas combusted in natural gas turbine generators, 0070-68a and 0070-68b.

(**g**~~f~~) * * *

Summary of Changes to the E Sections of the Permit:

(a) The appropriate rule citation was included in E.1.1.

(b) The applicable portions of the rule were updated in Section E.3.

(c) The Emission Unit ID for 0070-N54 (test cell 8137) has been corrected in Section E.4.

(d) Section E.5 was added to incorporate 40 CFR 60, Subpart KKKK, which is included in its entirety as Attachment E of the permit.

(e) Section E.6 was added to incorporate 40 CFR 63, Subpart YYYY, which is included in its entirety as Attachment F of the permit.

The permit has been revised as follows:

SECTION E.1 FACILITY OPERATION CONDITIONS

*** * ***

E.1.1 General Provisions Relating to NSPS [326 IAC 12-1-1] [40 CFR 60, Subpart ~~GG~~**A**]

* * *

* * * * *

SECTION E.3 FACILITY OPERATION CONDITIONS

* * *

E.3.2 National Emission Standards for Aerospace Manufacturing and Rework Facilities [40 CFR 63, Subpart GG][326 IAC 20-15]

The Permittee which engages in aerospace manufacturing and rework shall comply with the following provisions of 40 CFR 63, Subpart GG, which is incorporated by reference as 326 IAC 20-15-1 (included as Attachment C of the permit):

(1) 40 CFR 63.741~~(f)~~
(2) 40 CFR 63.742
(3) 40 CFR 63.744(a)(1-3), (b)(2), (c)(1)(ii)**, (c)**(2-3), (d)
(4) 40 CFR 63.745(b), (c), (f), (g)
(~~4~~**5**) 40 CFR 63.748
(~~5~~**6**) 40 CFR 63.750(a), (b)
(~~6~~**7**) 40 CFR 63.751(a)**, (c)**
(~~7~~**8**) 40 CFR 63.752**(a),** (b)(1)**, (b)**(2)**, (b)**(5)**,** (d)
(~~8~~**9**) 40 CFR 63.753(b)**,** (c)
(~~9~~**10**) Table 1 to 40 CFR 63, Subpart GG (applicable portions)

* * * * *

SECTION E.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(j) Forty-nine (49) engine test stand cells identified below. These test stand cells are used to test engines manufactured at the source. The engines tested are fueled by either Jet fuel, Diesel Oil #2 or Natural Gas. All test stand cells except test stand cells 133 and 135 (Emission Unit IDs 0070-87 and 0070-88) were constructed prior to 1977. Test stand cells 133 and 135 (Emission Unit IDs 0070-87 and 0070-88) were approved in 2007 for construction. Test cell 111 (Emission Unit ID 0070-N4) was approved in 1999 for modification. Test cell 824 (Emission Unit ID 0070-N32) was approved in 2008 for modification. Test cell 114 (Emission Unit 0070-N6) was approved in 2011 for modification.

* * *

Engine Test Cells - Plant 8				
Emission Unit ID	Engine Test Cell	Maximum Test Cell Capacity	Type of Fuels Used	Stack ID
* * *	* * *	* * *	* * *	* * *
0070-**N**54	8137	10 pounds/second air	Jet fuel, Diesel & Natural Gas	SN54
* * *	* * *	* * *	* * *	* * *

* * * * *

SECTION E.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(h) Jet fueled turbine engines, identified as follows:

(3) Two (2) natural gas fired turbine generators, identified as 0070-68a and 0070-68b, approved in 2011 for construction, each with a single 39 MMBtu/hr combustor, exhausting out stacks identified as 8-12A and 8-12B. Under 40 CFR 60, Subpart KKKK, the turbines identified as 0070-68a and 0070-68b are considered affected sources. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68a and 0070-68b are considered new affected sources.

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

New Source Performance Standards Requirements (NSPS) [326 IAC 2-7-5(1)]

E.5.1 General Provisions Relating to NSPS [326 IAC 12-1-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated as 326 IAC 12-1-1, apply to the facilities described in this section except when otherwise specified in 40 CFR Part 60, Subpart KKKK.

E.5.2 Standards of Performance for Stationary Combustion Turbines [40 CFR Part 60, Subpart KKKK] [326 IAC 12]

The Permittee shall comply with the provisions of 40 CFR 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines, which are incorporated by reference as 326 IAC 12. The entire rule is included as Attachment E of the permit. The two (2) gas turbines identified as 0070-68a, and 0070-68b are subject to the following requirements of 40 CFR Part 60, Subpart KKKK:

(1) 40 CFR 60.4300
(2) 40 CFR 60.4305
(3) 40 CFR 60.4320
(4) 40 CFR 60.4330(a)(2)
(5) 40 CFR 60.4333
(6) 40 CFR 60.4340
(7) 40 CFR 60.4345
(8) 40 CFR 60.4350
(9) 40 CFR 60.4355
(10) 40 CFR 60.4360
(11) 40 CFR 60.4365
(12) 40 CFR 60.4370(b), (c)
(13) 40 CFR 60.4375
(14) 40 CFR 60.4380
(15) 40 CFR 60.4385
(16) 40 CFR 60.4395
(17) 40 CFR 60.4400
(18) 40 CFR 60.4405
(19) 40 CFR 60.4410
(20) 40 CFR 60.4415
(21) 40 CFR 60.4420
(22) Table 1 of 40 CFR 60, Subpart KKKK

SECTION E.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(b) Two (2) gas turbines identified below:

Emission Unit ID No.	Unit Identification	Maximum Capacity, MMBtu/hr	Fuels Permitted to use	Stack No.	Date Constructed or last permitted
0070-80	Gas Turbine	68	Natural Gas, Landfill gas	8-80	1999
0070-71	Gas Turbine	35	Natural Gas	8-9	1999

Under 40 CFR 60, Subpart GG, 0070-80 and 0070-71 are considered affected facilities. Under 40 CFR 63, Subpart YYYY, 0070-80 and 0070-71 are considered existing affected sources.

(h) Jet fueled turbine engines, identified as follows:

(1) Two (2) emission units, identified as 0070-66, with a maximum operating capacity of 107 million British thermal units per hour each, exhausting out stacks identified as 8-11A and 8-11B. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-66 are considered existing affected sources.

(2) Twelve (12) emission units, identified as 0070-67, with a maximum operating

capacity of 27.2 million British thermal units per hour each, exhausting out stacks identified 8-13A through M respectively. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-67 are considered existing affected sources.

(3) Two (2) natural gas fired turbine generators, identified as 0070-68a and 0070-68b, approved in 2011 for construction, each with a single 39 MMBtu/hr combustor, exhausting out stacks identified as 8-12A and 8-12B. Under 40 CFR 60, Subpart KKKK, the turbines identified as 0070-68a and 0070-68b are considered affected sources. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68a and 0070-68b are considered new affected sources.

(4) Three (3) jet fuel fired turbine generators, identified as 0070-68c, 0070-68d, and 0070-68e, constructed in 1955, each with two (2) 27.2 MMBtu/hr combustor units, exhausting out stacks identified as 8-12C, 8-12D, and 8-12E. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-68c, 0070-68d, and 0070-68e are considered existing affected sources.

(5) Four (4) emission units, identified as 0070-69, with a maximum operating capacity of 27.2 million British thermal per hour units each, exhausting out stacks identified as 8-14A through D. Under 40 CFR 63, Subpart YYYY, the turbines identified as 0070-69 are considered existing affected sources.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.6.1 General Provisions Relating to NESHAP YYYY [326 IAC 20-1-1][40 CFR Part 63, Subpart A]

(a) The Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, as specified in Table 7 of 40 CFR 63, Subpart YYYY in accordance with the schedule in 40 CFR Part 63, Subpart YYYY for all new affected sources.

(b) Pursuant to 40 CFR 63.6090(b)(4), the Permittee does not have to comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for existing affected sources.

E.6.2 Stationary Combustion Turbines NESHAP [40 CFR 63, Subpart YYYY][326 IAC 20-90]

(a) The Permittee which operates stationary combustion turbines that are new affected sources is subject to the following provisions of 40 CFR 63, Subpart YYYY, which is incorporated by reference as 326 IAC 20-90-1 (included as Attachment F of the permit):

(1) 40 CFR 63.6080
(2) 40 CFR 63.6085
(3) 40 CFR 63.6090(a)(2)
(4) 40 CFR 63.6095(d)
(5) 40 CFR 63.6145(a), (c)
(6) 40 CFR 63.6155(a)(1)
(7) 40 CFR 63.6160
(8) 40 CFR 63.6165
(9) 40 CFR 63.6170
(10) 40 CFR 63.6175
(11) Table 7 of 40 CFR 63, Subpart YYYY

(b) The Permittee which operates stationary combustion turbines that are existing

affected sources is subject to the following provisions of 40 CFR 63, Subpart YYYY, which is incorporated by reference as 326 IAC 20-90-1 (included as Attachment F of the permit):

(1) 40 CFR 63.6080
(2) 40 CFR 63.6085
(3) 40 CFR 63.6090(a)(1), (b)(4)
(4) 40 CFR 63.6170
(5) 40 CFR 63.6175

Change to the Forms of the Permit:

A reporting form for tracking the natural gas usage for the new turbine generators has been added to the permit.

The permit has been revised as follows:

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

Part 70 Quarterly Report

Source Name: **Rolls Royce Corporation**
Source Address: **2001 and 2355 S. Tibbs Avenue, Indianapolis, IN 46241**
Part 70 Permit No.: **T097-25529-00311**
Facility: **Natural Gas Turbine Generators, 0070-68a and 0070-68b**
Parameter: **Natural Gas Fuel Usage**
Limit: **Less than 240 MMCF per twelve (12) consecutive month period.**

YEAR: **QUARTER:**

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: _____

Conclusion and Recommendation

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 097-30260-00311 and Significant Permit Modification No. 097-30291-00311, respectively. The staff recommend to the Commissioner that this Part 70 Significant Source Modification and Significant Permit Modification be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Laura Spriggs 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) 233-5693 or toll free at 1-800-451-6027 extension 3-5693.

(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

Appendix A: Emissions Calculations
D3 Test Cell NG Turbine Generators (0700-68a and 0700-68b)

Source Name: Rolls Royce Corporation
Source Location: 2001 & 2355 South Tibbs Avenue, Indianapolis, IN 46241
Significant Source Modification No.: 097-30260-00311
Significant Permit Modification No.: 097-30291-00311
Permit Reviewer: Laura Spriggs

Total Capacity for two proposed new NG fired Turbines: 78 MMBtu/hr (2 at 39 MMBtu/hr each)

			Criteria Pollutants*						
			PM	PM10	PM2.5	SO2	VOC	CO	NOx
Emission Factor (lb/MMBtu)			0.0019	0.0066	0.0066	0.0034	0.0021	0.082	0.32
Emission Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential to Emit (ton/yr)						
Unlimited PTE for NG Fired	78	669.9	0.65	2.25	2.25	1.16	0.72	28.01	109.32
Limited PTE for NG Fired	27.95	240	0.23	0.81	0.81	0.42	0.26	10.04	39.17

*Emission Factors from AP-42, Chapter 3.1, Tables 3.1-1 and 3.1-2a

			HAPs											
			1,3-butadiene	Acetaldehyde	Acrolein	Benzene	Ethylbenzene	Formaldehyde	Naphthalene	PAH	Propylene Oxide	Toluene	Xylenes	Total HAPs
Emission Factor (lb/MMBtu)			4.30E-07	4.00E-05	6.40E-06	1.20E-05	3.20E-05	7.10E-04	1.30E-06	2.20E-06	2.90E-05	1.30E-04	6.40E-05	
Emission Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential to Emit (ton/yr)											
Unlimited PTE for NG Fired	78	669.9	1.47E-04	1.37E-02	2.19E-03	4.10E-03	1.09E-02	2.43E-01	4.44E-04	7.52E-04	9.91E-03	4.44E-02	2.19E-02	3.51E-01
Limited PTE for NG Fired	27.95	240	5.26E-05	4.90E-03	7.83E-04	1.47E-03	3.92E-03	8.69E-02	1.59E-04	2.69E-04	3.55E-03	1.59E-02	7.83E-03	1.26E-01

*Emission Factors from AP-42, Chapter 3.1, Table 3.1-3

Methodology
Criteria Pollutants and HAPs:
Natural Gas Heating Value = 1020 MMBtu/MMCF
Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x (8760 hr/yr) x (1 MMCF/1020 MMBtu)
PTE (ton/yr) = Heat Input Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x (8760 hr/yr) x (1 ton/2000 lb)
The source is electing to take a natural gas throughput limit on the two (2) combustion turbines (0700-68a and 0700-68b) of 240 MMCF per twelve (12) consecutive month period in order to render the requirements of 326 IAC 2-2 not applicable.